FINAL
Basic Assessment Report for the establishment of Aeroville Cemetery on ERF 1 of Somerset East
EC02/C/LN1&3/M/63-2013

FutureWorks
Sustainability Consulting

Date of Report: 5 May 2014
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BASIC ASSESSMENT REPORT

(For official use only)

File Reference Number: 
Application Number: 
Date Received: 


Kindly note that:

1. This basic assessment report is a standard report that may be required by a competent authority in terms of the EIA Regulations, 2010 and is meant to streamline applications. Please make sure that it is the report used by the particular competent authority for the activity that is being applied for.

2. The report must be typed within the spaces provided in the form. The size of the spaces provided is not necessarily indicative of the amount of information to be provided. The report is in the form of a table that can extend itself as each space is filled with typing.

3. Where applicable tick the boxes that are applicable or black out the boxes that are not applicable in the report.

4. An incomplete report may be returned to the applicant for revision.

5. The use of “not applicable” in the report must be done with circumspection because if it is used in respect of material information that is required by the competent authority for assessing the application, it may result in the rejection of the application as provided for in the regulations.

6. This report must be handed in at offices of the relevant competent authority as determined by each authority.

7. No faxed or e-mailed reports will be accepted.

8. The report must be compiled by an independent environmental assessment practitioner.
9. Unless protected by law, all information in the report will become public information on receipt by the competent authority. Any interested and affected party should be provided with the information contained in this report on request, during any stage of the application process.

10. A competent authority may require that for specified types of activities in defined situations only parts of this report need to be completed.
SECTION A: ACTIVITY INFORMATION

Has a specialist been consulted to assist with the completion of this section? 

☐ NO

If YES, please complete a form for each specialist thus appointed. Any specialist reports must be contained in Appendix D.

1. ACTIVITY DESCRIPTION

Describe the activity, which is being applied for, in detail:

**Establishment of Aeroville Cemetery and Associated Access Road and Infrastructure:**

The Blue Crane Route Municipality proposes to establish Aeroville Cemetery on the Remainder of Erf 1, Somerset East. This site forms part of a large tract of land owned by the Blue Crane Route Municipality, which forms the municipal commonage. The zoning of the site is thus public open space and it is currently used for communal grazing. In order for the cemetery to be constructed, the cemetery site will need to be subdivided from Remainder of Erf 1 and zoned for use as a Cemetery. This process will begin once the Application for Environmental Authorisation process is complete.

The site is located outside the Central Business District of Somerset East and abuts the R63 linking Somerset East to Cookhouse. The Somerset East airport is located to the southwest of the site; vacant land and farmlands lie to the West; a road and cemetery to the East; vacant land that is zoned for residential use is located immediately adjacent the cemetery site to the South; and the R63 (and farmland on the other side of it) to the North. An existing residential settlement is located adjacent the site on the south-eastern corner.

The site is located at the head of a tributary of the Fish River in the middle reaches of the Fish River Catchment. The area proposed for burial within the cemetery boundary has been located a minimum of 500m away from the Fish River, which is the nearest natural watercourse.

The site is mostly flat and contains no rivers, valleys or wetlands. The site does, however fall within an area designated as CBA2 (critical biodiversity area 2) in the Eastern Cape Biodiversity Conservation Plan – the bioregional plan established to protect biological diversity in the Eastern Cape. Interrogation of this classification for this site reveals that the site, along with the whole of Somerset East, was designated as a CBA2 Corridor area owing to its potential role as a part of an ecological corridor. Depending on the type of fencing and landscaping that is to be done in the cemetery, this corridor function could be retained with the development of the site to a cemetery as proposed.

Although the site contains mostly indigenous veld (grasses and Acacia thorn trees), the site is not pristine, having previously been extensively earthworked and transformed. It is currently used for communal grazing, and there is an access road which runs through it. There is also a pedestrian pathway, which has recently been serviced with street lights to increase safety, which runs through the site. The Cemetery site also currently has a number of high and low voltage powerlines running through it.
The whole development, which encompasses the cemetery and an access road, will not exceed 3.4 hectares in extent. The development plan makes provision for:

- Approximately 2528 grave sites,
- Five remembrance walls,
- A toilet block,
- A caretakers house,
- An administration centre,
- An entrance gate and boundary fencing,
- Internal roads and parking.

The cemetery will be accessed via a 7.3m wide road linking into the existing formal road network of the area. The construction of this access road comprises the re-alignment of an existing dirt road that currently runs through the centre of the development site.

2. FEASIBLE AND REASONABLE ALTERNATIVES

“alternatives”, in relation to a proposed activity, means different means of meeting the general purpose 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.

Describe alternatives that are considered in this application. Alternatives should include a consideration of all possible means by which the purpose and need of the proposed activity could be accomplished in the specific instance taking account of the interest of the applicant in the activity. The no-go alternative must in all cases be included in the assessment phase as the baseline against which the impacts of the other alternatives are assessed. The determination of whether site or activity (including different processes etc.) or both is appropriate needs to be informed by the specific circumstances of the activity and its environment. After receipt of this report the competent authority may also request the applicant to assess additional alternatives that could possibly accomplish the purpose and need of the proposed activity if it is clear that realistic alternatives have not been considered to a reasonable extent.

Paragraphs 3 – 13 below should be completed for each alternative.

Alternatives Description:

ONE SITE ALTERNATIVE (the “preferred” alternative) is assessed in this Basic Assessment Report. This site is located on municipal owned land (Rem of ERF 1, Somerset East) and forms part of the municipal commonage. The site is not currently a distinct subdivision within the municipal commonage and, as such, a subdivision and rezoning of this portion of land to “cemetery” will be required. This will be undertaken once the Application for Environmental Authorisation process is completed.
It is important to note that three site alternatives for the cemetery were assessed in a previous Application for Environmental Authorisation that was undertaken for this proposed cemetery development in 2008. The preferred site that is evaluated here was identified as the best (or only feasible) option in this previous assessment based on factors such as: geotechnical conditions, minimising risk to water resources and ease of access to the site. All sites that were previously assessed were zoned for public open space and were owned by the municipality. This previous Application for Environmental Authorisation for Aeroville Cemetery at the preferred site was APPROVED by the Environmental Authorities, but the Authorisation lapsed prior to the development being initiated. The Geotechnical Report presenting an evaluation of the three site alternatives previously assessed is attached in Appendix D for reference purposes.

TWO LAYOUT ALTERNATIVES are assessed: the preferred layout alternative (Alternative A1 - as proposed by the Applicant), and Alternative 2. Alternative 2 presents a minor variation in the position of the caretakers house, administration centre and toilet block, and one of the remembrance walls. The buildings are shifted slightly south on the plan to avoid being located underneath an existing poweline.

NO OTHER alternatives (sites, technology, layout, access etc.) are assessed, excepting for the NO-GO alternative as required. The reasons for this are that:

a) Site selection and feasibility assessment work previously done for the cemetery identified a small portion of land that falls within the ownership of the Blue Crane Route Municipality and is in a suitable location from a planning perspective that would be suitable for use as a cemetery. This small portion is the preferred development site as presented in this BAR. All available space within this small portion that can be utilised for burial, is proposed to be utilised for this purpose in the development layout.

b) The approx. 2528 grave sites that can be accommodated within the preferred site (due to limitations such as avoiding close proximity to watercourses) is considered to be less than the desired number by the municipality – but it is not possible to fit more in unless burial methods are altered. Altering burial methods is not considered feasible by the municipality as there is currently no cultural acceptance for this.

c) Alternative access to the site has already been considered. One option was to access the cemetery directly from the R335 – but the traffic authorities were not in favour of this given that during large funerals the R335 could become blocked with buses and vehicles. The proposal to bring the access around the southern and western boundary of the cemetery was therefore determined as the best option to minimise traffic disturbance on the main roads in the vicinity of the cemetery site, and to maximise the use of “suitable” burial land on the site for this purpose and avoid the use of this “suitable” land for roads and other infrastructure.

3. ACTIVITY POSITION

Indicate the position of the activity using the latitude and longitude of the centre point of the site for each alternative site. The co-ordinates should be in degrees and decimal minutes. The minutes should have at least three decimals to ensure adequate accuracy. The projection that must be used in all cases is the WGS84 spheroid in a national or local projection.
List alternative sites if applicable.

**Alternative:**
- Alternative S1\(^1\) (preferred or only site alternative)
- Alternative S2 (if any)
- Alternative S3 (if any)

<table>
<thead>
<tr>
<th>Latitude (S):</th>
<th>Longitude (E):</th>
</tr>
</thead>
<tbody>
<tr>
<td>32°</td>
<td>44° 32.38&quot;</td>
</tr>
<tr>
<td>25°</td>
<td>35° 50.19&quot;</td>
</tr>
</tbody>
</table>

**In the case of linear activities:**

- Alternative S1 (preferred or only route alternative)
  - Starting point of the activity
  - Middle point of the activity
  - End point of the activity
- Alternative S2 (if any)
  - Starting point of the activity
  - Middle point of the activity
  - End point of the activity
- Alternative S3 (if any)
  - Starting point of the activity
  - Middle point of the activity
  - End point of the activity

For route alternatives that are longer than 500m, please provide an addendum with co-ordinates taken every 250 meters along the route for each alternative alignment.

### 4. PHYSICAL SIZE OF THE ACTIVITY

Indicate the physical size of the preferred activity/technology as well as alternative activities/technologies (footprints):

**Alternative:**
- Alternative A1\(^2\) (preferred layout alternative)
- Alternative A2
- Alternative A3 (if any)

<table>
<thead>
<tr>
<th>Size of the activity:</th>
</tr>
</thead>
<tbody>
<tr>
<td>3,400 m(^2)</td>
</tr>
<tr>
<td>3,400 m(^2)</td>
</tr>
</tbody>
</table>

**Length of the activity:**

<table>
<thead>
<tr>
<th>Alternative:</th>
<th>Length of the activity:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alternative A1 (if any)</td>
<td>m</td>
</tr>
<tr>
<td>Alternative A2 (if any)</td>
<td>m</td>
</tr>
<tr>
<td>Alternative A3 (if any)</td>
<td>m</td>
</tr>
</tbody>
</table>

Indicate the size of the alternative sites or servitudes (within which the above footprints will occur):

---

\(^1\)Alternative S..\(\ldots\) refer to site alternatives.

\(^2\)Alternative A..\(\ldots\) refer to activity, process, technology or other alternatives.
Alternative:

<table>
<thead>
<tr>
<th>Size of the site/servitude:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alternative A1 (preferred layout alternative)</td>
</tr>
<tr>
<td>Alternative A2</td>
</tr>
<tr>
<td>Alternative A3 (if any)</td>
</tr>
</tbody>
</table>

5. SITE ACCESS

Does ready access to the site exist? **But the access road is to be realigned. YES**

If NO, what is the distance over which a new access road will be built **350m**

Describe the type of access road planned:

Note that this site access is the same for layout Alternatives A1 and A2.

The existing dirt road that turns off from the R335 and crosses the development site will be realigned to follow the outside boundary of the site on the southern and western sides. Access into the cemetery will be gained from the western boundary:

![Proposed realignment of dirt road around the cemetery boundary](image)

The access that the existing dirt road provides to adjacent farms will therefore be retained and not blocked off by the cemetery.

The dirt road that will be constructed / realigned will be approximately 7.3m wide with a reserve of less than 13.5m (based on the extent of the road that currently exists and the road width shown on the plan above) and approximately 350m long.

Include the position of the access road on the site plan and required map, as well as an indication of the road in relation to the site.
6. **SITE OR ROUTE PLAN**

A detailed site or route plan(s) must be prepared for each alternative site or alternative activity. It must be attached as Appendix A to this document. See Plans in Appendix A.

The site or route plans must indicate the following:

6.1 the scale of the plan which must be at least a scale of 1:500;
6.2 the property boundaries and numbers of all the properties within 50 metres of the site;
6.3 the current land use as well as the land use zoning of each of the properties adjoining the site or sites;
6.4 the exact position of each element of the application as well as any other structures on the site;
6.5 the position of services, including electricity supply cables (indicate above or underground), water supply pipelines, boreholes, street lights, sewage pipelines, storm water infrastructure and telecommunication infrastructure;
6.6 all trees and shrubs taller than 1.8 metres;
6.7 walls and fencing including details of the height and construction material;
6.8 servitudes indicating the purpose of the servitude;
6.9 sensitive environmental elements within 100 metres of the site or sites including (but not limited thereto):
   - rivers;
   - the 1:100 year flood line (where available or where it is required by DWA);
   - ridges;
   - cultural and historical features;
   - areas with indigenous vegetation (even if it is degraded or invested with alien species);
6.9 for gentle slopes the 1 metre contour intervals must be indicated on the plan and whenever the slope of the site exceeds 1:10, the 500mm contours must be indicated on the plan; and
6.10 the positions from where photographs of the site were taken.

7. **SITE PHOTOGRAPHS**

Colour photographs from the centre of the site must be taken in at least the eight major compass directions with a description of each photograph. Photographs must be attached under Appendix B to this form. It must be supplemented with additional photographs of relevant features on the site, if applicable. See Photographs in Appendix B.

8. **FACILITY ILLUSTRATION**

A detailed illustration of the activity must be provided at a scale of 1:200 as Appendix C for activities that include structures. The illustrations must be to scale and must represent a realistic image of the planned activity. The illustration must give a representative view of the activity. Not applicable.

9. **ACTIVITY MOTIVATION**

Note that the activity motivation is the same for Alternatives 1 and 2.

9(a) **Socio-economic value of the activity**

What is the expected capital value of the activity on completion?  

R2 million
What is the expected yearly income that will be generated by or as a result of the activity? *The cemetery is a public social service facility.*

<table>
<thead>
<tr>
<th>Question</th>
<th>Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Will the activity contribute to service infrastructure?</td>
<td>YES</td>
</tr>
<tr>
<td>Is the activity a public amenity?</td>
<td>YES</td>
</tr>
</tbody>
</table>

How many new employment opportunities will be created in the development phase of the activity?

- R 0

What is the expected value of the employment opportunities during the development phase?

- R 800,000

What percentage of this will accrue to previously disadvantaged individuals?

- 90%

How many permanent new employment opportunities will be created during the operational phase of the activity?

- 2

What is the expected current value of the employment opportunities during the first 10 years?

- R 150,000 per annum

What percentage of this will accrue to previously disadvantaged individuals?

- 100%

### 9(b) Need and desirability of the activity

Motivate and explain the need and desirability of the activity (including demand for the activity):

Somerset East has two existing cemeteries. One of these is nearing capacity, the second is nearing capacity AND is facing a number of problems with regards to poor hydrogeological conditions and associated waterlogging. Somerset East faces a major shortage of burial space in the near future and the municipality therefore has a duty to develop additional facilities for this as soon as possible.

A number of site alternatives for a new cemetery were assessed in 2009 by the Cacadu District Municipality, and Environmental Authorisation was obtained for the development of Aeroville Cemetery in the position proposed in this BAR as the preferred site alternative. Unfortunately the Environmental Authorisation lapsed prior to the development being started.

Indicate any benefits that the activity will have for society in general:

The cemetery is a social service facility intended to provide burial space for the population of Somerset East (and surrounds).

Indicate any benefits that the activity will have for the local communities where the activity will be located:

The local community will not benefit directly, excepting in respect of improved social servicing by the municipality in respect of burial facilities.
10. **APPLICABLE LEGISLATION, POLICIES AND/OR GUIDELINES**

List all legislation, policies and/or guidelines of any sphere of government that are applicable to the application as contemplated in the EIA regulations, if applicable:

<table>
<thead>
<tr>
<th>Title of legislation, policy or guideline:</th>
<th>Administering authority:</th>
<th>Date:</th>
</tr>
</thead>
</table>

11. **WASTE, EFFLUENT, EMISSION AND NOISE MANAGEMENT**

Note that the description of waste, effluent, emission and noise management is the same for Alternatives 1 and 2.

11(a) **Solid waste management**

Will the activity produce solid construction waste during the construction/initiation phase?  
If yes, what estimated quantity will be produced per month?  
How will the construction solid waste be disposed of (describe)?  

<table>
<thead>
<tr>
<th>N/A</th>
<th>N/A</th>
</tr>
</thead>
</table>

Where will the construction solid waste be disposed of (describe)?

<table>
<thead>
<tr>
<th>N/A</th>
</tr>
</thead>
</table>

Will the activity produce solid waste during its operational phase?  
If yes, what estimated quantity will be produced per month?  
How will the solid waste be disposed of (describe)?

<table>
<thead>
<tr>
<th>N/A</th>
</tr>
</thead>
</table>

Where will the solid waste be disposed if it does not feed into a municipal waste stream (describe)?

<table>
<thead>
<tr>
<th>N/A</th>
</tr>
</thead>
</table>

If the solid waste (construction or operational phases) will not be disposed of in a registered landfill site or be taken up in a municipal waste stream, then the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA.

Can any part of the solid waste be classified as hazardous in terms of the relevant legislation?  
If yes, inform the competent authority and request a change to an application for scoping and EIA.

Is the activity that is being applied for a solid waste handling or treatment facility?  
If yes, then the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA. N/A

11(b) **Liquid effluent**

Will the activity produce effluent, other than normal sewage, that will be disposed of in a municipal sewage system?  
If yes, what estimated quantity will be produced per month?  
Will the activity produce any effluent that will be treated and/or disposed of on site?  
Only domestic sewage in small quantities from the public toilet and the

<table>
<thead>
<tr>
<th>NO</th>
<th>m³</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Yes</th>
</tr>
</thead>
</table>
caretakers house, which are likely to be disposed of via septic tank and soakaway systems. If yes, the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA.

Will the activity produce effluent that will be treated and/or disposed of at another facility?

If yes, provide the particulars of the facility:

<table>
<thead>
<tr>
<th>Facility name</th>
<th>Contact person</th>
<th>Postal address</th>
<th>Postal code</th>
<th>Telephone</th>
<th>Cell</th>
<th>Fax</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Describe the measures that will be taken to ensure the optimal reuse or recycling of waste water, if any:

None.

11(c) Emissions into the atmosphere

Will the activity release emissions into the atmosphere?

If yes, is it controlled by any legislation of any sphere of government?

If yes, the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA.

If no, describe the emissions in terms of type and concentration:

N/A

11(d) Generation of noise

Will the activity generate noise?

If yes, is it controlled by any legislation of any sphere of government?

If yes, the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA.

If no, describe the noise in terms of type and level:

N/A

12. WATER USE

Note that water use is the same for Alternatives 1 and 2.

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

<table>
<thead>
<tr>
<th>Municipal water board</th>
<th>groundwater</th>
<th>river, stream, dam or lake</th>
<th>other</th>
<th>the activity will not use water</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

If water is to be extracted from groundwater, river, stream, dam, lake or any other natural feature, please indicate the volume that will be extracted per month:
Does the activity require a water use permit from the Department of Water Affairs?

If yes, please submit the necessary application to the Department of Water Affairs and attach proof thereof to this application if it has been submitted.

13. ENERGY EFFICIENCY

Note that energy use is the same for Alternatives 1 and 2.

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

The caretakers house and toilet block will be constructed to utilise natural daylighting, will be thermally efficient (reducing the need for heating and cooling) and utilise solar water heating where appropriate.

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

N/A

SECTION B: SITE/AREA/PROPERTY DESCRIPTION

Important notes:

1. For linear activities (pipelines, etc) as well as activities that cover very large sites, it may be necessary to complete this section for each part of the site that has a significantly different environment. In such cases please complete copies of Section C and indicate the area, which is covered by each copy No. on the Site Plan.

2. Paragraphs 1 - 6 below must be completed for each alternative.

3. Has a specialist been consulted to assist with the completion of this section?

If YES, please complete a form each specialist thus appointed. Please see form attached in Appendix D.

All specialist reports must be contained in Appendix D. Please see Groundwater Specialist Report and Preliminary Heritage Assessment Report attached in Appendix D.

1. GRADIENT OF THE SITE

Note that as there is only 1 Site Alternative, only one description of the site is provided.

Indicate the general gradient of the site.
## 2. LOCATION IN LANDSCAPE

Indicate the landform(s) that best describes the site:

- 2.1 Ridgeline
- 2.2 Plateau
- 2.3 Side slope of hill/mountain
- 2.4 Closed valley
- 2.5 Open valley
- 2.6 Plain
- 2.7 Undulating plain / low hills
- 2.8 Dune
- 2.9 Seafront

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

Is the site(s) located on any of the following (tick the appropriate boxes)?

<table>
<thead>
<tr>
<th>Alternative S1:</th>
<th>Alternative S2 (if any):</th>
<th>Alternative S3 (if any):</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shallow water table (less than 1.5m deep)</td>
<td>NO ✓</td>
<td>YES</td>
</tr>
<tr>
<td>Dolomite, sinkhole or doline areas</td>
<td>NO ✓</td>
<td>YES</td>
</tr>
<tr>
<td>Seasonally wet soils (often close to water bodies)</td>
<td>NO ✓</td>
<td>YES</td>
</tr>
<tr>
<td>Unstable rocky slopes or steep slopes with loose soil</td>
<td>NO ✓</td>
<td>YES</td>
</tr>
<tr>
<td>Dispersive soils (soils that dissolve in water)</td>
<td>NO ✓</td>
<td>YES</td>
</tr>
<tr>
<td>Soils with high clay content (clay fraction more than 40%)</td>
<td>NO ✓</td>
<td>YES</td>
</tr>
<tr>
<td>Any other unstable soil or geological feature</td>
<td>NO ✓</td>
<td>YES</td>
</tr>
<tr>
<td>An area sensitive to erosion</td>
<td>NO ✓</td>
<td>YES</td>
</tr>
</tbody>
</table>

If you are unsure about any of the above or if you are concerned that any of the above aspects may be an issue of concern in the application, an appropriate specialist should be appointed to assist in the
completion of this section. (Information in respect of the above will often be available as part of the project information or at the planning sections of local authorities. Where it exists, the 1:50 000 scale Regional Geotechnical Maps prepared by the Council for Geo Science may also be consulted).

Please note that a Geotechnical Assessment of the preferred development site (and two site alternatives) was conducted in 2009 as part of the previous Application for Environmental Authorisation process for the cemetery (and which was authorised at the time), this is attached in Appendix D for reference only – as it was not a specialist study commissioned specifically as part of the current Application for Environmental Authorisation, but has relevance for this study.

4. GROUNDCOVER

Indicate the types of groundcover present on the site:

4.1 Natural veld – good condition

4.2 Natural veld – scattered aliens

4.3 Natural veld with heavy alien infestation

4.4 Veld dominated by alien species

4.5 Gardens

4.6 Sport field

4.7 Cultivated land

4.8 Paved surface Sections of a pedestrian pathway through the site are tarred, the dirt road through the site is not paved.

4.9 Building or other structure Dirt road through the site; a large number of powerlines running through the site.

4.10 Bare soil In places where overgrazing has caused a loss of basal vegetation cover.

The location of all identified rare or endangered species or other elements should be accurately indicated on the site plan(s).

<table>
<thead>
<tr>
<th>Natural veld - good condition</th>
<th>Natural veld with scattered aliens</th>
<th>Natural veld with heavy alien infestation</th>
<th>Veld dominated by alien species</th>
<th>Gardens</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sport field</td>
<td>Cultivated land</td>
<td>Paved surface</td>
<td>Building or other structure</td>
<td>Bare soil</td>
</tr>
<tr>
<td></td>
<td></td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>

If any of the boxes marked with an "E" is ticked, please consult an appropriate specialist to assist in the completion of this section if the environmental assessment practitioner doesn’t have the necessary expertise.

The Environmental Assessment Practitioner is a Professional Natural Scientist with botanical and ecological specialist assessment expertise, and so has completed this section without further assistance.
5. **LAND USE CHARACTER OF SURROUNDING AREA**

Indicate land uses and/or prominent features that currently occur within a 500m radius of the site and give description of how this influences the application or may be impacted upon by the application:

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>5.1 Natural area</td>
<td>✓ 5.2 Low density residential</td>
</tr>
<tr>
<td></td>
<td>✓ 5.3 Medium density residential</td>
</tr>
<tr>
<td>5.4 High density residential</td>
<td></td>
</tr>
<tr>
<td>5.5 Informal residential</td>
<td></td>
</tr>
<tr>
<td>5.6 Retail commercial &amp; warehousing</td>
<td></td>
</tr>
<tr>
<td>5.7 Light industrial</td>
<td></td>
</tr>
<tr>
<td>5.8 Medium industrial</td>
<td>✓</td>
</tr>
<tr>
<td>5.9 Heavy industrial</td>
<td>✓</td>
</tr>
<tr>
<td>5.10 Power station</td>
<td></td>
</tr>
<tr>
<td>5.11 Office/consulting room</td>
<td></td>
</tr>
<tr>
<td>5.12 Military or police base/station/compound</td>
<td></td>
</tr>
<tr>
<td>5.13 Spoil heap or slimes dam</td>
<td></td>
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<tr>
<td>5.14 Quarry, sand or borrow pit</td>
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<tr>
<td>5.15 Dam or reservoir</td>
<td></td>
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<tr>
<td>5.16 Hospital/medical centre</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>✓ 5.17 School</td>
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<tr>
<td>5.18 Tertiary education facility</td>
<td></td>
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<tr>
<td>5.19 Church</td>
<td></td>
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<tr>
<td>5.20 Old age home</td>
<td></td>
</tr>
<tr>
<td>5.21 Sewage treatment plant</td>
<td></td>
</tr>
<tr>
<td>5.22 Train station or shunting yard</td>
<td>✓</td>
</tr>
<tr>
<td>5.23 Railway line</td>
<td>✓</td>
</tr>
<tr>
<td>5.24 Major road (4 lanes or more)</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>✓ 5.25 Airport</td>
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<tr>
<td>5.26 Harbour</td>
<td></td>
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<tr>
<td>5.27 Sport facilities</td>
<td></td>
</tr>
<tr>
<td>5.28 Golf course</td>
<td></td>
</tr>
<tr>
<td>5.29 Polo fields</td>
<td></td>
</tr>
<tr>
<td>5.30 Filling station</td>
<td>✓</td>
</tr>
<tr>
<td>5.31 Landfill or waste treatment site</td>
<td></td>
</tr>
<tr>
<td>5.32 Plantation</td>
<td></td>
</tr>
<tr>
<td></td>
<td>✓ 5.33 Agriculture</td>
</tr>
<tr>
<td></td>
<td>✓ 5.34 River, stream or wetland</td>
</tr>
<tr>
<td>5.35 Nature conservation area</td>
<td></td>
</tr>
<tr>
<td>5.36 Mountain, koppie or ridge</td>
<td></td>
</tr>
<tr>
<td>5.37 Museum</td>
<td></td>
</tr>
<tr>
<td>5.38 Historical building</td>
<td></td>
</tr>
<tr>
<td>5.39 Protected Area</td>
<td></td>
</tr>
<tr>
<td></td>
<td>✓ 5.40 Graveyard</td>
</tr>
<tr>
<td>5.41 Archaeological site</td>
<td></td>
</tr>
<tr>
<td>5.42 Other land uses (describe)</td>
<td></td>
</tr>
</tbody>
</table>

If any of the boxes marked with an “N” are ticked, how will this impact / be impacted upon by the proposed activity.
**Airport:**
The airport is located to the southwest of the proposed cemetery site. The cemetery site is located slightly lower in elevation to the airport property (i.e. downslope of). The cemetery does not fall directly in line with the runway path. The nearest point of the cemetery to the end of the runway is 320m (this would comprise the access road around the southern boundary of the cemetery).

The cemetery site already has a powerline servitude running through it, where the powerlines are significantly higher in elevation that any component of the proposed cemetery buildings / infrastructure.

The cemetery activities will not impact on the operation of the airport, or on the safety of the airport. Equally, the cemetery will not be impacted on by the operations of the airport.

The locality of the cemetery site relative to the airport infrastructure is shown below.

![Figure 2: Location of airport runways in relation to the cemetery site](image)

If any of the boxes marked with an "An" are ticked, how will this impact / be impacted upon by the proposed activity.
If YES, specify and explain:
If YES, specify:

If any of the boxes marked with an "H" are ticked, how will this impact / be impacted upon by the proposed activity.
If YES, specify and explain:
If YES, specify:
6. CULTURAL/HISTORICAL FEATURES

Are there any signs of culturally or historically significant elements, as defined in section 2 of the National Heritage Resources Act, 1999, (Act No. 25 of 1999), including Archaeological or palaeontological sites, on or close (within 20m) to the site?

If YES, explain:

If uncertain, conduct a specialist investigation by a recognised specialist in the field to establish whether there is such a feature(s) present on or close to the site.

Briefly explain the findings of the specialist:

Will any building or structure older than 60 years be affected in any way?

Is it necessary to apply for a permit in terms of the National Heritage Resources Act, 1999 (Act 25 of 1999)?

If yes, please submit or, make sure that the applicant or a specialist submits the necessary application to SAHRA or the relevant provincial heritage agency and attach proof thereof to this application if such application has been made.

Please note that the Eastern Cape Provincial Heritage Resources Authority (ECPHRA) requested that a Heritage Assessment be conducted of the site, owing to the fact that the development triggered the need for such assessment in terms of Section 38 of the National Heritage Resources Act (Act 25 of 1999). The specialist that was appointed to conduct this assessment produced a letter motivating for Exemption from the need to conduct a full Phase 1 Archaeological Heritage Impact Assessment on the basis that the site was deemed to have a low cultural heritage sensitivity. This report / letter has been submitted to the ECPHRA for a response. This report / letter is attached in Appendix D.

SECTION C: PUBLIC PARTICIPATION

1. ADVERTISEMENT

The person conducting a public participation process must take into account any guidelines applicable to public participation as contemplated in section 24J of the Act and must give notice to all potential interested and affected parties of the application which is subjected to public participation by—

(a) fixing a notice board (of a size at least 60cm by 42cm; and must display the required information in lettering and in a format as may be determined by the competent authority) at a place conspicuous to the public at the boundary or on the fence of—
   (i) the site where the activity to which the application relates is or is to be undertaken; and
   (ii) any alternative site mentioned in the application;
(b) giving written notice to—
   (i) the owner or person in control of that land if the applicant is not the owner or person in control of the land;
(ii) the 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;

(iii) owners and occupiers of land adjacent to the site where the activity is or is to be undertaken or to any alternative site where the activity is to be undertaken;

(iv) the municipal councillor of the ward in which the site or alternative site is situated and any organisation of ratepayers that represent the community in the area;

(v) the municipality which has jurisdiction in the area;

(vi) any organ of state having jurisdiction in respect of any aspect of the activity; and

(vii) any other party as required by the competent authority;

(c) placing an advertisement in—

(i) one local newspaper; or

(ii) any official Gazette that is published specifically for the purpose of providing public notice of applications or other submissions made in terms of these Regulations;

(d) placing an advertisement in at least one provincial newspaper or national newspaper, if the activity has or may have an impact that extends beyond the boundaries of the metropolitan or local municipality in which it is or will be undertaken: Provided that this paragraph need not be complied with if an advertisement has been placed in an official Gazette referred to in subregulation 54(c)(ii); and

(e) using reasonable alternative methods, as agreed to by the competent authority, in those instances where a person is desiring of but unable to participate in the process due to—

(i) illiteracy;

(ii) disability; or

(iii) any other disadvantage.

2. CONTENT OF ADVERTISEMENTS AND NOTICES

A notice board, advertisement or notices must:

(a) indicate the details of the application which is subjected to public participation; and

(b) state—

(i) that the application has been submitted to the competent authority in terms of these Regulations, as the case may be;

(ii) whether basic assessment or scoping procedures are being applied to the application, in the case of an application for environmental authorisation;

(iii) the nature and location of the activity to which the application relates;

(iv) where further information on the application or activity can be obtained; and

(iv) the manner in which and the person to whom representations in respect of the application may be made.

3. PLACEMENT OF ADVERTISEMENTS AND NOTICES

Where the proposed activity may have impacts that extend beyond the municipal area where it is located, a notice must be placed in at least one provincial newspaper or national newspaper, indicating that an application will be submitted to the competent authority in terms of these regulations, the nature and location of the activity, where further information on the proposed activity can be obtained and the manner in which representations in respect of the application can be made, unless a notice has been placed in any Gazette that is published specifically for the purpose of providing notice to the public of applications made in terms of the EIA regulations.

Advertisements and notices must make provision for all alternatives.
4. DETERMINATION OF APPROPRIATE MEASURES

The practitioner must ensure that the public participation is adequate and must determine whether a public meeting or any other additional measure is appropriate or not based on the particular nature of each case. Special attention should be given to the involvement of local community structures such as Ward Committees, ratepayers associations and traditional authorities where appropriate. Please note that public concerns that emerge at a later stage that should have been addressed may cause the competent authority to withdraw any authorisation it may have issued if it becomes apparent that the public participation process was inadequate.

5. COMMENTS AND RESPONSE REPORT

The practitioner must record all comments and respond to each comment of the public before the application is submitted. The comments and responses must be captured in a comments and response report as prescribed in the EIA regulations and be attached to this application. The comments and response report must be attached under Appendix E.

6. AUTHORITY PARTICIPATION

Authorities are key interested and affected parties in each application and no decision on any application will be made before the relevant local authority is provided with the opportunity to give input. The planning and the environmental sections of the local authority must be informed of the application at least 30 (thirty) calendar days before the submission of the application.

List of authorities informed:
- Department of Water Affairs;
- Cacadu District Municipality;
- Eastern Cape Provincial Heritage Resources Authority;
- Eastern Cape Department of Agriculture;
- SANPARKS;
- Eastern Cape Parks and Tourism Agency;
- South African Civil Aviation Authority.

List of authorities from whom comments have been received:

- Eastern Cape Provincial Heritage Resources Authority

7. CONSULTATION WITH OTHER STAKEHOLDERS

Note that, for linear activities, or where deviation from the public participation requirements may be appropriate, the person conducting the public participation process may deviate from the requirements of that subregulation to the extent and in the manner as may be agreed to by the competent authority.

Any stakeholder that has a direct interest in the site or property, such as servitude holders and service providers, should be informed of the application at least 30 (thirty) calendar days before the submission of the application and be provided with the opportunity to comment.

Has any comment been received from stakeholders? YES

If “YES”, briefly describe the feedback below (also attach copies of any correspondence to and from the stakeholders to this application):
The following feedback was obtained at the public meeting held with local residents and councillors on 10 October 2013:

1. Stakeholders living in the residential suburb to the southeast of the proposed cemetery site raised the concern that the cemetery would block off the pedestrian pathway that they utilise to walk from their area into town. With the realigned road they would have further to walk.

2. The farm owner to the west of the cemetery site raised the following issues:
   a. Boreholes – concern was raised regarding the potential risk to their water quality from the cemetery.
   b. Whether the cemetery would be built over their access road and block their access.
   c. Noise impacts on them from funerals; visual impacts from the entrance gate and boundary fence etc.

The following feedback was received from stakeholders following circulation of the draft Basic Assessment Report for review:

1. A neighbouring farm owner queried whether a borehole on his property had been shown in the Geohydrological Assessment Report maps. A detailed map showing the boreholes identified in the report was provided to the neighbour, and no further comment was received.

2. The Eastern Cape Provincial Heritage Resources Authority requested a Heritage Impact Assessment, which was duly conducted and the report was circulated back to this authority for review. The report determined that the site has low cultural heritage sensitivity and motivated that a full Phase 1 Heritage Impact Assessment was not required. Conditions were suggested for inclusion into the EMPr for the development that would ensure an appropriate response should any cultural heritage resources be uncovered during construction.
SECTION D: IMPACT ASSESSMENT

The assessment of impacts must adhere to the minimum requirements in the EIA Regulations, 2010, and should take applicable official guidelines into account. The issues raised by interested and affected parties should also be addressed in the assessment of impacts.

1. ISSUES RAISED BY INTERESTED AND AFFECTED PARTIES

List the main issues raised by interested and affected parties.

| 1) Loss of the pedestrian pathway which currently runs through the centre of the cemetery site. |
| 2) Impact on access currently provided by the dirt road that currently runs through the centre of the cemetery site. |
| 3) Impact on water resources, particularly groundwater, utilised in the area. |
| 4) Visual and noise impacts of the cemetery on nearby residents. |
| 5) Possible discover of cultural heritage resources during construction of the cemetery. |

Response from the practitioner to the issues raised by the interested and affected parties (A full response must be given in the Comments and Response Report that must be attached to this report):

| 1) Pedestrian access will need to be accommodated for in the design of the realignment of the existing dirt road around the south and west of the cemetery site. Although residents may have slightly further to walk in going around the cemetery, rather than through it, this extra distance will be no more than 100m at most. The same standard of pathway (with lighting) will be required. |
| 2) The dirt road will be realigned, and the access it currently provides to the adjacent farm will be retained. |
| 3) The Groundwater Specialist Report indicates that the risk to groundwater resources is low owing to the geology, topography and depth of the water table (>9m below ground). However, the relatively close proximity of a borehole on the neighbouring farmer’s property of approx. 350m from the cemetery site (that submitted the concerns noted here) is mentioned in this Report, and as such groundwater monitoring recommendations are included in the Report that need to be adhered to in the operation of the cemetery. |
| 4) The neighbouring farmer that raised this concern is some distance from the cemetery (some 410m). While there may be some noise disturbance during funeral ceremonies, this is likely to be of limited duration. Visual impact will be limited to the effect of the boundary fence, for which recommendations have been included in the BAR to minimise negative visual impact within reasonable and practical limits. |
| 5) The Heritage Assessment Report indicated that the site has a low cultural heritage sensitivity, and that the site has been significantly disturbed by earthworks, pipelines and roads. The report did indicate that cultural heritage resources may be uncovered during the construction of the cemetery, however, so appropriate controls need to be included in the EMPr for the cemetery that address an appropriate response should this occur. |
2. IMPACTS THAT MAY RESULT FROM THE PLANNING AND DESIGN, CONSTRUCTION, OPERATIONAL, DECOMMISSIONING AND CLOSURE PHASES AS WELL AS PROPOSED MANAGEMENT OF IDENTIFIED IMPACTS AND PROPOSED MITIGATION MEASURES

List the potential direct, indirect and cumulative property/activity/design/technology/operational alternative related impacts (as appropriate) that are likely to occur as a result of the planning and design phase, construction phase, operational phase, decommissioning and closure phase, including impacts relating to the choice of site/activity/technology alternatives as well as the mitigation measures that may eliminate or reduce the potential impacts listed.

Alternative S1 and A1 (preferred site and layout alternative)

**Direct impacts:**

A. Planning Phase - Direct Impacts:

The potential direct ecological, social and economic impacts associated with the planning phase of the development include:

- Identification and selection of cemetery site.
- Layout and design specifications for cemetery.

1. Identification and Selection of Cemetery Site

The identification and selection of a suitable site for the cemetery has been an important process in which the potential social, ecological and economic impacts of a cemetery in different locations has been considered. Different sites are likely to be associated with different ecological and social issues. Similarly, different sites are associated with different land potential and land values, and so the economic impact of the development of different sites to a cemetery are likely to differ substantially.

In 2009, the Cacadu District Municipality contracted SRK Consulting to undertake a process of evaluating a range of site options for the establishment of a cemetery to service Somerset East. Three different site options were identified and assessed. All sites were in the municipality’s ownership (this was a key criterion) and were zones for public open space. One of the sites – a large site adjacent the Fish River – presented a sound option in terms of a large enough site to accommodate the cemetery. However, being located close to the Fish River, the potential risks to water resources were deemed to be significant enough to make this site un-feasible as an option.

Two sites in the vicinity of the “preferred site” (being assessed in this BAR) were also evaluated. In the end, a portion of each of these two sites was selected as the only feasible option for the establishment of the cemetery, given that this section of the two sites was set sufficiently back from the nearest watercourse (i.e. >500m from the Fish River) to accommodate use for burial purposes, and had suitable geotechnical conditions. The suitable portions of these two site options were joined into one and made the “preferred site” for the cemetery.

The site that has been selected as the “preferred development site” was thus chosen primarily on the basis of it being owned by the municipality and representing the least-risk option of the available alternative sites from the point of view of water resource impacts. The economic value
of all three sites assessed was similarly low – all sites are zoned for public open space use and are not optimally located for other forms of commercial, industrial or residential development. The economic opportunity costs of developing any of these sites is thus likely to have been similar.

The preferred development site contains a dirt road that gives access to adjacent farms, a pedestrian pathway that has been formalised by the Blue Crane Route Municipality through the erection of street lighting, and a number of high and low voltage powerlines. The cemetery development does not in principle conflict with the powerlines, but would require re-alignment of the existing dirt road and pedestrian pathway. It was deemed feasible to do this, and a proposed road realignment has thus been included in the development layout.

The selection of the preferred development site is therefore considered to have been undertaken in a manner that was considerate of economic, social and ecological impacts, with potential water resource impacts being the main environmental concern. The site that was selected as the “preferred site” is encumbered in terms of a large number of powerlines, an existing dirt track serving as access to neighbouring farms, and a pedestrian pathway. The powerlines are not in conflict with the use of the land for burial – in principle – although the large number of powerline poles and stays may reduce the number of grave sites available. Both road and pathway can and have been accommodated in a proposed road re-alignment in the development layout. As such, the ability to resolve issues of access and servitudes was also adequately considered in the site selection process.

2. Layout Design and Fencing of the Cemetery

The layout of the cemetery, and the specifications for access and fencing can make a significant contribution towards the scope and intensity of impacts associated with the development.

The layout of the cemetery has responded to the need to keep a 500m buffer between the active burial zone, and the nearest watercourse, which is the Fish River. The cemetery layout shows a burial area with capacity for some 2528 graves. This entire burial area lies outside of the 500m river buffer. The area to the west of this (i.e. closer to the river than 500m) that falls within the cemetery site boundary has been designated on the layout plan for use for remembrance walls, an administration building, a toilet block, parking and a caretakers’ house. These facilities are located at the entrance gate to the graveyard, preventing the need for cars to drive through the burial area to the parking.

This layout is deemed to be responsive to the potential water resource impacts associated with the burial area, and maximises the available space for burial by keeping access roads and other infrastructure outside of the zone which lies >500m from the Fish River. As there are no immediate neighbours on any of the boundaries of the cemetery site, the layout of various buildings and facilities within the cemetery site boundary will not result in any prejudice in terms of significantly greater impacts on some neighbours compared to others.

The choice of cemetery fencing has been raised by stakeholders. Some stakeholders questioned whether the cemetery should be fenced at all. This was associated with the fact that the fencing of the cemetery would affect an existing pedestrian path that runs through the site. The municipality has indicated that for safety and security reasons, and to prevent vandalism, the cemetery site does need to be fenced. Other stakeholders have raised a concern about the visual impact of this fence. At this time, the municipality has not specified the type of fencing material that will be used. Recommendations on this, to minimise visual impacts, are included.
in later sections of this BAR.

The planning of the cemetery layout, however, did not take cognisance of the existence of a number of high and low voltage powerlines running across the property. While these powerlines do not impact materially on the use of the underlying land for burial, the construction of buildings and physical structures such as the remembrance walls may be in conflict with the powerline servitude requirements. As such, minor changes to the layout may be required which involve slightly shifting the location of such structures so as to not conflict with powerline servitudes on the site, and so avoid the need to incur costs in realigning the powerlines to accommodate these structures.

These changes in where the buildings are physically constructed will not result in any change to the type or significance of impacts associated with the cemetery; excepting to avoid potential cost implications associated with either having to move the powerlines to accommodate the buildings, or apply to have the Environmental Authorisation amended at a later date to accommodate construction of buildings in slightly different positions than shown on the approved plan. As such – two layout plans are included in this Application for Environmental Authorisation and it is recommended that the Environmental Authority look to authorise both plans in the Record of Decision with a directive to develop only one of the two plans.

B. Construction Phase - Direct Impacts:

The potential direct ecological, social and economic impacts associated with the construction phase include:

- Blockage of access routes through the property.
- Noise and dust.
- Loss of indigenous vegetation and habitat functionality.
- Loss of grazing lands.
- Job creation.
- Discovery of cultural heritage resources.

1. Blockage of access routes

During construction of the cemetery access road and cemetery boundary fence, the current access provided by the dirt road across the property to the adjacent farm may be affected. This would impact on the owners / tenants of the adjacent farm. This impact can be mitigated by ensuring that during the construction process, an access route is designed that remains open – this may involve keeping the existing dirt road functional whilst the new road alignment is built, and only fencing the cemetery and closing the old road once the new access road is complete. This impact is therefore considered to be of very low significance owing to the fact that a limited number of people could be affected for a short duration, and that any such impact can be adequately mitigated through appropriate construction programming.

In addition, the pedestrian pathway that runs across the property may be blocked off if the cemetery boundary fencing is erected prior to the new cemetery access road being completed. This would affect the community living southeast of the cemetery site that utilises this route to get to town, and may cause them to have to walk alongside the R63 main road, which poses an increased safety risk.

The above impact can be mitigated by ensuring that the cemetery site is not fenced in (and the
existing pedestrian path not closed) until such time as the new access road around the southern and western boundary of the cemetery site is complete, AND contains a designated pedestrian walkway with functional street lighting. If this is done, the impact on the adjacent community that utilise this pedestrian route will be properly mitigated.

2. Noise and Dust

During the construction of the new access road around the southern and western boundary of the cemetery site, noise will be generated by construction machinery and workers, and dust will be generated from exposed surfaces. Those that may be impacted by this include:

- People walking on the pedestrian pathway through the cemetery site during construction;
- Adjacent farm owners / tenants;
- Residents in the nearby residential area;
- Users of the adjacent R63 and R335;
- The Aeroville Airport.

In order to prevent possible health and safety impacts on the above stakeholders, dust suppression will need to be properly addressed during the construction of the access road through the implementation of an Environmental Management Programme (EMPr). If this is done correctly, dust impacts associated with construction will be of limited significance. It should be noted that all residential homes and some distance (minimum 250m) from the site, and as such any potential dust impacts during construction will be mitigated to some extent on these stakeholders by the distance.

Noise impacts will occur during the construction of the access road. Residents from the community to the southeast of the cemetery site may be impacted by this, as well as farmers to the west and southwest of the site. The distance between the site and the closest house, however, is a minimum of 250m. As such, noise impacts are likely not to be highly significant for these stakeholders. The EMPr for the construction phase will, however, need to include controls for the working hours of the construction activities to minimise construction noise at night and over weekends.

Noise and dust impacts during construction are therefore not considered to result in significant impacts. Controls are to be included in the EMPr for the construction phase that aim to limit any potential dust and noise impacts on nearby residents and other stakeholders.

3. Loss of indigenous vegetation and habitat functionality

The cemetery site contains vegetation cover that is classified as “Bedford Dry Grassland”. The conservation status of this vegetation type is “least threatened” according to Driver (2005) and Mucina (2006). The site also contains scattered *Acacia karoo* trees, most of which are small (<1.5m) and very few of which are any taller than 2m. During the site inspection, a few low growing Aloes were noted. These are likely to be *Aloe maculata* – a species which occurs throughout South Africa and is common in the Karoo. The condition of the veld is considered intermediate to good, with relatively good basal grass cover and only small patches of bare soil. The site showed evidence of having been extensively grazed, however.
Sections of the site have been previously disturbed. Old aerial photographs and the site inspection undertaken by the Environmental Assessment Practitioner confirm that the southern part of the site has previously been subject to extensive earthworks. The dirt road and pedestrian pathways through the site are current points of disturbance.

The proposed cemetery will result in transformation of the vegetation on the majority of the site during construction and operation of the cemetery. Owing to the dry climate in the area, the re-establishment of vegetation is likely to be a lengthy process.

While there are no species of significance noted on the site that will be lost through the transformation of the site to a cemetery, it is recommended that – where possible, Aloes and any bulbs that may be encountered during construction and operation be rescued and replanted in locations within the site that are not going to be subject to physical disturbance.

The site falls within an area designated as Critical Biodiversity Area (CBA Level 2) Corridor in terms of the Eastern Cape Biodiversity Conservation Plan (ECBCP). The whole of Somerset East and surrounds is classified as falling within this zone.
Given that the function of the CBA2 Corridor zone is to provide a regional linkage between core biodiversity conservation areas, the proposed development of Aeroville Cemetery at the preferred site is unlikely to materially affect the function of this regional corridor.

4. Loss of grazing lands

The preferred cemetery site falls within the municipal commonage that is utilised by the local community for grazing of livestock. The livestock carrying capacity of the municipal commonage is limited by the fact that the area falls within the Karoo and has a low rainfall. While there was evidence of the site having been subject to grazing, there were no animals on the site on the day that the site inspection was conducted (10 October 2013), and few livestock seen in the general area during a brief drive-around.

The loss of 3.4 ha of the municipal commonage will therefore reduce the available land for livestock grazing by the local community. However, the municipal commonage is a large area and the loss of 3.4 ha is a relatively small proportion that is unlikely to result in a significantly increased grazing intensity on other areas and associated negative environmental impacts. In terms of the municipality’s mandate, the delivery of basic services, of which the provision of burial grounds is one, is considered to be a higher priority.

5. Job creation

The construction of the cemetery will result in a number of short-term jobs being created as a result of the construction of the boundary fence, realignment of the access road, and construction of buildings and parking within the cemetery boundary. This could be as much as 50 unskilled workers and 20 skilled workers for a period of about 6 – 8 months. In terms of an injection into the local economy, the development would create business and income generation opportunities for local fencing and construction companies, and local families. The socio-economic impact of the development from the construction expenditure would however be small considering the scale and intensity of the cemetery development.
6. Discovery of Cultural Heritage Resources during construction

The preferred site for establishment of Aeroville Cemetery has been surveyed by a qualified and experienced archaeologist. The site survey revealed that there were no obvious cultural heritage resources on the site, and concluded that the site presents low cultural heritage sensitivity and there is little likelihood of any archaeological remains of any significance being found on site. It does, however, point out that certain artifacts and heritage resources, including freshwater mussel middens and graves, may be buried beneath the soil, and that these may only be uncovered during construction. As such, it was recommended that should any such artifacts or remains be uncovered during the construction of the cemetery, these must be reported to the archaeologist at the Albany Museum or the Eastern Cape Provincial Heritage Resources Authority.

C. Operational Phase - Direct Impacts:

The potential direct ecological, social and economic impacts associated with the operational phase include:

- Loss of pedestrian access route.
- Noise and visual impacts.
- Road safety and congestion.
- Water resource impacts.
- Public amenity.
- Job creation.

1. Loss of Pedestrian Access Route

The pedestrian access pathway that runs through the property will be permanently closed once the cemetery is fenced. Local residents have raised this as a concern because they use this route often, the municipality has formalised it with the installation of street lighting, and they do not wish to be re-routed such that they have to walk further or next to the R63 main road (for safety reasons).

The loss of a pedestrian pathway would be considered to be a locally significant social impact of the proposed development. As such, it is recommended that the proposed access road that is to be built around the south and western sides of the cemetery, include a designated sidewalk and appropriate street lighting, to replace the existing pedestrian pathway function. A pedestrian link between this access road and the existing pedestrian pathway on the western side of the cemetery site is shown on the proposed layout plan for development, and which it is our recommendation should be constructed as a Condition of Environmental Authorisation for the cemetery. Should this be done, the social impact of the loss of this pedestrian pathway will be properly mitigated. The extra distance that this new route would present would be less than 100m more than the current pedestrian route (this has been estimated from local maps of the area). This extra distance is not considered to present a significant issue to users of the pedestrian pathway, most of whom walk in excess of 2 kilometers between the Somerset East CBD and their homes.

2. Noise and Visual Impacts

The proposed cemetery may result in noise impacts during funeral ceremonies, most of which would take place on the weekend. Those affected by the noise would include:
- Adjacent farm owners / tenants;
- Residents in the nearby residential area.

Owing to the fact that the nearest residences are 250m away from the cemetery site, this noise disturbance is unlikely to present a significant issue. The noise would comprise low intensity noise of a relatively short duration, and would not extent into hours of darkness. As such, the noise impacts of the proposed cemetery are not considered to present a significant issue.

The visual impact of the cemetery boundary fence has been raised by stakeholders as a potential issue. The Blue Crane Route Municipality has confirmed that for security reasons the cemetery will need to be fenced.

The choice of fencing materials will have a substantial influence on the type and intensity of the visual impacts. In terms of precedent, the cemetery across the road is fenced with barbed wire fencing (see photographs in Appendix). This has a limited visual impact. However, because the proposed Aeroville Cemetery will include buildings and infrastructure that needs to be secured, more substantial fencing will be required, but within a reasonable cost range. The following suggestions are made with respect to boundary fencing to reduce the visual impacts.

If possible, wire fencing materials should be used rather than concrete. Suggested fencing types that are commonly used for public facilities that has low visual impact includes: betafence (www.betafence.co.za); steel palisade fencing (green or grey would be recommended); or weldmesh. A durable, secure and theft-proof fencing type should be selected to minimise ongoing costs of repair due to theft and vandalism of the fence.

Provided that the cemetery is not fenced with a concrete (or brick) wall, or concrete palisade fencing, the visual impact of the cemetery fence is unlikely to cause a significant negative visual impact.

3. Road safety and congestion

The cemetery is likely to generate significant concentrations traffic during funerals. Provided that sufficient off-street parking is available, these events are unlikely to result in traffic congestion at or around the cemetery such that road safety issues emerge.

The proposal to bring the access into the cemetery around the southern boundary and in from the west, which is away from the R335, will address this issue of potential road safety to a large degree as there is more space available to allow overflow parking of cars outside the gate that don’t fit into the cemetery parking, without the potential for blocking of the road. Users of the access road to get to adjacent farms may be inconvenienced by such this congestion, however. There are 4 farms that use this as their primary access.

It is recommended that the municipality should designate overflow parking areas, or bays, outside the cemetery gate in order to limit blockages to the road, and damage to the natural veld.

4. Water resource impacts

The specialist groundwater assessment report conducted by SRK Consulting (see Appendix D) evaluated the potential risk to water resources posed by the cemetery in the proposed location. The report indicates that the following main factors are what determine the level of
risk that a cemetery may pose to water resources:

i. Geology and soils – different geology and soils are more and less permeable to water, and pollutants, and so depending on the geological context of the cemetery site, there may be greater or lesser risk to water resources. This includes whether boreholes in close proximity to the cemetery site are likely to be recharged from aquifers running below the cemetery site or not (i.e. groundwater flow direction)

ii. Groundwater table – groundwater should be more than 2.5m below the bottom of a grave (normally 1.8m deep) for a cemetery site to limit risk of groundwater contamination.

iii. Distance to domestic water abstraction points – a distance of 465m between a burial area and a water abstraction point (including boreholes) is considered safe.

The report identified the following:

“The 1:250 000 Geological Map of Graaff-Reinett (3324) by the Council for Geoscience indicates that the majority of the Site is situated on the Middleton Formation of the Beaufort Group. The Beaufort Group forms part of the Karoo Supergroup. The Middleton Formation is overlain by Quaternary alluvium in the north-western section of the Site.

As part of the previous environmental assessment for the proposed cemetery (2008), a hydrogeological investigation was conducted where a hydrocensus was done to establish whether there are any existing boreholes and groundwater users within close proximity of the proposed cemetery sites. The National Groundwater Database (NGDB) of the Department of Water Affairs (DWA) revealed the existence of five boreholes within a 1 km radius of the proposed cemetery site, but only two of these could be located during the hydrocensus. An additional five boreholes were found that were not recorded on the NGDB.

The water levels of five of the seven located boreholes ranged between 10 and 21 m below ground level (bgl). These boreholes were used for water supply, mostly as drinking water. It is unknown whether these boreholes were being pumped when the water levels were measured. If this was the case, the water levels may have been drawn down by the pumping. Two of the boreholes were blocked with stones and is no longer in use. Boreholes 1 to 3 (recorded on the NGDB) could not be located during the hydrocensus.

According to the geological map, the majority of these boreholes were drilled into the Quaternary alluvium, and may or may not extend into the Middleton Formation below. Therefore the yields (and water levels) of these boreholes may be reliant on rainfall for recharge.
The National Groundwater Archive (NGA) and the National Groundwater Data Base (NGDB) were queried for the Site and surrounding area. No boreholes were located on the Site, but 34 boreholes were identified within a 1 km radius of the Site boundaries.
The water levels measured in boreholes around the Site in 2008 varied between 11 and 21 m bgl. Therefore the minimum distance between the base of a grave (approximately 1.8 m bgl) and the water table is assumed to be approximately 9 m. This is regarded sufficient for the attenuation of bacteria. However, it must be taken into consideration that water levels may rise in the vicinity of the Klein Fish River. Water levels may also vary in the porous alluvium (parts of the Site) since it is highly influenced by rainfall recharge and the volumes of water in the river. Should parts of the cemetery be situated on porous Quaternary alluvium, the movement through the more permeable sediment may be enhanced.

Conclusions on the risk factors i, ii and iii from the specialist report are:

i. The majority of the boreholes surrounding the site appear to have been drilled into Quaternary alluvium. They are most likely to be recharged from rainfall and groundwater levels associated with the Fish River.

ii. If the water level information gathered during the 2008 hydrocensus is accepted, the basal buffer zone between the water table and base of the graves is 9m, which is sufficient (i.e. more than 2.5 m).

iii. Two boreholes are situated within the 465 m buffer zone from the cemetery Site, namely Borehole 4 and Windpump 2. Windpump 2 was not in use at the time of the hydrocensus in 2008, but Borehole 4 was reported to be used for drinking water by its owner. Borehole 4 is situated slightly up-gradient of the cemetery Site with regards to expected groundwater flow direction. During the 2008 hydrocensus, no down-gradient groundwater users were identified, therefore reducing potential receptors of contamination.
The specialist report concludes that the risk of groundwater becoming contaminated from the proposed cemetery is unlikely. However, the report also makes a number of recommendations for establishment of baselines and monitoring points as part of the cemetery establishment process.

5. Public amenity

The proposed establishment of Aeroville Cemetery represents the establishment of a public amenity to service the local community of Somerset East. Having sufficient burial space locally is considered to be a required service that reduces the need for burial having to take place far from people’s homes, and concomitant cost and inconvenience of having to travel long distances to visit the graves of families and friends. The proposed cemetery is therefore considered to be an essential public amenity within Somerset East.

6. Job creation

The cemetery will create at least two permanent jobs in the operational phase: 1 for a cemetery caretaker, and one for a grave digger. Additional temporary or part-time job may be created for grave digging at particular times.

The additional jobs are much needed in Somerset East, but the numbers are not significant in the greater context.

Indirect impacts:

D. Planning Phase – Indirect Impacts

The potential indirect ecological, social and economic impacts associated with the planning phase include:

- Impact on future development potentials
- Need for additional cemetery sites

1. Impact on future development potential

The preferred cemetery site, once developed, precludes any future change of land use of the site. In a nutshell – once cemeteries are established, it is only in exceptional cases that they are moved elsewhere, so the land is more or less set aside for use as a cemetery in perpetuity. This is not necessarily the case for a number of other land use types, where rezoning, building demolition and redevelopment can be implemented which materially changes the nature of the area as growth happens or market demands shift.

The cemetery site is located adjacent the R63, which is the main route between Graaff Rienet, Somerset East, Cookhouse and N10 (national road between Cradock and Coega). It lies adjacent another cemetery site (on the other side of the R335) that also lies adjacent this road.

While at present the area is not part of the Somerset East CBD, there is a proposal for a major commercial development around the Somerset East Airport, which may change the character of the zone between the airport and the CBD, creating more demand for commercial development. In the future, the two cemetery sites may thus be limiting of commercial land
use development in this area at the junction of the R335 with the R63. This is not seen as a significant issue, but would need to be taken into account in future land use planning for the area.

2. Need for additional cemetery sites

The proposed cemetery site is not considered to be large enough to accommodate long-term burial space needs. As such, additional cemetery sites will need to be found. While it may have been preferable to identify a larger site, with an appropriate location and hydrogeological conditions, such a site is not available in municipal-owned land.

In terms of future planning for burial space, it is recommended that the municipality investigate possible alternate approaches and technologies (e.g. cremation) that could be promoted amongst the community to reduce future demand for land-space for burial.

E. Construction Phase – Indirect Impacts

There are no potential indirect ecological, social and economic impacts associated with the construction phase. All impacts associated with the construction phase have been covered in the previous section.

F. Operational Phase – Indirect Impacts

There are no potential indirect ecological, social and economic impacts associated with the operational phase. All impacts associated with the construction phase have been covered in the previous section.

Cumulative impacts:

G. Cumulative Impacts

The potential cumulative ecological, social and economic impacts associated with the proposed development include:

- Impact on water resources.

1. Cumulative impact of the development on water resources

The proposed Aeroville Cemetery represents an extension of burial facilities already provided within the Somerset East area. There are currently 2 existing cemeteries, one of which is located adjacent the preferred site for the Aeroville Cemetery, and the other is located in the northeast of Somerset East.
The cumulative impact of burial grounds in the municipal area on ground and surface water resources is an important consideration.

The existing cemetery in the northwest of Somerset East has presented a problem with regards to waterlogging and may therefore be presenting an existing risk to water resources. The proposed new cemetery may alleviate this problem by providing a less risky location for burial.

While groundwater impacts from the 3 cemeteries are likely to manifest in local borehole pollution, the three cemeteries all fall within the Fish River catchment and so any impact on surface water resources will affect a broader user group in this catchment.

To date there is no information available on the water resource impacts of the existing cemeteries on surface (or ground) water resources. As such, it is a recommendation that as part of the establishment of the Aeroville Cemetery, the municipality implement a groundwater monitoring plan for that site, and engage with the Department of Water Affairs for the implementation of a broader programme to monitor water resource quality in the Fish River catchment and identify the effect of potential municipal sources of pollution such as the cemetery sites and other municipal infrastructure.

**Alternative S1 and A2 (minor change to layout from Alternative 1)**

Alternative A2 comprises a minor shift in the location of the proposed caretakers house, administration building and toilet block towards the south – but still within the preferred site boundary and not into the area which has been designated as suitable for burial – to avoid having these buildings located under an existing powerline on the site. This alternative has been suggested here in the instance that the Blue Crane Route Municipality would prefer to avoid having to relocate the powerline to accommodate these buildings. Alternative 2 also involves moving a remembrance wall that in Alternative 1 lies in the position where the above buildings are proposed in Alternative 2, to the north into an area where the other 4 remembrance walls are located.
The environmental impacts associated Alternative 2 (involving the minor shift in the location of buildings on the preferred site) are not anticipated to be any different to those assessed for Alternative 1. However, the benefit of Alternative 2 is that it addresses the potential conflict between the location of proposed buildings and an existing powerline on the site.

No Go Alternative

The No-go development alternative assumes that the proposed cemetery is not established.

**Direct impacts:**

**A. Planning Phase - Direct and Indirect Impacts:**

If the proposed development does not go ahead, the planning phase for the proposed new cemetery (which is a public amenity that needs to be provided within the Somerset East area) will continue until such time as a suitable site is found for the establishment of a cemetery.

The direct immediate impact of this would be additional costs for planning and feasibility studies that would be incurred by the Blue Crane Route Municipality. These costs could be substantial and owing to budgetary constraints could delay the establishment of an additional cemetery in Somerset East by some years.

If an argument were to be presented that Aeroville Cemetery as proposed should not be developed, and rather a process of identifying one large site that could accommodate the long term burial demand should instead be identified, the Blue Crane Route Municipality would argue that there is no one large piece of land that it owns or could acquire that would meet all foreseeable burial needs in the Somerset East area. As such, it would argue that a number of smaller cemetery sites would need to be established. The non-development of Aeroville cemetery as proposed would therefore present a significant challenge for the municipality, which is under pressure to find additional burial space to accommodate short term and medium term burial needs, particularly in light of the fact that the existing cemetery in the northeast of Somerset East is proving to be unsuitable for burial and poses a direct threat to water quality.

All impacts pertaining to the potential future development constraints that could be posed by the cemetery in the proposed location would, however, be avoided in the no-go scenario, and would create more time for strategic spatial planning to respond to the potential future needs for land use change around the Somerset East airport.

**B. Construction Phase - Direct and Indirect Impacts:**

The potential direct ecological, social and economic impacts associated with the construction phase that were identified include:

- Blockage of access routes through the property.
- Noise and dust.
- Loss of indigenous vegetation and habitat functionality.
- Loss of grazing lands.
- Job creation.
- Discovery of cultural heritage resources.
None of these impacts were considered significant. However, all negative impacts associated with construction on the preferred site would be avoided, and the job creation benefits would not be realised.

C. Operational Phase – Direct and Indirect Impacts:

The potential direct ecological, social and economic impacts associated with the operational phase include:

- Loss of pedestrian access route.
- Noise and visual impacts.
- Road safety and congestion.
- Water resource impacts.
- Public amenity.
- Job creation.

None of these impacts were considered significant. However, all negative impacts associated with operation on the preferred site would be avoided, and the job creation benefits would not be realised.

D. Cumulative impacts:

The potential cumulative water resource impacts associated with cemeteries in the Somerset East area would remain static, or possibly be worse under a no-go development scenario given that Aeroville Cemetery would be used as an alternative burial site to an existing cemetery that poses a water resource threat.

In the short to medium term, the Blue Crane Route Municipality needs to find an additional cemetery site to service local demand in Somerset East. As the preferred site selected for this appears to represent limited risk to water resources, the no-go development scenario poses no particular advantages in respect of minimising cumulative water resource impacts from cemeteries.
3. ENVIRONMENTAL IMPACT STATEMENT

Taking the assessment of potential impacts into account, please provide an environmental impact statement that summarises the impact that the proposed activity and its alternatives may have on the environment after the management and mitigation of impacts have been taken into account, with specific reference to types of impact, duration of impacts, likelihood of potential impacts actually occurring and the significance of impacts.

Alternative S1 and A1 (preferred alternative); and S1 and A2

The preferred development alternative, with recommended mitigation measures in place (including the layout alternative A2 to address potential conflict between powerlines and proposed buildings on the preferred site), is associated with the following impacts:

<table>
<thead>
<tr>
<th>Type of Impact</th>
<th>Duration</th>
<th>Likelihood of Impact Occurring</th>
<th>Significance of Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Planning Phase – Direct Impacts</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Identification and selection of cemetery site – impact of poor site choice</td>
<td>Long</td>
<td>Low</td>
<td>Low (-)</td>
</tr>
<tr>
<td>Layout and design specifications for cemetery – impact of poor layout design and specifications</td>
<td>Long</td>
<td>Low</td>
<td>Low (-)</td>
</tr>
<tr>
<td><strong>Planning Phase – Indirect Impacts</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Impact on future development potentials by locking land into use for cemetery</td>
<td>Long</td>
<td>Medium</td>
<td>Low (-)</td>
</tr>
<tr>
<td>Need for additional cemetery sites due to choice of too small site</td>
<td>Long</td>
<td>High</td>
<td>Low (-)</td>
</tr>
<tr>
<td><strong>Construction Phase – Direct Impacts</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blockage of access routes through the property during construction.</td>
<td>Short</td>
<td>Low</td>
<td>Low (-)</td>
</tr>
<tr>
<td>Noise and dust.</td>
<td>Short</td>
<td>High</td>
<td>Low (-)</td>
</tr>
<tr>
<td>Loss of indigenous vegetation and habitat functionality.</td>
<td>Long</td>
<td>Medium</td>
<td>Low (-)</td>
</tr>
<tr>
<td>Loss of grazing lands.</td>
<td>Long</td>
<td>High</td>
<td>Low (-)</td>
</tr>
<tr>
<td>Job creation.</td>
<td>Short</td>
<td>High</td>
<td>Low (+)</td>
</tr>
<tr>
<td>Discovery of cultural heritage resources.</td>
<td>Long</td>
<td>Low</td>
<td>Low (-)</td>
</tr>
<tr>
<td><strong>Operational Phase – Direct Impacts</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Loss of pedestrian access route.</td>
<td>Long</td>
<td>Low</td>
<td>Low (-)</td>
</tr>
<tr>
<td>Public amenity.</td>
<td>Long</td>
<td>High</td>
<td>High (+)</td>
</tr>
<tr>
<td>Noise and visual impacts.</td>
<td>Long</td>
<td>Low</td>
<td>Low (-)</td>
</tr>
<tr>
<td>Road safety and congestion.</td>
<td>Long</td>
<td>Low</td>
<td>Low (-)</td>
</tr>
<tr>
<td>Water resource impacts.</td>
<td>Long</td>
<td>Low</td>
<td>Low (-)</td>
</tr>
<tr>
<td>Job creation.</td>
<td>Long</td>
<td>High</td>
<td>Low (-)</td>
</tr>
<tr>
<td><strong>Cumulative Impacts</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cumulative impacts on water resources from cemeteries</td>
<td>Long</td>
<td>Low</td>
<td>Low (-)</td>
</tr>
</tbody>
</table>

The proposed development is associated with a number of potentially negative social, economic and ecological impacts which, if properly managed and mitigated as recommended, will not be
The proposed cemetery is a public amenity which the Blue Crane Route Municipality intends to establish to service the local population in terms of the provision of appropriate burial space. The job creation benefits from this development will be locally important during the construction phase, and of limited local or regional significance in the operational phase.

The primary negative impacts that have been identified that require mitigation include:

1. Any temporary or permanent loss of access from the dirt road and pedestrian pathway that run through the preferred cemetery site with have a locally significant impact on affected stakeholders. The recommended mitigation measures for this have been to ensure that access is kept open during realignment of the cemetery access road, and fencing of the cemetery; and that a properly constructed and serviced pedestrian pathway is included with the construction of the cemetery access road.

2. Dust impacts on local residents, pedestrians and users of the Somerset East airport may be significant at times during the construction phase. Dust suppression will be important during the construction of the cemetery access road, and this is to be dealt with in terms of the provisions of the EMPr. Noise control during construction must similarly managed through the provisions of the EMPr.

3. Visual impacts of the cemetery fence may detract from local landscape amenity. The potential visual impacts of the cemetery fence are to be addressed through the use of specified fencing types including betafence, steel palisade fencing, or weldmesh (or similar).

4. Negative impacts on local boreholes, particularly borehole 4 which is 350m from the cemetery site and is used for domestic purposes. Potential impacts of the cemetery on water resources is to be managed through the provisions of the EMPr and the groundwater monitoring plan contained therein.

5. Congestion around the cemetery access gate during large funerals may create road safety issues, and if overflow parking is not properly laid out, damage may be caused to vegetation on the land surrounding the cemetery site. The municipality is therefore required to designate and demarcate overflow parking areas outside the cemetery gate to ensure that these risks are addressed.

6. Conflicts between the layout plan and existing powerlines on the site may result in a need for costly relocation of powerlines, or Application for Amendment of the Environmental Authorisation to permit a change in position of buildings. Owing to the fact that the changes in the positions of the buildings that would be required to accommodate keeping the powerlines in situ are not likely to result in any change to the impacts of the development, two layout plans (Alternative A1 and A2) have been included in this Application and it is recommended that the Environmental Authority approves both plans with a clear indication that the development may be constructed in accordance with either of the two plans.

7. Local job creation benefits are to be maximised through prioritising the use of local labour during construction, and upskilling local workers rather than importing skilled workers from elsewhere where possible. These conditions can be included in the municipality’s Conditions of Contract for tenders they put out for construction of the cemetery.
8. Although the cultural heritage sensitivity of the site is considered to be low, and the archaeologist that assessed the site indicated that the likelihood of archaeological remains of any significance being found on the site is low, construction of the cemetery may uncover important cultural heritage resources that need to be protected. This has been dealt with in the EMPr for the development.

No-go alternative (compulsory)

The No-go development alternative is associated with the following impacts:

<table>
<thead>
<tr>
<th>Type of Impact</th>
<th>Duration</th>
<th>Likelihood of Impact Occurring</th>
<th>Significance of Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Planning Phase – Direct Impacts</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Identification and selection of cemetery site – impact of need to continue this process until further alternate sites are identified</td>
<td>Medium</td>
<td>High</td>
<td>Medium (-)</td>
</tr>
<tr>
<td>Layout and design specifications for cemetery</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td><strong>Planning Phase – Indirect Impacts</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Impact on future development potentials by avoiding locking land into use for cemetery</td>
<td>Long</td>
<td>Medium</td>
<td>Low (+)</td>
</tr>
<tr>
<td>Need for additional cemetery sites due to choice of too small a site</td>
<td>Long</td>
<td>Medium</td>
<td>Low (-)</td>
</tr>
<tr>
<td><strong>Construction Phase – Direct Impacts</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blockage of access routes through the property during construction.</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Noise and dust.</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Loss of indigenous vegetation and habitat functionality.</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
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<tr>
<td>Loss of grazing lands.</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Job creation.</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Discovery of cultural heritage resources.</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td><strong>Operational Phase – Direct Impacts</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Loss of pedestrian access route.</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Public amenity.</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Noise and visual impacts.</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Road safety and congestion.</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
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<tr>
<td>Water resource impacts.</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Job creation.</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td><strong>Cumulative Impacts</strong></td>
<td></td>
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<td></td>
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<tr>
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<td>Long</td>
<td>Low</td>
<td>Low (-)</td>
</tr>
</tbody>
</table>

The No-Go Development Alternative presents the possibility of extending the planning and site identification phase by Blue Crane Route Municipality for the development of another cemetery in Somerset East. Inevitably – another cemetery site would need to be found as the municipality needs
to deliver burial space as a component of its public service delivery mandate. While this may aid the process of thinking further about the implications of locking the preferred site into use as a cemetery in the long term, this would have significant implications for the municipality which is under pressure to deliver more burial space in the short term. The costs of further investigations and feasibility studies for alternative sites may also not yield a significantly better option than preferred site for Aeroville Cemetery as presented here, considering that the site does not pose any serious environmental or social risks for use as a cemetery.

SECTION E. RECOMMENDATIONS OF PRACTITIONER

Is the information contained in this report and the documentation attached hereto sufficient to make a decision in respect of the activity applied for (in the view of the environmental assessment practitioner)?

Yes

Is an EMPr attached?

Yes

The EMPr must be attached as Appendix F.

If “NO”, indicate the aspects that should be assessed further as part of a Scoping and EIA process before a decision can be made (list the aspects that require further assessment):

N/A

If “YES”, please list any recommended conditions, including mitigation measures that should be considered for inclusion in any authorisation that may be granted by the competent authority in respect of the application:

It is recommended that the proposed development of Aeroville Cemetery, at the preferred site, be authorised, subject to the following Conditions being met:

1. An updated hydrocensus of all areas downslope of the cemetery site (up to the Fish River) must be undertaken prior to the establishment of the cemetery. Included in this investigation must be a geotechnical analysis of the area between the cemetery site and the nearest borehole to site (known as Borehole 4 from the hydrocensus conducted by SRK Consulting in 2008) that is used for domestic purposes.

2. A monitoring borehole must be established in accordance with the recommendations of the Groundwater Monitoring Plan (contained in the EMPr) prior to the cemetery being established. Baseline water testing must be carried out prior to the cemetery becoming operational.

3. The Construction and Operation of the Cemetery must be undertaken in accordance with the provisions of the EMPr such that noise, dust and stormwater impacts are properly controlled.

4. A properly constructed pedestrian pathway must be included in the design and construction of the cemetery access road. This pedestrian pathway must be constructed to tie into the existing pedestrian route near the Fish River crossing of the R63. The pedestrian route must be lit with appropriate street lighting for safety purposes.

5. Construction programming for the construction of the access road and cemetery fence must be such that the road providing access to farms adjacent to the site is not completely blocked off at any time, and the pedestrian pathway is not blocked off, until such time as
the new pedestrian pathway on the access road is functional.

6. The municipality must designate overflow parking areas, or bays, outside the cemetery gate in order to limit blockages to the road, and damage to the natural veld.

7. Plants that can be rescued during the construction and operational phases of the cemetery should be rescued and replanted within the cemetery site.

9. The choice of materials and colours for the cemetery fence must take into account the need to minimise visual impacts.

10. The cemetery and associated infrastructure must be constructed in accordance EITHER with layout plan A1 OR with plan A2. Layout Plan A1 must be complied with if the municipality intends to move the powerline that conflicts with buildings on the site; and A2 must be complied with if the municipality does not intend to move the powerline.

11. Local job creation benefits are to be maximised through prioritising the use of local labour during construction, and upskilling local workers rather than importing skilled workers from elsewhere where possible.