DRAFT SCOPING REPORT

DEA&DP Ref. No. 16/3/1/2/D1/14/0009/13

PROPOSED NEW REGIONAL CEMETERY AND INTEGRATED URBAN
DEVELOPMENT, BITOU MUNICIPALITY

September 2014

PO Box 3511, Knysna, 6570

www.ecoroute.co.za
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GLOSSARY, DEFINITIONS AND TERMS:

**Activity (listed)** - an activity identified in Government Notices R543, R544, R 545 and R546 of 18 June 2010 as a listed activity or an activity that could have a negative effect on the environment.

**Affected environment** - Those parts of the socio-economic and biophysical environment affected by the activity or development impacts.

**Alien vegetation** - All undesirable vegetation, defined as, but not limited to, all plants declared Category 1 and 2 invaders in terms of the Conservation of Agricultural Resources Act, Act 43 of 1983 (CARA).

**Authorities** - The national, provincial or local authorities and state bodies that have a decision making role or interest in the development or activity.

**Applicant** - The person who authorises or submits an application, i.e. the project proponent or developer.


**Assessment** - The process of collecting, organising, analysing and interpreting information and data of relevance to the application, to determine environmental effects.
**Cumulative impact** - An effect on the environment that in itself is not significant, but is significant when added to the impact of others in a geographic area and at a specific time.

**CEMPPr** - Construction Phase Environmental Management Programme. A programme for managing the potential impacts of the construction process.

**CN** – Cape Nature administration of the Western Cape Nature Conservation Board

**DAFF** – Department of Agriculture, Forestry and Fisheries

**DEA&DP** - Department of Environmental Affairs and Development Planning

**DWA** – Department of Water Affairs

**Ecological corridor** - An undeveloped linear portion of land within a developed area along which species migrate and where the naturally occurring habitat is preserved.

**Ecotone** – The line or area of transition between two biological communities, e.g. thicket and fynbos.

**Endemic** – Refers to the occurrence of a species being restricted to a specific area.

**Environment** - The biosphere in which people and other organisms live. It consists of:

- Renewable and non-renewable natural resources;
- Physical, infrastructural, social, economic, cultural, historical and political components of the area and the wider surroundings;
- Natural ecosystems and habitats; and
- Biological and natural surroundings whether or not modified by people.

**Environmental impact** - Any change to the environment, whether desirable or undesirable that would result directly or indirectly from any construction related activity.

**Environmental Impact Report (EIR)** - The report that describes the assessment process followed to determine the environmental effects of the activities, e.g. a development proposal and the proposed mitigation measures if any negative effects are likely.

**Environmental issue** - Any concern or opinion offered by any interested or affected party in relation to the application.

**Eutrophication** – The process of nutrient enrichment of a water body through contamination by organic substances and chemicals from storm water runoff, waste or agricultural fertilizers that leads to heightened growth of some aquatic species to the detriment of others.

**ECO** - Environmental Control Officer - Designation reserved for suitably qualified person acting as the site environmental manager or officer. It is the person responsible to the client, tasked with implementing and controlling the environmental requirements and CEMP for the construction project.

**Fatal flaw** - A situation that renders the application and application process unacceptable, e.g. non-compliance with the NEMA Regulations.

**Height of building** – As defined in the relevant zoning scheme regulations, measured in floors, storeys or metres.
**HWC** – Heritage Western Cape is the provincial heritage resources authority for the province, in the Department of Cultural Affairs and Sport (021 483 9695).

**Impact** - The positive or negative effects on human well-being and/or on the environment.

**MCM** – Marine and Coastal Management Branch of the Department of Environmental Affairs (Integrated Coastal Management, 021 402 3331).

**Mitigate** - The implementation of practical measures to avoid, reduce or remedy adverse impacts and enhance positive impacts.

**Municipality** - The Bitou Municipality, situate in Plettenberg Bay (General contact, 044 501 3000 or Public Works Helpdesk 044 501 3261).

**"No-Go" Areas** - Areas identified as being environmentally sensitive in some manner and delineated on plan and/or on the site that is restricted with regard to access.

**Public authority** - means a state department, a municipality or a department of the Provincial Government.

**Pyric** – Refers to the fire cycle that occurs naturally in vegetation, e.g. fynbos, and serves to stimulate re-growth, reproduction and attraction to pollinators.

**Road Reserve** – The corridor in which a road is constructed and includes sidewalks, services areas, landscaping and cycle tracks.

**ROD** - Record of Decision by DEA&DP or any other authority when authorising or refusing the application.

**Scoping** - A process for determining the issues related to an application and ensuring that the assessment is focused on the significant environmental issues and potential impacts.

**Significant/significance** - Significance can be differentiated into impact magnitude and impact significance. Impact magnitude is the measurable change (i.e. intensity, duration and likelihood). Impact significance is the value placed on the change by different affected parties (i.e. level of significance and acceptability). It is a concept that makes use of value judgements and science-based criteria (i.e. biophysical, social and economic). Value judgement reflects the social perception of impact assessment.

**Significant impact** - An impact that, by its magnitude, duration or intensity, affects human health and well-being and causes irreversible change to the environment.

**Solid waste** - All solid materials that are not recycled and disposed of as waste, including metal sections, construction debris, chemical waste, excess cement / concrete, wrapping materials, timber, tins, cans, drums, wire, nails, food and domestic waste, e.g. plastic packets and wrappers.

**Sustainable development** - Development that meets the needs of the present without compromising the ability of future generations to meet their own needs and that does not require recurring external input to maintain it.

**SAHRA** - South African Heritage Resources Agency.

**Vegetation rehabilitation** - The re-establishment of endemic and/or indigenous vegetation with a similar species composition to that which naturally occurred on the site or in the area.
1. **INTRODUCTION:**

1.1. **Purpose of the Environmental Authorisation (EA) Application**

This scoping report is part of an environmental authorisation application process, initiated in keeping with Regulation 22(2) (a), GN. R 543, 18 June 2010, made in terms of Chapter 5 of the National Environmental Management Act, 1998, Act 107 of 1998.

Due to the nature of the project and the potential and relative sensitivity of the site, a comprehensive approach to the way forward is suggested, which allows for a systematic evaluation and generation of the final proposal, which will take into account all the opportunities and constraints of the site and will limit the costs and time taken for the process to the applicant. Similarly a background of the Environmental Legislation which would pertain to the proposal is provided.

1.2. **Objectives of Scoping**

The objectives of the scoping study are to identify the issues, concerns and queries related to the proposed development, which will be described in more detail below. It also serves as an introduction to the plan of study for the Environmental Impact Assessment (EIA), where all the factors that could potentially have negative impacts on the environment are assessed. Prior consultation between Interested and Affected Parties (I&AP’s) and the applicant (land owner or developer), through the Environmental Assessment Practitioner (EAP) is required and the scoping process allows this consultation to occur. Following the identification of issues and impacts, by the EAP and / or I&AP’s, these will be listed and evaluated in the scoping process.

If there are potentially significant negative or positive impacts resulting from the activities, the issues and impacts will be assessed in the EIA to evaluate the potential positive and / or negative impacts. A significant impact is defined as an impact that by its magnitude, duration, intensity or probability of occurrence may have a notable effect on one or more aspects of the environment. If no issues are identified, the activities listed herein will be evaluated and any comments submitted thereon will be responded to and submitted to the delegated competent authority for a decision.

1.3 **Content of a Scoping Report**

28 (1) A scoping report must contain all the information that is necessary for a proper understanding of the nature of issues identified during scoping, and must include:

(a) **Details of:**

   (i) The EAP who prepared the report; and

   (ii) The expertise of the EAP to carry out scoping procedures;

(b) A description of the proposed activity

(c) A description of any feasible and reasonable alternatives that have been identified;

(d) A description of the property on which the activity is to be undertaken and the location of the activity on the property, or if it is:

   (i) A linear activity, a description of the route of the activity; or

   (ii) An ocean-based activity, the coordinates where the activity is to be undertaken;
(e) a description of the environment that may be affected by the activity and the manner in which the physical, biological, social, economic and cultural aspects of the environment may be affected by the proposed activity;

(f) An identification of all legislation and guidelines that have been considered in the preparation of the scoping report;

(g) A description of environmental issues and potential impacts, including cumulative impacts, that have been identified;

(h) Details of the public participation process conducted in terms of Regulation 27(a), including:

   (i) The steps that were taken to notify potentially interested and affected parties of the application;

   (ii) Proof that notice boards, advertisements and notices notifying potentially interested and affected parties of the application have been displayed, placed or given;

   (iii) a list of all persons or organisations that were identified and registered in terms of Regulation 57 as interested and affected parties in relation to the application; and

   (iv) a summary of the issues raised by interested and affected parties, the date of receipt of and the response of the EAP to those issues;

(i) A description of the need and desirability of the proposed activity

(j) A description of identified potential alternatives to the proposed activity, including advantages and disadvantages that the proposed activity or alternatives may have on the environment and the community that may be affected by the activity.

(k) Copies of any representations, and comments received in connection with the application or the scoping report from interested and affected parties.

(l) copies of 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; and

(m) Any responses by the EAP to those representations, comments and views;

(n) A plan of study for environmental impact assessment which sets out the proposed approach to the environmental impact assessment of the application, which must include:

   (i) A description of the tasks that will be undertaken as part of the environmental impact assessment process, including any specialist reports or specialised processes, and the manner in which such tasks will be undertaken;

   (ii) An indication of the stages at which the competent authority will be consulted;

   (iii) A description of the proposed method of assessing the environmental issues and alternatives, including the option of not proceeding with the activity; and

   (iv) Particulars of the public participation process that will be conducted during the environmental impact assessment process;

(o) Any specific information required by the competent authority; and
(p) Any other matters required in terms of section 24(4)(a) and (b) of the Act.

(2) In addition, a scoping report must take into account any guidelines applicable to the kind of activity which is the subject of the application.

(3) The EAP managing the application must provide the competent authority with detailed, written proof of an investigation as required by section 24(4)(b)(i) of the Act and motivation if no reasonable or feasible alternatives, as contemplated in sub regulation (1)(c), exist.

1.4. Details of the Environmental Assessment Practitioner (EAP):

Qualifications and Expertise of the Relevant Environmental Assessment Practitioner

Qualifications:

1975 Baccalaureus Scientiae (BSc.) University of Potchefstroom
1976 University Educational Diploma (UED) University of Potchefstroom
1982 Baccalaureus Scientiae Honores [BSc. (Hons)] Botany University of Pretoria
1990 Magister Scientiae (MSc.) status awarded University of Pretoria
1992 Philosophiae Doctor (PhD.) Botany University of Pretoria

Expertise of the EAP:

Dr. Colleen Ebersohn has been an Independent Environmental Consultant for 12 years of experience in Environmental Impact Assessments, Environmental Law Applications and management of the EIA process, Public Participation and Facilitation.

Abilities:

Environmental Management Plans & Frameworks; Environmental Impact Assessments; Environmental Impact Reports; Game Farm & Resort Planning; Strategic Conservation Planning with Multi Spectrum Participation.

Projects & Scientific Papers:

Participant in various Research Projects, conferences, workshops and author of a number of Scientific Papers.
Participation in and guidance of Development Projects varied in nature.

2. LEGISLATION AND GUIDELINES THAT HAVE BEEN CONSIDERED:

2.1. NEMA Legislation:

Based on a brief review of the environmental legislation, there is the general duty of care obligation of NEMA (National Environmental Management Act – Act No 107 of 1998) and the NEMA sustainability principles which must guide all activities.

In addition to this, the National Environmental Management Act (NEMA) [Act 107 of 1998]; the National Environmental Management Amended Act (NEMAA) [Act 62 of 2008]. Environmental Impact Assessment (EIA) Regulations that came into effect on the 2nd of August 2010. As promulgated in the following Government Notices:

Government Gazette No.9343 of the 30th of July 2010, GN No. R 664; R 661; R 662; R 663: Commencement of EIA Regulations 2010, published in Government Notice No R 543 on 18 June 2010, determine that the said regulations shall take effect on 2 August 2010.
Government Notice GN R.544; GN R.545 & GN R.546 (2 August 2010) Provides a list of activities and competent authorities identified in terms of sections 24 and 24d of the National Environmental Management Act, 1998. The schedule of activities identified in terms of section 24(2) (a) and (d) of the act, which may not commence without environmental authorisation from the competent authority and in respect of which the investigation, assessment and communication of potential impact of activities must follow the procedure as described in regulations 22 to 26 of the environmental impact assessment regulations, 2010, promulgated in terms of section 24(5) of the Act. Other applicable legislation is described below.

2.2 Listed Activities:

There are various activities associated with the proposed development project that will trigger listed activities described in Government Notices Numbers 544 and 545 of these Environmental Regulations as identified below. Should any additional listed activities become evident, during the screening process these will be captured and included in the application.

In terms of NEMAA GN 544 and 545, various activities will trigger either a Basic Assessment Procedure (544) or a Scoping and Environmental Impact Assessment Procedure (545). Possible Listed Activities pertinent to an application for the establishment of a cemetery (ies) and integrated urban development are the following:

<table>
<thead>
<tr>
<th>Government Notice R. 544 Activity No(s):</th>
<th>Describe the relevant Basic Assessment Activity(ies) in writing as per Listing Notice 1 (GN No. R. 544)</th>
<th>Describe the portion of the development as per the project description that relates to the applicable listed activity</th>
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<tbody>
<tr>
<td>9</td>
<td>The construction of facilities or infrastructure exceeding 1000 metres in length for the bulk transportation of water, sewage or storm water – (i) with an internal diameter of 0.36 metres or more; or (ii) with a peak throughput of 120 litres per second or more, excluding where: (a) such facilities or infrastructure are for bulk transportation of water, sewage or storm water or storm water drainage inside a road reserve; or (b) where such construction will occur within urban areas but further than 32 metres from a watercourse, measured from the edge of the watercourse.</td>
<td>This activity might be triggered depending on the size of the urban development.</td>
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<td>10</td>
<td>The construction of facilities or infrastructure for the transmission and distribution of electricity – (i) outside urban areas or industrial complexes with a capacity of more than 33 but less than 275 kilovolts; or (ii) inside urban areas or industrial complexes with a capacity of 275 kilovolts or more.</td>
<td>This activity might be triggered depending on the size of the urban development.</td>
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<td>11</td>
<td>The construction of: (x) buildings exceeding 50 square metres in size; or (x) infrastructure or structures covering 50 square metres or more 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.</td>
<td>This activity will be triggered if construction occurs within 32 meters from a watercourse.</td>
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<td>21</td>
<td>The establishment of cemeteries of 2500 square metres or more in size</td>
<td>At least 12 Ha</td>
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<td>Government Notice R. 546 Activity No(s):</td>
<td>Describe the relevant Basic Assessment Activity(ies) in writing as per Listing Notice 3 (GN No. R. 546)</td>
<td>Describe the portion of the development as per the project description that relates to the applicable listed activity</td>
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<td>2</td>
<td>The construction of reservoirs for bulk water supply with a capacity of more than 250 cubic metres.</td>
<td>This activity will be triggered if the proposed development will take place outside the urban area.</td>
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<td>(d) In Western Cape:</td>
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<td>(i) In an estuary;</td>
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<td>(ii) A protected area identified in terms of NEMPAA, excluding conservancies;</td>
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<td>(iii) All areas outside urban areas;</td>
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<td>(iv) In urban areas:</td>
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<td>(aa) Areas zoned for use as public open space; and</td>
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<td>(bb) Areas designated for conservation use in Spatial Development Frameworks adopted by the competent authority, or zoned for a conservation purpose.</td>
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<td>4</td>
<td>The construction of a road wider than 4 metres with a reserve less than 13.5 metres -</td>
<td>Infrastructure needed for the entire proposed development</td>
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<td>(a) In Western Cape</td>
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<tr>
<td>i. In an estuary;</td>
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<td></td>
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<tr>
<td>ii. All areas outside urban areas;</td>
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<td></td>
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<tr>
<td>iii. In urban areas:</td>
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<tr>
<td>(aa) Areas zoned for use as public open space within urban areas;</td>
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<td>And (bb) Areas designated for conservation use in Spatial Development Frameworks adopted by the competent authority, or zoned for a conservation purpose.</td>
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<td>12</td>
<td>The clearance of an area of 300 square metres or more of vegetation where 75% or more of the vegetative cover constitutes indigenous vegetation –</td>
<td>Critical Biodiversity Areas as identified in the Garden Route Initiative fine scale maps.</td>
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<tr>
<td>(a) within any critically endangered or endangered ecosystem listed in terms of section 52 of the NEMBA or prior to the publication of such a list, within an area that has been identified as critically endangered in the National Spatial Biodiversity Assessment 2004;</td>
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<td>(b) within critical biodiversity areas identified in bioregional plans;</td>
<td>(c) within the littoral active zone or 100 metres inland from high water mark of the sea or an estuary, whichever distance is the greater, excluding where such removal will occur behind the development setback line on erven in urban areas.</td>
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<td>13</td>
<td>The clearance of an area of 1 hectare or more of vegetation where 75% or more of the vegetative cover constitutes indigenous vegetation, except where such removal of vegetation is required for:</td>
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<td>(1) the undertaking of a process or activity included in the list of waste management activities published in terms of section 19 of the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008), in which case the activity is regarded to be excluded from this list.</td>
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<td>(2) the undertaking of a linear activity falling below the thresholds mentioned in Listing Notice 1 in terms of GN No. 544 of 2010 –</td>
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<td>(a) Critical biodiversity areas and ecological support areas as identified in systematic biodiversity plans adopted by the competent authority.</td>
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<td>(b) National Protected Area Expansion Strategy Focus areas.</td>
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<td>(c) In Eastern Cape, Free State, KwaZulu-Natal, Limpopo, Mpumalanga, Northern Cape and Western Cape:</td>
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<td>(i) In an estuary;</td>
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<td>(ii) Outside urban areas, the following:</td>
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<td>(aa) A protected area identified in terms of NEMPAA, excluding Conservancies;</td>
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<td>(bb) National Protected Area Expansion Strategy Focus areas;</td>
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<td>(cc) Sensitive areas as identified in an environmental management framework as contemplated in chapter 5 of the Act and as adopted by the competent authority;</td>
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<td>(dd) Sites or areas identified in terms of an International Convention;</td>
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<td>(ee) Core areas in biosphere reserves;</td>
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<td>(ff) Areas within 10 kilometres from national parks or world heritage sites or 5 kilometres from any other protected area identified in terms of NEMPAA or from the core area of a biosphere reserve;</td>
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<td>(gg) Areas seawards of the development setback line or within 1 kilometer from the high-water mark of the sea if no such Development setback line is determined.</td>
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<td>(iii) In urban areas, the following:</td>
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<td></td>
<td>(aa) Areas zoned for use as public open space;</td>
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<td></td>
<td>(bb) Areas designated for conservation use in Spatial Development Frameworks adopted by the Critical Biodiversity Areas as identified in the Garden Route Initiative fine scale maps. With regard to Activity 13 (c) (iii) (dd).</td>
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<td>Government Notice R. 545 Activity No(s):</td>
<td>Describe the relevant Scoping and EIA Activity(ies) in writing as per Listing Notice 2 (GN No. R. 545)</td>
<td>Describe the portion of the development as per the project description that relates to the applicable listed activity</td>
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<td>15</td>
<td>Physical alteration of undeveloped, vacant or derelict land for residential, retail, commercial, recreational, industrial or institutional use where the total area to be transformed is 20 hectares or more; except where such physical alteration takes place for: (I) linear development activities; or agriculture or afforestation where activity 16 in this Schedule will apply.</td>
<td>The entire proposed development</td>
</tr>
</tbody>
</table>

**Please note:** Only those activities for which the applicant applies will be considered for authorisation. The onus is on the applicant to ensure that all the applicable listed activities are included in the application. Failure to do so may invalidate the application, may require amendments to the application and/or may result in delays in the finalization of the application.

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**No listed activity may be commenced without environmental authorisation from the competent authority.**

In light of the fact that activities will trigger both GN R 544 and GN R 545, the current regulations require that the process required to be followed is one of a **Scoping and Environmental Assessment Procedure** – as defined in the EIA regulations, and not a Basic Assessment procedure.

This requires the following process:

The submittance of an Application to the Department of Environmental Affairs and Development Planning (DEA&DP), Western Cape Government after the completion of the

1. Scoping process which includes the legal advertisements, public participation, identification of all the key issues, draft Scoping Report, final Scoping Report, draft Plan of Study for EIA and final Plan of Study for EIA.

2. EIA process which includes further public participation, specialist assessments, draft EIR and final EIR, a construction phase Environmental Management Programme (EMP) and an Operational phase EMP.
### 2.3 Legislation and Guidelines consulted:

<table>
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<tr>
<th>NATIONAL LEGISLATION</th>
<th>ADMINISTERING AUTHORITY</th>
<th>TYPE Permit/license/authorization/comment/relevant consideration</th>
<th>DATE (if already obtained):</th>
</tr>
</thead>
<tbody>
<tr>
<td>CONSTITUTION OF THE REPUBLIC OF SOUTH AFRICA. (ACT 108 OF 1996)</td>
<td>Department of Environmental Affairs, Republic of South Africa. All State and Provincial Departments as well as Local Authorities that have been identified as relevant Competent Authorities.</td>
<td>PERMIT / LICENSE / AUTHORIZATION / COMMENT / RELEVANT CONSIDERATION</td>
<td>N/A</td>
</tr>
<tr>
<td>ENVIRONMENTAL CONSERVATION ACT (ACT 73 OF 1989)</td>
<td>Department of Environmental Affairs, Republic of South Africa. All State and Provincial Departments as well as Local Authorities that have been identified as relevant Competent Authorities.</td>
<td>PERMIT / LICENSE / AUTHORIZATION / COMMENT / RELEVANT CONSIDERATION</td>
<td>N/A</td>
</tr>
<tr>
<td>NATIONAL ENVIRONMENTAL MANAGEMENT ACT (ACT 107 OF 1998)</td>
<td>Department of Environmental Affairs, Republic of South Africa. All State and Provincial Departments as well as Local Authorities that have been identified as relevant Competent Authorities.</td>
<td>PERMIT / LICENSE / AUTHORIZATION / COMMENT / RELEVANT CONSIDERATION</td>
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</tr>
<tr>
<td>NATIONAL ENVIRONMENTAL MANAGEMENT AMENDMENT ACT (ACT 62 OF 2008)</td>
<td>Department of Environmental Affairs, Republic of South Africa. All State and Provincial Departments as well as Local Authorities that have been identified as relevant Competent Authorities.</td>
<td>PERMIT / LICENSE / AUTHORIZATION / COMMENT / RELEVANT CONSIDERATION</td>
<td></td>
</tr>
<tr>
<td>NATIONAL ENVIRONMENTAL MANAGEMENT: BIODIVERSITY ACT (ACT NO 10 OF 2004)</td>
<td>Department of Environmental Affairs, Republic of South Africa. All State and Provincial Departments as well as Local Authorities that have been identified as relevant Competent Authorities.</td>
<td>PERMIT / LICENSE / AUTHORIZATION / COMMENT / RELEVANT CONSIDERATION</td>
<td>N/A</td>
</tr>
<tr>
<td>NATIONAL ENVIRONMENTAL MANAGEMENT: WASTE ACT (ACT 59 OF 2008)</td>
<td>Department of Environmental Affairs, Republic of South Africa. All State and Provincial Departments as well as Local Authorities that have been identified as relevant Competent Authorities.</td>
<td>PERMIT / LICENSE / AUTHORIZATION / COMMENT / RELEVANT CONSIDERATION</td>
<td></td>
</tr>
<tr>
<td>NATIONAL FORESTS ACT (ACT 84 OF 1998)</td>
<td>Department of Environmental Affairs, Republic of South Africa. All State and Provincial Departments as well as Local Authorities that have been identified as relevant Competent Authorities.</td>
<td>PERMIT / LICENSE / AUTHORIZATION / COMMENT / RELEVANT CONSIDERATION</td>
<td>DAFI Jurisdiction</td>
</tr>
</tbody>
</table>

PO Box 3511, Knysna, 6570

www.ecoroute.co.za
<table>
<thead>
<tr>
<th>Act</th>
<th>Department</th>
<th>Jurisdiction</th>
<th>Permit / License / Authorization / Comment / Relevant Consideration</th>
</tr>
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<tbody>
<tr>
<td><strong>Forestry Laws Amendment Act (Act 35 of 2005)</strong></td>
<td>Department of Environmental Affairs, Republic of South Africa. All State and Provincial Departments as well as Local Authorities that have been identified as relevant Competent Authorities.</td>
<td>DAFF Jurisdiction</td>
<td>N/A</td>
</tr>
<tr>
<td><strong>National Veld and Forest Fire Act (Act 101 of 1998)</strong></td>
<td>Department of Environmental Affairs, Republic of South Africa. All State and Provincial Departments as well as Local Authorities that have been identified as relevant Competent Authorities.</td>
<td>DAFF Jurisdiction</td>
<td>N/A</td>
</tr>
<tr>
<td><strong>National Water Act (Act 36 of 1998)</strong></td>
<td>Department of Environmental Affairs, Republic of South Africa. All State and Provincial Departments as well as Local Authorities that have been identified as relevant Competent Authorities.</td>
<td>Dept of Water Affairs Jurisdiction</td>
<td>N/A</td>
</tr>
<tr>
<td><strong>Water Services Act (Act 108 of 1997)</strong></td>
<td>Department of Environmental Affairs, Republic of South Africa. All State and Provincial Departments as well as Local Authorities that have been identified as relevant Competent Authorities.</td>
<td>Dept of Water Affairs Jurisdiction</td>
<td>N/A</td>
</tr>
<tr>
<td><strong>Subdivision of Agricultural Land Act (Act 70 of 1970)</strong></td>
<td>Department of Environmental Affairs, Republic of South Africa. All State and Provincial Departments as well as Local Authorities that have been identified as relevant Competent Authorities.</td>
<td>Dept. of Agriculture Jurisdiction</td>
<td>PERMIT / LICENSE / AUTHORIZATION / COMMENT / RELEVANT CONSIDERATION</td>
</tr>
<tr>
<td><strong>Conservation of Agricultural Resources Act (Act 43 of 1983)</strong></td>
<td>Department of Environmental Affairs, Republic of South Africa. All State and Provincial Departments as well as Local Authorities that have been identified as relevant Competent Authorities.</td>
<td>Dept. of Agriculture Jurisdiction</td>
<td>PERMIT / LICENSE / AUTHORIZATION / COMMENT / RELEVANT CONSIDERATION</td>
</tr>
<tr>
<td><strong>National Heritage Resources Act (Act 25 of 1999)</strong></td>
<td>Department of Environmental Affairs, Republic of South Africa. All State and Provincial Departments as well as</td>
<td>PERMIT / LICENSE / AUTHORIZATION / COMMENT / RELEVANT CONSIDERATION</td>
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</tr>
</tbody>
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<tr>
<th>Act</th>
<th>Department of Environmental Affairs, Republic of South Africa. All State and Provincial Departments as well as Local Authorities that have been identified as relevant Competent Authorities.</th>
<th>Relevant Consideration</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>NATIONAL HEALTH ACT (ACT 61 OF 2003)</strong></td>
<td>Dept. of Health Jurisdiction</td>
<td>PERMIT / LICENSE/ AUTHORIZATION / COMMENT / RELEVANT CONSIDERATION</td>
</tr>
<tr>
<td><strong>OCCUPATIONAL HEALTH AND SAFETY ACT (ACT 85 OF 1993)</strong></td>
<td>Dept. of Health Jurisdiction</td>
<td>PERMIT / LICENSE/ AUTHORIZATION / COMMENT / RELEVANT CONSIDERATION</td>
</tr>
<tr>
<td><strong>THE SOUTH AFRICAN ROADS AGENCY LIMITED AND NATIONAL ROADS ACT (ACT 7 OF 1998)</strong></td>
<td>SANRAL Jurisdiction</td>
<td>PERMIT / LICENSE/ AUTHORIZATION / COMMENT / RELEVANT CONSIDERATION</td>
</tr>
<tr>
<td><strong>NATIONAL ROAD TRAFFIC ACT (ACT 93 OF 1996)</strong></td>
<td>SANRAL Jurisdiction</td>
<td>PERMIT / LICENSE/ AUTHORIZATION / COMMENT / RELEVANT CONSIDERATION</td>
</tr>
<tr>
<td><strong>DEVELOPMENT FACILITATION ACT (ACT 67 OF 1995)</strong></td>
<td>SANRAL Jurisdiction</td>
<td>PERMIT / LICENSE/ AUTHORIZATION / COMMENT / RELEVANT CONSIDERATION</td>
</tr>
<tr>
<td><strong>PHYSICAL PLANNING ACT (ACT 88 OF 1967)</strong></td>
<td>N/A</td>
<td>PERMIT / LICENSE/ AUTHORIZATION / COMMENT / RELEVANT CONSIDERATION</td>
</tr>
<tr>
<td><strong>PHYSICAL PLANNING ACT (ACT 125 OF 1991)</strong></td>
<td>N/A</td>
<td>PERMIT / LICENSE/ AUTHORIZATION / COMMENT / RELEVANT CONSIDERATION</td>
</tr>
<tr>
<td>Act</td>
<td>Relevant Departments</td>
<td>Relevant Consideration</td>
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<tr>
<td><strong>REGIONAL SERVICES COUNCILS ACT (ACT 109 OF 1985)</strong></td>
<td>Department of Environmental Affairs, Republic of South Africa. All State and Provincial Departments as well as Local Authorities that have been identified as relevant Competent Authorities.</td>
<td>N/A</td>
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<tr>
<td><strong>LOCAL GOVERNMENT: MUNICIPAL SYSTEMS ACT (ACT 32 OF 2000)</strong></td>
<td>Department of Environmental Affairs, Republic of South Africa. All State and Provincial Departments as well as Local Authorities that have been identified as relevant Competent Authorities.</td>
<td>N/A</td>
</tr>
<tr>
<td><strong>SECTIONAL TITLES ACT (ACT 95 OF 1986)</strong></td>
<td>Department of Environmental Affairs, Republic of South Africa. All State and Provincial Departments as well as Local Authorities that have been identified as relevant Competent Authorities.</td>
<td>N/A</td>
</tr>
<tr>
<td><strong>PROMOTION OF ACCESS TO INFORMATION ACT (ACT 2 OF 2000)</strong></td>
<td>Department of Environmental Affairs, Republic of South Africa. All State and Provincial Departments as well as Local Authorities that have been identified as relevant Competent Authorities.</td>
<td>N/A</td>
</tr>
<tr>
<td><strong>PROMOTION OF ADMINISTRATIVE JUSTICE ACT (ACT 3 OF 2000)</strong></td>
<td>Department of Environmental Affairs, Republic of South Africa. All State and Provincial Departments as well as Local Authorities that have been identified as relevant Competent Authorities.</td>
<td>N/A</td>
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<tr>
<td><strong>PROMOTION OF ADMINISTRATIVE JUSTICE AMENDMENT ACT (ACT 53 OF 2002)</strong></td>
<td>Department of Environmental Affairs, Republic of South Africa. All State and Provincial Departments as well as Local Authorities that have been identified as relevant Competent Authorities.</td>
<td>N/A</td>
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<tr>
<td><strong>NATIONAL DEVELOPMENT AGENCY ACT (ACT 108 OF 1998)</strong></td>
<td>Department of Environmental Affairs, Republic of South Africa. All State and Provincial Departments as well as Local Authorities that have been identified as relevant Competent Authorities.</td>
<td>N/A</td>
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<tr>
<td><strong>LOCAL GOVERNMENT: MUNICIPAL DEMARCATION ACT (ACT 27 OF 1998)</strong></td>
<td>Department of Environmental Affairs, Republic of South Africa. All State and Provincial Departments as well as</td>
<td>N/A</td>
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<tr>
<td>PROVINCIAL LEGISLATION</td>
<td>ADMINISTERING AUTHORITY</td>
<td>TYPE</td>
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<tr>
<td>FENCING ACT (ACT 31 OF 1963)</td>
<td>Department of Environmental Affairs, Republic of South Africa. All State and Provincial Departments as well as Local Authorities that have been identified as relevant Competent Authorities.</td>
<td>PERMIT / LICENSE / AUTHORIZATION / COMMENT / RELEVANT CONSIDERATION</td>
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<tr>
<td>PROVINCIAL LEGISLATION WESTERN CAPE</td>
<td></td>
<td></td>
</tr>
<tr>
<td>WESTERN CAPE CONSTITUTION ACT 1 OF 1998</td>
<td>Department of Environmental Affairs, Republic of South Africa. All State and Provincial Departments as well as Local Authorities that have been identified as relevant Competent Authorities.</td>
<td>PERMIT / LICENSE / AUTHORIZATION / COMMENT / RELEVANT CONSIDERATION</td>
</tr>
<tr>
<td>WESTERN CAPE NATURE CONSERVATION LAWS AMENDMENT ACT (ACT 3 OF 2000)</td>
<td>Provincial Departments as well as Local Authorities that have been identified as relevant Competent Authorities. CapeNature Jurisdiction</td>
<td>PERMIT / LICENSE / AUTHORIZATION / COMMENT / RELEVANT CONSIDERATION</td>
</tr>
<tr>
<td>WESTERN CAPE NATURE CONSERVATION BOARD ACT (ACT 15 OF 1998)</td>
<td>Provincial Departments as well as Local Authorities that have been identified as relevant Competent Authorities. CapeNature Jurisdiction</td>
<td>PERMIT / LICENSE / AUTHORIZATION / COMMENT / RELEVANT CONSIDERATION</td>
</tr>
<tr>
<td>WESTERN CAPE PLANNING AND DEVELOPMENT ACT (ACT 7 OF 1999)</td>
<td>Provincial Departments as well as Local Authorities that have been identified as relevant Competent Authorities. CapeNature Jurisdiction</td>
<td>PERMIT / LICENSE / AUTHORIZATION / COMMENT / RELEVANT CONSIDERATION</td>
</tr>
<tr>
<td>NATURE AND ENVIRONMENTAL CONSERVATION ORDINANCE 19 OF 1974</td>
<td>Provincial Departments as well as Local Authorities that have been identified as relevant Competent Authorities. CapeNature Jurisdiction</td>
<td>PERMIT / LICENSE / AUTHORIZATION / COMMENT / RELEVANT CONSIDERATION</td>
</tr>
<tr>
<td>MUNICIPAL ORDINANCE 20 OF 1974</td>
<td>Local Authorities that have been identified as relevant Competent Authorities. Local Government Jurisdiction</td>
<td>PERMIT / LICENSE / AUTHORIZATION / COMMENT / RELEVANT CONSIDERATION</td>
</tr>
<tr>
<td>POLICIES AND GUIDELINES</td>
<td>ADMINISTERING AUTHORITY</td>
<td>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).</td>
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</tr>
<tr>
<td>DEA (2010), Companion to the EIA Regulations 2010, Integrated Environmental Management Guideline Series 5, Department of Environmental Affairs, (DEA), Pretoria, South Africa</td>
<td>Department of Environmental Affairs, Republic of South Africa. All Provincial Departments that have been identified as Competent Authorities.</td>
<td>This guideline was used to gain insight into the practical implementation of the 2010 EIA regulations and to obtain clarity on the processes to be followed when applying for an environmental authorization in terms of the EIA Regulations. The guideline was used to identify and interpret the relevant listed activities, as described in the pertinent Listing Notices that would be triggered by the proposed development. The guideline acts as a reference document to the NEMA EIA Regulations of 2010, and as such was adhered to in its entirety.</td>
</tr>
<tr>
<td>DEA (2010), Public Participation 2010, Integrated Environmental Management Guideline Series 7,</td>
<td>National Department of Environmental Affairs (DEA)</td>
<td>The guideline was used to gain guidance on the procedure and the provisions of the public participation process in terms of NEMA and the EIA regulations of 2010, as well as other relevant legislations (promotion of administrative justice act (PAJA), act no. 3 of 2000 and the promotion of access to information act (PAIA), act no. 2 of 2000. This guideline was used to determine the public participation process to be followed, for the identification of possible stakeholders. The guideline acts as a reference document to the NEMA EIA Regulations of 2010, and as such was adhered to in its entirety.</td>
</tr>
<tr>
<td>DEA&amp;DP (2010) Guideline on Public Participation, EIA Guideline and Information Document Series, Western Cape Department of Environmental Affairs &amp; Development Planning</td>
<td>Western Cape Department of Environmental Affairs and Development Planning (DEA&amp;DP)</td>
<td>In terms of NEMA procedures for the investigation, assessment and communication of the potential consequences or impacts of activities on the environment must, inter alia, ensure, with respect to every application for environmental authorization: · coordination and cooperation between organs of state in the consideration of assessments where an activity falls under the jurisdiction of more than one organ of state;</td>
</tr>
</tbody>
</table>
The general objectives of integrated environmental management laid down in the NEMA include to “ensuring adequate and appropriate opportunity for public participation in decisions that may affect the environment”. The National Environmental Management Principles include the principle that “The participation of all interested and affected parties in environmental governance must be promoted, and all people must have the opportunity to develop the understanding, skills and capacity necessary to achieving equitable and effective participation, and participation by vulnerable and disadvantaged persons must be ensured.”

With public information and participation procedures being specified as a minimum requirement in terms of NEMA, exemption from having to undertake public participation cannot be applied for in terms of either NEMA or the EIA Regulations. Exemption can, however, be applied for in terms of the extent and level of public participation to be undertaken. It must, however, be noted that in terms of the extent and level of public participation to be undertaken, deviation from some of the specific requirements in terms of the EIA Regulations related to the public participation steps to be taken (in terms of the different notices to be given in terms of Regulation 54(2) of GN No. R. 543 – as indicated in the Application Form for Environmental Authorisation) can, however, be requested. If the deviation is agreed to, then exemption is not required. It must, however, be noted that deviation from having to notify the owner or person in control of the land, if the applicant is not the owner or person in control of the land, cannot be obtained because the requirement for the notice to the owner or person in control of the land is also specified by another provision of the regulations.

This guideline was used to determine the format of the advertisements and notice boards for public participation notification in the case of a joint public participation process. The guideline was also used to determine the public participation process and timelines.

<table>
<thead>
<tr>
<th>Guideline for Involving Heritage Specialists in EIA Processes June 2005</th>
<th>Western Cape Department of Environmental Affairs and Development Planning (DEA&amp;DP)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heritage specialist input can occur at different stages in the EIA process and proposal formulation process and can vary in nature and intensity at each one of these phases. Input can range from the provision of an opinion, to assisting with the scoping of heritage issues, to detailed assessment of potential heritage impacts. Determining the scope of heritage specialist input is informed by the nature and degree of significance of the heritage resource and its context. This will determine whether the issues relate to the experiential qualities of a place, historical fabric, archaeological remains or associational values. Depending on the reliability or availability of existing information the range of approaches to heritage specialist input include fieldwork and mapping, historical research, consultation, visual character analysis and social-historical analysis. In evaluating the adequacy of heritage specialist input, this input should be reasonable, objective and professionally defensible. It should clearly establish the nature and degree of heritage significance, canvass the range of possible heritage values attached</td>
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</tbody>
</table>
to the heritage resource, consider the role of intangible and tangible values and provide clear recommendations including alternatives and mitigation measures to inform the decision-making process.

A Specialist Heritage Assessor was appointed and **PERCEPTION Environmental Planning** as commissioned to compile and submit to Heritage Western Cape a Notice of Intent to Develop (NID) and Heritage Statement for adjudication.

The purpose of this assessment is not only to serve as a NID application to Heritage Western Cape, but also to assist/contribute to the project as follows:

- To identify heritage issues, development constraints and opportunities at an early stage;
- To avoid potential negative impacts of the proposed development on heritage-related aspects;
- To provide guidance for planning and design of the proposed development.

**NOTE**: This Heritage Statement should be read in conjunction with the completed NID application form attached.

<table>
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<tr>
<td>Obtain a comprehensive understanding of the activities and associated impacts of all the phases of the project. Appropriate mitigation and monitoring measures can then be implemented.</td>
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<tr>
<td>Identify specific environmental risks and issues. This entails identifying the elements of the environment that need to be protected as well as the range of activities that could possibly adversely affect them.</td>
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<tr>
<td>Develop the suite of environmental controls and, ideally, prepare these as a set of specifications for integration into the construction tender or contract document. These environmental controls will include the mitigation measures, management controls, and environmental standards to be met.</td>
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<tr>
<td>The mitigation measures must be practical and cost efficient so that they are readily implementable.</td>
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<tr>
<td>Method statements are useful tools for the contractor to specify how mitigation actions will be implemented. Method statements describe:</td>
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<tr>
<td>* Construction and operational procedures;</td>
<td></td>
</tr>
<tr>
<td>* Materials and equipment to be used;</td>
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<tr>
<td>* How and where material will be stored;</td>
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<tr>
<td>* Action to contain leaks or spills of any liquid or material;</td>
<td></td>
</tr>
<tr>
<td>* The timing and location of construction and operational activities;</td>
<td></td>
</tr>
<tr>
<td>Identify and allocate roles and responsibilities for specific actions associated with mitigation, monitoring and performance assessment.</td>
<td></td>
</tr>
<tr>
<td>Establish a monitoring program and specify the mechanisms for achieving compliance.</td>
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<tr>
<td>Develop an environmental awareness program.</td>
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<tr>
<td>All of the above mentioned principles have been taken into consideration in the compilation of the Environmental Management Program (EMPr).</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Guideline for Environmental Management Plans (EMP's)</th>
<th>Western Cape Department of Environmental Affairs and Development Planning (DEA&amp;DP)</th>
</tr>
</thead>
<tbody>
<tr>
<td>An Environmental Management Plan (EMP) can be defined as “an environmental management tool used to ensure that undue or reasonably avoidable adverse impacts of the construction, operation and decommissioning of a project are prevented; and that the positive benefits of the projects are enhanced”.</td>
<td></td>
</tr>
<tr>
<td>EMPs are therefore important tools for ensuring that the management actions arising from Environmental Impact Assessment (EIA) processes are clearly defined and implemented through all phases of the project life-cycle.</td>
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<tr>
<td>The overall purpose of the guideline is twofold: to inform and guide the preparation and implementation of EMPs in a manner that promotes the effectiveness of EMPs; and to assist authorities and other reviewers in objectively evaluating the quality of EMPs.</td>
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</tbody>
</table>
This guideline for EMPs describes the key components that should be included in an EMP, drawing from relevant existing guidelines as well as South African EMP experience.

Key features of this guideline are that it:

- Is applicable to a range of types and scales of projects or developments, from projects with a low level of environmental risk to those with high environmental risk;
- Assumes a broad understanding of the term “environment”, that includes the biophysical, social and economic components;
- Includes the enhancement of positive impacts (benefits) as well as the mitigation of negative impacts;
- Should not be viewed as a prescriptive and inflexible document.

The guideline for EMPs describes the envisaged scope and content of an EMP, covering both the preparation and implementation stages of an EMP process, as well as the roles of key stakeholders associated with EMPs.

To assist in the review of EMPs by the authorities, as well as other reviewers, a set of review criteria has been identified. It must emphasized that these criteria are not intended to provide a prescriptive list of requirements for each and every EMP, but to provide prompts for reviewers regarding the scope and level of detailed appropriate for an EMP.

All of the above mentioned principles have been taken into consideration in the compilation of the Environmental Management Program (EMPr).

<table>
<thead>
<tr>
<th>NEMA EIA Regulations Guidance Document Series: Guideline on Alternatives</th>
<th>Western Cape Department of Environmental Affairs and Development Planning (DEA&amp;DP)</th>
</tr>
</thead>
<tbody>
<tr>
<td>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 authorization –</td>
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<tr>
<td>· 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</td>
<td></td>
</tr>
<tr>
<td>· 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.</td>
<td></td>
</tr>
<tr>
<td>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 minimizing negative impacts, maximizing benefits, and promoting compliance with the principles of environmental management” set out in NEMA.</td>
<td></td>
</tr>
<tr>
<td>The National Environmental Management Principles, inter alia, state that “Environmental management must be integrated, acknowledging that all elements of the environment are linked and interrelated, and it must take into account the effects of decisions on all aspects of the environment and all people in the environment by pursuing the selection of the best practicable environmental option”.</td>
<td></td>
</tr>
<tr>
<td>The NEMA defines the “best practicable environmental option” as “the option that provides the most benefit or causes the least damage to the environment as a whole, at a cost acceptable to society, in the long term as well as in the short term”.</td>
<td></td>
</tr>
<tr>
<td>In terms of the NEMA, if the Department considers an application for an environmental authorization, the Department must take into account all relevant factors, which may include, inter alia, “…any feasible and reasonable alternatives to the activity which are the subject of the application and any feasible and reasonable modifications or changes to the activity that may minimize harm to the environment”.</td>
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<tr>
<td>Ultimately an EIA is a decision-making process with the specific aim selecting the option that will provide the most benefit and cause the</td>
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</table>
least damage in the short and long term.

The quality of an EIA, as with all decisions, therefore “depends on the quality of alternatives from which to choose”.

In light of the above, the very consideration of a development in terms of EIA is about the consideration of alternatives related to the development – the consideration of alternatives being the key consideration of EIA.

Although the NEMA refers to “must include” “where applicable” when referring to the requirement to consider alternatives, the NEMA states that where an EIA has been identified as the environmental instrument to be utilized in informing an application for environmental authorization, the consideration of alternatives, is applicable.

All EIAs must therefore consider alternatives.

The following alternatives were assessed:
- Layouts
- Development Size
- “No Go” Option

<table>
<thead>
<tr>
<th>NEMA EIA Regulations Guideline and Information Document Series: Guideline on Appeals</th>
<th>Western Cape Department of Environmental Affairs and Development Planning (DEA&amp;DP)</th>
<th>Types of appeal applications:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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<td>The provisions of the NEMA EIA Regulations give effect to the appeal right afforded by the provisions of NEMA.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>No appeal is available if the Provincial Minister responsible for Environmental Affairs took a decision capacity as the competent authority.</td>
</tr>
<tr>
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<td></td>
<td>An appeal may, however, be lodged with the Provincial Minister responsible for Environmental Affairs against a decision taken by the Department on an application, which may include a:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Decision by the Department to grant or refuse environmental authorization Any affected person may appeal the decision taken by the Department to grant or refuse environmental authorization to undertake a listed activity in terms of the NEMA EIA Regulations.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Decision by the Department to amend an environmental authorization In terms of the NEMA EIA regulations either an applicant may apply to or the Department on its own initiative may decide to amend an environmental authorization. The amendment decision taken by the Department may be appealed.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Decision by the Department to amend an environmental management program. In terms of the NEMA EIA regulations either an applicant may apply to or the Department on its own initiative may decide to amend an environmental authorization. The amendment decision taken by the Department may be appealed.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Decision by the Department to suspend an environmental authorization In terms of the NEMA EIA Regulations the Department may suspend an environmental authorization. The Department’s decision to suspend an environmental authorization may be appealed.</td>
</tr>
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<td>Decision by the Department on an exemption application NEMA and the EIA Regulations allow an applicant to apply for exemption from certain provision of NEMA and any provision of the EIA Regulations.</td>
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<td>Any affected person may appeal the decision taken by the Department to grant or refuse the exemption applied for.</td>
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<tr>
<th>NEMA EIA Regulations Guideline and Information Document Series: Guideline on Exemption Applications</th>
<th>Western Cape Department of Environmental Affairs and Development Planning (DEA&amp;DP)</th>
<th>An applicant to whom a provision of NEMA, the EIA regulations, the NEM: AQA or NEM: WA applies may apply for exemption from such a provision, except from the provisions to obtain the required approval(s) and the requirements in terms of section 24(4)(a) of NEMA.</th>
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<td>NEMA also makes it clear that the Department may only grant exemption from a provision of NEMA if,</td>
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<td>(a) the granting of the exemption is unlikely to result in significant detrimental consequences for or impacts on the environment;</td>
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<td>(b) the provision cannot be implemented in practice in the case of the</td>
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application in question; or

(c) The exemption is unlikely to adversely affect the rights of interested or affected parties.

When applying for exemption, the EAP must first submit to the Department a notice of the intended exemption application as well as the proposed method of notifying the interested and affected parties (“I&APs”) of the intention to apply for exemption.

The EIA Regulations specifies that the notice to I&APs of the intended exemption application must be in the form of a site notice, written notice to the different parties, or placing an advertisements in newspapers, or a combination thereof as agreed to by the Department, including having to notify the owner or person in control of the land if the applicant is not the owner or person in control of the land.

The notice to the I&APs must also specify the provisions from which exemption is intended to be applied for, the manner in which and the person to whom comments on the intended application for such exemption must be submitted, and, the date on which comments on the application for exemption must be submitted.

After the Department has agreed to the method of notification of the I&APs, the EAP must first give notice of the intended exemption application to the I&APs in accordance with the agreed to method, and thereafter may submit the application for exemption.

A notice of the intended exemption applications as well as the proposed method of notifying the I&APs of the intention to apply for exemption, has also been incorporated into the Application Form for Environmental Authorisation.

If the notice is not submitted together with the application for environmental authorization, a separate notification and separate public participation process for the exemption application will be required.

Applications for exemption can be submitted at any time within the EIA process. The exemption must, however, be granted before an applicant or EAP proceeds in accordance with the exemption.

For administrative reasons the Department however encourages the submission of applications for exemption in alignment with the process to be undertaken for the application for environmental authorization.

Note that the public participation process to be followed for the exemption application will include the requirements of section 24O and 24(4) of NEMA. An applicant must bear in mind that should an exemption application be refused by the Department, the applicant will be required to meet the requirements of the provision(s) for which exemption was applied.

The application for exemption must be submitted to the Department on the official Application Form for Exemption and must be accompanied by:

i) an explanation of the reasons for the application for exemption;
ii) a description of any consequences the exemption may have on the environment;
iii) a description of any impacts the exemption may have on the right of interested and affected parties;
ii) any applicable supporting documents; and
i) the prescribed application fee.

All application forms must be original documents that are duly signed and dated. The Department will acknowledge receipt of an application within 14 days of receipt thereof.

The Department may require that the applicant or EAP conduct at least a public participation process which may include

i) a site notice board; and/or
ii) written notice; and/or
iii) advertisements in local/provincial/national newspapers; and
iv) opening and maintaining a register of all interested and affected parties in respect of the Exemption application; and
v) Submission of any comments received from interested and affected
parties and responses thereto following such a public participation process, to the Department.

On receipt of an application, the Department in accordance may request the applicant to furnish additional information and may advise the applicant of any matter that may prejudice the success of the application.

The Department will reach a decision on the application for exemption within 30 days of receiving all required information.

For exemption applications that relate to actions that will occur after the decision is issued by the Department, the Department may issue the exemption application decision at the same time as the decision on the application for environmental authorization (this may be as part of the environmental authorization).

The decision taken by the Department on the exemption application may be appealed.

If an exemption is granted, the Department will stipulate conditions and the period for which the exemption is granted (if the exemption is granted for a period), and may review, from time to time, any exemption notice issued, and may amend or suspend the exemption notice in writing.

Consistent with National Priorities, Environmental authorities must support “increased economic growth and promote social inclusion”, whilst ensuring that such growth is “ecologically sustainable”.

In the National Spatial Development Perspective (“NSDP”) it is highlighted that to achieve the goal of stimulating sustainable Economic activities and to create long-term employment opportunities, it is required that spending on economic infrastructure is focused in priority areas with potential for economic development, with development to serve the broader societies’ needs equitably.

What is needed and desired for a specific area must, however, be strategically and democratically determined.

With time being required for prolonged and active engagement it, however, becomes clear that the ad hoc nature of project-level EIA decision-making, with limited opportunities for public engagement, and the reality of time and resource constraints, do not allow for prolonged participative processes, and can therefore never substitute or replace the participative processes that should frame and inform all democratic decision-making.

The strategic context for informing need and desirability is therefore best addressed and determined during the formulation of the sustainable development vision, goals and objectives of Integrated Development Plans (“IDPs”) and Spatial Development Frameworks (“SDFs”) during which collaborative and participative processes play an integral part, and are given effect to, in the democratic processes at local government level.

In this regard the SDF, that forms an integral part of each Municipality’s IDP, must in terms of the Municipal Planning and Performance Management Regulations specifically:

"Set out objectives that reflect the desired spatial form of the municipality, contain strategies and policies regarding the manner in which to achieve the objectives, which strategies and policies must indicate desired patterns of land use within the municipality, provide strategic guidance in respect of the location and nature of development within the municipality, provide a visual representation of the desired spatial form of the Municipality, which representation must indicate desired or undesired utilization of space in a particular area".

Cognizance of the need to consider the strategic context of a decision and the broader societal needs and the public interest, and in an effort to better address cumulative impacts, the NEMA also provides for the compilation of information and maps that specify the attributes of the environment.

In particular geographical areas, including the sensitivity, extent, interrelationship and significance of such attributes which must be taken into account.
The Environmental Management Frameworks ("EMFs") Regulations state that EMFs must, inter alia, “specify the attributes of the environment in the area, including the sensitivity, extent, interrelationship and significance of those attributes; state the environmental management priorities of the area; indicate the kind of developments or land uses that would have a significant impact on those attributes and those that would not indicate the kind of developments or land uses that would be undesirable in the area or in specific parts of the area”.

The need and desirability of development must therefore be measured against the abovementioned contents of the credible IDP, SDF and EMF for the area, and the sustainable development vision, goals and objectives formulated in, and the desired spatial form and pattern of land use reflected in, the area’s IDP and SDF.

While project-level EIA decision-making therefore must help us stay on course by finding the alternative that will take us closer to our desired aim-goal, it is through Integrated Development Planning (and the SDF process) that the desired destination is to be decided and the map drawn of how to get there. In the absence of a credible IDP and SDF, the burden of having to addresses the broader need and desirability considerations is, however, shifted to the EIA which must then grapple with these issues within the vacuum left by inadequate planning.

Financial viability must therefore be considered within the context of justifiable economic development, measured against the broader societal short-term and long-term needs.

While the financial viability considerations of the private developer might therefore indicate if a development is “do-able”, the “need and desirability” will be determined by considering the broader community’s needs and interests as reflected in a credible IDP, SDF and EMF for the area, and as determined by the EIA.

While the importance of job creation and economic growth for South Africa cannot be denied, the Constitution calls for justifiable economic development.

The specific needs of the broader community must therefore be considered together with the opportunity costs and distributional consequences in order to determine whether or not the development is “justified”, will contribute to environmental justice and social justice, and will result in the “best practicable environmental option” – in other words to ensure that the development will be socially, economically and environmentally sustainable.

While EIAs have up until now been criticized for not having a big enough impact on the type, location and scale of development, the inclusion of the requirement to specifically consider “need and desirability” is set to change this.

In terms of the NEMA EIA Regulations, when considering an application the Department must have regard to a number of specific considerations including specifically having to consider “the need for and desirability of the activity”.

The NEMA EIA Regulations specifies that the Basic Assessment Report, Scoping Report and Environmental Impact Report must provide a description of the need and desirability of the proposed activity and identified potential alternatives to the proposed activity.

It requires that both “need” and “desirability” must be considered by the developer, his/her independent environmental assessment practitioner (“EAP”), the specialists, interested and affected parties, and the Department.

In addition, the provisions of NEM: WA and the NEM: AQA also specifically require the consideration of need and desirability.

With regard to having to consider need and desirability, the definition of “evaluation” must also be noted.

NEMA defines “evaluation” as “the process of ascertaining the relative importance or significance of information, in the light of people’s values, preferences and judgments, in order to make a decision.”

In order to properly interpret the NEMA EIA Regulations’ requirement to consider “need and desirability”, it is necessary to turn to the
National Environmental Management Principles in terms of NEMA which serve as a guide for the interpretation, administration and implementation of NEMA and the NEMA EIA regulations.

With regard to the issue of “need”, it is important to note that this “need” is not the same as the “general purpose and requirements” of the activity.

While the “general purpose and requirements” of the activity might to some extent relate to the specific requirements, intentions and reasons that the applicant has for proposing the specific activity, the “need” relates to the interests and needs of the broader public.

In this regard the National Environmental Management Principles specifically inter alia require that environmental management must:

- “Place people and their needs at the forefront of its concern” and equitably serve their interests;
- “Be integrated, acknowledging that all elements of the environment are linked and interrelated, and it must take into account the effects of decisions on all aspects of the environment and all people in the environment by pursuing the selection of the best practicable environmental option;
- Pursue environmental justice “so that adverse environmental impacts shall not be distributed in such a manner as to unfairly discriminate against any person”; and
- Ensure that decisions take “into account the interests, needs and values of all interested and affected parties”;

With the environment to be “held in public trust for the people, the beneficial use of environmental resources must serve the public interest and the environment must be protected as the people’s common heritage”.

The consideration of “need and desirability” in EIA decision-making therefore requires the consideration of the strategic context of the development proposal along with the broader societal needs and the public interest.

The government decision-makers, together with the environmental assessment practitioners and planners, are therefore accountable to the public and must serve their social, economic and ecological needs equitably.

This requires a long-term approach to decision-making in order to ensure that limits are not exceeded and that the proposed actions of individuals are measured against the long-term public interest.

Sustainable development therefore calls for the simultaneous achievement of the triple bottom-line.

These principles and parameters will be assessed and addressed during the Public Participation process and recorded in the final Basic Assessment Report.

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<tr>
<th>NEMA EIA Regulations Guideline and Information Document Series: Information Document on Generic Terms of Reference for EAP’s and Project Schedules</th>
<th>Western Cape Department of Environmental Affairs and Development Planning (DEA&amp;DP)</th>
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<td>This information document forms part of this Department’s Environmental Impact Assessment Guideline and Information Document Series and provides a generic terms of reference for an Environmental Assessment Practitioner (“EAP”) for both Basic Assessment and Scoping and Environmental Impact Reporting, as well as for Basic Assessment and Scoping and Environmental Impact Reporting where an atmospheric emission license in terms of the NEM: AQA and/or waste management license in terms in terms of the NEM: WA are also required. Appended to this document is generic project schedule for the different processes. While the requirements of each EIA might be different, this generic terms of reference and generic project schedules are of general application and are based on the minimum legislative requirements and legislated timeframes. Based on the specific requirements of each EIA, it might be necessary to add to the generic terms of reference and generic project schedules. Note: The generic project schedules reflect the schedule as per a well run EIA process.</td>
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Unnecessary delays caused by Application Forms or Reports being rejected or requests for additional information is therefore not provided for.

It must further be noted that the authority might also decide that an appeal suspends an Environmental Authorisation, and as such the time necessary to decide an appeal must also be considered.

A separate schedule which indicates the time necessary to consider appeals is therefore also included. If it is anticipated that a proposed EIA process will be more complicated than the generic EIA process, it is, however, always advisable to arrange for a pre-application meeting with the Department to clarify process requirements.

An EAP appointed in terms of the NEMA EIA Regulations to manage an EIA application process, *inter alia*, must –

- be independent;
- have expertise in conducting EIAs, including knowledge of the NEMA, the EIA Regulations and any guidelines that have relevance to the proposed activity; and once the registration authority for EAPs have been legislated, be registered.

Note: “Expertise” means “expert knowledge and skill in a particular subject”.

“Knowledge” in turn means “the information, understanding and skills that you gain through education or experience”.

A combination of relevant education and experience in EIA is therefore required. The requirements for registration of an EAP will also require the EAP to meet the registration requirements in terms of a combination of education and experience.

- perform the work relating to the application in an objective manner, even if this results in views and findings that are not favorable to the applicant;
- comply with the NEMA, the EIA Regulations and all other applicable legislation;
- disclose to the applicant and the Department all material information in the possession of the EAP that reasonably has or may have the potential of influencing –

(i) any decision to be taken with respect to the application by the competent authority in terms of the NEMA EIA Regulations; or

(ii) The objectivity of any report, plan or document to be prepared by the EAP in terms of the NEMA EIA Regulations for submission to the competent authority.

Note: If the Department at any stage of considering an application has reason to believe that the EAP does not comply with any of the abovementioned requirements and the Department, after having investigating the matter, remains unconvinced of the EAP’s compliance with the requirements, the Department will disqualify the EAP.

An EAP must manage the EIA process, including –

- giving advice on whether or not the Department would be able to reach a decision on the basis of information provided in a Basic Assessment Report or whether permission should be applied for to apply Scoping-EIR instead of Basic Assessment to the application;
- ensuring that the requirements in terms of the EIA Regulations are met and that the application does not lapse;
- coordinate and integrate any specialist inputs or studies that might be required, and also ensure that the specialists appointed meet the requirements in terms of independence, objectivity and expertise;
- managing and ensuring the integrity of the public participation process;
- ensuring EIA best practice and clearly communicate the methodologies used, and the assumptions, uncertainties and gaps in knowledge and...
A person appointed in terms of the NEMA EIA Regulations to compile a specialist report or undertake a specialized process, \textit{inter alia}, must—

- be independent;
- have the required expertise, including knowledge of the NEMA, the EIA Regulations and any guidelines that have relevance to the proposed activity and specialist input or study;
- perform the work relating to the application in an objective manner, even if this results in views and findings that are not favorable to the applicant;
- comply with NEMA, the EIA Regulations and all other applicable legislation; and
- disclose to the applicant, EAP and the Department all material information in the possession of the person that reasonably has or may have the potential of influencing—
  
  (i) any decision to be taken with respect to the application by the competent authority in terms of these Regulations; or  
  
  (ii) the objectivity of any report, plan or document to be prepared by the person in terms of these Regulations for submission to the competent authority;

Note: If the Department at any stage of considering an application has reason to believe that the specialist does not comply with any of the abovementioned requirements and the Department, after having investigating the matter, remains unconvinced of the specialist’s compliance with the requirements, the Department will disqualify the specialist.

The specialist must also—

- ensure EIA best practice and clear communication on the methodologies used, and the assumptions, uncertainties and gaps in knowledge; and
- adhere to the National Environmental Management Principles contained in Section 2 of NEMA and the general objectives of Integrated Environmental Management contained in Section 23 of NEMA.

The EAP’s input to the project would include:

- Attending all scheduled project meetings and site visits as may be necessary.
- Preparing and placing notices in the press about the proposed project to satisfy the requirements of the EIA Regulations.
- Coordination of all public participation required in terms of the EIA and HIA regulations, including notification of interested and affected parties (including the organs of state), preparing press notices (in the required languages), placing reports in all relevant libraries, facilitating meetings, producing minutes and tracking all correspondence.
- Preparing all documentation necessary in terms of the NEMA EIA Regulations, waste management activities (if applicable) and heritage requirements to be submitted to the public, Heritage Western Cape (HWC) (if applicable), South Africa Heritage resource Agency (SAHRA) (if applicable), DEA&DP, or Department of Environmental Affairs (DEA), as appropriate.
- Attending all scheduled project team meetings, and any other meetings with third parties, as may be necessary.
- Liaison with the public and other stakeholders (note: a preliminary list of the relevant stakeholders and reason for their involvement should be specified in the scope of work), including the media, for the duration of the EIA process (note: media liaison will however be
subject to the relevant policies and media procedures of the relevant municipality).

The appointed service provider must make themselves available to answer questions of direct relevance to the EIA process.

- Making all relevant reports available to the public and stakeholders, including placing these reports as electronic documents on an accessible web site. Two copies of each report must be placed in all relevant libraries as identified by the applicant in consultation with the appointed service provider.

Key steps in the process:

The procedures required for an Application for Authorisation to DEA&DP would involve the following key steps –

- site visit(s) and the collection of relevant site information needed for the Application;
- coordination of pre-application meetings with relevant authorities, including DEA&DP and HWC (if applicable), in order to establish their requirements;
- public participation, including advertising, the erection of notice boards and the notification of adjacent and/or directly affected property owners;
- coordination of specialists’ input or studies required;
- submission of relevant completed application forms;

Information Document on Generic TORs for EAPs and Project Schedules, EIA Guideline and Information Document Series (August 2010)

- completion of draft reports including draft Environmental Management Programs for public review;
- completion of final reports (including a Comments – Response Report) for public review;
- submission of the reports to the relevant authorities for consideration;
- Notification of all I&APs of the outcome of the application.

Timeframes:

The generic project schedules for Basic Assessment, Scoping-EIR, Basic Assessment where a Waste Management License and/or Atmospheric Emission License is also required, Scoping-EIR where a Waste Management Licenses and/or Atmospheric Emission License is also required, as well as a schedule indicating the timeframe to consider appeals are attached herewith as an Annexure.

While the EAP must ensure that best practice and due process is followed, that must, inter alia, allow for a reasonable opportunity for participation by the interested and affected parties, the EAP must complete the above scope of work in the shortest time possible within the ambit of NEMA and the EIA regulations.

Guideline for determining the Scope of Specialist Involvement in EIA Processes

Guideline for determining the scope of specialist involvement in EIA processes and the Guideline for the review of specialist input in EIA processes provide generic guidance applicable to any specialist input to the EIA process and clarify the roles and responsibilities of the different role-players involved in the scoping and review of specialist input.

It is recommended that these two guidelines are read first to introduce the generic concepts underpinning the guidelines which are focused on specific specialist disciplines.

The guidelines are directed at authorities, EIA practitioners, specialists, proponents, financial institutions and other interested and affected parties involved in EIA processes.

Although the guidelines have been developed with specific reference to the Western Cape province of South Africa, their core elements are
The guidelines have been developed to support project-level EIA processes regardless of whether they are used during the early project planning phase to inform planning and design decisions (i.e. during pre-application planning) or as part of a legally defined EIA process to obtain statutory approval for a proposed project (i.e. during screening, scoping and/or impact assessment).

Where specialist input may be required the guidelines promote early, focused and appropriate involvement of specialists in EIA processes in order to encourage proactive consideration of potentially significant impacts, so that negative impacts may be avoided or effectively managed and benefits enhanced through due consideration of alternatives and changes to the project.

The guidelines aim to be applicable to a range of types and scales of development, as well as different biophysical, social, economic and governance contexts.

The specific purpose of the Guideline for determining the scope of specialist involvement in EIA processes is to clarify:

- The key principles and concepts underpinning the involvement of specialists in EIA processes.
- The different role of specialists in EIA processes.
- The different stages in the EIA process at which a specialist can be involved.
- The generic approach that can be used to determine at which point in the EIA process the specialists should be involved and for what purpose.
- The prerequisite for a specialist to be involved efficiently and effectively in EIA processes.
- The elements to be considered when determining the scope of specialist inputs and when developing specialist terms of reference.
- The information required by specialists to provide input to the EIA process (Section 7); and
- The responsibilities of different role players in the EIA process in order to ensure efficient, effective and high quality specialist involvement in EIA processes.

The following generic principles apply to the involvement of specialists in EIA processes and underpin this series of guidelines:

- Eliminate unnecessary specialist involvement through proactive project planning and design to avoid or sufficiently reduce negative impacts that may otherwise require specialist assessment.
- Maximize use of existing relevant information prior to involving a specialist.
- Where appropriate and necessary, involve specialists early in the EIA process to increase efficiency and effectiveness of their involvement.
- Maintain continuity of specialist involvement throughout the process (specialist involvement should add value to project planning and design).
- Support flexible, focused and appropriate involvement of specialists to provide adequate, relevant information to make informed decisions (i.e. the correct level of information should be supplied at the right time in the EIA process).
- Allow for greater involvement of specialists in the identification of key issues, over and above those identified through stakeholder engagement processes.
- Allow for efficient and effective interaction between specialists and the EIA practitioner, the project proponent, the authorities, other specialists on the EIA team and other interested and affected parties (I&APs) to improve the quality of the EIA process and outcomes and ensure that findings are informed by local and indigenous knowledge and experience.
| Guideline for the Review of Specialist Input EIA Processes | Western Cape Department of Environmental Affairs and Development Planning (DEA&DP) | This guideline addresses the review of specialist inputs to EIA processes, and is presented in eight sections. The first section introduces the context and rationale for the guideline. Section 2 describes the specific purpose of the guideline and provides guidance on how it should be applied. Section 3 deals with the principles that inform the review of specialist inputs. Section 4 outlines the triggers for review by different role players, as well as the purpose and outcome of these reviews. The qualifications, experience and skills required of an independent specialist peer reviewer are outlined in Section 5. This is followed by guidance on the types of information that are required to undertake a specialist review (Section 6) and the criteria for review (Section 7). The purpose of this guideline is to improve the quality of specialist contributions to EIA processes by improving the robustness of all reviews of specialist inputs. This includes the review of contributions made by specialists during the pre-application planning, screening, scoping and impact assessment phases of EIA processes. Several types of problems have been linked to the provision of specialist inputs during an EIA process and these often result in inadequate quality of inputs. Typical problems include: Poor terms of reference, over-emphasis on baseline descriptions with inadequate impact assessment, analysis or evaluation of information; use of inappropriate approaches and methods; use or provision of unreliable data; provision of insufficient information for decision-making, and unclear presentation of information. In the absence of clear guidance to indicate when the review should be undertaken, who should undertake the review, and how the review should be conducted, reviews of specialist studies have varied in their thoroughness and quality, and have perpetuated deficiencies in the quality of final reports. In responding to the above, the objectives of the guideline are to: Identify triggers that determine when review should take place and for what purpose. Identify who should undertake the review. Present specific criteria that support the review process in determining whether or not the specialist input meets the minimum requirements for such inputs and is reasonable, objective and professionally defensible. With regard to the first and second objective, the guideline identifies triggers for the review of specialist input by different reviewers, including the EIA practitioner, the proponent, financial institutions, authorities, peer reviewers and other stakeholders. The purpose and outcome of these reviews are summarized. The guideline identifies the relevant qualifications, skills and experience required to provide independent specialist peer review and identifies relevant information required by any reviewer prior to conducting their review. In response to the third objective, the guidelines provide review criteria for overall quality assurance of the specialist input, as well as for the key types of specialist input. The need for the review of Specialist Reports might be identified during the Public Participation Process, during the comments period conducted by Commenting Authorities and during the consideration period conducted by the Competent Authorities. These issues will be addressed accordingly if and when necessary. |
**Guideline for involving Visual and Aesthetic Specialists in EIA Processes**

| Western Cape Department of Environmental Affairs and Development Planning (DEA&DP) | This guideline document, which deals with specialist visual input into the EIA process, is organized into a sequence of interleading sections. These follow a logical order covering the following:  
- the background and context for specialist visual input;  
- the triggers and issues that determine the need for visual input;  
- the type of skills and scope of visual inputs required in the EIA process;  
- the methodology, along with information and steps required for visual input;  
- finally, the review or evaluation of the visual assessment process.  
Part A is concerned with defining the visual and aesthetic component of the environment, and with principles and concepts relating to the visual assessment process.  
The importance of the process being logical, holistic, transparent and consistent is stressed in order for the input to be useful and credible.  
The legal and planning context within which visual assessments take place indicate that there are already a number of laws and bylaws that protect visual and scenic resources.  
These resources within the Western Cape context have importance for the economy of the region, along with the proclaimed World Heritage Sites in the Province.  
The role and timing of specialist visual inputs into the EIA process are outlined, with the emphasis being on timely, and on appropriate level of input, from the early planning stage of a project, through to detailed mitigation measures and management controls at the implementation stage.  
Part B deals with typical factors that trigger the need for specialist visual input to a particular project.  
These factors typically relate to:  
The nature of the receiving environment, in particular its visual sensitivity or protection status;  
The nature of the project, in particular the scale or intensity of the project, which would result in change to the landscape or townscape.  
The correlation between these two aspects are shown in a table, in order to determine the varying levels of visual impact that can be expected, i.e. from little or no impact, to very high visual impact potential.  
Part C deals with the choice of an appropriate visual specialist, and the preparation of the terms of reference (TOR) for the visual input.  
Three types of visual assessment are put forward, each requiring different expertise, namely:  
Type A: assessments involving large areas of natural or rural landscape;  
Type B: assessments involving local areas of mainly built environment;  
Type C: assessments involving smaller scale sites with buildings, or groups of buildings.  
The scope of the visual input would in summary relate to the following:  
- the issues raised during the scoping process;  
- the time and space boundaries, i.e. the extent or zone of visual influence;  
- the types of development alternatives that are to be considered; |
the variables and scenarios that could affect the visual assessment;
the inclusion of direct, indirect and cumulative effects.

Approaches to the visual input relate to the level of potential impact and range from minimal specialist input, to a full visual impact assessment (VIA).

A list of the typical components of a visual assessment is given, and the integration with other studies forming part of the EIA process is discussed.

Part D provides guidance for specialist visual input, and on the information required by specialists. Notes on predicting potential visual impacts are given, along with suggested criteria for describing and rating visual impacts. The assessments of the overall significance of impacts, as well as thresholds of significance are discussed.

Further aspects that need to be considered by visual specialists in EIA processes include:
- affected parties who stand to benefit or lose,
- risks and uncertainties related to the project,
- assumptions that have been made, and their justification,
- levels of confidence in providing the visual input or assessment,
- management actions that can be employed to avoid or mitigate adverse effects and enhance benefits, and
- the best practicable environmental option from the perspective of the visual issues and impacts.

Finally, pointers for the effective communication of the findings are given.

Part E lists specific evaluation criteria for reviewing visual input by a specialist, where this becomes necessary. Further guidance on this is given in the document on Guideline for the review of specialist input in EIA processes.

Guideline for involving Economists in EIA Processes

Western Cape Department of Environmental Affairs and Development Planning (DEA&DP)

This guideline deals with the involvement of economists in Environmental Impact Assessment (EIA) processes. It provides clear guidance as to when economic inputs should be provided; which aspects must be addressed by the economic specialist; and specific criteria against which economic inputs can be measured to ensure that the assessment meets a set of minimum requirements, is reasonable and objective and is theoretically sound.

The basic function of the economic specialist is to determine whether a project or policy will enhance net societal welfare.

At a broad level, investigating impacts on overall welfare requires considering the efficiency, equity and sustainability of the project. Keeping these principles in mind, the core concept applied by the economist when considering trade-offs is 'opportunity cost' - the net benefit that would have been yielded by the next best alternative.

The key issues that need to be considered and addressed by the specialist can be summarized as follows:
- Financial viability or justification for the project in the case of public sector projects that don’t necessarily require financial viability (e.g. roads, housing projects and other public infrastructure)
- Distortions that lead to financial viability, but are not to the benefit of wider society creating a false ‘viability’ when seen from a broader perspective
- Environmental externalities that are not accounted for in costs and benefits
- Degree of fit with economic development planning in the area (i.e. does the project compliment economic and spatial plans)
- Linkage effects that allow a project to generate added benefits in the form or employment, incomes, increased production
- Macro-economic risks (i.e. whether the project has the potential to
change exchange rates, interest rates or local factor and product prices)

It needs to be borne in mind that, with the exception of macro-economic risks that only apply to large projects, these key issues can arise for all different types and scales of development in different biophysical, social and economic contexts.

Whether the economist covers all of the potential issues mentioned above will be influenced mainly by the size of the proposed project and the nature of its impacts.

A layered approach to economic input that follows the principles of cost benefit analysis is thus advocated with elements being added as required, as illustrated in the figure below.

A number of tools or techniques are available to the economic specialist including opportunity cost analysis, financial and economic cost benefit analysis, environmental economic valuation techniques, input-output analysis, social accounting matrices, and computable general equilibrium modeling.

Not all impacts can be assessed using these techniques; it is the economist’s responsibility to choose and/or devise ways to assess impacts that are theoretically defensible.

Impacts need to be assessed with and without management actions that aim to avoid or minimize negative impacts and enhance benefits.

Ideally management actions should be required up to the point where the project is at least positive on balance (i.e. benefits exceed costs).

Further management beyond this point may lead to additional environmental benefits, but will come at a higher economic cost.

Economic specialist inputs have the potential to add substantial value to the EIA process provided they are carried out when appropriate, address pertinent questions and maintain a high standard of analysis. In this sense they are no different to other specialist inputs.

In addition to these requirements, their success is reliant on a high degree of integration with the other specialist studies upon which they rely for inputs. These inputs are particularly critical with respect to environmental externalities.

The appointment of a Specialist to assess the Socio-economic aspects of the proposed development is under consideration.

### Guideline for involving Social Assessment Specialists in EIA Processes

Western Cape Department of Environmental Affairs and Development Planning (DEA&DP)

This guideline deals with the involvement of social assessment specialists in the Environmental Impact Assessment (EIA) processes. In doing so the guideline provides information on:

- Background to Social Impact Assessment (SIA) and its development;
- Legislative setting for SIA in South Africa;
- Definition of social impacts and social impact assessment;
- Timing and social impacts;
- Key components of an SIA;
- Approaches to SIA; and,
- Key objectives of SIA.

These aspects are discussed briefly below.

**Background to SIA**

Following the promulgation of U.S. National Environmental Policy Act (NEPA) in 1969 and the introduction of EIA there has been significant research undertaken in the field of SIA. In 1994 the US Inter-organizational Committee on Guidelines and Principles for Social Impact Assessment produced the *Guidelines and Principles for Social Impact Assessment*.

This document outlines a set of guidelines and principles to assist agencies and private organisations and interest groups with fulfilling their mandates under NEPA and is regarded as a landmark document in the history of SIA.

The Guidelines and Principles were updated by in 2002 (IAIA, 2002). However, despite the developments in the field of SIA, when compared with the biophysical environment, SIA has not been widely adopted in the assessment and decision making-process (Burdge,
There are a number of reasons for this. Firstly there is a lack of consensus amongst practitioners and government agencies regarding the definition of SIA. Secondly, there is a need for better models to understand the causal linkages between events and social impacts (Burdge, 2003b).

There is also a tendency for SIA to focus on negative social impacts, without any comment on social and development objectives. Despite these potential problems, social specialist input in EIA processes is essential to ensure that the positive benefits associated with development are enhanced and the negative impacts are avoided and/or mitigated. Social assessment specialist input in EIA processes can therefore play a positive role in the development process by enriching the understanding of the social environment and communities affected by the proposed development.

In this way the SIA process can enable the proposed development to become more socially sustainable. The need to address social issues is also a legal requirement.

Legislative setting for SIA in South Africa

The need to assess social issues as part of the EIA process is underpinned by two key pieces of legislation, namely the Constitution of the Republic of South Africa and the National Environmental Management Act. Each contains rights, principles and objectives that inform the SIA Guidelines and provides an understanding of what constitutes social sustainability.

The Constitution is the supreme law of the Republic. Chapter 2, the Bill of Rights, enshrines the rights of all people in the country and affirms the democratic values of human dignity, equality and freedom. These rights represent the cornerstone of democracy in South Africa.

The Bill of Rights applies to all law, and binds the Legislature, the Executive, the Judiciary and all organs of state.

The National Environmental Management Act (NEMA) provides for cooperative environmental governance by establishing a set of principles for decision-making on matters affecting the environment.

The preamble to NEMA and the principles contained therein have a significant bearing on the social environment. In this regard the preamble refers to a number of the basic rights set out in Chapter 2 (Bill of Rights) of the Constitution.

These include reference to the right of all persons to an environment that is not harmful to his or her health or well-being, the need for the State to respect, protect, promote and fulfill the social, economic and environmental rights of everyone and strive to meet the basic needs of previously disadvantaged communities, and the promotion of sustainable development that requires the integration of social, economic and environmental factors in the planning, implementation and evaluation of decisions to ensure that development serves present and future generations.

In addition to these key Acts the National Water Act, Promotion of Administrative Justice Act and Development Facilitation Act (DFA) also have an important bearing on social issues. The significance of the DFA is linked to the fact that a significant number of EIAs are linked to the transformation of land uses. In this regard the DFA contains a number of important planning principles that have a bearing on assessing the fit with planning requirements. Section 9.3 of the Guidelines lists a number of key Western Cape Provincial Guideline documents that also have an important bearing on assessing fit with planning and policy requirements.

Definition of social impacts and Social Impact Assessment

Social impacts can be defined as “The consequences to human populations of any public or private actions (these include policies, programmes, plans and/or projects) that alter the ways in which people live, work, play, relate to one another, organise to meet their needs and generally live and cope as members of society. These impacts are felt at various levels, including individual level, family or
household level, community, organisation or society level. Some social impacts are felt by the body as a physical reality, while other social impacts are perceptual or emotional.” (Vanclay, 2002).

However, the issue of social impacts is complicated by the way in which different people from different cultural, ethnic, religious, gender, and educational backgrounds etc view the world. This is referred to as the “social construct of reality”. The social construct of reality informs people’s worldview and the way in which they react to changes.

Social Impact Assessment is the process of analyzing (predicting, evaluating and reflecting) and managing the intended and unintended consequences on the human environment of planned interventions (policies, programmes, plans and projects) and any social change processes invoked by those interventions so as to bring about a more sustainable and equitable biophysical and human environment (Vanclay, 2002).

Timing and social impacts

Social impacts vary in both time and space. In terms of timing, all projects and policies go through a series of phases, usually starting with initial planning, followed by implementation (construction), operation and finally closure (decommissioning). The activities, and hence the type and duration of the social impacts associated with each of these phases are likely to differ. It is therefore essential for the SIA to develop a timeline that represents the stages that the proposed project or intervention is expected to go through.

Key components of a SIA

The key activities in the SIA process include:

- Describing and obtaining an understanding of the proposed intervention (type, scale, location), the communities likely to be affected and determining the need and scope of the SIA;
- Collecting baseline data on the current social environment and historical social trends;
- Identifying potential alternatives;
- Identifying and collecting data on the Social Impact Assessment variables and social change processes related to the proposed intervention. This requires consultation with affected individuals and communities;
- Assessing and documenting the significance of social impacts associated with the proposed intervention;
- Assessing the alternatives and identifying potential mitigation measures; and,
- Developing a Monitoring and Evaluation Programme.

Approaches to SIA

There are essentially two basic approaches to undertaking SIAs, namely the Technocratic and Participatory approach.

The technocratic approach relies on the interpretation of secondary data, while the participatory approach incorporates the knowledge and experiences of individuals most affected by the proposed changes into the assessment process.

In most instances the approach to identifying and assessing social impacts involves a combination of the two approaches.

This highlights the importance of using experienced SIA specialists and public consultation.

Key objectives of SIA

SIA’s should enable the authorities, project proponents, individuals, communities and organisations to understand and be in a position to identify and anticipate the potential social consequences of the implementation of a proposed policy, programme, plan or project.

The SIA process should also alert communities and individuals to the proposed project and possible social impacts, while at the same time allowing them to assess the implications and identify potential
alternatives.

The assessment process should also alert proponents and planners to the likelihood and nature of social impacts and enable them to anticipate and predict these impacts in advance so that the findings and recommendations of the assessment are incorporated into and inform the planning and decision-making process.

As a process, SIA must enable and allow affected individuals and communities to identify what they feel constitute social impacts. This is likely to vary from individual to individual and likewise between different communities.

SIA should therefore enable people and decision-makers to understand in advance the consequences to individuals and groups of a proposed actions or policy changes. In so doing, the social assessment process should ensure that the social concerns of the community and individuals are considered at the earliest, and each subsequent stage of the planning and development process, and not only after a decision has been taken. In this regard, SIA should be considered as a “framework for incorporating participation and social analysis into the design and delivery of development projects” (World Bank, 1995).

Given South Africa’s needs, the improvement of social well being (with a particular focus on developmental objectives such as poverty reduction and job creation) should be assessed as an issue in all SIAs.

Within the South African and developing world context the SIA process should therefore include a commitment to:

• The principles of sustainable development and social sustainability;
• Vulnerable groups;
• Meeting basic needs and services;
• Livelihood strategies;
• Fairness and equity;
• Social justice;
• Openness and participation; and Accountability.

Based on the core values and principles the SIA process should seek to:

• Identify and assess the factors that contribute to the overall quality of life (social well-being) of people, not just their standard of living;
• Identify and assess the needs of vulnerable, at risk, groups and/or ethnic minorities or indigenous peoples;
• Identify and assess impact equity. Social assessments should seek to clearly identify which individuals, groups, organisations and communities stand to benefit from the proposed intervention and those that stand to be negatively affected. In so doing the assessment must identify and emphasize vulnerability and underrepresented groups;
• Identify and assess the gender aspects of impacts;
• Identify and assess the fit of the proposed development in terms of key legislative, policy and planning requirements;
• Acknowledge and value the existence of spiritual worldviews and the existence of sacred places;
• Acknowledge and value cultural diversity and differing value systems between and within cultures;
• Recognize that social, economic and biophysical systems and impacts are inextricably interconnected. Social assessments therefore, need to identify and understand the impact pathways that are created when changes in one domain trigger impacts across other domains;
• Acknowledge and incorporate local knowledge and experience into the assessment process;
<table>
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<tr>
<th>Guideline for involving Hydro-geologists in EIA Processes</th>
<th>Western Cape Department of Environmental Affairs and Development Planning (DEA&amp;DP)</th>
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<tbody>
<tr>
<td></td>
<td>This guideline deals with the specialist hydro-geological input to the EIA process. It is applicable to related specialist disciplines such as hydrogeochemistry, geomicrobiology and hydrogeophysics.</td>
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<tr>
<td></td>
<td>The guideline gives an introductory background to the key concepts underpinning the consideration of groundwater impacts in EIA processes and identifies the main triggers and key issues that require the involvement of hydro-geological specialist(s).</td>
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<td>In order to determine whether Hydro-geological specialist input to the EIA process is required it is suggested that:</td>
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<td>The proponent and/or the EIA practitioner determines whether the proposed development falls within one of the following activity types:</td>
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<td>- Where effluent or chemicals with the potential to change groundwater quality is handled as part of the project, or discharged into the environment due to the project.</td>
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<td>- The volume of groundwater in storage or entering groundwater storage is changed beyond what is allowed by the DWAF General Authorisations.</td>
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<td></td>
<td>- The groundwater flow regime is changed.</td>
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<td>Where a development is found to fall in one of these activity classes, the hydro-geologist, in conjunction with the project proponent and the EIA practitioner, should be involved to determine whether the environmental conditions prompt the need for more detailed specialist hydro-geological input (see Table 2 for examples of such settings).</td>
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<td>Where none of the listed conditions exist or are likely to exist, there is no need for a specialist, unless special circumstances exist at the site in question.</td>
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<td>Once it has been established that an activity coincides with an environmental condition that makes environmental impact likely, the specialist, with the EIA practitioner, the project proponent and the regulatory authorities must determine the level of environmental assessment required.</td>
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<td>Criteria to be used when making this determination include: project scale, sensitivity of the proposed location and expectation of adverse environmental impacts.</td>
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<td>Hydrogeology related issues that typically arise during the EIA process include:</td>
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<td>- Concern about the pollution or degradation in quality of water resources and the health and economic implications thereof;</td>
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<td>- Concern about over utilization of the water resource and the consequences that the loss thereof may have;</td>
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<td>- Concern about the impact that a declining water table may have on the environment / ecosystems (e.g. wetlands, springs or river systems);</td>
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<td>- Concern about the impact of a rising water table on infrastructure</td>
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- Identify and assess developmental opportunities and not merely the mitigation of negative or unintended outcomes;
- Address poverty reduction and seek to improve the position of the worst-off members in society;
- Identify and assess second and higher order impacts and cumulative impacts;
- Form an integral part of the development and planning process and inform all stages of the process, from inception to decommissioning and closure; and
- Identify and assess alternatives.

The role of the SIA process should therefore extend beyond the ex-ante (in advance) prediction of social impacts to include issues related to the empowerment of local people, gender issues, minority groups, capacity building, equity, development and poverty reduction.
and land-use;

- Concern about the impacts related to land subsidence and sinkhole development;

Once the need for specialist input has been determined, the scope of the specialist input needs to be defined through consultation between the EIA practitioner, the specialist, the project proponent and the relevant authorities. In drawing up terms of reference for hydro-geological specialists, the following needs to be taken into account:

- The hydro-geological specialist may be required to respond to groundwater issues that can be resolved (“closed off”) in the scoping phase; or to provide responses as to how issues could be resolved through more detailed groundwater assessment in the impact assessment phase of the EIA process.

- The size and nature of the proposed development influences the time and space boundaries of the specialist’s involvement.

- The hydro-geologist should ideally be involved in assisting the project proponent to identify the range of viable alternatives that should be considered.

- Groundwater is particularly susceptible to the cumulative effect of small impacts. Due regard must be given to this during the assessment, and should be thoroughly considered in a designated section of the specialist report.

- Specialists have a responsibility to engage with stakeholders over and above the EIA stakeholder engagement process, where this is necessary. They should identify the types of stakeholders that should typically be consulted with during the specialist study - and for what purpose.

- Issues of confidentiality need to be discussed and agreed upon.

The following need to be considered when providing specialist input to the EIA process:

- Specialists need to trace likely cause effect pathways to determine all potentially significant direct, indirect and cumulative impacts.

- One of the aims of hydro-geological input is to establish whether a proposed development exceeds legislative guidelines (e.g. RQOs or the Reserve).

- The determination of impact significance needs to consider the predicted impact of the proposed development in light of the vision for the area, including its water resources, rather than in terms of the impact on the current baseline conditions.

- The identification of beneficiaries and losers requires consideration of downstream benefits (e.g. job creation, economic growth and skills transfer) and costs (e.g. loss of ecosystem goods and services).

- Where conclusions are formulated based on assumptions, these must be clearly outlined, and where necessary scenarios must be generated which illustrate their effect on study conclusions.

Through management actions the likelihood of negative impacts on the receiving environment and users and/or impact significance can be reduced.

As far as possible, consensus on management actions should be secured between all specialists contributing to the EIA process in related fields.

Management actions may take the form of avoidance, mitigation, compensation and offsets, rehabilitation or enhancement.

When reviewing specialist hydro-geological inputs it must be judged whether the approach and methods used were appropriate and sound, the results are plausible and whether the conclusions are logical and substantiated by the results.

Importantly, the conceptual model must be tested for appropriateness.

The following should also be considered during the review:
The specialist study should have included inputs from a qualified, experienced hydro-geologist and/or a geochemist (and/or specialists in related fields, if necessary).

- If a hydro census is not included, reasons for this should be clearly motivated.
- Any specialist assessment should include a conceptual model that describes recharge, flow, discharge and the type of aquifer.
- The conceptual model should be substantiated by well referenced, supporting information.
- Assumptions, limitations and confidence levels underpinning the conceptual model must be made explicit.
- For large projects in sensitive areas, the assessment must include and describe the field work undertaken and indicate linkages with other specialists.
- Where modeling is used assumptions and parameters must be specified.
- Key groundwater references should be cited.

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<tr>
<th>Guideline for involving Biodiversity Specialists in EIA Processes</th>
<th>Western Cape Department of Environmental Affairs and Development Planning (DEA&amp;DP)</th>
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Biodiversity is the variability among living organisms from all sources including, amongst others, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part.

It covers the composition, structure and function of living organisms, and includes diversity within species at a genetic level, between species and of ecosystems, as defined by the Convention on Biological Diversity (1992) and the recently promulgated National Environmental Management Biodiversity Act (Act No. 10 of 2004) (hereinafter referred to as ‘the Biodiversity Act’).

South Africa has ratified the Convention on Biological Diversity (CBD), which means that it has an international obligation to work towards conservation of its biodiversity.

In terms of this Convention, conservation entails:

- The protection of species and ecosystems that warrant national protection;
- Sustainable use of indigenous biological resources; and
- The fair and equitable sharing of its benefits.

The Western Cape has a number of globally important ecosystems which provided an irreplaceable source of goods and services for the residents and economy of this province.

Development pressure in the Western Cape is growing and, in many cases, affects threatened ecosystems or species.

This guideline deals with specialist input on biodiversity to the Environmental Impact Assessment (EIA) process.

The guideline gives an introductory background to, and key concepts underpinning, consideration of biodiversity in EIA.

It looks at the role and timing of specialist input to the EIA process, and identifies the main triggers and key issues requiring specialist input on biodiversity.

These issues may emerge from the stakeholder engagement process, be evident from the nature of the receiving environment, or from the nature of the project.

The guideline covers the range of possible inputs by the biodiversity specialist.

Specialist input can be given in the form of professional advice or judgment with minimal documentation, usually in the early stages of the EIA process; or can be given in the form of a detailed specialist assessment supported by often lengthy written reports in the latter stages of the EIA process.

The guideline looks at the role of the EIA practitioner in planning and
coordinating specialist input, and the issues that need to be considered by that practitioner in finalising the biodiversity specialist's terms of reference.

The establishment of appropriate time and space boundaries, development alternatives, environmental and operating scenarios, a suitable approach to providing specialist input, stakeholder involvement, confidentiality issues, as well as the timing, sequencing and integration of the input need to be considered.

The guideline addresses the role of the biodiversity specialist in providing the right information in the best way to inform the EIA: from predicting through assessing and evaluating the potential significance of impacts, to recommending management actions (including mitigation, enhancement) and monitoring programmes, and reporting.

The establishment of impact assessment criteria and thresholds of significance are important steps in the assessment and evaluation process.

Risks and uncertainties, gaps in information and/or limitations to the study, as well as confidence levels in the specialist input should be clearly stated.

Affected parties who stand to benefit or ‘lose’ from impacts on biodiversity should be identified.

Finally, the guideline gives advice on reviewing the biodiversity specialist's input.

A list of useful resources that may assist the reader in better understanding best practice consideration of biodiversity in EIA is provided.

Key principles for sustainable development in general, and ecologically sustainable development in particular, are given below.

These principles underpin the consideration of biodiversity in EIA, and indicate desired outcomes. They are dictated by international conventions which South Africa has ratified or signed, and reflected in accepted best practice world-wide:

- A long-term perspective of biodiversity should be adopted to promote intergenerational equity;
- Biodiversity should be protected, and natural capital maintained at or near current levels, with best efforts made to replace or offset loss (“no net loss” principle);
- Prevention of impacts on biodiversity is better than cure in terms of risk and investment of resources;
- Biodiversity issues should be integrated into decision-making;
- An ecosystems approach to evaluating effects and impacts should be taken, recognizing that humans are a component of ecosystems on which they depend;
- The rights to an environment (including biodiversity) not detrimental to health or well-being must be respected;
- The requirements of international laws and conventions relating to biodiversity, as well as national and provincial legislation, should be met;
- Thorough and early consideration of alternatives is the optimum way to determine the best practicable environmental option to meet proposal objectives whilst preventing or avoiding loss of biodiversity;
- Resource use should operate within the regenerative capacities, whilst pollution/waste outputs operate within assimilative capacities of the natural environment;
- Both biodiversity pattern and process should be conserved;
- Ecosystem services should be safeguarded, giving due consideration to the costs of replacing these services should they fail;
- A risk-averse and cautious approach should be taken where either information and/or the level of understanding is inadequate, where
impacts are unprecedented or where there is inherent uncertainty as to the significance of impacts, or there is an element of substantial risk of irreversible impacts which could lead to irreplaceable loss of natural capital;

Traditional rights and uses of, and access to, biodiversity should be recognised, and any benefits of commercial use of biodiversity should be shared fairly.

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<tr>
<th>Provincial Spatial Development Framework</th>
<th>Western Cape Department of Environmental Affairs and Development Planning (DEA&amp;DP)</th>
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<tr>
<td>This report describes the Western Cape’s Provincial Spatial Development Framework. The purpose of the PSDF is to:</td>
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<td><strong>Be the spatial expression of the Provincial Growth and Development Strategy (PGDS);</strong></td>
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<td><strong>Guide (metropolitan, district and local) municipal integrated development plans (IDPs) and spatial development frameworks (SDFs) and provincial and municipal framework plans (i.e. sub-SDF spatial plans);</strong></td>
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<tr>
<td><strong>Help prioritise and align investment and infrastructure plans of other provincial departments, as well as national departments’ and parastatals’ plans and programmes in the Province;</strong></td>
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<td><strong>Provide clear signals to the private sector about desired development directions;</strong></td>
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| **Increase predictability in the development environment, for example by establishing no-go, conditional and ‘go’ areas for development;** and,
| **Redress the spatial legacy of apartheid.** |

The PSDF was drafted for the Province as a whole, and was commissioned by the Department of Environmental Affairs and Development Planning (DEA&DP) as one of the eight lead strategies of the PGDS.

A full report of the PSDF study was published in November 2005. The current report is an abridged and updated version of that report, focusing on planning content and directives – as opposed to the background and information parts of the previous report, for which this report largely relies on the previous report.

For ease of reference this report is structured like the 2005 report, with the difference then being that especially Chapter 4 but also some other chapters of this report have limited content and largely or partially refer to the 2005 report. This structure (i.e. of the 2005 report, but which this report adheres to although some chapters are only referred to or summarised), is then as follows:

- Chapter 1: Introduction to and purpose of the PSDF;
- Chapter 2: The PSDF’s starting points, provided by national and provincial policy, and the process through which the PSDF was developed;
- Chapter 3: The normative principles, the major spatial elements, and the vision provided by the PSDF;
- Chapter 4: Information relating to, and the key issues facing, the Province’s natural resources, built environment and socio-economic patterns;
- Chapter 5: The current status of overarching policy and legislation, zoning schemes and district and local SDFs;
- Chapter 6: An overview of comments on drafts of the PSDF received from the various road shows and bilateral meetings;
- Chapter 7: The spatial implications and development direction that arise from the analysis;
- Chapter 8: The PSDF spatial plan and the PSDF’s policies and corresponding action plans (this should be read together with the PSDF map) – where appropriate relevant legislation is identified;
- Chapter 9: How the PSDF principles and proposals are to be implemented, and a set of tools and mechanisms to facilitate this; and,
Chapter 10: Risks that may affect the PSDF’s implementation, and how the risks should be addressed.

WHAT IS THE PSDF AND WHY DOES THE WESTERN CAPE NEED IT?

People, economic activity, social needs, infrastructure and natural resources are not evenly distributed across the landscape.

This uneven geographic distribution is not incidental – in some instances it is the result of topography, in others of history - but these variations and forces impact directly on economic growth, social justice, and the ability of the natural environment to support human activities now and in the future.

The spatial distribution of natural and human activity in part reflects the distribution and intensity of natural features and resources across the landscape.

In South Africa especially, spatial policies have historically been actively used as a political tool, to shape our economy, our social fabric, and the way we use our natural resources – in most instances to the benefit of the privileged.

If the Western Cape is not simply to reinforce spatial patterns established in the past, and the socio-economic and ecological inequalities that accompany them, then the economy and society will have to be consciously reshaped using, inter alia, spatial policies.

Equally important is to recognise the spatial impacts of policies, investments and decisions in all arenas. Even those policies, programmes, projects and decisions that do not seem at first glance to have spatial implications, have to be investigated to ensure that inequitable past patterns or new unsustainable patterns are not inadvertently reinforced into the future.

In particular, decisions about where to invest public sector resources have strong spatial impacts and can be used effectively to achieve developmental objectives, especially if all three spheres of government and their departments as well as state owned enterprises reinforce each others’ investment decisions.

Furthermore, sustainable development outcomes require an integrated cross-sectoral approach to managing land and resources (both natural and human-made) at the local level.

This is much easier to achieve in practice with a clear set of principles and policies that provide a spatial framework for cooperative governance and streamlined decision-making.

In the light of national guidelines provided through the National Spatial Development Perspective (NSDP), and incorporating international commitments to sustainable development, the PSDF:

Analyses the issues facing 27 sectors in the biophysical, socioeconomic and built environment;

Provides a set of normative principles or departure points that guide the Province’s approach to dealing with socio-economic issues that are manifested spatially;

Provides a map giving guidance for the future spatial development of the Province based on Broad Provincial Spatial Planning Categories (BPSPCs) and a series of other relevant features; and,

Provides a set of policies, some of which are linked directly to particular conditions on the ground, i.e. through the BPSPCs, and others which apply throughout the Province.

The PSDF deals both with issues that are explicitly spatial (for example, where future residential development should be located), and with issues that are often not viewed as part of spatial policy but which have significant spatial impacts (for example, recycling of waste, or limiting carbon emissions).

The PSDF is a long-term planning instrument, which is to be reviewed every five years.

The PSDF sets out a bold vision for changing the development path of the Western Cape. This cannot be achieved overnight.
Many of the proposals contained in the PSDF have substantial implications for the allocation of public resources, and will take time to put in place.

Some of the proposals are intended to take effect immediately, and others will come into effect in Year 2, 3, 4 or 5 or even later.

Suggested timeframes for implementation are given for the proposals in Chapter 8.

The view taken in the PSDF is that it is important not to compromise on doing the right thing simply because it is difficult or the necessary resources are not available immediately.

A note on scale, and the relationship of the PSDF to municipal SDFs

The PSDF is intended to be broad-directive and is therefore largely mapped at a small scale.

This means that, for example, the PSDF will not, except in circumstances of important Province-wide interest having to be served, provide answers about what to do or not to do on an individual cadastral unit or site (erf or farm).

Most of the underlying spatial data layers used in the PSDF were mapped at a scale of approximately 1 : 2.5 million, which means that a point on the map may be out by up to 2500m (2,5km) on the ground.

The Broad Provinicial Spatial Planning Categories set out in the PSDF should be refined and delineated in greater detail in district and local SDFs.

In addition, ground-truthing and site assessment will be required in respect of individual development applications for decisions about particular appropriate development or activities to be taken.

LEGAL STATUS OF THE PSDF

The PSDF is a policy document that will be applied in terms of the conformity principle; it does not create or take away any rights to use land, but on the other hand upgrading of existing rights will have to conform to the PSDF.

This means that organs of state and officials must take account of, and apply relevant provisions of, the PSDF when making decisions that affect the use of the land in the Province. However, like all guidelines, the PSDF must not be applied rigidly but in a developmental way that takes account of the particular circumstances of each case.

This latter goal will be achieved through the consistency principle which is explained in par 1.4 below.

The PSDF sends clear signals as to how rights to use land should be allocated and exercised in order to reorientate our society towards an equitable and sustainable future.

It is intended that the Framework Agreement on Growth and Development in the Western Cape signed by representatives of provincial and local government and their social partners on 14 November 2003, be implemented.

In particular, the PSDF will enable the NSDP to be applied in the Province by defining a common spatial vision and direction around which to align the PGDS, IDPs, Urban Renewal Programmes (URPs), Integrated Sustainable Rural Development Programmes (ISRDPs) and other initiatives.

In this way it will be made easier for all spheres of government to promote equitable and sustainable development effectively and concertedly, as envisaged by the Intergovernmental Relations Framework Act, 2005 (Act 13 of 2005).

The provincial government is also in the process of drafting an integrated land use, environmental and heritage planning law that will facilitate sustainable development in a variety of ways, including by requiring the Province to develop and regularly update a provincial policy and spatial framework to guide decision-makers.

The PSDF will eventually also (in addition to initial statutorisation) be approved in terms of the new law, and will then have to be updated and applied in accordance with the provisions of the new law.
In the interim, the option of adoption of the PSDF in terms of available land use planning statute has been followed.

The statute provides therefore that the general purpose of a spatial plan is to lay down guidelines for the future spatial development of the area to which it relates (in this case the whole Province) in such a way as will most effectively promote order and the general welfare of the community.

A spatial plan is intended to guide and (unless amended in particular cases) determine decisions under land use planning statute, particularly when the desirability of proposed development is tested.

The role of the PSDF will therefore be to provide guidelines and directives to help decision-makers under land use planning statute to determine the desirability of proposed development by considering whether or not it is socially, economically and ecologically sustainable.

This will require both provincial and municipal decision-makers to consider which of the policy statements in the PSDF are relevant in the circumstances and the weight that should be given to each, in order to secure ecologically sustainable development and use of natural resources while promoting justifiable economic and social development.

Relevant policies contained in the PSDF will be mandatory in terms of the relevant legislation. These policies are indicated with an 'M' next to the applicable policy in Chapter 8 of this report.

The balance of the policies is indicated with a 'G' to indicate that they are guiding principles.

Mandatory measures refer to policies that are regarded as being of social, economic or ecological importance and as being capable of being implemented by EADP.

Guidelines refer to policies that are intended as general developmental goals and of which the detailed implementation may depend on organisations other than EADP.

THE CONSISTENCY PRINCIPLE

The PSDF will, as all forward plans, be implemented in accordance with the consistency principle that applies in the relations between development applications vis-à-vis relevant spatial development frameworks or framework plans, and in the relations between lower- and higher-order spatial development frameworks or framework plans in the plans hierarchy.

Lower order spatial development frameworks or framework plans must be consistent with higher order spatial development frameworks or framework plans.

Therefore the PSDF must be consistent with the designations, policy statements and requirements of the NSDP and similarly regional plans as well as district municipal and local municipal SDFs and framework plans must be consistent with the PSDF and with each other.

Furthermore development applications must be consistent with relevant spatial development frameworks or framework plans.

If a lower-order SDF or framework plan is not consistent with a relevant higher-order SDF or framework plan, the lower-order SDF or framework plan must be amended in order to align it with the higher-order SDF or framework plan.

However, there might be occasions where detail planning at the lower level can provide new information that makes it necessary (after careful consideration of the implications and impact of this new information), for the higher-order SDF or framework plan to be amended instead.

At the most fundamental level a development proposal (or a proposal contained in a lower-order framework or framework plan) can, when measured against the designation of the land concerned in terms of an applicable SDF or framework plan, be found to weigh up in one of three ways:

1. The designation and/or text provides for the proposal (and at the proposed extent/density, if relevant).

2. The designation and/or text do not explicitly provide for the
3. THE DEVELOPMENT PROPOSAL:

Marike Vreken Urban and Environmental Planners were appointed by the Bitou Municipality during 2013 to investigate five possible sites with regard to the suitability of these sites for the establishment of a municipal cemetery or cemeteries and integrated urban development. Phase 1 of the study is to investigate the five sites and to identify the most suitable alternative. Phase 2 will be the design of the cemetery and integrated development as well as obtaining authorisations and development rights for the new regional cemetery and integrated urban development.
3.1 Site Selection Criteria and Assessment Methodologies:

The following criteria were used to weight the suitability of the alternative sites for cemetery purposes.

3.1.1 Geo-Hydrological Investigation:

- Collecting existing geo-hydrological information;
- Undertaking a site visit and conducting a hydro-census in the vicinity of the five proposed sites;
- Analysing the collected data and assessing the risk to the geo-hydrological environment; and
- Documenting the outcome of the investigation in a short report.

3.1.2 Geotechnical Investigation:

- **Soil Excavatability**: A minimum excavatable dept of 1,8 metres is required for cemetery purposes, although depths exceeding 2,2 metres would be more desirable.
- **Soil Permeability**: Soil permeabilities should preferably fall between the following limits: $1 \times 10^{-7}$ cm per second and $1 \times 10^{-4}$ cm per second. Too high permeabilities would inhibit the decomposition process.
- **Position in respect of Domestic water sources**: Minimum safe distances between a cemetery and domestic (potable) water source such as a bore hole or storage dam, are required. The safe distance is a function of the soil permeability.
- **Position in respect of Drainage features**: Minimum safe distances between a cemetery and drainage features are also required. This safe distance, once again a function of the prevailing soil permeability, is however, less stringent than the safe distance to potable water sources.
- **Site Drainage**: Good site drainage is required to firstly prevent soil erosion and secondly to prevent ponding, marshy conditions, unnecessary water ingress and cemetery degradation.
- **Site Topography**: A gradient of between 2o and 6o is considered ideal for cemetery purposes. This slope range will ensure adequate drainage, minimise erosion and promote human and mechanical mobility on site.
- **Basal Buffer Zone**: A basal buffer zone refers to the soil succession between the base of the deepest grave and the water table. The buffer zone is essentially a barrier between the source of pollution and the valuable water resource. A vertical buffer zone of at least 2,5 metres is required.
- **Grave Stability**: Competence of the grave verge is important for a number of reasons, the most prominent being that a few says usually elapses between excavation and use, hence the need for a few days of “stand up” time.
- **Soil Workability**: This refers to the ease at which the soil can be manipulated in and out of graves.
- **Cemetery Size**: A minimum sized cemetery to justify the costs of investigation and implementation is recommended. A minimum size of about 10 hectares is usually advocated. Bitou Municipality has indicated that a size of approximately 12 ha is required.

3.1.3 Rapid Biodiversity Assessment:

- Desktop Studies with regard to the following biodiversity aspects:
  - Garden Route Initiative (GRI) Fine Scale Mapping – identification of Critical Biodiversity Areas (CBA’s), Ecological Support Areas (ESA’s) & Protected Areas (PA’s)
  - National Fresh Water Ecosystem Priority Areas (NFEPA’s)
  - Threatened, Endangered and Critically Endangered Ecosystems in terms of Section 52 of the National Environmental Biodiversity Act (Act 10 of 2004)
3.1.4 Civil Services Investigation:

Conduct an assessment to establish the possibility of bulk civil supply to each of the five alternative cemetery sites near Plettenberg Bay. The assessment will include water and sewer services.

3.1.5 Electrical Services Investigation:

Conduct an assessment to establish the possibility of bulk electrical supply to each of the five alternative cemetery sites near Plettenberg Bay. The assessment will include:

- The electrical requirements for each site will be determined.
- A meeting will be held with Bitou Municipality and Eskom to determine the capacity of the nearest network to each site to meet the development requirements;
- Compiling a site layout plan showing inter alia the distances to the nearest supply points identified for these purposes;
- A cost and feasibility exercise undertaken for each site to determine the most suitable site.
- Prioritise the sites.

3.1.6 Rapid Traffic Investigation:

To identify the most appropriate sites the following criteria was used to assess the five alternative sites:

- Proximity of surfaced public roads to the site for access.
- Feasibility of gaining access off the public road network within the requirements of the relevant road authority.
- Capacity of the proposed access off the public road network.
- Safety of the proposed access off the public road network.
- Capacity of the larger network to accommodate trips and funeral processions to the site.
- Estimated costs of any improvements to upgrade the access to the site and any other network mitigations.
- Topography of the site and the feasibility to create parking areas and internal access roads.
- Distance of Cemetery to the geographic centre of the population served.

3.1.7 Spatial Planning and Socio Economic Informants:

In assessing the five alternative sites from a spatial planning and socio-economic point of view, the following criteria were used:

- Bitou Spatial Development Framework;
- Guidelines for urban development as set out in the Western Cape Spatial Development Framework (compact cities; integration and restructuring)
- Proximity to existing urban development.
- Socio-economic informants:
  - Proximity to communities;
  - Accessibility of social and community infrastructure

Based on the findings of these studies, the Bitou Municipality has decided to undertake the required environmental investigations to determine the suitability on Sites C & D for the proposed establishment of a new Regional Cemetery and Integrated Urban Development.
3.2 Property Locations, Descriptions and Assessments of Selection Criteria:

3.2.1 Site C: Portion 3 of Knysna Farm Hill View No 437

Locality:
Portion 3 of the Farm 437 Hill View, is located to the direct west of the New Horizons neighbourhood of Plettenberg Bay and north of Kwanokuthula. This site borders the N2 National Road, where access can be gained from the existing Ebenezer intersection via the N2. This site is ideally located for normal urban extension of Plettenberg Bay.

Property and Title Deed Information:

Title Deed Number: T1580/1970

Title Deed Description: Remainder of Portion 3 of the Farm Hill View No 437 in the Greater Plettenberg Bay Transitional Local Council Area, Division of Knysna, Province of the Western Cape

Property Owner: Ebenezer Enterprises(Pty) Ltd No 69/16507/07.

Title Deed Restrictions: None

Bonds: None

Property Size: 39,6338 ha

Servitudes:
○ Centre Sewage pipeline servitude of 4m
○ South eastern boundary servitude of 8m
○ 8m Right of way servitude
Servitudes on Site C:

Biodiversity:

The RSA Vegetation classification classifies 98% of the site as South Outeniqua Sandstone Fynbos, which not listed in terms of NEM:BA and 2% of the property as Eastern Coastal Shale Band Vegetation which is vulnerable.

The GRI status of the property is 80% Piesang River Fynbos which is endangered and 10% Roodefontein Grassy Fynbos which is critically endangered the remaining 10% is vulnerable Groot Brak River and Floodplain. A CBA constitutes approximately 10% of the property.

A buffer zone of approximately 30 meters should be delineated adjacent to the wetland area on site, which is classified as Groot Brak River and Floodplain and correlates with the location of the CBA.

This property could be further investigated as a proposed site for the Bitou Cemetery in terms its biodiversity status.

View No 437

Transformed Areas on Portion 3 of the Farm Hill

PO Box 3511, Knysna, 6570  www.ecoroute.co.za
**Geohydrology:**

This property was assigned a high groundwater rating. The major aquifer classification means that the property has high groundwater abstraction potential, and the municipal borehole ‘BHNH’ is about 80m from the southern end of Site C, however it but is perpendicular to the direction of groundwater flow. Ultimately the property was assigned a groundwater rating of 4.

The property on Table Mountain Group aquifer therefore slightly higher barrier rating than Enon group properties.

This property obtained a final ranking of 3 meaning that it is not ideal for cemetery use from a geohydrological point of view.

**Geotechnical:**

The Geotechnical investigation concluded by Outeniqualab concluded that neither Site C nor Site D is ideal for cemetery purposes.

The preferred site from a Geotechnical point of view is Site C, but both sites carry unfavourable constraints and are considered marginally suitable, although this is not unusual in cemetery site selection. In terms of excavatability, both sites are underlain by stiff residual soil which will be difficult to dig through by hand (pick and shovel), but Site C is slightly softer and the depth to bedrock is greater. Only a portion of Site D is suitable because of the presence of shallow rock in the remaining area (see Figure 10). Soil permeability is very low on both sites and this is also deemed unfavourable because groundwater will tend to stagnate in graves with little recycling and dispersion and this may lead to anaerobic conditions. Medium soil permeability is considered favourable.

It is recommended that the northern portion of Site C is developed first (see Figure 10) with the view to expanding further southward towards the N2 as the demand grows. The developable portion of Site D can also potentially be utilised as demand grows in the future.

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**Geotechnical Assessment – Sites C & D**

PO Box 3511, Knysna, 6570  
www.ecoroute.co.za
Spatial Planning and Socio Economic Informants:

Bitou SDF

Extract from the Bitou SDF – Site C

The Bitou SDF recommended that:

◊ Site C is located within the demarcated urban edge of Plettenberg Bay

◊ The southern part of Site C abuts the N2 National Road and it has been identified for GAP Housing purposes.

◊ The expropriated N2 Bypass runs along the western boundary of site C.

Socio Economic Informants:

Site C is ideally located for cemetery and integrated housing purposes, as the site abuts the existing New Horizons neighbourhood and this neighbourhood is in dire need for subsidised and affordable housing opportunities.

The New Horizons and Kwanokuthula communities have a higher mortality rate and therefore this proposed cemetery site is very accessibly located for these communities.

From a spatial planning and socio-economic point of view Site C should be the priority site for cemetery and integrated urban purposes.

Availability of Civil Services:

Water supply is limited to the property due to the reasons that there are no boreholes and municipal water supply available on the property. Currently the property makes use of catchment dams to provide water for irrigation and other causes.
It is proposed that a water supply to the site can be gained from the existing Ebenezer reservoir directly to the west of the site.

A sewer network could be linked to the existing New Horizons gravity sewer.

**Availability of Electrical Services:**

According to the availability and location of electrical infrastructure, the site poses the best option in making electrical supply available and will also be the most cost effective option. Connection to the supply line would require little effort and can easily be distributed to other areas of the site.

**Traffic and Transport Infrastructure:**

The existing access opportunities and constraints can be summarised as follows:

- **Existing Access Road:** Indirect off N2 via Bay College Road (gravel).
- **Proximity to existing public Road:** Fronts N2 and secondary road fronts property.
- **Access opportunity from Public Road:** Good.
- **Geometric Constraints of Access Road:** None.

**Capacity Constraints of Access Point:**

Although all these properties only links indirectly to the N2, all the generated traffic to/from the cemeteries will use the nearby N2 intersection. All these intersections are at or close to capacity during peak periods and most of them could require capacity upgrades, which will be more than just turning lanes, i.e. traffic signals, roundabouts or interchanges. The latter is not feasible and signals will probably not be allowed. Hence roundabouts. The access near Site C and D is earmarked for a roundabout and has been conditioned by SANRAL as part of previous approvals.

**Impact of Future N2 Alignment:** Operations will improve on the N2 access, since conflicting volumes will reduce.

**Conclusion:**

Site C is regarded as the ideal site for an integrated urban development and regional cemetery purposes.
3.2.2 Site D: Portion 33 of Knysna Farm Hill View No 437.

Locality:

Portion 33 of Knysna Farm Hill View is located to the north of Kwanokuthula and to the western side of Plettenberg Bay. The N2 is located directly south and is approximately 100 meters from the site. The site is currently land locked but access to the site could be gained from the existing Ebenezer intersection of the N2.

Property and Title Deed Information:

<table>
<thead>
<tr>
<th>Title Deed Number:</th>
<th>T38863/2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>Title Deed Description:</td>
<td>Portion 33 of the Farm Hill View No 437 in the Greater Plettenberg Bay Transitional Local Council Area, Division of Knysna, Province of the Western Cape</td>
</tr>
<tr>
<td>Title Deed Restrictions:</td>
<td>None</td>
</tr>
<tr>
<td>Bonds:</td>
<td>None</td>
</tr>
<tr>
<td>Property Size:</td>
<td>44,9761 ha</td>
</tr>
<tr>
<td>Servitudes:</td>
<td>Eskom Servitude</td>
</tr>
</tbody>
</table>

Biodiversity:

According to the RSA Vegetation classification the vegetation on the site is 90% South Outeniqua Sandstone Fynbos, which not listed in terms of NEM:BA, 10% of the property is Eastern Coastal Shale Band Vegetation which is vulnerable.

In terms of the GRI Vegetation Classification the property is classified as Uplands Grassy Fynbos (83%) and Roodefontein Grassy Fynbos (10%) which is Critically Endangered. Groot Brak River and Floodplain covers 2% of the property.

5% of the property constitutes a CBA which correlates with the location of the Groot Brak River and Floodplain and some Eastern Coastal Shale Band Vegetation.
This property could be further investigated as a proposed site for the Bitou Cemetery from an ecological point of view.

**Geohydrology:**

This site was assigned a high groundwater rating because of the major aquifer classification (Table Mountain) and proximity to the municipal production boreholes. Since the property is on Table Mountain Group aquifer it also received a slightly higher barrier rating than Enon group properties.

This property also obtained a final ranking of 3 meaning that it is not ideal for cemetery use from a geohydrological point of view.

**Geotechnical:**

The Geotechnical investigation concluded by Outeniqualab concluded that neither Site C nor Site D is ideal for cemetery purposes.

The preferred site from a Geotechnical point of view is Site C, but both sites carry unfavourable constraints and are considered marginally suitable, although this is not unusual in cemetery site selection. Only a portion of Site D is suitable because of the presence of shallow rock in the remaining area (see Figure 9). Soil permeability is very low and this is also deemed unfavourable because groundwater will tend to stagnate in graves with little recycling and dispersion and this may lead to anaerobic conditions. Medium soil permeability is considered favourable.

It is recommended that the south eastern part of site D could be used for expansion of the cemetery further southward towards the N2 as the demand grows.

**Spatial Planning and Socio Economic Informants:**

**Bitou SDF**

*Extract from the Bitou SDF – Site D*
The Bitou SDF recommended that:

◊ Site D is located within the demarcated urban edge of Plettenberg Bay

◊ The southern part of Site C abuts the N2 National Road and it has been identified for GAP Housing purposes.

◊ The expropriated N2 Bypass runs along the eastern boundary of site C.

Socio Economic Informants:

Site D is well located for cemetery and integrated housing purposes, as the site is in close proximity to the existing New Horizons neighbourhood as well as Kwanokuthula. Both neighbourhoods are in need for subsidised and affordable housing opportunities.

This site is currently land locked and therefore it is unlikely that it will be disposed of on public tender, should SANRAL decide to dispose of this property.

Site D leapfrogs the undeveloped Site C, but it could make planning sense to acquire this land and develop it for cemetery purposes whilst Site C is used for integrated housing purposes.

This site could confirm the urban edge for Plettenberg Bay.

From a spatial planning and socio-economic point of view Site D should be the second priority site for cemetery and integrated urban purposes.

Availability of Civil Services:

A sewer network could be linked to the existing New Horizons gravity sewer.

Availability of Electrical Services:

There is no existing municipal supply on the site, however there is an existing network within 500 meters from the site and in relatively close proximity to Site C. It would therefore be not too expensive to connect to the municipal supply, assuming that the availability of supply would be sufficient in order to provide and carry out desired services.

Traffic and Transport Infrastructure:

The existing access opportunities and constraints can be summarised as follows:

Existing Access Road: No existing access. Access could possibly be obtained via Site C.

Proximity to existing public Road: Have to link across Site C to secondary road.

Access opportunity from Public Road: Needs access rights across Site C.

Geometric Constraints of Access Road: None.

Capacity Constraints of Access Point: Although all these properties only links indirectly to the N2, all the generated traffic to/from the cemeteries will use the nearby N2 intersection. All these intersections are at or close to capacity during peak periods and most of them could require capacity upgrades, which will be more than just turning lanes, i.e. traffic signals, roundabouts or interchanges. The latter is not feasible and signals
will probably not be allowed. Hence roundabouts. The access near Site C and D is earmarked for a roundabout and has been conditioned by SANRAL as part of previous approvals.

**Impact of Future N2 Alignment:** Could require an under/overpass of the future N2.

**Conclusion:**
- (i) Site D is currently land locked but could be accessed via Site C;
- (ii) Site D is in close proximity to existing bulk infrastructure networks.
- (iii) Site D is not very sensitive from a biodiversity point of view.
- (iv) Site D could be considered for cemetery purposes.

### 3.3 Feasible and reasonable alternatives (Screening Phase)

The Screening Report carried out by Marike Vreken Urban and Environmental Planners dated November 2013 is attached as Addendum 1.

### 4. DESCRIPTION OF THE ENVIRONMENT THAT MAY BE AFFECTED BY THE ACTIVITY:

#### 4.1. General Description

Portion 3 of the Farm 437 Hillview, is located to the direct west of the New Horizons neighbourhood of Plettenberg Bay and north of Kwanokuthula. This site borders the N2 National Road, where access can be gained from the existing Ebenezer intersection via the N2. This site is ideally located for normal urban extension of Plettenberg Bay.

Portion 33 of the Farm Hillview, is located to the north of Kwanokuthula and to the western side of Plettenberg Bay. The N2 is located directly south and is approximately 100 meters from the site. The site is currently land locked but access to the site could be gained from the existing Ebenezer intersection of the N2. The GPS Coordinates of the site is 34° 2'28.31"S and 23°19'48.95"E.

#### 4.2. Physical Environment

The vegetation of the site falls within the Cape Floral Kingdom, one of six such plant kingdoms in the world. This kingdom has over 9 000 plant species, 70% of which grow nowhere else in the world (i.e. they are endemic to the Kingdom) (Cowling and Heijnis, 2001). The Kingdom has the highest known concentration of Red Data Book (threatened) species in the world (Cowling and Hilton-Taylor, 1994) although the occurrence of these species is lower in the eastern part of the Kingdom.

Fynbos is generally characterised by three elements: the tough, wiry restioids (Cape Reeds) form the graminoid (grass-like) layer; the heath component is composed of small, narrow-leaved shrubs (the most famous examples are the Ericas); the proteoid component of proteas, cone-bushes and pin-cushions (Campbell & Sigonyela, 2001). The dominant component of the Mosaic is a Grassy Fynbos community. In Grassy Fynbos, true grasses largely replace the restioids although several species of Restios are still found. The grasses are common, widespread species that are fairly drought-hardy (C4 grasses).

**Portion 3 of the Farm 437 Hillview and Portion 33 of the Farm 437 Hillview**

According to the Vegetation of Southern Africa (Mucina & Rutherford, 2006) classification, the vegetation on the sites are:
FFs 19 South Outeniqua Sandstone Fynbos with a Vulnerable ecological conservation status and

FFb 6 Eastern Coastal Shale Band Vegetation with an Endangered ecological conservation status.

**RSA Vegetation Types:**

**FFs 19 South Outeniqua Sandstone Fynbos**

**Distribution:**

Western Cape Province: Southern slopes of the Outeniqua Mountains from the Cloetesberg northeast of Albertinia in the west to the upper reaches of the Keurbooms River where it borders on FFs 20 Tsitsikamma Sandstone Fynbos. It includes sandstone outcrops on the lowlands from the vicinity of the Gouka River near Knysna in the west and Komkromma Point near Nature’s Valley in the east. Altitude from the coast to 1 579 m on Cradock’s Berg north of George.

**Vegetation & Landscape Features:**

Gentle to steep south-facing slopes, over a 160 km long area, relatively broad with some moderately sloping intramontane valleys in the west where it is over 10 km wide. The dominant vegetation is a tall; open to medium dense shrub land with medium dense, medium tall shrub under storey – mainly proteoid and restioid fynbos, with extensive ericaceous fynbos on the upper slopes. Some grassy fynbos at lower altitudes and shrub fynbos in riverine areas. Patches of this unit are not confined to south-facing slopes, but are found on all slopes south of the highest peaks in the range. Thus there are extensive northern slopes in some intra-montane valley systems, the most significant of those found in the Doring River Wilderness Area.

**Geology & Soils:**

Acidic lithosol soils derived from Ordovician sandstones of the Table Mountain Group (Cape Supergroup). Land types mainly Ib, Gb and Fa.

**Climate:**

MAP 360 – 1 170 mm (mean: 785 mm), with a slight bimodal winter and a low in December. Mean daily maximum and minimum temperatures 27.8 degrees Celsius and 4.8 degrees Celsius for January and July, respectively. Frost incidence 2-10 days per year. See also climate diagram for FFs 19 South Outeniqua Sandstone Fynbos.

**Conservation:**

Vulnerable. Target 23%. Statutorily conserved (47%) in the proposed Garden Route National Park, Doring River Wilderness Area as well as in Ruitersbos and Witfontein Nature Reserves. About 2% protected in private nature reserves. Some 28% transformed (pine plantations, cultivations). Alien *Pinus pinaster* and *Hakea sericea* scattered over part of the area. Erosion very low.

**Vegetation Type: FFs 19 South Outeniqua Sandstone Fynbos - Not Listed**

**Remarks:**

The western boundaries of this unit are discussed under FFs 16 South Langeberg Sandstone Fynbos. The Cederberg Shale Bands were not adequately mapped within this unit due to a lack of proper geological coverage. The eastern boundary is also more of a transition zone and is somewhat arbitrarily taken as...
approximating the Keurbooms River (for the mountain section). It can be refined when sufficient
distributional data become available.

**FFb 6 Eastern Coastal Shale Band Vegetation**

**Distribution:**

Western and Eastern Cape Provinces: Shale bands in the eastern Outeniqua (often also bearing forest
patches), Langkloof, Tsitsikamma and Kareedouw Mountains and along the southern Cape coastal plains to
around Oyster Bay with the most seaward belt reaching the coast at, for example, Clinton’s Bank south of
Bloukrans Pass. Altitude 0-1 100m.

**Vegetation & Landscape Features:**

Shale bands form narrow 80-200m, linear, smooth and flat landscape features and support various shrub
lands, ranging from thicket to renosterveld and fynbos at higher altitudes. Fynbos includes all structural
types, quite often grassy in character.

**Geology & Soils:**

Clays derived from shale of the Cederberg Formation, Land types mainly Db, Ca, Bb and Ib.

**Climate:**

MAP 500-1 140 mm (mean: 815 mm), relatively even with a bimodal peak in March and August-November.
Mean daily maximum and minimum temperatures 25.1 degrees Celsius and 7.0 degrees Celsius for January-
February and July, respectively. Frost incidence 0-20 days per year.

**Conservation:**

Endangered. Target 27%.

Statutorily conserved (16%) in the proposed Garden Route National Park (including Tsitsikamma National
Park), Koomans Bush State Reserve as well as in Lottering Forest Reserve, Plaatbos Nature Reserve,
Kwaaibrand and Langebosch Forest Reserves and several other private conservation areas. Some 65% transformed, with cultivation accounting for most of the transformation, followed by pine plantations. Alien
*Pinus pinaster* and *Hakea sericea* occur as scattered. Erosion is very low.

**4.3. Socio - economic Environment:**

Plettenberg Bay has a seasonal growth in population that changes the social structure of the area
significantly. During the non-holiday period, the town is predominantly occupied by work seekers, with
between 41 and 54% of the population unemployed (Eden District Municipality, 2007).

The immediate area (Plettenberg Bay area south of the Piesang River) has some facilities for holiday
makers, but no schools or churches and few other community facilities serve the area. Most community
facilities are located in the central and north-western areas of the town.

The population of the town has grown rapidly since the 2001 census and it is estimated that the total
permanent population now exceeds 34 000, with an increase of more than 30% during the summer holiday
season.

The description of the economic environment is outdated, as the economic recession of 2009 probably
changed most of the numbers and figures quoted in research. The economic environment is nonetheless
closely linked to the social environment and it is obvious that the income levels, employment levels and regional income have decreased significantly. There are three main sectors in the local economy, namely:

Agriculture and mining (quarrying) activities; manufacturing, construction and wholesale and retail trading; and lastly the services, transport and education activities.

Of these, the finance sector (which includes the property dealers) had the largest contribution to the local economy, around 22% (based on 2005 statistics). Wholesale and retail trading contributed around 21% and manufacturing around 17%. The majority of the labour is employed in the trading sector, followed by the manufacturing sector. Agriculture has established a firm foothold in the local economy, with more intensive agricultural activities, e.g. vineyards and intensive feed farming, on the increase.

5. DESCRIPTION OF ENVIRONMENTAL ISSUES AND POTENTIAL IMPACTS:

5.1. Issues listed in the Background Information Document:

Key issues and possible environmental impacts associated with the project identified to date include, but are not limited to, the following:

- Contamination of ground and surface water;
- Geotechnical considerations i.e. soil erosion, etc;
- Ecological impacts / reduction of biodiversity;
- Heritage impacts;
- Transport and traffic impacts;
- Service provision – water, waste, sewage, electricity, etc;
- Socio-economic impacts;
- Aesthetic impact – noise, visual impact, etc; and
- Impacts on surrounding land use and other proposed developments in the area.

Several specialist studies will be undertaken relating to the above issues, the results of which will be incorporated in the Environmental Impact Report.

Potential environmental issues as well as recommended mitigation measures, where feasible, will be presented to manage and minimise potential impacts associated with the development, to within acceptable levels. These measures will be further detailed in an Environmental Management Program for the proposed project.

The outcomes of the assessment of potential environmental impacts, as well as the public involvement process, will inform the design and layout of the new facility (ies).

5.2. Potential Impacts, Issues, Concerns and Preliminary Specialist Studies:

5.2.1 Land Survey Report
Land Survey Needs for Bitou Cemetery and associated Urban Development Project:

David Friedman land Surveyors will provide the mapping required for any planning work on the project, including the measurement of the boundaries of the properties involved in the project. The survey of the land identified in the project may also require engineering survey for setting out of roads and infrastructure as well as a detailed topographical survey to identify the contours and features on the land, required for other specialist to make informed planning decisions.

Qualification and Experience of Specialist:

David qualified via a Bachelor’s Degree in Surveying and two Master’s Degrees. The first in Geomatics (Engineering) and the second in Housing Development and Management both from the Faculty of Engineering and the Built Environment at the University of Cape Town. David is in the process of completing his MBA from the NMMU in Port Elizabeth and has obtained a Certificate of International Management Competencies from the Institute of Management Wolfsburg Germany in 2010. David keeps abreast of latest developments with regards to planning regulations and attended the additional DEADP workshop on NEMA & the EIA REGULATIONS 2010 on the 7 October 2011 in George.

David was elected as a member of The SA Council for Professional Land Surveyors and Technical Surveyors (PLATO) in 1988 and is also a member of the SA Geomatics Institute (SAGI). David has worked continuously in the land and planning related fields for the past twenty four years, of which eighteen years were with local government at a senior management level. David has extensive experience of a very wide range of survey, monitoring, planning and land development projects.

Professional Indemnity Cover:

The business is covered by AON Professional Risks (Certificate No 0079) for Professional Indemnity (PI) R3,000,000 and Public Liability (PL) to R1,000,000. (PO2336)

BBBEE Status:

The business is rated as a level 4 (Exempt Status). We have a valid Black Economic Empowerment Verification Certificate for 2014.

Tax Certificate:

The business has a valid Tax Certificate in good standing for 2014.

Survey Equipment:

My office uses the following survey and computer software equipment:

- Leica TCR 1201 single second high performance total station with reflectorless distance measuring.
- R3 Trimble GPS System
- R4 Trimble GPS System
- Leica Disto D3
- Model Maker and Survey Maker Software
Plato Continuing Professional Development:

- Attend lecture by Prof J Whittal on Land and Rights under the Integrated Coastal Management Act: 13 July 2012 in George. (1/5 credit for Plato CPD).
- Attend lecture by Mr Aslam Parker on GPS and Heighting by, George 25 October 2012 (1/5 credit for Plato CPD).
- Attend NEMA, EIA and Waste Training Session, 26 March 2014, George. (1/5 credit for Plato CPD).

5.2.2 Biodiversity Impact Assessment:

Terms of Reference

ECO-ROUTE Environmental Consultancy was appointed by Marike Vreken Town & Regional Planners to conduct a Rapid Biodiversity Assessment based on Vegetation Sensitivity Analyses and Ecological Status Surveys on the sites under consideration for the proposed Bitou Municipal Cemetery on portions of the following properties: Portion 33 of the Farm No. 437 Ebenezer West; Portion 3 of the Farm 437 Ebenezer East; within the Bitou Municipal jurisdiction area of the Eden District Municipality.

The Terms of Reference guides the scope of work for the specific specialist study.

An overview of the current vegetation classification of the various sites (using VegMap, GRI) is given, which describes the dominant vegetation units that would naturally occur on the site.

An overview of the perceived Ecological Status of the sites under consideration on a national scale according to the list of threatened Ecosystems published in terms of Section 52 of the National Environmental Management: Biodiversity Act (Act No. 10 of 2004) (NEM:BA) and on a regional scale according to the Garden Route Initiative (GRI) Ecosystem Status (Critical Biodiversity and Ecological Support Areas).

Lists of Important and Endemic plant species that could occur on the sites were compiled. The conservation status of these plant species were checked against the Red Data List of South African Plants.

An overall vegetation sensitivity assessment has then been collated using the above criteria, which include relative conservation and ecological importance of the vegetation communities.

Once the suitable positions for the development of a cemetery on the various sites have been determined as per the applicable specialist desktop studies more comprehensive on site surveys will be conducted to ground truth the findings and to determine the presence of indigenous species and the extent of alien invasion, land transformation, connectivity in the landscape and fragmentation of habitat as well as the degree to which successful rehabilitation can take place and the identification of viable ecological corridors.

Recommendations have been made regarding the development potentials taking into consideration the limitations and requirements for the establishment of a cemetery.

Cognisance is taken of the following situations:

- The properties under consideration fall outside the urban edge of the local municipality (Bitou Municipality).
- The properties border in some cases on existing urban developments.
In terms of the Garden Route Initiative Fine Scale Planning Map “Critical Biodiversity Areas (CBA)” and / or “Ecological Support Areas (ESA)” occur on portions of the properties.

The Garden Route Initiative Fine Scale Conservation Map

Limitations of the CBA map

The aim of the assessment and analysis:
Is to investigate and report on the current ecological status of the receiving environment with regard to the terrestrial habitats that occur on the properties under consideration for the proposed development of a municipal cemetery or cemeteries.

The following parameters have been assessed for each site:
National Perceived Ecological Status
Regional Perceived Ecological Status
National Vegetation Sensitivity Analysis
Regional Vegetation Sensitivity Analysis

Methodology:
A desktop study was done, taking into account all of the available Conservation Planning documents. A literature study was undertaken using the relevant literature as well as other applicable information.

Relevant Legislation and Policy Documents:
In terms of Section 52 the National Environmental Management: Biodiversity Act (Act 10 of 2004) (NEM:BA); The National Forests Act (Act No 84 of 1998); Outeniqua Sensitive Coastal Area Regulations in terms of The Environmental Conservation Act (Act No.73 of 1989)

Policy Principles and Guidelines for Control of Development Affecting Natural Forests (undated DAFF Document)

Cape Nature’s Requirements for providing comments on Agricultural, Environmental, Mining, Planning and Water-Use related Applications (undated CapeNature Document)

Please note that a declaration of independence has to be made by the specialist consultant, as determined by the Environmental Conservation Act, (Act 73 of 1989).

5.2.3 Geohydrological Impact Assessment:

Qualifications and Experience:

I am a registered Professional Natural Scientist (400163/88) and a Fellow of both the Institute of Waste Management of Southern Africa (IWMSA) and the Water Institute of South Africa (WISA). I am a member
of the Ground Water Division (past Branch Chairman), the International Association of Hydrogeologists, the National Ground Water Association and the International Association of Hydrological Sciences. I regularly attend conferences, lectures and training courses to remain abreast of developments in my field.

**Problem Statement:**

The Bitou Municipality published a call for proposals to obtain authorizations and approvals for a new cemetery to serve the town. The municipality identified five possible properties on which the cemetery could be established (Figure 1) and required the cemetery have an aerial extent of 12 ha and a capacity for 36 000 burials.

Marike Vreken Town Planners CC assembled a professional team to acquire the approvals and authorisations for the new cemetery. Parsons & Associates Specialist Groundwater Consultants CC was included in the project team to provide input relating to geohydrological considerations.

**Terms of Reference:**

Based on the proposal submitted by Parsons & Associates to Marike Vreken Town Planners CC on 12 December 2012, Parsons & Associates was required to provide a geohydrological assessment of the properties on which a new cemetery could be established. The assessment was to be done by:

- Collecting existing geohydrological information;
- Undertaking a site visit and conducting a hydrocensus in the vicinity of the five proposed properties;
- Analysing the collected data and assessing the risk to the geohydrological environment; and
- Documenting the outcome of the investigation in a short report.

**Limitations and Assumptions:**

This study was based on existing information gleaned from geohydrological reports of the area and observations made during the field visit and hydrocensus undertaken on 12 and 13 June 2013.

A number of reports were identified that deal with Plettenberg Bay’s water supply and geohydrology of the Table Mountain Group aquifer (Knight, Dames and Moore, 1985; Groundwater Consulting Services, 1993, 1998; Ninham Shand, 1996; Tredoux, 2007; Groundwater Africa, 2007, 2011, SRK Consulting, 2012). However, little data or information were sourced that addressed the geohydrology of areas underlain by the Enon Formation. Knowledge of the geohydrology of Enon Formation aquifers elsewhere was thus assumed to be applicable to the study area (Meyer, 1999).

Because the area of four of the five identified properties is significantly greater than the 12 ha required for the new cemetery and specific sites for the new cemetery have not been identified, a detailed hydrocensus could not be undertaken. Rather, the hydrocensus was used to gain an understanding of geohydrological conditions and reliance of landowners on groundwater.

Insufficient groundwater level data were sourced to determine the local direction of groundwater flow. The regional direction of groundwater is expected to be toward the sea (i.e. southwards and eastwards), but at a local scale groundwater flow directions may mimic topography. This information gap is not considered a major shortcoming and should not detract from the outcome of this assessment.
It must be noted the five properties identified by the Bitou Municipality were assessed during the project, and as yet no 12 ha site has been proposed. It is assumed that once this has been done, the geohydrological characteristics of the site will be reviewed.

**Methodology:**

Geohydrological information were sourced from both the National Groundwater Data Base and a series of geohydrological reports of the area. Topographical and geological maps were studied prior to the field visit, as were aerial photographs and satellite imagery of the five properties.

A site visit was undertaken on 12 and 13 June 2013 to familiarise ourselves with the five properties and to undertake a hydrocensus in the vicinity of the identified areas. During the site visit a tour of the five properties was undertaken with other specialists involved in the project, include those responsible of the geotechnical, biodiversity and socio-economic aspects.

While taking cognisance of Hall and Hanbury (1990) and DWA (2004b), a rating system based on the waste aquifer separation principle (WASP) described by Parsons and Jolly (1994) was used to assess the five properties. This principle considers the threat posed by the waste (in this case a cemetery 12 ha in extent), the barrier between the waste and groundwater (either by depth or distance) and the current and potential future use of groundwater.

**Climate:**

The area experiences a temperate, moderate climate with moderately hot summers and mild to chilly winters. Mean annual precipitation amounts to some 630mm/a, with rainfall occurring throughout the year. Slightly higher rainfall is recorded during late summer and spring. Mean annual evaporation is in the order of 1 800mm/a.

**Drainage and Topography:**

Plettenberg Bay is located in the Gouritz Water Management Area in quaternary catchment K60G. Only Site E falls within the same quaternary catchment. Site B and Site D straddle quaternary catchments K60G and K60F, while Site A and Site C are located in quaternary catchment K60F.

The Bitou River is located in quaternary catchment K60F and drains westward into the Indian Ocean. It is located north of Site A. The Piesang River is also westward draining, but drains quaternary catchment K60G. The Piesangs River is located south of Site C, Site D and Site E and is dammed by the Roodefontein Dam. Both rivers are perennial in character. Most of the town’s water supply is sourced from the Keurbooms River using a run-of-river abstraction scheme.

The topography rises sharply from sea level at the coast to a plateau with an elevation ranging between 140 mamsl and 200 mamsl, as illustrated in the west-east geohydrological cross-section (Figure x). The emerging landscape is characterised by steep incised valleys and steep gradients along the scarp down to the sea. The five properties are all located on the plateau, with elevations ranging from 100 and 160 mamsl at Site A and Site B, between 140 and 160 mamsl at Site C and Site D to about 220 mamsl at Site E.

**Vegetation:**

The vegetation of the study area is subject to a separate specialist study by Eco-Route Environmental Consultancy. The area is located in the southern part of the Cape Floristic Region. Kleynhans and Hill (1998) included the area in their South-eastern Coastal Belt Ecoregion while Acocks (1988) described the vegetation as comprising Knysna forest. The area is dominated by Keurbooms grassy fynbos.
Land Use:

The properties have a rural character, being located directly west of the town. Site C and Site D are located directly north of Kwanokuthula and New Horizons. Site D is undeveloped while Site C contains houses, light industrial work areas and Bay College.

Assessment of Properties:

Unlike waste disposal sites for which the WASP method is available (Parsons and Jolly, 1994), no formal geohydrological-based method exists with which to assess the suitability of a site for development as a cemetery. Guidance in the selection of sites for cemeteries is provided by Fisher (1992) and DWAF (2004b).

Using the principles of WASP, a simple qualitative rating technique was developed and used to assess the five properties. A rating between 0 and 5 was assigned for each of the three criteria considered, with a higher rating being indicative of less suitable conditions. The individual ratings were then multiplied to obtained a rating score (Table 2). The three criteria considered were:

- The characteristics, use and potential of the groundwater resource;
- The ability to keep the threat and groundwater apart, either through distance or the attenuating of the vadose zone; and
- The contamination threat posed by the proposed cemetery.

**Assessment of the five properties based on geohydrological considerations:**

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Site A</th>
<th>Site B</th>
<th>Site C</th>
<th>Site D</th>
<th>Site E</th>
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<tr>
<td>Groundwater resource</td>
<td>2</td>
<td>2</td>
<td>4</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Barrier</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Threat</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Score</td>
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<td>4</td>
<td>16</td>
<td>16</td>
<td>20</td>
</tr>
<tr>
<td>Ranking</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td>3</td>
<td>5</td>
</tr>
</tbody>
</table>

The groundwater resource criterion was assigned the highest score for Site E because of the major aquifer classification, the dependence of some landowners on groundwater and the absence of a municipal water supply and the potential of this area to be developed as part of a regional bulk water scheme. Site C and D are also assigned a high groundwater rating because of the major aquifer classification and proximity to the municipal production boreholes. Adopting a precautionary approach, Site A and Site B were assigned a moderate groundwater rating because of the high development potential assigned to this aquifer by Fortuin et al (2004). However, it is probable a rating of 1 would be appropriate.

A characteristic of the study area is the unusually deep depth to groundwater. Typically a water table of 2 m below surface is considered suitable for cemeteries, but in this instance the piezometric surface is more than 100 m below ground level. Fisher (1992) developed distance criteria that cemeteries must be from domestic water sources or drainage features. These ranged from 150 m to 465 m depending on the soil permeability.
Dent (2002) recommended a buffer of 200 m or 100 day travel time. BHNH is about 80m from the southern end of Site C (but perpendicular to the direction of groundwater flow) while two boreholes were identified within 100 m of Site E. All other boreholes are at least 500 m from the identified properties. Those properties located on TMG aquifers were assigned a slightly higher barrier rating because of the higher transmissivity of these aquifers than those of the Enon Formation.

A uniform rating was applied for the threat criterion because the size of the cemetery would remain the same, irrespective of where it was sited. It is noted that the threat posed by cemeteries is relatively small (Dent, 2002), particularly when compared to other land uses or activities.

In comparing the ratings, it is apparent Site A and Site B are the most favourable for development as a cemetery, while Site E is the least favourable. It is also noted the northern parts of Site C and Site D are more favourable than the southern parts or those properties.

As the proposed cemetery poses a relatively small threat to groundwater and the deep piezometric surface provides a buffer between the threat and the resource, no fatal flaws or critical factors were identified. However, the potential of the TMG aquifer in the vicinity of the N2 between Plettenberg Bay and Knysna – and the importance thereof cannot be ignored. As a result, Site E and the southern parts of Site C and Site D should be avoided.

**Conclusions and Recommendations:**

Five properties were identified by the Bitou Municipality on which a cemetery could be established. The cemetery is to have an aerial extent of 12 ha and a capacity for 36 000 burials. Assessment of these properties from a geohydrological perspective indicates that Site A and Site B are the most favourable while Site E is the least favourable. The northern parts of Site C and Site D are considered more favourable than the southern parts of those properties.

The relatively small threat posed by cemeteries and the somewhat unique depth to groundwater in the study area suggest the proposed cemetery will have little impact on the groundwater resources of the area. Notwithstanding this, Site C, Site D and Site E are all located on a major aquifer that could play an important role in the future bulk water supply of the region. It is thus recommended they be avoided when selecting a new site for a cemetery.

Once the property on which the cemetery has been selected, further assessment will be required to site the 12 ha cemetery and inform the environmental impact assessment. Given the information gathered to date, it is likely that a desk-based assessment will suffice.

**Geology:**

The study area lies in the Cape Fold Belt and is underlain by rocks of the Table Mountain Group (TMG) and Enon Formation. Quaternary aged sediments are found along the river channels and form the stabilised dunes along the coast and west of Plettenberg Bay.

In the Plettenberg Bay area the TMG attains a thickness of some 3 000 m and is represented by the Peninsula Formation, the Cedarberg Formation and the Tchando Formation. The basal Peninsula Formation comprises whitish-weathering medium to coarse grained quartzitic sandstones. The thin but extensive Cedarberg Formation comprises a soft shale while the Tchando Formation comprises brownish-weathering fine to coarse grained sandstone.
During the Cretaceous period, the Uitenhage Group was deposited in low-lying area. The group comprises an interfingering and overlapping sequence of marine, fluvial and estuarine sediments. The Enon Formation was deposited in high energy environments and comprises conglomerates, sandstone, siltstone and clay.

In the Plettenberg Bay area, faulting resulted in small elongated asymmetrical northward tilting half-garbens subsequently filled with Cretaceous sediments.

**Geohydrology:**

**Aquifer Type and Classification:**

It is well recognised rocks associated with the TMG form major aquifer systems capable of yielding large quantities of good quality groundwater. These secondary aquifers owe their water-bearing properties to the faulting, folding and fracturing that occurred during the Cape Oregeny. Borehole yields in excess of 10 L/s have been reported.

Aquifers formed by rocks of the Enon Formation are also secondary in character and are either classified as minor or poor aquifer systems. Boreholes are generally low yielding (less than 2 L/s) and groundwater quality highly variable. In the Uitenhage area groundwater from the Enon Formation is highly saline and mostly unusable. Similar groundwater qualities are reported near Mossel Bay and Oudtshoorn. As a result the aquifers are classified as poor aquifer systems. However, moderate quality groundwater is obtained in the vicinity of Knysna. In these cases a minor classification is more appropriate. Ninham Shand (1996) found the aquifer to be used to a limited degree in the Plettenberg Bay area and concluded the Enon Formation aquifer not to be significant in terms of groundwater resource potential.

The geohydrological properties of the Quaternary deposits are not of relevance to the current project, and are not addressed in this report.

**Recharge and Potential:**

Recharge to TMG aquifers in the study area is probably in the order of 7 – 12% MAP, while the harvest potential of the aquifer was set at almost 85 000 m³/km²/a (Baron et al., 1998). Fortuin et al. (2004) set the groundwater potential of the aquifer as being very high. The General Authorisation for both quaternary catchments germane to this study is 400 m³/ha/a.

It is noteworthy that the TMG aquifer – and in particular the area between Site C and Site D – is being targeted as a potential source of water for a regional bulk water supply for the Knysna – Bitou area. It is expected faults and fractures in the Peninsula Formation will be the primary drilling targets.

No geohydrological information pertaining to aquifers associated with the Enon Formation are available. In their provincial-scale study Fortuin et al. (2004) set the groundwater potential of the Enon Formation aquifer as being high, but the absence of boreholes or groundwater use suggests this might not be the case.

**Depth to Groundwater and Direction of Flow:**

Measured depth to groundwater in the vicinity of Site C, Site D and Site E indicates groundwater is at least 120 m below ground level (Figure 2). At Site C and D the piezometric surface is at an elevation of about 65 m asl. At Site E the piezometric surface is at an elevation of some 120 m asl. Monitoring of groundwater levels indicate levels remain relatively constant (Figure 4).
Knight, Dames and Moore (1985) compile a piezometric level contour map of the Plettenberg Bay area that showed the direction of groundwater is toward the sea and is influenced by topography. In the vicinity of Site C, Site D and Site groundwater flow is eastwards, as confirmed by Tredoux (2007).

In the absence of any local data in the vicinity of Site A and Site B, it is expected that the regional groundwater flow mimics that of topography and moves in a general eastward direction towards the sea. On the plateau, depth to groundwater is expected to be deep and in the order of at least 75 m below ground level.

Because of the interpreted depth to groundwater, little surface – groundwater interaction is likely at a local scale.

**Groundwater Quality:**

Groundwater from TMG aquifers has a low electrical conductivity (EC), is slightly acidic and may have elevated concentrations of iron. Tredoux (2007) measured EC ranging between 45 mS/m and 120 mS/m, with pH being in a range between 5.8 and 6.3. The groundwater is fit for domestic use.

Groundwater Consulting Services (1993) reported groundwater quality from the Enon Formation aquifers is known to be poor, with high EC and elevated concentrations of sodium and chloride. No site-specific data were sourced to confirm this.

**Groundwater Use:**

No groundwater use was identified in the vicinity of Site A and Site B.

No groundwater is abstracted at either Site C or Site D, with rainwater harvesting and small farm dams being used as a source of water on Site C (Greig, *pers.comm.*, 2013). The area directly south of these two properties has been targeted for geohydrological exploration. Three municipal production boreholes are located within 1.5 km of the two properties (BH3, BH6, BHNH) (Figure 5). The area has also been identified as having potential to be artificially recharged (Groundwater Africa, 2007; DWAF, 2010).

Similarly, groundwater is not abstracted at Site E. However, in the absence of any municipal water supply, landowners in the area are reliant on boreholes, rainwater harvesting and small farm dams for their water. Two boreholes were identified on properties directly adjoining Site E (Strombolis retirement centre, Huguenot guest house), while a number of boreholes are known to exist in the Harkerville area.

**5.2.4 Geotechnical Impact Assessment:**

**Background information:**

Outeniqua Geotechnical Services was appointed by Marike Vreken Town Planners on behalf of Bitou Municipality to conduct a geotechnical investigation for a proposed new cemetery facility for Plettenberg Bay. The envisaged development will consist of a graveyard, ablutions, maintenance rooms and possibly other community facilities.

Five potential sites (A to E) were identified by Bitou Municipality for an initial desk-top screening process, and from this exercise two potential sites were carried forward to a more detailed investigation (C and D). The detailed investigation involved conducting a subsurface investigation to determine if the sites are suitable in terms of the site geology and geotechnical conditions.
**Terms of reference:**

The scope of work for the investigation is as follows:

- Determine soil conditions by way of excavating a limited number of test pits;
- Collect soil samples from representative horizons for laboratory testing to determine geotechnical parameters;
- Determine the suitability of the site for cemetery purposes in terms of the geotechnical parameters and provide recommendations for the design of possible structures and access roads.

**Site description:**

The two sites that have been deemed worthy of further investigation, viz. Site C & D, are located adjacent to one another near the residential areas of Kwanokuthula and New Horizons in Plettenberg Bay. Site C consists of three parcels of vacant land separated by natural drainage lines or existing dwellings on Portion 3 of Farm 437, which is privately owned by the Ebenezer Trust. Site D consists of a single parcel of land on Portion 33 of Farm 437, which is owned by SANRAL.

The sites are positioned on gently undulating terrain at an altitude of 160-170m which then slopes steeply down into the surrounding valleys. The vegetation is dominated by Fynbos on Site C and dense alien trees on Site D. There are well defined drainage lines along the valleys that surround the sites which flow towards the northeast into tributaries of the Bitou River.

**The method of investigation:**

**Preliminary site information**

The following information was obtained and studied as part of an initial desk study before the site work commenced:

- 1:250 000 Geological map of the area, obtained from the Council for Geoscience;
- Aerial imagery, obtained from Google Earth;
- 1:50 000 topographic maps, obtained from the Surveyor General;
- Cadastral plans for the area, obtained from the Surveyor General.

**Regional geology:**

The 1:250 000 Geological map of the area (Sheet 3322) indicates that the sites are underlain by sedimentary rocks of the Peninsula, Cedarberg and Goudini Formations of the Table Mountain Group. These basal rocks were deposited during the Ordovician to Silurian era and consist mainly of sandstone and shale formations. Sediments of the Uitenhage Group, which were deposited during the Cretaceous period, occur to the north and south of the sites. Thick Quaternary alluvial sediments are found along natural drainage lines that surround the sites.

The basal Table Mountain Group (TMG) rocks were subjected to orogenic (mountain building) compression events associated with the formation of the Cape Fold Belt. Subsequently these rocks were eroded along the coast during marine transgressions (rising sea levels) which resulted in process of gradual peneplanation and the formation of the African Surface, which is an erosional surface along the Southern Cape Coast at an...
altitude of 160-180m amsl. The sites are located on this African Surface peneplain. During subsequent marine regressions (lowering of sea level), the Uitenhage Group rocks were deposited in coastal embayments.

Although the area has had a chaotic tectonic history and numerous faults occur in the basal TMG, the region is now generally considered to have a low seismic activity risk.

**Geotechnical tests:**

A subsurface investigation was conducted on the two preferred sites (C & D) to determine the thickness of the soil overburden, soil types, moisture conditions, soil permeability and other geotechnical parameters. Six test pits were excavated on Site C and five test pits were excavated on Site D, as indicated in Figure 5. The test pits on Site C were excavated using a TLB/backactor and the pits on Site D were excavated using a 22ton tracked excavator due to accessibility problems caused by dense alien vegetation. The test pits were profiled by an engineering geologist and representative samples of various soil horizons were collected for laboratory testing to determine the engineering properties. The soil profiles and photographs of the test pits are included in Appendix 2 of this report.

Soil samples were tested according to the standard TMH1 A1-6 test method (Foundation Indicator tests). The tests were performed by Outeniqua Lab in George. Dynamic cone penetrometer (DCP) tests were conducted from ground surface level at each test position to evaluate soil consistency. The tests were carried out according to the standard TMH6 ST6 method.

**Results of the investigation:**

**Soil and rock types**

**Site C**

Observations made in test pits indicate that the soil profile across the entire site is fairly consistent. The uppermost horizon is a silty sand colluvium (topsoil) which is underlain by a pedogenic ferricrete layer, followed by stiff to very stiff gravelly silty sandy clay. No rock was encountered in any of the test pits which were excavated to depth ranging from 1.8 to 2.5m.

**Site D**

Observations made in test pits indicate that the soil profile is generally consistent, but as one approaches the valley lines, the depth to bedrock decreases. The uppermost soil horizon is a silty sand colluvium (topsoil) which is underlain by a pedogenic ferricrete layer, followed by stiff to very stiff residual gravelly silty clay and/or clayey gravel. Below the residual soil, very soft to soft sandstone rock was encountered in most test pits, at a depth ranging from 0.9 to >3m.

**Laboratory tests:**

Representative samples of residual clay horizons were collected for Foundation Indicator tests to determine the engineering properties.

The lab results confirm that the residual soils tested are classified as CL (clays with low plasticity), ML (sils with low plasticity) or GC (Clayey gravels), according to the Universal Soil Classification. The tests indicate that the residual soil on Site D contains more gravel particles (unweathered rock fragments) than Site C and this may be due to the closer proximity to the underlying bedrock on Site D. The plasticity index of the clay on both sites is fairly similar ranging from 13 to 20. Based on the relationship between PI and clay fraction...
(Skempton’s activity value), the potential expansiveness on both sites is low. However, experience has shown that medium levels of heave can occur.

**In situ tests:**

Dynamic cone penetrometer (DCP) tests were conducted to assess soil consistency and estimate bearing capacity of the soils. The tests indicate that the upper 0.5-1.2m is typically loose to medium dense and this roughly corresponds to the transported soil horizon. Below 1.2m the soil generally stiffens up considerably and this concurs with observations in test pits.

**Groundwater, permeability and surface drainage:**

Shallow perched water tables were encountered in several test pits on Site C only. Slow groundwater seepage was noted from the sidewalls at the interface between the surficial transported/pedogenic horizons and the underlying residual clay of relatively low permeability, estimated at $10^{-7}$ m/s.

Surface water on Site C will tend to flow towards the north in the northern parts of the site and eastwards in the southern parts. There is a natural drainage line and two small dams between the two southern parcels of land. Site D has a slightly steeper gradient, draining towards the west, north and east. There are 2 large drainage lines forming the eastern and western boundaries of the site.

**Slopes:**

The majority of Site C is generally quite flat (~1:35), becoming slightly steeper in the northern parts (~1:20). Site D is relatively flat in the southern portion, becoming progressively steeper closer towards the valley lines along the western and eastern boundaries. The proposed developable portion of this site is partly constrained to the southern portion by the surrounding slopes.

5.2.4 Geotechnical assessment:

The successful siting of a cemetery depends on a complex interaction of social, economic, geographic, environmental, geotechnical and geohydrological factors. The geotechnical and geohydrological factors are often overlooked and a number of cemeteries in South Africa have been developed without any regard to these factors, to the detriment of the environment. The lack of ideal cemetery sites in most urban areas in South Africa has meant that a certain amount of flexibility is needed in the selection process. However, there are certain constraints which are considered more important and are crucial to the successful operation of the cemetery.

Leachate emanating from cemeteries could potentially pollute groundwater, wetlands and/or domestic water sources if the cemetery is located in close proximity to such sources. Soil permeability and the presence of shallow water tables will have a significant effect on leachate dispersion. Groundwater and potential contamination thereof is covered in more detail in the Geohydrological report.

Other important geotechnical factors which can affect the suitability of a cemetery site include site topography (slopes), site drainage, excavatability, workability of the soil and stability of grave sidewalls.

The table below rates the main geotechnical constraints that influence the suitability of sites for cemetery purposes in order of perceived importance (adapted from Fisher, G.J. 1992). A rating of between 0 and 3 is assigned to each constraint, based on the suitability of the site with respect to each constraint. A rating of 0 denotes totally unsuitable conditions, 1 denotes unfavourable conditions, 2 denotes suitable conditions and 3 denotes ideal conditions. Constraints with ratings of 1 and less are highlighted in red and should be carefully considered as they may potentially flaw the site.
Rating of Geotechnical Constraints:

<table>
<thead>
<tr>
<th>Geotechnical Constraint</th>
<th>Site C</th>
<th>Site D</th>
</tr>
</thead>
<tbody>
<tr>
<td>Excavatability</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Permeability</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Proximity to domestic water sources</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Proximity to natural drainage features</td>
<td>1</td>
<td>1</td>
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<tr>
<td>Site drainage</td>
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<td>3</td>
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<tr>
<td>Site topography</td>
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<td>3</td>
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<tr>
<td>Basal buffer zone</td>
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<td>1</td>
</tr>
<tr>
<td>Grave stability</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Soil workability</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Cemetery size</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Proximity to existing roads &amp; services</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>22</strong></td>
<td><strong>20</strong></td>
</tr>
</tbody>
</table>

It is evident from the table above that the preferred site is Site C, but both sites carry unfavourable constraints and are considered marginally suitable, although this is not unusual in cemetery site selection. In terms of excavatability, both sites are underlain by stiff residual soil which will be difficult to dig through by hand (pick and shovel), but Site C is slightly softer and the depth to bedrock is greater. Only a portion of Site D is suitable because of the presence of shallow rock in the remaining area. Soil permeability is very low on both sites and this is also deemed unfavourable because groundwater will tend to stagnate in graves with little recycling and dispersion and this may lead to anaerobic conditions. Medium soil permeability is considered favourable.

In terms of the proximity to domestic water sources and natural drainage features, reference should be made to the Geohydrological report. Poor basal buffer zone (distance between possible perched water tables and the bottom of the grave) and poor soil workability are also rated as unfavourable due to the presence of stiff soil on both sites.

An assessment of other geotechnical constraints that could potentially affect the design of proposed structures and services to be constructed on the site is tabulated below:

### Assessment of potential geotechnical constraints affecting structures

<table>
<thead>
<tr>
<th>Geotechnical Constraint</th>
<th>Effect on the proposed development</th>
<th>Severity</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Geotechnical Constraint</td>
<td>Effect on the proposed development</td>
<td>Severity</td>
<td>Comment</td>
</tr>
<tr>
<td>-------------------------</td>
<td>------------------------------------</td>
<td>----------</td>
<td>---------</td>
</tr>
<tr>
<td>Collapsible &amp; compressible soil</td>
<td>Soil horizons with a potentially collapsible or compressible fabric unsuitable for foundations.</td>
<td>Low</td>
<td>Moisture content of cohesive soil is important when placing foundations.</td>
</tr>
<tr>
<td>Differential settlement</td>
<td>Foundations placed in different soil types may settle differentially.</td>
<td>Low</td>
<td>Uniform founding conditions and compaction is important. Engineer to inspect foundations.</td>
</tr>
<tr>
<td>Bearing capacity</td>
<td>Foundations placed on soils with low bearing capacity will display unsuitable settlement.</td>
<td>Low</td>
<td>Bearing capacity for light structures will not be a problem on stiff clay. Engineer to inspect all foundations.</td>
</tr>
<tr>
<td>Groundwater</td>
<td>Seepage, permanent or perched water tables affecting excavations.</td>
<td>Low to Medium</td>
<td>Shallow perched water tables are expected to 1.5m and can affect soil stability. Additional surface and/or subsoil drainage may be required.</td>
</tr>
<tr>
<td>Active soil</td>
<td>Heaving clays affecting foundation stability</td>
<td>Low to medium</td>
<td>Low to medium clay heave is expected. Foundations should be reinforced.</td>
</tr>
<tr>
<td>Excavations</td>
<td>Boulders or rock affecting excavations</td>
<td>Low</td>
<td>All excavations to 1.5m are soft.</td>
</tr>
<tr>
<td></td>
<td>Unstable excavations requiring shoring</td>
<td>Low</td>
<td>Sidewalls of temporary shallow excavations are generally stable. Engineer to assess stability of deep (&gt;1.5m) excavations.</td>
</tr>
<tr>
<td>Slope stability</td>
<td>Geological instability causing damage to structures founded on slopes</td>
<td>Low</td>
<td>The developable portions of the proposed sites are generally flat.</td>
</tr>
<tr>
<td></td>
<td>Soil creep or erosion by storm water</td>
<td>Low</td>
<td>Minor surficial erosion during storms is expected.</td>
</tr>
<tr>
<td>Seismic activity</td>
<td>Structures at risk of damage due to seismicity</td>
<td>Low</td>
<td>MMS of less than IV with a 10% chance of being exceeded in 50 years.</td>
</tr>
<tr>
<td>Flood potential</td>
<td>Low lying areas affected by poor drainage.</td>
<td>Low</td>
<td>All sites are generally well drained.</td>
</tr>
<tr>
<td>Unconsolidated fill</td>
<td>Uncontrolled fill material affecting foundations</td>
<td>Low</td>
<td>No uncontrolled fill was encountered in test pits.</td>
</tr>
<tr>
<td>Geotechnical Constraint</td>
<td>Effect on the proposed development</td>
<td>Severity</td>
<td>Comment</td>
</tr>
<tr>
<td>-------------------------</td>
<td>------------------------------------</td>
<td>----------</td>
<td>---------</td>
</tr>
<tr>
<td>Sources of construction material</td>
<td>Distance to sources of construction material affecting costs</td>
<td>Low</td>
<td>The material excavated from foundation trenches is not considered suitable for re-use for backfilling purposes, but engineer to assess on site.</td>
</tr>
</tbody>
</table>

The sites have been classified according to the expected soil movements in terms of the Code of Practice for Foundations and Superstructures issued by the Joint Structural Division (JSD) of the South African Institution of Civil Engineering and Institution of Structural Engineers (SAICE/IStructE). This classification is given in the table below:

**SAICE soil classification:**

<table>
<thead>
<tr>
<th>Site</th>
<th>Main Constraints</th>
<th>Geotechnical Constraint</th>
<th>Soil Class</th>
<th>Total expected heave (mm)</th>
<th>Total expected settlement (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sites C &amp; D</td>
<td>Compressible and/or collapsible soil</td>
<td>S-S1</td>
<td>-</td>
<td>&lt;20mm</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Active clay</td>
<td>H-H1</td>
<td>&lt;15mm</td>
<td>-</td>
<td></td>
</tr>
</tbody>
</table>

**Recommendations:**

**Cemetery site:**

Neither of the proposed sites is ideal for cemetery purposes. However, in the absence of more suitable alternatives, it is recommended that the northern portion of Site C is developed first with the view to expanding further southward towards the N2 as the demand grows. The developable portion of Site D can also potentially be utilized as demand grows in the future.

Although there are municipal production boreholes located close to both sites, the groundwater flow is in the opposite direction and the development of the sites is unlikely to have a significant impact on this source. However, this should be evaluated carefully and monitored.

Grave excavation will be slow and difficult by hand and the municipality should consider the use of a TLB in this regard. Backfilling of graves will also be challenging with the in situ clayey material which can be blocky and difficult to compact. It is recommended that the topsoil and clay are mixed for backfilling to reduce voids. Soil that is wet will not be suitable for backfilling and should be replaced with drier imported soil from any available source.
Foundations for structures:

The design of foundations for structures lies within the consulting engineer’s responsibility and the following recommendations are based on limited subsurface information. The recommendations are provided as a guideline for conceptual design and more detailed investigations should be undertaken for detailed design purposes.

The stiff residual soil is most suitable to carry foundation loads but foundations can be cast at shallower depths on well compacted pedogenic (ferricrete) or transported horizons (topsoil). A preliminary design bearing capacity is 75kPa. The recommended foundation types is conventional reinforced concrete strip foundations or light rafts. All foundation trenches should be inspected and approved by the engineer before casting.

Access roads:

The topsoil subgrade generally has a poor CBR value (assume G9) and it is recommended that an allowance is made for an imported 150mm G7 selected gravel layer below the subbase. The subgrade should be proof-rolled to identify wet or soft spots and wet material should be removed and replaced with suitably drier G7 fill material from commercial sources. The recommended layerworks are given in the table below:

Pavement design recommendations:

<table>
<thead>
<tr>
<th>Layer</th>
<th>Material</th>
<th>Thickness</th>
<th>Required Compaction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Base</td>
<td>Interlocking cement pavers on 25mm sand bedding</td>
<td>80mm-100mm</td>
<td></td>
</tr>
<tr>
<td>Subbase</td>
<td>Imported G4/5 gravel stabilised to C4 (+/- 2-3% cement)</td>
<td>150mm</td>
<td>95% Mod AASHTO</td>
</tr>
<tr>
<td>SSG</td>
<td>Imported G7</td>
<td>150mm</td>
<td>93% Mod AASHTO</td>
</tr>
<tr>
<td>OR</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Base</td>
<td>Imported G2/4</td>
<td>98% Mod AASHTO</td>
<td></td>
</tr>
<tr>
<td>Subbase</td>
<td>Imported G5</td>
<td>150mm</td>
<td>95% Mod AASHTO</td>
</tr>
<tr>
<td>SSG</td>
<td>Imported G7</td>
<td>150mm</td>
<td>93% Mod AASHTO</td>
</tr>
</tbody>
</table>

Conclusions:

Both sites carry unfavourable geotechnical constraints and are therefore considered marginally suitable and should only be developed in the absence of more suitable sites. Some practical recommendations have been provided for consideration by the municipality, town planners and engineers.
5.2.5 Civil Engineering Survey and Input:

Ref: N13/59    Date: 20th August 2014

Bitou Cemetery Proposed Layout: Ptn 33 & 3 of Farm 437, Plettenberg Bay Civil Services Investigations, Conceptual Design and Service Report

Civil Engineering Inputs for External and Internal Services:

<table>
<thead>
<tr>
<th>Terms of Reference</th>
<th>Investigation Methodology</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Water Demand and Supply</td>
<td>- Determine the water demand based on the Guidelines for Human Settlement Planning and Bitou water consumption data.</td>
</tr>
<tr>
<td></td>
<td>- Preliminary design of bulk supply and internal water pipeline sizes and required reservoir elevation and storage volume.</td>
</tr>
<tr>
<td></td>
<td>- Preliminary design of fire network and required reservoir storage.</td>
</tr>
<tr>
<td>2. Effluent Discharge and Sewer Reticulation</td>
<td>- Determine the design flows of the effluent discharge from the proposed layout.</td>
</tr>
<tr>
<td></td>
<td>- Preliminary design of sewage reticulation based on the contour level survey of the proposed layout.</td>
</tr>
<tr>
<td></td>
<td>- Preliminary design of sewer pumpstations to discharge the effluent to the New Horizons sewage outfall.</td>
</tr>
<tr>
<td>3. Bulk Water and Sewer Capacity Analysis</td>
<td>- Appointment of GLS Consulting to carry out the bulk water and sewer services impact investigation and capacity analysis of the existing Municipal water &amp; sewer networks.</td>
</tr>
<tr>
<td></td>
<td>- Based on the Municipal Master Plan determine where network upgrades are required to provide the bulk services to the proposed layout.</td>
</tr>
<tr>
<td>Terms of Reference</td>
<td>Investigation Methodology</td>
</tr>
<tr>
<td>-------------------</td>
<td>--------------------------</td>
</tr>
</tbody>
</table>
| 4. Internal Road Network | - Preliminary layout planning and geometric design of the internal road network based on the contour level survey of the proposed layout and the Guidelines for Human Settlement Planning and Design.  
- Carry out a soil investigation on the alignment of the proposed road layout.  
- Preliminary pavement design based on the soil test results. |
| 5. Stormwater Management | - Determine the stormwater runoff from the roads and buildings on the proposed layout based on the contour level survey and the Guidelines.  
- Preliminary Design of the stormwater network to safely discharge the runoff into the natural environment. |

5.2.6 Electrical Engineering Survey and Input - 25 August 2014

Electrical Services to Proposed Cemetery Site at Plettenberg Bay:

Terms of Reference and Methodology:

- Determine peak kVA demand and load profile at proposed Point of Supply.  
- Evaluate existing Bitou Municipality electrical network to supply new development.  
- Determine upgrading measures and extension required to municipal network.  
- Comment on any requirements in terms of network within the development.  
- Provide report, which is to include layout drawing and cost estimates.

5.2.7 Socio-Economic Impact Assessment:

- Proximity to existing urban development.

  - Socio-economic informants:
    - Proximity to communities;
    - Accessibility of social and community infrastructure
    - Job Creation / work opportunities
Need and Desirability:
- Housing
- Educational Facilities
- Correctional Services
- Cemetery
- Medical Services
- Churches
- Transport

5.2.8 Heritage Impact Assessment:

Introduction:

PERCEPTION Planning was appointed by Bitou Municipality to compile and submit to Heritage Western Cape a Notice of Intent to Develop (NID) to in terms of Section 38(8) of the National Heritage Resources Act, 1999 (Act 25 of 1999) with relation to establishment of a mixed-use urban development on portions of the farms Hillview 437/3 &33 (Plettenberg Bay), Knysna District. Sanction for submission of this Notice of Intent to Develop was provided by Mr. Dupre Lombaard (Head: Strategic Services, Bitou Municipality).

Study Area:

The proposed development area includes two development sites namely portions of the farms Hillview 437/3 and 33 respectively. Both portions are directly north of the N2 National road and ±4.7km west of the Plettenberg Bay town centre. For ease of reference, the two sites are described separately below.

Hillview 437/3:

The property (39.6338 ha in extent) is registered to Ebenezer Enterprises (Pty) Ltd and generally known as the “Ebenezer Estate”. Vehicular access is directly from the N2 National Road. It is bound by the New Horizons and Kwanokuthula neighbourhoods to the east and south, respectively. Existing land use within the proximity of the site includes a secondary school (directly southeast), intensive agriculture (northeast) and former agricultural areas (now lying fallow) to the north.

The property appears to have been transformed and present land use includes a private school (“Bay College”), staff and rental accommodation (converted from former labourer’s cottages) as well as an array of outbuildings that have been altered to various uses, including industrial workshops (e.g. upholstery, woodworking, metal working, timber decking etc.) and an art gallery. The core of the main farmstead (c. 1940’s) and two secondary structures are older than 60 years. A number of tree-rows, lined by e.g. mature blue gum trees, were noted. The northernmost portion of the property affords long distance views towards the Indian Ocean and surrounding rural landscape. Archaeological occurrences were noted by Dr. Peter Nilssen (see Archaeological Statement).

Hillview 437/33:

Registered to SANRAL, this property (44.9761 ha in extent) forms the western half of the proposed development area and is landlocked, lacking direct access from the N2. It is overgrown by virtually impenetrable vegetation, which consists of a mixture of alien invasive and indigenous (difficult to guess percentage coverage of each). The area of foot survey was therefore limited to a narrow track created by woodcutters presently removing alien invasive vegetation as well as a fire break, which follows Eskom overhead power line (both features legible on Figure 2). No structures were noted during field work. The southernmost portion of this site may be visually exposed to the N2 though the degree and significance of such (possible) exposure is not known at this stage.
**Proposed Development:**

During 2013 Bitou Municipality appointed *Marike Vreken Urban and Environmental Planners* (together with a multi-disciplinary professional team) to conduct an investigation into the suitability of five alternative sites to establish a new regional cemetery consisting of at least 12 ha and also incorporate an integrated urban development. Phase 1 of the study is to investigate the five sites and to identify the most suitable alternative. Phase 2 will be the design of the cemetery and integrated development as well as obtaining authorisations and development rights for the new regional cemetery and integrated urban development\(^1\).

The following were some of the factors considered during Phase 1 of the investigation, which led to the conclusion that the subject properties would be best suited to accommodate the proposals set out below:

- Location;
- Property and Title Deed Information;
- Biodiversity;
- Geohydrology;
- Geotechnical data;
- Spatial Planning and Socio-economic informants;
- Availability of Civil and Electrical services;
- Traffic and Transport infrastructure.

Phase 2 of the project will now include obtaining the necessary approval and authorisations required in terms of relevant legislation. According to information provided by *Marike Vreken Urban and Environmental Planners*, the conceptual proposal for the proposed development area comprises the land uses set out below:

**Hillview 437/3:**

- **Residential uses (total of 773 units):**
  - 390 subsidised housing units to accommodate 1,560 people;
  - 288 community rental units to accommodate 1,152 people;
  - 95 single residential erven to accommodate 380 people;
- **Commercial uses (total of 34,500m² commercial space):**
  - 3,300m² general commercial space over 2 erven within the development;
  - Clinic and commercial development of 9,600m²;
  - 2,16ha (14,000m² + 7,600m²) mixed commercial development to the south of Saringa Street;
- **Community uses:**
  - School of 1.9 hectares;
  - 2x churches of 2,100m² and 3,800m²;
  - Early Childhood Development Centre of 600m²;

\(^1\) *Bitou Municipality Cemetery Investigation Phase One Report, November 2013, Marike Vreken Urban and Environmental Planners.*
- Transport interchange including taxi rank and pick-up / drop-off point of 2,700m²;
- Remaining land to be public open space with landscaping and retention of existing dams / wetlands:

**Hillview 437/33:**

- Residential uses (total of 226 units):
  - 130 subsidised housing units to accommodate 520 people;
  - 96 community rental units to accommodate 384 people;
- 11 ha prison buildings - inmate accommodation, administration buildings;
- 5ha Cemetery;
- Remaining land to be public open space to accommodate sensitive areas.

Access to Hillview 437/33 will be via an extension from the Wittedrift Road to the west while access to Hillview 437/3 would be from (a) the existing access point off the N2 and (b) an extension to Saringa Street to the east (New Horizons area).

**Planning Policy Framework:**

According to the Bitou Spatial Development Framework (May 2014), the property Hillview 437/3 is situated within the designated urban edge, as is most of Hillview 437/33, save for the northeast portion.

The SDF furthermore identifies the proposed development area as being part of an area being investigated for a possible cemetery site and includes spatial proposals for various forms of housing and mixed use development. The SDF identifies a potential “sub-centre” node at the current N2/ Ebenezer intersection together with existing educational facilities provided in the vicinity. Areas beyond the proposed development area (further west, north and east) are mostly designated as “Core 1 - Protected natural areas”.

The Bitou SDF recommends creating a new precedent, setting mixed income mixed use projects with a range of housing typologies and other land uses on better located sites abutting the N2 transport corridor. From the above it is our view that the principle and land use typologies proposed herewith are generally in accordance with spatial forward planning guideline document.

**Brief Historical Background:**

The following research was undertaken by independent historian Kathleen Schulz and transposed from primary sources obtained in the Cape Town Archives, SG Office and other available sources. Kindly note these finding relate primarily to colonial history and that further research would be required to obtain insight into pre-colonial history pertaining to the area.

**Early farm Hillview**

The proposed development area forms part of the freehold farm Hillview 437, then including adjoining farms Ladywood and Astley, was re-surveyed during 1903 (date of original survey has not yet been determined) and measured ±1.242 morgen in extent. Resurveying of the farm took place during August 1902 and coincided with its transfer in favour of Aaron Trolis. Note the farm already appears on early 1880-1890
mapping for the area (as shown with Figure 4). The development area is ±5.5km northeast of the Kranshoek Griqua settlement, which has a rich and proud history.

A sketch of the “Country between Knysna and Plettenberg Bay” drawn by William Henry Newdigate\(^3\) (c. 1850-1860) was meant to record the location of “principle houses and inhabitants” at the time but also gives insight into early land use and alignment of the coastal route between Knysna and Plettenberg Bay. The sketch, which Newdigate admits as “not being to scale”, shows the ravine directly west of present day Hillview 437/33 (Figure 5). Then a bachelor aged 21 years, WH Newdigate came to South Africa from Warwickshire, England in about 1846. He later married George Rex’s grand-daughter, Caroline Duthie (from Belvidere) and resided at Redbourne farm, southeast of the proposed development area.

**Early aerial photography**

Early (1942) aerial imagery for the proposed development area and its environs highlights a number of Pre-Modern (traditional) landscape patterns within its proximity (Figure 6). These include for example the following:

- Imagery confirms agriculture (including cultivation) to be predominant land use on and within proximity of study area during this period;
- Alignments of historic coastal route as well as current N2 National Road (here under construction) legible within the landscape;
- Approach road leading to cluster of structures located on 437/33 noted;
- Alignment of Ebenezer approach road (437/3) coincides with that of the existing (following southeast property boundary)
- Location of historic farmstead with attentive grounds fanning out to northeast;
- Several other occurrences, which are likely to be former structures noted;
- Landscape framing within proximity of former farmyard, just west of the study area;

Extent of natural (presumably indigenous) vegetation within ravine along northwest boundary of 437/33 of interest.

**Heritage Resources & Issues:**

While from the preliminary assessment, no significant historic themes were found to apply to the proposed development area, earliest available aerial photography confirms established agricultural land use patterns within the landscape during this period. Cultural landscape patterns identified above mostly seem to pertain to agriculture and we therefore recommend that the two farmstead precincts identified (Figure 6) be analysed in further detail. In particular the farmstead located on Hillview 437/33, together with its attentive grounds and north/northeast-facing views, is of local cultural significance and needs to be incorporated into the future layout of the site through an appropriate design approach. Traditional cultural landscape features employed locally, such as landscape framing and use of tree-rows along the linear “Ebenezer” approach road may contribute to the visual setting and character of the future settlement quality.

The principle of future development of the proposed development area is consistent with future spatial planning proposals and objectives as presented through the Bitou SDF (May 2013) and is therefore supported. It is acknowledged that the proposal is in its early stages and that no detailed planning has yet been done. As such it is recommended that detailed site planning considers aspects such as existing urban settlement patterns with its proximity and the objective to accomplish urban and social integration; its

\(^3\) “Plettenberg Bay and The Paradise Coast”, Patricia Storrar, 2001

PO Box 3511, Knysna, 6570

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setting within a rural cultural landscape as well as its locality in relation to the N2 National Road and the scenic ravine along the western site boundary.

An Archaeological statement (Dr. Peter Nilssen), compiled as part of this NID submission, notes poor archaeological visibility on Hillview 437/33 due to dense vegetation growth and recorded archaeological occurrences on Hillview 437/3. The report (Annexure 3) consequently recommends that a full Archaeological Impact Assessment be undertaken.

**Recommendation:**

Having regard to the above assessment, it is recommended that a focussed Integrated HIA be undertaken focussing on the following issues and articulated through a set of integrated recommendations:

- Built environment and cultural landscape informants;
- Analysis of visual-spatial informants;
- Archaeological Impact Assessment.

### 5.2.9 Archaeological Impact Assessment:

#### Introduction:

The applicant, Bitou Municipality, proposes to establish a new regional cemetery of around 12 ha in extent in the Plettenberg Bay area that will include an integrated urban development. As a result of the initial "investigation into site suitability for a new cemetery for Bitou Municipality" facilitated by Marike Vreken Town Planners CC, two out of five properties were considered suitable for the proposed development. These properties, Portions 3 (Site C) and 33 (Site D) of Knysna Farm Hill View 437, were included in this scoping archaeological assessment.

The affected properties are situated immediately north of the N2 and approximately 4 km west-north-west of the centre of Plettenberg Bay in the Western Cape Province (Figures 1 through 4). Site C is almost 40 ha in extent, is owned by Ebenezer Enterprises (Pty) Ltd and can be accessed directly from the N2 (Figure 2). Site D is 45 ha in extent is owned by South African National Roads Agency Limited and was accessed from a reservoir and rubble dumping site situated near its southern boundary (Figures 3 & 4).

Details of the nature and scope of the proposed activity are provided in the accompanying Heritage Western Cape Notification of Intent to Develop (NID) and further details and specifications are available from Marike Vreken and PERCEPTION Planning (see contact details on title page of this report). The proposed activity triggers the National Heritage Resources Act (Act 25 of 1999), and therefore, a NID is included with the submission of this statement to Heritage Western Cape (HWC). Other legislation relevant to this application is given in the accompanying NID.

This Archaeological Statement and accompanying NID serve to inform HWC of the proposed activity and to make recommendations regarding heritage resources that may or may not be affected by the proposed activity. On behalf of Bitou Municipality, PERCEPTION Planning and this author were appointed by Marike Vreken Town Planners CC to undertake the Heritage Impact Assessment process, to conduct a site visit of the affected area, to complete a NID and to produce this Statement for submission to HWC.
Study Areas:

Site C - Portion 3 of Knysna Farm Hill View No 437 - is situated west of the New Horizons suburb of Plettenberg Bay and north of Kwanokuthula. The site borders the N2, and can be accessed directly from it at the Ebenezer intersection. The location, extent, environmentally sensitive areas and proposed areas of development of the study area are shown in Figures 1 through 3, while examples of the affected and surrounding environment are presented in Plates 1 through 3. Permission to access the property was obtained from Mr Angus Grieg, who also accompanied this author to point out the disturbed areas and proposed areas for development. Thereafter, the site inspection was conducted independently and partly by vehicle and partly on foot.

As is evident in Figures 3 and 4, Site C is substantially altered by relatively recent human activities that include; vegetation clearing, numerous structures, roads, vehicle and pedestrian tracks, dams, overhead power lines, water pipelines and fencing. Due to thick and dense vegetation / ground cover, archaeological visibility is generally low. Small tracts of near-pristine indigenous vegetation are found on the steeper slopes of the ravine in the northern extent of the property and a small area in the south-western extent of the property (see Critical Biodiversity Areas in Figure 2). Archaeological inspections focused on previously disturbed areas such as vehicle tracks and dams as well as exposed surfaces. Surface sediments consist of topsoil that is interrupted in places by exposures of gravels while bedrock was only visible on the steeper slopes in the northern extent of the property.

Site D - Portion 33 of Knysna Farm Hill View No 437 - is situated west of Site D and is separated from the latter by a narrow tract of land that includes a ravine and associated tributary (Figure 3). The site is currently landlocked and was accessed indirectly from the N2 in the south. The location, extent, environmentally sensitive areas and proposed areas of development of the study area are shown in Figures 1 through 3, while examples of the affected and surrounding environment are presented in Plate 3. Permission to access the property was obtained from the South African National Roads Agency Limited and the site inspection was conducted independently and on foot.

The bulk of the study area is in an undisturbed state and substantial areas are thickly vegetated by near-pristine vegetation as is evident from Critical Biodiversity Areas indicated in Figure 3. Relatively recent human related disturbances to the natural environment include an overhead power line with associated vehicle track for maintenance, fencing and an area that is currently undergoing tree-felling of mainly exotic black wattles (Figure 4 and Plate 3). Archaeological visibility is very poor and was limited to the power line servitude vehicle track and geotechnical clearings and excavations.

Site Inspection and Results:

The Plettenberg Bay region has a rich Stone Age archaeological record, where cave and open sites as well as shell middens with Middle Stone Age (MSA) and Later Stone Age (LSA) deposits are particularly common on and around the Robberg Peninsula (Kaplan 1993). Because of predictable food sources, the coastal strip has been a frequently inhabited zone for many thousands of years. The closest and most significant heritage sites are; the Provincial Heritage Site of Nelson Bay Cave, which is situated on the Robberg Peninsula, approximately 8 km south-west of the study area, and the Provincial Heritage Site of Matjes River Cave, located near Keurboomstrand, some 14 km to the east-north-east of the study area.

A selection of archaeological studies in the nearby environment of the study area show that the immediate surroundings are generally not archaeologically sensitive, and for the most part, the record includes a mixture of Early and Middle Stone Age stone artefacts that lack formal tools such as hand axes, cleavers, blades and points (Deacon 2007, Kaplan 2004 & 2008, Nilssen 2010 & 2011 and Yates 2006). In all the
reviewed cases, the archaeological record is considered to be of low local significance due to their mixed and derived nature, the low densities of artefacts in these occurrences, and the absence of other cultural and subsistence remains. This does not imply, however, that no significant archaeological resources occur in sub-surface sediments and this possibility cannot be ruled out.

A site inspection of the affected properties was undertaken on 26 May 2014. Survey tracks, photo localities, observations and archaeological occurrences were fixed with a hand held Garmin Camo GPS to record the investigated area and its heritage contents. The locations of photographs and observations in Plates 1 through 4 are established by matching photo numbers with labelled markers in Figure 4. Directions of views are given with compass bearing names on photographs. Digital audio notes and a high quality, comprehensive digital photographic record were also made (full data set available from author on request).

The development site was examined with a focus on the potential impact of the proposed activity on archaeological resources. While the scoping phase covered an acceptable and representative portion of Site C, a more thorough foot survey of Site D is needed after vegetation but before earthmoving activities.

**Site C - Portion 3 of Knysna Farm Hill View No 437:**

Although numerous structures occur on the property, none of these are considered to be of significant heritage value. According to Mr Grieg, the site has been occupied for approximately 40 years.

Mr Grieg informed me that he had found a few Stone Age implements while they were preparing a single vehicle track. The specimens are thought to be of Early Stone Age (ESA) origin, and are described as a crude biface or hand axe and a cleaver. They were found within the top 15 to 20 cm of topsoil and among naturally occurring gravels. An independent inspection of the area revealed two more Stone Age artefacts at waypoint 6 (Figure 4 and Plate 4). These consist of a heavily patinated and clearly ancient core in quartzite and a similarly weathered flake. These ESA specimens are minimally around 300 000 years old and may date as far back as 1.5 million years or so.

Significance and Recommendation: Due to the very low density of stone artefacts (less than 1 piece per m$^2$) at this occurrence and the absence of any other cultural or subsistence remains, the find is considered to be of low local significance and no further archaeological work is required.

Very low density scatters of mixed ESA and Middle Stone Age (MSA) stone artefacts were found along the eroded south-western banks of a man-made dam at waypoints 2 and 3 (Figure 4 and Plates 3 & 4). The stone artefact scatters were found in eroded areas of about 100 to 200m$^2$ in extent where artefact densities are less than 1 piece per m$^2$. It is conceivable that this very low density scatter may cover a much larger, currently unexposed area. The specimens include a very weathered and heavily patinated or cortified ESA core in quartzite, two broken MSA blades with faceted, prepared striking platforms, a blade core with a single platform and a few flakes and flaked pieces, all in quartzite. The MSA pieces appear " fresher" than the ESA artefact as their surfaces are not cortified or patinated. The MSA artefacts date to somewhere between around 40 000 and 350 000 years ago. No formal tools were seen and no other cultural or subsistence remains were seen.
Significance and Recommendation:

Due to the derived and mixed nature of this ESA and MSA stone artefact scatter, the very low density of artefacts and the absence of other cultural or subsistence remains, this occurrence is considered to be of low local significance and therefore, no further archaeological work is required.

An isolated, bifacially flaked core or crude hand axe was found in a small, recently dug dam at waypoint 12 (Figure 4 and Plate 4). The quartzite piece is patinated and appears, therefore, to be of ESA origin, though its more recent, possible MSA origin cannot be ruled out entirely.

Significance and Recommendation: Due to its isolated nature and absence of any other cultural or subsistence remains, this find is considered to be of low local significance and no further archaeological work is needed.

Site D - Portion 33 of Knysna Farm Hill View No 437:

The vast bulk of the site is currently inaccessible due to impenetrable vegetation, and ground visibility is very poor in areas that are accessible. Therefore, an adequate archaeological assessment cannot be performed at present. Apart from fencing, an overhead power line with associated single vehicle service track, recent tree-felling and wood cutting, and clearings and excavations from geotechnical investigations, the site appears to be in a mostly undisturbed state. No heritage remains of any type were seen in the small area covered during the site inspection. Based on observations made at Site C, it is likely that Stone Age remains may occur in surface or subsurface sediments at Ste D, and therefore a recommendation in this regard is made below.

Recommendations:

Site C - Portion 3 of Knysna Farm Hill View No 437:

Since Stone Age archaeological remains occur in the study area and although the identified materials are considered to be of low significance, it cannot be ruled out entirely that more significant materials of this time period occur in as yet undisturbed sub-surface sediments. To ensure that such potentially significant materials are not damaged or destroyed during construction, it is recommended that the Environmental Control Officer appointed for the development should be briefed by a professional archaeologist with a view to identifying such materials and the manner in which they should be dealt with in the event that they are
exposed during vegetation clearing or earthmoving operations. Such procedures and protocols should form part of the Environmental Management Plan for the development, but should not necessarily be applied to the excavation of individual graves (operational phase). There are no archaeological fatal flaws and therefore, there are no objections to the proposed development of Site C.

**Site D - Portion 33 of Knysna Farm Hill View No 437:**

Due to the inaccessibility of most of the study area and very poor archaeological visibility, it was not possible to complete an archaeological assessment of Site D. Nevertheless, based on the observations made at Site C and other nearby properties, it is likely that Site D does not contain significant archaeological resources. However, as noted for Site C above, the presence of significant sub-surface archaeological materials cannot be ruled out. Due to Site D’s presently undisturbed nature (and hence undisturbed archaeological record), it is recommended that archaeological monitoring be conducted by a professional archaeologist during vegetation clearing so that a more realistic assessment can be done. Further recommendations concerning the archaeological record can be made through such an assessment during the vegetation clearing phase of development.

5.2.10 **Traffic Impact Assessment:**

**Portion 3 of Knysna Farm Hill View No 437:**

The existing access opportunities and constraints can be summarised as follows:

**Existing Access Road:** Indirect off N2 via Bay College Road (gravel).

**Proximity to existing public Road:** Fronts N2 and secondary road fronts property.

**Access opportunity from Public Road:** Good.

**Geometric Constraints of Access Road:** None.

**Capacity Constraints of Access Point:** Although all these properties only links indirectly to the N2, all the generated traffic to/from the cemeteries will use the nearby N2 intersection. All these intersections are at or close to capacity during peak periods and most of them could require capacity upgrades, which will be more than just turning lanes, i.e. traffic signals, roundabouts or interchanges. The latter is not feasible and signals will probably not be allowed. Hence roundabouts. The access near Site C and D is earmarked for a roundabout and has been conditioned by SANRAL as part of previous approvals.

**Impact of Future N2 Alignment:** Operations will improve on the N2 access, since conflicting volumes will reduce.

**Portion 33 of Knysna Farm Hill View No 437:**

The existing access opportunities and constraints can be summarised as follows:

**Existing Access Road:** No existing access. Access could possibly be obtained via Site C.

**Proximity to existing public Road:** Have to link across Site C to secondary road.

**Access opportunity from Public Road:** Needs access rights across Site C.
Geometric Constraints of Access Road: None.

Capacity Constraints of Access Point: Although all these properties only links indirectly to the N2, all the generated traffic to/from the cemeteries will use the nearby N2 intersection. All these intersections are at or close to capacity during peak periods and most of them could require capacity upgrades, which will be more than just turning lanes, i.e. traffic signals, roundabouts or interchanges. The latter is not feasible and signals will probably not be allowed. Hence roundabouts. The access near Site C and D is earmarked for a roundabout and has been conditioned by SANRAL as part of previous approvals.

Impact of Future N2 Alignment: Could require an under/overpass of the future N2.

5.2.11 Specialist Planning Report - Need and Desirability Assessment:

Planning Inputs for Environmental Assessment:
The inputs of a town planner are necessary for the assessment of any project requiring environmental authorisation, in particular in the assessment of how the proposal is assessed in terms of ‘Need and Desirability’. The project must be assessed in terms of how it aligns with future planning policy spatial planning imperatives and other activities in the wider area. Therefore the Specialist Planning Report for the proposed mixed use development on Remainder of Portion 3 of Farm 437 and Ptn 33 of 437 Division Knysna will include the following:

Background Information:

- Introduction – an explanation of the aim of the report and including the background to the project and reasons thereof

- Property Description Size and Ownership – information about the subject property including:
  - Title Deed Number
  - Title Deed Description
  - Registered Property Owner
  - Title Deed Restrictions
  - Bonds
  - Property Size
  - Servitudes

Contextual Informants:

- Locality – where the property is in relation to major landmarks and known areas

- Current Land use and Zoning – an explanation of what the land is presently used for and the zoning of the property in terms of the applicable zoning scheme for the area

- Character of the Area – a description of land uses in the area and a general contextualisation of the ambiance and nature of the area

- Site Characteristics – a detailed description of the physical characteristics of the site including topography, vegetation and built environment
The proposal:

- Preferred Alternative – a detailed description of all the land uses and structures that will are proposed on the property

- Alternatives – other options for what could be done on the property and a brief description of their impacts

Forward Planning:

A detailed description of the applicable spatial planning guidelines that should be taken into account when assessing the application. In this case the following will be included:

- Western Cape Spatial Development Framework (2009)
- Bitou SDF (2013)
- Bitou Municipality Integrated Development Plan (IDP)
- Garden Route Biodiversity Sector Plan

Statutory Requirements:

An investigation into the legislation and statutory documents that must be taken into account when assessing the application. This will include:

- The Land Use Planning Ordinance 1985 (Ordinance 15 OF 1985) – what applications must be made to allow the proposed land use. This will include rezoning and subdivision.

- The Spatial Planning and Land Use Management Act, 2013 (16 of 2013)

- The National Environmental Management Act, 1998 (107 of 1998) – with specific input on the assessment of need and desirability of the project. Need being the timing and desirability the location of the proposal.

- The legislation that may be applicable including - the Subdivision of Agricultural Land Act, 1970 (Act 70 of 1970) or the National Heritage Resources Act, 1999 (Act 25 of 1999)

6. METHODOLOGY ADOPTED IN SCOPING OF ISSUES AND CONCERNS:

6.1. Introduction:

The assessment of the potential impacts or effects of an activity is based on the outcome of the scoping process. Thus the scoping process must determine as wide a range of issues and concerns as is possible, which in turn requires consultation with the widest possible range of interest groups and affected parties. The scoping process provides I&AP’s with the opportunity of suggesting ways of avoiding, reducing or mitigating negative impacts of activities or for enhancing positive impacts.

It also allows the applicant the opportunity to incorporate the opinions, needs, preferences and values of I&AP’s into the proposed activity.
The environmental impact assessment (EIA) is the next phase of the process and it involves specialist studies and assessments to determine the effect of an activity on the environment.

6.2. Method:

Section 23 of NEMA states that the general objectives of integrated environmental management include: ensuring adequate and appropriate opportunity for public participation in decisions that may affect the environment. Thus, various actions must be taken to generate interaction between the applicant and the potential interested and affected parties. The first is allowing the interested and affected parties to give their opinions on the process, the application, the land and any issue they might consider relevant. The issues also lead to the determination of alternatives, which are evaluated to determine the feasibility thereof, as only reasonable and feasible alternatives are included in the further study process.

The next action is to evaluate the opinions (and alternatives) and to determine which should be elevated to assessment in the EIA phase of the process. Keeping in mind that the I&AP’s express opinions, any comment is acknowledged as of value and registered for further consideration, up to the Final Environmental Scoping Report (FESR). The Draft Environmental Scoping Report (DESR) and the FESR therefore reflect all issues mentioned by the I&AP’s, regardless of their nature and validity, as they represent the opinions of the I&AP’s. Responses to those issues that could have environmental effects must be given in the Environmental Impact Report (EIR) or they must be excluded with reason in the FESR.

Any activity that has a likely chance of causing a significant effect on the environment or identified impact passes into the next phase of the process, namely the EIA, where the issues are assessed. Those issues and actions that are unlikely to have any effect or negative impacts are discarded, with reasons given, in order for I&AP’s to have the opportunity to contest the response. Thus, I&AP’s must give critical consideration to issues and concerns, as only those issues indicated for relevance are referred for assessment in the EIA and will be incorporated into the plan of study for EIA.

7. ENVIRONMENTAL IMPACT ASSESSMENT PROCESS:

7.1. Process explanation and requirements

7.2 Public Participation Process

7.2.1 Legal Background

According to the National Environmental Management Act (NEMA, Act 107 of 2008) and the National Environmental Management Amendment Act (NEMAA, Act 62 of 2008) it is advised that the Public Participation Process be followed to comply with Regulation 54.

Under Regulation 54 is it stated that the person conducting a public participation process must take into account any guidelines applicable to public participation and must give notice to all potential interested and affected parties of the application.

Compliance in terms of the following is as follows:

Regulation 54 (2)(a): Fixing a notice board at a place conspicuous to the public at the boundary or on the fence of the site. The site notice provides background on the proposed process and proposal and informs potential I&APs how to register for the process.

Regulation 54 (2)(b): Giving written notice to –

(i) the owner or person in control of that land if the applicant is not the owner or the person in control of the land.
(ii) and occupiers of the site where the activity is or is to be undertaken or to any alternative site where the activity is to be undertaken. – there are no alternate sites.
(iii) Owners and occupiers of land adjacent to the site where the activity is or is to be undertaken or to any alternative site;
(iv) the municipal councillor of the ward in which the site or alternative site is situated and any organisation of ratepayers that represents the community in the area; - the ward councillor and rate payers association were notified.
(v) the municipality which has jurisdiction in the area; the local municipality is the applicant.
(vi) any organ of state having jurisdiction in respect of any aspect of the activity
(vii) any other party as required by the competent authority.(none as yet)

Regulation 54 (2)(c): Placing an advertisement in – (i) one local newspaper

The public participation phase started with the placing of a legal advert in the local newspaper in the “Knysna / Plettenberg Bay Herald” on 23rd of January 2014 calling for the registration of Interested and Affected Parties (I&APs) and referring the public to the Plettenberg Bay Library to review the Background Information Document (BID). Copies of the legal adverts are incorporated into the document

7.2.2 Notification:
Registered letters and or courier delivery will be used to contact all the neighbouring property owners, registered Interested and Affected Parties (I&AP’s), Non Governmental Organizations (NGO’s), Community Based Organizations (CBO’s) and relevant Government Departments. They will be provided with explanatory letters; The Draft Scoping Report will be burnt on disk (CD’s) and distributed to all. A hard copy will be made available at the Plettenberg Bay Library.

Meetings with RI&APs will be held during the 40 day comment period so that questions and issues can be discussed and work shopped should there be such a need. It is anticipated that these meetings will be held during the beginning of June. The comments received on the Draft Scoping Report will be added into a Comment and Responses Report which is to be incorporated into the Final Scoping Report.

7.2.3 Public Participation Register (In reaction to adverts & Background Information Document) :

<table>
<thead>
<tr>
<th>Name</th>
<th>Organisation</th>
<th>E-mail</th>
<th>Telephone</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mr. Christo Vlok</td>
<td>Plettenberg Bay Rate Payers Association</td>
<td><a href="mailto:Christo.vlok@telkomsa.net">Christo.vlok@telkomsa.net</a></td>
<td>082 821 6920</td>
</tr>
<tr>
<td>Plettbergen湾Community Environmental Forum</td>
<td><a href="mailto:Eforum@mweb.co.za">Eforum@mweb.co.za</a></td>
<td>084 7736 084</td>
<td></td>
</tr>
</tbody>
</table>

7.2.4 Written notice will be provided to the neighbouring I&AP’s:

All affected neighbours within a radius of 100 meters of the proposed site will be notified and a CD (Draft Scoping Report) with regard to the proposed project will be send to IA&P’s via registered mail or courier.

Letter to Registered Interested and Affected Parties:
Dear Sir / Madam,

You / your Department / Organization have been identified as a possible Interested and or Affected Party with regard to the following proposed Activities that require Environmental Authorization from the relevant competent Authority. Please refer to the notification below.

Notice is hereby given of a Public Participation Process in terms of:

- The National Environmental Management Act (NEMA) [Act 107 of 1998]; the National Environmental Management Amended Act (NEMAA) [Act 62 of 2008], Environmental Impact Assessment (EIA) Regulations that came into effect on the 2nd of August 2010. As promulgated in the following Government Notices:
  - Government Gazette No.9343 of the 30th of July 2010, GN No. R 664; R 661; R 662; R 663:

  Commencement of EIA Regulations 2010, published in Government Notice No R 543 on the 18th of June 2010, determines that the said regulations shall take effect on 2 August 2010. As published in Listing Notice 1 (GN R 544) listing Notice 2 (GN R 545) and Listing Notice 3 (GN R 546).

Location: PORTION 3 OF THE FARM HILL VIEW NO 437 AND PORTION 33 OF THE FARM HILL VIEW NO 437.

Application for Environmental Authorization to Undertake the Following Listed Activities:

<table>
<thead>
<tr>
<th>GN R 544 – Listing Notice 1</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Activity Numbers: 9; 10; 11; 21 and 56</td>
<td></td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>GN R 545 Listing Notice 2</th>
<th></th>
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<tbody>
<tr>
<td>Activity Number: 15</td>
<td></td>
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</table>

<table>
<thead>
<tr>
<th>GN R 546 Listing Notice 3</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Activity Numbers: 2; 4; 12; 13 and 26</td>
<td></td>
</tr>
</tbody>
</table>

All interested and affected parties are invited to register and provide written comments, their names, contact details and an indication of any direct business, financial, personal or other interest which they have in the proposed New Regional Cemetery and Integrated Urban Development, Bitou Municipality

**COMMENTING PERIOD:** Within 30 Days from 2014-09-15 until 2014-10-14 for individuals, Non-Governmental Organisations and State Departments.

Draft Screening & Scoping Documents are on the included CD for your perusal.

A Hard Copy of the relevant Documents is available for perusal at: The Plettenberg Bay Municipal Library

Registration of Interested and or Affected Parties must be made by in writing by providing the following:

Name, Contact Details, and Preferred Method of Notification (Fax / e-mail / ordinary mail)

All Interested and Affected Parties must disclose any direct business, financial, personal or other interest which they may have in the approval or refusal of the application.

Representation with regard to the application can be made in writing to ECO-ROUTE Environmental Consultancy, by Fax; E-Mail; or Registered Mail, from date of publication of this notice until the closure dates for commenting periods as stipulated above.
7.2.5 Advertisement and Notice Boards:

7.2.6 State Departments and NGO’s to be contacted and provided with electronic copies of the Draft Scoping Report:

- Department of Environmental Affairs and Development Planning
- Department of Economic Development & Tourism Western Cape
- Department of Transport and Public Works
- Department of Rural Development and Land Reform Western Cape
- Department of Land Affairs Western Cape
- Department of Water Affairs (DWA)
- Department of Agriculture Forestry & Fisheries (DAFF)
- Department of Agriculture Western Cape
- Department of Health Western Cape
- Department of Correctional Services
- National Department of Agriculture
• Eskom Western Cape
• Eden District Municipality
• Bitou Municipality
• South African National Roads Agency
• The District Roads Engineer
• Western Cape Heritage
• Cape Nature
• Wessa
• SanParks
• Plettenberg Bay Environmental Community Forum
• Plettenberg Bay Rate Payers Association

7.2.7 **Notification to Land Owners:**

Regulation 54 (2)(b): Giving written notice to the owner or person in control of that land if the applicant is not the owner or the person in control of the land.
29 November 2013

SANRAL

Bueno Vista Office Park
Block C
Unit 17
C/o Kendal & Durban Road
7550

Dear Mr. Siemsen,

**Bitou Municipality New Regional Cemetery and Integrated Urban Development**

**on Portion 3 and Portion 33 of the Farm Hill View, No. 437, Greater Plettenberg Bay Transitional Local Council Area, Division of Knysna**

In terms of GN No. R543 f the National Environmental Management Act, 1998 (Act No. 107 of 1998) Environmental Impact Assessment Regulations number 15(1) states the following:

15(1) If the applicant is not the Owner or person in control of the land on which the activity is to be undertaken, the applicant must give written notice of the proposed activity to the owner or person in control of the land on which the activity is to be undertaken, and inform such person that he may participate in the public participation process as contemplated in regulation 54.

This letter is to notify you that Mr D. Lombaard on behalf of the Bitou Municipality will submit an application form to the Department of Environmental Affairs & Development Planning for the commencement of the Basic Assessment Report for the proposed New Regional Cemetery and Integrated Urban Development to Portion 3 and Portion 33 of the Farm Hill View, No. 437.

Should you require any further information please do not hesitate to contact me.

Kind regards,

Dr. Colleen Ebersohn
29 November 2013

Ebernezer Enterprises P.O. Box 12
Plettenberg Bay, 6600

Dear Mr. Grieg,

**Bitou Municipality New Regional Cemetery and Integrated Urban Development**

**on Portion 3 and Portion 33 of the Farm Hill View, No. 437, Greater Plettenberg Bay Transitional Local Council Area, Division of Knysna**

In terms of GN No. R543 f the National Environmental Management Act, 1998 (Act No. 107 of 1998)

Environmental Impact Assessment Regulations number 15(1) states the following:

15(1) If the applicant is not the Owner or person in control of the land on which the activity is to be undertaken, the applicant must give written notice of the proposed activity to the owner or person in control of the land on which the activity is to be undertaken, and inform such person that he may participate in the public participation process as contemplated in regulation 54.

This letter is to notify you that Mr D. Lombaard on behalf of the Bitou Municipality will submit an application form to the Department of Environmental Affairs & Development Planning for the commencement of the Environmental Impact Assessment for the proposed New Regional Cemetery and Integrated Urban Development to Portion 3 and Portion 33 of the Farm Hill View, No. 437.

Should you require any further information please do not hesitate to contact me.

Kind regards,

Dr. Colleen Ebersohn
8. PLAN OF STUDY FOR ENVIRONMENTAL IMPACT ASSESSMENT:

8.1 Description of the tasks that will be undertaken as part of the environmental impact assessment process:

- The issues that require further assessment in the EIA (additional specialist studies that could be identified during the Scoping Process.
- The alternatives relating to the proposed development and use of the site.

Alternatives are defined as such:

“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 status quo or no go (no development) scenario will be the baseline against which the alternatives are assessed and if required, mitigation measures are recommended. The feasible and reasonable alternatives will be assessed.
- No-go alternative: Retain land for agriculture.
- Alternative 1: Use of land for regional cemetery and associated urban development purposes, preferred layout and density.
- Alternative 2: Use of land for regional cemetery and associated urban development purposes, alternative layout and density (to be developed if indicated by the scoping procedure)
- Property alternatives – This aspect was assessed in the Screening Phase – refer to the Screening Report attached as Addendum 1

8.2 Criteria for assigning Significant Ratings to Impacts:

IMPACT ASSESSMENT SIGNIFICANCE IMPACT RATING METHOD

<table>
<thead>
<tr>
<th>Temporal Scale</th>
<th>Spatial Scale</th>
<th>Severity</th>
<th>Likelihood of occurrence</th>
</tr>
</thead>
</table>

Significance Criteria

Following is the significance criteria that will be applied when assessing impacts. Five factors need to be considered:

1. Relationship of the impact to **temporal** scales - the temporal scale defines the significance of the impact at various time scales, as an indication of the duration of the impact.
2. Relationship of the impact to **spatial** scales - the spatial scale defines the physical extent of the impact.
3. The **severity** of the impact - the severity/beneficial scale is used in order to scientifically evaluate how severe negative impacts would be, or how beneficial positive impacts would be on a particular affected party.
4. The **likelihood** that the impact will actually occur - the likelihood of impacts taking place as a result of project actions differs between potential impacts. There is no doubt that some impacts would occur (e.g. loss
of vegetation), but other impacts are not as likely to occur (e.g. vehicle accident), and may or may not result from the proposed development. Although some impacts may have a severe effect, the likelihood of them occurring may affect their overall significance.

5. Each of the above criterions is ranked with scores to determine the overall significance of an activity.

**Ranking Criteria**

The significance of potential impacts will be determined by using the ranking formula indicated below. Each criterion is ranked with scores assigned as presented to determine the overall significance of an activity. The criterion is then considered in two categories, viz. effect of the activity and the likelihood of the impact. The total scores recorded for the effect and likelihood are then read off the matrix presented in Table 1, to determine the overall significance of the impact. The overall significance is either negative or positive.

**Ranking of Evaluation Criteria:**

<table>
<thead>
<tr>
<th>Temporal Scale</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Short term</td>
<td>Less than 5 years</td>
</tr>
<tr>
<td>Medium term</td>
<td>Between 5-20 years</td>
</tr>
<tr>
<td>Long term</td>
<td>Between 20 and 40 years (a generation) and from a human perspective also permanent</td>
</tr>
<tr>
<td>Permanent</td>
<td>Over 40 years and resulting in a permanent and lasting change that will always be there</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Spatial Scale</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Localised</td>
<td>At localised scale and a few hectares in extent</td>
</tr>
<tr>
<td>Study Area</td>
<td>The proposed site and its immediate environs</td>
</tr>
<tr>
<td>Regional</td>
<td>District and Provincial level</td>
</tr>
<tr>
<td>National</td>
<td>Country</td>
</tr>
<tr>
<td>International</td>
<td>Internationally</td>
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</table>

<table>
<thead>
<tr>
<th>Effect</th>
<th>Severity</th>
<th>Benefit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Slight</td>
<td>Slight impacts of the affected system(s) or party(ies)</td>
<td>Slightly beneficial to the affected system(s) and party(ies)</td>
</tr>
<tr>
<td>Moderate</td>
<td>Moderate impacts of the affected system(s) or party(ies)</td>
<td>Moderately beneficial to the affected system(s) and party(ies)</td>
</tr>
<tr>
<td>Severe/Beneficial</td>
<td>Severe impacts of the affected system(s) or party(ies)</td>
<td>A substantial benefit to the affected system(s) and party(ies)</td>
</tr>
<tr>
<td>Very Severe/Beneficial</td>
<td>Very severe change to the affected system(s) or party(ies)</td>
<td>A very substantial benefit to the affected system(s) and party(ies)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Likelihood</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Unlikely</td>
<td>The likelihood of these impacts occurring is slight</td>
</tr>
<tr>
<td>May Occur</td>
<td>The likelihood of these impacts occurring is possible</td>
</tr>
<tr>
<td>Probable</td>
<td>The likelihood of these impacts occurring is probable</td>
</tr>
<tr>
<td>Definite</td>
<td>The likelihood is that this impact will definitely occur</td>
</tr>
</tbody>
</table>

*In certain cases it may not be possible to determine the severity of an impact thus it may be determined: Don’t know/Can’t know*
**Matrix used to determine the overall significance of the impact based on the likelihood and effect of the impact.**

<table>
<thead>
<tr>
<th>Likelihood</th>
<th>Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 4 5 6 7 8 9 10 11 12 13 14 15 16</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>4 5 6 7 8 9 10 11 12 13 14 15 16 17</td>
</tr>
<tr>
<td>2</td>
<td>5 6 7 8 9 10 11 12 13 14 15 16 17 18</td>
</tr>
<tr>
<td>3</td>
<td>6 7 8 9 10 11 12 13 14 15 16 17 18 19</td>
</tr>
<tr>
<td>4</td>
<td>7 8 9 10 11 12 13 14 15 16 17 18 19 20</td>
</tr>
</tbody>
</table>

**Description of Environmental Significance Ratings and associated range of scores:**

<table>
<thead>
<tr>
<th>Significance Rate</th>
<th>Description</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td>Ac acceptable impact for which mitigation is desirable but not essential. The impact by itself is insufficient even in combination with other low impacts to prevent the development being approved. These impacts will result in either positive or negative medium to short term effects on the social and/or natural environment.</td>
<td>4-7</td>
</tr>
<tr>
<td>Moderate</td>
<td>An important impact which requires mitigation. The impact is insufficient by itself to prevent the implementation of the project but which in conjunction with other impacts may prevent its implementation. These impacts will usually result in either a positive or negative medium to long-term effect on the social and/or natural environment.</td>
<td>8-11</td>
</tr>
<tr>
<td>High</td>
<td>A serious impact, if not mitigated, may prevent the implementation of the project (if it is a negative impact). These impacts would be considered by society as constituting a major and usually a long-term change to the (natural &amp;/or social) environment and result in severe effects or beneficial effects.</td>
<td>12-15</td>
</tr>
<tr>
<td>Very High</td>
<td>A very serious impact which, if negative, may be sufficient by itself to prevent implementation of the project. The impact may result in permanent change. Very often these impacts are unmitigable and usually result in very severe effects, or very beneficial effects.</td>
<td>16-20</td>
</tr>
</tbody>
</table>

The **significance** scale is an attempt to evaluate the importance of a particular impact. This evaluation needs to be undertaken in the relevant context, as an impact can either be ecological or social, or both. The evaluation of the significance of an impact relies heavily on the values of the person making the judgment. For this reason, impacts of especially a social nature need to reflect the values of the affected society.

**Prioritising:**

The evaluation of the impacts, as described above is used to prioritise which impacts require mitigation measures. Negative impacts that are ranked as being of "**VERY HIGH**" and "**HIGH**" significance will be investigated further to determine how the impact can be minimised or what alternative activities or mitigation measures can be implemented. These impacts may also assist decision makers i.e. lots of **HIGH** negative impacts may bring about a negative decision.
For impacts identified as having a negative impact of “MODERATE” significance, it is standard practice to investigate alternate activities and/or mitigation measures. The most effective and practical mitigations measures will then be proposed.

For impacts ranked as “LOW” significance, no investigations or alternatives will be considered. Possible management measures will be investigated to ensure that the impacts remain of low significance.

8.3 Consultation with the Competent Authority:

Refer to copies of correspondence attached as Annexure 10.2

8.4 Description of the proposed method of assessing the environmental issues:

The specific methodologies to be followed in each specialist study / survey have been described in the relevant section in the document.

8.5 Introduction to the assessment methodology:

Assessment of the impacts or effects of the activity relates to the receiving environment. Thus, this section must be read in conjunction with the description of the receiving environment.

8.6 Public Participation Process:

Process:

This section of the Scoping Report summarises the consultation process, the comments received and the responses to the comments. The details of the public participation process are outlined in Regulation 54 of the EIA Regulations, as published in Government Notice No. R 543, in terms of Section 24 (5) of the National Environmental Management Act, 1998, Act 107 of 1998 (NEMA).

The aim of the Public Participation Process is to provide the public with an opportunity to provide input into the process and identify issues and / or concerns they might have with the proposed project.

Tasks associated with the Public Participation Process are as follows:

- Compilation of a database and register of Interested and Affected Parties (I&AP’s).
- Placement of advertisements in local newspapers to notify possible I&AP’s of the proposed development and requesting I&AP’s to register for the PPP and to declare their interest in the project.
- Placement of Notice boards on site(s) under investigation.
- Notification to all residents within 100m of the proposed site(s).
- Distribution of a Background Information Document (BID) (this document) to I&APs in order to share information about the proposed project.
- Meetings will be held with the relevant authorities, officials and key I&AP’s to identify their issues and concerns.
- A Draft Scoping Report(s), Final Scoping Report(s), Draft Environmental Impact Report(s), Final Environmental Impact Report(s), a Draft Environmental Management Program, Cemetery (ies) and integrated urban development layout plan(s) will be compiled and made available to all Registered I&AP’s for review and comment.
• All comments raised by I&APs will be incorporated into the Final Reports and submitted to the Department of Environmental Affairs and Development Planning (DEA&DP) to enable them to make an informed decision with regard to the development proposal.

• Once an Environmental Authorisation (EA) is received, it will be distributed to all registered I&AP’s who may lodge an appeal against the Environmental Authorization (EA), following the designated appeal procedure.

Crucial to the EIA process is input from Interested and Affected Parties (I&AP’s). Therefore members of the public are encouraged to register as I&AP’s for this project and to submit their comments in writing to the environmental practitioners regarding the proposed project.

Registered I&AP’s will be kept informed of project progress throughout the EIA process. The public will be given the opportunity to review and comment on:

The Draft Scoping Report(s), Final Scoping Report(s), Draft Environmental Impact Report(s), the Final Environmental Impact Report(s) and the Draft Environmental Management Program.

The public participation phase started with the placing of a legal advert in the local newspaper in the “Knysna / Plettenberg Bay Herald” on 23rd of January 2014 calling for the registration of Interested and Affected Parties (I&APs) and referring the public to the Plettenberg Bay Library, New Horizons Library and Kwanokuthula Library to review the Background Information Document (BID). Copies of the legal adverts are incorporated into the document.

The public participation process continued with circulation of a public notice and background information document to residents and property owners within 100 metres of the boundary of the site, the municipal ward councillor, interest groups and state Department and Organs of State to ensure transparency, accountability and inclusion of all stakeholders involved in the development and conservation of the socio-economic character of the area. The next step in the process was the fixing notice boards at places conspicuous to the public, on the boundary of the site.

Interested and Affected Parties:

Interested and affected parties were identified through various processes, such as consultation with officials in the local authority and at the provincial government offices, reference to other studies in the area and through input received from other I&AP’s. According to the NEMA regulations, all residents within 100 m of the site must be notified of the proposed activity, together with other role-players.

The Bitou Municipality provided the names and addresses of all residents within 100 m of the site, as only the municipality keeps such public record. Approximately 10% of all letters returned undelivered or unaccepted from the I&AP’s local Post Offices and all these are kept as records for future reference.

Specific issues raised by the I&AP’s are listed in the issues for scoping. No solutions to the issues or assessment of impacts is or will be given in the Scoping Report, as it is not the purpose of the scoping process to respond to issues, other than to incorporate it into the further assessment of the proposals, as explained in the definition contained in GN. 385 made in terms of Section 24 (5) of the NEMA: “scoping” means a process contemplated in Regulation 28(e). The scoping is a process and the Scoping Report is a step therein, to list and report on various aspects, not to offer solutions thereto.
Scoping EIA Procedure:

- Compilation of a Draft Scoping Report that will be made available to all registered I&AP’s for a 40 day commenting period.

- Compilation of a Final Scoping Report, Comments and Response Report and a Plan of Study for the Environmental Impact Assessment Phase that will be made available to all registered I&AP’s for 21 day commenting period.

- Submission of the Final Scoping Report and Plan of Study for the Environmental Impact Assessment Phase to the DEA&DP for acceptance.

- Compilation of a Draft Environmental Impact Report and Draft Environmental Management Program that will be made available to all registered I&AP’s for a 40 day commenting period.

- Compilation of a Final Environmental Impact Report and Comments and Response Report that will be made available to all registered I&AP’s for 21 day commenting period.

- Submission of the Final Environmental Impact Report and Draft Environmental Management Program to the DEA&DP for decision making purposes.

- Notification to all registered I&AP’s of the decision of the DEA&DP.

9. FIGURES:

- Figure 1 Locality Plan
- Figure 2 Site Development Plan

10. ANNEXURES:

10.1 Screening Report

10.2 Authorisation for Scoping and EIA Process

10.3 Correspondence with Competent Authority

10.4 Copies of Public Notices

- Copy of the Background Information Document (BID) Notice Published In the Knysna-Plett Herald 23rd of January 2014. The BID was placed in the public domain on the 4th of February 2014 for a period of 21 days in order to facilitate registration of possible I&AP’s.

- Copies of Public Notices and letters sent by Registered Post and Lists

- Photographic Record of Site Notice (Will be included in Final Scoping Report).

10.5 I&AP Register

10.6 Bitou Cemetery Bylaws