



Environmental Health & Safety Legal Consulting

# **MONTAGU CO-OPERATIVE WINE CELLAR LTD WASTE WATER TREATMENT WORKS**

## **DRAFT BASIC ASSESSMENT REPORT**

in support of an

## **WASTE MANAGEMENT LICENSE**

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Environmental Health & Safety Legal Consulting

**DEA&DP Ref No: 19/2/5/1/B1/11/WL0116/12**

**MARCH 2013**



**Basic Assessment Report in terms of the NEMA Environmental Impact Assessment  
Regulations, 2010**

**AUGUST 2010**

**Kindly note that:**

1. This **Basic Assessment Report** is the standard report required by DEA&DP in terms of the EIA Regulations, 2010 and must be completed for all Basic Assessment applications.
2. This report must be used in all instances for Basic Assessment applications for an environmental authorisation in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998) (NEMA), as amended, and the Environmental Impact Assessment Regulations, 2010, and/or a waste management licence in terms of the National Environmental Management: Waste Act, 2008 (Act 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).
3. This report is current as of 2 August 2010. It is the responsibility of the Applicant / EAP to ascertain whether subsequent versions of the report have been published or produced by the competent authority.
4. The required information must be typed within the spaces provided in the report. The sizes of the spaces provided are not necessarily indicative of the amount of information to be provided. It is in the form of a table that will expand as each space is filled with typing.
5. Incomplete reports will be rejected. A rejected report may be amended and resubmitted.
6. The use of "not applicable" in the report must be done with circumspection. Where it is used in respect of material information that is required by the Department for assessing the application, this may result in the rejection of the report as provided for in the regulations.
7. **While the different sections of the report 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.**
8. 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 the belief that the information is protected.
9. 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. No faxed or e-mailed reports will be accepted. **Please note that for waste management licence applications, this report must 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 Region A.**
10. Unless indicated otherwise, two electronic copies (CD/DVD) and three hard copies of this report must be submitted to the Department.

**DEPARTMENTAL DETAILS**

<b>CAPE TOWN OFFICE REGION A (Cape Winelands, City of Cape Town: Tygerberg and Oostenberg Administrations)</b>	<b>CAPE TOWN OFFICE REGION B (West Coast, Overberg, City of Cape Town: Helderberg, South Peninsula, Cape Town and Blaauwberg Administrations)</b>	<b>GEORGE OFFICE (Eden and Central Karoo)</b>
Department of Environmental Affairs and Development Planning Attention: Directorate: Integrated Environmental Management (Region A2) Private Bag X 9086 Cape Town, 8000  Registry Office 1 <sup>st</sup> Floor Utilitas Building 1 Dorp Street, Cape Town  Queries should be directed to the Directorate: Integrated Environmental Management (Region A2) at: Tel: (021) 483-4793 Fax: (021) 483- 3633	Department of Environmental Affairs and Development Planning Attention: Directorate: Integrated Environmental Management (Region B) Private Bag X 9086 Cape Town, 8000  Registry Office 1 <sup>st</sup> Floor Utilitas Building 1 Dorp Street, Cape Town  Queries should be directed to the Directorate: Integrated Environmental Management (Region B) at: Tel: (021) 483-4094 Fax: (021) 483-4372	Department of Environmental Affairs and Development Planning Attention: Directorate: Integrated Environmental Management (Region A1) Private Bag X 6509 George, 6530  Registry Office 4 <sup>th</sup> Floor, York Park Building 93 York Street George  Queries should be directed to the Directorate: Integrated Environmental Management (Region A1) at: Tel: (044) 805 8600 Fax: (044) 874-2423

View the Department's website at <http://www.capegateway.gov.za/eadp> for the latest version of this document.

## DEPARTMENTAL REFERENCE NUMBER(S)

File reference number (EIA):	
File reference number (Waste):	19/2/5/1/B1/11/WL0116/12
File reference number (Other):	

## PROJECT TITLE

<b>MONTAGU CO-OPERATIVE WINE CELLAR LTD WASTE LICENCE APPLICATION FOR EFFLUENT TREATMENT</b>
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## DETAILS OF THE ENVIRONMENTAL ASSESSMENT PRACTITIONER (EAP)

Environmental Assessment Practitioner (EAP):	Eco Impact Legal Consulting (Pty) Ltd		
Contact person:	Nicolaas Hanekom	Johmandie Giliomee	
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	Claremont	Postal code:	7735
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E-mail:	admin@ecoimpact.co.za	Fax:	021 67 11675
EAP Qualifications	M.Tech Nature Conservation. Cape Peninsula University of Technology. EMS ISO 14001. North West University Environmental Audit ISO 19011. North West University		<p>B Tech Nature Conservation (Cum Laude): Cape Peninsula University of Technology (2008)</p> <p>Centre for Environmental Management:</p> <ul style="list-style-type: none"> <li>Implementing Environmental Management Systems (ISO 14001)(2009);</li> <li>Occupational Health and Safety Law for Managers (2010);</li> <li>Implementing an OHS Management System based on OHSAS 18001 (2010) and;</li> <li>Occupational Health and Safety Management System OHSAS 18001 Audit: A Lead Auditor Course Based on ISO 19011 and ISO 17021 (2011).</li> </ul>
EAP Registrations/Associations	SACNASP Pri.Sci.Nat (Ecological Science) 400274/11. SAATCA Registration number 015. EMS ISO 14001 (Internal Auditor) International Association for Impact Assessment (Contact I.D. 106673)		N/A

### Details of the EAP's expertise to carry out Basic Assessment procedures

<p><u>Mr Nicolaas Hanekom:</u> Mr Hanekom is a registered Professional Natural Scientist in the ecological science field with the South African Council for Natural Scientific Professions ("SACNASP") and a qualified EAP who holds a Masters Technologiae, Nature Conservation ("Vegetation Ecology and Biodiversity Assessment") degree from the Cape Peninsula University of Technology.</p> <p>He further qualified in Environmental Management Systems ISO 14001:2004, at the Centre for Environmental Management, North-West University, as well as Environmental Management Systems ISO 14001:2004 Audit: Internal Auditors Course to ISO 19011:2003 level, from the Centre for Environmental Management, North-West University qualifying him to audit to ISO/SANS environmental compliance and EMS standards.</p> <p>Mr Hanekom has been responsible for many environmental impact assessments and several EIA, waste license and atmospheric emission license applications as well as being involved in the implementation of several environmental management systems.</p>
<p><u>Ms Johmandie Giliomee</u> Johmandie has trained as an Environmental Assessment Practitioner since March 2009 and has been involved in the compilation, coordination and management of Basic Assessment Reports, Environmental Impact Assessments, Environmental Management Programmes, Waste License Applications, Water Use License Applications and Baseline Biodiversity Surveys for numerous clients.</p> <p>Johmandie has also been involved in conducting environmental and occupational health and safety legal compliance audits for a number of clients.</p>

## EXECUTIVE SUMMARY OF THE CONTENT OF THE BASIC ASSESSMENT REPORT:

Montagu Wine Cellar proposes to upgrade and expand their existing cellar waste water treatment works to establish a waste water treatment works at the wine cellar premises to treat cellar wash water to DWA irrigation standards.

Montagu cellar is an existing winery, situated in Montagu, which processes about 15 078 tons of grapes per annum, producing 10,5 million liters of red and white wine. The wine is mostly sold as bulk wine, while about 3750 liters are bottled (5 000 cases). 1,9 Million liters grape juice is also produced to be concentrated to 410 000 liters as well as 1,2 million liters distilling wine.

Due to its activities water is used and wastewater is produced. This wastewater has a high organic load, mainly during the harvesting season and must be correctly treated to prevent contamination of the environment. The effluent volume is currently about 11 000 m<sup>3</sup> per season. The average wastewater volume during the harvesting season is calculated on 100m<sup>3</sup>/ day, varying from 55 – 155 m<sup>3</sup>/day. During the “off – season”, water consumption drops to 30 - 40 m<sup>3</sup>/day.

Until the 2013 season a wastewater pre - treatment system was designed and built, consisting mainly of a mechanical, solid separation system, lime treatment and settling pits (Delta separator) to settle the filter powder. Wastewater is currently disposed of by irrigation on 0,75 ha on plot 1721 but mainly removal by tanker and disposed of on a farmer's land. The over irrigation of plot 1721 caused problems with bad smells, and also pollution of the Kingna River. The cellar has also received complaints from the local municipality and the municipal WWTW does not have the capacity to handle the cellar waste water. Transporting all the wastewater away in a tanker and dumping it on farmland, where it could not cause any pollution, temporarily solved the problem.

The reason why Montagu cellar is now proposing the upgrade and expansion of their existing WWTW is because the municipality does not have the capacity and infrastructure to treat the wastewater. Negotiations have been going on for years with the municipality, but to no avail. None of the farmers want to allow the dumping of wastewater onto their properties anymore.

Because of its environmental responsibilities and the sensitivity of the areas where it is situated, Montagu Cellar realised that the existing treatment system had to be upgraded and expanded to accommodate the treatment of waste water from the cellar. A closed system (Bioreactor) wastewater treatment system has been designed by Dekker Envirotech to utilise the existing solid separation system and then have a closed system, in the form of a tank with mechanical aeration for COD degradation. This will be followed with by another tank, which will serve as clarifier. The effluent, treated to irrigation standards, will be conveyed by pipeline to the Golf Course, where it will be mixed with water from the Cogmanskloof Irrigation Board (“CBR”) and irrigated on 11ha golf course irrigation area. In case of an emergency Montagu Cellar also has authorisation to irrigate the treated waste water unto Erf 1721 (0.75ha)

**Proposed waste water treatment works upgrade and expansion** - The winery effluent comprises only cellar wash water (excluding sewage and condensate). The system design is based on standard aerobic biological treatment in pre-fabricated steel tanks with internal HDPE liners and comprises the following operational units:

### **1. Screening (existing infrastructure which will be expanded)**

Mechanical screens remove the pips and skins from the cellar wash water (these screened solids will be removed and mixed with bulk grape solids for composting).

### **2. Lime dosing (existing infrastructure which will be expanded)**

Lime is mixed in a concentrate/tank and then continuously dosed into the winery effluent stream; the purpose is to neutralise the effluent prior to biological treatment.

### **3. Settling (existing infrastructure)**

The delta-separator allows for removal of settleable material, consisting mainly of insoluble lime and filter aid material (these settled solids will be removed and mixed with bulk grape solids for composting).

### **4. Bioreactor (New infrastructure to allow for the expansion of the existing waste water treatment system)**

These will be pre-fabricated steel tanks (two tanks) of 360 m<sup>3</sup> with internal HDPE liner and fitted with mechanical aeration to provide sufficient dissolved oxygen for biological COD degradation. The hydraulic

retention will be 3 days in this unit,

**5. Clarifier (New infrastructure to allow for the expansion of the existing waste water treatment system)**

A smaller steel tank of approximately 210 m<sup>3</sup> providing 2 hours for settling of the microbial biomass that developed in the previous bioreactor. The biomass will be partially returned to the bioreactor and partially removed for co-composting with the bulk grape solids waste.

**6. Final treated waste water disposal (New infrastructure to allow for the expansion of the existing waste water treatment system)**

The overflow from the clarifier tank will be compliant with DWA irrigation standard (i.e. COD < 400 mg/L) and will be pumped towards the nearby golf course for irrigation use.

**Discharge/irrigation quantities expected:**

- The main stream is discharged for 250 days per annum.
- There are seasonal discharges.
- Average discharge is - 100 m<sup>3</sup>/day (season) and 45 m<sup>3</sup>/day out of season
- Maximum discharge is 155 m<sup>3</sup>/day (season) and 65 m<sup>3</sup>/day out of season
- Average annual discharge is 18 000 m<sup>3</sup>
- Maximum annual discharge is 20 000 m<sup>3</sup>

**Treatment/technology alternative assessed:**

Several options exist to treat the wastewater but several factors will depict the system to be used like -

- The type of wastewater (Its chemical composition) and if it is sewage or plant wastewater
- The surrounding environment
- The end quality of the treated wastewater that must be achieved
- The daily volume of wastewater produced and if it is seasonal or continuous.
- The capital cost involved
- The available footprint
- Operating cost (Electrical, chemical, salaries)
- How complicated is it to operate the system?

Several treatment options exist, like the Activated Sludge System, UASB and Membrane Reactor systems, which is compact systems and capital intensive, expensive and complicated to operate. These systems also require wastewater at a more standard flow rate and quality.

More robust are the ponding and activated sludge systems. The most negative aspect of the ponding systems are that it requires a large footprint.

The Bioreactor system (preferred for Montagu Cellar) is an activated system which:

- Requires a small footprint
- Is uncomplicated to operate
- It is a proven effective system
- Low capital maintenance cost
- Has a great buffer capacity
- Can handle great fluctuations in hydraulic loads
- Will be utilizing existing infrastructure at the cellar of which the most important is the solids separating system.

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# SECTION A: ACTIVITY INFORMATION

## 1. PROJECT DESCRIPTION

(a) Is the project a new development?

NO

(b) Provide a detailed description of the development project and associated infrastructure.

Montagu Wine Cellar proposes to upgrade and expand their existing cellar waste water treatment works to establish a waste water treatment works at the wine cellar premises to treat cellar wash water to DWA irrigation standards.

The winery effluent comprises only cellar wash water (excluding sewage and condensate). The system design is based on standard aerobic biological treatment in pre-fabricated steel tanks with internal HDPE liners and comprises the following operational units:

**1. Screening (existing infrastructure which will be expanded)**

Mechanical screens remove the pips and skins from the cellar wash water (these screened solids will be removed and mixed with bulk grape solids for composting).

**2. Lime dosing (existing infrastructure which will be expanded)**

Lime is mixed in a concentrate/tank and then continuously dosed into the winery effluent stream; the purpose is to neutralise the effluent prior to biological treatment.

**3. Settling (existing infrastructure)**

The delta-separator allows for removal of settleable material, consisting mainly of insoluble lime and filter aid material (these settled solids will be removed and mixed with bulk grape solids for composting).

**4. Bioreactor (New infrastructure to allow for the expansion of the existing waste water treatment system)**

These will be pre-fabricated steel tanks (two tanks) of 360 m<sup>3</sup> with internal HDPE liner and fitted with mechanical aeration to provide sufficient dissolved oxygen for biological COD degradation. The hydraulic retention will be 3 days in this unit,

**5. Clarifier (New infrastructure to allow for the expansion of the existing waste water treatment system)**

A smaller steel tank of approximately 210 m<sup>3</sup> providing 2 hours for settling of the microbial biomass that developed in the previous bioreactor. The biomass will be partially returned to the bioreactor and partially removed for co-composting with the bulk grape solids waste.

**6. Final treated waste water disposal (New infrastructure to allow for the expansion of the existing waste water treatment system)**

The overflow from the clarifier tank will be compliant with DWA irrigation standard (i.e. COD < 400 mg/L) and will be pumped towards the nearby golf course for irrigation use. A pump will be installed next to the proposed WWTW and a 450m long 100mm PVC pipe be laid to the golf course - approximate footprint 450m<sup>2</sup>

The existing Montagu Cellar WWTW has a footprint of approximately 300m<sup>2</sup>. The proposed WWTW (including the existing) will have a footprint of approximately 1400m<sup>2</sup>

(c) List all the activities assessed during the Basic Assessment process:

GN No. R. 544 Activity No(s):	Describe the relevant <b>Basic Assessment Activity(ies)</b> in writing as per <b>Listing Notice 1</b> (GN No. R. 544)	Describe the portion of the development as per the project description that relates to the applicable listed activity.
-		
GN No. R. 546 Activity No(s):	Describe the relevant <b>Basic Assessment Activity(ies)</b> in writing as per <b>Listing Notice 3</b> (GN No. R. 546)	Describe the portion of the development as per the project description that relates to the applicable listed activity.
-		

If the application is also for activities as per **Listing Notice 2** and permission was granted to subject the application to Basic Assessment, also indicate the applicable Listing Notice 2 activities: - **N/A**

GN No. R. 545 Activity No(s):	If permission was granted in terms of Regulation 20, describe the relevant <b>Scoping and EIA Activity(ies)</b> in writing as per <b>Listing Notice 2</b> (GN No. R. 545)	Describe the portion of the development as per the project description that relates to the applicable listed activity.
<b>N/A</b>		

**Waste management activities** in terms of the NEM: WA (Government Gazette No. 32368): -

GN No. 718 Category A Activity No(s):	Describe the relevant <u>Category A</u> waste management activity in writing.	
(3)711:	The treatment of effluent, wastewater or sewage with an annual throughput capacity of more than 2 000 cubic metres but less than 15 000 cubic metres.	
(3)18:	The construction of facilities for activities listed in Category A of this Schedule (not in isolation to associated activity).	
(3)19:	The expansion of facilities of or changes to existing facilities for any process or activity, which requires an amendment of an existing permit or license or a new permit or license in terms of legislation governing the release of pollution, effluent or waste.	

**Please 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**.

If the application is also for waste management activities as per Category B and permission was granted to subject the application to Basic Assessment, also indicate the applicable Category B activities: - **N/A**

GN No. 718 – Category B Activity No(s):	Describe the relevant <u>Category B</u> waste management activity in writing.
<b>N/A</b>	

**Atmospheric emission activities** in terms of the NEM: AQA (Government Gazette No. 33064): - **N/A**

GN No. 248 Activity No(s):	Describe the relevant atmospheric emission activity in writing.
<b>N/A</b>	

(d) Please provide details of all components of the proposed project and attach diagrams (e.g. architectural drawings or perspectives, engineering drawings, process flow charts etc.). - **Refer to Appendix B**

<b>Buildings</b> (Provide brief description)	<input type="checkbox"/>	NO
<b>N/A</b>		
<b>Infrastructure (e.g. roads, power and water supply/ storage)</b> (Provide brief description)	<input checked="" type="checkbox"/>	YES
A pump will be installed next to the proposed WWTW and a 450m long 100mm PVC pipe be laid to the golf course - approximate footprint 450m <sup>2</sup>		
<b>Processing activities (e.g. manufacturing, storage, distribution)</b> (Provide brief description)	<input type="checkbox"/>	NO
<b>N/A</b>		
<b>Storage facilities for raw materials and products (e.g. volume and substances to be stored)</b> (Provide brief description)	<input type="checkbox"/>	NO
<b>N/A</b>		
<b>Storage and treatment facilities for solid waste and effluent generated by the project</b> (Provide brief description)	<input checked="" type="checkbox"/>	YES
<b>Upgrade and expansion of existing WWTW:</b>		
<b>1. Screening (existing infrastructure which will be expanded)</b> Mechanical screens remove the pips and skins from the cellar wash water (these screened solids will be removed and mixed with bulk grape solids for composting).		
<b>2. Lime dosing (existing infrastructure which will be expanded)</b> Lime is mixed in a concentrate/tank and then continuously dosed into the winery effluent stream; the purpose is to neutralise the effluent prior to biological treatment.		
<b>3. Settling (existing infrastructure)</b> The delta-separator allows for removal of settleable material, consisting mainly of insoluble lime and filter aid material (these settled solids will be removed and mixed with bulk grape solids for composting).		



<b>4. Bioreactor (New infrastructure to allow for the expansion of the existing waste water treatment system)</b> These will be pre-fabricated steel tanks (two tanks) of 360 m <sup>3</sup> with internal HDPE liner and fitted with mechanical aeration to provide sufficient dissolved oxygen for biological COD degradation. The hydraulic retention will be 3 days in this unit,	
<b>5. Clarifier (New infrastructure to allow for the expansion of the existing waste water treatment system)</b> A smaller steel tank of approximately 210 m <sup>3</sup> providing 2 hours for settling of the microbial biomass that developed in the previous bioreactor. The biomass will be partially returned to the bioreactor and partially removed for co-composting with the bulk grape solids waste.	
<b>6. Final treated waste water disposal (New infrastructure to allow for the expansion of the existing waste water treatment system)</b> The overflow from the clarifier tank will be compliant with DWA irrigation standard (i.e. COD < 400 mg/L) and will be pumped towards the nearby golf course for irrigation use.  The existing Montagu Cellar WWTW has a footprint of approximately 300m <sup>2</sup> . The proposed WWTW (including the existing) will have a footprint of approximately 1400m <sup>2</sup>	
<b>Other activities (e.g. water abstraction activities, crop planting activities)</b> (Provide brief description)	NO
N/A	

## 2. PHYSICAL SIZE OF THE ACTIVITY

(a) Indicate the size of the property (cadastral unit) on which the activity is to be undertaken	1.93ha
(b) Indicate the size of the facility (development area) on which the activity is to be undertaken	1 400m <sup>2</sup>
(c) Indicate the physical size (footprint) of the activity together with its associated infrastructure	1 850m <sup>2</sup>
(d) Indicate the physical size (footprint) of the activity	1 400m <sup>2</sup>
(e) Indicate the physical size (footprint) of the associated infrastructure	450m <sup>2</sup>

and, for linear activities: -

(f) Indicate the length of the activity:	NA
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## 3. SITE ACCESS

(a) Is there an existing access road?	YES	
(b) If no, what is the distance over which a new access road will be built? <b>N/A</b>		m
(c) Describe the type of access road planned: -		

Please Note: **indicate the position of the proposed access road on the site plan.**

## 4. DESCRIPTION OF THE PROPERTY ON WHICH THE ACTIVITY IS TO BE UNDERTAKEN AND THE LOCATION OF THE ACTIVITY ON THE PROPERTY

- (a) Provide a description of the property on which the activity is to be undertaken and the location of the activity on the property.

The proposed property is already developed upon and falls within the industrial area of Montagu. Montagu Wine Cellar with associated infrastructure is located on the proposed property. See Appendix A for a locality map.
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- (b) Please provide a location map (see below) as **Appendix A** to this report which shows the location of the property and the location of the activity on the property; as well as a site map (see below) as **Appendix B** to this report; and if applicable all alternative properties and locations.

Locality map:	<p>The scale of the locality map must be at least 1:50 000. For linear activities of more than 25 kilometres, a smaller scale e.g. 1:250 000 can be used. The scale must be indicated on the map. The map must indicate the following:</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>• the prevailing wind direction (during November to April and during May to October); and</li> <li>• GPS co-ordinates (Indicate the position of the activity using the latitude and longitude of the centre</li> </ul>
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	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).
Site Plan:	<p>Detailed site plan(s) must be prepared for each alternative site or alternative activity. The site plan must contain or conform to the following:</p> <ul style="list-style-type: none"> <li>• The detailed site plan must be at a scale preferably at a scale of 1:500 or at an appropriate scale. The scale must be indicated on the plan.</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 above or underground), water supply pipelines, boreholes, sewage pipelines, storm water infrastructure and access roads that will form part of the development must be indicated on the site plan.</li> <li>• Servitudes indicating the purpose of the 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>○ Rivers.</li> <li>○ Flood lines (i.e. 1:10, 1:50, year and 32 meter set back line from the banks of a river/stream).</li> <li>○ Ridges.</li> <li>○ Cultural and historical features.</li> <li>○ Areas with indigenous vegetation (even if it is degraded or infested with alien species).</li> </ul> </li> <li>• Whenever the slope of the site exceeds 1:10, then a contour map of the site must be submitted.</li> </ul>

(c) For a linear activity, please also provide a description of the route. ▀

NA

Indicate the position of the activity using the latitude and longitude of the centre point of the site. The co-ordinates must be in degrees, minutes and seconds. The minutes should be given to 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.	Latitude (S):			Longitude (E):		
	33°	46'	35.9"	20°	07'	58.5"

(d) or for linear activities: NA

**Please Note:** For linear activities that are longer than 500m, please provide an addendum with co-ordinates taken every 100 meters along the route.

