

# **FINAL BASIC ASSESSMENT REPORT**

## **PROPOSED “THE VINES ESTATE” VAL DE VIE: PORTION 12 OF FARM 826 PAARL**



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January 2015

**Prepared for:** Watchman Properties (Pty) Ltd  
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February 2015



DEPARTMENT of  
ENVIRONMENTAL AFFAIRS  
& DEVELOPMENT PLANNING

Provincial Government of the Western Cape

THE VINES ESTATE  
FINAL BASIC ASSESSMENT REPORT

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

### DEPARTMENTAL REFERENCE NUMBER(S)

File reference number (EIA):	<b>16/3/1/1/B3/28/1019/14</b>
File reference number (Waste):	
File reference number (Other):	

### PROJECT TITLE

**The Vines Estate at Val de Vie**

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

Environmental Assessment Practitioner (EAP):	Johan Neethling Environmental Services		
Contact person:	Johan Neethling		
Postal address:	P O Box 16594		
	VLAEBERG	Postal code:	8018
Telephone:	021 4614386	Cell:	0834493920
E-mail:	jneeth@mweb.co.za	Fax:	086 544 4868
EAP Qualifications	PhD Forestry, HonsB Publ Admin		
EAP Registrations/Associations	Member of IAIA, Founder member EAPASA		

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

Dr Johan Neethling – PhD in Forestry, is a member of the International Association of Impact Assessment (South Africa) and a founding member of the Environmental Assessment Practitioners Association of South Africa. The latter is a precursor to a compulsory accreditation system of Environmental Assessment Practitioners to be promulgated by the authorities in the near future, ex-Chief Director of CapeNature, 40+ years experience in environmental management (including execution of more than 300 Basic Assessment/Scoping and EIA processes). See [www.jnes.co.za](http://www.jnes.co.za) for details of past projects

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

Portion 12 of Farm Kliprug No 826 is 17.2470ha in extent. The portion to be developed as The Vines Estate is Portion A of 12.7841ha. The owners of the land are to keep Portion B of 4.4629ha.

Portion A to be subdivided into 134 Single Residential erven covering 5.6531ha, one Town House erf covering 0.6685ha, with a total of 22 units, one Private Open Space erf covering 4.3588ha and two Private Road Erven of 2.1046ha.

Portion B (4.4629ha) to be further subdivided into 5 erven. Erf 131 Private Road (0.0762ha), Erf 130 Open Space (3.4589ha), Erf 129 Single Residential (2444m<sup>2</sup>), Erf 128 Single Residential (3430m<sup>2</sup>) and Erf 127 Single Residential (3404m<sup>2</sup>).

#### Appendix B1

**No site alternatives were considered. The present and preferred site is the only one under consideration.** The applicants propose to do a residential development on land forming an enclave into the Val de Vie Estate. The development will be merged with the latter.

Only one **type of activity** option was considered namely that of residential development. Other activities on the site were not considered as the applicant's focus is the development of residential areas. Other types of activity such as shopping malls, hospitals, office blocks, industrial buildings were not considered as feasible due to the applicant's focus on housing, the surrounding land uses and applicable zoning. The proposed development entails the provision of residential opportunities, roads, open spaces, and bulk services infrastructure.

**No go option.** Do not develop the residential units on the relevant properties and leave the land vacant with no economic or social benefit in return. The site was previously heavily mined and subsequently used as a 4x4 track. This left the site heavily degraded and covered with invasive alien trees. A number of the mine pits filled with water creating a breeding ground for mosquitoes. The property has limited economic use in its present state and development and inclusion into the surrounding Val de Vie Estate makes economic and environmental sense. The no-go option was not considered feasible.

### ENVIRONMENTAL LEGAL REQUIREMENTS

The National Environmental Management Act (NEMA, Act 107 of 1998) makes provision for the identification and assessment of activities that are potentially detrimental to the environment and which require authorisation from the competent authority (in this case, the Provincial Department of Environmental Affairs and Development Planning, DEA&DP) based on the findings of a BAR.

The latest EIA Regulations and Listed Activities (Government Notices R983, R984 and R985, promulgated on 8 December 2014) were scrutinized and included below.

#### The following listed activities are triggered in terms of Listing Notice 1 (Government Notice R. 983)

**No19:** The infilling or depositing of any material of more than 5 cubic metres into, or the dredging, excavation, removal or moving of soil, sand, shells, shell grit, pebbles or rock of more than 5 cubic metres from-

- (i) a watercourse;
- (ii) the seashore; or
- (iii) the littoral active zone, an estuary or a distance of 100 metres inland of the high-water mark of the sea or an estuary, whichever distance is the greater but excluding where such infilling, depositing, dredging, excavation, removal or moving-
  - (a) will occur behind a development setback;
  - (b) is for maintenance purposes undertaken in accordance with a maintenance management plan; or
  - (c) falls within the ambit of activity 21 in this Notice, in which case that activity applies.

**No 28:** Residential, mixed, retail, commercial, industrial or institutional developments where such land was used for agriculture or afforestation on or after 01 April 1998 and where such development:

- (i) will occur inside an urban area, where the total land to be developed is bigger than 5 hectares; or
- (ii) will occur outside an urban area, where the total land to be developed is bigger than 1 hectare; excluding where such land has already been developed for residential, mixed, retail, commercial, industrial or institutional purposes.

#### The following listed activity is triggered in terms of Listing Notice 3 (Government Notice R. 985)

**No 4:** The development of a road wider than 4 metres with a reserve less than 13,5 metres.

- (f) In Western Cape:
  - i. Areas outside urban areas;
    - (aa) Areas containing indigenous vegetation;
    - (bb) Areas on the estuary side of the development setback line or in an estuarine functional zone where no such setback line has been determined;
  - or
  - ii. In urban areas:
    - (cc) Areas zoned for conservation use; or
    - (dd) Areas designated for conservation use in Spatial Development Frameworks adopted by the competent authority.

## SITE DESCRIPTION

The locality of the subject property has both a regional and local significance. It is this specific location which makes the subject property ideal for the proposed development. The proposed development will be incorporated into and forms an extension of the existing Val de Vie Winelands Life Style Estate.

**Figure 1** is an aerial map indicating the location of the site.



Figure 1

## Soils

The site is fairly homogenous with loose sandy topsoil underlain by a boulder and cobble layer with weathered shale and sandstone below the layer of boulders. According to the relevant 1:250 000 scale geology map from the Council for Geoscience (3318 Cape Town), Portion 12 of the Farm Kliprug No. 826, Paarl, is located in an area dominated by Quaternary sands of the Springfontyn Formation. This area is underlain by Malmesbury Group sediments of the Mooresburg Formation (associated with the shale-dominated geology to the west of the Berg River) or by granites of the Paarl Pluton (associated with the well-known Paarl Mountain to the north), with a band of Alluvium occurring at the surface along the Berg River (to the west of the proposed site) and Table Mountain Group sandstones of the Peninsula Formation on the Klein Drakenstein Mountains to the east.

## Vegetation

According to the most recent national vegetation map (Mucina & Rutherford 2006), the proposed site is located in an area that would have naturally consisted of Swartland Alluvium Fynbos, occurring as a band of distinctive vegetation along the valley floor associated with the Berg River, with Swartland Shale Renosterveld to the west (on the other side of the Berg River) and Hawequas Sandstone Fynbos on the slopes of the Klein Drakenstein Mountains to the east. Swartland Alluvium Fynbos and Swartland Shale Renosterveld are both categorised as a Critically Endangered terrestrial vegetation types on the National List of Threatened Ecosystems published in terms of the National Environmental Management: Biodiversity Act (Act No. 10 of 2004) (Government Notice 1002 of 9 December 2011). The natural vegetation was largely destroyed during many years of agriculture and the more recent mining operations. See **Appendix B5** for aerial photograph dated 1988.

## PLANNING CONTEXT

The site is zoned as Open Space II and the application is for rezoning to Subdivisional Area.

## SERVICES

The Drakenstein Municipality is the service provider.

## PROCESS TO DATE

A public participation process (PPP) was undertaken in terms of Regulation 56 of NEMA (as amended): **Appendix F1**

- Newspaper Advertisement

Advertisements in Afrikaans and English, notifying the public of the project and requesting I&APs to register their comments, were placed in the Paarl Post of 12 June 2014. **Appendix F2**. No I&AP's responded to the newspaper advertisements.

- Site notice

In order to inform surrounding communities and immediately adjacent landowners of the proposed development, site notices were erected at the entrance to the site on 12 June 2014. See photographic evidence under **Appendix F3**.

- Draft BAR

All adjacent landowners, the local authority, ward councillor and relevant organs of state were registered as I&AP's. The draft BAR was made available to all the above plus the Department of Environmental Affairs and Development Planning for a comment period of 40 days.

See **Appendix F5**

- A Comments and Responses Report was prepared for the Draft BAR. **Appendix F6**
- The Final BAR is now made available to registered I&AP's for a comment period of 21 days.

#### ENVIRONMENTAL MANAGEMENT PROGRAMME

A Construction Phase Environmental Management Programme (CEMP) is required in terms of the amended NEMA. A draft CEMP was compiled and is attached as **Appendix H**

#### CONCLUSIONS AND RECOMMENDATIONS

The site is highly altered being an old mining quarry. It forms an enclave into the Val de Vie Estate. It is overgrown with alien vegetation and earlier aerial photographs indicate a totally cleared site. Environmental authorisation for the residential development, to fit in with the Val de Vie Estate is recommended.

## SECTION A: ACTIVITY INFORMATION

### 1. PROJECT DESCRIPTION

(a) Is the project a new development?

**YES**

NO

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

Portion 12 of Farm Kliprug No 826 is 17.2470ha in extent. The portion to be developed as The Vines Estate is Portion A of 12.7841ha. The owners of the land to keep Portion B of 4.4629ha.

Portion A to be subdivided into 134 Single Residential erven covering 5.6531ha, one Town House erf covering 0.6685ha, with a total of 22 units, one Private Open Space erf covering 4.3588ha and two Private Road Erven of 2.1046ha.

Portion B (4.4629ha) to be further subdivided into 5 erven. Erf 131 Private Road (0.0762ha), Erf 130 Open Space (3.4589ha), Erf 129 Single Residential (2444m<sup>2</sup>), Erf 128 Single Residential (3430m<sup>2</sup>) and Erf 127 Single Residential (3404m<sup>2</sup>).

Access to the site will be provided from the main access road to Val de Vie within the security gate complex.  
**Appendix B1**

(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. 983)	Describe the portion of the development as per the project description that relates to the applicable listed activity.
19	The infilling or depositing of any material of more than 5 cubic metres into, or the dredging, excavation, removal or moving of soil, sand, shells, shell grit, pebbles or rock of more than 5 cubic metres from- (i) a watercourse; (ii) the seashore; or (iii) the littoral active zone, an estuary or a distance	It is the intention to fill in some of the artificial mining dams for residential and other uses.

	<p>of 100 metres inland of the high-water mark of the sea or an estuary, whichever distance is the greater but excluding where such infilling, depositing, dredging, excavation, removal or moving-</p> <p>(a) will occur behind a development setback;  (b) is for maintenance purposes undertaken in accordance with a maintenance management plan; or  (c) falls within the ambit of activity 21 in this Notice, in which case that activity applies.</p>	
28	<p>Residential, mixed, retail, commercial, industrial or institutional developments where such land was used for agriculture or afforestation on or after 01 April 1998 and where such development:</p> <p>(i) will occur inside an urban area, where the total land to be developed is bigger than 5 hectares; or  (ii) will occur outside an urban area, where the total land to be developed is bigger than 1 hectare;  excluding where such land has already been developed for residential, mixed, retail, commercial, industrial or institutional purposes.</p>	The whole development will be effected on previously used agricultural land.
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. 985)	Describe the portion of the development as per the project description that relates to the applicable listed activity.
4	<p>The development of a road wider than 4 metres with a reserve less than 13,5 metres.</p> <p>(f) In Western Cape:</p> <p>i. Areas outside urban areas;  (aa) Areas containing indigenous vegetation;  (bb) Areas on the estuary side of the development setback line or in an estuarine functional zone where no such setback line has been determined;  or  <b>ii. In urban areas:</b>  (cc) Areas zoned for conservation use; or  (dd) Areas designated for conservation use in Spatial Development Frameworks adopted by the competent authority.</p>	Roads would be wider than 4m and are located within an urban area, in an area zoned as open space.

**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:**

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.
	N/A	

**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.
	N/A

**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:

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

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

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

(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.).

Buildings	<a href="#">YES</a>	NO
Provide brief description:		
Dwelling units both single residential (121 units) and town houses (38 units)		
Infrastructure (e.g. roads, power and water supply/ storage)	<a href="#">YES</a>	NO
Provide brief description:		
<p><b>See Appendix E for letter from Municipality confirming availability of capacity in the services infrastructure.</b></p> <p><b>Roads:</b> Access to the site will be obtained from the existing entrance road to Val de Vie. This will ensure security as the connection will be inside the security gate. This road will be 20m wide. The current connection of the Kliprug Road to the R301 can be used without modification. See <b>Appendix G5</b> for the Traffic Impact Report.</p> <p>Internal roads within the proposed development itself would be made of interlocking paving as per the existing internal roads in Val de Vie. Internal road widths would vary from 8.5 m to 13 m.</p> <p><b>Power:</b> The electrical supply authority for this area is Drakenstein Municipality who in turn is supplied in bulk from Eskom. Drakenstein Municipality currently do not have bulk electrical capacity for this development. This will prevail until the proposed new Kliprug 132/11kV substation has been completed. The completion of this substation is dependent on Council approving capital funds for it. It should however be possible to co-ordinate the implementation programme of Kliprug substation with the electricity take-up schedule of the development. It is not expected that dwellings be occupied for at least two years, and by that time the Municipality should be able to have Kliprug commissioned. This should be carefully co-ordinated with the Municipality. The lack of present capacity should thus not prevent the project from proceeding. The existing internal Val De Vie power networks do have sufficient capacity and will therefore not require upgrading to cater for the estimated additional loads of The Vines.</p> <p><b>Water Supply:</b> Drakenstein Municipality has an allocation of 1,881kl/day (37%) within the bulk Wemmershoek supply and reservoir delivery pipelines. It is anticipated that 1370.4 kl/day of the 1881kl/day will be allocated to the existing Val de Vie Estate once it has been fully developed. This results in approximately 510.6kl/day available for future developments. The total water demand for the fully developed Val de Vie Estate and The Vines Development is calculated to 1548.7kl/day which is still less than the Drakenstein Municipal allocation of 1,881kl/day. Val de Vie currently has a 3Ml allocation of the 5Ml Drakenstein Reservoir. The combined estimated total storage requirements for the Val de Vie Estate and The Vines Development are calculated to 3.32Ml, which result in an increase of 0.32Ml. Therefore, 1.68Ml spare capacity will still be available for future developments. It can therefore be concluded that the bulk supply pipelines and 5Ml Drakenstein Reservoir will have sufficient capacity for the proposed new The Vines Development and that no bulk infrastructure upgrades will be required. The proposed The Vines Development will require a separate connection for water supply from the 355mm dia. supply pipeline. This connection will be made on the existing Val de Vie internal main supply line that is connected to the above mentioned 355mm dia. supply line. The internal water reticulation network for the proposed The Vines Development will be supplied via a new 160mm dia. bulk water pipeline as per the engineer's future designs. The internal network will mainly consist of 110mm dia. uPVC Class 12 pipes. The working pressure in the potable network would be suitable for domestic use.</p> <p><b>Sewerage:</b> The total Val de Vie and The sewage yield figures is estimated to be 0.82 Ml per day, which is 0.18 Ml less than the current Val de Vie approved allocation of 1Ml per day. From the actual figures received from Drakenstein Municipality, Pearl Valley is currently generating on average 0.47 Ml of sewage inflow to the WWTW and Val de Vie 0.18 Ml per day. Therefore the Pearl Valley WWTW at this stage receives on average approximately 0.65 Ml sewage inflow from both Pearl Valley and Val de Vie, operating at 32.5% of its full capacity of 2Ml. The current maximum combined inflow to the WWTW is 1.12 Ml, operating at 55.8% of its design capacity. When the actual municipal figures/readings are extrapolated to estimate the total sewage yield for the fully developed Pearl Valley and Val de Vie (including The Vines Development), current indications are that these developments would be accommodated within their allocated capacities. See Engineering Services Report in <b>Appendix G2</b>.</p> <p><b>Stormwater:</b> The internal storm water system will consist of an underground pipe network, road side channels, storm water furrows and inlet structures which will drain the roads and other hard surfaces to the existing three remaining dams (Dam 2,3 and 9 on SDP)</p>		



which eventually overflow to dam 3, the lowest dam in the north-western corner of the proposed The Vines development. The underground storm water drainage system will be designed to have sufficient capacity to convey a 1:5 year rainfall event . The above mentioned dam will discharge the collected storm water runoff through an outlet/overflow structure into existing overflow channel at a 1:5 year predevelopment rate.

See the Storm Water Management Report in **Appendix G4**

Processing activities (e.g. manufacturing, storage, distribution)	YES	<a href="#">NO</a>
Provide brief description:		
Storage facilities for raw materials and products (e.g. volume and substances to be stored)		
Provide brief description	<a href="#">YES</a>	NO
Temporary stockpiling of construction materials during the construction period. This will be regulated by the EMP		
Storage and treatment facilities for solid waste and effluent generated by the project	Yes	<a href="#">NO</a>
Provide brief description		

Other activities (e.g. water abstraction activities, crop planting activities)	Yes	<a href="#">NO</a>
Provide brief description		

## 2. PHYSICAL SIZE OF THE ACTIVITY

	<b>Size of the property:</b>
(a) Indicate the size of the property (cadastral unit) on which the activity is to be undertaken.	17.2470 ha

	<b>Size of the facility:</b>
(b) Indicate the size of the facility (development area) on which the activity is to be undertaken.	12.7841 ha

	<b>Size of the activity:</b>
(c) Indicate the physical size (footprint) of the activity together with its associated infrastructure:	12.7841 ha
(d) Indicate the physical size (footprint) of the activity:	12.7841 ha
(e) Indicate the physical size (footprint) of the associated infrastructure:	12.7841 ha

and, for linear activities:

	<b>Length of the activity:</b>
(f) Indicate the length of the activity: <a href="#">N/A</a>	m

## 3. SITE ACCESS

(a) Is there an existing access road?	<a href="#">YES</a>	NO
(b) If no, what is the distance over which a new access road will be built?	m	

(c) Describe the type of access road planned:

The development will be accessed from the existing entrance road and security gate of the Val de Vie Estate. The access road will be 20m wide.

**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.

##### Regional context

Portion 12 of Farm No 826, Paarl is an old mining site and is in an abandoned state. The subject property is situated approximately 56 km east of Cape Town and 4 km south of the intersection of Main Road 201 (R301) and the National Road N1. Main Road No 201 runs parallel to the Berg River and the R45 connecting road Paarl to Franschhoek via Wemmershoek. Collectively these arterial routes running north/south through the Drakenstein Municipal area form an important road network linking Paarl with Simondium and Franschhoek to the south and Wellington and Malmesbury to the north. From a regional perspective the subject property is easily accessible specifically noting its close proximity to the National Road N1 which runs in an east/west direction through the Western Cape and connects Cape Town with the hinterland.

##### Local Context

The subject land unit abuts the existing Val de Vie Winelands Life Style Estate approximately 9km south of the Central Business District (CBD) of Paarl situated between the Boschenmeer Golf and Country Estate to the north and Pearl Valley Golf Estate to the south. The proposed development will be incorporated into and forms an extension of the larger Val de Vie Winelands Life Style Estate accessed via Minor Road 5255 (Kliprug Road) which connects with the R301 (Wemmershoek Road) approximately 1,6km to the east. Minor Road No 5255 serves as the access road to the existing Val de Vie Winelands Life Style Estate as well as the agricultural land units abutting the road.

The access to the proposed development situated on Portion A is from the main access road within the Val de Vie Winelands Life Style Estate thereby including the proposed development into the security and control of the estate. Internally the new development will form part of the larger estate with a network of private roads providing access to the individual erven. Access to Portion B will be from the existing access point in the south eastern corner of the subject land unit. With the inclusion of smaller single residential erven and town housing pockets into the larger estate, the suggestions and recommendations by local and provincial authorities for alternative housing options within one larger development, are achieved without compromising the existing character of the estate. The alternative residential opportunities supported by the existing infrastructure of the Val de Vie Winelands Life Style Estate, will fulfil the needs of an important sector of the overall residential housing market. It is therefore clear that from a local context, the proposed development will have a significantly positive impact in that alternative residential options are provided within the existing Val de Vie Winelands Life Style Estate.



**Figure 2:** Indication of locality of site in relation to its surrounds.

(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 point of the site for each alternative site. The co-ordinates should be in degrees and decimal minutes. The minutes should have at least three decimals to ensure adequate accuracy. The projection that must be used in all cases is the WGS84 spheroid in a national or local projection).</li> </ul>
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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>i.e.</i> 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>
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(c) For a linear activity, please also provide a description of the route.

N/A
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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°	45'	50.57"	18°	59'	45.42"

(d) or:

For linear activities:	Latitude (S):			Longitude (E):		
• Starting point of the activity	°	'	"	°	'	"
• Middle point of the activity	°	'	"	°	'	"
• End point of the activity	°	'	"	°	'	"

**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	<a href="#">Flatter than 1:10</a>	1:10 – 1:4	Steeper than 1:4
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### 2. LOCATION IN LANDSCAPE

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

Ridgeline	Plateau	Side slope of hill/mountain	Closed valley	<a href="#">Open valley</a>	Plain	Undulating plain/low hills	Dune	Sea-front
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(b) Please provide a description of the location in the landscape.

The site lies on the floor of the wide Berg River Valley between Franschhoek and Paarl. The site is surrounded on the northern, western and southern side by the Val de Vie Estate and it borders in the east, across a gravel road, on agricultural land.  
The R201 runs in a north- south direction approximately 3,5km to the east of the site. The Pearl Valley golf Estate lies immediately to the south of the Val de Vie Estate.

### 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)	<a href="#">YES</a>		UNSURE
Seasonally wet soils (often close to water bodies)	<a href="#">YES</a>		UNSURE
Unstable rocky slopes or steep slopes with loose soil		<a href="#">NO</a>	UNSURE
Dispersive soils (soils that dissolve in water)		<a href="#">NO</a>	UNSURE
Soils with high clay content	<a href="#">YES</a>		UNSURE
Any other unstable soil or geological feature		<a href="#">NO</a>	UNSURE
An area sensitive to erosion		<a href="#">NO</a>	UNSURE

An area adjacent to or above an aquifer.			<b>UNSURE</b>
An area within 100m of the source of surface water	<b>YES</b>		UNSURE

(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.

<u>Granite</u>	<u>Shale</u>	Sandstone	Quartzite	Dolomite	Dolorite	Other
Please provide a description.						
<p>The site is fairly homogenous with loose sandy topsoil underlain by a boulder and cobble layer with weathered shale and sandstone below the layer of boulders. According to the relevant 1:250 000 scale geology map from the Council for Geoscience (3318 Cape Town), Portion 12 of the Farm Kliprug No. 826, Paarl, is located in an area dominated by Quaternary sands of the Springfontyn Formation. This area is underlain by Malmesbury Group sediments of the Mooresburg Formation (associated with the shale-dominated geology to the west of the Berg River) or by granites of the Paarl Pluton (associated with the well-known Paarl Mountain to the north), with a band of Alluvium occurring at the surface along the Berg River (to the west of the proposed site) and Table Mountain Group sandstones of the Peninsula Formation on the Klein Drakenstein Mountains to the east.</p>						

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

(b) Please provide a description.

<p>The topographical setting of the site is a small ridge, ranging in height from approximately 120 m to 130 m AMSL, located along the eastern edge of the valley floor of the Berg River (the edge of the river is located approximately 500 m away, at an altitude of approximately 110 to 115 m AMSL). The localised topography of the site has, however, been substantially altered from its natural state through mining-related excavation, and today there are a series of permanent open water bodies (dams) on the site which were not present before the mining operations began (see time series of historical aerial photographs of the study area in <b>Appendix G1</b>). It has been estimated by Zeeman &amp; Van der Walt (2013) that the nine existing dams on Portion 12 of Farm Kliprug 826 have a maximum cumulative volume of approximately 130 400 m<sup>3</sup>. Prior to being mined, the site appears to have been used for agriculture (cultivation), going back to at least the late 1930's</p>

#### 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
<a href="#">Critical Biodiversity Area (CBA)</a>	Ecological Support Area (ESA)	Other Natural Area (ONA)	<a href="#">No Natural Area Remaining (NNR)</a>	According to the most recent national vegetation map (Mucina & Rutherford 2006), the proposed site is located in an area that would have naturally consisted of Swartland Alluvium Fynbos, occurring as a band of distinctive vegetation along the valley floor associated with the Berg River, with Swartland Shale Renosterveld to the west (on the other side of the Berg River) and Hawequas Sandstone Fynbos on the slopes of the Klein Drakenstein Mountains to the east. Swartland Alluvium Fynbos and Swartland Shale Renosterveld are both categorised as a <b>Critically Endangered terrestrial vegetation types</b> on the National List of Threatened Ecosystems published in terms of the National Environmental Management: Biodiversity Act (Act No. 10 of 2004) (Government Notice 1002 of 9 December 2011). Swartland Alluvium Fynbos is typically associated with alluvial gravel and cobble fields resting over Malmesbury Group sediments or Cape Suite granites but soils can be dominated by clay-rich silts (leading to plant communities that are ecotonal between fynbos and renosterveld in these cases) (Rebelo <i>et al.</i> 2006). The site was however totally altered during previous agricultural and mining operations and no natural vegetation remains on 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	%	
Near Natural (includes areas with low to moderate level of alien invasive plants) (Previously ploughed)	%	
Degraded (includes areas heavily invaded by alien plants)	1%	Only a few patches of indigenous vegetation were observed during the site visit by FCG, most notably along a very short section of the inlet stream flowing into the dam on proposed "Portion B" of the site and in the north-western corner of the site
Transformed (includes cultivation, dams, urban, plantation, roads, etc)	99%	Totally transformed by mining

- (c) Complete the table to indicate:
- the type of vegetation, including its ecosystem status, present on the site; and
  - 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)	<a href="#">Critical</a>	Wetland (including rivers, depressions, channelled and unchannelled wetlands, flats, seeps pans, and artificial wetlands)			Estuary		Coastline	
	Endangered							
	Vulnerable							
	Least Threatened							
		<a href="#">YES</a>	NO	UNSURE	YES	<a href="#">NO</a>	YES	<a href="#">NO</a>

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

According to the most recent national vegetation map (Mucina & Rutherford 2006), the proposed site is located in an area that would have naturally consisted of Swartland Alluvium Fynbos, occurring as a band of distinctive vegetation along the valley floor associated with the Berg River, with Swartland Shale Renosterveld to the west (on the other side of the Berg River) and Hawequas Sandstone Fynbos on the slopes of the Klein Drakenstein Mountains to the east. Swartland Alluvium Fynbos and Swartland Shale Renosterveld are both categorised as a Critically Endangered terrestrial vegetation types on the National List of Threatened Ecosystems published in terms of the National Environmental Management: Biodiversity Act (Act No. 10 of 2004) (Government Notice 1002 of 9 December 2011). Swartland Alluvium Fynbos is typically associated with alluvial gravel and cobble fields resting over Malmesbury Group sediments or Cape Suite granites but soils can be dominated by clay-rich silts (leading to plant communities that are ecotonal between fynbos and renosterveld in these cases) (Rebello *et al.* 2006). The site was however totally altered during previous agricultural and mining operations and no natural vegetation remains on site. The site is covered in alien invasive tree species.

The localised topography of the site has, however, been substantially altered from its natural state through mining-related excavation and today there are a series of permanent open water bodies (dams) on the site which were not present before the mining operations began (see time series of historical aerial photographs of the study area in [Appendix G1](#)). It has been estimated by Zeeman & Van der Walt (2013) that the nine existing dams on Portion 12 of Farm Kliprug 826 have a maximum cumulative volume of approximately 130 400 m<sup>3</sup>. Prior to being mined, the site appears to have been used for agriculture (cultivation), going back to at least the late 1930's (see Time Series Photographs in [Appendix G1](#))

## 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.

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

Other land uses (describe):	<a href="#">Farm house</a>
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(a) Please provide a description.

The topographical setting of the site is a small ridge, ranging in height from approximately 120 m to 130 m AMSL, located along the eastern edge of the valley floor of the Berg River (the edge of the river is located approximately 500 m away, at an altitude of approximately 110 to 115 m AMSL). The localised topography of the site has, however, been substantially altered from its natural state through mining-related excavation and today there are a series of permanent open water bodies (dams) on the site which were not present before the mining operations began (see time series of historical aerial photographs of the study area in [Appendix G1](#)). It has been estimated by Zeeman & Van der Walt (2013) that the nine existing dams on Portion 12 of Farm Kliprug 826 have a maximum cumulative volume of approximately 130 400 m<sup>3</sup>. Prior to being mined, the site appears to have been used for agriculture (cultivation), going back to at least the late 1930's (see [Appendix G1](#)).

## 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.

**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.

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

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

The site is an enclave into the Val de Vie residential estate. There are no industrial areas nearby. Active agriculture such as vineyards occur in the vicinity

## 8. SOCIO-ECONOMIC ASPECTS

Describe the existing social and economic characteristics of the community in order to provide baseline information.

The Val de Vie Estate is an upmarket development adjacent to the Pearl Valley Golf Estate which is also upmarket. The estates are surrounded by agricultural development



## 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;
  - I 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;
  - I 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?		<b>YES</b>	NO
		UNCERTAIN	
If YES, explain:	See HWC Record of Decision dated 27 November 2013. A Visual Impact Study was required to be incorporated into a HIA. Heritage Western Cape Approved the project. See <b>Appendix D2</b>		
Will the development impact on any national estate referred to in section 3(2) of the National Heritage Resources Act, 1999?		YES	<b>NO</b>
		UNCERTAIN	
If YES, explain:			

Will any building or structure older than 60 years be affected in any way?	YES	<b>NO</b>	UNCERTAIN
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):
NEMA	DEADP	GN No R543, R544.	This application
LUPO & Municipal Bye-laws	Drakenstein Municipality	LUPO Application	Pending
National Water Act	Department of Water Affairs	Water Use License	Submitted on 28/11/14
National Heritage Resources Act	Heritage Western Cape	Approval	17/10/14

POLICY/ GUIDELINES	ADMINISTERING AUTHORITY
Guidelines to Alternatives March 2013	DEA&DP
Guideline on Transitional Arrangements (March 2013).	DEA&DP
Guidelines on Need and Desirability March 2013	DEA&DP
Guidelines on Public Participation March 2013	DEA&DP
Guidelines to Management Plans June 2005	DEA&DP
Guideline on Exemption Applications (March 2013).	DEA&DP
Generic Terms of Reference for EAPs and Project Schedules (March 2013).	DEA&DP
Guidelines to Alternatives March 2013	DEA&DP

(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).
Guidelines on Public Participation March 2013	Public Participation Process
Guidelines to Alternatives March 2013	Presentation of alternatives
Guidelines on Specialists	Assessing need for specialist input in the proposed development
Guidelines on Need and Desirability March 2013	Assessing the need and desirability of the proposed development
Guidelines to Management Plans June 2005	Drafting Environmental Management Plan for project
Guideline on Exemption Applications (March 2013).	To determine validity of applying for exemption.

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

## 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.capegateway.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.**

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	<a href="#">YES</a>	DEVIATED	
(ii) any alternative site mentioned in the application;	<a href="#">N/A</a>	DEVIATED	
(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;	<a href="#">YES</a>	Deviated	
(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;	<a href="#">Yes</a>	DEVIATED	
(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;	<a href="#">YES</a>	DEVIATED	
(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;	<a href="#">YES</a>	DEVIATED	
(v) the municipality which has jurisdiction in the area;	<a href="#">YES</a>	DEVIATED	
(vi) any organ of state having jurisdiction in respect of any aspect of the activity; and	<a href="#">YES</a>	DEVIATED	
(vii) any other party as required by the competent authority;	<a href="#">YES</a>	DEVIATED	
I placing an advertisement in –			
(i) one* local newspaper; and	<a href="#">YES</a>	DEVIATED	
(ii) any official <i>Gazette</i> that is published specifically for the purpose of providing public notice of applications or other submissions made in terms of these Regulations;	YES	DEVIATED	<a href="#">N/A</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	DEVIATED	<a href="#">N/A</a>

\* **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.

2. Provide a list of all the state departments that were consulted:

[Department of Water and Sanitation](#)  
[CapeNature](#)  
[Heritage Western Cape](#)  
[Department of Transport and Public Works](#)

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**.)

**A public participation process (PPP) was undertaken in terms of Regulation 56 of NEMA (as amended) Appendix F1**

- Identification of Interested and Affected Parties (I&APs)

Key applicable stakeholders were identified and a database of I&APs was opened (Refer to **Appendix F4 for the Registered I&AP's**)

The stakeholders included landowners and occupiers of land adjacent to the site, the ward councillor, local municipality, local home owners associations, and relevant organs of State.

- Compilation of a Background Information Document (BID) **Appendix F1**

The main objective of the BID was to introduce I&APs to the proposal. The following information was presented in the BID:

- Introduction and background
- Brief project description
- Purpose of the BID
- Applicable legislation
- Invitation for I&APs to comment and/or register

- Newspaper Advertisement

Advertisements in Afrikaans and English, notifying the public of the project and the availability of the Draft Basic Assessment Report and requesting I&APs to register their comments, were placed in the Paarl Post of 12 June 2014. The notices were placed synchronised with the LUPO advertisements **Appendix F2**. No I&AP's responded to the newspaper advertisements.

- Site notice

In order to inform surrounding communities and immediately adjacent landowners of the proposed development, site notices were placed at the entrance to the site on 12 June 2014. See photographic evidence under **Appendix F3**.

- Draft BAR

A copy of the Draft Bar was made available between the dates of 15 to 17 September 2014, for a 40 day comment period, to the following Organs of State:

1. CapeNature
2. Department of Water Affairs
3. Department of Transport and Public Works
4. Heritage Western Cape
5. Department of Environmental Affairs and Development Planning, to allow the latter to alert organs of State of the 40 day comment period.

The Draft Bar was also made available for a 40 day commenting period to:

1. Adjacent landowners
2. The Val de Vie Home Owners Association
3. The Drakenstein Municipality
3. The Ward Councillor
4. A copy of the Draft BAR was available on site in the offices of the Val de Vie Estate Management
5. A copy of the Draft Bar was also available on the JNES website [www.jnes.co.za](http://www.jnes.co.za)

NB In the advertisement and covering letter to I&AP's about the availability of the Draft BAR it was also indicated that an application will be submitted to DEA&DP for an exemption from complying with NEMA Regulation 10(2)d "The requirement to publish a notice of the final decision in the newspaper used during the original public participation process".

See **Appendix F4**

During the 40 day commenting period I&AP's and State Departments reviewed the report and send comments to Johan Neethling Environmental Services;

These comments were received and incorporated into a Comments and Responses Report on the Draft BAR.

**Appendix F6**

This Final Basic Assessment Report was compiled and the latter is now made available to all registered I&APs for a further 21 day commenting period.

The Final Basic Assessment Report is also available on the JNES Website [www.jnes.co.za](http://www.jnes.co.za)

**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/eadp>).

1. Is the activity permitted in terms of the property's existing land use rights?	YES	<u>NO</u>	Please explain
<u>Rezoning has been applied for.</u>			
2. Will the activity be in line with the following?			
(a) Provincial Spatial Development Framework (PSDF)	<u>YES</u>	NO	Please explain
<u>See the LUPO application Section 8.4 Appendix G9 for a detailed summary of adherence to the principles of the PSDF</u>			
(b) Urban edge / Edge of Built environment for the area	<u>YES</u>	NO	Please explain
<u>The property under discussion is located within the approved urban edge of the Drakenstein Municipality.</u>			
(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?)	<u>YES</u>	NO	Please explain
<u>The Drakenstein Municipality Spatial Development Framework (DMSDF) was prepared in terms of the Local Government: Municipal Systems Act, 2000 (Act 32 of 2000), and in particular Chapter 5 thereof. The purpose of the SDF is to improve the spatial structure of Drakenstein Municipality and at the same time provide development opportunities in both urban as well as rural areas of the municipality. The DMSDF was formally adopted by Council on 24 November 2010. The subject property is included in the approved DMSDF for Drakenstein Municipality and reserved for urban development purposes. The fact that this land unit is surrounded by the existing Val de Vie Winelands Lifestyle Estate, and the fact that the proposed development will be incorporated into the estate, is a clear indication that the proposed development is directly in line with the future development proposals for Paarl</u>			
(d) Approved Structure Plan of the Municipality	<u>YES</u>	NO	Please explain
<u>The site is situated within the urban edge of the Drakenstein municipality and earmarked for development in the Drakenstein municipality SDF</u>			
(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?)	<u>YES</u>	NO	Please explain
<u>No EMF was adopted for the area.</u>			
(f) Any other Plans (e.g. Guide Plan)	YES	NO	Please explain

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)?	<a href="#">YES</a>	NO	Please explain
The Drakenstein Municipality Spatial Development Framework (DMSDF) was prepared in terms of the Local Government: Municipal Systems Act, 2000 (Act 32 of 2000), and in particular Chapter 5 thereof. The purpose of the SDF is to improve the spatial structure of Drakenstein Municipality and at the same time provide development opportunities in both urban as well as rural areas of the municipality. The DMSDF was formally adopted by Council on 24 November 2010. The subject property is included in the approved DMSDF for Drakenstein Municipality and reserved for urban development purposes. The fact that this land unit is surrounded by the existing Val de Vie Winelands Lifestyle Estate, and the fact that the proposed development will be incorporated into the estate, is a clear indication that the proposed development is directly in line with the future development proposals for Paarl			
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?	<a href="#">YES</a>	NO	Please explain
The proposal is for an infill development within the Val de Vie Winelands Lifestyle Estate. There is a demand for smaller units at this point in time.			
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.)	<a href="#">YES</a>		Please explain
There is a demand for this type of development. This is development of an enclave in Val de Vie. The opportunities are more affordable than those in Val de Vie and will supply a demand.			
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> )	<a href="#">YES</a>		Please explain
The municipality has provided la letter confirming availability. <b>Appendix E</b>			
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> )	<a href="#">YES</a>		Please explain
<b>Messrs Aurecon Consulting Engineers</b> was appointed to evaluate the current standard of civil and electrical engineering services and infrastructure on the property as well as what would be required internally to accommodate the redevelopment of the property into a residential development as proposed. Their attached <b>Internal Services Report</b> also evaluates the availability of bulk services against the expected requirements. The Municipality confirmed that Services Capacity exists for this development. <b>See Appendix E</b>			
8. Is this project part of a national programme to address an issue of national concern or importance?	YES	<a href="#">NO</a>	Please explain
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.)	<a href="#">YES</a>		Please explain
The site is an enclave into the Val de Vie Estate and forms a natural extension of the Estate.			
10. How will the activity or the land use associated with the activity applied for,		<a href="#">NO</a>	Please explain

impact on sensitive natural and cultural areas (built and rural/natural environment)?			
The site is an old mining area and is totally disturbed. The proposed development will have no impact on natural vegetation or heritage resources.			
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)?	<u>YES</u>	NO	Please explain
The proposed development is not out of character with the land use and character of the surrounding environment. The surrounding area is also zoned for single residential and a number of houses have been built on adjacent plots. See Visual Impact Assessment in <b>Appendix G3</b>			
12. Will the proposed activity or the land use associated with the activity applied for, result in unacceptable opportunity costs?	YES	<u>NO</u>	Please explain
Developing this privately owned property will not lead to any opportunity costs to others.			
13. What will the cumulative impacts (positive and negative) of the proposed land use associated with the activity applied for, be?	<u>YES</u>	NO	Please explain
Negative cumulative impacts the proposal will be increasing demands for services made on the resources and infrastructure of the municipality and the provincial road system in the area. The number of units in the proposed development is small and these increased demands can be accommodated in the municipal systems. There are positive cumulative impacts in the form of optimum use of derelict land and a widening of the tax base of the Municipality.			
14. Is the development the best practicable environmental option for this land/site?	<u>YES</u>	NO	Please explain
The site is an old agricultural and mining area and is in a derelict state with no economic potential unless suitably developed. The no-go option will maintain the <i>status quo</i> with no impact on the micro environment of the site. It will however not contribute to the economic potential of the site.			
15. What will the benefits be to society in general and to the local communities?			Please explain
Apart from the temporary and permanent employment which will be created by this development, the financial benefit to the local economy and the Drakenstein Municipality in particular in the form of rates and taxes, will be significant.			
16. Any other need and desirability considerations related to the proposed activity?			Please explain
Since the subject property is bounded on three sides by the existing Val de Vie Winelands Lifestyle Estate, the inclusion thereof into the existing estate, is not only logical but will also result in the land unit being developed to its full potential while utilising existing services and infrastructure in the immediate area. The fact that access to the proposed development on Portion A will be taken directly from the existing internal road inside the estate, is also a clear indication of the ease in which this development will be incorporated into the existing estate. Apart from the internal private streets no new roads or new accesses from Minor Road 5255 will be required. The new development will provide alternative residential opportunities within the existing estate without compromising the value and standards currently maintained within the estate. The existing facilities on the estate will be shared with the proposed development. According to the approved spatial planning policies for the Drakenstein Municipal area, the subject property is earmarked for urban development purposes. The proposed development of the property for residential purposes, is therefore directly in line with their recommendations and is therefore desirable from			



a spatial planning point of view.

(17) Please describe how the general objectives of Integrated Environmental Management as set out in section 23 of NEMA have been taken into account:

**a) Promote the integration of the principles of environmental management set out in section 2 into the making of all decisions which may have a significant effect on the environment;**

This Application has been undertaken in accordance with the NEMA EIA Regulations (2010), the provisions of which they take into account the general objectives of Integrated Environmental Management in Section 23 of the NEMA

**b) 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;**

Impacts associated with the development have been identified, assessed and mitigated and these are detailed in Section F of this BAR.

**c) Ensure that the effects of activities on the environment receive adequate consideration before actions are taken in connection with them;**

This Application has been undertaken in accordance with the NEMA EIA Regulations (2010), the provisions of which take into account the general objectives of Integrated Environmental Management in Section 23 of the NEMA. Please refer to the attached Environmental Management Programme (**Appendix H**).

**d) Ensure that adequate and appropriate opportunity for public participation in decisions that may affect the environment;**

This Application includes a public participation component which has been undertaken in accordance with the requirements of Chapter 6 of the EIA Regulations, 2010. Please refer to Section C of this BAR for details relating to public participation

**e) Ensure the consideration of environmental attributes in management and decision-making which may have a significant effect on the environment;**

The public participation component of this application allows Organs of State which have jurisdiction over the activity to review and comment on the application. As such, these Organs of State have an opportunity to include any environmental sensitivity identified in this application, in their decision-making going forward;

**f) Identify and employ the modes of environmental management best suited to ensuring that a particular activity is pursued in accordance with the principles of environmental management set out in section 2.**

The EMP compiled for this application has been informed by the impact assessment undertaken, which is based on specialist input and the EAP's numerous years in the environmental management field. An Environmental Control Officer (ECO) will control the construction activities. As the construction work will take place within an existing security estate with an active Home Owners Association, the contractor will be subjected to stringent operational controls. The management measures included in the EMP are therefore considered to be best practice.

(18) Please describe how the principles of environmental management as set out in section 2 of NEMA have been taken into account:

The investigation of the proposed activity and its associated impacts has considered the benefits as well as the possible harm of the activity for the receiving social, economic and biophysical environment.

The impacts of this activity on the receiving environment have been considered without favouring any particular aspect of the receiving environment over another aspect; nor favouring any particular community over any other affected by the proposed development.

All interested and affected parties identified as possibly impacted (or benefitted) by the activity have been given the opportunity to participate in the Basic Assessment process through the public participation process undertaken in accordance with Chapter 6 of the NEMA EIA Regulations contained in GN No. R543, 544 and 546 of 2010.

Possible negative environmental impacts associated with the activity has led to the recommendation of a number of mitigation measures to either avoid any such impacts altogether; or to ensure that such impacts remain at an acceptable level without adversely impacting the environmental common heritage.

The mitigation measures recommended for implementation during the development of the site, are considered by the EAP to represent the Best Practical Environmental Option for land use at this site.

## 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 subject land unit forms an enclave into the existing Val de Vie Winelands Life Style Estate and the proposal is to incorporate it into the larger Val de Vie Winelands Life Style Estate.

The access to the proposed development situated on Portion A is from the main access road within the Val de Vie Winelands Life Style Estate thereby including the proposed development into the security and control of the estate.

Internally the new development will form part of the larger estate with a network of private roads providing access to the individual erven. Access to Portion B will be from the existing access point in the south eastern corner of the subject land unit. With the inclusion of smaller single residential erven and town housing pockets into the larger estate, the suggestions and recommendations by local and provincial authorities for alternative housing options within one larger development, are achieved without compromising the existing character of the estate. The alternative residential opportunities supported by the existing infrastructure of the Val de Vie Winelands Life Style Estate, will fulfil the needs of an important sector of the overall residential housing market. It is therefore clear that from a local context, the proposed development will have a significantly positive impact in that alternative residential options are provided within the existing Val de Vie Winelands Life Style Estate.

As such no alternative site locations have been considered, but a number of alternative layouts and potential land uses have been considered, in accordance with the relevant legislative requirements.

(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:

The proposed land use for the site considered social and economic requirements as well as potential visual impacts. The applicants own and manage the adjacent Val de Vie Winelands Lifestyle Estate as residential entity. The location of the subject property as an enclave into the Val de Vie Estate logically resulted in considering it for residential development as an extension of Val de Vie. Alternative development s, such as farming or commercial/retail were not considered financially feasible or appropriate for this site and were therefore rejected. The current residential proposal is considered to be the most appropriate, both in terms of land use planning, needs of the applicant and the broader community.

(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:

#### **Site Layout Alternatives**

The general design and layout of the development has been the subject of a number of design exercises and was refined and revised through inter alia specialist studies including a feasibility report, visual study, engineering report, fresh water study, heritage study, landscape report, traffic study and public participation. This led to the eventual acceptance of a preferred layout.

#### **Alternative Layout 1. Rejected Alternative 1. See Appendix B1**

The original alternative land use and layout investigated for the site was a broad concept based on a number of cottages for a possible retirement village. In the conceptual phase a club house and frail care centre was also envisaged. The design concept to link it with the Val de Vie Estate with an entrance within the security gate of the latter was already emerging. This first concept was on the right track but not fully developed. The architects were asked to come up with a more concrete proposal.

#### **Alternative Layout 2. Rejected Alternative 2. See Appendix B2**

This alternative layout was still based on the vision of a retirement village. The proposed layout was of a fairly high density (325 units) with a clubhouse and frail care centre. Three types of units were envisaged, fairly large units of 142m<sup>2</sup>, medium sized units of 111m<sup>2</sup> and small garden cottages of 53m<sup>2</sup> each. Financial and market forces caused the applicant to abandon the idea of a retirement village in favour of a security residential develop in a similar style as the existing Val de Vie Estate. This led to a third iteration of the site development plan and layout.

#### **Alternative Layout 3. Rejected Alternative 3. See Appendix B3**

Portion 12 of Farm Kliprug No 826 is 17.2470ha in extent. The portion to be developed as The Vines Estate is Portion A of 12.7841ha. The present owners of the site are to keep Portion B of 4.4629ha

The emphasis of development on Portion A of the property thus changed from provisioning retirement accommodation to providing both single residential and town house units in a security estate. Portion B is to be retained by the land owner and the developers of Portion A felt that any future development on Portion B may impact on their development and reached an agreement with the original owner to include Portion B in the application. Portion B will be subdivided into 5 erven as indicated below. These considerations led to the design of Alternative 3.

Portion A to be subdivided into 118 Single Residential erven covering 4.6391ha, five Town House erven covering 1.2890ha, with a total of 38 units, two Private Open Space erven covering 2.1286ha and two Private Road Erven of 4.727ha.

Portion B (4.4629ha) to be further subdivided into 5 erven. Erf 131 Private Road (0.0762ha), Erf 130 Open Space (3.4589ha), Erf 129 Single Residential (2444m<sup>2</sup>), Erf 128 Single Residential (3430m<sup>2</sup>) and Erf 127 Single Residential (3404m<sup>2</sup>).

Access to the site (both Portion A and Portion B) will be provided from the main access road to Val de Vie Winelands Lifestyle Estate within the security gate complex.

After discussions with the owners of existing adjoining erven in Val de Vie during the rezoning process, it was agreed to revise the layout plan by introducing a water feature along the western boundary of The Vines Estate. This water feature will create a softer edge at that point between the new The Vines development and the established Val de Vie. Alternative 3 was thus rejected and revised to Alternative 4 below.

**Alternative layout 4. Rejected Alternative. See Appendix B4**

Portion 12 of Farm Kliprug No 826 is 17.2470ha in extent. The portion to be developed as The Vines Estate is Portion A of 12.7841ha. The present owners of the site are to keep Portion B of 4.4629ha.

Portion A to be subdivided into 118 Single Residential erven covering 4.6391ha, five Town House erven covering 1.2890ha, with a total of 38 units, one Private Open Space erf covering 4.3588ha and two Private Road Erven of 2.1046ha.

A water feature will extend along the western boundary of The Vines estate. This feature was introduced after discussions with the owners of existing adjoining erven in the Val de Vie Estate during **the rezoning process**.

Access to the site (both Portion A and Portion B) will be provided from the main access road to Val de Vie Winelands Lifestyle Estate within the security gate complex.

The applicant and professional team revisited the proposal, especially the financial feasibility of what is proposed. After considering the dynamics of the present property market it was decided to replace all the town houses with single residential opportunities. Alternative 4 was thus rejected in favour of the final and Preferred Alternative 5 below.

**Alternative layout 5. Preferred Alternative. See Appendix B5**

Portion 12 of Farm Kliprug No 826 is 17.2470ha in extent. The portion to be developed as The Vines Estate is Portion A of 12.7841ha. The present owners of the site are to keep Portion B of 4.4629ha.

Portion A to be subdivided into 142 Single Residential erven covering 6.2236ha, one Private Open Space erf covering 4.3662ha and two Private Road Erven of 2.1943ha.

Portion B (4.4629ha) to be further subdivided into 5 erven. Erf 131 Private Road (0.0762ha), Erf 130 Open Space (3.4589ha), Erf 129 Single Residential (2444m<sup>2</sup>), Erf 128 Single Residential (3430m<sup>2</sup>) and Erf 127 Single Residential (3404m<sup>2</sup>).

All the town house opportunities (38) were converted into 24 single residential opportunities. The private road reserve had to be extended by about 0.09ha to service some of these erven. The open space area was moved to between Erven 90 and 91 to allow for a connecting pipe (or landscaped channel) between the two dams. Similarly the open space between Erven 110 and 111 was widened to 6m to serve the same purpose.

Access to the site (both Portion A and Portion B) will be provided from the main access road to Val de Vie Winelands Lifestyle Estate within the security gate complex.

(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:

**Technology alternatives:** Standard brick and mortar technology will be used in the construction of the housing units. This alternative technology is tried and tested and the most cost effective in supplying housing. In the final design of the buildings energy saving technologies such as solar water heating and grey water harvesting will be considered. Resource demand reducing technologies have been included in the preferred option and include:

- Low flow showerheads
- Dual flush toilets
- Low energy lighting
- Thermal insulation of the ceilings

(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:

**Operational alternatives:** Promotion of gas as an alternative energy source will be considered. Resource demand reducing activities have been included in the preferred option and include:

- External house lighting is not recommended. Low lighting internally with recommended dark curtains.
- Other resource demand reducing technologies include the maintenance of geyser at 60° Celsius.
- Recycling
- Grey water use for garden irrigation

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

**No go option.** Do not develop the residential units on the relevant property and leave the land vacant with no economic or social benefit in return. Previous land uses especially the recent clay mining left the site in a derelict and disturbed state. The massive alien pine tree infestation added to the neglected appearance of the site. The proposed residential development coupled with the landscaping proposals is far more preferable option to the "no-go" option.

The applicant further advises that the "no-go" option would be undesirable for the following reasons:

- No capital investment of the order of R400 to R500 million would occur and there will be no opportunities for temporary or permanent employment during the construction and operational phases of development.
- No upliftment of previously disadvantaged individuals via employment opportunities in both phases of the development and no spin offs such as greater tourism to the area would occur.
- No contribution would occur to the local economy via the payment of rates and taxes.

(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:

N/A

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

**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.

**Summary**

**No-Go Alternative**

The consequences of implementing the no-go alternative would be that the site would remain in its present derelict state and that there would be no opportunity to provide a better land use. No positive social impacts of job creation would accrue to the surrounding area.

**Layout Alternatives**

Of the number of options considered the preferred option with the extended water feature on the western boundary results in a more acceptable interface with existing properties in the Val de Vie Estate.

## 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:

**Noise, Dust and Vibration**

**Construction phase:**

There will be dust, noise and vibration impacts associated with the development during the construction phase, with construction vehicles and equipment being used on the site, emissions of dust from materials stockpiles, and the use of construction machinery and vehicles, etc. These impacts will be mitigated by construction phase measures contained in the Construction EMP..

**Operation phase**

No dust impacts will occur during the operational phase, as all surfaces will then be paved, grassed and landscaped. Noise impacts will be limited to that normally associated with a residential estate and is not anticipated to be problematic.

**Traffic**

**Construction phase**

Heavy vehicles entering and exiting the site during loading and offloading of construction equipment. A separate entrance must be considered for this traffic during the construction period.

**Operation phase See Appendix G5 for the Traffic Impact Study**

From the Traffic Counts it transpired that the present Val de Vie Estate generates 161 outbound trips + 151 inbound trips = 312 trips per day. Knowing that there were 200 occupied units at the time of the survey; this results in an approximately 1.5 trips per unit, which coincides with the Department of Transport recommended trip rate for high income residential housing. It was therefore assumed that 1.5 trips per dwelling would be suitable to apply to The Vines. This results in 113 trips in the morning and 113 trips in the afternoon. This is not considered problematic for the present infrastructure.

**Subsoil's and groundwater**

Previous mining activity resulted in a number of large excavations. These have filled up with water resulting in a total of 10 dams. Of these 4 will be retained as part of the landscaping and the rest filled in.

The Geophysical Report indicated that a large amount of fill material will have to be imported to reclaim the dams for residential purposes. See **Appendix G8**

(b) Biological aspects:

Will the development have an impact on critical biodiversity areas (CBAs) or ecological support areas (CSAs)?	<b>YES</b>	NO
If yes, please describe:		

According to the most recent national vegetation map (Mucina & Rutherford 2006), the proposed site is located in an area that would have naturally consisted of Swartland Alluvium Fynbos, occurring as a band of distinctive vegetation along the valley floor associated with the Berg River, with Swartland Shale Renosterveld to the west (on the other side of the Berg River) and Hawequas Sandstone Fynbos on the slopes of the Klein Drakenstein Mountains to the east. Swartland Alluvium Fynbos and Swartland Shale Renosterveld are both categorised as a **Critically Endangered terrestrial vegetation types** on the National List of Threatened Ecosystems published in terms of the National Environmental Management: Biodiversity Act (Act No. 10 of 2004) (Government Notice 1002 of 9 December 2011). Swartland Alluvium Fynbos is typically associated with alluvial gravel and cobble fields resting over Malmesbury Group sediments or Cape Suite granites, but soils can be dominated by clay-rich silts (leading to plant communities that are ecotonal between fynbos and renosterveld in these cases) (Rebelo *et al.* 2006). The entire site has been previously used for farming activity and later extensive clay mining. The site has thus been cleared of these forms of vegetation and currently comprises interconnected water filled mining excavations and heavy alien pine trees. As such the development will not have an impact on critical biodiversity or ecological support areas.

Will the development have an impact on terrestrial vegetation, or aquatic ecosystems ( wetlands, estuaries or the coastline)?	<b>YES</b>	NO
If yes, please describe:		

According to the most recent national vegetation map (Mucina & Rutherford 2006), the proposed site is located in an area that would have naturally consisted of Swartland Alluvium Fynbos, occurring as a band of distinctive vegetation along the valley floor associated with the Berg River, with Swartland Shale Renosterveld to the west (on the other side of the Berg River) and Hawequas Sandstone Fynbos on the slopes of the Klein Drakenstein Mountains to the east. Swartland Alluvium Fynbos and Swartland Shale Renosterveld are both categorised as a **Critically Endangered terrestrial vegetation types** on the National List of Threatened Ecosystems published in terms of the National Environmental Management: Biodiversity Act (Act No. 10 of 2004) (Government Notice 1002 of 9 December 2011). Swartland Alluvium Fynbos is typically associated with alluvial gravel and cobble fields resting over Malmesbury Group sediments or Cape Suite granites, but soils can be dominated by clay-rich silts (leading to plant communities that are ecotonal between fynbos and renosterveld in these cases) (Rebelo *et al.* 2006). The entire site has been previously used for farming activity and later extensive clay mining. The site has thus been cleared of all natural vegetation vegetation and currently comprises interconnected water fillid mining excavations and heavy alien pine trees. There are 10 of these dams on site. Of These 4 will be retained for landscaping purposes and 6 filled in to be used for residential purposes.

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?		<b>NO</b>
If yes, please describe:		

Please describe the manner in which any other biological aspects will be impacted:  
 Since the site has been cultivated and mined in the past, no significant ecological impacts are expected.

(c) Socio-Economic aspects:

What is the expected capital value of the activity on completion?	R 400 000 000
What is the expected yearly income or contribution to the economy that will be generated by or as a result of the activity?	R 40 000 000 (Rates and rentals)
Will the activity contribute to service infrastructure?	<b>YES</b> NO
How many new employment opportunities will be created in the construction phase of the activity?	80
What is the expected value of the employment opportunities during the construction phase?	R 9 000 000
What percentage of this will accrue to previously disadvantaged individuals?	60 %
How will this be ensured and monitored (please explain):	
Tender documentation will stipulate the BEE portion linked to the project and will be monitored by the client / project manager during the construction phase. Non-compliance will result in the contractor paying a penalty.	

How many permanent new employment opportunities will be created during the operational phase of the activity?	100
What is the expected current value of the employment opportunities during the first 10 years?	R 58 000 000
What percentage of this will accrue to previously disadvantaged individuals?	60 %
How will this be ensured and monitored (please explain):	
The developer's procurement policy and employment BEE ratios as required by the BEE act governing companies.	
Any other information related to the manner in which the socio-economic aspects will be impacted:	
Temporary employment with design and construction. Local employment may be created with garden and domestic household services Security services	

(d) Cultural and historic aspects:

There are no historic buildings on the site. The proposed development is not out of keeping with the characteristics of the adjacent residential area. Heritage Western Cape approved the project and agreed that no further actions under Section 38 of the National Heritage Resources Act are necessary. See <b>Appendix D3</b>
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## 2. WASTE AND EMISSIONS

(a) Waste (including effluent) management

Will the activity produce waste (including rubble) during the construction phase?	<b>YES</b>	NO
If yes, indicate the types of waste (actual type of waste, e.g. oil, and whether hazardous or not) and estimated quantity per type?	As per single dwelling M <sup>3</sup>	
Building rubble will be temporarily stored and protected on site to be disposed of at the approved municipal landfill site. Run-off will be associated with construction activities e.g. cleaning, flushing. The Environmental Management Programme (EMP) specifies how construction effluent and solid waste is to be stored and disposed of.	About 1 cub m	

Will the activity produce waste during its operational phase?	<b>YES</b>	NO
If yes, indicate the types of waste (actual type of waste, e.g. oil, and whether hazardous or not) and estimated quantity per type?	Household refuse is one wheely bin per dwelling per week during occupation of house.	

Where and how will the waste be treated / disposed of (describe)?	Waste is collected by the Drakenstein Municipality disposed of according to the waste management plan of the Municipality.	
If yes, indicate the types of waste (actual type of waste, e.g. oil, and whether hazardous or not) and estimated quantity per type per phase of the development?	Per single dwelling. Household refuse will be temporarily stored on site in bins to be collected and disposed of at the approved municipal landfill site. Toilets and bathroom facilities will generate sewage/effluent that will be treated at an approved Drakenstein Municipal sewage treatment works	
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	<b>YES</b>	NO
Written confirmation is included in Appendix E		



Will the activity produce waste that will be treated and/or disposed of at another facility other than into a municipal waste stream?	YES	<b>NO</b>
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:	YES	NO
Does the facility have an operating license? (If yes, please attach a copy of the license.)	YES	NO
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:
The Drakenstein Municipality is slowly rolling out a recycling system but it is not yet operational in this area. The Val de Vie Home Owners Association has a voluntary recycling system in place at their waste collections point and residents are encouraged to make use of it.

## (b) Emissions into the atmosphere

Will the activity produce emissions that will be disposed of into the atmosphere?	YES	<b>NO</b>
If yes, does it require approval in terms of relevant legislation?	YES	NO
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)

<input checked="" type="checkbox"/> <b>Municipal</b>	<input type="checkbox"/> Water board	<input type="checkbox"/> Groundwater	<input type="checkbox"/> River, Stream, Dam or Lake	<input type="checkbox"/> Other	<input type="checkbox"/> The activity will not use water
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If water is to be extracted from a groundwater source, river, stream, dam, lake or any other natural feature, please indicate the volume that will be extracted per month:		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)		
Written confirmation from the municipality is attached to the final report.		
Does the activity require a water use permit / license from DWAF?	YES	<b>NO</b>
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:		
Resource demand reducing technologies have been included in the preferred option and include:		
<ul style="list-style-type: none"> <li>◦ Low flow showerheads</li> <li>◦ Dual flush toilets</li> <li>. Water wise gardening</li> </ul>		
Grey water irrigation systems will be considered.		

**4. POWER SUPPLY**

Please indicate the source of power supply eg. Municipality / Eskom / Renewable energy source

The electrical supply authority for this area is Drakenstein Municipality who is supplied in bulk from Eskom. Drakenstein Municipality currently do not have bulk electrical capacity for this development. This situation will prevail until the proposed new Kliprug 132/11kV substation has been completed. The completion of this substation is dependent on Council approving capital funds for it. See **Appendix E** for approval letter from the Local Authority.

If power supply is not available, where will power be sourced from?

## 5. ENERGY EFFICIENCY

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

The installation of low energy lighting is to be included in the building plans. Thermal insulation of the ceilings is a standard building requirement. Geysers are to be insulated and the temperature setting is recommended at 60° Celsius.

Describe how alternative energy sources have been taken into account or been built into the design of the activity, if any:

The use of solar or wind power for the dwellings is not seen as cost effective under the present supply conditions but may be considered as an option in future.

## PREFERRED ALTERNATIVE

## 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.

- (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.**

<b>Potential impacts on geographical and physical aspects:</b>	Conversion of water bodies and construction of landscaped channels
Nature of impact:	Negative
Extent and duration of impact:	Local and temporary
Probability of occurrence:	High
Degree to which the impact can be reversed:	High
Degree to which the impact may cause irreplaceable loss of resources:	Low
Cumulative impact prior to mitigation:	Medium.
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Medium
Degree to which the impact can be mitigated:	High
Proposed mitigation:	The edges of the dams that are to be retained should be made less steep, with a wider shallow zone, and these edges should be vegetated with indigenous wetland plants (besides enhancing the ecological value of the dams, this would improve their safety); Provision should be made for the creation of a vegetated buffer area on either side of the open channels that are to be retained or constructed on the site for conveying water between the dams and through the site, and these channels should be designed in such a way that they provide a diversity of habitats; and Input should be

	obtained from a freshwater ecologist before the plans for the proposed development are finalised so that the above-mentioned suggestions can be effectively incorporated into the final designs.
Cumulative impact post mitigation:	Low
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Low

<b>Potential impacts on geographical and physical aspects:</b>	Transport of fill material by heavy transport vehicles
Nature of impact:	Negative
Extent and duration of impact:	Local and temporary
Probability of occurrence:	High
Degree to which the impact can be reversed:	High
Degree to which the impact may cause irreplaceable loss of resources:	Low
Cumulative impact prior to mitigation:	Medium. Frequent trips by heavy transport vehicles.
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Medium
Degree to which the impact can be mitigated:	High
Proposed mitigation:	Separate entrance for heavy vehicles.
Cumulative impact post mitigation:	Low
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Low

<b>Potential impact on geographical and physical aspects:</b>	Dust generation during construction
Nature of impact:	Negative
Extent and duration of impact:	Local and Temporary
Probability of occurrence:	High during dry and windy periods
Degree to which the impact can be reversed:	High
Degree to which the impact may cause irreplaceable loss of resources:	Low
Cumulative impact prior to mitigation:	Medium
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Medium
Degree to which the impact can be mitigated:	High
Proposed mitigation:	Restriction of vehicle speeds. Standard EMP procedures, including watering of dusty areas and straw and geo-textile stabilization.
Cumulative impact post mitigation:	Low
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Low

<b>Potential impact on biological aspects:</b>	Potential loss of small patch of indigenous vegetation along the entrance channel feeding the large dam
Nature of impact:	Negative
Extent and duration of impact:	Local and Temporary
Probability of occurrence:	High
Degree to which the impact can be reversed:	High
Degree to which the impact may cause irreplaceable loss of resources:	Low
Cumulative impact prior to mitigation:	Medium
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Medium- Low
Degree to which the impact can be mitigated:	High
Proposed mitigation:	Search and rescue and replanting once channel has been landscaped. The few remaining plants are not of high significance.
Cumulative impact post mitigation:	Medium- Low
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Low

<b>Potential impacts on socio-economic aspects:</b>	Creation of construction phase job opportunities
Nature of impact:	Positive
Extent and duration of impact:	Local and short-term
Probability of occurrence:	High
Degree to which the impact can be reversed:	This is a positive impact
Degree to which the impact may cause irreplaceable loss of resources:	None
Cumulative impact prior to mitigation:	Low positive
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	None
Degree to which the impact can be mitigated:	Low positive
Proposed mitigation:	Create construction jobs
Cumulative impact post mitigation:	Low positive
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	High

<b>Potential impacts on cultural-historical aspects:</b>	Visual Impacts. While the development will result in a change in the visual landscape from an unbuilt, treed with water bodies site, to a built area, the scenic resources of the greater valley will be minimally affected. See <b>Appendix xxx</b> for HIA
Nature of impact:	Negative
Extent and duration of impact:	Local and permanent
Probability of occurrence:	High
Degree to which the impact can be reversed:	High
Degree to which the impact may cause irreplaceable loss of resources:	Low
Cumulative impact prior to mitigation:	Medium
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Medium-Low
Degree to which the impact can be mitigated:	High
Proposed mitigation:	The proposed development will change the site from a densely vegetated site with Pine trees and numerous water bodies to a security residential estate. Landscaping will incorporate the remaining water bodies and connecting channels into the environment of the development. Certain ponds will be retained in the new development and the pine trees which were planted to stabilize the site in the mining operations and have since become invasive on the site will be removed. Indigenous vegetation will be planted with the redevelopment of the site.
Cumulative impact post mitigation:	High Positive
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Low negative. Medium-high positive

<b>Potential noise impacts:</b>	There will be noise associated with the construction phase
Nature of impact:	Negative
Extent and duration of impact:	Local and Short-term
Probability of occurrence:	Probable
Degree to which the impact can be reversed:	Medium
Degree to which the impact may cause irreplaceable loss of resources:	Low
Cumulative impact prior to mitigation:	Low
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Medium-low
Degree to which the impact can be mitigated:	Medium
Proposed mitigation:	Working hours will be restricted to normal working hours. <ul style="list-style-type: none"> <li>All noise and sounds generated by plant or machinery must adhere to SABS specifications for the maximum permissible noise levels for residential areas.</li> </ul>

	<ul style="list-style-type: none"> <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.</li> </ul>
Cumulative impact post mitigation:	Low
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Low
<b>Potential visual impacts:</b>	Lighting during construction phase
Nature of impact:	Negative
Extent and duration of impact:	Local and Temporary
Probability of occurrence:	Medium
Degree to which the impact can be reversed:	High
Degree to which the impact may cause irreplaceable loss of resources:	Low
Cumulative impact prior to mitigation:	Medium
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Medium- Low
Degree to which the impact can be mitigated:	
Proposed mitigation:	<p>Lighting on site is to be sufficient for safety and security purposes, but shall not be intrusive to neighbouring residents, or interfere with road traffic. Temporary construction lights must be designed to reflect light downwards. Thus reducing the impact of light pollution.</p> <ul style="list-style-type: none"> <li>• Should overtime/night work be authorised, the Contractor shall be responsible to ensure that lighting does not cause undue disturbance to neighbouring residents. In this situation low flux lighting shall be utilised.</li> </ul>
Cumulative impact post mitigation:	Low
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.**

<b>Potential impacts on the geographical and physical aspects:</b>	Although a few potentially negative operational-phase impacts to freshwater ecosystems of medium significance without mitigation were identified with respect to stormwater-related pollution and increased sewage loads from the proposed development, it was predicted that the significance of these negative impacts would reduce to a low level if the recommended mitigation measures were to be effectively implemented.
Nature of impact:	Negative
Extent and duration of impact:	Permanent
Probability of occurrence:	Medium
Degree to which the impact can be reversed:	High
Degree to which the impact may cause irreplaceable loss of resources:	Low
Cumulative impact prior to mitigation:	Low
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Low
Degree to which the impact can be mitigated:	High
Proposed mitigation:	The most important recommended mitigation measures for reducing the potential operational-phase impacts on freshwater ecosystems to low levels of significance are (1) the inclusion of vegetated channels in the stormwater management system for the proposed development, (2) the construction of sediment traps/sumps at the inlets to the dams (or provision of a programme for the periodic dredging of the dams), and (3) confirmation of the availability of

	adequate capacity at the Pearl Valley WWTW for the anticipated sewage loads from the proposed development.
Cumulative impact post mitigation:	Low
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Low

<b>Potential impact biological aspects:</b>	Alien plant invasion into nature reserve from residential area
Nature of impact:	Negative
Extent and duration of impact:	Local and Temporary
Probability of occurrence:	Medium
Degree to which the impact can be reversed:	High
Degree to which the impact may cause irreplaceable loss of resources:	Medium-Low
Cumulative impact prior to mitigation:	Medium
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	High
Degree to which the impact can be mitigated:	High
Proposed mitigation:	No planting of CARA listed alien invasive plants in gardens. No dumping of garden refuse over fence of nature reserve.
Cumulative impact post mitigation:	Low
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Low

<b>Potential impacts on socio-economic aspects:</b>	Impact on traffic patterns
Nature of impact:	Negative
Extent and duration of impact:	Local and permanent
Probability of occurrence:	High
Degree to which the impact can be reversed:	High with traffic easing measures at intersections
Degree to which the impact may cause irreplaceable loss of resources:	Low
Cumulative impact prior to mitigation:	Medium
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Medium
Degree to which the impact can be mitigated:	High
Proposed mitigation:	Small number of additional trip generated from The Vines Estate can be accommodated in the existing infrastructure.
Cumulative impact post mitigation:	Low
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Low

<b>Potential impacts on socio-economic aspects:</b>	Impact on municipal services
Nature of impact:	Negative
Extent and duration of impact:	Regional and permanent.
Probability of occurrence:	High
Degree to which the impact can be reversed:	High with added capacity and prior planning
Degree to which the impact may cause irreplaceable loss of resources:	Low
Cumulative impact prior to mitigation:	Medium
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Medium
Degree to which the impact can be mitigated:	High
Proposed mitigation:	In planning The Vines Estate provision was made for bulk services. This is confirmed by the Local authority. See <b>Appendix E</b>
Cumulative impact post mitigation:	Low
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Low

<b>Potential impacts on the socio-economic aspects:</b>	Increased economic activity and provision of employment in the area
Nature of impact:	Positive

Extent and duration of impact:	Local and Permanent
Probability of occurrence:	High
Degree to which the impact can be reversed:	Low
Degree to which the impact may cause irreplaceable loss of resources:	Low
Cumulative impact prior to mitigation:	Medium positive
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Medium
Degree to which the impact can be mitigated:	Medium positive
Proposed mitigation:	
Cumulative impact post mitigation:	Medium
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	High

<b>Potential impacts on the cultural-historical aspects:</b>	Mainly of a visual nature. See below and the Heritage Impact Assessment. <b>Appendix G3</b>
Nature of impact:	Negative
Extent and duration of impact:	Local and Permanent
Probability of occurrence:	Medium
Degree to which the impact can be reversed:	High
Degree to which the impact may cause irreplaceable loss of resources:	Low
Cumulative impact prior to mitigation:	Medium
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Medium- Low
Degree to which the impact can be mitigated:	
Proposed mitigation:	Street and other permanent light sources must be designed to reflect light downwards. Thus reducing the impact of light pollution. Limited street/parking lighting; Keeping street/parking lighting to low level lighting; and Limiting external lighting on the residential buildings.
Cumulative impact post mitigation:	Low
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Low

<b>Potential noise impacts:</b>	Normal traffic noise associated with a residential development.
Nature of impact:	Negative to neutral
Extent and duration of impact:	Permanent and Local
Probability of occurrence:	High
Degree to which the impact can be reversed:	Low
Degree to which the impact may cause irreplaceable loss of resources:	Low
Cumulative impact prior to mitigation:	Medium
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Medium
Degree to which the impact can be mitigated:	Low
Proposed mitigation:	Small number of vehicles and traffic calming design in layout.
Cumulative impact post mitigation:	Medium
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Medium

<b>Potential visual impacts:</b>	These residential units will be visible from surrounding properties
Nature of impact:	Negative to neutral
Extent and duration of impact:	Local and Permanent
Probability of occurrence:	High
Degree to which the impact can be reversed:	High
Degree to which the impact may cause irreplaceable loss of resources:	Low
Cumulative impact prior to mitigation:	Medium
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Medium
Degree to which the impact can be mitigated:	High
Proposed mitigation:	While the development will result in a change in the visual landscape from an unbuilt, treed with water bodies site, to a built area, the scenic resources of the greater valley will be minimally affected, but at the local scale will be moderately affected. If following mitigation

	measures are implemented, the visual impact will be low. Landscaping of the green buffer areas through a combination of a phased removal of the existing alien vegetation, planting of quick growing and slower growing indigenous trees and shrubs and thus constructing a landscaped areas to screen the new built development
Cumulative impact post mitigation:	Low
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Low

<b>Potential visual impacts:</b>	Lighting
Nature of impact:	Negative
Extent and duration of impact:	Local and Permanent
Probability of occurrence:	High
Degree to which the impact can be reversed:	Medium
Degree to which the impact may cause irreplaceable loss of resources:	Medium
Cumulative impact prior to mitigation:	High
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Medium
Degree to which the impact can be mitigated:	Medium
Proposed mitigation:	Street and other permanent light sources must be designed to reflect light downwards. Thus reducing the impact of light pollution. Limited street/parking lighting; Keeping street/parking lighting to low level lighting; and Limiting external lighting on the residential buildings.
Cumulative impact post mitigation:	Medium
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Medium-Low

- (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.**

**NB This is a proposed residential development and does not involve decommissioning or closure of any facilities.**

<b>Potential impacts on the geographical and physical aspects:</b>	
Nature of impact:	
Extent and duration of impact:	
Probability of occurrence:	
Degree to which the impact can be reversed:	
Degree to which the impact may cause irreplaceable loss of resources:	
Cumulative impact prior to mitigation:	
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	
Degree to which the impact can be mitigated:	
Proposed mitigation:	
Cumulative impact post mitigation:	
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	

<b>Potential impact biological aspects:</b>	
Nature of impact:	
Extent and duration of impact:	
Probability of occurrence:	
Degree to which the impact can be reversed:	
Degree to which the impact may cause irreplaceable loss of resources:	
Cumulative impact prior to mitigation:	



Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	
Degree to which the impact can be mitigated:	
Proposed mitigation:	
Cumulative impact post mitigation:	
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	

<b>Potential impacts on the socio-economic aspects:</b>	
Nature of impact:	
Extent and duration of impact:	
Probability of occurrence:	
Degree to which the impact can be reversed:	
Degree to which the impact may cause irreplaceable loss of resources:	
Cumulative impact prior to mitigation:	
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	
Degree to which the impact can be mitigated:	
Proposed mitigation:	
Cumulative impact post mitigation:	
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	

<b>Potential impacts on the cultural-historical aspects:</b>	
Nature of impact:	
Extent and duration of impact:	
Probability of occurrence:	
Degree to which the impact can be reversed:	
Degree to which the impact may cause irreplaceable loss of resources:	
Cumulative impact prior to mitigation:	
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	
Degree to which the impact can be mitigated:	
Proposed mitigation:	
Cumulative impact post mitigation:	
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	

<b>Potential noise impacts:</b>	
Nature of impact:	
Extent and duration of impact:	
Probability of occurrence:	
Degree to which the impact can be reversed:	
Degree to which the impact may cause irreplaceable loss of resources:	
Cumulative impact prior to mitigation:	
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	
Degree to which the impact can be mitigated:	
Proposed mitigation:	
Cumulative impact post mitigation:	
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	

<b>Potential visual impacts:</b>	
Nature of impact:	
Extent and duration of impact:	
Probability of occurrence:	
Degree to which the impact can be reversed:	

Degree to which the impact may cause irreplaceable loss of resources:	
Cumulative impact prior to mitigation:	
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	
Degree to which the impact can be mitigated:	
Proposed mitigation:	
Cumulative impact post mitigation:	
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	

(d) **Any other impacts: N/A**

Potential impact:	
Nature of impact:	
Extent and duration of impact:	
Probability of occurrence:	
Degree to which the impact can be reversed:	
Degree to which the impact may cause irreplaceable loss of resources:	
Cumulative impact prior to mitigation:	
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	
Degree to which the impact can be mitigated:	
Proposed mitigation:	
Cumulative impact post mitigation:	
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	

## **LAYOUT ALTERNATIVES**

(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.**

**NB The rejected layouts will have the same impacts as the preferred layout.**

<b>Potential impacts on geographical and physical aspects:</b>	
Nature of impact:	
Extent and duration of impact:	
Probability of occurrence:	
Degree to which the impact can be reversed:	
Degree to which the impact may cause irreplaceable loss of resources:	
Cumulative impact prior to mitigation:	
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	
Degree to which the impact can be mitigated:	
Proposed mitigation:	
Cumulative impact post mitigation:	
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	

**NOTE: All other impacts remain the same as for the preferred alternative.**

**“No-Go Alternative”. This means no development in the area**

<b>Potential impact biological aspects:</b>	Further degradation of the site through increased invasive alien vegetation and lack of formal management.
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Nature of impact:	Negative
Extent and duration of impact:	Local and long term
Probability of occurrence:	High
Degree to which the impact can be reversed:	High
Degree to which the impact may cause irreplaceable loss of resources:	High
Cumulative impact prior to mitigation:	Medium
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Medium
Degree to which the impact can be mitigated:	High
Proposed mitigation:	Development as proposed in preferred alternative.
Cumulative impact post mitigation:	High positive
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	High positive

<b>Potential impacts on socio-economic aspects:</b>	Lack of capital investment in the area and provision of employment
Nature of impact:	Negative
Extent and duration of impact:	Local and permanent
Probability of occurrence:	High
Degree to which the impact can be reversed:	High
Degree to which the impact may cause irreplaceable loss of resources:	Low
Cumulative impact prior to mitigation:	Medium
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	High (Opportunity cost)
Degree to which the impact can be mitigated:	High
Proposed mitigation:	Develop the area through an appropriate development that uplifts the socio-economic status of the area.
Cumulative impact post mitigation:	High positive
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	High positive

## 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:

A **fresh water assessment** was done by Dean Ollis. See **Appendix G1**.

### Conclusions

The only naturally-occurring freshwater ecosystem identified on the site for the proposed "The Vines" residential development (Portion 12 of Farm Kliprug No. 826, Paarl) was the highly degraded remnants of a stream that used to flow through the site before it was excavated for clay-mining. The only portion of this stream that remains on the site is a short section that enters at the south-eastern corner of the site and flows for approximately 150 m through "Portion B" of the proposed subdivision before reaching the first dam on the site (referred to as the "inlet stream"). The original stream is no longer evident on the rest of the site, due to the extensive excavation that resulted in the creation of eight dams on "Portion A" of the proposed subdivision, and only becomes recognisable as a stream again as it exits the site in the north-western corner and flows through the neighbouring Val de Vie Estate towards the Berg River (referred to as the "outlet stream"). The inlet stream was assessed to be largely modified in terms of its present ecological condition (Ecological Category D), while the instream component of the outlet stream was rated to be in a similar condition but with a riparian component that it is in slightly better condition (moderately to largely modified – Ecological Category C/D) due to the presence of sections with indigenous vegetation along the stream margin. The outlet stream was rated to be of moderate conservation importance, due largely to its importance as an ecological corridor between the proposed site and the Berg River, while the inlet stream was rated to be of low-to-moderate conservation importance.

Besides the relatively deep, permanently inundated dams on the site, a small artificial wetland was identified in a shallow depression area formed through excavation activities at some stage in the past. This wetland was rated to be of low-to-moderate conservation importance, in contrast to the low conservation importance of the dams, but it was concluded that this feature – which did not occur naturally on the site – could quite easily be recreated elsewhere on the site. The proposed development of "The Vines" would result in the direct loss of five dams and of the small artificial wetland that was identified. This footprint-related (design-phase) impact was rated to be of low significance in the case of the dams but of low-to-moderate significance without mitigation in the case of the artificial wetland. If a similar wetland was to be recreated elsewhere on the site as part of the proposed development, it was predicted that the residual footprint-related impact would be of low significance.

Although a few potentially negative operational-phase impacts to freshwater ecosystems of medium significance without mitigation were identified with respect to stormwater-related pollution and increased sewage loads from the proposed development, it was predicted that the significance of these negative impacts would reduce to a low level if the recommended mitigation measures were to be effectively implemented.

The most important recommended mitigation measures for reducing the potential operational-phase impacts on freshwater ecosystems to low levels of significance are (1) the inclusion of vegetated channels in the stormwater management system for the proposed development, (2) the construction of sediment traps/sumps at the inlets to the dams (or provision of a programme for the periodic dredging of the dams), and (3) confirmation of the availability of adequate capacity at the Pearl Valley WWTW for the anticipated sewage loads from the proposed development.

The only cumulative impact of potential significance that was identified for "The Vines" proposed residential development is the further increase in the generation of sewage that would inevitably result from the development and which would be treated at the Pearl Valley WWTW, potentially resulting in further pollution of the Berg River, especially if the WWTW reaches its treatment capacity.

Overall, it was concluded that the potentially negative impacts to freshwater ecosystems that could result from the proposed development would be of low significance if all the recommended mitigation measures outlined in the current report were to be effectively implemented.

### Recommendations

To minimise the potentially negative footprint-related (design-phase) impacts associated with the loss of freshwater ecosystems that would result from the implementation of the proposed development, and to enhance the positive impacts to freshwater ecosystems, it is recommended that the final plans for the development be refined as follows: Provision should be made for the creation of one or more isolated depression wetlands on the site similar to the small artificial wetland that would be lost;

The edges of the dams that are to be retained should be made less steep, with a wider shallow zone, and these edges should be vegetated with indigenous wetland plants (besides enhancing the ecological value of the dams, this would improve their safety);

Provision should be made for the creation of a vegetated buffer area on either side of the open channels that are

to be retained or constructed on the site for conveying water between the dams and through the site, and these channels should be designed in such a way that they provide a diversity of habitats; and

Input should be obtained from a freshwater ecologist before the plans for the proposed development are finalised so that the above-mentioned suggestions can be effectively incorporated into the final designs.

The recommended construction-phase mitigation measures to minimise negative impacts to remaining freshwater ecosystems (as outlined in **Section 6.1** of the current report) should be written into the EMP for the proposed development.

To minimise the potentially negative operational-phase impacts to freshwater ecosystems, the following mitigation measures are recommended:

The open channels forming part of the Stormwater Management Plan for the proposed development should be designed and constructed in such a way that they can be vegetated, and these channels should preferably be planted with appropriate vegetation under the guidance of a suitably qualified horticulturalist or freshwater ecologist with a good working knowledge of wetland plants.

Sediment traps/sumps should be installed at the inlet to each dam that is to be retained on the site, and these traps/sumps should be regularly cleared and the sediment that is removed should be disposed of at a licensed waste disposal site. Alternatively, the dams should be periodically dredged (at least once every five years) to remove the accumulated sediments and the dredged material should be disposed of at a licensed waste disposal site. Provision would have to be made in the final plans for the proposed development to allow for the access of dredging equipment into the dams.

Residents of the proposed development, and their visitors, should be made aware of the importance of minimising the damage and disturbance to the remaining dams, streams and open channels on and adjacent to the site.

Night-time lighting should be kept to a minimum, especially around the dams and along the streams/channels, and low-intensity lighting should be used throughout the development as far as possible (this could be enforced by including such requirements in the rules for homeowners within the proposed residential estate)

#### **A Traffic Impact Study was done by Aurecon. Appendix G5**

##### **Conclusion**

Based on the three SIDRA analyses of the R301 / Kliprug Minor Rd intersection, the existing lane configuration is suitable and a traffic circle is not required. It is understood that previously a traffic circle was investigated; this was done once it was evident that the intersection had failed and expected delays had decreased the LOS. Such failure was as a result of the additional traffic on Kliprug Minor Rd generated by Pearl Valley. The additional traffic generated by The Vines will have a minimal impact on the R301 intersections.

The N1 interchange currently operates at failure i.e. a Level of Service (LOS) F, therefore the impact from Val de Vie cannot be measured. Its failure is a hindrance to all future developments and natural growth along the R301, such as Val de Vie and Pearl Valley. Based on the SIDRA analyses of the N1 interchange, signalling the off ramps proved insufficient, as the intersection continued to fail in the PM peak hour with the existing traffic volumes. It therefore also failed using existing + generated traffic and after 1% growth for 5 years. Additional geometric improvements were investigated to improve the intersections' LOS for the existing traffic volumes, before considering the development's additional traffic. A signalised interchange with geometric improvements was then modelled with the development's traffic added and 1% growth for 5 years. The LOS for the R301 decreased (to a D in some circumstances), but is still acceptable. It should be emphasized that the N1 interchange fails under its existing conditions (i.e. stop control) with existing traffic volumes. The failure of the intersection should not impact on the proposed development of The Vines, as this traffic accounts for a small percentage of the traffic at the interchange. The SIDRA outputs indicate that the improvement from signalling and the addition of a turning lane greatly decreases the delays and the intersection operates at an acceptable LOS.

##### **Recommendations**

From a traffic impact perspective, the development of The Vines should be approved.

Upgrading the R301 / Kliprug Minor Rd Intersection is not required.

The N1 interchange currently requires upgrading. It is recommended that the relevant authority (SANRAL) investigate possible upgrading solutions. The Provincial Department of Transport and Public Works indicated that they have no objection to the development. See **Appendix E**

#### **A visual and Heritage Impact Study was done by Brigitte O'Donoghue and Megan Anderson. Appendix G3**

##### **Conclusion**

The proposed Vines Residential Development is an infill development adjacent to Val de Vie Residential development. While the development will result in a change in the visual landscape from an unbuilt, treed with water bodies site, to a built area, the scenic resources of the greater valley will be minimally affected, but at the local scale will be moderately affected. If mitigation measures are implemented, the visual impact will be low. Other visual impacts will be additional night lighting and visibility to neighbouring residential units. These too can be mitigated to reduce the visual impacts to low.

##### **RECOMMENDATIONS**

The HIA recommends to HWC IARCOM endorse the HIA with the positive comment to DEA&DP with the following recommended mitigation measures included in the proposed developed:

##### **Landscaping**

- Landscaping of the green buffer areas through a combination of a phased removal of the existing alien vegetation, planting of quick growing and slower growing indigenous trees and shrubs and constructing a landscaped screen.

##### **Lighting**

- Limited street/parking lighting;
  - Keeping street/parking lighting to low level lighting; and
  - Limiting external lighting on the residential buildings.
- Heritage Western Cape approved the project see **Appendix E**.

**Geotechnical Report Appendix G8**

This report deals mainly with the technical aspects of the site for civil engineering works.

**Landscape Statement Appendix G6**

**Architectural Report Appendix G7**

**LUPO Report Appendix G9**

Land use application

## 8. IMPACT SUMMARY

Please provide a summary of all the above impacts.

### Summary table of impacts for preferred alternative

Impact	Significance rating	
	Without mitigation	With mitigation
<b>Construction Phase</b>		
Conversion of water bodies and construction of landscaped channels	Medium	Low
Dust generation during construction	Medium	Low
Transport of fill material by heavy transport vehicles	High	Medium-Low
Potential loss of small patch of indigenous vegetation along the entrance channel feeding the large dam on Portion B	Medium	Low
Noise associated with the construction	Medium-low	Low
Creation of construction phase job opportunities	Low	High positive
Lighting during construction phase	Medium	Low
<b>Operation phase</b>		
Impact on municipal services	Medium	Low
Alien plant invasion into nature reserve from residential area	Medium	Low
Impact on traffic patterns	Low	Low
These residential units will be visible from a wide area	High	Low
Normal traffic noise associated with a residential development.	Medium	Medium
Lighting	Medium	Medium-Low
<b>Decommissioning and closure phase</b>		
<b>NB This is a proposed residential development and does not involve decommissioning or closure of facilities.</b>		
<b>No-go alternative</b>		
<b>Impact</b>	<b>Without mitigation</b>	<b>With Mitigation (Development)</b>
Further degradation of the site through increased invasive alien	High Negative	High Positive

vegetation, Site should be actively managed		
Lack of capital investment in the area and provision of employment	High negative	High positive
<b>Summary table for alternative layout options</b>		
<b>Impact</b>	<b>Significance rating</b>	
<b>NB The rejected layouts will have the same impacts as the preferred layout.</b>	<b>Without mitigation</b>	<b>With mitigation</b>
<b>All other impacts remain the same as for the preferred alternative.</b>		

## 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.

An Environmental Management Programme has been drawn up for the construction and operational phase of the development. Please see **Appendix H** for the Draft EMP. Compliance with the Environmental Management Programme is essential

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

The applicant budgeted for the construction of the development and has the financial wherewithal to implement these measures. The same applicant very successfully implemented the previous phases of the Val de Vie Estate.

**Please note:** A draft **ENVIRONMENTAL MANAGEMENT PROGRAMME** must be attached 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.

This Basic Assessment was undertaken in accordance with the principles of Integrated Environmental Management as detailed in Section 23 of NEMA and in the NEMA EIA Regulations (2010).  
 This Basic Assessment was undertaken in accordance with the DEA&DP Guidelines and reference literature detailed in Section B10 of this BAR. The EAP feels it reasonable to conclude that the criteria listed in the above references ensured an adequate assessment of this environmental application. One of the fundamental aims of a Basic Assessment Process is to ensure that the demands of sustainable development are met on a project level, within the context of the greater area. The most common definition of sustainable development is development that meets the needs of the present while not compromising the needs of future generations.  
 The BAR for the proposed The Vines development is therefore being undertaken with sustainable development as a goal. The assessment looked at the impacts of the proposals on the environment and assesses the significance of these, as well as proposes mitigation measures, as required, to reduce anticipated impacts to acceptable levels. This is to ensure that the development makes "equitable and sustainable use of environmental and natural resources for the benefit of present and future generations"

(b) Please describe the assessment criteria used.

**Protocol for the Assessment of Impacts** (from DEAT 2002 and the NEMA regulations 2010)

**Nature of the Impact:**

Description of the type of effect the activity would have on the affected environment.

**Extent of the Impact:**

Reflects the importance of the environment on:

- ◆ a local (site area);
- ◆ surrounds (site area and its surroundings);
- ◆ regional (Western Cape) or
- ◆ a national scale.

Impacts on threatened wetlands or seeps, or those that provide ecosystem functions on a regional or national scale are considered to constitute a regional or national scale impact.

**Duration of the Impact:**

- ◆ Short term (0-5 years);
- ◆ Medium term (6-15 years);
- ◆ Long term (16-30 years);
- ◆ Permanent (mitigation, either human or natural, will not occur in such a way or in such time span that the impact can be considered transient).

**Intensity of the Impact:**

- ◆ Low (affects the environment such that natural functions or processes are not affected – or not degraded significantly more than their present state);
- ◆ Medium (affected environment is altered but natural functions or processes continue, albeit in a modified/ increasingly modified way);
- ◆ High (natural functions or processes are altered to the extent that they will temporarily or permanently cease).

**Probability of Occurrence:**

- ◆ Improbable (low likelihood of the impact occurring);
- ◆ Probable (distinct possibility of the impact occurring);
- ◆ Highly probable (the impact will most likely occur).
- ◆ Definite (impact will occur regardless of any prevention measures)

**Status of the Impact:**

- ◆ Negative



- ◆ Positive
- ◆ Neutral

**Significance of impact (Degree to which the impact will cause irreplaceable loss of resources):**

- ◆ No significance: the impacts do not influence the environment in any way.
- ◆ Low significance: the impacts will have a minor influence on the environment. These impacts require some attention to modification of the project design where possible, or alternative mitigation.
- ◆ Moderate significance: the impacts will have a moderate influence on the environment. The impact can be ameliorated by a modification in the project design or implementation of effective mitigation measures.
- ◆ High significance: the impacts will have a major influence on the environment.
- ◆ No development: the impacts will have the "no-go" implication on the development or portions of the development regardless of any mitigation measures that could be implemented. This level of significance must be well motivated.

**Degree to which impact can be reversed:**

- ◆ Low (can only be removed with great difficulty and expense)
- ◆ Medium (can be removed with moderate difficulty and expense)
- ◆ High (can easily and cheaply be removed)

**Degree of Confidence in Predictions:**  
It is necessary to state the degree of confidence (low, medium or high) in the predictions based on the available information and level of knowledge and expertise.

**Accumulative Impact:**  
Consideration must be given to the extent of any accumulative impact that may occur due to the proposed development. Such impacts must be evaluated with an assessment of similar developments already in the environment. Such impacts will be either positive or negative, and will be graded as being of negligible, low, medium or high impact.

(c) Please describe the gaps in knowledge.

No gaps were identified

(d) Please describe the underlying assumptions.

The following assumptions are made:

- The information on which the report is based (i.e. diagrams, plans and project information) is correct.
- The construction of this proposed development will be in line with the recommendations in this report, which will be enforced by the implementation of detailed Environmental Management Programme. Much of the long-term success lies in the effective implementation of the measures prescribed in the Environmental Management Programme.

(e) Please describe the uncertainties.

Implementation of mitigation and management measures is the responsibility of the applicant and contactors. The successful implementation of these measures are therefore not in the hands of the EAP, and the effectiveness of the implementation remains uncertain. It is therefore suggested that an ECO be appointed in order to ensure compliance with the relevant conditions and mitigations.

## 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>	NO
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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>	NO
Please provide reasons for your opinion		
<p>The property is an enclave within the existing Val de Vie Estate and within the urban edge of Drakenstein Municipality.</p> <p>The EAP has not identified any reasons as to why the proposed development cannot proceed provided that the mitigation measures proposed by the independent specialists and in the EMP are implemented.</p>		
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.		
<p>Should the project be authorized, the following recommendations could be included as conditions, where applicable:</p> <p><b>WASTE</b></p> <ul style="list-style-type: none"> <li>All building rubble should be removed on a monthly cycle, during construction, thus no storage of rubble on site for periods longer than a month.</li> </ul> <p><b>NOISE:</b></p> <ul style="list-style-type: none"> <li>All noise and sounds generated by plant or 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> </ul> <p>No sound amplification equipment such as sirens, loud hailers or hooters may be used on site, after normal working hours, except in emergencies.</p> <ul style="list-style-type: none"> <li>If work is to be undertaken outside of normal work hours, permission must be obtained from the Local Authority. Prior to commencing any such activity the Contractor is also to advise the potentially affected neighbouring residents. Dates, times and the nature of the work to be undertaken are to be provided. Notification could include letter-drops.</li> </ul> <p>No Kikuyu grass should be planted. No fertilizers to be used in the garden area. No planting of CARA listed invasive alien species.</p> <p>Energy efficient and water saving devices and technologies included in the impact assessment should be implemented with operation. Recycling activity points are indicated</p>		
Duration and Validity:		
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.		
An extension of the authorisation time period is not 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	✓
Appendix B1:	Alternative Layout 1 (Rejected)	✓
Appendix B2:	Alternative Layout 2 (Rejected)	✓
Appendix B3:	Alternative Layout 3 (Rejected)	✓
Appendix B4:	Alternative Layout 4 (Rejected)	✓

Appendix B5:	Alternative Layout 5 (Preferred)	✓
Appendix B6:	Historic Aerial Photograph	✓
Appendix C:	Photographs	✓
Appendix D1:	Biodiversity Overlay	✓
Appendix D2:	Heritage Matters and HWC ROD	✓
Appendix E:	Permit(s) / license(s) from any other organ of state including service letters from the municipality	✓
Appendix F1:	Public participation process	✓
Appendix F2:	Newspaper Notices	✓
Appendix F3:	Site Notice Boards	✓
Appendix F4:	Registered Interested and Affected Parties (I&AP's)	✓
Appendix F5:	Proof of delivery of Draft BAR to I&AP's	✓
Appendix F6:	Comments and Responses Report on Draft BAR	✓
Appendix G1:	Fresh Water Study	✓
Appendix G2:	Engineering Services Report	✓
Appendix G3:	Heritage and Visual Impact Study	✓
Appendix G4:	Storm Water Report	✓
Appendix G5:	Traffic Impact Assessment	✓
Appendix G6:	Landscape Statement	✓
Appendix G7:	Architectural Statement	✓

Appendix G8:	Geo-technical Report	✓
Appendix G9:	LUPO Application	✓
Appendix H :	Environmental Management Programme	✓
Appendix I:	Power of Attorney and Landowner's consent	✓
Appendix J:	EAP Terms of Reference and Time Schedule	✓

## DECLARATIONS

### THE APPLICANT

I ....., in my personal capacity or duly authorised (please circle the applicable option) by **Watchman Properties (Pty) Ltd** 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:

**Watchman Properties (Pty) Ltd**

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Date:

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

I, **Johannes Hendrik Neethling** 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:

**Johan Neethling Environmental Services cc**

Name of company:

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Date: