

# BASIC ASSESSMENT REPORT



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Department:  
Environment & Nature Conservation  
NORTHERN CAPE PROVINCE  
REPUBLIC OF SOUTH AFRICA

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(For official use only)

**File Reference Number:**

**Application Number:**

**Date Received:**


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### **Basic Assessment Report in terms of the Environmental Impact Assessment Regulations, 2014, promulgated in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998), as amended.**


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**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, 2014 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. This report format is current as of **08 December 2014**. It is the responsibility of the applicant to ascertain whether subsequent versions of the form have been published or produced by the competent authority
3. 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.
4. Where applicable **tick** the boxes that are applicable in the report.
5. An incomplete report may be returned to the applicant for revision.
6. 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.
7. This report must be handed in at offices of the relevant competent authority as determined by each authority.
8. No faxed or e-mailed reports will be accepted.
9. The signature of the EAP on the report must be an original signature.
10. The report must be compiled by an independent environmental assessment practitioner.
11. 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.
12. A competent authority may require that for specified types of activities in defined situations only parts of this report need to be completed.
13. Should a specialist report or report on a specialised process be submitted at any stage for any part of this application, the terms of reference for such report must also be submitted.

### **SECTION A: ACTIVITY INFORMATION**

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

YES 	NO
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If YES, please complete the form entitled “Details of specialist and declaration of interest” for the specialist appointed and attach in Appendix I.

1. ACTIVITY DESCRIPTION

a) Describe the project associated with the listed activities applied for

The Gamagara Local Municipality (Gamagara Municipality) proposes to extend the cemetery of the town of Kathu. The Kathu Cemetery is located approximately 3.5 km north-east of central Kathu on the remaining extent of the farm Uitkoms 463, immediately east of the N14 road. The cemetery falls within the Gamagara Municipality and John Taolo Gaetsewe District Municipality, in the Northern Cape.

The Kathu Cemetery will be extended by 5 hectares (ha) in a southern direction on land owned by the Sishen Iron Ore Company (Pty) Ltd (SIOC). The Gamagara Municipality maintains that the extension is necessary due to the saturated cemetery facilities, and the rapid expansion of the town of Kathu, which is partly due to the resettlement of the Dingleton residents. SIOC is in the process of relocating the town of Dingleton, situated immediately west. If the current Sishen Iron Ore Mine (Sishen Mine) pit, to the phase 4 (f-h) development on the farm Sekgame 461 directly south-east of Kathu. The 5 ha site extension will be transferred to the Gamagara Municipality through a land swap agreement as part of the Dingleton Resettlement project.

The existing Kathu Cemetery, and extension thereof, is located within the Kathu Forest, a protected woodland in terms of the National Forest Act, 1998 (NFA, No. 84 of 1998) and the National Environmental Protected Areas Act, 2003 (NEMPAA, No. 57 of 2003). The competent authority, Department of Environment and Nature Conservation (DENC) has also identified and adopted Kathu Forest as a critical biodiversity area.

Construction activities of the extension to the Kathu Cemetery will include site clearance, access/maintenance roads, fencing and diesel storage facilities.

The main ongoing operational activities on site will involve the erection of a fence to mark off the boundaries of the cemetery, establishing an access road, the digging of graves and burial of coffins. All soil that is dug up to make the graves will be replaced over the coffins.

b) Provide a detailed description of the listed activities associated with the project as applied for

\*As of the 8<sup>th</sup> December 2014, GN R983, GN R 984 and GN R 985 are the applicable regulations for Listed Activities for Environmental Impact Assessments and Basic Assessments - see page 35 for further information.

Listed activity as described in <del>GN 734, 735 and 736</del> * GN 983, 984, 985	Description of project activity
GNR 983 List 1 Activity 24: The development of- (ii) a road with a reserve wider than 13,5 meters, or where no reserve exists	Access and maintenance roads outside urban areas, will be constructed. The roads will vary in width and length.

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<p>where the road is wider than 8 metres;</p>	
<p><b>GNR 983 List 1 Activity 27:</b> The clearance of any area of 1 hectares or more, but less than 20 hectares of indigenous vegetation,</p>	<p>Vegetation clearance of an area between 1 and 5 ha may be necessary to extend the graveyard.</p> <p>The Kathu Cemetery Extension will be located within the Kathu Forest. The Kathu Forest is a protected woodland in terms of the NFA and the NEMPAA, and a critical biodiversity area identified and adopted by the DENC. Known protected plant and tree species that are present might be affected by the cemetery extension.</p>
<p><b>GNR 983 List 1 Activity 44:</b> The expansion of cemeteries by 2500 square metres or more.</p>	<p>The Kathu Cemetery needs to be expanded by 50 000 square metres to accommodate future graves.</p>
<p><b>GNR 983 List 1 Activity 56:</b> The widening of a road by more than 6 metres, or the lengthening of a road by more than 1 kilometre- (i) where the existing reserve is wider than 13.5 metres; or (ii) where no reserve exists, where the existing road is wider than 8 metres;</p>	<p>Possible widening or lengthening of access and maintenance roads outside urban areas.</p>
<p><b>GNR 985 List 3 Activity 4:</b> The development of a road wider than 4 metres with a reserve less than 13.5 metres. (a) In Northern Cape Province:  (ii) Outside urban areas, in: (aa) A protected area identified in terms of NEMPAA, excluding disturbed areas; (ee) Critical biodiversity areas as identified in systematic biodiversity plans adopted by the competent authority or in bioregional plans</p>	<p>Possible construction of access and maintenance roads outside urban areas.</p> <p>The Kathu Cemetery Extension will be located within Kathu Forest. The Kathu Forest is a protected woodland in terms of the NFA and the NEMPAA, and a critical biodiversity area identified and adopted by the DENC.</p> <p>Known protected plant and tree species that are present might be affected by the cemetery extension.</p>
<p><b>GNR 985 List 3 Activity 12:</b> The clearance of an area of 300 square metres or more of indigenous vegetation except where such clearance of indigenous vegetation is required for maintenance purposes undertaken in accordance with a maintenance management plan.</p>	<p>The Kathu Cemetery Extension will be located within the Kathu Forest. The Kathu Forest is a protected woodland in terms of the NFA and the NEMPAA, and a critical biodiversity area identified and adopted by the DENC.</p>

<p>(a) In Northern Cape province:                  (ii) Within critical biodiversity areas identified in bioregional plans;                  (iv) On land, where, at the time of the coming into effect of this Notice or thereafter such land was zoned open space, conservation or had an equivalent zoning.</p>	
<p><b>GNR 985 List 3 Activity 18:</b>                  The widening of a road more than 4 metres, or the lengthening of a road by more than 1 kilometre.                  (a) In Northern Cape province                  (ii) Outside urban areas, in:                  (aa) (aa) A protected area identified in terms of NEMPAA, excluding conservancies;                  (ee) Critical biodiversity areas as identified in systematic biodiversity plans adopted by the competent authority or in bioregional plans;</p>	<p>Possible widening of access and maintenance roads by more than 4 m or lengthening by more than 1 km, outside urban areas.</p> <p>The Kathu Cemetery Extension will be located within Kathu Forest. The Kathu Forest is a protected woodland in terms of the NFA and the NEMPAA, and a critical biodiversity area identified and adopted by the DENC.</p> <p>Known protected plant and tree species that are present might be affected by the cemetery extension.</p>

## 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 as required by Appendix 1 (3)(h), Regulation 2014. Alternatives should include a consideration of all possible means by which the purpose and need of the proposed activity (NOT PROJECT) 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.

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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, minutes and seconds. The projection that must be used in all cases is the WGS84 spheroid in a national or local projection.

**a) Site alternatives**

<b>Alternative 1 (preferred alternative)</b>		
Description	Lat (DDMMSS)	Long (DDMMSS)
<b>Cemetery Expansion adjacent to the existing Kathu Cemetery</b>	<b>27 40 28.02 S</b>	<b>23 04 33.70 E</b>
<b>Alternative 2</b>		
Description	Lat (DDMMSS)	Long (DDMMSS)
<b>Alternative 3</b>		
Description	Lat (DDMMSS)	Long (DDMMSS)

In the case of linear activities: - **Not Applicable**

<b>Alternative:</b>	<b>Latitude (S):</b>	<b>Longitude (E):</b>
Alternative S1 (preferred)		
• Starting point of the activity		
• Middle/Additional point of the activity		
• End point of the activity		
Alternative S2 (if any)		
• Starting point of the activity		
• Middle/Additional point of the activity		
• End point of the activity		
Alternative S3 (if any)		
• Starting point of the activity		
• Middle/Additional 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.

In the case of an area being under application, please provide the co-ordinates of the corners of the site as indicated on the lay-out map provided in Appendix A of this form.

**b) Lay-out alternatives**

**There are no layout alternatives that have been considered, as the layout has been developed to maximise the number of graves that can be excavated in the proposed project area, to maximise the lifespan of the cemetery for new burials and reduce the need to expand the cemetery boundaries which would impact a larger area. Refer to Appendix C.**

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Alternative 1 (preferred alternative)		
Description	Lat (DDMMSS)	Long (DDMMSS)
<b>Cemetery Expansion adjacent to existing Kathu Cemetery</b>	<b>27 40 28.02 S</b>	<b>23 04 33.70 E</b>
Alternative 2		
Description	Lat (DDMMSS)	Long (DDMMSS)
Alternative 3		
Description	Lat (DDMMSS)	Long (DDMMSS)

c) Technology alternatives –

Technology alternatives are not applicable to this type of project as the proposed project is the expansion of an existing cemetery and will not involve the need to assess different technologies.

Alternative 1 (preferred alternative)		
<b>Not Applicable</b>		
Alternative 2		
Alternative 3		

d) Other alternatives (e.g. scheduling, demand, input, scale and design alternatives)

Other alternatives are not applicable to this type of project as the proposed project is the expansion of an existing cemetery.

Alternative 1 (preferred alternative)		
<b>Not Applicable</b>		
Alternative 2		
Alternative 3		

e) No-go alternative

Should the project not progress there will not be any expansion of the Kathu cemetery. There will not be sufficient capacity for graves for the Kathu residents, as the existing cemetery is near full capacity. Residents will need to find another cemetery further away.

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

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### 3. PHYSICAL SIZE OF THE ACTIVITY

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

**Alternative:**

Alternative A1<sup>1</sup> (preferred activity alternative)

Alternative A2 (if any)

Alternative A3 (if any)

**Size of the activity:**

50 000 m <sup>2</sup>
50 000 m <sup>2</sup>
m <sup>2</sup>

or, for linear activities:

**Alternative:**

Alternative A1 (preferred activity alternative)

Alternative A2 (if any)

Alternative A3 (if any)

**Length of the activity:**

m
m
m

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

**Alternative:**

Alternative A1 (preferred activity alternative)

Alternative A2 (if any)

Alternative A3 (if any)

**Size of the site/servitude:**

50 000 m <sup>2</sup>
50 000 m <sup>2</sup>
m <sup>2</sup>

### 4. SITE ACCESS

Does ready access to the site exist?

YES ✓	NO
m	

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

Describe the type of access road planned:

**A gravel access road already exists to the existing cemetery area; however, there will be the construction of additional gravel access and maintenance roads. The roads will vary in width and length and some section will be more than 8m wide.**

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.

### 5. LOCALITY MAP

An A3 locality map must be attached to the back of this document, as Appendix A. The scale of the locality map must be relevant to the size of the development (at least 1:50 000. For linear activities of

<sup>1</sup> "Alternative A.." refer to activity, process, technology or other alternatives.



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more than 25 kilometres, a smaller scale e.g. 1:250 000 can be used. The scale must be indicated on the map.). The map must indicate the following:

- an accurate indication of the project site position as well as the positions of the alternative sites, if any;
- indication of all the alternatives identified;
- closest town(s);
- road access from all major roads in the area;
- road names or numbers of all major roads as well as the roads that provide access to the site(s);
- all roads within a 1km radius of the site or alternative sites; and
- a north arrow;
- a legend; and
- locality GPS co-ordinates (Indicate the position of the activity using the latitude and longitude of the centre point of the site for each alternative site. The co-ordinates should be in degrees and decimal minutes. The minutes should have at least three decimals to ensure adequate accuracy. The projection that must be used in all cases is the WGS84 spheroid in a national or local projection).

### **6. LAYOUT/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.

The site or route plans must indicate the following:

- the property boundaries and numbers of all the properties within 50 metres of the site;
- the current land use as well as the land use zoning of the site;
- the current land use as well as the land use zoning each of the properties adjoining the site or sites;
- the exact position of each listed activity applied for (including alternatives);
- servitude(s) indicating the purpose of the servitude;
- a legend; and
- a north arrow.

### **7. SENSITIVITY MAP**

The layout/route plan as indicated above must be overlain with a sensitivity map that indicates all the sensitive areas associated with the site, including, but not limited to:

- watercourses;
- the 1:100 year flood line (where available or where it is required by DWS);
- ridges;
- cultural and historical features;
- areas with indigenous vegetation (even if it is degraded or infested with alien species); and
- critical biodiversity areas.

The sensitivity map must also cover areas within 100m of the site and must be attached in Appendix A.

**8. 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 report. It must be supplemented with additional photographs of relevant features on the site, if applicable.

**9. FACILITY ILLUSTRATION**

A detailed illustration of the activity must be provided at a scale of at least 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.

**This is the same as the Figure included in Appendix A.**

**10. ACTIVITY MOTIVATION**

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

1. Is the activity permitted in terms of the property's existing land use rights?	YES ✓	NO	Please explain
<b>The property is currently owned by the Sishen Iron Ore Company (SIOC) who has a land swap agreement with the Gamagara Local Municipality for the purposes of expanding the Kathu cemetery.</b>			
2. Will the activity be in line with the following?			
(a) Provincial Spatial Development Framework (PSDF)	YES	NO ✓	Please explain
<b>The municipality's SDF is not linked to the SDF of The district and the district is not linked to provincial SDF.</b>			
(b) Urban edge / Edge of Built environment for the area	YES ✓	NO	Please explain
<b>This development is outside of the urban area and will not encroach on the urban edge. It is adjacent to the existing Kathu cemetery.</b>			

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<p>(c) Integrated Development Plan (IDP) and Spatial Development Framework (SDF) of the Local Municipality (e.g. would the approval of this application compromise the integrity of the existing approved and credible municipal IDP and SDF?).</p>	<p>YES ✓</p>	<p>NO</p>	<p>Please explain</p>
<p>In terms of the SDF, the area around the existing cemetery is part of the Kathu Forest. The Kathu Forest is a protected woodland in terms of the NFA and the NEMPAA, and a critical biodiversity area identified and adopted by the DENC. However, the chosen position is adjacent to the existing cemetery, and thus is the most feasible location for expanding the cemetery.</p> <p>The IDP for the Gamagara Local Municipality indicates that the Sishen Iron Ore Mine (Sishen Mine) has guided the development of the Gamagara area. As part of the proposed Sishen Mine expansion (a separate project), the residents of Dingleton need to be relocated to Kathu. As a result, the Kathu Cemetery is no longer large enough to meet the demands of the Kathu town and its increasing residents. The expansion of the cemetery is proposed by the Gamagara Local Municipality, and cemeteries form part of the IDP strategic objectives for the Gamagara Local Municipality (Draft IDP 2012-2017 Gamagara Municipality).</p> <p>This project was listed as a priority in the IDP.</p>			
<p>(d) Approved Structure Plan of the Municipality</p>	<p>YES ✓</p>	<p>NO</p>	<p>Please explain</p>
<p>The Gamagara Local Municipality has requested that the Kathu cemetery be expanded and have entered into a land swap agreement with SIOC for the property adjacent to the existing Kathu cemetery.</p> <p>Provision is made in the SDF for the expansion of the cemetery.</p>			
<p>(e) An Environmental Management Framework (EMF) adopted by the Department (e.g. Would the approval of this application compromise the integrity of the existing environmental management priorities for the area and if so, can it be justified in terms of sustainability considerations?)</p>	<p>YES ✓</p>	<p>NO</p>	<p>Please explain</p>
<p>The project area is part of the Kathu Forest, which is a protected woodland in terms of the NFA and the NEMPAA, and a critical biodiversity area identified and adopted by the DENC. However, the expansion will be adjacent to the existing cemetery and thus the chosen location is the most feasible location for the cemetery to be expanded. The project is also listed as a priority for the Kathu area in terms of the IDP.</p>			
<p>(f) Any other Plans (e.g. Guide Plan)</p>	<p>YES</p>	<p>NO</p>	<p>Please explain</p>
<p>None</p>			

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<p>3. Is the land use (associated with the activity being applied for) considered within the timeframe intended by the existing approved SDF agreed to by the relevant environmental authority (i.e. is the proposed development in line with the projects and programmes identified as priorities within the credible IDP)?</p>	<p>YES ✓</p>	<p>NO</p>	<p>Please explain</p>
<p><b>This project was listed as a priority in the IDP.</b></p>			
<p>4. Does the community/area need the activity and the associated land use concerned (is it a societal priority)? (This refers to the strategic as well as local level (e.g. development is a national priority, but within a specific local context it could be inappropriate.)</p>	<p>YES ✓</p>	<p>NO</p>	<p>Please explain</p>
<p><b>The community requires the proposed activity as the town of Kathu is expanding and the current cemetery will not meet the requirements of the increasing population. The activity is required on a local context.</b></p>			
<p>5. Are the necessary services with adequate capacity currently available (at the time of application), or must additional capacity be created to cater for the development? (Confirmation by the relevant Municipality in this regard must be attached to the final Basic Assessment Report as Appendix † K)</p>	<p>YES ✓</p>	<p>NO</p>	<p>Please explain</p>
<p><b>The existing services are sufficient for the proposed Kathu cemetery expansion and additional capacity will not be required.</b></p>			
<p>6. Is this development provided for in the infrastructure planning of the municipality, and if not what will the implication be on the infrastructure planning of the municipality (priority and placement of services and opportunity costs)? (Comment by the relevant Municipality in this regard must be attached to the final Basic Assessment Report as Appendix † K)</p>	<p>YES</p>	<p>NO</p>	<p>Please explain</p>
<p><b>Yes, this project has been commissioned by the Gamagara Local Municipality, and thus fits into their infrastructure plans for the Municipality.</b></p>			
<p>7. Is this project part of a national programme to address an issue of national concern or importance?</p>	<p>YES</p>	<p>NO ✓</p>	<p>Please explain</p>
<p><b>This is for the expansion of the Kathu Cemetery which does not form part of a national programme.</b></p>			
<p>8. Do location factors favour this land use (associated with the activity applied for) at this place? (This relates to the contextualisation of the proposed land use on this site within its broader context.)</p>	<p>YES ✓</p>	<p>NO</p>	<p>Please explain</p>
<p><b>The expansion is adjacent to the existing cemetery and thus the proposed location is the most feasible location for the expansion. The additional area required for the cemetery cannot be positioned elsewhere as this would be impractical. The expansion will allow for additional space for graves for the residents of the Kathu town and is easily accessible for residents to visit graves.</b></p>			

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9. Is the development the best practicable environmental option for this land/site?	YES	NO ✓	Please explain
<b>The best practicable environmental option would be to keep the area as it is, without development as the area forms part of the Kathu Bush critical conservation area.</b>			
10. Will the benefits of the proposed land use/development outweigh the negative impacts of it?	YES ✓	NO	Please explain
<b>Considering that an expansion of the cemetery is required, the best place to locate the additional space is adjacent to the existing cemetery. This type of development will allow for the retention of trees of as many trees as possible as graves can be positioned in between the trees. The expansion is needed to ensure that there is sufficient cemetery space to cater for the needs of the increasing Kathu town. The expansion of the cemetery will also generate jobs for the construction phase and allow for the continuation of existing jobs during the operational phase of the cemetery.</b>			
<b>The expanded section of the cemetery will be in close proximity to the Kathu town and thus easily accessible to Kathu residents. In this way, residents will not need to be buried at a cemetery that is further away from Kathu and the expansion will allow ease of accessibility for relatives to visit graves. Based on the need for the expansion as well as the ease of accessibility and the fact that it will be adjacent to the existing Kathu cemetery, the benefits of the proposed land use outweighs the negative impacts.</b>			
11. Will the proposed land use/development set a precedent for similar activities in the area (local municipality)?	YES ✓	NO	Please explain
<b>The development will set a precedent for similar activities in the area as the proposed project is within an area, which is a protected woodland in terms of the NFA and the NEMPAA, and a critical biodiversity area identified and adopted by the DENC. Therefore, if this project occurs it can set a precedent for similar projects also being conducted in the protected area.</b>			
12. Will any person's rights be negatively affected by the proposed activity/ies?	YES	NO ✓	Please explain
<b>The proposed area for the expansion is unoccupied and is owned by SIOC. SIOC have an agreement with the Gamagara Local Municipality for a land swap in order for the Gamagara Municipality to expand the existing cemetery.</b>			
13. Will the proposed activity/ies compromise the "urban edge" as defined by the local municipality?	YES	NO ✓	Please explain
<b>This development is outside of the urban area and will not encroach on the urban edge.</b>			

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14. Will the proposed activity/ies contribute to any of the 17 Strategic Integrated Projects (SIPS)?	YES	NO ✓	Please explain
<b>The Cemetery development does not form part of any of the 17 SIPS.</b>			
15. What will the benefits be to society in general and to the local communities?	Please explain		
<p><b>The expanded section of the cemetery will be in close proximity to the Kathu town and thus easily accessible to Kathu residents. In this way, residents will not need to be buried at a cemetery that is further away from Kathu and the expansion will allow ease of accessibility for relatives to visit graves.</b></p> <p><b>The expansion of the cemetery will also generate jobs for the construction phase as well as job opportunities during the life of the cemetery, which will last until reaches its full capacity.</b></p>			
16. Any other need and desirability considerations related to the proposed activity?	Please explain		
<b>None</b>			
17. How does the project fit into the National Development Plan for 2030?	Please explain		
<p><b>It will contribute on a very marginal scale towards the National Development Plan for 2030 as the project is not an extensive project. There will be the generation of minimal jobs (Approximately 30), which fits in with the National Development plan to reduce unemployment. However, long-term employment will be limited, as the cemetery will not have an operational phase that requires many personnel to be employed. Existing employment will be retained to cater for the expansion.</b></p>			
18. Please describe how the general objectives of Integrated Environmental Management as set out in section 23 of NEMA have been taken into account.			
<ul style="list-style-type: none"> <li>• <b>The impacts on the environment, socio-economic, and cultural heritage have been taken into account for this project (refer to the Impact Tables in Appendix F).</b></li> <li>• <b>Mitigations for minimising these impacts have also been provided in the Impact tables and the EMP (Appendix G).</b></li> <li>• <b>The actions of the project have been taken into consideration in relation to their environmental impact.</b></li> <li>• <b>The public have been provided with the opportunity to provide input on the project and will be provided with this report for comment.</b></li> <li>• <b>An EMP has been developed to enforce appropriate environmental management.</b></li> </ul>			

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

Consideration of sustainable development that is economically, socially and environmentally sustainable has been made through assessing project impacts and providing mitigation measures to minimise impacts to be more socially, economically and environmentally acceptable (refer to Appendix F and G).

Measures to minimise impacts to the ecosystem, the minimisation of pollution and degradation, disturbance to the landscape and impacts of waste have been considered (refer to Appendix F and G).

The project takes into consideration the public needs, the need for additional burial space, and takes into consideration the protection of the environment through the identification of impacts and mitigation measures.

Consideration has been made of the sensitive nature of the area where the cemetery expansion is to take place, the protected Kathu woodlands, and provides measures to minimise negative impacts on this area.

#### 11. 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:

Title of legislation, policy or guideline	Applicability to the project	Administering authority	Date
National Environmental Management: Biodiversity Act	Project located in the Kathu Forest. The Kathu Forest is a protected woodland in terms of the NFA and the NEMPAA, and a critical biodiversity area identified and adopted by the DENC.	DENC	7 June 2004
National Environmental Management Act	Environmental Authorisation required for listed activities	Department of Environment and Nature Conservation	19 November 1998
National Environmental Management: Protected Areas Act	Project located in the Kathu Forest. The Kathu Forest is a protected woodland in terms of the NFA	DENC	18 February 2004

BASIC ASSESSMENT REPORT

	<b>and the NEMPAA, and a critical biodiversity area identified and adopted by the DENC.</b>		
<b>National Heritage Resources Act</b>	<b>The activity is greater than 0.5 hectares and a decision on the development is required from the heritage authority.</b>	<b>The South African Heritage Resources Agency</b>	<b>19 April 1999</b>

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

**a) Solid waste management**

Will the activity produce solid construction waste during the construction/initiation phase?

<b>YES</b> ✓	NO
<b>5m<sup>3</sup></b>	

If YES, what estimated quantity will be produced per month?

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

**Calcrete, rocks and wire to be removed – 4 m<sup>3</sup> estimated. Soil to be levelled not removed – 0 m<sup>3</sup>. Food parcels materials / minor domestic waste – 0.75 m<sup>3</sup>. This will be removed off site and disposed of at the municipal dump site.**

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

**Municipal dump site**

Will the activity produce solid waste during its operational phase?

YES	<b>NO</b> ✓
m <sup>3</sup>	

If YES, what estimated quantity will be produced per month?

How will the solid waste be disposed of (describe)?

If the solid waste will be disposed of into a municipal waste stream, indicate which registered landfill site will be used.

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

*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.*



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Can any part of the solid waste be classified as hazardous in terms of the NEM:WA?

YES	NO ✓
-----	---------

If YES, inform the competent authority and request a change to an application for scoping and EIA. An application for a waste permit in terms of the NEM:WA must also be submitted with this application.

Is the activity that is being applied for a solid waste handling or treatment facility?

YES	NO ✓
-----	---------

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. An application for a waste permit in terms of the NEM:WA must also be submitted with this application.

### b) Liquid effluent

Will the activity produce effluent, other than normal sewage, that will be disposed of in a municipal sewage system?

YES	NO ✓
-----	---------

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?

m <sup>3</sup>	
YES	NO ✓

*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?

YES	NO ✓
-----	---------

If YES, provide the particulars of the facility:

<b>Facility name:</b>			
<b>Contact person:</b>			
<b>Postal address:</b>			
<b>Postal code:</b>			
<b>Telephone:</b>	<b>Cell:</b>		
<b>E-mail:</b>	<b>Fax:</b>		

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

**None**

### c) Emissions into the atmosphere

Will the activity release emissions into the atmosphere other than exhaust emissions and dust associated with construction phase activities?

YES	NO ✓
YES	NO

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

If YES, the applicant must 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:

**Dust from vehicles travelling along the access and maintenance roads, exhaust emissions from construction vehicles and other vehicles travelling to the cemetery.**

**d) Waste permit**

Will any aspect of the activity produce waste that will require a waste permit in terms of the NEM:WA?

YES	NO <input checked="" type="checkbox"/>
-----	--

If YES, please submit evidence that an application for a waste permit has been submitted to the competent authority

**e) Generation of noise**

Will the activity generate noise?

YES <input checked="" type="checkbox"/>	NO
YES	NO <input checked="" type="checkbox"/>

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

Describe the noise in terms of type and level:

**Minor noise from construction activities and construction vehicles.**

**13. WATER USE**

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

Municipal <input checked="" type="checkbox"/>	Water board	Groundwater	River, stream, dam or lake	Other	The activity will not use water
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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 authorisation (general authorisation or water use license) from the Department of Water Affairs?

	litres
YES	NO <input checked="" type="checkbox"/>

If YES, please provide proof that the application has been submitted to the Department of Water Affairs.

**14. ENERGY EFFICIENCY**

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

**This is not applicable to a project of this nature as the proposed project is the expansion of a cemetery and will not involve measures that require energy efficiency. The main activities on site will involve the erection of a fence to mark off the boundaries of the cemetery, the digging of graves and burial of coffins and the use of roads. These activities do not require energy efficient design measures.**

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

**Not Applicable.**

**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 B and indicate the area, which is covered by each copy No. on the Site Plan.

Section B Copy No. (e.g. A): A

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?

YES	NO ✓
-----	---------

If YES, please complete the form entitled “Details of specialist and declaration of interest” for each specialist thus appointed and attach it in Appendix I. All specialist reports must be contained in Appendix D.

**Property description/physical address:**

<b>Province</b>	<b>Northern Cape</b>
<b>District Municipality</b>	<b>John Taolo Gaetsewe District Municipality</b>
<b>Local Municipality</b>	<b>Gamagara Local Municipality</b>
<b>Ward Number(s)</b>	<b>1</b>
<b>Farm name and number</b>	<b>Farm Uitkoms 463</b>
<b>Portion number</b>	<b>Remainder</b>
<b>SG Code</b>	<b>C0410000000046300000</b>

Where a large number of properties are involved (e.g. linear activities), please attach a full list to this application including the same information as indicated above.

**Current land-use zoning as per local municipality IDP/records:**

<b>Kathu Forest: Protected woodlands, Proposed Critical Conservation Area, Highly Restricted Development (2011 Kathu Spatial Development Framework).</b>
--

In instances where there is more than one current land-use zoning, please attach a list of current land use zonings that also indicate which portions each use pertains to, to this application.

Is a change of land-use or a consent use application required?

YES ✓	NO
----------	----

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### 1. GRADIENT OF THE SITE

Indicate the general gradient of the site.

#### Alternative S1:

Flat ✓	1:50 – 1:20	1:20 – 1:15	1:15 – 1:10	1:10 – 1:7,5	1:7,5 – 1:5	Steeper than 1:5
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#### Alternative S2 (if any):

Flat	1:50 – 1:20	1:20 – 1:15	1:15 – 1:10	1:10 – 1:7,5	1:7,5 – 1:5	Steeper than 1:5
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#### Alternative S3 (if any):

Flat	1:50 – 1:20	1:20 – 1:15	1:15 – 1:10	1:10 – 1:7,5	1:7,5 – 1:5	Steeper than 1:5
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### 2. LOCATION IN LANDSCAPE

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

2.1 Ridgeline	<input type="checkbox"/>	2.4 Closed valley	<input type="checkbox"/>	2.7 Undulating plain / low hills	<input type="checkbox"/>
2.2 Plateau	<input type="checkbox"/>	2.5 Open valley	<input type="checkbox"/>	2.8 Dune	<input type="checkbox"/>
2.3 Side slope of hill/mountain	<input type="checkbox"/>	2.6 Plain	<input checked="" type="checkbox"/>	2.9 Seafront	<input type="checkbox"/>
2.10 At sea	<input type="checkbox"/>				

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

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

	Alternative S1:		Alternative S2 (if any):		Alternative S3 (if any):	
Shallow water table (less than 1.5m deep)	YES	NO ✓	YES	NO	YES	NO
Dolomite, sinkhole or doline areas	YES ✓ <b>Malmani Dolomite at depths of more than 40 m.</b>	NO	YES	NO	YES	NO
Seasonally wet soils (often close to water bodies)	YES	NO ✓	YES	NO	YES	NO
Unstable rocky slopes or steep slopes with loose soil	YES	NO ✓	YES	NO	YES	NO
Dispersive soils (soils that dissolve in water)	YES	NO ✓	YES	NO	YES	NO

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Soils with high clay content (clay fraction more than 40%)	YES	NO ✓	YES	NO	YES	NO
Any other unstable soil or geological feature	YES	NO ✓	YES	NO	YES	NO
An area sensitive to erosion	YES	NO ✓	YES	NO	YES	NO

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.

### 4. GROUND COVER

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

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

If any of the boxes marked with an “<sup>E</sup>” 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.

### 5. SURFACE WATER

Indicate the surface water present on and or adjacent to the site and alternative sites?

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

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If any of the boxes marked YES or UNSURE is ticked, please provide a description of the relevant watercourse.

**There are drainage lines near the proposed cemetery expansion. The drainage line is to the east of the proposed expansion, outside of the proposed boundary. The drainage line is ephemeral and only has water after rainfall events.**

### 6. 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:

Natural area	Dam or reservoir	Polo fields
Low density residential	Hospital/medical centre	Filling station <sup>H</sup>
Medium density residential	School	Landfill or waste treatment site
High density residential	Tertiary education facility	Plantation
Informal residential <sup>A</sup>	Church	Agriculture
Retail commercial & warehousing	Old age home	River, stream or wetland
Light industrial	Sewage treatment plant <sup>A</sup>	Nature conservation area
Medium industrial <sup>AN</sup>	Train station or shunting yard <sup>N</sup>	Mountain, koppie or ridge
Heavy industrial <sup>AN</sup>	Railway line <sup>N</sup>	Museum
Power station	Major road (4 lanes or more) <sup>N</sup>	Historical building
Office/consulting room	Airport <sup>N</sup>	<b><u>Protected Area</u></b> ✓ <b>Protected Kathu Forest, critical conservation area as adopted by DENC</b>
Military or police base/station/compound	Harbour	<b><u>Graveyard</u></b> ✓ <b>Adjacent Kathu cemetery</b>
Spoil heap or slimes dam <sup>A</sup>	Sport facilities	<b><u>Archaeological site</u></b> ✓ <b>2 sites within 500m radius (1 is within 50m) – refer to Phase I Heritage Impact Assessment</b>
Quarry, sand or borrow pit	Golf course	Other land uses (describe)

If any of the boxes marked with an “N” are ticked, how this impact will / be impacted upon by the proposed activity? Specify and explain:

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

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If any of the boxes marked with an "H" are ticked, how will this impact / be impacted upon by the proposed activity? Specify and explain:

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Does the proposed site (including any alternative sites) fall within any of the following:

Critical Biodiversity Area (as per provincial conservation plan) <b>– Protected Kathu woodlands, critical conservation area as adopted by DENC.</b>	YES ✓	NO
Core area of a protected area?	YES	NO ✓
Buffer area of a protected area?	YES	NO ✓
Planned expansion area of an existing protected area?	YES	NO ✓
Existing offset area associated with a previous Environmental Authorisation?	YES	NO ✓
Buffer area of the SKA?	YES	NO ✓

If the answer to any of these questions was YES, a map indicating the affected area must be included in Appendix A.

### 7. 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 paleontological sites, on or close (within 20m) to the site? If YES, explain:

YES	NO ✓ *
Uncertain	

**\* The closest known site (Uitkoms 4) is approximately 50m away from the proposed cemetery expansion border. Refer to the Phase I Heritage Impact Assessment study in Appendix D.**

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



**PGS Heritage conducted a Phase I heritage study and a desktop palaeontological study for the area where the cemetery is to be expanded.**

**Heritage:**

**There was no archaeological material identified from the fieldwork conducted by PGS. However, the Kathu area is characterised by buried archaeological deposits, thus there is a high possibility of buried deposits being present on the project site.**

**Palaeontology:**

**The moderate fossiliferous potential of the Gordonia Formation strata must be noted. Since the area proposed for the cemetery expansion is relatively small, it is unlikely that significant fossil assemblages will be encountered during the expansion of the cemetery.**

**Refer to Appendix D for further details on the two studies conducted that also provide mitigation measures to limit the impacts to heritage and palaeontological resources.**

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

YES	NO ✓
YES	NO ✓

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

If YES, please provide proof that this permit application has been submitted to SAHRA or the relevant provincial authority.

**8. SOCIO-ECONOMIC CHARACTER**

**a) Local Municipality**

Please provide details on the socio-economic character of the local municipality in which the proposed site(s) are situated.

Level of unemployment:

**The information below is based on the 2011 census for the Gamagara Municipality:**

**Total employed: 16058  
Total unemployed: 3453 = 17.69%**

Economic profile of local municipality:

**The information below is based on the 2011 census for the Gamagara Municipality:**

## BASIC ASSESSMENT REPORT

Employment	Black African	Coloured	Indian or Asian	White	Other	Total
Employed	9187	3355	146	3099	270	16058
Unemployed	2169	996	10	229	49	3453
Grand total						19511

The historical drivers of the local economy are mining. The primary land use in the Gamagara Municipality is mining and agriculture with iron ore and manganese being the prime minerals mined in the area and the main focus of agriculture being on cattle and goats. The town of Kathu is subject to a number of recent developments that include residential, shopping, mining and power facilities. Game farming and hunting are increasing in popularity.

The largest of the mines in the area is the Sishen Mine, which is found near Kathu and is a major role player in the economic development of this area. Sishen Mine is the Northern Cape's largest employer, and a major trainer of artisans in South Africa.

Level of education:

The information below is based on the 2011 census for the Gamagara Municipality:

	Black African	Coloured	Indian or Asian	White	Other	Total	Total Percentage
No schooling	1763	909	13	28	43	2756	10.57 %
Some primary	1933	878	11	71	65	2959	11.35 %
Completed primary	871	519	14	20	14	1437	5.51 %
Some secondary	5173	2295	56	990	171	8685	33.30 %
Grade 12/Std 10	3668	1554	66	1541	118	6946	26.63 %
Higher	1173	551	22	1521	30	3298	12.65 %
Other	-	-	-	-	-	-	0 %
Grand total						26081	100 %

### b) Socio-economic value of the activity

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

What is the expected yearly income that will be generated by or as a result of the activity?

Will the activity contribute to service infrastructure?

Is the activity a public amenity?

How many new employment opportunities will be created in the development and construction phase of the activity/ies?

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

What percentage of this will accrue to previously disadvantaged individuals?

<b>R 331 190</b>	
<b>R 253 164.56</b>	
<input checked="" type="checkbox"/> YES	NO
<input checked="" type="checkbox"/> YES	NO
<b>30 estimated</b>	
<b>R 100 000 estimated</b>	
<b>100%</b>	

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

**NA (existing jobs to be retained)**

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

**R 7 718 400**

What percentage of this will accrue to previously disadvantaged individuals?

**100% - Still to be confirmed**

**9. BIODIVERSITY**

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

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

<b>Systematic Biodiversity Planning Category</b>				<b>If CBA or ESA, indicate the reason(s) for its selection in biodiversity plan</b>
Critical Biodiversity Area (CBA)    ✓ <b>Proposed</b>	Ecological Support Area (ESA)	Other Natural Area (ONA)	No Natural Area Remaining (NNR)	<b>The Kathu Forest is a protected woodland in terms of the National Forest Act (No. 84 of 1998) as amended, and the National Environmental Protected Areas Act (No. 53 of 2003) as amended and a critical biodiversity area identified and adopted by the DENC.</b>

- b) **Indicate and describe the habitat condition on site**

<b>Habitat Condition</b>	<b>Percentage of habitat condition</b>	<b>Description and additional Comments and Observations (including additional insight into condition, e.g. poor</b>
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	<b>class (adding up to 100%)</b>	<b>land management practises, presence of quarries, grazing, harvesting regimes etc).</b>
Natural	<b>0%</b>	
Near Natural (includes areas with low to moderate level of alien invasive plants)	<b>100%</b>	<b>Refer to photos of the site in Appendix B.</b>
Degraded (includes areas heavily invaded by alien plants)	<b>0%</b>	
Transformed (includes cultivation, dams, urban, plantation, roads, etc)	<b>0%</b>	

**c) Complete the table to indicate:**

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

Terrestrial Ecosystems		Aquatic Ecosystems						
<b>Ecosystem threat status as per the National Environmental Management: Biodiversity Act (Act No. 10 of 2004)</b>	<u>Critical</u> ✓	Wetland (including rivers, depressions, channelled and unchannelled wetlands, flats, seeps pans, and artificial wetlands)			Estuary		Coastline	
	Endangered							
	Vulnerable							
	Least Threatened	YES	NO ✓	UNSURE	YES	NO ✓	YES	NO ✓

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

**The area forms part of the Kathu Forest which is characterised by veld grass, thorny bush and *Acacia erioloba* (protected) trees.**

## SECTION C: PUBLIC PARTICIPATION

### 1. ADVERTISEMENT AND NOTICE

Publication name	Kathu Gazette and Volksblad	
Date published	14 March 2015	
Site notice position	Latitude	Longitude
1	23° 04' 28.54" E	27° 40' 24.46" S
2	23° 04' 31.46" E	27° 40' 24.66" S
3	23° 04' 18.68" E	27° 41' 25.85" S
4	23° 03' 56.60" E	27° 42' 50.47" S
5	23° 03' 01.43" E	27° 41' 58.96" S
Date placed	10 March 2015	

Include proof of the placement of the relevant advertisements and notices in Appendix E1.

### 2. DETERMINATION OF APPROPRIATE MEASURES

Provide details of the measures taken to include all potential I&APs as required by Regulation 41(2)(e) and 41(6) of GN 733.

**An existing database from another project currently occurring in the Kathu area was used to start the database for this project. The database is considered a good representation as it has been compiled from information derived from various projects that have occurred in the Kathu area over a number of years.**

**The landowner is the Sishen Iron Ore Company, who are entering into a land swap agreement with the Gamagara Local Municipality.**

**Site notices were placed on site and advertisements were placed in 2 newspapers that circulate in Kathu and surrounding areas to identify additional potential I&APs.**

**A notification letter of the proposed project was also submitted to I&APs on the existing database.**

Key stakeholders (other than organs of state) identified in terms of Regulation 41(2)(b) of GN 733

Title, Name and Surname	Affiliation/ key stakeholder status	Contact details (tel number or e-mail address)
Mr Schalk Van Schalkwyk	Leraar NG Kerk / Dorp	schalk@ngkathu.co.za
Rev A. De Villiers	Reverend of NG Church Kathu	andre@ngkathu.co.za
Mr H.W. Buys	Teacher at Kathu High School	office@hskathu.ncape.school.za
Ms S.M. Buys	Teacher at Kathu High School	office@hskathu.ncape.school.za
Mr G. Solomons	Teacher at Kathu High School	laerskoolkathu@xsinet.co.za
Me A. Spagenberg	Teacher at Kathu High School	laerskoolkathu@xsinet.co.za
Mrs H. W.	Teacher at Kathu High School	office@hskathu.ncape.school.za
Me E.	Teacher at Kathu High School	laerskoolkathu@xsinet.co.za

## BASIC ASSESSMENT REPORT

<b>Title, Name and Surname</b>	<b>Affiliation/ key stakeholder status</b>	<b>Contact details (tel number or e-mail address)</b>
Mr H.A.R. Me R.	Teacher at Kathu High School	laerskoolkathu@xsinet.co.za
Kathu Primary School		root@lskathu.ncape.school.za
R. Carlson	Teacher	P.O. Box 43, Dingleton, 8445
Ms K.V. Mogotsi	Teacher at Sishen Intermediate Mine School	P.O. Box 3088, Sesheng, 8447
Mr K.E. Senye	Teacher at Sishen Intermediate Mine School	P.O. Box 3088, Seshen, 8447
Mr Pierre Cronje	Interested Party	P.O. Box 2267, Faerie Glen, Pretoria, 0181 pierre.cronje@gmce.co.za
Mr A. W. A. Maritz	Curtis Farm	PO Box 1656, Kathu, 8446 maritzsiviel@vodamail.co.za
Mr J. E. Hoffman	Fouriesville	Posbus 823, Kathu, 8446 jaap.hoffman@kiold.com; jaap.hoffman@angloamerican.com
Mr G. G. Jacobs	Mooihoek Farm	ggj@cybertrade.co.za
Mr C. H. Kotzé	Erfdeel, Lohathla Farm	Jacky.Sterrenberg@kiold.com; jacky.sterrenberg@angloamerican.co.za
Mr J. A Van der Linde	Farmer	topsvdl@lantic.net
Mr J. F. Viljoen	Bishopswood Farm	fred.viljoen@kiold.com
Mr K.E. Jantjie	John Taolo Gaetsewe (Traditional leader)	P.O. Box 785, Kuruman, 8460 kaldc@mweb.co.za
J. A. Smit	Vredeford	PO Box 102, Dibeng, 8463
Mr Pieter Pias		P.O. Box 380, Kathu, 8446
Ms Sahndya Naidoo	Werksmans Attorneys	snaidoo@werksmans.com
C De Klerk	Interested Party	c-deklerk@vodamail.co.za; c_deklerk@vodamail.co.za
Mr A. Markram	Moria Boerdery BK / Sishen Ged 24 Farms	sandra.markram@KIOLD.com
Mr A. H. G. Van Zyl	Lanham Farm	andre.lanhem@gmail.com
Mrs S. Cornelissen	Wright Farm	wright@polka.co.za
Mr J. H. Maritz	Dingle Farm	
J. P. Lock	Edenvale Farm	
A. Laubscher	SNR. Admin D.	
Ms. M. M. Kalp	Rosenvlei / Kromvlei	
A. J. Hoffman	Maxdale, Dingleton	
J. M. Fourie	Dundrum Farm	
Mr J. A. Burger	Oupos / Uitkoms Farms	
Mr L. Bosman		
Nicolaas Smit	Bredenkamp	nicowhsmit@vodamail.co.za
Mr Van Niekerk	AssMang Mining, Manager	sakkievn@assmang.co.za
D. J. Coetzee	AssMang Mining Khumani Mine	dirkc@assmang.co.za
Mr A. Mosterd	AssMang Mining, Manager	alexm@assmang.co.za
A. J. Du Toit	Eskom	dToitAJ@eskom.co.za
Ms J Burger	Snr Environmental Advisor Eskom Transmission North-West Grid	BurgerJe@eskom.co.za
Mr J. Geeringh	Eskom	john.geeringh@eskom.co.za
A Van Gensen	Environmental Management Practitioner Eskom Distribution NWR Land Development	andrea.vangensen@eskom.co.za
Mr AttieCoetzee	Transnet Freight Rail SLD	attie.coetzee@transnet.net

## BASIC ASSESSMENT REPORT

<b>Title, Name and Surname</b>	<b>Affiliation/ key stakeholder status</b>	<b>Contact details (tel number or e-mail address)</b>
Mr G. Nortier	Transnet	Gilbert.Nortier@transnet.net
Mr S. Fiff	Western Region Environmental Manager - Transnet	Sam.Fiff@transnet.net
Mr V. Matabane	Transnet	Vincent.Matabane@transnet.net
Mr Albertus Viljoen	Tshiping Water Users Association	info@tshiping.co.za

Include proof that the key stakeholder received written notification of the proposed activities as Appendix E2. This proof may include any of the following:

- e-mail delivery reports;
- registered mail receipts;
- courier waybills;
- signed acknowledgements of receipt; and/or
- or any other proof as agreed upon by the competent authority.

### 3. ISSUES RAISED BY INTERESTED AND AFFECTED PARTIES

<b>Summary of main issues raised by I&amp;APs</b>	<b>Summary of response from EAP</b>
<b>Andrea van Gensen of Eskom requested a locality map of the proposed project.</b>	<b>A map of the proposed extension was sent to the I&amp;AP and is included in this report.</b>

### 4. COMMENTS AND RESPONSE REPORT

The practitioner must record all comments received from I&APs and respond to each comment before the Draft BAR 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 the Final BAR as Appendix E3.

### 5. AUTHORITY PARTICIPATION

Authorities and organs of state identified as key stakeholders:

- **Department of Water and Sanitation**
- **Department of Agriculture, Forestry and Fisheries,**
- **Sedibeng Water**
- **Department of Labour**
- **Department of Health**
- **Gamagara Local Municipality**
- **John Taolo Gaetsewe District Municipality**
- **South African Heritage Resources Agency**

Include proof that the Authorities and Organs of State received written notification of the proposed activities as appendix E4.

In the case of renewable energy projects, Eskom and the SKA Project Office must be included in the list of Organs of State.

### **6. CONSULTATION WITH OTHER STAKEHOLDERS**

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

Proof of any such agreement must be provided, where applicable. Application for any deviation from the regulations relating to the public participation process must be submitted prior to the commencement of the public participation process.

A list of registered I&APs must be included as appendix E5.

Copies of any correspondence and minutes of any meetings held must be included in Appendix E6.



## **SECTION D: IMPACT ASSESSMENT**

The assessment of impacts must adhere to the minimum requirements in the EIA Regulations, 2014 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. 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**

Provide a summary and anticipated significance of the potential direct, indirect and cumulative impacts 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. This impact assessment must be applied to all the identified alternatives to the activities identified in Section A(2) of this report.

## BASIC ASSESSMENT REPORT

No.	ENVIRON- MENTAL IMPACT	IMPACT SOURCE/DESCRIPTION	Impact Significance	MITIGATION
			Without Mitigation	Mitigation Measure
<b>1 CONSTRUCTION PHASE</b>				
<b>1.1 DIRECT CONSTRUCTION IMPACTS</b>				
<b>PHYSICAL NATURAL ENVIRONMENT</b>				
<b>SOILS</b>				
1.1.1	Compaction of soils	Movement of vehicles and machinery at the site for fence and access road construction.	Low	<ul style="list-style-type: none"> <li>• Equipment movement on top of the exposed soil will be limited to avoid topsoil compaction and subsequent damage to the soils and seedbank.</li> <li>• Ripping of soil in areas where soil has been compacted.</li> <li>• Impacted area to be minimised.</li> </ul>
<b>LAND CAPABILITY</b>				
1.1.2	Loss of natural land and grazing land	Loss of vegetation cover from site clearance for the establishment of the cemetery fence and access roads. Loss of grazing land from fencing off area for the cemetery.	Low	<ul style="list-style-type: none"> <li>• Natural vegetation cover needs to be restored at impacted areas where possible. Mitigation for the loss of grazing land is limited other than the "no-go" option.</li> </ul>
<b>LAND USE</b>				
1.1.3	Change in land use	Change in land use from natural to a cemetery.	Moderate	<ul style="list-style-type: none"> <li>• Mitigation for the change in land use is limited other than the "no-go" option.</li> </ul>
<b>NOISE</b>				
1.1.4	Movement of vehicles	Movement of vehicles during construction phase may generate noise.	Low	<ul style="list-style-type: none"> <li>• Minimise movement of traffic along public roads as far as reasonably possible.</li> <li>• The contractor shall ensure that the workers do not create unnecessary noise such as hooting or shouting.</li> <li>• Maintain vehicles in good condition to prevent unnecessary noise outputs.</li> </ul>
<b>SURFACE WATER</b>				

## BASIC ASSESSMENT REPORT

No.	ENVIRONMENTAL IMPACT	IMPACT SOURCE/DESCRIPTION	Impact Significance	MITIGATION
			Without Mitigation	Mitigation Measure
<b>1 CONSTRUCTION PHASE</b>				
<b>1.1 DIRECT CONSTRUCTION IMPACTS</b>				
1.1.5	Disturbance to watercourses	Disturbance to the drainage lines through construction activities.	Low	<ul style="list-style-type: none"> <li>• Limit the footprint area of any development to what is absolutely essential in order to minimise environmental damage</li> <li>• No activities are to take place within watercourses.</li> </ul>
1.1.6	Contamination of surface water run-off	The inappropriate management and handling of fuel, oil and other potentially hazardous chemicals and substances during the construction period could result in potentially negative impacts on surface water quality. Poor placement and maintenance of temporary sanitary arrangements (i.e. portable toilets) can also result in detrimental impacts on water resources.	Moderate	<ul style="list-style-type: none"> <li>• All spills should be immediately cleaned up and treated accordingly</li> <li>• Chemical toilets must be appropriately managed and regularly cleaned out to prevent contamination of water resources.</li> <li>• Erosion sensitive areas must be identified and regular monitoring undertaken to ensure once the impact occurs it is stabilised and rehabilitated immediately.</li> </ul>

## BASIC ASSESSMENT REPORT

No.	ENVIRON- MENTAL IMPACT	IMPACT SOURCE/DESCRIPTION	Impact Significance	MITIGATION
			Without Mitigation	Mitigation Measure
<b>1 CONSTRUCTION PHASE</b>				
<b>1.1 DIRECT CONSTRUCTION IMPACTS</b>				
<b>GROUNDWATER</b>				
1.1.7	Groundwater contamination	The inappropriate management and handling of fuel, oil and other potentially hazardous chemicals and substances during the construction period could result in potentially negative impacts on ground water quality. Poor placement and maintenance of temporary sanitary arrangements (i.e. portable toilets) can also result in detrimental impacts on water resources.	Moderate	<ul style="list-style-type: none"> <li>• Use drip trays under machinery, vehicles and equipment with minor fuel or hydraulic fluid leaks.</li> <li>• Repairs and maintenance to machinery, vehicles and equipment must not be done on site.</li> <li>• Implement measures to prevent the contamination of soils to prevent contamination of groundwater resources. The potential impacts from hydrocarbon groundwater contamination such as vehicle oil/fuel leaks, and oil spillage should be prevented by providing vehicles with drip trays.</li> </ul>
<b>AIR QUALITY</b>				
1.1.8	Increase in dust fallout. Increase in the concentration of suspended particulates, specifically fine, inhalable particulates.	Topsoil stripping and vegetation clearing for fence and access road construction. Vehicle movement along unsurfaced roads.	Low	<ul style="list-style-type: none"> <li>• Minimise vehicle movements on unsurfaced roads as far as reasonably possible.</li> <li>• Speed limits on unsealed roads will be limited to a maximum speed consistent with the minimisation of dust generation. Nominal speed limit of 30 km/h applies unless otherwise marked.</li> <li>• Complaints regarding dust to be registered in the complaints register and to be investigated and managed in accordance with the incident reporting procedures.</li> <li>• Rehabilitate disturbed area.</li> <li>• Control measures will be applied at the construction area such as dust suppression using water and chemicals (if required).</li> </ul>

BASIC ASSESSMENT REPORT

No.	ENVIRON- MENTAL IMPACT	IMPACT SOURCE/DESCRIPTION	Impact Significance	MITIGATION
			Without Mitigation	Mitigation Measure
<b>1 CONSTRUCTION PHASE</b>				
<b>1.1 DIRECT CONSTRUCTION IMPACTS</b>				
<b>CLIMATE AND GREENHOUSE GAS EMISSIONS</b>				
1.1.9	Contribution to climate change due to greenhouse gas emissions.	Vehicles and machinery used during the construction phase contributing to greenhouse gas emissions.	Low	<ul style="list-style-type: none"> <li>• Maintain machinery, vehicles and equipment in good condition to prevent unnecessary emissions.</li> <li>• Plan vehicle logistics to minimise the operational hours and distances travelled.</li> </ul>
<b>BIOLOGICAL NATURAL ENVIRONMENT</b>				
<b>PLANT LIFE</b>				
1.1.10	Loss of protected species or species of conservation importance.	Damage and removal of protected trees within the protected Kathu Woodland.	Moderate	<ul style="list-style-type: none"> <li>• Damage to and removal of protected species of vegetation is prohibited unless permits for removal from the Department of Agriculture, Fisheries and Forestry (DAFF) and the Department of Environment and Nature Conservation (DENC) are in place (licenses and permits are required where protected tree and plant species cannot be avoided and have to be removed, respectively). There are some species e.g. <i>Acacia erioloba</i> on site that would require a permit should they need to be moved.</li> <li>• Trees that are removed should be replanted at a location discussed with DAFF/DENC. If trees cannot be replanted, new trees should be planted of the same species that were removed at a location discussed with DAFF/DENC.</li> </ul>

## BASIC ASSESSMENT REPORT

No.	ENVIRON- MENTAL IMPACT	IMPACT SOURCE/DESCRIPTION	Impact Significance	MITIGATION
			Without Mitigation	Mitigation Measure
<b>1 CONSTRUCTION PHASE</b>				
<b>1.1 DIRECT CONSTRUCTION IMPACTS</b>				
<b>ANIMAL LIFE</b>				
1.1.111	Disturbance to animal life	Disturbance of habitats impacting animal movements and distribution, noise impacting animal movements and distribution, potential poaching.	Low	<ul style="list-style-type: none"> <li>• Any fauna directly threatened by the construction activities should be removed to a safe location by the SHEQ officer or other suitably qualified person.</li> <li>• Minimise footprint areas of disturbance</li> <li>• The collection, hunting or poaching of any animals at the site should be strictly forbidden. Personnel should not be allowed to wander off the demarcated construction site.</li> <li>• Strict penalties for poaching need to be imposed.</li> <li>• There needs to be environmental awareness training of staff.</li> </ul>
<b>SENSITIVE LANDSCAPES</b>				
1.1.12	Disturbance to the Protected Kathu Woodland.	Damage and removal of protected trees within the protected Kathu Woodland which the cemetery is located within.	Moderate	<ul style="list-style-type: none"> <li>• Damage to and removal of protected species of vegetation is prohibited unless permits for removal from the Department of Agriculture, Fisheries and Forestry (DAFF) and the Department of Environment and Nature Conservation (DENC) are in place (licenses and permits are required where protected tree and plant species cannot be avoided and have to be removed, respectively). There are some species e.g. <i>Acacia erioloba</i> on site that would require a permit should they need to be moved.</li> <li>• Trees that are removed should be replanted at a location discussed with DAFF/DENC. If trees cannot be replanted, new trees should be planted of the same species that were removed at a location discussed with DAFF/DENC.</li> </ul>
<b>SOCIAL AND ECONOMIC ENVIRONMENT</b>				
<b>SOCIO-ECONOMICS</b>				
1.1.13	Job opportunities	Minimal job opportunities will be created for the construction phase of the cemetery expansion.	Low Positive	<ul style="list-style-type: none"> <li>• Preference should be given to people in the local area.</li> <li>• The recruitment strategy to be communicated to the key stakeholders.</li> <li>• Local goods and services to be procured wherever reasonably possible.</li> <li>• Quotas for local procurement to be set in the specification for contractors.</li> <li>• Local sub-contractors to be used wherever reasonably possible.</li> </ul>

## BASIC ASSESSMENT REPORT

No.	ENVIRON- MENTAL IMPACT	IMPACT SOURCE/DESCRIPTION	Impact Significance	MITIGATION
			Without Mitigation	Mitigation Measure
<b>1 CONSTRUCTION PHASE</b>				
<b>1.1 DIRECT CONSTRUCTION IMPACTS</b>				
1.1.14	Providing increased burial area.	Providing residents of the Kathu area with burial space as the existing cemetery is reaching full capacity.	High Positive	<ul style="list-style-type: none"> <li>• No mitigation necessary.</li> </ul>
<b>TRAFFIC</b>				
1.1.15	Increase traffic during construction	Increased vehicle movement during the construction of the cemetery fence and access road.	Very Low	<ul style="list-style-type: none"> <li>• Appropriate speed limits for all vehicles must be strictly enforced to reduce the dust nuisance for the surrounding areas. Traffic impacts are not expected to be significant.</li> </ul>
<b>VISUAL ASPECTS</b>				
1.1.16	Changes in visual character of the area	Removal of vegetation and establishment of the cemetery fence and access road.	Moderate	<ul style="list-style-type: none"> <li>• Natural vegetation cover needs to be restored at impacted areas, where possible.</li> </ul>
1.1.17	Sense of place	Visual, noise and dust impacts from fence construction.	Very Low	<ul style="list-style-type: none"> <li>• The existing cemetery is adjacent to the proposed extension, thus the sense of place is not expected to change.</li> <li>• Natural vegetation cover needs to be restored at impacted areas, where possible.</li> </ul>

## BASIC ASSESSMENT REPORT

No.	ENVIRON- MENTAL IMPACT	IMPACT SOURCE/DESCRIPTION	Impact Significance	MITIGATION
			Without Mitigation	Mitigation Measure
<b>1 CONSTRUCTION PHASE</b>				
<b>1.1 DIRECT CONSTRUCTION IMPACTS</b>				
<b>CULTURAL, HERITAGE AND PALAEOLOGICAL RESOURCES</b>				
1.1.18	Disturbance of palaeontological resources	Excavation activities for the erection of the fence may unearth palaeontological resources.	Moderate	<ul style="list-style-type: none"> <li>• The subterranean presence of palaeontological resources is always a distinct possibility. Care should therefore be taken during any activities in case any of these are accidentally discovered.</li> <li>• The ECO for this project must be made aware of the fact that the windblown sand of the Gordonia Formation might contain fossils of root casts, burrows and rare vertebrate remains. Recording of these fossils will contribute significantly to our understanding of the palaeo-environments that prevailed in the area.</li> <li>• If significant fossil finds (e.g. vertebrate remains, bones, burrows, fresh water shells) are recorded during excavations for poles for the fence a qualified palaeontologist must be employed to apply for a collection permit to collect the fossils according the SAHRA specifications.</li> </ul>



## BASIC ASSESSMENT REPORT

No.	ENVIRON- MENTAL IMPACT	IMPACT SOURCE/DESCRIPTION	Impact Significance	MITIGATION
			Without Mitigation	Mitigation Measure
<b>1 CONSTRUCTION PHASE</b>				
<b>1.1 DIRECT CONSTRUCTION IMPACTS</b>				
1.1.19	Disturbance of archaeological sites and other sites of heritage importance	Movement of people and vehicles on site and the clearance of areas to establish the fence and access roads may impact sites of heritage/archaeological importance. The proposed construction activities might unearth artefacts of cultural or historic value.	High	<ul style="list-style-type: none"> <li>• The subterranean presence of archaeological and/or historical sites features or artefacts are always a distinct possibility. Care should therefore be taken during any activities in case any of these are accidentally discovered.</li> <li>• It is recommended that a set of test excavation be done to determine presence and extent of an archaeological deposit.</li> <li>• If a deposit is identified a controlled sampling of the material found should be done.</li> <li>• This work must be done in such a way as to augment the current research questions and field work such as the excavations at the Kathu Townlands Site and Kathu Pan.</li> <li>• These test excavations and sampling must be done after a permit has been granted under Section 35 of the NHRA (Act 25 of 1999) to a qualified and experienced Stone Age archaeologist.</li> <li>• An archaeologist suitably qualified in Stone Age fieldwork and research must be appointed to undertake an Archaeological Watching Brief for the Construction Phase of the project. The appointed archaeologist will be responsible for the following:               <ul style="list-style-type: none"> <li>○ Provide training to the project Environmental Control Office (ECO) in Stone Age archaeology and the identification of Stone Age artefacts and sites. The ECO will be responsible for daily on-site monitoring during the construction phase with the appointed archaeologist visiting the site every two weeks, or at a lower frequency as recommended by the archaeologist.</li> </ul> </li> </ul>

BASIC ASSESSMENT REPORT

No.	ENVIRON- MENTAL IMPACT	IMPACT SOURCE/DESCRIPTION	Impact Significance	MITIGATION
			Without Mitigation	Mitigation Measure
<b>1 CONSTRUCTION PHASE</b>				
<b>1.1 DIRECT CONSTRUCTION IMPACTS</b>				
				<ul style="list-style-type: none"> <li>○ On-site assessment of any Stone Age material exposed during construction and the provision of recommendations for the way in which the exposed material must be mitigated.</li> <li>○ Compile and submit an archaeological monitoring report at the end of the monitoring process.</li> <li>○ Should any Stone Age material or any archaeological material be identified, all construction work in that area must immediately stop and the ECO or archaeologist (if he is already present on site) must demarcate a construction free area around the discovery. If the ECO made the discovery, the archaeologist must be contacted immediately to visit the construction site to assess the exposed material. After assessing the exposed material the archaeologist would provide recommendations for the exposed material, which may range from destruction without mitigation (if the exposed material is found to be of little significance) to archaeological mitigation (if the exposed material is found to be significant). The Stone Age or archaeological material will not be disturbed or relocated until the necessary permits have been obtained where applicable.</li> </ul>

## BASIC ASSESSMENT REPORT

No.	ENVIRON-MENTAL IMPACT	IMPACT SOURCE/DESCRIPTION	Impact Significance	MITIGATION
			Without Mitigation	Mitigation Measure
<b>1 CONSTRUCTION PHASE</b>				
<b>1.2 INDIRECT CONSTRUCTION IMPACTS</b>				
<b>PHYSICAL NATURAL ENVIRONMENT</b>				
<b>AIR QUALITY</b>				
1.2.1	Dust generation	Dust can affect visibility and traffic safety. When dispersed, the dust could be a nuisance to nearby receptors and can settle on plants thereby negatively impacting their vigour and palatability and reducing the grazing capacity in the area.	Very Low	<ul style="list-style-type: none"> <li>• Minimise movement of traffic as far as reasonably possible.</li> <li>• Unsealed access roads and road verges of sealed roads should be watered by means of water carts (if required).</li> <li>• Unsealed laydown areas should be watered as required by means of water carts (if required).</li> <li>• Speed limits on unsealed roads will be limited to a maximum speed consistent with the minimisation of dust generation. Nominal speed limit of 40 km/h applies unless otherwise marked.</li> <li>• All installed dust control equipment, such as water sprays, shall be operated and maintained to prevent or minimise fugitive dust emissions.</li> </ul>
<b>BIOLOGICAL NATURAL ENVIRONMENT</b>				
<b>PLANT LIFE</b>				
1.2.2	Alien and invasive Plants	The disturbance of the soil surface could provide opportunity for alien and invasive plant species to establish and proliferate.	Low	<ul style="list-style-type: none"> <li>• In terms of the amendments to the regulations under the Conservation of Agricultural Resources Act, 1983 and Section 28 of the National Environmental Management Act, 1998, land users are legally responsible for the control of invasive alien plants on the properties and it is therefore recommended that declared weed and invader species be removed from the subject property areas where the construction takes place.</li> <li>• This action must be followed up regularly to prevent regrowth or seedling growth.</li> <li>• It must be continuously monitored.</li> </ul>

## BASIC ASSESSMENT REPORT

No.	ENVIRON-MENTAL IMPACT	IMPACT SOURCE/DESCRIPTION	Impact Significance	MITIGATION
			Without Mitigation	Mitigation Measure
<b>1 CONSTRUCTION PHASE</b>				
<b>1.2 INDIRECT CONSTRUCTION IMPACTS</b>				
<b>SENSITIVE LANDSCAPES</b>				
1.2.3	Ecosystem Changes	Fencing off the cemetery area could impact animal movements, which may contribute to ecosystem changes.	Low	<ul style="list-style-type: none"> <li>• Minimise footprint areas of disturbance.</li> <li>• Minimise noise disturbance as described in 'direct construction impacts'.</li> <li>• Minimise impacts to water resources as described in the 'direct construction impacts'.</li> <li>• Mitigation for the loss of grazing land and animal movements is not really possible other than the "no-go" option. The surrounding area is similar to the area being used for the cemetery, thus this impact is not expected to be significant, as surrounding areas can provide the same use.</li> </ul>

BASIC ASSESSMENT REPORT

No.	ENVIRONMENTAL IMPACT	IMPACT SOURCE/DESCRIPTION	Impact Significance	Recommendations
			Incremental (additional) Impacts	
<b>1 CONSTRUCTION PHASE</b>				
<b>1.3 CUMULATIVE CONSTRUCTION IMPACTS</b>				
<b>PHYSICAL NATURAL ENVIRONMENT</b>				
<b>NOISE</b>				
1.3.1	Movement of vehicles	There is not much noise in the surrounding area and the area consists of mainly open veld. The proposed project will generate minimal noise through the movement of construction vehicles and machinery during construction. A very limited, short term increase in the level of noise will be caused by the proposed project.	Very Low / insignificant	Recommendations as per the construction phase.
<b>SURFACE WATER</b>				
1.3.2	Disturbance to watercourses	Disturbance to the drainage lines through construction activities. It is not expected that the project will impact on drainage lines significantly, as the cemetery will be outside of the drainage lines and activities are expected to be restricted to the proposed project area.	Very Low	Recommendations as per the construction phase.
1.3.3	Contamination of surface water run-off	The inappropriate management and handling of fuel, oil and other potentially hazardous chemicals and substances during the construction period could result in potentially negative cumulative impacts on surface water quality. Poor placement and maintenance of temporary sanitary arrangements (i.e. portable toilets) can also result in detrimental cumulative impacts on water resources. Provided that the correct management of the site is implemented, it is not expected that construction activities should contribute significantly to the decrease in surface water quality and quantity.	Very Low	Recommendations as per the construction phase.

## BASIC ASSESSMENT REPORT

No.	ENVIRONMENTAL IMPACT	IMPACT SOURCE/DESCRIPTION	Impact Significance	Recommendations
			Incremental (additional) Impacts	
<b>1 CONSTRUCTION PHASE</b>				
<b>1.3 CUMULATIVE CONSTRUCTION IMPACTS</b>				
<b>GROUNDWATER</b>				
1.3.4	Groundwater contamination	<p>The inappropriate management and handling of fuel, oil and other potentially hazardous chemicals and substances during the construction period could result in potentially negative impacts on ground water quality.</p> <p>Poor placement and maintenance of temporary sanitary arrangements (i.e. portable toilets) can also result in detrimental impacts on water resources.</p> <p>It is assumed that groundwater quality may already be impacted by the existing cemetery, but this has not been tested.</p> <p>Provided that the correct management of the site is implemented, it is not expected that construction activities should contribute significantly to the decrease in groundwater quality and quantity. The existing cemetery would already be contributing to the impacts on groundwater and the small extension is not expected to have a significant additional impact.</p>	Very Low	Recommendations as per the construction phase.
<b>AIR QUALITY</b>				
1.3.5	Increase in dust fallout. Increase in the concentration of suspended particulates, specifically fine, inhalable particulates.	<p>The dust levels in the area are expected to be low as the site is only near a tarred road and there are no other activities in the area. The site is located near the existing Kathu cemetery thus, the activities in the area are not changing.</p> <p>The increase in the number of construction vehicles and machinery are unlikely to result in noticeable increases in dust emissions.</p>	Very Low	Recommendations as per the construction phase.

## BASIC ASSESSMENT REPORT

No.	ENVIRONMENTAL IMPACT	IMPACT SOURCE/DESCRIPTION	Impact Significance	Recommendations
			Incremental (additional) Impacts	
<b>1 CONSTRUCTION PHASE</b>				
<b>1.3 CUMULATIVE CONSTRUCTION IMPACTS</b>				
<b>CLIMATE AND GREENHOUSE GAS EMISSIONS</b>				
1.3.6	Contribution to climate change due to greenhouse gas emissions.	Minimal vehicles and machinery are expected to be used for the construction phase as only a fence and an access road will be constructed. The increase in the number of construction vehicles and machinery are unlikely to result in noticeable increases in greenhouse gas emissions	Very Low	Recommendations as per the construction phase.
<b>BIOLOGICAL NATURAL ENVIRONMENT</b>				
<b>PLANT LIFE</b>				
1.3.7	Loss of protected species or species of conservation importance.	The adjacent Kathu Cemetery has already slightly impacted on the prevailing ecology. However, there is a high possibility of retaining protected trees on site.  Provided the recommended mitigation measures for the construction phase are implemented, it is not expected that there will be significant changes to the plant life.	Low	Recommendations as per the construction phase.
<b>ANIMAL LIFE</b>				
1.3.8	Disturbance to animal life	Grazing can still occur in the surrounding area where there is similar habitat. Some animals can still use the habitat e.g. birds as they will not be restricted by the fencing.  Provided the recommended mitigation measures for the construction phase are implemented, it is not expected that there will be significant changes to the plant life.	Low	Recommendations as per the construction phase.

## BASIC ASSESSMENT REPORT

No.	ENVIRONMENTAL IMPACT	IMPACT SOURCE/DESCRIPTION	Impact Significance	Recommendations
			Incremental (additional) Impacts	
<b>1 CONSTRUCTION PHASE</b>				
<b>1.3 CUMULATIVE CONSTRUCTION IMPACTS</b>				
<b>SENSITIVE LANDSCAPES</b>				
1.3.9	Disturbance to the Protected Kathu Woodland.	<p>The adjacent Kathu Cemetery has already slightly impacted on the prevailing ecology. However, there is a high possibility of retaining protected trees on site.</p> <p>Provided the recommended mitigation measures for the construction phase are implemented, it is not expected that there will be significant changes to the sensitive landscape.</p>	Low	Recommendations as per the construction phase.
<b>SOCIAL AND ECONOMIC ENVIRONMENT</b>				
<b>SOCIO-ECONOMICS</b>				
1.3.10	Job opportunities	<p>Minimal job opportunities will be created for the construction phase of the cemetery expansion.</p> <p>A low impact is expected in terms of job opportunities with the implementation of the recommendations provided in the construction phase being implemented.</p>	Low	Recommendations as per the construction phase.
<b>TRAFFIC</b>				
1.3.11	Increase traffic during construction	<p>Increased vehicle movement during the construction of the cemetery fence and access road.</p> <p>The project will result in a very limited and short-lived increase in the total number of vehicles in the area.</p>	Low	Recommendations as per the construction phase.



## BASIC ASSESSMENT REPORT

No.	ENVIRON-MENTAL IMPACT	IMPACT SOURCE/DESCRIPTION	Impact Significance	MITIGATION
			Without Mitigation	Mitigation Measure
<b>2 OPERATIONAL PHASE</b>				
<b>2.1 DIRECT OPERATIONAL IMPACTS</b>				
<b>PHYSICAL NATURAL ENVIRONMENT</b>				
<b>TOPOGRAPHY</b>				
2.1.1	Alteration of local relief	Levelling of areas where graves will be placed	Low	<ul style="list-style-type: none"> <li>• No mitigation is really possible other than the "no-go" option as the establishment of graves will change the local topography of the immediate area of where the grave is relocated. Soil can be replaced and vegetation that was removed can be replaced where possible to minimise the impact.</li> </ul>
<b>SOILS</b>				
2.2.2	Loss of topsoil	Inappropriate removal and refilling of topsoil at graves.	Low	<ul style="list-style-type: none"> <li>• Care should be taken to replace topsoil to allow re-establishment of vegetation where possible.</li> </ul>
2.2.3	Compaction of soils	<p>Movement of vehicles and machinery at the site for grave establishment.</p> <p>Movement and parking of vehicles for people visiting graves.</p>	Low	<ul style="list-style-type: none"> <li>• Ripping of soil in areas where soil has been compacted.</li> <li>• The impact of parked vehicles is expected to not cover a large area, as cars are likely to park near the entrance of the cemetery.</li> <li>• Vehicles should be restricted to travelling on the access roads.</li> </ul>
2.2.4	Sidewall stability of soil where coffins are buried.	Loss of stability the deeper the coffin is buried. There is loss of sidewall stability around 1.5 meters, which is the same depth as the general grave depth, thus this impact is expected to be minimal.	Very Low	<ul style="list-style-type: none"> <li>• Coffins should not be buried too deep, to prevent loss of stability of the sidewalls.</li> </ul>

## BASIC ASSESSMENT REPORT

No.	ENVIRON-MENTAL IMPACT	IMPACT SOURCE/DESCRIPTION	Impact Significance	MITIGATION
			Without Mitigation	Mitigation Measure
<b>2 OPERATIONAL PHASE</b>				
<b>2.1 DIRECT OPERATIONAL IMPACTS</b>				
<b>NOISE</b>				
2.2.5	Noise generation from grave digging equipment.	Equipment used for digging of graves.	Low	<ul style="list-style-type: none"> <li>• Minimise movement of traffic along public roads as far as reasonably possible.</li> <li>• The contractor shall ensure that the workers do not create unnecessary noise such as hooting or shouting.</li> <li>• Maintain vehicles in good condition to prevent unnecessary noise outputs.</li> </ul>
<b>SURFACE WATER</b>				
2.2.6	Surface Water Contamination	Maintenance activities including cleaning and use of herbicides for headstones.	Very Low	<ul style="list-style-type: none"> <li>• Ensure that the use of cleaning agents are minimised. Herbicides are to be biodegradable.</li> </ul>
<b>GROUNDWATER</b>				
2.2.7	Groundwater contamination	Contamination to the groundwater from coffins: material used for the coffin, natural human decomposition and impact to ammonia and nitrate levels in groundwater.	Moderate	<ul style="list-style-type: none"> <li>• No mitigation is really possible other than the "no-go" option as human natural decomposition cannot be stopped. To try decrease the impact, graves must not be dug too deep where the groundwater table level would be met, which is fairly deep (8m) in comparison to the general grave depth of approximately 1.6m.</li> </ul>

## BASIC ASSESSMENT REPORT

No.	ENVIRON-MENTAL IMPACT	IMPACT SOURCE/DESCRIPTION	Impact Significance	MITIGATION
			Without Mitigation	Mitigation Measure
<b>2 OPERATIONAL PHASE</b>				
<b>2.1 DIRECT OPERATIONAL IMPACTS</b>				
<b>AIR QUALITY</b>				
2.2.8	Increase in dust fallout. Increase in the concentration of suspended particulates, specifically fine, inhalable particulates.	Topsoil stripping and vegetation clearing for grave establishment. Travel on unsurfaced roads.	Very Low	<ul style="list-style-type: none"> <li>• Minimise vehicle movements on unsurfaced roads as far as reasonably possible.</li> <li>• Speed limits on unsealed roads will be limited to a maximum speed consistent with the minimisation of dust generation. Nominal speed limit of 40 km/h applies unless otherwise marked.</li> <li>• Complaints regarding dust to be registered in the complaints register and to be investigated and managed in accordance with the incident reporting procedures.</li> <li>• Rehabilitate disturbed area.</li> </ul>
<b>CLIMATE AND GREENHOUSE GAS EMISSIONS</b>				
2.2.9	Contribution to climate change due to greenhouse gas emissions.	Vehicles and machinery used during the establishment of graves contributing to greenhouse gas emissions.	Very Low	<ul style="list-style-type: none"> <li>• Maintain machinery, vehicles and equipment in good condition to prevent unnecessary emissions.</li> <li>• Plan vehicle logistics to minimise the operational hours and distances travelled.</li> </ul>

BASIC ASSESSMENT REPORT

No.	ENVIRON-MENTAL IMPACT	IMPACT SOURCE/DESCRIPTION	Impact Significance	MITIGATION
			Without Mitigation	Mitigation Measure
<b>2 OPERATIONAL PHASE</b>				
<b>2.1 DIRECT OPERATIONAL IMPACTS</b>				
<b>BIOLOGICAL NATURAL ENVIRONMENT</b>				
<b>PLANT LIFE</b>				
2.2.10	Loss of protected species or species of conservation importance.	Damage and removal of protected trees within the protected Kathu Woodland.	Moderate	<ul style="list-style-type: none"> <li>• Damage to and removal of protected species of vegetation is prohibited unless permits for removal from the Department of Agriculture, Fisheries and Forestry (DAFF) and the Department of Environment and Nature Conservation (DENC) are in place (licenses and permits are required where protected tree and plant species cannot be avoided and have to be removed, respectively). There are some species e.g. <i>Acacia erioloba</i>, <i>Boscia albitrunca</i> on site that would require a permit should they need to be moved.</li> <li>• Protected trees should be avoided and graves placed between protected trees allowing the retention of protected trees. Where disturbance cannot be avoided, the applicable permits need to be acquired prior to disturbance or removal of the plants/trees.</li> <li>• Trees that are removed should be replanted at a location discussed with DAFF/DENC. If trees cannot be replanted, new trees should be planted of the same species that were removed at a location discussed with DAFF/DENC.</li> </ul>

## BASIC ASSESSMENT REPORT

No.	ENVIRON-MENTAL IMPACT	IMPACT SOURCE/DESCRIPTION	Impact Significance	MITIGATION
			Without Mitigation	Mitigation Measure
<b>2 OPERATIONAL PHASE</b>				
<b>2.1 DIRECT OPERATIONAL IMPACTS</b>				
<b>ANIMAL LIFE</b>				
2.2.11	Disturbance to animal life	Disturbance of habitats impacting animal movements and distribution, noise impacting animal movements and distribution, potential poaching. Impact to animal grazing.	Low	<ul style="list-style-type: none"> <li>• Any fauna directly threatened by the operational activities should be removed to a safe location by the SHEQ officer or other suitably qualified person.</li> <li>• Minimise footprint areas of disturbance</li> <li>• The collection, hunting or poaching of any animals at the site should be strictly forbidden. Personnel should not be allowed to wander off the demarcated construction site.</li> <li>• Strict penalties for poaching need to be imposed.</li> <li>• There needs to be environmental awareness training of staff.</li> </ul>
<b>SENSITIVE LANDSCAPES</b>				
2.2.12	Disturbance to the Protected Kathu Woodland.	Damage and removal of protected trees within the protected Kathu Woodland which the cemetery is located within.	Moderate	<ul style="list-style-type: none"> <li>• Damage to and removal of protected species of vegetation is prohibited unless permits for removal from the Department of Agriculture, Fisheries and Forestry (DAFF) and the Department of Environment and Nature Conservation (DENC) are in place (licenses and permits are required where protected tree and plant species cannot be avoided and have to be removed, respectively). There are some species e.g. <i>Acacia erioloba</i> on site that would require a permit should they need to be moved.</li> <li>• Trees that are removed should be replanted at a location discussed with DAFF/DENC. If trees cannot be replanted, new trees should be planted of the same species that were removed at a location discussed with DAFF/DENC.</li> </ul>

## BASIC ASSESSMENT REPORT

No.	ENVIRON-MENTAL IMPACT	IMPACT SOURCE/DESCRIPTION	Impact Significance	MITIGATION
			Without Mitigation	Mitigation Measure
<b>2 OPERATIONAL PHASE</b>				
<b>2.1 DIRECT OPERATIONAL IMPACTS</b>				
<b>SOCIAL AND ECONOMIC ENVIRONMENT</b>				
<b>SOCIO-ECONOMICS</b>				
2.2.13	Job opportunities	Minimal job opportunities will be created for the operational phase of the cemetery expansion, which will mainly include maintenance activities and grave digging.	Low Positive	<ul style="list-style-type: none"> <li>• Maintain employment numbers.</li> </ul>
2.2.14	Providing increased burial area.	Providing residents of the Kathu area with burial space as the existing cemetery is reaching full capacity.	High Positive	<ul style="list-style-type: none"> <li>• Ensure effective placement of graves to maximise the number of graves that can be placed in the cemetery.</li> </ul>
<b>VISUAL ASPECTS</b>				
2.2.15	Sense of place	Establishing graves and erecting gravestones.	Very Low Negative	<ul style="list-style-type: none"> <li>• The existing cemetery is adjacent to the proposed extension, thus the sense of place is not expected to change.</li> <li>• Natural vegetation cover needs to be maintained where possible and vegetation removal must be minimised where possible.</li> </ul>
<b>TRAFFIC</b>				
2.2.16	Increased traffic for visiting graves	Increased vehicle movement during the operational phase of the cemetery where graves are visited.	Very Low Negative	<ul style="list-style-type: none"> <li>• Appropriate speed limits for all vehicles must be strictly enforced to reduce the dust nuisance for the surrounding areas. Traffic impacts are not expected to be significant.</li> </ul>

## BASIC ASSESSMENT REPORT

No.	ENVIRON-MENTAL IMPACT	IMPACT SOURCE/DESCRIPTION	Impact Significance	MITIGATION
			Without Mitigation	Mitigation Measure
<b>2 OPERATIONAL PHASE</b>				
<b>2.1 DIRECT OPERATIONAL IMPACTS</b>				
<b>CULTURAL, HERITAGE AND PALAEOLOGICAL RESOURCES</b>				
<b>2.2.17</b>	Disturbance of archaeological sites and other sites of heritage importance	Movement of people and vehicles on site and digging up of soil for grave establishment may impact sites of heritage/archaeological importance. The proposed operational activities might unearth artefacts of cultural or historic value.	High	<ul style="list-style-type: none"> <li>• The subterranean presence of archaeological and/or historical sites features or artefacts are always a distinct possibility. Care should therefore be taken during any activities in case any of these are accidentally discovered.</li> <li>• It is recommended that a set of test excavation be done to determine presence and extent of an archaeological deposit.</li> <li>• If a deposit is identified a controlled sampling of the material found should be done.</li> <li>• This work must be done in such a way as to augment the current research questions and field work such as the excavations at the Kathu Townlands Site and Kathu Pan.</li> <li>• These test excavations and sampling must be done after a permit has been granted under Section 35 of the NHRA (Act 25 of 1999) to a qualified and experienced Stone Age archaeologist.</li> <li>• An archaeologist suitably qualified in Stone Age fieldwork and research must be appointed to undertake an Archaeological Watching Brief for the Construction Phase of the project. The appointed archaeologist will be responsible for the following:               <ul style="list-style-type: none"> <li>○ Provide training to the project Environmental Control Office (ECO) in Stone Age archaeology and the identification of Stone Age artefacts and sites. The ECO will be responsible for daily on-site monitoring during the construction phase with the appointed archaeologist visiting the site every two weeks, or at a lower frequency as recommended by the archaeologist.</li> <li>○ On-site assessment of any Stone Age material exposed during construction and the provision of recommendations for the way in which the exposed material must be mitigated.</li> <li>○ Compile and submit an archaeological monitoring report at the end of the</li> </ul> </li> </ul>

BASIC ASSESSMENT REPORT

No.	ENVIRON-MENTAL IMPACT	IMPACT SOURCE/DESCRIPTION	Impact Significance	MITIGATION
			Without Mitigation	Mitigation Measure
<b>2 OPERATIONAL PHASE</b>				
<b>2.1 DIRECT OPERATIONAL IMPACTS</b>				
				<p>monitoring process.</p> <ul style="list-style-type: none"> <li>○ Should any Stone Age material or any archaeological material be identified, all construction work in that area must immediately stop and the ECO or archaeologist (if he is already present on site) must demarcate a construction free area around the discovery. If the ECO made the discovery, the archaeologist must be contacted immediately to visit the construction site to assess the exposed material. After assessing the exposed material the archaeologist would provide recommendations for the exposed material which may range from destruction without mitigation (if the exposed material is found to be of little significance) to archaeological mitigation (if the exposed material is found to be significant). The Stone Age or archaeological material will not be disturbed or relocated until the necessary permits have been obtained where applicable.</li> </ul>
2.2.18	Disturbance of palaeontological resources	Excavation activities for the establishment of graves may unearth palaeontological resources.	Moderate	<ul style="list-style-type: none"> <li>• The subterranean presence of palaeontological resources is always a distinct possibility. Care should therefore be taken during any activities in case any of these are accidentally discovered.</li> <li>• The ECO for this project must be made aware of the fact that the windblown sand of the Gordonia Formation might contain fossils of root casts, burrows and rare vertebrate remains. Recording of these fossils will contribute significantly to our understanding of the palaeo-environments that prevailed in the area.</li> <li>• If significant fossil finds (e.g. vertebrate remains, bones, burrows, fresh water shells) are recorded during excavations for poles for the fence a qualified palaeontologist must be employed to apply for a collection permit to collect the fossils according the SAHRA specifications.</li> </ul>



## BASIC ASSESSMENT REPORT

No.	ENVIRONMENTAL IMPACT	IMPACT SOURCE/DESCRIPTION	Impact Significance	MITIGATION
			Without Mitigation	Mitigation Measure
<b>2 OPERATIONAL PHASE</b>				
<b>2.2 INDIRECT OPERATIONAL IMPACTS</b>				
<b>BIOLOGICAL NATURAL ENVIRONMENT</b>				
<b>PLANT LIFE</b>				
2.2.1	Alien and invasive Plants	The disturbance of the soil surface could provide opportunity for alien and invasive plant species to establish and proliferate.	Low	<ul style="list-style-type: none"> <li>• In terms of the amendments to the regulations under the Conservation of Agricultural Resources Act, 1983 and Section 28 of the National Environmental Management Act, 1998, land users are legally responsible for the control of invasive alien plants on the properties and it is therefore recommended that declared weed and invader species be removed from the subject property areas where the operations take place.</li> <li>• This action must be followed up regularly to prevent regrowth or seedling growth.</li> <li>• It must be continuously monitored.</li> </ul>
<b>SENSITIVE LANDSCAPES</b>				
2.2.2	Ecosystem Changes	Establishing graves could have ecosystem changes with impacts to groundwater impacts, habitats etc.	Low	<ul style="list-style-type: none"> <li>• Minimise footprint areas of disturbance.</li> <li>• Minimise noise disturbance as described in 'direct operational impacts'.</li> <li>• Minimise impacts to water resources as described in the 'direct operational impacts'.</li> <li>• Mitigation for the change to habitat is not really possible other than the "no-go" option. The surrounding area is similar to the area being used for the cemetery, thus this impact is not expected to be significant, as surrounding areas can provide the same use.</li> <li>• Natural vegetation cover needs to be restored at impacted areas, where possible.</li> </ul>

## BASIC ASSESSMENT REPORT

No.	ENVIRONMENTAL IMPACT	IMPACT SOURCE/DESCRIPTION	Impact Significance	Recommendations
			Incremental (additional) Impacts	
<b>2 OPERATIONAL PHASE</b>				
<b>2.3 CUMULATIVE OPERATIONAL IMPACTS</b>				
<b>PHYSICAL NATURAL ENVIRONMENT</b>				
<b>NOISE</b>				
2.3.1	Movement of vehicles	<p>The proposed project will generate minimal noise through the movement of vehicles and machinery during the operational phase. A very limited, short term increase in the level of noise will be caused by the proposed project.</p> <p>There will not be any new impacts, only the time extension of existing impacts.</p>	Very Low Negative	Recommendations as per the construction phase.
<b>SURFACE WATER</b>				
2.3.2	Disturbance to watercourses	Disturbance to the drainage lines through construction activities. It is not expected that the project will impact on drainage lines significantly, as the cemetery will be outside of the drainage lines and activities are expected to be restricted to the proposed project area.	Low	Recommendations as per the construction phase.
2.3.3	Contamination of surface water run-off	<p>The inappropriate management and handling of fuel, oil and other potentially hazardous chemicals and substances during the construction period could result in potentially negative cumulative impacts on surface water quality.</p> <p>Provided that the correct management of the site is implemented, it is not expected that operational activities should contribute significantly to the decrease in surface water quality and quantity.</p>	Very Low Negative	Recommendations as per the construction phase.

## BASIC ASSESSMENT REPORT

No.	ENVIRONMENTAL IMPACT	IMPACT SOURCE/DESCRIPTION	Impact Significance	Recommendations
			Incremental (additional) Impacts	
<b>2 OPERATIONAL PHASE</b>				
<b>2.3 CUMULATIVE OPERATIONAL IMPACTS</b>				
<b>GROUNDWATER</b>				
2.3.4	Groundwater contamination	<p>The inappropriate management and handling of fuel, oil and other potentially hazardous chemicals and substances during the construction period could result in potentially negative impacts on ground water quality.</p> <p>Provided that the correct management of the site is implemented, it is not expected that operational activities (grave digging, site maintenance) should contribute significantly to the decrease in groundwater quality and quantity.</p> <p>There will not be any new impacts, only the time extension of existing impacts.</p>	Very Low Negative	Recommendations as per the construction phase.
<b>AIR QUALITY</b>				
2.3.5	Increase in dust fallout. Increase in the concentration of suspended particulates, specifically fine, inhalable particulates.	<p>The dust levels in the area are expected to be low as the site is only near a tarred road and there are no other activities in the area. The site is located near the existing Kathu cemetery thus; the activities in the area are not changing.</p> <p>The increase in the number of construction vehicles and machinery are unlikely to result in noticeable increases in dust emissions.</p>	Very Low Negative	Recommendations as per the construction phase.

## BASIC ASSESSMENT REPORT

No.	ENVIRONMENTAL IMPACT	IMPACT SOURCE/DESCRIPTION	Impact Significance	Recommendations
			Incremental (additional) Impacts	
<b>2 OPERATIONAL PHASE</b>				
<b>2.3 CUMULATIVE OPERATIONAL IMPACTS</b>				
<b>CLIMATE AND GREENHOUSE GAS EMISSIONS</b>				
2.3.6	Contribution to climate change due to greenhouse gas emissions.	<p>Minimal vehicles and machinery are expected to be used for the operational phase as only graves need to be dug. There will be vehicles from people visiting graves, however this is currently happening at the existing cemetery. There may be slight increases with the expansion.</p> <p>The increase in the number of vehicles and machinery are unlikely to result in noticeable increases in greenhouse gas emissions.</p> <p>There will not be any new impacts, only the time extension of existing impacts.</p>	Very Low Negative	Recommendations as per the construction phase.
<b>BIOLOGICAL NATURAL ENVIRONMENT</b>				
<b>PLANT LIFE</b>				
2.3.7	Loss of protected species or species of conservation importance.	<p>The adjacent Kathu Cemetery has already slightly impacted on the prevailing ecology. However, there is a high possibility of retaining protected trees on site.</p> <p>Provided the recommended mitigation measures for the construction phase are implemented, it is not expected that there will be significant changes to the plant life.</p>	Low	Recommendations as per the construction phase.
<b>ANIMAL LIFE</b>				
2.3.8	Disturbance to animal life	Grazing can still occur in the surrounding area where there is similar habitat. Some animals can still use the habitat e.g. birds as they will not be restricted by the fencing.	Low	Recommendations as per the construction phase.

## BASIC ASSESSMENT REPORT

No.	ENVIRONMENTAL IMPACT	IMPACT SOURCE/DESCRIPTION	Impact Significance	Recommendations
			Incremental (additional) Impacts	
<b>2 OPERATIONAL PHASE</b>				
<b>2.3 CUMULATIVE OPERATIONAL IMPACTS</b>				
<b>SENSITIVE LANDSCAPES</b>				
2.3.9	Disturbance to the Protected Kathu Woodland.	The adjacent Kathu Cemetery has already slightly impacted on the prevailing ecology. However, there is a high possibility of retaining protected trees on site. Provided the recommended mitigation measures for the construction phase are implemented, it is not expected that there will be significant changes to the sensitive landscape.	Very Low Negative	Recommendations as per the construction phase.
<b>SOCIAL AND ECONOMIC ENVIRONMENT</b>				
<b>SOCIO-ECONOMICS</b>				
2.3.10	Job opportunities	There will be retention of existing job opportunities.	Very Low Positive	Recommendations as per the construction phase.
<b>TRAFFIC</b>				
2.3.11	Increase traffic during construction	Increased vehicle movement during the operational of the cemetery fence and access road. The project will result in a very limited increase in the total number of vehicles in the area.  There will not be any new impacts, only the time extension of existing impacts.	Very Low Negative	Recommendations as per the construction phase.

BASIC ASSESSMENT REPORT

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No.	ENVIRONMENTAL IMPACT	IMPACT SOURCE/DESCRIPTION	Impact Significance	MITIGATION
			Without Mitigation	Mitigation Measure
<b>3 DECOMMISSIONING AND CLOSURE PHASE</b>				
<b>3.1, 3.2 and 3.3 DIRECT, INDIRECT AND CUMULATIVE DECOMMISSIONING AND CLOSURE IMPACTS</b>				
<p>The Kathu cemetery expansion is expected to remain on site indefinitely. Should this change in future, then the direct impact of removing the graves and rehabilitating the site will need to be assessed at the appropriate time. Once the cemetery reaches full capacity, any infrastructure present, other than graves, headstones and fences, will be removed from the site.</p>				

A complete impact assessment in terms of Regulation 19(3) of GN 733 must be included as Appendix F.

**Regulation GN R733 was a regulation out for comment on 29 August 2014. Following comment on this regulation, new EIA regulations were promulgated. The current applicable regulation for Basic Assessments and Environmental Impact Assessments is GN R982 (4 December 2014). GN R982 was promulgated on the 8<sup>th</sup> December 2014 and the 2010 EIA regulations were repealed. The impact assessment has therefore been done in accordance with GN R982.**

## **2. 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 A (preferred alternative)**

**Following the implementation of mitigation measures, it is believed that the impacts can be managed to acceptable levels. There are no impacts that are considered detrimental to the environment requiring the prohibition of the project from continuing. None of the impacts after the implementation of mitigation measures is considered “high”, with impacts being moderate to very low. The duration of most impacts are considered medium to short term should they occur. The long-term impacts relate to impacts to heritage/palaeontological resources and to protected trees, which can be managed through the mitigation measures provided by the heritage/palaeontological specialist and through planting/replanting/avoiding protected plant species respectively. The likelihood of the more significant impacts occurring ranges from “unlikely” to ‘definite”, with the mitigation measures decreasing the impact. The positive impact of the project, the provision of extended burial grounds, is “high”, and the probability of this impact occurring is definite.**

### **Alternative B**

### **Alternative C**

### **No-go alternative (compulsory)**

**If the project does not proceed, there will not be any changes to the environment and the status quo would remain. None of the positive or negative impacts identified in this impact assessment will be realised. If the project does not go ahead, the Gamagara municipality’s need for the cemetery to be expanded will not be realised. There will not be an increase in availability of cemetery space and the residents of Kathu would need to use a cemetery further away for burials.**

**SECTION E. RECOMMENDATION 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 ✓	NO
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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).

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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.

**Inclusion of EMP conditions in the Environmental Authorisation.**

Is an EMPr attached?

YES ✓	NO
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The EMPr must be attached as Appendix G.

The details of the EAP who compiled the BAR and the expertise of the EAP to perform the Basic Assessment process must be included as Appendix H.

If any specialist reports were used during the compilation of this BAR, please attach the declaration of interest for each specialist in Appendix I.

Any other information relevant to this application and not previously included must be attached in Appendix J.

**Chiara D'Egidio Kotze**

\_\_\_\_\_  
NAME OF EAP

\_\_\_\_\_  
SIGNATURE OF EAP

**24/08/2015**

DATE



**SECTION F: APPENDICES**

The following appendixes must be attached:

Appendix A: Maps

Appendix B: Photographs

Appendix C: Facility illustration(s)

Appendix D: Specialist reports (including terms of reference)

Appendix E: Public Participation

Appendix F: Impact Assessment

Appendix G: Environmental Management Programme (EMPr)

Appendix H: Details of EAP and expertise

Appendix I: Specialist's declaration of interest

Appendix J: Additional Information

Appendix K: Comment by the relevant Municipality