## 5. SITE PHOTOGRAPHS

Colour photographs of the site and its surroundings (taken of the site and from 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. It 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 RECEIVING ENVIRONMENT

## Site/Area Description

For linear activities (pipelines, etc.) as well as activities 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 which is covered by each copy No. on the Site Plan.

## 1. GRADIENT OF THE SITE

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

Flat	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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## 2. LOCATION IN LANDSCAPE

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

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Open valley	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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(b) Please provide a description of the location in the landscape.

The town Montagu is located within an open valley area in-between a mountain range.
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## 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)	<input type="checkbox"/>	NO	<input type="checkbox"/>
Seasonally wet soils (often close to water bodies)	<input type="checkbox"/>	NO	<input type="checkbox"/>
Unstable rocky slopes or steep slopes with loose soil	<input type="checkbox"/>	NO	<input type="checkbox"/>
Dispersive soils (soils that dissolve in water)	<input type="checkbox"/>	NO	<input type="checkbox"/>
Soils with high clay content	<input type="checkbox"/>	NO	<input type="checkbox"/>
Any other unstable soil or geological feature	<input type="checkbox"/>	NO	<input type="checkbox"/>
An area sensitive to erosion	<input type="checkbox"/>	NO	<input type="checkbox"/>
An area adjacent to or above an aquifer.	<input type="checkbox"/>	NO	<input type="checkbox"/>
An area within 100m of the source of surface water	<input type="checkbox"/>	NO	<input type="checkbox"/>

(b) If any of the answers to the above are "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. Where it exists, the 1:50 000 scale Regional Geotechnical Maps prepared by Geological Survey may also be used).

(c) Please indicate the type of geological formation underlying the site.

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Other (describe)
Please provide a description.						
Soils with minimal development, usually shallow on hard or weathering rock, with or without intermittent diverse soils. Lime generally present in part or most of the landscape, derived from the Bokkeveld group.						

## 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	<input type="checkbox"/>	NO	<input type="checkbox"/>
Non-Perennial River	YES	<input type="checkbox"/>	<input type="checkbox"/>
Permanent Wetland	<input type="checkbox"/>	NO	<input type="checkbox"/>
Seasonal Wetland	<input type="checkbox"/>	NO	<input type="checkbox"/>
Artificial Wetland	<input type="checkbox"/>	NO	<input type="checkbox"/>
Estuarine / Lagoonal wetland	<input type="checkbox"/>	NO	<input type="checkbox"/>

(b) Please provide a description.

A non-perennial Kingna river is present approximately 200 meters southeast of the proposed development site. (410m from the proposed irrigation site)
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## 5. BIODIVERSITY

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

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

Systematic Biodiversity Planning Category				If CBA or ESA, indicate the reason(s) for its selection in biodiversity plan
[REDACTED]	[REDACTED]	[REDACTED]	No Natural Area Remaining (NNR)	The proposed property is a developed industrial site.

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

Habitat Condition	Percentage of habitat condition class (adding up to 100%)	Description and additional Comments and Observations (including additional insight into condition, e.g. poor land management practises, presence of quarries, grazing/harvesting regimes etc.)
Natural		Developed industrial property.
Near Natural (includes areas with low to moderate level of alien invasive plants)		
Degraded (includes areas heavily invaded by alien plants)		
Transformed (includes cultivation, dams, urban, plantation, roads, etc.)	100%	

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

Terrestrial Ecosystems		Aquatic Ecosystems					
Ecosystem threat status as per the National Environmental Management: Biodiversity Act (Act No. 10 of 2004)	[REDACTED]	Wetland (including rivers, depressions, channelled and unchannelled wetlands, flats, seeps pans, and artificial wetlands)	Estuary		Coastline		
	[REDACTED]						
	[REDACTED]						
	[REDACTED]						
			NO		NO		NO

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

No indigenous vegetation remaining on site as the site is an developed industrial erf.

## 6. LAND USE OF THE SITE

**Please 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 activity/ies.

[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	Medium industrial	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Other land uses (describe):	Wine Cellar			

(a) Please provide a description.

The land use of the site is zoned as Industrial 1. The Montagu Wine Cellar is currently being operated on site.

## 7. LAND USE CHARACTER OF 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.

Untransformed area	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	Medium industrial	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	Golf course	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	River, stream or wetland	[REDACTED]
Mountain, koppie or ridge	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Other land uses (describe):	NA			

**Please 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 activity/ies.

(b) Please provide a description, including the distance and direction to the nearest residential area and industrial area.

The proposed property is located within the industrial area of Montagu, adjacent land uses includes industrial activities, a golf course, untransformed mountainous area and a river tributary.

## 8. SOCIO-ECONOMIC ASPECTS

(c) Describe the existing social and economic characteristics of the community in order to provide baseline information

Montagu contributes 19.54% to the GVA of the Langeberg Municipal Area.

As assessment of the Statistics SA Census of 2001 and the Community Survey of 2007 suggests that the economically active people in the municipal area increased from 51 703 in 2001 to 53 112 in 2007. This implies that 1409 more people could potentially have been absorbed into the local economy. The labour force increased at an annual average of 0.5% from 36 488 to 37 609 from 2001 to 2007, with the labour force participation rate (LFPR) remaining constant at approximately 70% in 2001 and 2007.

The number of employed persons increased by 4.5% from 26 158 in 2001 to 34 090 in 2007, which implies an employment take-up of 7 905 people in the municipal area. In 2007 the largest contributors were Agriculture 20.4%, Manufacturing (11%), and Community, Social and Personal Services (6.6%). A large percentage of respondents were recorded as not applicable institutions or unspecified and this group constituted 43.5% of the sample.

A need exists to stimulate the local economy and build on the strength of core growing sectors that deliver gross value added and employment by introducing strategies that will reduce the decline in employment and migration (Langeberg Municipality IDP 2012-2016)..

## 9. HISTORICAL AND CULTURAL ASPECTS

(a) Please be advised that if section 38 of the National Heritage Resources Act, 1999 (Act No. 25 of 1999), is applicable to your proposed development, then you are requested to furnish this Department with written comment from Heritage Western Cape as part of your public participation process. Section 38 of the Act states as follows: "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 5 000 m2 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 10 000 m2 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 National Heritage Resources Act, 1999 (Act No. 25 of 1999), must also be investigated, assessed and evaluated. Section 3(2) states as follows: "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 palaeontological 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 National Heritage Resources Act, 1999, applicable to the development?	YES	<input checked="" type="checkbox"/>	<input type="checkbox"/>
If YES, explain:	A pump will be installed next to the proposed WWTW and a 450m long 100mm PVC pipe be laid to the golf course and connect to the existing irrigation system. See NID attached under Appendix G.		
Will the development impact on any national estate referred to in section 3(2) of the National Heritage Resources Act, 1999?	<input checked="" type="checkbox"/>	NO	<input type="checkbox"/>
If YES, explain:	-		
Will any building or structure older than 60 years be affected in any way?	<input checked="" type="checkbox"/>	NO	<input type="checkbox"/>
If YES, explain:	-		

Please Note: If uncertain, the Department may request that specialist input be provided.

## 10. APPLICABLE LEGISLATION, POLICIES AND/OR GUIDELINES

- (a) Please list all legislation, policies and/or guidelines that have been considered in the preparation of this Basic Assessment Report.

LEGISLATION	ADMINISTERING AUTHORITY	TYPE Permit/ license/ authorisation/comment / relevant consideration (e.g. rezoning or consent use, building plan approval)	DATE (if already obtained):
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	N/A
National Environmental Management Waste Act, 2008 (Act No. 59 of 2008) [NEMWA] and relevant regulations	Western Cape Department of Environmental Affairs and Development Planning	Waste Management License Application	In progress

LEGISLATION	ADMINISTERING AUTHORITY	TYPE Permit/ license/ authorisation/comment / relevant consideration (e.g. rezoning or consent use, building plan approval)	DATE (if already obtained):
National Environmental Management: Biodiversity Act 10 of 2004 [NEMBA]	Western Cape Department of Environmental Affairs and Development Planning	N/A	N/A
National Environmental Management: Air Quality Act, 39 Of 2004 [NEMAQA] and Relevant Regulations	Western Cape Department of Environmental Affairs and Development Planning	N/A	N/A
National Water Act, 1998 (Act No. 36 of 1998) [NWA] and relevant regulations	Department of Water Affairs	General Authorisation	In progress
Conservation Of Agricultural Resources Act, 43 Of 1983 [CARA]	National Department of Agriculture, forestry and Fisheries Western Cape Department of Agriculture	<ul style="list-style-type: none"> <li>Weeds and the tolerance thereof</li> <li>Use of agricultural land for project implementation</li> <li>Improvement to agricultural practices</li> </ul>	N/A
Health Act, 63 Of 1977		Littering and causing a nuisance	N/A
Constitution of the Republic of South Africa, 1996		General application to individual rights of all on and adjacent to the Sites	N/A
Fencing Act, 31 of 1963		The erection and maintenance of fences.	N/A
National Building Regulations and Building Standards Act 103 of 1977 [NBRBSA] and relevant regulations		N/A	N/A
National Heritage Resources Act 25 of 1999 [NHRA]	Heritage Western Cape South African Heritage Resource Agency	N/A	N/A
National Veld and Forest Fire Act 101 of 1998 [NVFFA]		N/A	N/A
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	N/A	N/A

POLICY/ GUIDELINES	ADMINISTERING AUTHORITY
Langeberg SDF	Langeberg Municipality
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) Please describe how the legislation, policies and/or guidelines were taken into account in the preparation of this Basic Assessment Report.

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	Basic EIA process and public participation followed as described by the legislation.
NEMWA	Listed waste management activities
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	Operation of a WWTW
CARA	Weeds and the tolerance thereof.
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.

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).
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>
Oudtshoorn SDF	The requirements of the SDF in terms of agriculture, was considered during the need and desirability determination.
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 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

**Please note:** Copies of any permit(s) or licences received from any other organ of state must be attached this report as Appendix E. – **N/A**

## SECTION C: PUBLIC PARTICIPATION

The public participation process must fulfil the requirements outlined in NEMA, the EIA Regulations, and if applicable the NEM: WA and/or the NEM: AQA. This Department's *Guideline on Public Participation* (August 2010) and *Guideline on Exemption Applications* (August 2010), both of which are available on the Department's website (<http://www.capecgateway.gov.za/eadp>), must also be taken into account.

Please highlight the appropriate box to indicate whether the specific requirement was undertaken or whether there was a deviation that was agreed to by the Department.

**Although exemption was applied for and granted in terms of NEMA EIA Regulation 54(2)(d) all the conditions below have been met. Refer to Appendix F.**

1. Were all potential interested and affected parties notified of the application by –			
(a) fixing a notice board at a place conspicuous to the public at the boundary or on the fence of -			
(i) the site where the activity to which the application relates is to be undertaken; and	YES	<input type="checkbox"/>	<input type="checkbox"/>
(ii) any alternative site mentioned in the application; - <b><u>No alternative sites considered</u></b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(b) giving written notice to –			
(i) the owner or person in control of that land if the applicant is not the owner or person in control of the land;	<input type="checkbox"/>	<input type="checkbox"/>	N/A
(ii) the occupiers of the site where the activity is to be undertaken and to any alternative site where the activity is to be undertaken; - <b><u>No alternative sites considered</u></b>	YES	<input type="checkbox"/>	<input type="checkbox"/>
(iii) owners and occupiers of land adjacent to the site where the activity is to be undertaken and to any alternative site where the activity is to be undertaken;	YES	<input type="checkbox"/>	<input type="checkbox"/>
(iv) the municipal councillor of the ward in which the site and alternative site is situated and any organisation of ratepayers that represent the community in the area;	YES	<input type="checkbox"/>	<input type="checkbox"/>
(v) the municipality which has jurisdiction in the area;	YES	<input type="checkbox"/>	<input type="checkbox"/>
(vi) any organ of state having jurisdiction in respect of any aspect of the activity; and	YES	<input type="checkbox"/>	<input type="checkbox"/>
(vii) any other party as required by the competent authority;	YES	<input type="checkbox"/>	<input type="checkbox"/>
(c) placing an advertisement in -			
(i) one* local newspaper; and	YES	<input type="checkbox"/>	<input type="checkbox"/>
(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;	<input type="checkbox"/>	<input type="checkbox"/>	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 local municipality in which it is or will be undertaken	YES	<input type="checkbox"/>	<input type="checkbox"/>

\* **Please note:** In terms of the NEM: WA and NEM: AQA a notice must be placed in at least two newspapers circulating in the area in which the activity applied for is to be carried out.



<b>2. Provide a list of all the state departments that were consulted:</b>
Liaison with the relevant authorities plays a crucial role in the successful completion of any environmental assessment process. In addition to the DEA&DP, the key departments such as the provincial departments having jurisdiction in respect of any aspect of the project, the local municipality and municipal councillor as well as other potentially affected I&APs, including adjacent property owners and dwellers, were identified. The departments listed above were thus identified per the requirements of the Regulation 55 of R.543. <b>A list with complete details of the affected departments and all other I&amp;APs is attached in Appendix F.</b>
DEA&DP: Pollution Management
DEA&DP: Land Management
Department of Water Affairs: Bellville Regional Office
Cape Winelands District Municipality
Langeberg Municipality
CapeNature
Heritage Western Cape
Department of Health

<b>3. Please provide an overall summary of the Public Participation Process that was followed. (The detailed outcomes of this process must be included in a comments and response report to be attached to the final Basic Assessment Report (see note below) as Appendix F).</b>
<p>Public participation is an integral part of the environmental assessment process, and affords potentially interested and affected parties (I&amp;APs) an opportunity to participate in the EIA process, or to comment on any aspect of the development proposals. The public participation process undertaken thus far and to be undertaken for this project complies with the requirements of the EIA Regulations. The description of the public participation process as included below itemizes the steps and actions undertaken to date and as appropriate at this stage of the project</p> <p>Notification of I&amp;APs</p> <p>Potential I&amp;AP's have been notified about the project in the following manner (this is in compliance with Regulation 54 of GN R543).</p> <ul style="list-style-type: none"> <li>• Fixing notice boards at the boundary of the property in compliance with Regulation 54(2)(a)(i) of GN R543;</li> <li>• Written notifications were sent to potential I&amp;APs inviting them to register and give comments on the proposed development. These notifications are in line with the requirements of Regulation 54(2)(b) of GN R543; and</li> <li>• Placing an advertisement in two provincial newspapers in compliance with Regulation 54(2)(c)(i) of GN R543.</li> </ul> <p>All potential I&amp;APs were afforded the opportunity to register for the project. All registered I&amp;APs will be informed of further activities regarding the project.</p> <p>Public Meetings and Workshops</p> <p>No public meetings have been held as of yet. The need for public meetings and / or workshops will be determined during the course of the public participation process.</p> <p>Availability of the draft Basic Assessment Report</p> <p>As per the requirements of Regulation 56 of GN R543, the draft Basic Assessment Report (BAR) will be made available to all relevant state departments and all registered I&amp;APs for a 40 day commenting period.</p> <p>The BAR will be included for statutory comment with the written notice as sent to the commenting organs of state. The reports will also made available at public venues for viewing by the general public. Electronic copies (CDs) will be made available to any department or I&amp;AP on request.</p> <p>Proof of delivery and document placement will be attached to the final BAR. Additionally, the report will be made available to any I&amp;AP upon request, as advised on the notice boards, notices and advertisements referred to above.</p> <p>Comments received will be responded to as per the requirements of Regulation 57 of GN R543. The comments and response report as well as all comments received will be attached to the final BAR.</p>

## Public Participation during the final BAR Phase

Once all comments have been received, the BAR will be finalised taking into account the comments. The final BAR will be submitted to the registered I&AP's and Key Departments for a 21 day period to provide them the opportunity to comment on the findings of the amended report. The final BAR will simultaneously be submitted to the DEA&DP for approval. As per the requirements of the GN R543, should any additional comments be received during this stage, these will be submitted to the DEA&DP.

## Decision and Appeal Period

Once the DEA&DP have reviewed the final BAR and are satisfied that it contains sufficient information to make an informed decision, the DEA&DP will use the information contained within the BAR to determine the environmental acceptability of the proponent's preferred options. A decision on the applications and associated reports will be made by the DEA&DP based on the findings of the BAR.

Following the issuing of the decision, all registered I&APS will be notified. As per Regulations 60 to 62 of the GN R543, all I&APs will be provided with the opportunity to appeal the decision to the MEC of the DEA&DP in terms of the NEMA.

### **Please note:**

*Should any of the responses be "No" and no deviation or exemption from that requirement was requested and agreed to / granted by the Department, the Basic Assessment Report will be rejected.*

*A list of all the potential interested and affected parties, including the organs of State, notified and a list of all the register of interested and affected parties, must be submitted with the final Basic Assessment Report. The list of registered interested and affected parties must be opened, maintained and made available to any person requesting access to the register in writing.*

*The draft Basic Assessment Report must be submitted to the Department before it is made available to interested and affected parties, including the relevant organs of State and State departments which have jurisdiction with regard to any aspect of the activity, for a 40-day commenting period. With regard to State departments, the 40-day period commences the day after the date on which the Department as the competent/licensing authority requests such State department in writing to submit comment. The applicant/EAP is therefore required to inform this Department in writing when the draft Basic Assessment Report will be made available to the relevant State departments for comment. Upon receipt of the Draft Basic Assessment Report and this confirmation, this Department will in accordance with Section 24O(2) and (3) of the NEMA request the relevant State departments to comment on the draft report within 40 days.*

*All comments of interested and affected parties on the draft Basic Assessment Report must be recorded, responded to and included in the Comments and Responses Report included as **Appendix F** to the final Basic Assessment Report. If necessary, any amendments in response to comments received must be effected in the Basic Assessment Report itself. The Comments and Responses Report must also include a description of the public participation process followed.*

*The final Basic Assessment Report must be made available to registered interested and affected parties for comment before submitting it to the Department for consideration. Unless otherwise indicated by the Department, a final Basic Assessment Report must be made available to the registered interested and affected parties for comment for a minimum of 21-days. Comments on the final Basic Assessment Report does not have to be responded to, but the comments must be attached to the final Basic Assessment Report.*

*The minutes of any meetings held by the EAP with interested and affected parties and other role players which record the views of the participants must also be submitted as part of the public participation information to be attached to the final Basic Assessment Report as **Appendix F**.*

*Proof of all the notices given as indicated, as well as of notice to the interested and affected parties of the availability of the draft Basic Assessment Report and final Basic Assessment Report must be submitted as part of the public participation information to be attached to the final Basic Assessment Report as **Appendix F**.*

## SECTION D: NEED AND DESIRABILITY

**Please Note:** Before completing this section, first consult this Department's Guideline on Need and Desirability (August 2010) available on the Department's website (<http://www.capegateway.gov.za/eaddp>).

1. Is the activity permitted in terms of the property's existing land use rights?	YES	<input checked="" type="checkbox"/>	Please explain
The activity will not change the existing land use. It will form part of the existing WWTW and associated infrastructure of the wine cellar on site.			
2. Will the activity be in line with the following?			
(a) Provincial Spatial Development Framework (PSDF)	YES	<input checked="" type="checkbox"/>	Please explain
The activity will not change the existing land use. It will form part of the existing WWTW and associated infrastructure of the wine cellar on site.			
(b) Urban edge / Edge of Built environment for the area	YES	<input checked="" type="checkbox"/>	Please explain
It will form part of the existing WWTW and associated infrastructure of the wine cellar on site.			
(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 IDP and SDF?)	YES	<input checked="" type="checkbox"/>	Please explain
The activity will not change the existing land use. It will form part of the existing WWTW and associated infrastructure of the wine cellar on site.			
(d) Approved Structure Plan of the Municipality	YES	<input checked="" type="checkbox"/>	Please explain
The activity will not change the existing land use. It will form part of the existing WWTW and associated infrastructure of the wine cellar on site.			
(e) An Environmental Management Framework (EMF) adopted by the Department (e.g. Would the approval of this application compromise the integrity of the existing environmental management priorities for the area and if so, can it be justified in terms of sustainability considerations?)	<input checked="" type="checkbox"/>	NO	Please explain
No approved EMF available for the area.			
(f) Any other Plans (e.g. Guide Plan)	<input checked="" type="checkbox"/>	NO	Please explain
N/A			
3. Is the land use (associated with the activity being applied for) considered within the timeframe intended by the existing approved Spatial Development Framework (SDF) agreed to by the relevant environmental authority (i.e. is the proposed development in line with the projects and programmes identified as priorities within the credible IDP)?	YES	<input checked="" type="checkbox"/>	Please explain
The activity will not change the existing land use. It will form part of the existing WWTW and associated infrastructure of the wine cellar on site.			
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 here at this point in time?	YES	<input checked="" type="checkbox"/>	Please explain
An urgent need exists to treat the cellar waste water to DWA standards to allow for the treated waste water to be released into the environment.			
5. Does the community/area need the activity and the associated land use concerned (is it a societal priority)? (This refers to the strategic as well as local level (e.g. development is a national priority, but within a specific local context it could be inappropriate.)	YES	<input checked="" type="checkbox"/>	Please explain
An urgent need exists to treat the cellar waste water to DWA standards to allow for the treated waste water to be released into the environment.			
6. Are the necessary services with adequate capacity currently available (at the time of application), or must additional capacity be created to cater for the development? (Confirmation by the relevant Municipality in this regard must be attached to the final Basic Assessment Report as <b>Appendix E</b> .)	YES	<input checked="" type="checkbox"/>	Please explain
No additional capacity in terms of municipal service provision will be required.			
7. Is this development provided for in the infrastructure planning of the municipality, and if not what will the implication be on the infrastructure planning of the municipality (priority and placement of services and opportunity costs)? (Comment by the relevant Municipality in this regard must be attached to the final Basic Assessment Report as <b>Appendix E</b> .)	YES	<input checked="" type="checkbox"/>	Please explain
The project will not impact on the planned infrastructure of the municipality. It will also not affect the land use. No additional services will be required for the implementation of this project.			
8. Is this project part of a national programme to address an issue of national concern or importance?	<input checked="" type="checkbox"/>	NO	Please explain
Expansion of Montagu Wine Cellar WWTW.			

9. Do location factors favour this land use (associated with the activity applied for) at this place? (This relates to the contextualisation of the proposed land use on this site within its broader context.)	YES	<input checked="" type="checkbox"/>	Please explain
<b>Existing WWTW can be expanded and adapted to accommodate proposed activities.</b>			
10. How will the activity or the land use associated with the activity applied for, impact on sensitive natural and cultural areas (built and rural/natural environment)? Please explain			
<b>The activity will not occur in an area of either natural or cultural sensitivity.</b>			
11. How will the development impact on people's health and wellbeing (e.g. in terms of noise, odours, visual character and sense of place, etc)? Please explain			
<b>The proposed development will have a positive on people's health and wellbeing within the surrounding areas, as the proposed expansion and upgrade of the existing WWTW will decrease chances of bad odours being produced at the WWTW and improve the quality of the treated waste water leaving the site.</b>			
12. Will the proposed activity or the land use associated with the activity applied for, result in unacceptable opportunity costs?		NO	Please explain
<b>Expansion and upgrade of existing WWTW</b>			
13. What will the cumulative impacts (positive and negative) of the proposed land use associated with the activity applied for, be? Please explain			
<b>Improved quality of waste water being released into the environment and an additional source of recycled irrigation water for the nearby golf course.</b>			
14. Is the development the best practicable environmental option for this land/site?	YES	<input checked="" type="checkbox"/>	Please explain
<b>Improved quality of waste water being released into the environment and an additional source of recycled irrigation water for the nearby golf course.</b>			
15. What will the benefits be to society in general and to the local communities? Please explain			
<b>Improved quality of waste water being released into the environment and an additional source of recycled irrigation water for the nearby golf course.</b>			
16. Any other need and desirability considerations related to the proposed activity? Please explain			
<b>N/A</b>			
17. Please describe how the general objectives of Integrated Environmental Management as set out in section 23 of 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 in 18.</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> </ul>			
18. Please describe how the principles of environmental management as set out in section 2 of NEMA have been taken into account:			
<p>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 into the EMP.</p> <p>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.</p> <p>All specialists involved in the planning and design of the activity are independent and ensured that the effects of the activities on the environment receive adequate consideration before recommendations and actions taken in connection with them are proposed to be included in the EA conditions and EMP. 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.</p> <p>A full public participation process as described in the legislation and guidelines is followed. Refer to Appendix F. The proposed development will not have an impact on an endangered vegetation type, and should not lead to the loss of any conservation worthy species or habitat and ecological functioning. The opinion of the biodiversity specialist concludes that this development should not result in the loss of any species. The proposed development will not disturb the sites that constitute the nation's cultural heritage. The proposed development will follow an Integrated Waste Management Approach. The proposed</p>			

development will not exceed or exploit renewable resources to an extent that they reach a level beyond which their integrity is jeopardised. A risk-averse and caution first approach is being applied. Specialists were employed to design and plan the development layout. All alternatives were assessed against the no go or no development option. All impacts and aspects were assessed and identified. Both specialists and the public through the public participation process identified impacts and aspects. The proposed development will prevent pollution and reduce impacts on scarce non-renewable resources. An environmental management plan is included. This will guide the responsibilities in execution as stipulated above. The social, economic and environmental impacts of activities, including disadvantages and benefits, were considered, assessed and evaluated, and decisions are appropriate in the light of such consideration and assessment (Refer to sections in the basic assessment report as well as specialist reports under Appendix G). The proposed development gives attention to sensitive, vulnerable, highly dynamic or stressed ecosystems, such as both the natural veld and archaeological sites.

## SECTION E: ALTERNATIVES

**Please Note:** Before completing this section, first consult this Department's Guideline on Alternatives (August 2010) available on the Department's website (<http://www.capegateway.gov.za/eadp>).

"Alternatives", in relation to a proposed activity, means different means of meeting the general purposes and requirements of the activity, which may include alternatives to –

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

The NEMA 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 NEMA and the National Environmental Management Principles set out in 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 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 NEMA.

1. In the sections below, please provide a description of any identified and considered alternatives and alternatives that were found to be feasible and reasonable.

**Please note:** Detailed written proof the investigation of alternatives must be provided and motivation if no reasonable or feasible alternatives exist.

- (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:

The main factors considered during placement/layout of the proposed infrastructures includes:

- Location of the existing WWTW;
- Open areas available on the property for the placement of the required infrastructure to upgrade and expand the existing WWTW;
- Location in terms of the existing cellar from where the waste water is produced; and
- Placement of WWTW in terms of the golf course for irrigations of treated waste water.

These factors determined the placement/layout of the proposed WWTW infrastructure and upgrades therefore no other property/location alternatives are reasonable or feasible.

- (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:

### **Activity alternative A1:**

Expanding and upgrading the current WWTW, and irrigating treated waste water onto the nearby golf course.

**Activity alternative A2:**

Current cellar WWTW to remain as is, and waste water to be disposed of at the municipal waste water treatment works. The municipal WWTW does not have the capacity to treat the cellar waste water therefore alternative A2 is not preferred.

- 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 main factors considered during placement/layout of the proposed infrastructures includes:

- Location of the existing WWTW;
- Open areas available on the property for the placement of the required infrastructure to upgrade and expand the existing WWTW;
- Location in terms of the existing cellar from where the waste water is produced; and
- Placement of WWTW in terms of the golf course for irrigations of treated waste water.

These factors determined the placement/layout of the proposed WWTW infrastructure and upgrades therefore no other design/layout alternatives are reasonable or feasible.

- d) Technology alternatives (e.g. to reduce resource demand and 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 technology proposed for the WWTW have been selected to ensure that all the needs of Montagu Cellar and surrounding landowners are met, in terms of preventing system failure and ensuring that no strong odours is produced and that the waste water is treated to DWA standards. Therefore no other reasonable or feasible technology alternatives exist.

Several options exist to treat the wastewater but several factors will depict the system to be used like -

- The type of wastewater (Its chemical composition) and if it is sewage or plant wastewater
- The surrounding environment
- The end quality of the treated wastewater that must be achieved
- The daily volume of wastewater produced and if it is seasonal or continuous.
- The capital cost involved
- The available footprint
- Operating cost (Electrical, chemical, salaries)
- How complicated is it to operate the system?

Several treatment options exist, like the Activated Sludge System, UASB and Membrane Reactor systems, which is compact systems and capital intensive, expensive and complicated to operate. These systems also require wastewater at a more standard flow rate and quality.

More robust are the ponding and activated sludge systems. The most negative aspect of the ponding systems is that it requires a large footprint.

The Bioreactor system (preferred for Montagu Cellar) is an activated system which:

- Requires a small footprint
- Is uncomplicated to operate
- It is a proven effective system
- Low capital maintenance cost
- Has a great buffer capacity
- Can handle great fluctuations in hydraulic loads
- Will be utilizing existing infrastructure at the cellar of which the most important is the solids separating system.

- 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:

Once operational, the only activities that will be undertaken are related to maintenance, monitoring and upkeep of the WWTW and associated infrastructure.

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

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

Currently the WWTW are being pumped into a tanker on a regular basis and disposed of on a privately owned farm outside of Montagu. The landowner has informed Montagu Cellar that he will no longer allow disposal of the treated waste water on his land therefore urgent alternatives must be assessed and implemented.

As was previously mentioned the municipal WWTW does not have the capacity to handle the waste water from the Montagu Cellar therefore the only alternative that remains is for Montagu Cellar to expand and upgrade their current WWTW. This will allow Montagu Cellar to treat their waste water to DWA standards and due to the close proximity of the golf course; the treated waste water can be used for irrigation.

(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 were assessed see summary below.

(h) Please provide a summary of the alternatives investigated and the outcomes of such investigation:

**Property/location and design alternatives:**

The main factors considered during placement/layout and design of the proposed infrastructure includes:

- Location of the existing WWTW;
- Open areas available on the property for the placement of the required infrastructure to upgrade and expand the existing WWTW;
- Location in terms of the existing cellar from where the waste water is produced; and
- Placement of WWTW in terms of the golf course for irrigations of treated waste water.

These factors determined the placement/layout and design of the proposed WWTW infrastructure and upgrade therefore no other property/location and design alternatives are reasonable or feasible to assess.

**Activity alternatives:**

**Activity alternative A1:**

Expanding and upgrading the current WWTW, and irrigating treated waste water onto the nearby golf course.

**Activity alternative A2:**

Current cellar WWTW to remain as is, and waste water to be disposed of at the municipal waste water treatment works. The municipal WWTW does not have the capacity to treat the cellar waste water therefore alternative A2 is not preferred.

**Technology alternatives:**

The technology proposed for the WWTW have been selected to ensure that all the needs of Montagu Cellar and surrounding landowners are met, in terms of preventing system failure and ensuring that no strong odours is produced and that the waste water is treated to DWA standards. Therefore no other reasonable or feasible technology alternatives exist.

**Operational alternatives:**

Once operational, the only activities that will be undertaken are related to maintenance, monitoring and upkeep of the WWTW and associated infrastructure.

**No-go Option:**

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

Currently the WWTW are being pumped into a tanker on a regular basis and disposed of on a privately owned farm outside of Montagu. The landowner has informed Montagu Cellar that he will no longer allow disposal of the treated waste water on his land therefore urgent alternatives must be assessed and implemented.

As was previously mentioned the municipal WWTW does not have the capacity to handle the waste water from the Montagu Cellar therefore the only alternative that remains is for Montagu Cellar to expand and

upgrade their current WWTW. This will allow Montagu Cellar to treat their waste water to DWA standards and due to the close proximity of the golf course; the treated waste water can be used for irrigation.

**Please note:** If no feasible and reasonable alternatives exist, the description and proof of the investigation of alternatives, together with motivation of why no feasible or reasonable alternatives exist, must be provided.

## SECTION F: IMPACT ASSESSMENT, MANAGEMENT, MITIGATION AND MONITORING MEASURES

**Please note:** The information in this section must be duplicated for all the feasible and reasonable alternatives (where relevant).

### 1. PLEASE DESCRIBE THE MANNER IN WHICH THE DEVELOPMENT WILL IMPACT ON THE FOLLOWING ASPECTS:

(a) Geographical and physical aspects:

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

The sensitive natural and cultural land uses were assessed during the EIA process and the development layout is designed according to such parameters.

(b) Biological aspects:

Will the development have an impact on critical biodiversity areas (CBAs) or ecological support areas (CSAs)? If yes, please describe:	<input checked="" type="checkbox"/>	NO
N/A		
Will the development have an impact on terrestrial vegetation, or aquatic ecosystems (wetlands, estuaries or the coastline)? If yes, please describe:	<input checked="" type="checkbox"/>	NO
There will be no impact on any aquatic ecosystems.		
Will the development 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 describe:	<input checked="" type="checkbox"/>	NO
N/A.		
Please describe the manner in which any other biological aspects will be impacted:		
Biological aspects will not be impacted upon by the proposed development.		

(c) Socio-Economic aspects:

What is the expected capital value of the activity on completion?	Unknown	
What is the expected yearly income or contribution to the economy that will be generated by or as a result of the activity?	N/A	
Will the activity contribute to service infrastructure?	<input checked="" type="checkbox"/>	YES
How many new employment opportunities will be created in the construction phase of the activity?	Unknown	
What is the expected value of the employment opportunities during the construction phase?	Unknown	
What percentage of this will accrue to previously disadvantaged individuals?	-	
How will this be ensured and monitored (please explain):		
Will make use of local and respected contractors as far as possible. For specialised equipment and installations, outside specialist resources will be used.		
How many permanent new employment opportunities will be created during the operational phase of the activity?	0	
What is the expected current value of the employment opportunities during the first 10 years?	N/A	
What percentage of this will accrue to previously disadvantaged individuals?	N/A	
How will this be ensured and monitored (please explain):		
N/A		
Any other information related to the manner in which the socio-economic aspects will be impacted:		
N/A		



(d) Cultural and historic aspects:

No cultural or historical aspects will be impacted upon by the proposed development, as development will occur on existing developed industrial erf.

## 2. WASTE AND EMISSIONS

(a) Waste (including effluent) management

Will the activity produce waste (including rubble) during the construction phase?	<input checked="" type="checkbox"/>	<b>NO</b>
If yes, indicate the types of waste (actual type of waste, e.g. oil, and whether hazardous or not) and estimated quantity per type?	-	
-		
Will the activity produce waste during its operational phase?	YES	<input checked="" type="checkbox"/>
If yes, indicate the types of waste (actual type of waste, e.g. oil, and whether hazardous or not) and estimated quantity per type?	-	
<b>Discharge/irrigation quantities expected:</b>		
<ul style="list-style-type: none"> <li>• The main stream is discharged for 250 days per annum.</li> <li>• There are seasonal discharges.</li> <li>• Average discharge is - 100 m<sup>3</sup>/day (season) and 45 m<sup>3</sup>/day out of season</li> <li>• Maximum discharge is 155 m<sup>3</sup>/day (season) and 65 m<sup>3</sup>/day out of season</li> <li>• Average annual discharge is 18 000 m<sup>3</sup></li> <li>• Maximum annual discharge is 20 000 m<sup>3</sup></li> </ul>		
Where and how will the waste be treated / disposed of (describe)?		
The treated waste water from the proposed WWTW will be pumped to the nearby golf course to be used for irrigation purposes.		
Has the municipality or relevant authority confirmed that sufficient capacity exist for treating / disposing of the waste to be generated by this activity(ies)? If yes, provide written confirmation from Municipality or relevant authority – N/A	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Will the activity produce waste that will be treated and/or disposed of at another facility other than into a municipal waste stream?	YES	<input checked="" type="checkbox"/>
If yes, has this facility confirmed that sufficient capacity exist for treating / disposing of the waste to be generated by this activity(ies)? Provide written confirmation from the facility and provide the following particulars of the facility - N/A	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Does the facility have an operating license? (If yes, please attach a copy of the license.) - N/A	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Facility name:		
Contact person:		
Postal address:		
	Postal code:	
Telephone:	Cell:	
E-mail:	Fax:	
Describe the measures that will be taken to reduce, reuse or recycle waste:		
All wash water produced by the wine cellar will be treated at the proposed WWTW to DWA standards and then re-used as irrigation water at the golf course.		

(b) Emissions into the atmosphere

Will the activity produce emissions that will be disposed of into the atmosphere?	<input checked="" type="checkbox"/>	<b>NO</b>
If yes, does it require approval in terms of relevant legislation? – N/A	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Describe the emissions in terms of type and concentration and how it will be treated/mitigated:		
-		

## 3. WATER USE

Please indicate the source(s) of water for the activity by ticking the appropriate box(es)

Municipal	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
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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 - N/A	m <sup>3</sup>
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Please provide proof of assurance of water supply (eg. Letter of confirmation from municipality / water user associations, yield of borehole)	
Does the activity require a water use permit / license from DWAF?	YES <input type="checkbox"/> <input checked="" type="checkbox"/>
If yes, please submit the necessary application to Department of Water Affairs and attach proof thereof to this application.	
Describe the measures that will be taken to reduce water demand, and measures to reuse or recycle water:	
All wash water produced by the wine cellar will be treated at the proposed WWTW to DWA standards and then re-used as irrigation water at the golf course.	

#### 4. POWER SUPPLY

Please indicate the source of power supply eg. Municipality / Eskom / Renewable energy source
Eskom
If power supply is not available, where will power be sourced from?
A back-up generator will used in case of an emergency.

#### 5. ENERGY EFFICIENCY

Describe the design measures, if any, that have been taken to ensure that the activity is energy efficient:
N/A
Describe how alternative energy sources have been taken into account or been built into the design of the activity, if any:
N/A

#### 6. DESCRIPTION AND ASSESSMENT OF THE SIGNIFICANCE OF IMPACTS PRIOR TO AND AFTER MITIGATION

**Please note:** While sections are provided for impacts on certain aspects of the environment and certain impacts, the sections should also be copied and completed for all other impacts.

Describe impacts in terms of the following aspects:

1. Potential impacts on geographical and physical aspects
2. Potential impacts on biodiversity aspects
3. Potential impacts on socio-economic aspects
4. Potential impacts on the cultural-historical aspects
5. Potential noise impacts
6. Potential visual impacts

(a) Impacts that may result from the planning, design and construction phase (briefly describe and compare the potential impacts (as appropriate), significance rating of impacts, proposed mitigation and significance rating of impacts after mitigation that are likely to occur as a result of the planning, design and construction phase.

##### 1. Potential Impacts on Geographical and Physical Aspects:

1.1 Potential impacts on geographical and physical aspects:	
Nature of impact:	Impact of possible oil or diesel spills on the environment during construction activities
Source of impact:	Construction vehicles and equipment
Extent and duration of impact:	Short Term
Probability of occurrence:	Probable
Degree to which the impact can be reversed:	Reversible
Degree to which the impact may cause irreplaceable loss of resources:	The resource will not be lost - Low
Cumulative impact prior to mitigation:	Diesel and oil spills affecting ground and water quality within the area
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Medium
Degree to which the impact can be mitigated:	Can mitigate completely
Proposed mitigation:	Mitigation measures, as outlined in the EMP attached as Appendix H must be adhered to. For example: <ul style="list-style-type: none"> <li>• Place drip trays underneath construction</li> </ul>

	<p>vehicles and equipment.</p> <ul style="list-style-type: none"> <li>• Ensure that all vehicles and equipment does not leak and are kept in a good condition.</li> <li>• Report any leakage or spillage detected and implement rehabilitation measures of affected area immediately.</li> <li>• Bund any fuel storage areas with impermeable materials.</li> </ul>
<b>Cumulative impact post mitigation:</b>	Reduced diesel and oil spills impacting on ground and surface water quality.
<b>Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)</b>	Very Low

## 2. Potential Impacts on Biodiversity Aspects:

The proposed development will not impact on any biodiversity aspects of the site during the construction phase.

## 3. Potential Impacts on Socio-economic Aspects:

<b>3.1 Potential impacts on socio-economic aspects:</b>	
Nature of impact:	Impact of construction workers on local community safety and security
Extent and duration of impact:	Extent: Local Duration: Short term
Probability of occurrence:	Unlikely
Degree to which the impact can be reversed:	Reversible
Degree to which the impact may cause irreplaceable loss of resources:	No resources will be lost
Cumulative impact prior to mitigation:	Theft of property of local communities
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	High
Degree to which the impact can be mitigated:	Can be mitigated completely
Proposed mitigation:	Construction personnel to be restricted to the perimeters of the construction site. Fines to be allocated as according to the EMP if personnel do not comply.
Cumulative impact post mitigation:	Management and control of construction personnel
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Low

<b>3.2 Potential impacts on socio-economic aspects:</b>	
Nature of impact:	Temporary construction job opportunities
Extent and duration of impact:	Extent: Local Duration: Temporary
Probability of occurrence:	Definite
Degree to which the impact can be reversed:	N/A – positive impact
Degree to which the impact may cause irreplaceable loss of resources:	No resources will be lost
Cumulative impact prior to mitigation:	Temporarily the additional jobs created will contribute to the local employment levels.
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Positive impact – Low
Degree to which the impact can be mitigated:	N/A – positive impact
Proposed mitigation:	N/A – positive impact
Cumulative impact post mitigation:	N/A – positive impact
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	N/A – positive impact

<b>3.3 Potential impacts on socio-economic aspects:</b>	
Nature of impact:	Impact of litter/waste produced during the construction phase on the surrounding communities
Extent and duration of impact:	Extent: Local Duration: Short term
Probability of occurrence:	Unlikely
Degree to which the impact can be reversed:	Reversible

Degree to which the impact may cause irreplaceable loss of resources:	No resources will be lost
Cumulative impact prior to mitigation:	Litter/waste from construction activities and staff polluting the surrounding environment and causing a nuisance to the local communities
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Medium
Degree to which the impact can be mitigated:	Can be mitigated completely
Proposed mitigation:	Appropriate refuse disposal facilities shall be provided at the proposed construction site, to be emptied regularly at the licensed municipal landfill site.
Cumulative impact post mitigation:	Controlled and reduced litter and waste pollution.
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Very Low

#### 4. Potential Impacts on the Cultural-historical Aspects

4.1 Potential impacts on cultural-historical aspects:	
Nature of impact:	Any cultural or historical features found on the site during construction may be destroyed if proper mitigation measures are not implemented.
Extent and duration of impact:	Extent: Footprint Duration: Permanent
Probability of occurrence:	Unlikely
Degree to which the impact can be reversed:	Irreversible
Degree to which the impact may cause irreplaceable loss of resources:	Resource cannot be replaced once lost.
Cumulative impact prior to mitigation:	Should any historical or cultural features be destroyed it will contribute to the loss of such features locally. It will also contribute to the national and international loss of heritage features.
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	High
Degree to which the impact can be mitigated:	Can mitigate completely
Proposed mitigation:	Should any cultural or historic features be discovered on the site, a heritage specialist should be contacted immediately regarding the removal and preservation of such features before construction continues.
Cumulative impact post mitigation:	None
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Very Low

#### 5. Potential Noise Impacts:

5.1 Potential noise impacts:	
Nature of impact:	Noise will be created due to the vehicles used to transport the infrastructure components. Noise will also be generated during the construction activities. This may impact on the surrounding communities and passers-by.
Extent and duration of impact:	Extent: Site Duration: 6-8 months from date of commencement on site
Probability of occurrence:	Probable
Degree to which the impact can be reversed:	Completely reversible
Degree to which the impact may cause irreplaceable loss of resources:	No resources will be lost
Cumulative impact prior to mitigation:	Noise nuisance for surrounding communities
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Medium
Degree to which the impact can be mitigated:	Can mitigate completely
Proposed mitigation:	As according to EMP: <ul style="list-style-type: none"> <li>Construction should only occur during working hours (07:00 – 17:00) so as to not disturb the neighbours.</li> </ul>

	<ul style="list-style-type: none"> <li>• Leave as much natural vegetation in place where possible to screen noise from construction activities.</li> <li>• All noise and sounds generated by plant and machinery must adhere to SABS 0103 specifications for the maximum permissible noise levels for residential areas.</li> <li>• All plant and machinery are to be fitted with adequate silencers.</li> <li>• No sound amplification equipment such as sirens, loud hailers or hooters may be used on site, after normal working hours, except in emergencies.</li> <li>• If work is to be undertaken outside of normal work hours, permission must be obtained from the Local Authority. Dates, times and the nature of the work to be undertaken are to be provided. Notification could include letter-drops.</li> </ul>
Cumulative impact post mitigation:	Noise of construction activities controlled so that it does not have a negative effect on the surrounding environment.
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Very Low

## 6. Potential Visual Impacts:

6.1 Potential visual impacts:	
Nature of impact:	This impact relates to potential visual effects that the construction activities may have on existing environment and landscape.
Extent and duration of impact:	Extent: Site Duration: Short term
Probability of occurrence:	Definite
Degree to which the impact can be reversed:	Partially reversible
Degree to which the impact may cause irreplaceable loss of resources:	No resources will be lost
Cumulative impact prior to mitigation:	The camp, equipment and vehicles potentially can impact on the views of surrounding communities
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Medium
Degree to which the impact can be mitigated:	Impact can be partly mitigated
Proposed mitigation:	As according to the EMP: <ul style="list-style-type: none"> <li>• Construction should only occur during working ours (07:00 – 17:00) so as to not disturb the neighbours.</li> <li>• No lighting should be allowed at night time.</li> <li>• Leave as much natural vegetation in place where possible to screen construction activities.</li> <li>• The size of the construction phase footprint shall be limited to the areas required for actual works.</li> <li>• Restrict construction work to existing disturbed areas as far as possible.</li> </ul>
Cumulative impact post mitigation:	The camp, equipment and vehicles will be managed and mitigated to reduce the impact on the views of surrounding communities
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Low

(b) Impacts that may result from the operational phase (briefly describe and compare the potential impacts (as appropriate), significance rating of impacts, proposed mitigation and significance rating of impacts after mitigation that are likely to occur as a result of the operational phase.

## 1. Potential Impacts on Geographical and Physical Aspects:

1.1 Potential impacts on geographical and physical aspects:	
Nature of impact:	This impact relates to the potential impact of Irrigation of

	the golf course with treated waste water which has not been treated to DWA standards
<b>Source of impact:</b>	Waste water from Montagu Cellar WWTW
<b>Extent and duration of impact:</b>	Long Term
<b>Probability of occurrence:</b>	Unlikely
<b>Degree to which the impact can be reversed:</b>	Reversible
<b>Degree to which the impact may cause irreplaceable loss of resources:</b>	The resource will not be lost, but may impact on environmental health
<b>Cumulative impact prior to mitigation:</b>	Environmental pollution
<b>Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)</b>	Very High
<b>Degree to which the impact can be mitigated:</b>	Can mitigate completely
<b>Proposed mitigation:</b>	Mitigation measures, as outlined in the EMP attached as Appendix H must be adhered to.  Undertake monthly irrigation water quality monitoring to ensure wastewater is being treated to standards as set by DWA.
<b>Cumulative impact post mitigation:</b>	Treated waste water as according to DWA standards irrigated unto golf course
<b>Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)</b>	Low

## 2. Potential Impacts on Biodiversity Aspects:

The proposed development will not impact on any biodiversity aspects of the site during the operational phase.

## 3. Potential Impacts on Socio-economic Aspects:

<b>3.1 Potential impacts on the socio-economic aspects:</b>	
Nature of impact:	Improved quality of treated waste water discharge into the environment and additional source of irrigation water for golf course.
Extent and duration of impact:	Extent: Local Duration: Throughout operational phase – undetermined timeframe
Probability of occurrence:	Definite
Degree to which the impact can be reversed:	N/A – positive impact
Degree to which the impact may cause irreplaceable loss of resources:	No resources will be lost
Cumulative impact prior to mitigation:	N/A – positive impact
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	N/A – positive impact
Degree to which the impact can be mitigated:	N/A – positive impact
Proposed mitigation:	N/A – positive impact
Cumulative impact post mitigation:	N/A – positive impact
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	N/A – positive impact

<b>1.1 Potential impacts on the socio-economic aspects:</b>	
<b>Nature of impact:</b>	This impact relates to the potential impact of odours arising from the WWTW on the surrounding properties
<b>Source of impact:</b>	Montagu Cellar WWTW
<b>Extent and duration of impact:</b>	Short Term
<b>Probability of occurrence:</b>	Unlikely
<b>Degree to which the impact can be reversed:</b>	Reversible
<b>Degree to which the impact may cause irreplaceable loss of resources:</b>	The resource will not be lost, but may impact temporarily on neighbours
<b>Cumulative impact prior to mitigation:</b>	Strong odours
<b>Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)</b>	Very High
<b>Degree to which the impact can be mitigated:</b>	Can mitigate completely
<b>Proposed mitigation:</b>	Mitigation measures, as outlined in the EMP attached as Appendix H must be adhered to.

	Daily monitoring of WWTW to ensure that all processes are working effectively and no strong odours being produced.
<b>Cumulative impact post mitigation:</b>	No strong odours produced to cause a nuisance to neighbouring properties
<b>Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)</b>	Low

#### 4. Potential Impacts on the Cultural-historical Aspects

<b>4.1 Potential impacts on the cultural-historical aspects:</b>	
Nature of impact:	N/A – no further impacts anticipated

#### 5. Potential Noise Impacts:

<b>Potential noise impacts:</b>	
Nature of impact:	N/A – no further impacts anticipated

#### 6. Potential Visual Impacts:

<b>6.1 Potential visual impacts:</b>	
Nature of impact:	N/A – no further significant impacts anticipated

- (c) Impacts that may result from the decommissioning and closure phase (briefly describe and compare the potential impacts (as appropriate), significance rating of impacts, proposed mitigation and significance rating of impacts after mitigation that are likely to occur as a result of the decommissioning and closure phase.

Potential impacts associated with the decommissioning phase will be similar to potential impacts as listed under (a) Construction Phase as above, and:

#### 3. Potential Impacts on Socio-economic Aspects:

<b>3.1 Potential impacts on the socio-economic aspects:</b>	
Nature of impact:	Decommissioning of Montage Wine Cellar WWTW
Extent and duration of impact:	Extent: Local Duration: Long term
Probability of occurrence:	Definite
Degree to which the impact can be reversed:	Reversible
Degree to which the impact may cause irreplaceable loss of resources:	No resources will be lost
Cumulative impact prior to mitigation:	Decommissioning of WWTW and associated infrastructure
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	High
Degree to which the impact can be mitigated:	Can be mitigated completely
Proposed mitigation:	With ongoing need to decrease pressure of municipal WWTW and water resources for irrigation purposes it is unlikely that the proposed WWTW will be decommissioned while the wine cellar is still operational,
Cumulative impact post mitigation:	None
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	High

(d) Any other impacts:

No Go or No Development Option:

**1. Potential Impacts on Geographical and Physical Aspects:**

<b>1.1 Potential impacts on the geographical and physical aspects:</b>	The No Development Option will have a negative impact on the Geographical and Physical Aspects of the site. No other feasible or reasonable alternatives exist to treat and dispose of the cellar wash water than to upgrade and expand the existing WWTW and irrigate the treated waste water unto the nearby golf course. Therefore if the proposed development is not authorised the no-go option will result in the cellar WWTW remaining as is, which will ultimately lead to the overflow of waste water into the surrounding environment as the current WWTW does not have the required capacity.
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**2. Potential Impacts on Biodiversity Aspects:**

<b>2.1 Potential impact on biological aspects:</b>	The No Development Option will have a negative impact on the Biological Aspects of the site. No other feasible or reasonable alternatives exist to treat and dispose of the cellar wash water than to upgrade and expand the existing WWTW and irrigate the treated waste water unto the nearby golf course. Therefore if the proposed development is not authorised the no-go option will result in the cellar WWTW remaining as is, which will ultimately lead to the overflow of waste water into the surrounding environment as the current WWTW does not have the required capacity.
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**3. Potential Impacts on Socio-economic Aspects:**

<b>3.1 Potential impacts on the socio-economic aspects:</b>	The No Development Option will have a negative impact on the Socio-economic Aspects of the area. No other feasible or reasonable alternatives exist to treat and dispose of the cellar wash water than to upgrade and expand the existing WWTW and irrigate the treated waste water unto the nearby golf course. Therefore if the proposed development is not authorised the no-go option will result in the cellar WWTW remaining as is, which will ultimately lead to the overflow of waste water into the surrounding environment as the current WWTW does not have the required capacity.
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**4. Potential Impacts on the Cultural-historical Aspects:**

<b>4.1 Potential cultural- historical impacts</b>	Neutral, will remain as is.
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**5. Potential Noise Impacts:**

<b>5.1 Potential noise impacts</b>	Neutral, will remain as is.
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**6. Potential Visual Impacts:**

<b>6.1 Potential visual impacts:</b>	Neutral, will remain as is.
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**7. SPECIALIST INPUTS/STUDIES AND RECOMMENDATIONS**

**Please note:** Specialist inputs/studies must be attached to this report as **Appendix G**. Also take into account the Department's Guidelines on the Involvement of Specialists in EIA Processes available on the Department's website (<http://www.capegateway.gov.za/eadp>).

Specialist inputs/studies and recommendations: Not Applicable

<b>See Montagu Cellar Background Information Document (October 2012):</b>
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The BID provides technical design details of the proposed Montagu WWTW and similar facilities references; and addresses the concerns of the neighbouring property owners. (Appendix J)

## 8. IMPACT SUMMARY

Please provide a summary of all the above impacts.

### **Construction phase:**

- Visual disturbances will occur due to temporary construction activities
- Temporary construction jobs will be created
- Very little noise will be generated and will be kept to normal working hours
- Potential environmental pollution due to oil or diesel spillage from construction vehicles and equipment
- Potential nuisance of litter created during construction activities on the surrounding communities

### **Operational phase:**

- Potential environmental pollution due to waste water being irrigated onto golf course
- Improved quality of treated waste water discharge into the environment and additional source of irrigation water for golf course.
- Potential impact of strong odours arising from the proposed WWTW.

### **Decommissioning phase:**

- Similar to impacts associated with construction phase; and
- Decommissioning of WWTW that will provide additional source of irrigation water to the golf course and prevent environmental pollution, which makes implementation of this phase highly unlikely

### **No Go or No Development option:**

- WWTW will remain as is
- No other feasible or reasonable alternatives exist to treat and dispose of the cellar wash water than to upgrade and expand the existing WWTW and irrigate the treated waste water onto the nearby golf course. Therefore if the proposed development is not authorised the no-go option will result in the cellar WWTW remaining as is, which will ultimately lead to the overflow of waste water into the surrounding environment as the current WWTW does not have the required capacity.

## 9. OTHER MANAGEMENT, MITIGATION AND MONITORING MEASURES

- (a) Over and above the mitigation measures described in Section 6 above, please indicate any additional management, mitigation and monitoring measures.

Refer to Appendix H for more details in the EMP.

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

Montagu Wine Cellar is responsible for the management of the property and products produced on site, therefore management must budget and implement these management, mitigation and monitoring recommendations.

**Please note:** A draft **ENVIRONMENTAL MANAGEMENT PROGRAMME** must be attached to this report as **Appendix H**.

# SECTION G: ASSESSMENT METHODOLOGIES AND CRITERIA, GAPS IN KNOWLEDGE, UNDERLYING ASSUMPTIONS AND UNCERTAINTIES

(a) Please describe adequacy of the assessment methods used.

Based on the EAP's assessment, issues raised by IAPs and the project team, specialist studies were undertaken to provide information to address the concerns and assess the impacts of the proposed development on the environment.

The various specialists have provided baseline information. This information has been used by the planning team to inform the current development proposals. The specialists are provided with set criteria for undertaking their assessments, to allow for comparative assessment of all issues. These criteria are detailed in the Terms of Reference to each specialist. These criteria are based on the EIA Regulations.

(b) Please describe the assessment criteria used.

## INTRODUCTION

Below is the assessment methodology utilized in determining the significance of the construction, operational and decommission impacts of the proposed activities, and where applicable the possible alternatives, on the biophysical and socio-economic environment. The methodology is broadly consistent to that described in DEA's Guideline Document on the EIA Regulations (1998).

## ASSESSMENT METHODOLOGY

This section outlines the methodology used to assess the significance of the potential environmental impacts. For each impact, the EXTENT (spatial scale), MAGNITUDE (size or degree scale) and DURATION (time scale) are used to ascertain the SIGNIFICANCE of the impact, firstly in the case of no mitigation and then with the most effective mitigation measure(s) in place. The mitigation described in the BAR represents the full range of plausible and pragmatic measures *but does not necessarily imply that they should or will all be implemented*. The decision as to which mitigation measures to implement lies with the applicant and ultimately with DEADP. The tables on the following pages show the scale used to assess these variables, and defines each of the rating categories.

### Assessment criteria for the evaluation of impacts

CRITERIA	CATEGORY	DESCRIPTION
Extent or spatial influence of impact	Regional	Beyond a 20 km radius of the site
	Local	Within a 20 km radius of the centre of the site
	Site specific	On site or within 100 m of the site
Magnitude of impact (at the indicated spatial scale)	High	Natural and/ or social functions and/ or processes are <i>severely</i> altered
	Medium	Natural and/ or social functions and/ or processes are <i>notably</i> altered
	Low	Natural and/ or social functions and/ or processes are <i>slightly</i> altered
	Very Low	Natural and/ or social functions and/ or processes are <i>negligibly</i> altered
	Zero	Natural and/ or social functions and/ or processes remain <i>unaltered</i>
Duration of impact	Construction period Medium Term	Up to 60 months Up to 10 years after construction
	Long Term	More than 10 years after construction

The SIGNIFICANCE of an impact is derived by taking into account the temporal and spatial scales and magnitude. The means of arriving at the different significance ratings is explained in the following table.

### Definition of significance ratings

SIGNIFICANCE RATINGS	LEVEL OF CRITERIA REQUIRED
<b>High</b>	<ul style="list-style-type: none"> <li>High magnitude with a regional extent and long term duration</li> <li>High magnitude with either a regional extent and medium term duration or a local extent and long term duration</li> <li>Medium magnitude with a regional extent and long term duration</li> </ul>
<b>Medium</b>	<ul style="list-style-type: none"> <li>High magnitude with a local extent and medium term duration</li> <li>High magnitude with a regional extent and construction period or a site specific extent and long term duration</li> <li>High magnitude with either a local extent and construction period duration or a site specific extent and medium term duration</li> <li>Medium magnitude with any combination of extent and duration except site specific and construction period or regional and long term</li> <li>Low magnitude with a regional extent and long term duration</li> </ul>
<b>Low</b>	<ul style="list-style-type: none"> <li>High magnitude with a site specific extent and construction period duration</li> <li>Medium magnitude with a site specific extent and construction period duration</li> <li>Low magnitude with any combination of extent and duration except site specific and construction period or regional and long term</li> <li>Very low magnitude with a regional extent and long term duration</li> </ul>
<b>Very low</b>	<ul style="list-style-type: none"> <li>Low magnitude with a site specific extent and construction period duration</li> <li>Very low magnitude with any combination of extent and duration except regional and long term</li> </ul>
<b>Neutral</b>	<ul style="list-style-type: none"> <li>Zero magnitude with any combination of extent and duration</li> </ul>

Once the significance of an impact has been determined, the PROBABILITY of this impact occurring as well as the CONFIDENCE in the assessment of the impact would be determined using the rating systems outlined in below respectively. It is important to note that the significance of an impact should always be considered in concert with the probability of that impact occurring.

Probability ratings	Criteria
Definite	>95% chance of impact occurring.
Probable	5 – 95% chance of impact occurring.
Unlikely	<5% chance of impact occurring.

Confidence ratings	Criteria
Certain	Wealth of information on and sound understanding of the environmental factors potential influencing the impact.
Sure	Reasonable amount of useful information on and relatively sound understanding of the environmental factors potentially influencing the impact.
Unsure	Limited useful information on and understanding of the environmental factors potential influencing this impact.

(c) Please describe the gaps in knowledge.

EAP has no detailed knowledge of the other specialist studies conducted, or proposed. Only knowledgeable on the biodiversity aspects.

(d) Please describe the underlying assumptions.

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

- The information provided by the client, engineers and specialists 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 WL into the detailed design and construction contract specifications and operational management system for the proposed project.

(e) Please describe the uncertainties.

None at this stage.

## SECTION H: RECOMMENDATION OF THE EAP

In my view (EAP), the information contained in this application form and the documentation attached hereto is sufficient to make a decision in respect of the activity applied for.	<b>YES</b>	
If "NO", list the aspects that should be further assessed through additional specialist input/assessment or whether this application must be subjected to a Scoping & EIR process before a decision can be made:		
N/A		
If "YES", please indicate below whether in your opinion the activity should or should not be authorised:		
Activity should be authorised:	<b>YES</b>	
Please provide reasons for your opinion:		
Refer to executive summary.		
If you are of the opinion that the activity should be authorised, then please provide any conditions, including mitigation measures that should in your view be considered for inclusion in an authorisation.		
EA should prescribe that:		
<ul style="list-style-type: none"> <li>• Should any human burials be exposed during construction that all activities be stopped, and Heritage Western Cape contacted pre any further action being permitted.</li> <li>• The project implementation process should be subject to standard Environmental Management Program prescripts and conditions under supervision of a competent and diligent ECO, during its construction, operational and decommissioning phases.</li> <li>• All recommendations made by specialist, as recorded within specialist reports, be adhered to and implemented.</li> </ul>		
<b>Duration and Validity:</b>		
Environmental authorisations are usually granted for a period of three years from the date of issue. Should a longer period be required, the applicant/EAP is requested to provide a detailed motivation on what the period of validity should be.		
It is not anticipated that a longer period for Environmental Authorisation will be required.		

## SECTION I: APPENDICES

The following appendices must be attached to this report:

Appendix		Tick the box if Appendix is attached
Appendix A:	Locality map	X
Appendix B:	Site plan(s)	X
Appendix C:	Photographs	X
Appendix D:	Biodiversity overlay map	NA
Appendix E:	Permit(s) / license(s) from any other organ of state including service letters from the municipality	X
Appendix F:	Public participation information: including a copy of the register of interested and affected parties, the comments and responses report, proof of notices, advertisements and any other public participation information as required in Section C above.	X
Appendix G:	Specialist Report(s)	x
Appendix H :	Environmental Management Programme	X
Appendix I:	Additional information related to listed waste management activities (if applicable)	X
Appendix J:	Any Other (if applicable): Background Information Document	X

## DECLARATIONS

### THE APPLICANT

I ....., in my personal capacity or duly authorised (please circle the applicable option) by ..... thereto hereby declare that I:

- regard the information contained in this report to be true and correct, and
- am fully aware of my responsibilities in terms of the National Environmental Management Act of 1998 ("NEMA") (Act No. 107 of 1998), the Environmental Impact Assessment Regulations ("EIA Regulations") in terms of NEMA (Government Notice No. R. 543 refers), and the relevant specific environmental management Act, and that failure to comply with these requirements may constitute an offence in terms of the environmental legislation;
- appointed the environmental assessment practitioner as indicated above, which meet all the requirements in terms of regulation 17 of GN No. R. 543, to act as the independent environmental assessment practitioner for this application;
- have provided the environmental assessment practitioner and the competent authority with access to all information at my disposal that is relevant to the application;
- will be responsible for the costs incurred in complying with the environmental legislation including but not limited to –
  - costs incurred in connection with the appointment of the environmental assessment practitioner or any person contracted by the environmental assessment practitioner;
  - costs incurred in respect of the undertaking of any process required in terms of the regulations;
  - costs in respect of any fee prescribed by the Minister or MEC in respect of the regulations;
  - costs in respect of specialist reviews, if the competent authority decides to recover costs; and
  - the provision of security to ensure compliance with the applicable management and mitigation measures;
- am responsible for complying with the conditions that might be attached to any decision(s) issued by the competent authority;
- have the ability to implement the applicable management, mitigation and monitoring measures;
- hereby indemnify, the government of the Republic, the competent authority and all its officers, agents and employees, from any liability arising out of, inter alia, the content of any report, any procedure or any action for which the applicant or environmental assessment practitioner is responsible; and
- am aware that a false declaration is an offence in terms of regulation 71 of GN No. R. 543.

**Please Note:** If acting in a representative capacity, a certified copy of the resolution or power of attorney must be attached.

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Signature of the applicant:

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Name of company:

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Date:

**THE INDEPENDENT ENVIRONMENTAL ASSESSMENT PRACTITIONER (EAP)**

I....., as the appointed independent environmental practitioner ("EAP") hereby declare that I:

- act/ed as the independent EAP in this application;
- regard the information contained in this report to be true and correct, and
- do not have and will not have any financial interest in the undertaking of the activity, other than remuneration for work performed in terms of the NEMA, the Environmental Impact Assessment Regulations, 2010 and any specific environmental management Act;
- have and will not have no vested interest in the proposed activity proceeding;
- have disclosed, to the applicant and competent authority, any material information that have or may have the potential to influence the decision of the competent authority or the objectivity of any report, plan or document required in terms of the NEMA, the Environmental Impact Assessment Regulations, 2010 and any specific environmental management Act;
- am fully aware of and meet the responsibilities in terms of NEMA, the Environmental Impact Assessment Regulations, 2010 (specifically in terms of regulation 17 of GN No. R. 543) and any specific environmental management Act, and that failure to comply with these requirements may constitute and result in disqualification;
- have ensured that information containing all relevant facts in respect of the application was distributed or made available to interested and affected parties and the public and that participation by interested and affected parties was facilitated in such a manner that all interested and affected parties were provided with a reasonable opportunity to participate and to provide comments;
- have ensured that the comments of all interested and affected parties were considered, recorded and submitted to the competent authority in respect of the application;
- have kept a register of all interested and affected parties that participated in the public participation process;
- have provided the competent authority with access to all information at my disposal regarding the application, whether such information is favourable to the applicant or not; and
- am aware that a false declaration is an offence in terms of regulation 71 of GN No. R. 543.

**Note:** The terms of reference must be attached.

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Signature of the environmental assessment practitioner:

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Name of company:

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Date:

**THE INDEPENDENT PERSON WHO COMPILED A SPECIALIST REPORT OR UNDERTOOK A SPECIALIST PROCESS**

I ....., as the appointed independent specialist hereby declare that I:

- act/ed as the independent specialist in this application;
- regard the information contained in this report as it relates to my specialist input/study to be true and correct, and
- do not have and will not have any financial interest in the undertaking of the activity, other than remuneration for work performed in terms of the NEMA, the Environmental Impact Assessment Regulations, 2010 and any specific environmental management Act;
- have and will not have no vested interest in the proposed activity proceeding;
- have disclosed, to the applicant, EAP and competent authority, any material information that have or may have the potential to influence the decision of the competent authority or the objectivity of any report, plan or document required in terms of the NEMA, the Environmental Impact Assessment Regulations, 2010 and any specific environmental management Act;
- am fully aware of and meet the responsibilities in terms of NEMA, the Environmental Impact Assessment Regulations, 2010 (specifically in terms of regulation 17 of GN No. R. 543) and any specific environmental management Act, and that failure to comply with these requirements may constitute and result in disqualification;
- have ensured that information containing all relevant facts in respect of the specialist input/study was distributed or made available to interested and affected parties and the public and that participation by interested and affected parties was facilitated in such a manner that all interested and affected parties were provided with a reasonable opportunity to participate and to provide comments on the specialist input/study;
- have ensured that the comments of all interested and affected parties on the specialist input/study were considered, recorded and submitted to the competent authority in respect of the application;
- have ensured that the names of all interested and affected parties that participated in terms of the specialist input/study were recorded in the register of interested and affected parties who participated in the public participation process;
- have provided the competent authority with access to all information at my disposal regarding the application, whether such information is favourable to the applicant or not; and
- am aware that a false declaration is an offence in terms of regulation 71 of GN No. R. 543.

**Note:** The terms of reference must be attached.

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Signature of the specialist:

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Name of company:

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Date: