



Environmental Health & Safety Legal Consulting

HIGH DENSITY RESIDENTIAL DEVELOPMENT ERF 2569 WELLINGTON

DRAFT BASIC ASSESSMENT REPORT

in support of an

ENVIRONMENTAL AUTHORISATION

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DEA&DP: LAND MANAGEMENT REF NO: 16/3/1/1/B3/38/1016/13

APRIL 2013



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

AUGUST 2010

Kindly note that:

1. This **Basic Assessment Report** is the standard report required by DEA&DP in terms of the EIA Regulations, 2010 and must be completed for all Basic Assessment applications.
2. This report must be used in all instances for Basic Assessment applications for an environmental authorisation in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998) (NEMA), as amended, and the Environmental Impact Assessment Regulations, 2010, and/or a waste management licence in terms of the National Environmental Management: Waste Act, 2008 (Act 59 of 2008) (NEM: WA), and/or an atmospheric emission licence in terms of the National Environmental Management: Air Quality Act, 2004 (Act No. 39 of 2004) (NEM: AQA).
3. This report is current as of 2 August 2010. It is the responsibility of the Applicant / EAP to ascertain whether subsequent versions of the report have been published or produced by the competent authority.
4. The required information must be typed within the spaces provided in the report. The sizes of the spaces provided are not necessarily indicative of the amount of information to be provided. It is in the form of a table that will expand as each space is filled with typing.
5. Incomplete reports will be rejected. A rejected report may be amended and resubmitted.
6. The use of "not applicable" in the report must be done with circumspection. Where it is used in respect of material information that is required by the Department for assessing the application, this may result in the rejection of the report as provided for in the regulations.
7. While the different sections of the report only provide space for provision of information related to one alternative, if more than one feasible and reasonable alternative is considered, the relevant section must be copied and completed for each alternative.
8. Unless protected by law all information contained in, and attached to this report, will become public information on receipt by the competent authority. If information is not submitted with this report due to such information being protected by law, the applicant and/or EAP must declare such non-disclosure and provide the reasons for the belief that the information is protected.
9. This report must be submitted to the Department at the postal address given below or by delivery thereof to the Registry Office of the Department. No faxed or e-mailed reports will be accepted. Please note that for waste management licence applications, this report must be submitted for the attention of the Department's Waste Management Directorate (tel: 021-483-2756 and fax: 021-483-4425) at the same postal address as the Cape Town Office Region A.
10. Unless indicated otherwise, two electronic copies (CD/DVD) and three hard copies of this report must be submitted to the Department.

DEPARTMENTAL DETAILS

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

DEPARTMENTAL REFERENCE NUMBER(S)

File reference number (EIA):	16/3/1/1/B3/38/1016/13
File reference number (Waste):	
File reference number (Other):	

PROJECT TITLE

HIGH DENSITY PROPERTY DEVELOPMENT ERF 2569 WELLINGTON
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DETAILS OF THE ENVIRONMENTAL ASSESSMENT PRACTITIONER (EAP)

Environmental Assessment Practitioner (EAP):	Eco Impact Legal Consulting (Pty) Ltd		
Contact person:	Nicolaas Hanekom	Liz McEvoy	
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EAP Qualifications	M.Tech Nature Conservation. Cape Peninsula University of Technology. EMS ISO 14001. North West University Environmental Audit ISO 19011. North West University	B. Sc (Environmental Biology) University of Technology, Sydney Planning for Bushfire Prone Areas, University of Technology, Sydney SASS5 Aquatic Biomonitoring Course, WESSA/GroundTruth In-house EAP training (ongoing)	
EAP Registrations/Associations	SACNASP Pri.Sci.Nat (Ecological Science) 400274/11. SAATCA Registration number 015. EMS ISO 14001 (Internal Auditor) International Association for Impact Assessment (Contact I.D. 106673)	N/A	

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

<p><u>Mr Nicolaas Hanekom:</u> Mr Hanekom is a registered Professional Natural Scientist in the ecological science field with the South African Council for Natural Scientific Professions ("SACNASP") and a qualified EAP who holds a Masters Technologiae, Nature Conservation ("Vegetation Ecology and Biodiversity Assessment") degree from the Cape Peninsula University of Technology.</p> <p>He further qualified in Environmental Management Systems ISO 14001:2004, at the Centre for Environmental Management, North-West University, as well as Environmental Management Systems ISO 14001:2004 Audit: Internal Auditors Course to ISO 19011:2003 level, from the Centre for Environmental Management, North-West University qualifying him to audit to ISO/SANS environmental compliance and EMS standards.</p> <p>Mr Hanekom has been responsible for many environmental impact assessments and several EIA, waste license and atmospheric emission license applications as well as being involved in the implementation of several environmental management systems.</p>
<p><u>Mrs Liz McEvoy</u> Mrs McEvoy has a B.Sc in Environmental Biology from the University of Technology, Sydney where she sub-majored in aquatic ecology and pollution ecology. As a member of Brian Parry and Associates, she consulted on ecological issues faced on site for the development of Bushfire Management Plans for Australian local and state government, as well as commercial and residential private property owners. She joined the Eco Impact Legal Consulting (Pty) Ltd team in July 2011 and has been involved with the compilation of numerous Environmental, Health and Safety legal registers as well as a number of Waste Licence applications and associated reports. Liz completed the SASS5 Aquatic Bio-monitoring Training course in October 2012.</p>

EXECUTIVE SUMMARY OF THE CONTENT OF THE BASIC ASSESSMENT REPORT:

The proposed development entails the construction of 388 high density residential housing units at 83.54 units per hectare with streets and services infrastructure on the edge of residential development of Wellington South.

The proposed development on 4.6ha will encompass the following:

- a) Construction of 388 high density residential housing units
- b) Formalising the drainage line by infilling and constructing pipelines to connect with the existing pipelines in the drainage line to the north and south of the property
- c) Construction of water and sewer lines and storm water outlets
- d) Construction of roads and pathways

Eco Impact Legal Consulting (Pty) Ltd were appointed to undertake the necessary environmental applications and related impact studies to provide information to the Department of Environmental Affairs and Development Planning (DEA&DP) to make an informed decision regarding the project. The impact assessment determined the following areas of sensitivity where impacts on the environment may occur (refer to Section F for the full impact assessment):

- Construction of infrastructure within a watercourse
- Removal of vegetation during site clearance;
- Animal habitat disturbance due to vegetation clearance;
- Soil erosion and pollution;
- Soil compaction;
- Disturbance to freshwater ecosystems and associate riparian vegetation;

Positive impacts include the following:

- Job creation (construction phase);
- Job creation (operational phase);
- Socio-economic gains (operational phase);

It is the recommendation of the Environmental Assessment Practitioner that the proposed site development should be approved for the following reasons:

- The proposed activity aims at increasing the capacity of housing located in the Wellington area. The site is severely degraded and bordered by other residential developments.

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SECTION A: ACTIVITY INFORMATION

1. PROJECT DESCRIPTION

(a) Is the project a new development?	YES
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(b) Provide a detailed description of the development project and associated infrastructure.

The proposed development entails the construction of 388 high density residential housing units at 83.54 units per hectare with streets and services infrastructure on the edge of residential development of Wellington South.

The proposed development will consist of the construction of a new residential housing development with associated infrastructure including; bulk transportation of sewage and water, storm water outlets and the construction of access roads.

The High Density Residential Development on Erf 2569 in Wellington **Site Alternative 1** will entail the following infrastructure:

- 388 high density residential housing units at 83.54 units per ha
- Streets and services infrastructure

Total proposed development footprint = ±4.6ha

Positive impacts;

- Temporary job creation during the construction phase;
- Job creation via the shopping centre proposed on site;
- Provision of high density housing for the Wellington community

Negative impacts;

- Animal habitat disturbance due to some vegetation clearance;
- Potential soil erosion, pollution and compaction;
- Disturbance to freshwater ecosystems, associate riparian vegetation and river banks;

The proposed site for the development is located on a degraded site adjacent to other residential developments. The proposed development will entail the formalisation of the drainage line with infilling and piping of the drainage line to allow for development through and over the drainage line. The piping will connect to the existing pipeline to the NE and SW of the site. The formalised drainage line will be utilised as a storm water channel and storm water outlets will be constructed with this in mind.

No alternative routes were considered as the designs have been created to link with the existing infrastructure and pipelines in place to the NE and SW of the site.

The objective of an EIA, in this case a basic assessment, is to ensure that assessment and evaluation of the potential impacts associated with the proposed development were undertaken in an iterative manner to inform proactively the 'shaping' of the optimum development proposal. Specialists and key stakeholders were involved in the EIA process to identify and assess potential impacts of the proposed development.

The overall summary is based on previous impacts identified during the planning, design, construction and operational phase (Socio-economic and Biophysical):

The negative impacts identified, as a result of the proposed activity, are primarily related to the construction phase. However, the potential impacts identified for all phases of the project would be adequately managed and effectively mitigated through the implementation of the recommendations outlined in this report as well as the proposed Environmental Management Programme (EMP) (attached as Appendix H).

1.1 Potential Negative Environmental Impacts during the Construction Phase:

- Disturbance to sensitive environmental features such as underlying geological layers, indigenous terrestrial and riparian fauna and flora, water courses and steep slopes
- Compaction of soil
- Environmental pollution
- Erosion in cleared areas
- Increased traffic due to construction activities
- Disturbance to cultural-historical aspects
- Temporary construction noise impacts on surrounding communities
- Temporary visual impacts due to construction activities

1.2 Potential Positive Environmental Impacts during the Construction Phase:

- Temporary construction job opportunities to local residents
- Removal of overgrown non-indigenous flora

2.1 Potential Negative Environmental Impacts during the Operational Phase:

- Erosion potential
- Change in visual imprint
- Increased traffic
- Increased noise

2.2 Potential Positive Environmental Impacts during the Operational Phase:

- Provision of housing for the community of Wellington. Development of brown field (developable land inside the urban area)
- High density housing reduces the size of land required for the development

3.1 Potential Negative Environmental Impacts during the Decommissioning Phase:

- There is no decommissioning phase expected.

3.2 Potential Positive Environmental Impacts during the Decommissioning Phase:

- Not applicable

All impacts and aspects were identified and assessed by both specialists and the public through specialist studies and the public participation process. The following summarises the impacts thereof:

- The proposed development will not have a significant impact on biodiversity. The opinion of the EAP concludes that this development should not result in the loss of any species.
- The proposed development is located on a degraded site adjacent to current residential developments.
- The proposed development will follow an Integrated Waste Management approach.
- The proposed development will not exceed or exploit renewable resources to an extent that they reach a level beyond which their integrity is jeopardised.
- The proposed development will prevent pollution and reduce impacts on scarce non-renewable resources. An environmental management programme is included to guide the responsibilities in execution.
- The proposed development intends to give attention, where present, to sensitive,

vulnerable, highly dynamic or stressed ecosystems, such as the natural veld, aquatic systems and archaeological sites.

No-Go Option:

The No-Go option is the option of not constructing the proposed residential development. Should this alternative be selected the community of Wellington will have less access to new housing as the section of the property, which is further than 32m from the bank of the drainage line can still be developed without an Environmental authorization.

It was concluded that the proposed development will not have a significant negative environmental impact and it was recommended that the Environmental Management Programme (Appendix H) be adhered to accordingly. The river is already piped and formalized at the upper and lower catchment area north and south of the development. Formalizing this section of the drainage line will not result in the degradation and function of the drainage line ecosystem functioning.

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

Listed Activity as per GN544	Describe the relevant Basic Assessment Activity(ies) in writing as per Listing Notice 1 (GN No. R544)	Describe the portion of the development as per the project description that relates to the applicable listed activity
9	<p>The construction of facilities or infrastructure exceeding 1000 metres in length for the bulk transportation of water, sewage or storm water -</p> <p>(i) with an internal diameter of 0,36 metres or more; or</p> <p>(ii) with a peak throughput of 120 liters per second or more,</p> <p>excluding where:</p> <p>(a). such facilities or infrastructure are for bulk transportation of water, sewage or storm water or storm water drainage inside a road reserve; or</p> <p>(b). where such construction will occur within urban areas but further than 32 metres from a watercourse, measured from the edge of the watercourse.</p>	<p>The construction of storm water outlets within the 32m buffer area.</p>
11	<p>The construction of:</p> <p>(vi) bulk storm water outlet structures;</p> <p>(xi) infrastructure or structures covering 50 square metres or more</p> <p>where such construction occurs within a watercourse or within 32 metres of a watercourse, measured from the edge of a watercourse, excluding where such construction will occur behind the development setback line.</p>	<p>Road crossing the drainage lines to give access to the development. Storm water outlets within the 32m buffer area.</p>
18	<p>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 from</p> <p>(i) a watercourse;</p>	<p>Road development and services through the drainage lines to give access and services to the development.</p> <p>Infilling and piping of the drainage</p>

		line to allow for development through and over the drainage line.
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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 Scoping and EIA Activity(ies) in writing as per Listing Notice 2 (GN No. R. 545)	Describe the portion of the development as per the project description that relates to the applicable listed activity.
NA		

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.
NA	

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.
NA	

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.
NA	

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

Buildings (Provide brief description)	YES	<input checked="" type="checkbox"/>
388 high density houses		
Infrastructure (e.g. roads, power and water supply/ storage) (Provide brief description)	YES	<input checked="" type="checkbox"/>
Sewage reticulation system: <ul style="list-style-type: none"> •sewer network •water supply pipeline •storm water outlets •formalised drainage line •electrical services •access roads 		
Processing activities (e.g. manufacturing, storage, distribution) (Provide brief description)		NO
NA		
Storage facilities for raw materials and products (e.g. volume and substances to be stored) (Provide brief description)		NO
NA		
Storage and treatment facilities for solid waste and effluent generated by the project (Provide brief description)		NO
NA		
Other activities (e.g. water abstraction activities, crop planting activities) (Provide brief description)		NO
NA		

2. PHYSICAL SIZE OF THE ACTIVITY

(a) Indicate the size of the property (cadastral unit) on which the activity is to be undertaken.	±4.6ha
(b) Indicate the size of the facility (development area) on which the activity is to be undertaken.	±4.6ha
(c) Indicate the physical size (footprint) of the activity together with its associated infrastructure:	±4.6ha
(d) Indicate the physical size (footprint) of the activity:	±4.6ha

(e) Indicate the physical size (footprint) of the associated infrastructure:	±4.6ha
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and, for linear activities: -

(f) Indicate the length of the activity:	N/A	N/A
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3. SITE ACCESS

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

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

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

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

The proposed development will be located off Rand Street on the edge of the residential development of Wellington South, 10km north of Paarl.

The property on which the activity is proposed is characterised by degraded undeveloped veld with the Mbekweni River running in a generally SW to NE direction along the north-western edge of the property.

The development will encompass 388 high density residential units at 83.54 units/ha and associated services infrastructure and roads. In addition, formalisation of the drainage line is proposed which includes infilling, piping and the construction of storm water outlets to connect to existing pipelines along the drainage line to the NE and SW of the site.

See Appendix A for a locality map.

(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"> • an accurate indication of the project site position as well as the positions of the alternative sites, if any; • road names or numbers of all the major roads as well as the roads that provide access to the site(s) • a north arrow; • a legend; • the prevailing wind direction (during November to April and during May to October); and • 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).
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"> • 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. • The property boundaries and numbers of all the properties within 50m of the site must be indicated on the site plan. • 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. • The position of each element of the application as well as any other structures on the site must be indicated on the site plan. • 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. • Servitudes indicating the purpose of the servitude must be indicated on the site plan. • 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"> ○ Rivers.

	<ul style="list-style-type: none"> ○ Flood lines (i.e. 1:10, 1:50, year and 32 meter set back line from the banks of a river/stream). ○ Ridges. ○ Cultural and historical features. ○ Areas with indigenous vegetation (even if it is degraded or infested with alien species). ● Whenever the slope of the site exceeds 1:10, then a contour map of the site must be submitted.
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(c) For a linear activity, please also provide a description of the route. **NA**

Indicate the position of the activity using the latitude and longitude of the centre point of the site. The co-ordinates must be in degrees, minutes and seconds. The minutes should be given to at least three decimals to ensure adequate accuracy. The projection that must be used in all cases is the WGS84 spheroid in a national or local projection.	Latitude (S):			Longitude (E):		
	33°	40'	40"	19°	00'	02"

(d) or:

For linear activities: (See Appendix J)	Latitude (S):			Longitude (E):		
<ul style="list-style-type: none"> ● 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 and 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).

Site Alternative 1	Flat	
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Site Alternative 2	
---------------------------	--

NA

2. LOCATION IN LANDSCAPE

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

Site Alternative 1		Plain
Site Alternative 2		

(b) Please provide a description of the location in the landscape.

The Wellington region is a mixed farming area within the Drakenstein Municipality. The site for the proposed development is located along Rand Street east of Jan van Riebeeck Road on the edge of the residential development of Wellington South. Existing residential development is present along Rand Street and adjacent to the property to the NE and SE. An informal housing settlement is located to the south of the site. The remainder of the surrounding sites and area are agricultural land.

The site is flat and has been modified and degraded due to past farming and clearing activities. Little indigenous flora is present and the vegetation along the drainage line is degraded with overgrown alien species present.

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)		NO	
Seasonally wet soils (often close to water bodies)	YES		
Unstable rocky slopes or steep slopes with loose soil		NO	
Dispersive soils (soils that dissolve in water)		NO	
Soils with high clay content		NO	
Any other unstable soil or geological feature		NO	
An area sensitive to erosion		NO	
An area adjacent to or above an aquifer.		NO	
An area within 100m of the source of surface water		NO	

(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.

	Shale		Other (describe)
Please provide a description.			
The proposed site is characterised by a combination of soils mainly derived from the Table Mountain Group:			
<ul style="list-style-type: none"> • Qartzitic sandstones, Cape Granite and sandy sediments 			

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		NO	
Non-Perennial River	YES		
Permanent Wetland		NO	
Seasonal Wetland		NO	
Artificial Wetland		NO	
Estuarine / Lagoonal wetland		NO	

(b) Please provide a description.

The Kbekweni River runs along a NE to SW direction on the north-western edge of the proposed development site. The development proposal includes the formalisation of this drainage line through infilling and piping to connect with pipelines already in place to the SW and NE as well as the construction of storm water outlets to the formalised drainage line. Refer to Fresh water ecological report attached as Appendix G for more detail.

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. 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
No Natural Area Remaining (NNR)	

- (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	-	The site of the proposed development is located in a disturbed area due to previous farming and clearing activities.
Near Natural (includes areas with low to moderate level of alien invasive plants)	0%	
Degraded (includes areas heavily invaded by alien plants)	0%	
Transformed (includes cultivation, dams, urban, plantation, roads, etc.)	100%	

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

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

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

The property lies in the general area that used to be Swartland Alluvium Fynbos. Agricultural and urban developments have resulted in this vegetation being transformed in the region. The site is degraded due to previous clearing and farming activities. Little native flora is present. Vegetation along the drainage line is also degraded and invaded with alien species.

Much of the river channel has also been altered by land use activities. Downstream of the proposed development the river flows through agricultural and the river is confined to channel alongside the roads.

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	
Other land uses (describe):	

(a) Please provide a description.

7. LAND USE CHARACTER OF SURROUNDING AREA

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

Untransformed area	Medium density residential	
Other land uses (describe):		

Please note: The Department may request specialist input/studies depending on the nature of the land use character of the area and potential impact(s) of the proposed activity/ies.

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

Residential development is present on the opposite side of Rand St to the east of the site as well as adjacent to the site to the South East. An informal settlement is located to the south of the site although not directly adjacent. Agriculture land use occurs in the vicinity of the site.

8. SOCIO-ECONOMIC ASPECTS

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

The Drakenstein Municipality has a population of slightly more than 200 000 with an annual increase of around 4200. Wellington has a population of approximately 62 000. The towns of Drakenstein are located in one of the most productive agricultural belts in the country and are the heart of South Africa's Winelands. More than 80% of all vines in the entire country are produced in Wellington. The manufacturing sector also boasts established industries in the clothing, textile and footwear industries complimented by steady growth in the technology sector. Broad-based economic structure is one of the regions strongest growth factors.

The Drakenstein Municipality primarily comprises 4 ethnic groups. According to the latest national Census statistics, 64% of the population is Coloured, 21% African and 15% White. In 1996, 67% of the population was Coloured, 17% was White and 16% was African. Africans now represent the second largest population group having increased by 5%.

9. HISTORICAL AND CULTURAL ASPECTS

- (a) Please be advised that if section 38 of the National Heritage Resources Act, 1999 (Act No. 25 of 1999), is applicable to your proposed development, then you are requested to furnish this Department with written comment from Heritage Western Cape as part of your public participation process. Section 38 of the Act states as follows: "38. (1) Subject to the provisions of subsections (7), (8) and (9), any person who intends to undertake a development categorised as-
- (a) the construction of a road, wall, power line, pipeline, canal or other similar form of linear development or barrier exceeding 300m in length;
 - (b) the construction of a bridge or similar structure exceeding 50m in length;
 - (c) any development or other activity which will change the character of a site-
 - (i) exceeding 5 000 m² in extent; or
 - (ii) involving three or more existing erven or subdivisions thereof; or
 - (iii) involving three or more erven or divisions thereof which have been consolidated within the past five years; or
 - (iv) the costs of which will exceed a sum set in terms of regulations by SAHRA or a provincial heritage resources authority;
 - (d) the re-zoning of a site exceeding 10 000 m² in extent; or
 - (e) any other category of development provided for in regulations by SAHRA or a provincial heritage resources authority,
- must at the very earliest stages of initiating such a development, notify the responsible heritage resources authority and furnish it with details regarding the location, nature and extent of the proposed development."
- (b) The impact on any national estate referred to in section 3(2), excluding the national estate contemplated in section 3(2)(i)(vi) and (vii), of the National Heritage Resources Act, 1999 (Act No. 25 of 1999), must also be investigated, assessed and evaluated. Section 3(2) states as follows: "3(2) Without limiting the generality of subsection (1), the national estate may include—
- (a) places, buildings, structures and equipment of cultural significance;
 - (b) places to which oral traditions are attached or which are associated with living heritage;
 - (c) historical settlements and townscapes;
 - (d) landscapes and natural features of cultural significance;
 - (e) geological sites of scientific or cultural importance;
 - (f) archaeological and palaeontological sites;
 - (g) graves and burial grounds, including—
 - (i) ancestral graves;
 - (ii) royal graves and graves of traditional leaders;
 - (iii) graves of victims of conflict;
 - (iv) graves of individuals designated by the Minister by notice in the Gazette;
 - (v) historical graves and cemeteries; and
 - (vi) other human remains which are not covered in terms of the Human Tissue Act, 1983 (Act No. 65 of 1983);
 - (h) sites of significance relating to the history of slavery in South Africa;
 - (i) movable objects, including—
 - (i) objects recovered from the soil or waters of South Africa, including archaeological and palaeontological objects and material, meteorites and rare geological specimens;
 - (ii) objects to which oral traditions are attached or which are associated with living heritage;
 - (iii) ethnographic art and objects;
 - (iv) military objects;
 - (v) objects of decorative or fine art;
 - (vi) objects of scientific or technological interest; and

(vii) books, records, documents, photographic positives and negatives, graphic, film or video material or sound recordings, excluding those that are public records as defined in section 1(xiv) of the National Archives of South Africa Act, 1996 (Act No. 43 of 1996)."

Is section 38 of the National Heritage Resources Act, 1999, applicable to the development?	YES	
If YES, explain:	See NID as attached under Appendix G. NID has been sent to HWC for comment.	
Will the development impact on any national estate referred to in section 3(2) of the National Heritage Resources Act, 1999?	NO	
If YES, explain:	See NID as attached under Appendix G. NID has been sent to HWC for comment.	
Will any building or structure older than 60 years be affected in any way?	NO	
If YES, explain:	-	

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

10. APPLICABLE LEGISLATION, POLICIES AND/OR GUIDELINES

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

LEGISLATION	ADMINISTERING AUTHORITY	TYPE Permit/ license/ authorisation/comment / relevant consideration (e.g. rezoning or consent use, building plan approval)	DATE (if already obtained):
National Environmental Management Act, 1998 (Act No. 107 of 1998) [NEMA] and relevant regulations	Western Cape Department of Environmental Affairs and Development Planning	Environmental Authorisation Application	N/A
National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008) [NEMWA] and relevant regulations	Western Cape Department of Environmental Affairs and Development Planning	N/A	N/A
National Environmental Management: Biodiversity Act 10 of 2004 [NEMBA]	Western Cape Department of Environmental Affairs and Development Planning	N/A	N/A
National Environmental Management: Air Quality Act, 39 Of 2004 [NEMAQA] and Relevant Regulations	Western Cape Department of Environmental Affairs and Development Planning	N/A	N/A
National Water Act, 1998 (Act No. 36 of 1998) [NWA] and relevant regulations	Department of Water Affairs	N/A	N/A
Conservation Of Agricultural Resources Act, 43 Of 1983 [CARA]	National Department of Agriculture, forestry and Fisheries Western Cape Department of Agriculture	<ul style="list-style-type: none"> Weeds and the tolerance thereof Use of agricultural land for project implementation Improvement to agricultural practices 	N/A
Health Act, 63 Of 1977		Littering and causing a nuisance	N/A
Constitution of the Republic of South Africa, 1996		General application to individual rights of all on and adjacent to the Sites	N/A
Fencing Act, 31 of 1963		N/A	N/A
National Building Regulations and Building Standards Act 103 of 1977 [NBRBSA] and relevant regulations		N/A	N/A
National Heritage Resources Act 25 of 1999 [NHRA]	Heritage Western Cape South African Heritage Resource Agency	RoD	N/A
National Veld and Forest Fire Act 101 of 1998 [NVFFA]		N/A	N/A
Fertilizers, Farm Feeds, Agricultural Remedies And Stock Remedies Act, 36 Of 1947 [FFFARSRA] and Relevant Regulations	National Department of Agriculture, forestry and Fisheries Western Cape Department of Agriculture	N/A	N/A

POLICY/ GUIDELINES	ADMINISTERING AUTHORITY
Guideline on Public Participation	Western Cape Department of Environmental Affairs and Development Planning
Guidelines on Alternatives	Western Cape Department of Environmental Affairs

	and Development Planning
Guideline on Need and desirability	Western Cape Department of Environmental Affairs and Development Planning
Guideline for Environmental Management Plans (EMP's)	Western Cape Department of Environmental Affairs and Development Planning

(b) Please describe how the legislation, policies and/or guidelines were taken into account in the preparation of this Basic Assessment Report.

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

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

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	YES	<input type="checkbox"/>
(ii) any alternative site mentioned in the application;	<input type="checkbox"/>	NA
(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;	YES	<input type="checkbox"/>

(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; - <u>No alternative sites considered</u>	YES		
(iii) owners and occupiers of land adjacent to the site where the activity is to be undertaken and to any alternative site where the activity is to be undertaken;	YES		
(iv) the municipal councillor of the ward in which the site and alternative site is situated and any organisation of ratepayers that represent the community in the area;	YES		
(v) the municipality which has jurisdiction in the area;	YES		
(vi) any organ of state having jurisdiction in respect of any aspect of the activity; and	YES		
(vii) any other party as required by the competent authority;	YES		
(c) placing an advertisement in -			
(i) one* local newspaper; and	YES		
(ii) any official Gazette that is published specifically for the purpose of providing public notice of applications or other submissions made in terms of these Regulations;			N/A
(d) placing an advertisement in at least one* provincial newspaper or national newspaper, if the activity has or may have an impact that extends beyond the boundaries of the metropolitan or local municipality in which it is or will be undertaken.			N/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:
Liaison with the relevant authorities plays a crucial role in the successful completion of any environmental assessment process. In addition to the DEA&DP, the key departments such as the provincial departments having jurisdiction in respect of any aspect of the project, the local municipality and municipal councillor as well as other potentially affected I&APs, including adjacent property owners and dwellers, were identified. The departments listed below were thus identified per the requirements of the Regulation 55 of R.543. A list with complete details of the affected departments and all other I&APs is attached in Appendix F .
CapeNature Heritage Western Cape Department of Agriculture Department of Water Affairs Drakenstein Municipality Cape Winelands District Municipality DEA&DP: Waste Management DEA&DP: Pollution Management Department of Health

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).
Public participation is an integral part of the environmental assessment process, and affords potentially interested and affected parties (I&APs) an opportunity to participate in the EIA process, or to comment on any aspect of the development proposals. The public participation process undertaken thus far and to be undertaken for this project complies with the requirements of the EIA Regulations. The description of the public participation process as included below itemizes the steps and actions undertaken to date and as appropriate at this stage of the project.
Notification of I&APs
Potential I&AP's have been notified about the project in the following manner (this is in compliance with Regulation 54 of GN R543).
<ul style="list-style-type: none"> • Fixing notice boards at the boundary of the property in compliance with Regulation 54(2)(a)(i) of GN R543; • Written notifications were sent to potential I&APs inviting them to register and give comments on the proposed development. These notifications are in line with the requirements of Regulation 54(2)(b) of GN R543; and • Placing an advertisement in two provincial newspapers in compliance with Regulation 54(2)(c)(i) of GN R543.
All potential I&APs were afforded the opportunity to register for the project. All registered I&APs will be informed of further activities regarding the project.
Public Meetings and Workshops

No public meetings have been held as of yet. The need for public meetings and / or workshops will be determined during the course of the public participation process.

Availability of the draft Basic Assessment Report

As per the requirements of Regulation 56 of GN R543, the draft Basic Assessment Report (BAR) will be made available to all relevant state departments and all registered I&APs for a 40 day commenting period.

The BAR will be included for statutory comment with the written notice as sent to the commenting organs of state. Electronic copies (CDs) will be made available to any department or I&AP on request.

Proof of delivery and document placement will be attached to the final BAR. Additionally, the report will be made available to any I&AP upon request, as advised on the notice boards, notices and advertisements referred to above.

Comments received will be responded to as per the requirements of Regulation 57 of GN R543. The comments and response report as well as all comments received will be attached to the final BAR.

Public Participation during the final BAR Phase

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

Decision and Appeal Period

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

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

Please note:

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

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

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

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

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

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

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

SECTION D: NEED AND DESIRABILITY

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

1. Is the activity permitted in terms of the property's existing land use rights?	YES		Please explain
Located within urban area			
2. Will the activity be in line with the following?			
(a) Provincial Spatial Development Framework (PSDF)	YES		Please explain
Located within urban area			
(b) Urban edge / Edge of Built environment for the area	YES		Please explain
Located within urban area			
(c) Integrated Development Plan and Spatial Development Framework of the Local Municipality (e.g. would the approval of this application compromise the integrity of the existing approved and credible municipal IDP and SDF?).	YES		Please explain
Located within urban area			
(d) Approved Structure Plan of the Municipality	YES		Please explain
Located within urban area			
(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?)	YES		Please explain
EMF drafted for area. Area located inside urban area			
(f) Any other Plans (e.g. Guide Plan)	YES		Please explain
Located within urban area			
3. Is the land use (associated with the activity being applied for) considered within the timeframe intended by the existing approved Spatial Development Framework (SDF) agreed to by the relevant environmental authority (i.e. is the proposed development in line with the projects and programmes identified as priorities within the credible IDP)?	YES		Please explain
Housing development provision in the area is planned for in the SDF.			
4. Should development, or if applicable, expansion of the town/area concerned in terms of this land use (associated with the activity being applied for) occur here at this point in time?	YES		Please explain
Located within urban area			
5. Does the community/area need the activity and the associated land use concerned (is it a societal priority)? (This refers to the strategic as well as local level (e.g. development is a national priority, but within a specific local context it could be inappropriate.)	YES		Please explain
The project will create jobs during the construction phase. The proposed development will provide housing for the increasing population of Wellington.			
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 Appendix E .)	YES		Please explain
The current services have the capacity to encompass the proposed development (once linked to existing services)			
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 Appendix E .)	YES		Please explain
Located within urban area			
8. Is this project part of a national programme to address an issue of national concern or importance?		NO	Please explain
The project will contribute to local community needs.			
9. Do location factors favour this land use (associated with the activity applied for) at this place? (This relates to the contextualisation of the proposed land use on this site within its broader context.)	YES		Please explain
The site has been chosen due to the existence of surrounding residential development.			

10. How will the activity or the land use associated with the activity applied for, impact on sensitive natural and cultural areas (built and rural/natural environment)? Please explain		
The degraded non-perennial Mbekweni River will be formalised with infilling and pipelines and the undeveloped vacant land inside the urban area will be developed.		
11. How will the development impact on people's health and wellbeing (e.g. in terms of noise, odours, visual character and sense of place, etc)? Please explain		
<ul style="list-style-type: none"> The proposed development will provide new housing for the growing community of Wellington. An increase in noise will occur during the construction phase. Thereafter, during the operational phase the noise will be similar to that occurring in the existing residential areas adjacent to the site. The visual character of the land will change from open space to residential, which is in line with adjacent sites and thus the sense of place should remain the same. 		
12. Will the proposed activity or the land use associated with the activity applied for, result in unacceptable opportunity costs?	NO	Please explain
Municipal infrastructure is in place.		
13. What will the cumulative impacts (positive and negative) of the proposed land use associated with the activity applied for, be? Please explain		
<ul style="list-style-type: none"> Cumulative impacts relate to the provision of new homes and associated infrastructure for the community of Wellington. During the construction phase the project will also contribute to local job creation. 		
14. Is the development the best practicable environmental option for this land/site?	YES	Please explain
The site exists in a residential built environment and the proposed development is of a higher density as preferred.		
15. What will the benefits be to society in general and to the local communities? Please explain		
The proposed development will provide new housing and associated infrastructure to the growing community of Wellington.		
There will be an increase in municipal revenue.		
16. Any other need and desirability considerations related to the proposed activity? Please explain		
n/a		
17. Please describe how the general objectives of Integrated Environmental Management as set out in section 23 of NEMA have been taken into account:		
<ul style="list-style-type: none"> The general principles as set out in Section 2 of NEMA are implemented as described below in 18. The potential impacts for both the construction and the operational phase have been identified in this report – this allows for the appropriate management and mitigation measures to be identified and implemented where and when necessary to prevent environmental degradation and promote sustainability. All decisions during the planning and assessment by all involved for the activity promote the integration of the principles of environmental management set out in section 2 to minimize and mitigate any significant effect on the environment. All these mitigations and management measures were included as EA conditions and into the EMP. All involved in the planning and design identify, predict and evaluate the actual and potential impact on the environment, socio-economic conditions and cultural heritage. The risks and consequences and alternatives and options for mitigation of activities, with a view to minimising negative impacts, maximising benefits, and promoting compliance with the principles of environmental management set out in section 2 were taken in consideration and used in the assessments, mitigations and recommendations throughout this report. Adequate and appropriate opportunity for public participation was provided and included in Appendix F as per the guidelines and regulations in decisions that may affect the environment. The consideration of environmental attributes in management and decision making which may have a significant effect on the environment was ensured. The modes of environmental management best suited to ensure that a particular activity is pursued in accordance with the principles of environmental management set out in section 2, was identified and employed. Refer to section below. 		

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

A full public participation as described in the legislation and guidelines has been followed. The proposed development will not have a significant impact on biodiversity. The proposed development is situated within an existing urban edge and will not disturb the landscape and sites that constitute the nation's cultural heritage. The proposed development will not exceed or exploit renewable resource to an extent that they reach a level beyond which their integrity is jeopardised. The proposed development will not have a significant environmental impact and it is recommended that the Environmental Management Programme be adhered to accordingly.

SECTION E: 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 of 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:

No property or site alternatives were considered. There are no site alternatives to the property owners of Erf 2569. Other site alternatives is therefor not feasible or reasonable and were not assessed.

- (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 site is located in an existing residential area and as such, activity alternatives are not an option. The current proposal is seen to be the most practicable and feasible alternative for the developers. The area is located in the urban area and designated for residential development with the planning policies. The activity alternative is therefore in line with the planning policies and no other activity alternatives were considered as they are not feasible or reasonable.

- (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:

Design and layout alternatives were considered. The piping and formalization of the drainage line was included as a design alternative in order to optimize the development footprint area as well as to mitigate the negative impacts of the degraded drainage line which is impacted by formalized storm water systems upstream and downstream on the environment.

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

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

To minimise the degradation of the buildings:

- Cover the entrance areas where possible;
- Specify drip edging where possible;
- Provide adequate roof overhangs where possible; and
- Slope backfill to divert surface water away from the building where possible

Building Material:

- Consider energy efficient building materials where possible;
- Sun-dried or cement stabilized earth bricks are an alternative to conventional clays and cement bricks. They have good thermal mass and store heat effectively;
- Consider materials that are plentiful in supply; are locally produced and made from renewable resources where possible. This minimizes exhaustion of materials and transportation;
- Where possible, use material that have gone through less processing to be made;

Roofs and Overhangs:

- Consider pitched roofing where possible as it requires lesser water-proofing and has greater run-off ;
- Dormer windows, skylights or roof lights are encourage where possible;
- Suitable roof overhangs must be considered to allow the winter sun in and encourages the shade in summer where possible;

Floors:

- Durable and environmentally friendly flooring material is encourage

Windows and Doors:

- The installation of thin, transparent, flexible polyethylene membrane in the place of the inner pane of glass to create the double glazed windows must be used where possible;
- Minimize unwanted air flows by installing windows and doors properly to seal any cracks;
- Recycle and re-use any wood used in the building (e.g. doors, door frames, tables, counter tops and cupboards);

Electricity:

- Use of energy efficient equipment;
- Use of solar panels and geysers;
- Dimmers and motion sensors to reduce energy consumption;
- CFL's must be used to save energy cost where possible;
- Fluorescent lighting must be used in communal spaces where possible;
- Geysers must be installed vertically and covered with geyser blanket to save even more electricity where possible;

Water savings:

- Collection of rain water from the gutters to collect rain water must be implemented were possible;

- Showers installed must be fitted with low-flow shower heads. These must be balanced well with the balanced pressure of the geyser.
- Ensure that the maximum flow rate from a hand basin does not exceed 6 litres per minute;
- Indoor taps must be fitted with aerators to increase the efficiency by reducing the flow and amount of water used;
- The flush toilets must be fitted with dual or multi flush mechanisms to ensure that the amount of water required is controlled by the user;
- Indigenous or water wise plants must be planted to reduce water usage;
- Plants with similar water requirements must be grouped together.
- Large lawns must be avoided as they have high water requirements;
- Irrigation systems must be used to minimise water use and evaporation

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

No operational alternatives were considered as the proposed activity is for the construction of residential infrastructure.

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

The only No-Go activity alternative is to maintain the status quo and to develop on the areas outside the 32m buffer area for which no environmental authorization is needed. Housing development for the community of Wellington is necessary as the population continues to grow. The proposed development intends to provide sufficient housing for the GAP to middle class markets by densifying the development.

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

No additional alternatives were considered to avoid negative impacts.

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

The proposed development and site is a feasible and reasonable alternative:

Location alternatives - This is the only property owned by the applicant in Wellington and therefore no location alternatives exist.

Activity alternatives - This is already a residential area and therefore activity alternatives are not an option. The proposed development is seen to be the most practicable and feasible alternative for the owners.

Design or layout alternatives – Layout alternatives were considered in order to avoid formalising the degraded drainage line. To avoid the area would result in a reduced development area and more costly infrastructure.

Technology alternatives – Were considered and included to reduce energy, water consumption and impacts on natural resources.

Operational alternatives – Not applicable.

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

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

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

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

(a) Geographical and physical aspects:

There will be no significant impact in terms of broader geographical or physical aspects. The site exists adjacent to a residential area.

(b) Biological aspects:

Will the development have an impact on critical biodiversity areas (CBAs) or ecological support areas (CSAs)? If yes, please describe:	<input checked="" type="checkbox"/>	NO
N/A		
Will the development have an impact on terrestrial vegetation, or aquatic ecosystems (wetlands, estuaries or the coastline)? If yes, please describe:	<input checked="" type="checkbox"/>	YES
<p>The Mbekweni River runs from a generally NE to SW direction on the north-westerly border of the site. The current state of the river is degraded. The habitat integrity of the stream is impacted by flow modification, water quality and solid waste disposal. Further to this, water abstraction activities, alien invasion and the removal of indigenous riparian vegetation are impacting on the aquatic habitat integrity.</p> <p>The proposed development includes the formalisation of the Mbekweni River by infilling and canalisation to link with existing canals upstream and downstream.</p>		
Will the development have an impact on any populations of threatened plant or animal species, and/or on any habitat that may contain a unique signature of plant or animal species? If yes, please describe:	<input checked="" type="checkbox"/>	NO
<p>The proposed development site is located in a disturbed and impacted area. Virtually no natural vegetation occurs on the site which is in a severely degraded and transformed state.</p>		
Please describe the manner in which any other biological aspects will be impacted:		
There should be no significant biological impacts.		

(c) Socio-Economic aspects:

What is the expected capital value of the activity on completion?	Approximately R 15 127 800.00
What is the expected yearly income or contribution to the economy that will be generated by or as a result of the activity?	R0.00
Will the activity contribute to service infrastructure?	<input checked="" type="checkbox"/> YES
How many new employment opportunities will be created in the construction phase of the activity?	10
What is the expected value of the employment opportunities during the construction phase?	R 756 390.00
What percentage of this will accrue to previously disadvantaged individuals?	80%
How will this be ensured and monitored (please explain):	
A participation goal would be included in the contract to force the contractor to use previously disadvantaged individuals. This would be monitored and the Contractor would be penalised should he not comply.	
How many permanent new employment opportunities will be created during the operational phase of the activity?	0
What is the expected current value of the employment opportunities during the first 10 years?	R 0.00
What percentage of this will accrue to previously disadvantaged individuals?	0%
How will this be ensured and monitored (please explain):	
-	
Any other information related to the manner in which the socio-economic aspects will be impacted:	

-

(d) Cultural and historic aspects:

A Notice of Intent to Develop (NID) was submitted to the Heritage Western Cape (HWC) for review. Input from the HWC will be included in the final BAR.

2. WASTE AND EMISSIONS

(a) Waste (including effluent) management

Will the activity produce waste (including rubble) during the construction phase?	YES	<input checked="" type="checkbox"/>
If yes, indicate the types of waste (actual type of waste, e.g. oil, and whether hazardous or not) and estimated quantity per type?		
Limited volumes of non-hazardous general construction waste. Cement or pipe of cuts. All waste will be removed from site to a licensed landfill site. Waste that can be recycled will be used in the filling where possible.		
Will the activity produce waste during its operational phase?	YES	<input checked="" type="checkbox"/>
If yes, indicate the types of waste (actual type of waste, e.g. oil, and whether hazardous or not) and estimated quantity per type?		Domestic waste associated to residential developments
General domestic waste and sewage to be managed by Drakenstein Municipality as per their residential waste handling program.		
Where and how will the waste be treated / disposed of (describe)?		
During the construction phase waste will be removed to the municipal waste facility. During operational phase, municipal waste services will be utilised.		
If yes, indicate the types of waste (actual type of waste, e.g. oil, and whether hazardous or not) and estimated quantity per phase of the development?		
General domestic waste and sewage		
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	YES	<input checked="" type="checkbox"/>
Will the activity produce waste that will be treated and/or disposed of at another facility other than into a municipal waste stream?		NO
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 - NA		
Does the facility have an operating license? (If yes, please attach a copy of the license.) - NA		
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:		
Soil removed during construction will be reused in infilling as required.		

(b) Emissions into the atmosphere

Will the activity produce emissions that will be disposed of into the atmosphere?	NO
If yes, does it require approval in terms of relevant legislation? - NA	
Describe the emissions in terms of type and concentration and how it will be treated/mitigated:	
NA	

3. WATER USE

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

Municipal	<input checked="" type="checkbox"/>
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If water is to be extracted from a groundwater source, river, stream, dam, lake or any other natural feature, please indicate the volume that will be extracted per month - NA	m ³
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Please provide proof of assurance of water supply (eg. Letter of confirmation from municipality / water user associations, yield of borehole)	
Does the activity require a water use permit / license from DWAF?	YES
If yes, please submit the necessary application to Department of Water Affairs and attach proof thereof to this application.	
Application for Water Use will be submitted to DWA for a decision depending on their comments on the Fresh Water Specialist report attached under Appendix G already submitted to them.	
Describe the measures that will be taken to reduce water demand, and measures to reuse or recycle water:	
Dual flush toilets, low flow shower heads	

4. POWER SUPPLY

Please indicate the source of power supply eg. Municipality / Eskom / Renewable energy source
Energy will be supplied from Drakenstein Municipality as from existing infrastructure.
If power supply is not available, where will power be sourced from?
NA

5. ENERGY EFFICIENCY

Describe the design measures, if any, that have been taken to ensure that the activity is energy efficient:
Refer to technological alternatives above
Describe how alternative energy sources have been taken into account or been built into the design of the activity, if any:
NA

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.

POTENTIAL IMPACTS ON GEOGRAPHICAL AND PHYSICAL ASPECTS

Nature of impact: Disturbance to subsurface geological layers						
Discussion: Construction and excavation activities will affect the underlying geological layers on site to some extent. This will be limited due to the disturbances that occurred when the existing infrastructure was constructed. The depth of the rocks differs throughout the proposed area; therefore, the substrata will be affected differently.						
Cumulative impacts: It is not anticipated that the impact will be high if rehabilitation is allowed as the affected substrata is very shallow and the integrity of the underlying ground structures will thus not be sacrificed.						
Mitigation: Due to the nature of the impacts, not much can be done to mitigate the impact, only the severity of it can be managed. Mitigation and management for affecting geology is to ensure that removal of soil is kept to a minimum – removal of soil should only be in areas where infrastructure will be established.						
Criteria	Alternative Without Mitigation	With Mitigation			No-Go Alternative Without Mitigation	With Mitigation
Extent	1	1			-	-
Duration	5	5			-	-
Magnitude	2	2			-	-
Probability	2	2			-	-
Significance	16-Low	16-Low			No significance	No significance
Status	No significance if mitigated	No significance if mitigated			Neutral	Neutral
Reversibility	0%				-	-
Irreplaceable loss of	2- Partly Replaceable				-	-

resources			
Can impacts be mitigated?	2-Partly, but impact on subsurface geological layers during excavations is inevitable.		-

Nature of impact: Soil erosion						
Discussion: Construction activities will cause a disturbance to the soil and the vegetation cover on the site. This disturbance, unless carefully managed, could spread as a result of. Soil erosion can occur due to wind (wind erosion cause dust pollution); and due to overland stormwater flow should rains fall during construction.						
Cumulative impacts: Exposing soil may lead to erosion if not mitigated.						
Mitigation: <ul style="list-style-type: none"> Control access to roads and other areas to avoid disturbance of areas outside the development footprint. Undertake dust suppression as needed. Personnel should be restricted to the camp site and immediate construction areas only. When stripping the soil from the laydown areas, topsoil should be stored for use during the rehabilitation process subsequent to construction. Undertake storm water management measures as required. Rehabilitate or stabilise eroded areas immediately to prevent increase in erosion. 						
Criteria	Alternative Without Mitigation	With Mitigation			No-Go Alternative Without Mitigation	Alternative With Mitigation
Extent	1	1			-	-
Duration	1	1			-	-
Magnitude	2	2			-	-
Probability	2	2			-	-
Significance	8 - Low	8 - Low			No significance	No significance
Status	Significant if not mitigated	Significant if not mitigated			Neutral	Neutral
Reversibility	90%				N/A	
Irreplaceable loss of resources	2 Partly – while topsoil takes very long to redevelop, loss of topsoil can be prevented if correct mitigation measures are implemented				N/A	
Can impacts be mitigated?	2 Partly – Disturbance to topsoil during construction is inevitable, but erosion and increased storm water runoff can be mitigated.				N/A	

Nature of impact: Compaction of soil						
Discussion: Heavy construction machinery will compact the soil on the site. The compaction will lead to a change in soil structure and function. It will furthermore affect the micro-organisms in the soil detrimentally (these species may migrate to other areas where possible while some individuals may die). Soil compaction will lead to a lower growth rate in vegetation.						
Cumulative impacts: Soil compaction will contribute to the loss of soil function due to impacts as described above.						
Mitigation: <ul style="list-style-type: none"> Undertake construction activities only in areas where required. Cross areas with machinery as little as possible (work effectively). 						
Criteria	Alternative Without Mitigation	With Mitigation			No-Go Alternative Without Mitigation	Alternative With Mitigation
Extent	1	1			-	-
Duration	1	1			-	-
Magnitude	4	4			-	-
Probability	4	4			-	-
Significance	24 - Low	24 - Low			No significance	No significance
Status	Not significant if mitigated properly	Not significant if mitigated properly			Neutral	Neutral
Reversibility	80%				-	
Irreplaceable loss of resources	1-No				-	

Can impacts be mitigated?	2-Yes development and construction vehicles to be restricted only to demarcated footprint areas		-
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Nature of impact:
Impacts of construction activities on surface and underground water resources

Discussion:
Construction activities can impact negatively upon the surface and groundwater resources on and adjacent to the site.

Possible chemicals found on site during construction as well as any hydrocarbon spillages will negatively affect the soil and surface or ground water interacting with it. Should the spills not be cleaned up and surface water infiltrate the ground, pollutants may even affect the groundwater resource.

Cumulative impacts:
Loss or pollution of surface and ground water resources.

Soil pollution might under extreme circumstances extend to areas outside the area of development. This will lead to higher sediment and solute content of water leaving the area, thus lowering water quality in the area and even pose a threat to human health in extreme circumstances.

Mitigation:

- All construction activities and personnel on site to stay within demarcated construction areas.
- Proper waste bins to be provided to construction staff and all waste to be regularly removed to municipal landfill site.
- Monitor for erosion. Should erosion be present, undertake maintenance activities such as planting of vegetation.
- Areas disturbed during construction must be re-vegetated as soon as possible.
- All roads need to be maintained and monitored. Visible signs of possible erosion must be immediately rehabilitated.
- Any oil or diesel spills etc. must be reported to the site manager and rehabilitation measures must be taken immediately and contaminated soil disposed of at a licensed landfill site.
- Cement mixing to take place on impermeable material and not on bare soil or near any surface water resources

Criteria	Alternative		No-Go Alternative	
	Without Mitigation	With Mitigation	Without Mitigation	With Mitigation
Extent	3	1	-	-
Duration	5	1	-	-
Magnitude	8	2	-	-
Probability	4	2	-	-
Significance	64- High	8 - Low	No significance	No significance
Status	Negative	Significant if not mitigated	Neutral	Neutral
Reversibility	100%		-	-
Irreplaceable loss of resources	1-Will not be lost if mitigation measures are implemented		-	-
Can impacts be mitigated?	1-Yes		-	-

Nature of impact:
Impact on sensitive environments (such as indigenous terrestrial and riparian vegetation, wetlands, water courses and steep slopes)

Discussion:
Sensitive environments: All sensitive environmental features (drainage line) were mapped first and the site which will have the least environmental impacts on sensitive environments were selected as the preferred option (Alternative). No red data fauna or flora species were found on the study site that will be impacted upon.

Cumulative impacts:
Unavoidable disturbance to existing sensitive environmental features such as riparian vegetation and the drainage line identified.

Mitigation:
EMP guidelines and specific work method statements as provided for work in and around sensitive environmental features to be implemented and development to be restricted to approved layout area.

Criteria	Alternative		No-Go Alternative	
	Without Mitigation	With Mitigation	Without Mitigation	With Mitigation
Extent	3	1	-	-
Duration	5	1	-	-
Magnitude	8	2	-	-
Probability	5	5	-	-
Significance	80- High	20 - Low	No significance	No significance
Status	Negative	Significant if not mitigated	Neutral	Neutral
Reversibility	80%		-	-

Irreplaceable loss of resources	1-Will not be lost if mitigation measures are implemented		-
Can impacts be mitigated?	2 – Partly, temporary impacts on sensitive environmental features on site are unavoidable.		-

Nature of impact: Mud from construction activities						
Discussion: Mud will have a significant impact on the surrounding community.						
Cumulative impacts: Nuisance of mud spread onto roads.						
Mitigation: Although it is not anticipated that a significant amount of mud will be spread in surrounding areas during construction if it should occur the tyres of the construction vehicles should first be rinsed before entering surrounding areas.						
Criteria	Alternative		No-Go Alternative			
	Without Mitigation	With Mitigation	Without Mitigation	With Mitigation		
Extent	3	1			-	-
Duration	1	1			-	-
Magnitude	2	2			-	-
Probability	2	1			-	-
Significance	10- Low	4-Low			No significance	No significance
Status	Negative	Not Significant			Neutral	Neutral
Reversibility	100%				-	-
Irreplaceable loss of resources	1- No resources will be lost.				-	-
Can impacts be mitigated?	1-Yes				-	-

POTENTIAL IMPACTS ON BIOLOGICAL ASPECTS

Nature of impact: Impact on the indigenous terrestrial and riparian flora present in the area						
Discussion: No red data flora species were identified during the survey. The proposed development will not impact on any known conservation worthy species. Site disturbed with no indigenous vegetation on site.						
Cumulative impacts: Loss of indigenous vegetation and establishment of invasive vegetation if not mitigated.						
Mitigation: <ul style="list-style-type: none"> • Undertake construction activities only in identified and specifically demarcated areas. • Invasive vegetation to be eradicated and re-growth monitored. 						
Criteria	Alternative		No-Go Alternative			
	Without Mitigation	With Mitigation	Without Mitigation	With Mitigation		
Extent	3	3			-	-
Duration	1	1			-	-
Magnitude	2	2			-	-
Probability	2	2			-	-
Significance	10- Low	10- Low			No significance	No significance
Status	Negative	Negative			Neutral	Neutral
Reversibility	100%				-	-
Irreplaceable loss of resources	1-Will not be lost				-	-
Can impacts be mitigated?	1-Yes,				-	-

Nature of impact: Introduction of alien plant species						
Discussion: Declared Weeds may be transported onto the site and spread to surrounding areas. This may have management and cost impacts on such properties. Introduction of alien plant species via building material and vehicular traffic is an important aspect that needs to be considered. Alien grass seeds for example may become attached to vehicles and be transported to site or be brought on to site in building materials such as sand. Without monitoring and control this could become problematic.						
Cumulative impacts: Loss of potential biodiversity and ecosystems due to the spread of invader plants.						

Mitigation:
The mitigation measures mentioned below will help reduce the risk of introductions and will ensure that should introductions occur they are controlled timeously:

- Undertake construction activities only in identified and specifically demarcated areas.
- An important aspect of on-going maintenance is the monitoring of the rehabilitated sites and access road verges for alien plant species.
- Ensure building materials brought onto site are free of alien seeds.
- Materials such as sand and stone should, wherever possible, be sourced from local areas which are free of alien plants.
- Wherever possible rehabilitation of disturbed area should be done with seeds collected in the area during rehabilitation.
- Implement an ongoing alien eradication program for the areas to be rehabilitated.

Criteria	Alternative Without Mitigation	With Mitigation	No-Go	Alternative Without Mitigation	With Mitigation
Extent	3	1			-
Duration	5	1			-
Magnitude	6	0			-
Probability	4	2			-
Significance	56- Medium	4-Low			No significance
Status	Negative	Not Significant if mitigated			Neutral
Reversibility	100%				-
Irreplaceable loss of resources	1-Will not be lost				-
Can impacts be mitigated?	1-Yes, by implementing an alien eradication plan and continuing monitoring of alien regrowth				-

Nature of impact:
Impact on the naturally occurring fauna present in the area

Discussion:
No red data fauna species were identified during the survey. The proposed development will not impact on any known conservation worthy species.

Cumulative impacts:
Loss of indigenous fauna and fish species habitat.

Mitigation:

- Undertake construction activities only in identified and specifically demarcated areas.
- Avoid all areas known to contain sensitive species.

Criteria	Alternative Without Mitigation	With Mitigation	No-Go	Alternative Without Mitigation	With Mitigation
Extent	3	3			-
Duration	1	1			-
Magnitude	2	2			-
Probability	2	2			-
Significance	10- Low	10- Low			No significance
Status	Significant if not mitigated	Significant if not mitigated			Neutral
Reversibility	90%				-
Irreplaceable loss of resources	1-Will not be lost				-
Can impacts be mitigated?	1-Yes				-

POTENTIAL IMPACTS ON SOCIO-ECONOMIC ASPECTS

Nature of impact:
Increased jobs

Discussion:
Temporary construction jobs will be created. The locals may not have sufficient skills to utilize the employment opportunities and "others (work force and job seekers)" may be employed from outside the community.

Cumulative impacts:

- Influx of contract workers due to lack of skills.
- Influx of job seekers due to jobs created.
- Littering.

Mitigation:						
<ul style="list-style-type: none"> Local contractors, employing or seeking to employ local (historically disadvantaged individuals (HDIs) from the region who are suitably qualified, should get preference. The municipality, local community and local community organizations should be informed of the project and potential job opportunities by the developer. 						
Criteria	Alternative Without Mitigation		With Mitigation		No-Go Alternative Without Mitigation	
Status	Negative	Positive			Negative	Negative

Nature of impact:						
Increased traffic due to the construction activities requiring various vehicles to come onto and leave the site.						
Discussion:						
The construction machinery will only have a traffic impact on delivery to, and collection from the site and are therefore regarded as negligible.						
Cumulative impacts:						
The minor increase in traffic volumes at certain times of day will add to the existing traffic volumes. As the existing traffic volumes are relatively moderate, this cumulative impact is significant.						
Mitigation:						
Avoid peak traffic hours (07h00 – 08h00 and 17h00 – 18h00) as far as possible						
Criteria	Alternative Without Mitigation		With Mitigation		No-Go Alternative Without Mitigation	
Significance	Significance	No significance			No significance	No significance
Status	Neutral	Neutral			Neutral	Neutral

POTENTIAL IMPACTS ON CULTURAL-HISTORICAL ASPECTS

Nature of impact:						
The potential impact of the proposed development on archaeological, paleontological and heritage remains						
Discussion:						
No significant above surface archaeological, paleontological or heritage remains were found on site. The development is proposed on existing infrastructure and disturbed areas and will not impact on any heritage or cultural features.						
Cumulative impacts:						
Destruction of cultural- historical features at the site will contribute to the loss of such features in the general area due to other non-related activities. This can at all times be mitigated to prevent/ minimise the loss of such features.						
Mitigation:						
Should any burials, fossils or other historical material be encountered during construction, work must cease immediately and HWC must be contacted.						
Criteria	Alternative Without Mitigation		With Mitigation		No-Go Alternative Without Mitigation	
Extent	1	1			-	-
Duration	1	1			-	-
Magnitude	0	0			-	-
Probability	1	1			-	-
Significance	3-Low	3-Low			No significance	No significance
Status	Not Significant	Not Significant			Neutral	Neutral
Reversibility	0% reversibility – once the historical features are destroyed, it cannot be recovered.				-	
Irreplaceable loss of resources	3- Yes, completely irreplaceable				-	
Can impacts be mitigated?	1-Yes				-	

POTENTIAL IMPACTS OF NOISE

Nature of impact:						
Noise due to construction machinery						
Discussion:						
Construction machinery may cause noise disturbance to the directly adjacent land users/ owners. It is not anticipated that the noise will be considerable and will only be temporary.						
Cumulative impacts:						
Noise due to construction activities may cause a nuisance to adjacent residential areas.						
Mitigation:						
<ul style="list-style-type: none"> Construction activities should be restricted to weekday working hours. Machinery and vehicles should be regularly maintained to prevent excessive noise. All machinery and work activities must adhere to the requirements of the noise regulations. 						

Criteria	Alternative		No-Go Alternative	
	Without Mitigation	With Mitigation	Without Mitigation	With Mitigation
Extent	3	2	-	-
Duration	1	1	-	-
Magnitude	2	2	-	-
Probability	3	2	-	-
Significance	18- Low	10-Low	No significance	No significance
Status	Negative	Not Significant	Neutral	Neutral
Reversibility	This will not be a long term impact nor will it have an impact on the natural processes. It is thus 100% reversible.		-	
Irreplaceable loss of resources	1- No resources will be lost.		-	
Can impacts be mitigated?	1-Yes		-	

(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.

POTENTIAL IMPACTS ON GEOGRAPHICAL AND PHYSICAL ASPECTS

Nature of impact: Increase in storm water runoff				
Discussion: Hardening of surfaces due to infrastructure development will cause an increase in storm water runoff from the site unto the adjacent environment.				
Cumulative impacts: Increase in storm water runoff could cause soil erosion on surrounding natural environment.				
Mitigation:				
<ul style="list-style-type: none"> • Undertake storm water management measures as recommended in the environmental management program. • Rehabilitate or stabilise eroded areas immediately to prevent increase/spread of erosion. 				
Criteria	Alternative		No-Go Alternative	
	Without Mitigation	With Mitigation	Without Mitigation	With Mitigation
Extent	3	2	-	-
Duration	5	1	-	-
Magnitude	6	4	-	-
Probability	4	3	-	-
Significance	56- Medium	21 - Low	No significance	No significance
Status	Negative	Significant if not mitigated	Neutral	Neutral
Reversibility	80%		N/A	
Irreplaceable loss of resources	2 Partly – While increase in storm water runoff is inevitable erosion can still be prevented and mitigated if required.		N/A	
Can impacts be mitigated?	2 Partly – While increase in storm water runoff is inevitable erosion can still be prevented and mitigated if required.		N/A	

Nature of impact: Impact on sensitive environments (such as indigenous terrestrial and riparian vegetation, wetlands, water courses and steep slopes)				
Discussion: Sensitive environments: No red data fauna or flora species were found on the study site that will be impacted upon.				
Cumulative impacts: Hydrocarbon pollution may cause environmental pollution should construction machinery fail and leak.				
On completion of the project, sewage system failure may cause pollution. Additionally, general domestic waste created and not disposed of correctly may result in environmental pollution				
Mitigation: Vehicles to be serviced and maintained to prevent hydrocarbon spills. During power failures emergency back-up to be provided by the municipality to the proposed sewage system to be prioritised to prevent any environmental pollution due to overflow or system failure.				
Efficient, regular municipal waste management services should limit the spread of general domestic waste.				
Criteria	Alternative		No-Go Alternative	
	Without Mitigation	With Mitigation	Without Mitigation	With Mitigation

Extent	3	2			-	-
Duration	5	1			-	-
Magnitude	6	4			-	-
Probability	4	3			-	-
Significance	56- Medium	21 - Low			No significance	No significance
Status	Negative	Significant if not mitigated			Neutral	Neutral
Reversibility	80%				N/A	
Irreplaceable loss of resources	1-Will not be lost if mitigation measures are implemented				N/A	
Can impacts be mitigated?	1- Yes, can be completely mitigated				N/A	

POTENTIAL IMPACTS ON BIOLOGICAL ASPECTS

It is not anticipated that any further impact on the biodiversity will occur during this phase as no biodiversity disturbance will take place during operation of the facility. Ongoing alien clearing, erosion monitoring, system and maintenance is however recommended to ensure possible impacts on biological aspects on site is avoided.

POTENTIAL IMPACTS ON SOCIO-ECONOMIC ASPECTS

Nature of impact: Increased housing						
Discussion: The proposed development will provide needed residential housing.						
Cumulative impacts: The reason for this development is to provide the community of Wellington with high density housing to cater for the growing population. The nature of high density development means that less land will be utilised and thus urban sprawl will be somewhat contained						
Mitigation: Ongoing maintenance of infrastructure.						
	Alternative		No-Go Alternative			
Criteria	Without Mitigation	With Mitigation			Without Mitigation	With Mitigation
Status	Negative	Positive			Neutral	Neutral

POTENTIAL IMPACTS ON CULTURAL-HISTORICAL ASPECTS

It is not anticipated that any further impact on the cultural-historical aspects of the site will occur during this phase as no further disturbance will take place during operation.

POTENTIAL IMPACTS OF NOISE

The noise associated with the development will only occur during construction and decommissioning of the facilities due to construction vehicles.

POTENTIAL VISUAL IMPACTS

The visual impacts of the proposed development will not be significant as the development is surrounded by existing residential and commercial developments.

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

POTENTIAL IMPACTS ON GEOGRAPHICAL AND PHYSICAL ASPECTS

The decommissioning of the facility is not anticipated to occur in the near future. Impacts during this phase will however be similar to that of the construction phase. Mitigation and management measures will be related to the technology of the day and needs to be discussed at such time as decommissioning will occur. All structures must be removed and the area rehabilitated to the state as before construction had commenced (dependent upon the end land use agreement). Waste,

where possible must be recycled. All concrete introduced must be removed off site to a licensed facility.

POTENTIAL IMPACTS ON SOCIO-ECONOMIC ASPECTS

Decommissioning of the proposed facility will mean that the town will have no infrastructure. Decommissioning will therefore be highly unlikely and undesirable.

POTENTIAL IMPACTS ON CULTURAL-HISTORICAL ASPECTS

It is not anticipated that any further impact on the cultural-historical aspects of the site will occur during this phase as no further disturbance will take place during decommission.

POTENTIAL IMPACTS OF NOISE

The impacts and their significance anticipated to occur during this phase will be the same as that of the construction phase. Mitigation measures during this phase will remain the same as for the construction phase.

(d) Any other impacts:

Potential impact:	
Nature of impact:	It is not anticipated that any additional impact will be experienced.

(e) No- Go Option:

The No-Go option is the option of not constructing the proposed development.

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:

<p>A Notice of Intent to Develop was submitted to the Heritage Western Cape (HWC) for review. Input from the HWC will be included in the final BAR.</p> <p>Aquatic Ecosystem Assessment – Earl Herdien and Toni Belcher (December 2007):</p> <p>Recommended actions that should be taken:</p> <p>To prevent or, if prevention is not feasible, to mitigate impacts and restore ecological processes.</p> <ul style="list-style-type: none"> • The River and associated Wetland area should be protected by a development setback or buffer. • Alternatively, where the buffer can't be established, a riverine corridor of not less than 40m should be maintained. • Storm water generated on the site should not be carried to the stream • The river should as far as possible be rehabilitated and incorporated into the development as an aesthetic feature • Road crossings should be minimised within the identified buffer area. • An EMP should be formulated within which should contain areas considered for rehabilitation. • Active flood prevention structures should be designed for possible heavy flood events. • No construction should take place during the wet winter months. Construction of the proposed pipeline should take place during the dry summer months when tributaries and drainage lines are not flowing. • Proposed development areas must be clearly demarcated before construction commences to prevent any unnecessary impacts on surrounding sensitive
--

environments.

How preventative and remedial actions will be scheduled to ensure long-term protection, management and restoration of affected ecosystems and biodiversity.

- On-going clearing of alien invasive plants to encourage the growth and retention of indigenous vegetation.

Concluding Remarks and Further Recommendations

The Mbekweni River has a low ecological importance. A section of the river and wetland have the potential for rehabilitation and could be utilised as an aesthetic feature of the development. Should this be decided, buffer zones in these sections will prevent and mitigate potential negative effects on the system and allow for rehabilitation to occur.

Due to the degraded nature of the river downstream on the site minimal buffer zones and canalisation using ecologically acceptable materials and landscaping could be implemented. In addition, as the remnant wetland area is very degraded and doesn't contribute significantly to the ecological functioning of the river system, loss of this wetland area would not be a significant impact to the river system.

Should the proposed development be undertaken in accordance with the EMP, the impact of the development will be very little due to the already deteriorated state of the river.

Archaeological Impact Assessment – Agency for Cultural Resource Management (November 2010)

No archaeological remains were documented during the study.

The impact of the proposed development on archaeological remains is likely to be low and the probability of locating important archaeological remains is likely to be highly improbable.

No significant impacts to pre-colonial archaeological material will need to be mitigated prior to the construction activities commencing.

8. IMPACT SUMMARY

Please provide a summary of all the above impacts.

1.1 Potential Negative Environmental Impacts during the Construction Phase:

- Disturbance to sensitive environmental features such as underlying geological layers, indigenous terrestrial and riparian fauna and flora, water courses, wetland areas and steep slopes
- Compaction of soil
- Environmental pollution
- Erosion along cleared areas
- Temporary increased traffic due to construction activities
- Disturbance to cultural-historical aspects
- Temporary construction noise impacts on surrounding communities
- Temporary visual impacts due to construction activities

1.2 Potential Positive Environmental Impacts during the Construction Phase:

- Temporary construction job opportunities to local residents

2.1 Potential Negative Environmental Impacts during the Operational Phase:

- Erosion potential along cleared areas

- Environmental pollution due to construction equipment failure

2.2 Potential Positive Environmental Impacts during the Operational Phase:

- Clearing of alien vegetation

3.1 Potential Negative Environmental Impacts during the Decommissioning Phase:

- The decommissioning of the Residential Development is not anticipated to occur in the near future. Impacts during this phase will however be similar to that of the construction phase

3.2 Potential Positive Environmental Impacts during the Decommissioning Phase:

- Rehabilitation of disturbed natural areas and ongoing clearing of alien vegetation
- Temporary construction job opportunities to local residents

No-Go Option:

The No-Go option is the option of not constructing the proposed residential development which would result in the growing population of Wellington not having access to housing. The proposed development is in line with existing guidelines and land use for the current land.

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.

The construction of the proposed facility should be implemented according to the EMP (appendix H) to adequately mitigate and manage potential impacts associated with construction activities. The construction activities and relevant rehabilitation of disturbed areas should be monitored against the approved EMP, the Environmental Authorisation and all other relevant environmental legislation.

Relevant conditions to be adhered to include:

Design, Construction and Decommissioning Phase:

The following mitigation and management measures should be implemented during the construction phase in order to minimise potential environmental impacts:

- If a heritage object is found, work in that area must be stopped immediately, and appropriate specialist brought in to assess the site, notify the administering authority of the item/site, and undertake due/required processes.
- Mitigation measures outlined in the EMP, attached as Appendix H, will be adhered to
- Measures to ensure that material loads are properly covered during transportation
- Minimisation of the areas disturbed at any one time and protection of exposed soil against wind erosion, e.g. by dampening with water. Location and treatment of material stockpiles will take consideration of prevailing wind directions and dwellings as well as to prevent erosion and run off
- Dust suppression measures in the form of dampening with water will be used when particularly during dry periods of weather during the summer months
- Adherence to provisions of the Occupational Health and Safety Act
- As a proclaimed work site the public is not entitled to legal access. Provision will be made for sign boards/ wire perimeter identification/ danger taping of sites. Public access will need to be overtly discouraged via some security presence. Control of personnel
- The use of local labour for low- semi skilled jobs should be maximised as far as possible
- All noise and sounds generated by plant or machinery must adhere to SABS 0103 specifications for the maximum permissible noise levels
- All plant and machinery are to be fitted with adequate silencers
- No sound amplification equipment such as sirens, loud hailers or hooters may be used on

site, after normal working hours, except in emergencies

- 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
- Ensure that the slope of the stockpiled material is such that surface runoff is minimal
- Additions of stabilizing agents such as organic material or vegetation cover for erosion control
- Building of swales or berms to decrease water runoff speed
- Appoint Environmental Control Officer (ECO)
- Demarcate all areas where no impacts will be allowed, clearly marking these areas with high visibility signs, inform all contractors and construction workers to refrain from entering / affecting these areas
- Prevent impacts on any surface water as a result of hazardous materials, contamination, unnecessary crossing by vehicles or personnel, extraction, drinking or other uses, construction and maintenance activities
- All declared aliens must be identified and managed in accordance with the Conservation of Agricultural Resources Act, 1983 (Act No. 43 of 1983), the implementation of a monitoring programme in this regard is recommended
- The removal or picking of any protected or unprotected plant will not be permitted and no horticultural specimens (even within demarcated working areas) will be removed, damaged, or tampered with unless agreed to by the ECO
- No painting or marking of rocks or vegetation to identify locality or other information will be allowed as it will disfigure the natural setting. Marking will be done by steel stakes with tags, if required
- Make use of existing access roads, ensuring proper upgrade/ construction/ maintenance in order to limit erosion, proliferation of weeds
- Use of branches of trees and shrubs for fire making purposes is strictly prohibited
- Prevent open fire; provide demarcated fire-safe zones, facilities, and fire control measures
- Fire fighting equipment will be made available on all vehicles and at various suitable points within the development site
- No animals may be hunted, trapped, or killed for any purpose whatsoever
- In the event that animals are present that may pose a risk to human safety, a suitable animal handler must be requested to remove the animal in an environmentally responsible manner. This specifically refers to snakes, spiders and scorpions
- Use only local indigenous species in the rehabilitation / re-vegetation process
- Adhere to all specialist recommendations as provided in specialist's reports
- Adhere to recommendations as provided by key departments

Operation Phase:

The following mitigation and management measures should be implemented during the operation phase in order to minimise potential environmental impacts:

- Implement a weed/alien plant monitoring and control programme
- The use of local labour for low- semi skilled jobs should be maximised as far as possible
- Maintenance of erosion control measures
- Maintenance of roads
- Maintenance and monitoring of services infrastructure
- Provision of back-up resources in case of system failure
- Adhere to all specialist recommendations as provided in specialist's reports
- Adhere to recommendations as provided by key departments

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

The proposed development will be handed over to a home owners association after construction is completed for the operational phase of the project.

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.

The assessment above is based on the methodology described below. The EAP assessed the possible impacts as fully as possible with the available information.

(b) Please describe the assessment criteria used.

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

Criteria	Description		
Nature	a description of what causes the effect, what will be affected, and how it will be affected.		
	Type	Score	Description
Extent (E)	None (No)	1	Footprint
	Site (S)	2	On site or within 100 m of the site
	Local (L)	3	Within a 20 km radius of the centre of the site
	Regional (R)	4	Beyond a 20 km radius of the site
	National (Na)	5	Crossing provincial boundaries or on a national / land wide scale
Duration (D)	Short term (S)	1	0 – 1 years
	Short to medium (S-M)	2	2 – 5 years
	Medium term (M)	3	5 – 15 years
	Long term (L)	4	> 15 years
	Permanent (P)	5	Will not cease
Magnitude (M)	Small (S)	0	will have no effect on the environment
	Minor (Mi)	2	will not result in an impact on processes
	Low (L)	4	will cause a slight impact on processes
	Moderate (Mo)	6	processes continuing but in a modified way
	High (H)	8	processes are altered to the extent that they temporarily cease
	Very high (VH)	10	results in complete destruction of patterns and permanent cessation of processes.
Probability (P) the likelihood of the impact actually occurring. Probability is estimated on a scale, and a score assigned	Very improbable (VP)	1	probably will not happen
	Improbable (I)	2	some possibility, but low likelihood
	Probable (P)	3	distinct possibility
	Highly probable (HP)	4	most likely
	Definite (D)	5	impact will occur regardless of any prevention measures
Significance (S)	Determined through a synthesis of the characteristics described above: S = (E+D+M) x P Significance can be assessed as low, medium or high		
	Low: < 30 points: The impact would not have a direct influence on the decision to develop in the area		
	Medium: 30 – 60 points: The impact could influence the decision to develop in the area unless it is effectively mitigated		
	High: > 60 points: The impact must have an influence on the decision process to develop in the area		
No significance	When no impact will occur or the impact will not affect the environment		
Status	Positive (+)		Negative (-)
The degree to which the impact can be reversed	Completely reversible (R)	90-100%	The impact can be mostly to completely reversed with the implementation of the correct mitigation and rehabilitation measures.
	Partly reversible (PR)	6-89%	The impact can be partly reversed providing that mitigation measures as stipulated in the EMP are implemented and rehabilitation measures are undertaken
	Irreversible (IR)	0-5%	The impact cannot be reversed, regardless of the mitigation or rehabilitation measures taking place
The degree to which the impact may cause irreplaceable loss of resources	Resource will not be lost (R)	1	The resource will not be lost or destroyed provided that mitigation and rehabilitation measures as stipulated in the EMP are implemented
	Resource may be partly destroyed (PR)	2	Partial loss or destruction of the resources will occur even though all management and mitigation measures as stipulated in the EMP are implemented

	Resource cannot be replaced (IR)	3	The resource cannot be replaced no matter which management or mitigation measures are implemented.
The degree to which the impact can be mitigated	Completely mitigatable (CM)	1	The impact can be completely mitigated providing that all management and mitigation measures as stipulated in the EMP are implemented
	Partly mitigatable (PM)	2	The impact cannot be completely mitigated even though all management and mitigation measures as stipulated in the EMP are implemented. Implementation of these measures will provide a measure of mitigatability
	Un-mitigatable (UM)	3	The impact cannot be mitigated no matter which management or mitigation measures are implemented.

(c) Please describe the gaps in knowledge.

None other than the engineering requirements.

(d) Please describe the underlying assumptions.

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

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

(e) Please describe the uncertainties.

Due to knowledge gaps as described above, some of the anticipated impacts may need to be assessed in more detail. As such, a more conservative approach to the impacts was taken for the Draft BAR in order to compensate for the lack of detailed knowledge, as may be required by the commenting authorities.

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.	YES	<input checked="" type="checkbox"/>
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:		
NA		
If "YES", please indicate below whether in your opinion the activity should or should not be authorised:		
Activity should be authorised:	YES	<input checked="" type="checkbox"/>
Please provide reasons for your opinion:		
The proposed development is in line with surrounding residential developments in Wellington and will provide housing for the growing population. The proposed development is the most suitable when considering the degraded site and drainage line and the socio-economic aspects.		
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.		
The construction of the proposed development should be implemented according to the EMP to adequately mitigate and manage potential impacts associated with construction activities. The construction activities and relevant rehabilitation of disturbed areas should be monitored against the approved EMP, the Environmental Authorisation and all other relevant environmental legislation.		
Relevant conditions to be adhered to include:		
Design, Construction and Decommissioning Phase:		
The following mitigation and management measures should be implemented during the construction phase in order to minimise potential environmental impacts:		
<ul style="list-style-type: none"> • If a heritage object is found, work in that area must be stopped immediately, and 		

appropriate specialist brought in to assess the site, notify the administering authority of the item/site, and undertake due/required processes.

- Mitigation measures outlined in the EMP, attached as Appendix H, will be adhered to
- Measures to ensure that material loads are properly covered during transportation
- Minimisation of the areas disturbed at any one time and protection of exposed soil against wind erosion, e.g. by dampening with water. Location and treatment of material stockpiles will take consideration of prevailing wind directions and dwellings as well as to prevent erosion and run off
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- 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
- Ensure that the slope of the stockpiled material is such that surface runoff is minimal
- Additions of stabilizing agents such as organic material or vegetation cover for erosion control
- Building of swales or berms to decrease water runoff speed
- Appoint Environmental Control Officer (ECO)
- Demarcate all areas where no impacts will be allowed, clearly marking these areas with high visibility signs, inform all contractors and construction workers to refrain from entering / affecting these areas
- Prevent impacts on any surface water as a result of hazardous materials, contamination, unnecessary crossing by vehicles or personnel, extraction, drinking or other uses, construction and maintenance activities
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- The removal or picking of any protected or unprotected plant will not be permitted and no horticultural specimens (even within demarcated working areas) will be removed, damaged, or tampered with unless agreed to by the ECO
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- Make use of existing access roads, ensuring proper upgrade/ construction/ maintenance in order to limit erosion, proliferation of weeds
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- Prevent open fire; provide demarcated fire-safe zones, facilities, and fire control measures
- Fire fighting equipment will be made available on all vehicles and at various suitable points within the development site
- No animals may be hunted, trapped, or killed for any purpose whatsoever
- In the event that animals are present that may pose a risk to human safety, a suitable animal handler must be requested to remove the animal in an environmentally responsible manner. This specifically refers to snakes, spiders and scorpions
- Use only local indigenous species in the rehabilitation / re-vegetation process
- Adhere to all specialist recommendations as provided in specialist's reports
- Adhere to recommendations as provided by key departments

<p>Operation Phase: The following mitigation and management measures should be implemented during the operation phase in order to minimise potential environmental impacts:</p> <ul style="list-style-type: none"> • Implement a weed/alien plant monitoring and control programme • The use of local labour for low- semi skilled jobs should be maximised as far as possible • Maintenance of erosion control measures • Maintenance of roads • Maintenance and monitoring of services infrastructure • Provision of back-up energy/electricity resources in case of system failure • Adhere to all specialist recommendations as provided in specialist's reports • Adhere to recommendations as provided by key departments
<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.</p>
<p>It is not anticipated that a longer period for Environmental Authorisation will be required.</p>

SECTION I: APPENDICES

The following appendices must be attached to this report:

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

DECLARATIONS

THE APPLICANT

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

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

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

Signature of the applicant:

Name of company:

Date:

THE INDEPENDENT ENVIRONMENTAL ASSESSMENT PRACTITIONER (EAP)

Ias 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.

Signature of the environmental assessment practitioner:

Name of company:

Date:

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

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

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

Note: The terms of reference must be attached.

Signature of the specialist:

Name of company:

Date: