

# **DRAFT BASIC ASSESSMENT REPORT**

**Expansion of the  
Askham cemetery,  
Dawid Kruiper Local Municipality,  
Northern Cape**



**GREEN-BOX**  
CONSULTING

# Report prepared by:

## Environmental Assessment Practitioner:

|                         |                                                                  |
|-------------------------|------------------------------------------------------------------|
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## Applicant:

|                                 |                                                                      |
|---------------------------------|----------------------------------------------------------------------|
| <b>Applicant Contact Person</b> | WJP Brand                                                            |
| <b>Postal Address</b>           | Private Bag X6003<br>UPINGTON<br>8800                                |
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## Site Information:

|                                          |                                      |
|------------------------------------------|--------------------------------------|
| <b>Erf number</b>                        | Portion 1 of the farm Cammelduin 139 |
| <b>Region</b>                            | Gordonia                             |
| <b>21 Digit Surveyors Code</b>           | C02800000000013900001                |
| <b>Area</b>                              | 2 ha                                 |
| <b>Magisterial District</b>              | Askham                               |
| <b>District Municipality</b>             | Z.F. Mgcawu District Municipality    |
| <b>Local Municipality</b>                | Dawid Kruiper Local Municipality     |
| <b>Site coordinates (Centre of site)</b> | 26°58'37.06"S, 20°45'54.40"E         |

# **Green-Box Consulting**

## **Revision & Tracking Schedule:**

|                                            |                                                                                   |                    |                       |
|--------------------------------------------|-----------------------------------------------------------------------------------|--------------------|-----------------------|
| <b>Document Title</b>                      | Expansion of the Askham cemetery, Dawid Kruiper Local Municipality, Northern Cape |                    |                       |
| <b>Client name &amp; Address</b>           | David Kruiper Local Municipality                                                  |                    |                       |
| <b>Green-Box Consulting Project Number</b> | 106/P/2024/DK                                                                     |                    |                       |
| <b>Status</b>                              | Draft Basic Assessment Report                                                     |                    |                       |
| <b>Issue Date</b>                          | 12 June 2026                                                                      |                    |                       |
| <b>Lead Authors</b>                        | Mr. Danie Krynauw                                                                 |                    |                       |
| <b>Registered EAP</b>                      | Mr. Danie Krynauw – EAPASA – 2019/1348                                            |                    |                       |
| <b>Report Distribution</b>                 | Circulate to                                                                      | No. of hard copies | No. electronic copies |
|                                            | I&APs                                                                             |                    | 1                     |
|                                            | Authorizing Authority                                                             | 1                  | 1                     |

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# Acronyms used in this report:

|        |                                                                           |
|--------|---------------------------------------------------------------------------|
| CA     | Competent Authority                                                       |
| CBA    | Critical Biodiversity Areas                                               |
| CBD    | Central Business District                                                 |
| DAERL  | Department of Agriculture, Environment, Rural development and Land Reform |
| DFFE   | Department of Forestry, Fisheries and Environment                         |
| EAPASA | Environmental Assessment Practitioners Association of South Africa        |
| EIA    | Environmental Impact Assessment                                           |
| EMPR   | Environmental Management Program                                          |
| ESA    | Ecological Support Area                                                   |
| I&AP   | Interested and Affected Party                                             |
| IDP    | Integrated Development Plan                                               |
| IEM    | Integrated Environmental Management                                       |
| NEMA   | National Environmental Management Act (Act No. 107 of 1998)               |
| NEMBA  | National Environmental Management Biodiversity Act (Act No 10 of 2004)    |
| PPP    | Public Participation Process                                              |
| SAHRA  | South African Heritage Resources Agency                                   |
| SAHRIS | South African Heritage Resource Information System                        |
| SANBI  | South African National Biodiversity Institute                             |
| SDF    | Spatial Development Framework                                             |
| TOR    | Terms of Reference                                                        |
| CA     | Competent Authority                                                       |
| CBA    | Critical Biodiversity Areas                                               |

# Project team:

Green-Box Consulting has been appointed by David Kruiper Local Municipality to undertake the Basic Assessment required for the proposed project. The EIA team which is involved in this Process is listed in Table 1 below. This team includes several specialists which have been involved to date.

Table 1: EIA Team

| NAME                                     | ORGANISATION                                          | ROLE/STUDY TO BE UNDERTAKEN                                                   |
|------------------------------------------|-------------------------------------------------------|-------------------------------------------------------------------------------|
| <b>ENVIRONMENTAL MANAGEMENT SERVICES</b> |                                                       |                                                                               |
| Danie Krynauw                            | Green-Box Consulting                                  | Lead EAP (EAPASA) Certified                                                   |
| Lebogang Motsamai                        | Green-Box Consulting and L and R Walker Consulting JV | Reviewer                                                                      |
| <b>SPECIALISTS</b>                       |                                                       |                                                                               |
| Mr. Rikus Lamprecht                      | Eco Focus                                             | Terrestrial Impact Assessment                                                 |
| Dr. Lloyd Rossouw                        | Paleo Field Services                                  | Heritage Impact Assessment (Archaeology, Paleontology and Cultural Landscape) |

Danie Krynauw is the sole director and owner of Green-Box Consulting and has a master's degree in Town and Regional Planning and completed studies in Environmental Management at the University of the Free State. D. Krynauw has over 25 years' experience in the environmental management field and is an EAPASA registered Environmental Assessment Practitioner (EAPASA – 2019/1348). He is also a member of the International Association of Impact Assessments South Africa. He has been project manager of several EIAs, Basic Assessments, Mining Permits and Water Use Licensing applications.

Mr. Krynauw (the EAP) is supported by the EIA Team as outlined in Table 1.

## Report details:

|                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|-------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Title:                  | DRAFT BASIC ASSESSMENT REPORT<br>Expansion of the Askham cemetery, Dawid Kruiper Local Municipality, Northern Cape                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Purpose of this report: | <p>This Draft Basic Assessment Report (DBAR) has been compiled in terms of the Environmental Impact Assessment (EIA) Regulations, 2014, promulgated under the National Environmental Management Act (Act No. 107 of 1998), as amended (NEMA). The BAR is required for listed activities that may have a significant effect on the environment and serves as the primary submission to the competent authority to obtain environmental authorisation prior to commencement.</p> <p>The objectives of the Basic Assessment process are to:</p> <ul style="list-style-type: none"> <li>(a) establish the legislative and policy context within which the proposed activity is to be considered;</li> <li>(b) describe the need and desirability of the activity in relation to the development footprint and socio-economic setting;</li> <li>(c) identify and assess the location of the activity and its footprint based on environmental sensitivity, cumulative impacts, and risks across physical, biological, social, economic, heritage, and cultural aspects;</li> <li>(d) determine the nature, significance, consequence, extent, duration, and probability of potential impacts, and evaluate the degree to which these impacts— <ul style="list-style-type: none"> <li>(i) can be reversed,</li> <li>(ii) may cause irreplaceable loss of resources, and</li> <li>(iii) can be avoided, managed, or mitigated;</li> </ul> </li> <li>(e) identify feasible measures to avoid, manage, or mitigate impacts associated with the proposed activity;</li> <li>(f) document residual risks that require ongoing management and monitoring; and</li> <li>(g) provide an Environmental Management Programme (EMr) that sets out enforceable commitments for mitigation, rehabilitation, and compliance.</li> </ul> |
| Report submission date: | 12 June 2026                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |

## BASIC ASSESSMENT REPORT



agriculture, environmental affairs,  
rural development and land reform

Department:  
agriculture, environmental affairs,  
rural development and land reform .  
NORTHERN CAPE PROVINCE  
REPUBLIC OF SOUTH AFRICA

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|                             |                                                                      |       |              |
|-----------------------------|----------------------------------------------------------------------|-------|--------------|
| Project applicant:          | David Kruiper Local Municipality                                     |       |              |
| Business reg. no. /ID. no.: | N/A                                                                  |       |              |
| Contact person:             | Mr. WJP Brand                                                        |       |              |
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Prepared by:

|                                             |                                                                  |       |              |
|---------------------------------------------|------------------------------------------------------------------|-------|--------------|
| Environmental Assessment Practitioner/Firm: | Green-Box Consulting                                             |       |              |
| Business reg. no. /ID. no.:                 | 2011/087408/23                                                   |       |              |
| Contact person:                             | Danie Krynauw (EAPASA 2019/1348)                                 |       |              |
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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 07 April 2017. 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

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

Green-Box Consulting has been appointed by Dawid Kruiper Local Municipality to fulfil the role of Environmental Assessment Practitioners. Green-Box Consultants will undertake the Environmental Impact Assessment for the proposed development of a cemetery. The construction corridor is situated within the Askham area of the Dawid Kruiper Local Municipality. Dawid Kruiper falls under the ZF Mgcawu District Municipality.

The Dawid Kruiper Local Municipality (Applicant) wishes to expand the Askham cemetery. There is currently an existing cemetery, this proposal is to expand and therefore to provide additional burial space. The town of Askham is fast approaching their maximum burial capacity, therefore creating an urgent need for the expansion of their cemetery. The overall benefit of the proposed development is to ensure that the local community has burial plots to bury their loved ones in a respectful and dignified manner and to enable the municipality to provide the basic service of provision of a cemetery, which includes grave-digging, and landscaping. The social impacts are clear, as it is a need and desirability of the community to have formal burial space.

An 2ha portion has been identified next to the existing cemetery in Askham to expand the cemetery for future use.

The proposed development will accommodate adults and children, which will be divided into a 70% and 30% split between adults and children respectively. The cemetery will also have provisions for formalized walkways between gravesites, enough parking facilities as well as adequate sanitary services for the public. The cemetery will also be fenced. The project site is located west of Askham town.

The size of the proposed cemetery is calculated by considering the following factors:

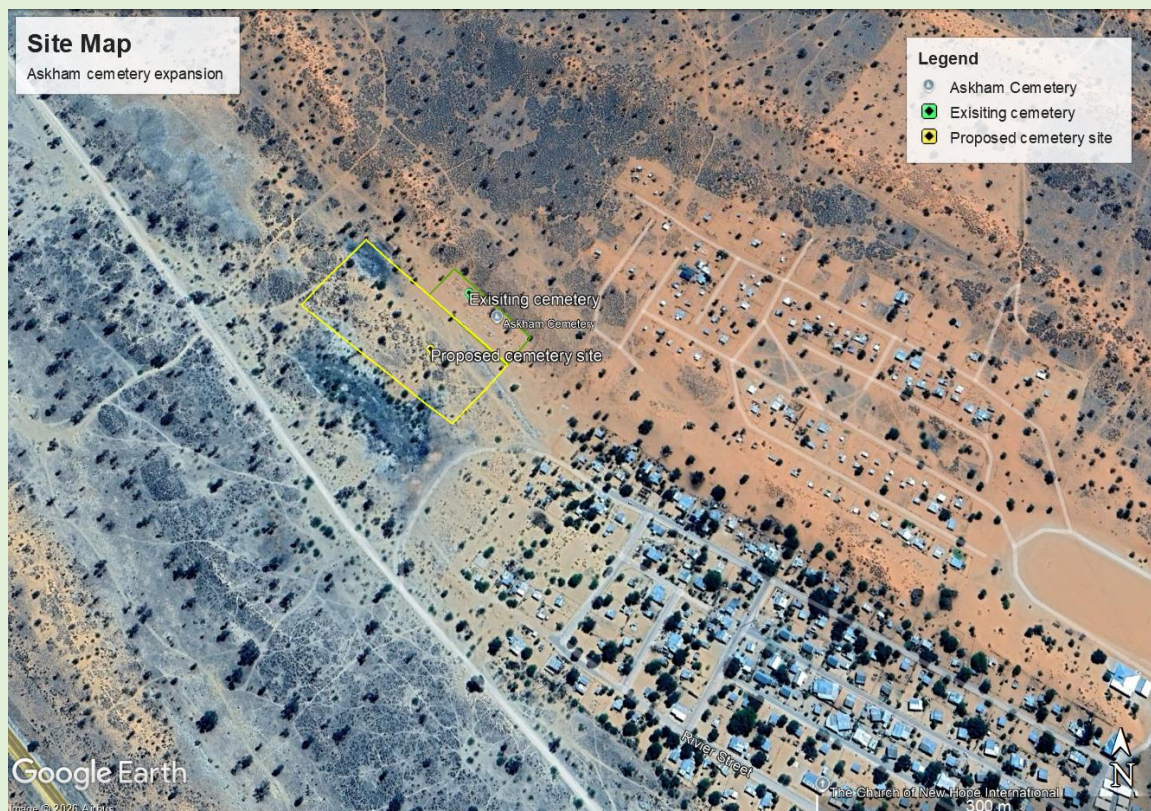
- Cemetery service period;
- Population growth rate;
- Current deaths per year in the local community;
- Percentage of adult deaths per year;
- Percentage children's deaths per year; and
- Area of child and adult graves.

The measurements for adult graves (older than 10 years) will be 2100 x 760 cm, with the child grave measurements being 1500 x 530 cm.

The development of this cemetery will include:

- ◆ Blocks for adult graves;
- ◆ Blocks for children graves;
- ◆ Blocks for pauper graves;

- ◆ Ablution Area;
- ◆ Access roads;
- ◆ Vehicle parking bays; and
- ◆ Perimeter fencing and access gate of cemetery area.



**Figure 1: Locality Map**

The property for the cemetery is described as portion 1 of the farm, Cammelduin 139, Askham. Askham is located approximately 180km north of Upington, in the Northern Cape. The middle point coordinates of the proposed cemetery site are as follows 26°58'37.06"S, 20°45'54.40"E (also refer to Figure 1 for the location map).

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

| Listed activity as described in GN 983, 984 and 985, as amended                                                                                                                                                           | Description of project activity                                                                                                                          |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>GN R 327 - Activity 44 of Listing Notice 1</b> "The expansion of cemeteries by 2500 square meters or more".                                                                                                            | The proposed development footprint of the Cemetery will be 20 000 Square Meters.                                                                         |
| <b>GN R 327 - Activity 27 of Listing Notice 1</b> "The clearance of an area of 1 hectares or more, but less than 20 hectares of indigenous vegetation, expect where such clearance of indigenous vegetation is required." | The proposed development footprint of the Cemetery is 2 hectares. The site proposed for the cemetery contains more than 1ha indigenous vegetation cover. |

## 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.

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

| Alternative 1 (preferred alternative)                                                                                                                                                                                                                                                                                                                                                        |                  |               |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|---------------|
| Description                                                                                                                                                                                                                                                                                                                                                                                  | Lat (DDMMSS)     | Long (DDMMSS) |
| The preferred site for the cemetery expansion is identified at the existing Askham cemetery. The site is open and undeveloped with ample expansion area. The site can easily be accessed from the R31 road and does not pose any restriction in terms of current and future landuse planning. It should be noted that Askham landfill site is located to the south of the existing cemetery. | 1. 26°58'33.30"S | 20°45'52.62"E |
|                                                                                                                                                                                                                                                                                                                                                                                              | 2. 26°58'35.79"S | 20°45'50.33"E |
|                                                                                                                                                                                                                                                                                                                                                                                              | 3. 26°58'40.27"S | 20°45'56.39"E |
|                                                                                                                                                                                                                                                                                                                                                                                              | 4. 26°58'38.15"S | 20°45'58.32"E |
| <b>No additional site alternatives were identified</b> because the applicant intends to develop the facility on land already under their control. Selecting an alternative site would introduce unnecessary environmental disturbance and additional infrastructure requirements.                                                                                                            |                  |               |
| Alternative 2                                                                                                                                                                                                                                                                                                                                                                                |                  |               |
| Description                                                                                                                                                                                                                                                                                                                                                                                  | Lat (DDMMSS)     | Long (DDMMSS) |
| <b>No other Site Alternatives Identified.</b>                                                                                                                                                                                                                                                                                                                                                |                  |               |
| Alternative 3                                                                                                                                                                                                                                                                                                                                                                                |                  |               |
| Description                                                                                                                                                                                                                                                                                                                                                                                  | Lat (DDMMSS)     | Long (DDMMSS) |

**No other Site Alternatives Identified.**

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

**Alternative:**

**Latitude (S):**

**Longitude (E):**

Alternative S1 (preferred)

- Starting point of the activity
- Middle/Additional point of the activity
- End point of the activity

|  |  |
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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**

| <b>Alternative 1 (preferred alternative)</b>                                                                                                                                                                                                                                                                                                                                                                                                                                              |                  |               |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|---------------|
| Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Lat (DDMMSS)     | Long (DDMMSS) |
| The proposed development footprint of approximately 2 hectares consists of a vacant portion of land characterized by disturbed Southern Kalahari Mekkacha vegetation type. The ecological specialist confirms that the area is of low sensitivity for terrestrial biodiversity, aquatic biodiversity, plant species, and animal species. No Critical Biodiversity Areas, Ecological Support Areas, or significant Species of Conservation Concern populations occur within the footprint. | 5. 26°58'33.30"S | 20°45'52.62"E |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 6. 26°58'35.79"S | 20°45'50.33"E |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 7. 26°58'40.27"S | 20°45'56.39"E |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 26°58'38.15"S    | 20°45'58.32"E |
| Because the site is environmentally uniform, with no internal high sensitivity features requiring avoidance, no detailed internal layout alternative has been developed at this stage. The proposed cemetery facility will be positioned within the assessed footprint, and the final internal configuration of grave blocks will be determined during the detailed design phase.                                                                                                         |                  |               |
| Given the low sensitivity and absence of ecological constraints, imposing rigid layout alternatives would not provide additional environmental benefit. The internal layout will therefore be refined during later planning stages, guided                                                                                                                                                                                                                                                |                  |               |

|                                                                              |              |               |
|------------------------------------------------------------------------------|--------------|---------------|
| by operational requirements and standard environmental management practices. |              |               |
| <b>Alternative 2</b>                                                         |              |               |
| Description                                                                  | Lat (DDMMSS) | Long (DDMMSS) |
| <b>No other Layout Alternatives Identified.</b>                              |              |               |
| <b>Alternative 3</b>                                                         |              |               |
| Description                                                                  | Lat (DDMMSS) | Long (DDMMSS) |
| <b>No other Layout Alternatives Identified.</b>                              |              |               |

## c) Technology alternatives

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Alternative 1 (preferred alternative)</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <p>The proposed cemetery involves establishing a formal burial space. The activity requires only standard burial methods and technologies, including:</p> <ul style="list-style-type: none"> <li>- Blocks for adult graves;</li> <li>- Blocks for children graves;</li> <li>- Blocks for pauper graves;</li> <li>- Ablution Area;</li> <li>- Access roads;</li> <li>- Vehicle parking bays; and</li> <li>- Perimeter fencing and access gate of cemetery area.</li> </ul> <p>The ecological specialist confirms that the site is of low environmental sensitivity, with no Critical Biodiversity Areas, no priority ecosystems, and no significant SCC populations requiring specialized technological mitigation.</p> <p>Given the simplicity of the proposed cemetery activity and the low sensitivity context, no advanced or alternative technologies are required or environmentally justified.</p> <p>No other technology alternatives were identified. The proposed activity does not involve complex processes that would benefit from technological alternatives.</p> |
| <b>Alternative 2</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>No Technology Alternatives Identified.</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Alternative 3</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>No Technology Alternatives Identified.</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |

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

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Alternative 1 (preferred alternative)</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <p>The proposed development involves establishing a cemetery facility on a 2-hectare portion which is currently vacant land. The activity is a straightforward cemetery development that requires only the preparation of grave sites. Because the activity is simple, low tech, and environmentally non-intrusive, no meaningful scheduling, demand management, input substitution, scale, or design alternatives were identified. The development does not involve industrial processes, high-risk operations, or resource intensive systems where such alternatives would typically provide measurable environmental benefits.</p> |

The ecological specialist confirms that the site The study area scored a Low floral species Site Ecological Importance (SEI) value and a Very Low faunal species Site Ecological Importance (SEI) value. The study area is therefore rated as possessing Low overall long-term ecological/conservational value/significance. The proposed scale of 2 hectares is already minimal and appropriate for the intended cemetery use.

Because the site contains no internal high sensitivity features, alternative design configurations would not provide additional ecological protection. The final internal layout will be refined during detailed design, guided by operational needs and standard environmental management practices. For these reasons, no additional “other alternatives” were considered reasonable or environmentally meaningful for assessment.

#### **Alternative 2**

**No ‘Other’ Alternatives identified.**

#### **Alternative 3**

**No ‘Other’ Alternatives identified.**

### **e) No-go alternative**

The No-Go alternative represents the scenario in which the proposed cemetery facility is not developed, and the site remains in its current condition. Under this alternative, no vegetation clearing, ground preparation, or construction activities would occur. However, the presence of a small existing burial section, will stimulate informal burials. Developing a formal extension section will allow controlled grave digging and burials. The fragmented patches of natural vegetation currently present on the site would remain subject to existing land management practices.

From an environmental perspective, the No-Go alternative would avoid the incremental disturbance associated with clearing approximately 2 hectares of indigenous vegetation. However, the ecological specialist confirms that the site already exhibits low environmental sensitivity, with no Critical Biodiversity Areas, no Ecological Support Areas, no priority ecosystems, and no confirmed populations of Species of Conservation Concern within the proposed development footprint. Maintaining the site in its current state would therefore not result in a significant additional conservation benefit beyond the existing baseline condition.

The No-Go alternative would also prevent the applicant from extending the existing small cemetery to accommodate the growing need for burial space. The land would remain unused for its proposed purpose, and the opportunity to support the local community with formal burial space, would not be realised.

From a planning perspective, the No-Go alternative would leave a vacant, already disturbed portion of land underutilised.

For these reasons, although the No-Go alternative avoids direct environmental disturbance, it is not considered the preferred option because it does not support the Local Municipality objectives or the beneficial use of an already modified site.

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

### 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:**

|                       |
|-----------------------|
| 20 000 m <sup>2</sup> |
| m <sup>2</sup>        |

or, for linear activities: **Not Applicable**

**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:**

|                            |
|----------------------------|
| 24175205.37 m <sup>2</sup> |
| m <sup>2</sup>             |
| m <sup>2</sup>             |

### 4. SITE ACCESS

Does ready access to the site exist?

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

|     |
|-----|
| YES |
|-----|

Describe the type of access road planned:

Access to the site will be from the R31 Road, which is located approximately 450m from the cemetery. From the R31 road, vehicles will make use of the existing internal Askham Town access streets to reach the proposed cemetery. No new access roads are required, as the existing road network is already used and provides adequate access for construction and operational vehicles.

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 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:

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

- 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.

## 10. ACTIVITY MOTIVATION

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

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                     |     |                |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|-----|----------------|
| <b>1. Is the activity permitted in terms of the property's existing land use rights?</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | <input checked="" type="checkbox"/> | NO  | Please explain |
| The area is currently zoned as agricultural; however, a formal rezoning process is running parallel with the Basic Assessment Application, due to the increase of Askham and adjacent township a new cemetery is of utmost importance in this area.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                     |     |                |
| <b>2. Will the activity be in line with the following?</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                     |     |                |
| <b>(a) Provincial Spatial Development Framework (PSDF)</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | <input checked="" type="checkbox"/> | YES | Please explain |
| <p>Yes, the proposed 2 ha cemetery can align with the Northern Cape Provincial Spatial Development Framework (PSDF), provided it meets SPLUMA principles of sustainability, spatial justice, and efficient land use. Cemeteries are considered "social infrastructure" and fall under provincial interest matters, meaning they must be assessed for location suitability, environmental impact, and integration with municipal planning.</p> <p>The PSDF promotes sustainable settlement patterns and equitable access to social facilities.</p> <p>Cemeteries are recognized as essential community infrastructure, especially in growing urban nodes like Upington.</p> <p>The framework requires such facilities to be strategically located to serve surrounding communities without fragmenting land use.</p> |                                     |     |                |
| <b>(b) Urban edge / Edge of Built environment for the area</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | <input checked="" type="checkbox"/> | YES | Please explain |
| <p>Upington/David Kruiper Municipality SDF: The urban edge around Upington is drawn to consolidate growth along the Orange River corridor and within existing settlements (Upington, Askham, Leerkrans, etc.).</p> <p>The cemetery is proposed directly adjacent to Askham's built footprint, but not within the densest residential cluster. At 100 m from houses, the site is functionally contiguous with the settlement, meaning it can be interpreted as being inside or immediately abutting the urban edge. Vacant land in this zone is often earmarked for social infrastructure expansion (schools, cemeteries, clinics) to serve the settlement.</p>                                                                                                                                                      |                                     |     |                |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |     |    |                |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|----|----------------|
| <b>(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?).</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | YES |    | Please explain |
| <p>The IDP emphasizes equitable access to basic services and community facilities. Cemeteries are recognized as essential municipal services under Schedule 5 Part B. The IDP requires facilities to be located where they serve population growth and settlement expansion. Askham is identified as part of the Kgalagadi Trans Frontier Park growth corridor. The IDP promotes balancing ecological, social, and economic sustainability.</p> <p>The Dawid Kruiper IDP and SDF explicitly recognize cemeteries as municipal functions and support their provision within settlement areas. The proposed 2 ha site near Askham is in line with the urban edge and strategic objectives of the IDP/SDF, subject to rezoning and environmental compliance.</p>                                                                                                                                  |     |    |                |
| <b>(d) Approved Structure Plan of the Municipality</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | YES |    | Please explain |
| <p>The municipal SDF functions as the approved structure plan and identifies the Askham area as suitable for community facilities. The proposed development is consistent with these designations and does not conflict with residential areas, sensitive environments, or incompatible land uses. Askham provides direct access, and the 2 ha site can be buffered and landscaped to integrate with the settlement.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |     |    |                |
| <b>(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?)</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | YES |    | Please explain |
| <p>The proposed development will not compromise the integrity of existing environmental priorities for the area as identified in the Environmental Management Framework (EMF) applicable to the ZF Mgcawu District (within which Dawid Kruiper Local Municipality falls). The municipality's EMF, as integrated into its planning instruments and referenced in the David Kruiper IDP, provides strategic environmental guidance, including environmental control zones and sustainability considerations to inform decision making on land uses and development patterns in the district.</p> <p>The ecological and paleontological assessments confirm that the site is of low environmental sensitivity, contains no CBAs or ESAs, and does not fall within high constraint areas. The development therefore aligns with EMF guidance and does not compromise environmental priorities.</p> |     |    |                |
| <b>(f) Any other Plans (e.g. Guide Plan)</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |     | NO |                |
| <b>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)?</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | YES |    | Please explain |
| <p>Yes, the David Kruiper Local Municipality is the applicant and has incorporated two cemetery upgrades and expansion in their current IDP's, e.g. Askham and Louisvale Road.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |     |    |                |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                   |    |                |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|----|----------------|
| <p><b>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.)</b></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | YES               |    | Please explain |
| <p>At both the strategic (national/provincial) and local (municipal/community) levels, the proposed cemetery activity can be considered a societal priority, its appropriateness has been aligned with David Kruiper LM planning frameworks and local needs.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                   |    |                |
| <p><b>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 I.)</b></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | YES/<br>Partially |    | Please explain |
| <p>Basic services such as water supply and sanitation (via septic tanks) will be provided for the cemetery. Stormwater will follow natural drainage patterns identified on site. Final confirmation of bulk water availability will be obtained from the municipality. Any required upgrades will be implemented in consultation with the municipality to ensure compliance with service standards.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                   |    |                |
| <p><b>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 I.)</b></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | YES               |    | Please explain |
| <p>The proposed facility will utilise existing access routes and basic services, requiring minimal new infrastructure. The development is consistent with municipal infrastructure planning and does not impose undue pressure on existing systems.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                   |    |                |
| <p><b>7. Is this project part of a national programme to address an issue of national concern or importance?</b></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                   | NO | Please explain |
| <p>The project is not part of a formal national programme.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                   |    |                |
| <p><b>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.)</b></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | YES               |    | Please explain |
| <p>The site lies <b>adjacent to Askham settlement</b>, only 100 from houses, making it contiguous with the built environment. Cemeteries are recognized as <b>community/social infrastructure</b> in municipal SDFs and IDPs. Locating one here reduces travel burdens for residents and aligns with the Dawid Kruiper Municipality's infrastructure planning. The land is vacant and not earmarked for high-value agricultural or conservation use, so rezoning to "community facility" is feasible.</p> <p>In terms of ecological and environmental suitability, the specialist assessment confirms the site is of <b>low sensitivity for terrestrial, aquatic, plant, and animal biodiversity</b>. No medium- or high significance potential long-term ecological receptor impacts were identified for the proposed development.</p> <p>No Critical Biodiversity Areas (CBA), Ecological Support Areas (ESA), or Freshwater Ecosystem Priority Areas (FEPA) overlap the footprint. Existing cemetery use is already present in the northern corner of the site, meaning the expansion is a logical continuation rather than a new intrusion.</p> |                   |    |                |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |     |    |                |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|----|----------------|
| 9. Is the development the best practicable environmental option for this land/site?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | YES |    | Please explain |
| <p><b>Ecological Assessment (EcoFocus Report)</b></p> <ul style="list-style-type: none"> <li>The site was verified as <b>low sensitivity</b> for terrestrial, aquatic, plant, and animal biodiversity.</li> <li>No Critical Biodiversity Areas (CBA), Ecological Support Areas (ESA), or Freshwater Ecosystem Priority Areas (FEPA) overlap the footprint.</li> <li>Expansion builds on an <b>existing cemetery footprint</b>, meaning the activity is a logical continuation rather than a new intrusion.</li> <li>Mitigation measures (buffer zones, invasive species control, groundwater safeguards) can effectively manage residual risks</li> </ul> <p><b>Heritage &amp; Palaeontology (Paleo Field Services Report)</b></p> <ul style="list-style-type: none"> <li>The site has <b>low palaeontological sensitivity</b> (Generally Protected C rating).</li> <li>From a palaeontological perspective, the site is assigned a Generally Protected C (low) field rating, reflecting the generally non-fossiliferous nature of the Budin Formation, the pedogenic origin of the Mokalanen calcrete, and the poor preservation potential of the overlying Gordonian Formation aeolian sands. The site is assessed as having low archaeological sensitivity (Generally Protected B), consistent with prior disturbance by informal dumping and shallow excavations as well as the reduced surface visibility imposed by thick sand cover which is noted as a limiting factor. No heritage-related fatal flaws or constraints have been identified that would preclude the proposed development from proceeding.</li> <li>No fatal flaws were identified; development may proceed subject to these mitigation measures.</li> </ul> |     |    |                |
| 10. Will the benefits of the proposed land use/development outweigh the negative impacts of it?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | YES |    | Please explain |
| <p>Yes — the <b>benefits of the proposed cemetery expansion outweigh the negative impacts</b>, based on the ecological and heritage assessments and municipal planning context.</p> <p><b>Societal Priority:</b> Cemeteries are essential municipal infrastructure, recognized in the Dawid Kruiper IDP/SDF. The expansion ensures dignified burial space for Askham communities.</p> <p><b>Accessibility:</b> Locating the cemetery adjacent to the settlement reduces travel burdens, improves cultural accessibility, and distributes facilities more equitably.</p> <p><b>Land Use Efficiency:</b> The site is already disturbed, of low ecological sensitivity, and contiguous with the existing cemetery footprint — making it a logical and efficient expansion.</p> <p><b>Planning Alignment:</b> The development aligns with SPLUMA principles (spatial justice, sustainability, efficiency) and provincial PSDF priorities for social infrastructure.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |     |    |                |
| 11. Will the proposed land use/development set a precedent for similar activities in the area (local municipality)?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | YES |    | Please explain |
| <p>The activity is consistent with existing land uses as the proposal relates to the expansion of an existing cemetery.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |     |    |                |
| 12. Will any person's rights be negatively affected by the proposed activity/ies?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |     | NO | Please explain |
| <p>The site is ~100m from houses. With buffer zones and landscaping, residents' rights to enjoyment of property and privacy will not be infringed. Cemeteries are recognized municipal land uses, so no unlawful encroachment occurs.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |     |    |                |

|                                                                                                                                                                                                                                                                                                                                                                                                                         |                |    |                |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|----|----------------|
| 13. Will the proposed activity/ies compromise the “urban edge” as defined by the local municipality?                                                                                                                                                                                                                                                                                                                    |                | NO | Please explain |
| The cemetery expansion is <b>inside and immediately abutting the urban edge</b> , and therefore does not compromise it. Instead, it strengthens municipal planning by clustering essential infrastructure within the settlement footprint.                                                                                                                                                                              |                |    |                |
| 14. Will the proposed activity/ies contribute to any of the 17 Strategic Integrated Projects (SIPs)?                                                                                                                                                                                                                                                                                                                    |                | NO | Please explain |
| The project is not part of the SIPs.                                                                                                                                                                                                                                                                                                                                                                                    |                |    |                |
| 15. What will the benefits be to society in general and to the local communities?                                                                                                                                                                                                                                                                                                                                       | Please explain |    |                |
| The cemetery expansion is both a <b>societal priority</b> and a <b>local necessity</b> . It supports national planning principles, meets urgent community needs, and provides long-term social value. With mitigation, the benefits clearly outweigh the negative impacts.                                                                                                                                              |                |    |                |
| 16. Any other need and desirability considerations related to the proposed activity?                                                                                                                                                                                                                                                                                                                                    | Please explain |    |                |
| The cemetery expansion is <b>needed</b> because existing facilities are insufficient for future demand, and it is <b>desirable</b> because it: <ul style="list-style-type: none"><li>• Meets constitutional and municipal obligations.</li><li>• Aligns with planning frameworks.</li><li>• Provides equitable, culturally appropriate services.</li><li>• Uses low-sensitivity land with manageable impacts.</li></ul> |                |    |                |
| 17. How does the project fit into the National Development Plan for 2030?                                                                                                                                                                                                                                                                                                                                               | Please explain |    |                |
| The cemetery expansion is <b>fully aligned with the NDP 2030 vision</b> . It: <ul style="list-style-type: none"><li>• Meets constitutional and municipal obligations for basic services.</li><li>• Promotes spatial justice by serving underserved communities.</li><li>• Ensures environmental sustainability through mitigation.</li><li>• Supports local economic activity and social cohesion.</li></ul>            |                |    |                |
| 18. Please describe how the general objectives of Integrated Environmental Management as set out in section 23 of NEMA have been taken into account.                                                                                                                                                                                                                                                                    |                |    |                |
| The project applies IEM principles by considering ecological, social, and economic impacts from the outset. Specialist studies were undertaken, sensitive areas were avoided, and mitigation measures were proposed. The development promotes sustainable land use and informed decision making.                                                                                                                        |                |    |                |
| 19. Please describe how the principles of environmental management as set out in section 2 of NEMA have been taken into account.                                                                                                                                                                                                                                                                                        |                |    |                |
| The development footprint avoids sensitive areas, uses land sustainably, applies the precautionary approach, and balances environmental, social, and economic considerations. It supports responsible resource use and aligns with the principles of environmental management.                                                                                                                                          |                |    |                |

## 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:

| <b>Title of legislation, policy or guideline</b>                                             | <b>Applicability to the project</b>                                                                                                                                     | <b>Administering authority</b>                           | <b>Date</b>       |
|----------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------|-------------------|
| National Environmental Management Act (NEMA), No. 107 of 1998 (as amended)                   | Provides the overarching legal framework for environmental management; requires environmental authorisation for listed activities, including development of cemeteries. | Department of Environment, Forestry and Fisheries (DEFF) | 1998              |
| EIA Regulations, GN R983, R984, R985 (as amended)                                            | Listed activities requiring environmental authorisation, including the development of cemeteries.                                                                       | DEFF                                                     | 2014 (as amended) |
| Northern Cape Provincial Spatial Development Framework (PSDF)                                | Guides location of social infrastructure (including cemeteries) within settlement clusters.                                                                             | DAERDL                                                   | 2020              |
| Environmental Management Framework (EMF) – ZF Mgcawu District                                | Identifies environmental sensitivities and recommended land uses to guide sustainable development.                                                                      | DAERDL                                                   | 2021              |
| Dawid Kruiper Local Municipality Integrated Development Plan (IDP)                           | Sets out municipal development priorities; supports social upliftment through social facility.                                                                          | Dawid Kruiper Local Municipality                         | 2022/27           |
| Dawid Kruiper Local Municipality Spatial Development Framework (SDF)                         | Defines the urban edge and land use zones for community facilities.                                                                                                     | Dawid Kruiper Local Municipality                         | 2022              |
| National Water Act (NWA), No. 36 of 1998                                                     | Regulates water use, including groundwater protection relevant to cemeteries.                                                                                           | Department of Water and Sanitation                       | 1998              |
| National Heritage Resources Act (NHRA), No. 25 of 1999                                       | Section 38: Heritage Impact Assessments required for developments affecting heritage resources.                                                                         | SAHRA                                                    | 1999              |
| Spatial Planning and Land Use Management By-law                                              | Provides the framework for rezoning, land use applications, and urban edge compliance.                                                                                  | Dawid Kruiper Local Municipality                         | 2018              |
| Occupational Health and Safety Act, No. 85 of 1993                                           | Governs public health standards, including burial practices and cemetery management.                                                                                    | Department of Employment and Labour                      | 1993              |
| Municipal By-laws on Cemeteries and Crematoria Cemeteries Amendment By-law, 2017 (Provincial | Regulate cemetery operations, burial procedures, and maintenance standards.                                                                                             | David Kruiper Local Municipality                         | 2017              |

|                                                                                                                                                     |                                                                                    |      |      |
|-----------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|------|------|
| Gazette No. 2131, Notice 127 of 2017).                                                                                                              |                                                                                    |      |      |
| Department of Forestry, Fisheries and the Environment (DFFE) Screening Tool Protocols. 5 July 2019 in Government Gazette No. 42561, Notice No. 960. | Site Sensitivity Verification for biodiversity, plant, animal, and aquatic themes. | DFFE | 2019 |

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

### a) Solid waste management

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

YES

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

2 to 5 m<sup>3</sup>

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

Construction waste, although expected to be minimal, can be disposed of at the Askham landfill (not a licensed landfill).

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

At the Askham Landfill Site (municipal), with recyclables sent to licensed recycling facilities in Upington.

Will the activity produce solid waste during its operational phase?

NO

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

-m<sup>3</sup>

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

Operational waste will consist mainly of general domestic waste from grave visitors, packaging materials, and small quantities of maintenance-related waste. No chemical waste will be generated, as confirmed in the ecological report. Waste will be segregated, stored in designated areas, and removed by the David Kruiper Local Municipality.

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

Askham Landfill Site, operated by Dawid Kruiper Local Municipality (however the landfill is not licensed).

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

Any solid waste that does not enter the municipal waste stream will be managed separately to ensure environmental compliance. Recyclable materials, such as metals, cardboard, and plastics, will be segregated on site and transported to licensed recycling facilities in the Upington area. The activity will not generate hazardous waste streams.

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

Can any part of the solid waste be classified as hazardous in terms of the NEM:WA? ☐ 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? ☐ 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? ☐ 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? ☐ YES  
*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? ☐ NO  
 Sanitation needs will be met via septic tanks, emptied by a registered service provider.  
 No effluent will be discharged into the environment.

If YES, provide the particulars of the facility:

|                        |                                                                                                    |              |  |
|------------------------|----------------------------------------------------------------------------------------------------|--------------|--|
| <b>Facility name:</b>  | N/A -Septic tank French drain system will be introduced for the ablution facility at the cemetery. |              |  |
| <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:

Stormwater will follow natural drainage patterns. No contaminated stormwater is expected, as the activity does not involve pollutants. Groundwater in the Askham area is generally shallow to moderately deep (often 5 m–20 m below ground level), occurring in Kalahari sand and calcrete aquifers with limited recharge due to the semi-arid climate. This makes the aquifers vulnerable to contamination from cemetery leachates if burial depths and site placement are not carefully managed.

**c) Emissions into the atmosphere**

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

|    |
|----|
| 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:

|                |
|----------------|
| Not Applicable |
|----------------|

**d) Waste permit**

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

|    |
|----|
| NO |
|----|

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 |  |
|-----|--|

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

|  |    |
|--|----|
|  | NO |
|--|----|

Describe the noise in terms of type and level:

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Noise generated during the construction phase will be limited, short term, and typical of small-scale site preparation. Activities such as minor earth levelling, installation of fencing, delivery of materials, and the use of light construction equipment will produce intermittent noise, but at relatively low intensities. No heavy machinery, concrete works, or high impact construction processes are required for the establishment of the cemetery, which significantly reduces potential noise levels. |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

|                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Operational noise from the cemetery facility will be minimal due to the passive nature of a cemetery. Therefore, noise from cemetery operations is <b>minimal and manageable</b> , mainly arising from grave preparation, funeral traffic, and maintenance. With proper scheduling (e.g., limiting mechanical digging to daytime hours) and buffer zones, the cemetery will remain a <b>low-impact land use</b> in terms of noise. |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

**13. WATER USE**

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

|           |              |  |
|-----------|--------------|--|
| Municipal | Ground water |  |
|-----------|--------------|--|

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?

|    |
|----|
| NO |
|----|

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

Water for the proposed cemetery will be supplied solely from the Dawid Kruiper Local Municipality's groundwater supply system in Askham.

#### **14. ENERGY EFFICIENCY**

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

It is not foreseen that the cemetery will utilize any electricity.

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

None required.

## SECTION B: SITE/AREA/PROPERTY DESCRIPTION

### Important notes:

- 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**

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

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

**YES**

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>              | Northern Cape                        |
| <b>District Municipality</b> | ZF Mgcawu District Municipality      |
| <b>Local Municipality</b>    | Dawid Kruiper Local Municipality     |
| <b>Ward Number(s)</b>        | Ward 5                               |
| <b>Farm name and number</b>  | Portion 1 of the farm Cammelduin 139 |
| <b>Portion number</b>        | Portion 1                            |
| <b>SG Code</b>               | C02800000000013900001                |

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:**

The property proposed for the Askham cemetery expansion is currently zoned as *Agricultural/Undetermined (vacant land)* under Dawid Kruiper Municipality's land-use scheme, and will require rezoning to *Community Facility* (cemetery use) before development can proceed.

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**

## 1. GRADIENT OF THE SITE

Indicate the general gradient of the site.

**Alternative S1:**

Flat

**Alternative S2 (if any):**

**Alternative S3 (if any):**

## 2. LOCATION IN LANDSCAPE

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

2.1 Ridgeline

2.2 Plateau

2.3 Side slope of hill/mountain

2.10 At sea

2.4 Closed valley

2.5 Open valley

2.6 Plain

2.7 Undulating plain / low hills

2.8 Dune

2.9 Seafront

x

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

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

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

The paleo report confirms that geology is situated on an undulating dune-structured surface, capped by unconsolidated aeolian sand (late Quaternary Gordonia Fm.), forming a thin to moderate superficial layer, which is discontinuous in places, as indicated by frequent exposures of underlying hardpan and nodular calcrete assigned to the Tertiary Mokalanen Formation. For a hardpan calcrete developed beneath Gordonia-type aeolian sands, the likelihood of preserving significant Quaternary vertebrate fossils is assessed as low.

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 with scattered aliens <sup>E</sup> |           |
|                                                 | Bare soil |

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

#### 5. SURFACE WATER

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

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

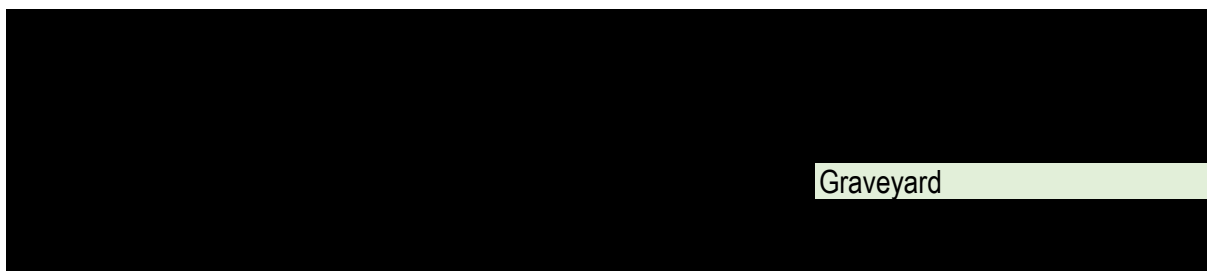
If any of the boxes marked YES or UNSURE is ticked, please provide a description of the relevant watercourse.

The ecological assessment confirms that there are no significant natural perennial watercourses, - wetlands, -salt pans or non-perennial watercourses of which the regulated areas fall within the proposed development footprint.

#### 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               |                          |
| Medium density residential |                          |
| High density residential   |                          |
|                            | River, stream or wetland |



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:

Not Applicable

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:

Not Applicable

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:

Not Applicable

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

|                                                                              |  |    |
|------------------------------------------------------------------------------|--|----|
| Critical Biodiversity Area (as per provincial conservation plan)             |  | NO |
| Core area of a protected area?                                               |  | NO |
| Buffer area of a protected area?                                             |  | NO |
| Planned expansion area of an existing protected area?                        |  | NO |
| Existing offset area associated with a previous Environmental Authorisation? |  | NO |
| Buffer area of the SKA?                                                      |  | 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:

NO

Not Applicable

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:

**Cultural/Historical Features-**

A **Palaeontological and Heritage Impact Assessment (PIA & HIA)** was undertaken for the proposed cemetery expansion near Askham. The study found:

- **Archaeological Context:**
  - Scattered **Stone Age artefacts** (flakes, blades, handaxes) were recorded on the surface.
  - These artefacts are **displaced and of low significance**, with no intact archaeological sites identified.
  - Chance finds of subsurface artefacts remain possible during excavation.
- **Historical Features:**
  - The site is adjacent to the **existing cemetery** and township, both of which have already disturbed the landscape.
  - No built heritage structures or historically significant features were identified within the expansion footprint.
- **Palaeontological Sensitivity:**
  - The underlying geology (Kalahari sands and calcrete) is of **low palaeontological sensitivity**.
  - No fossil material was observed during the survey.
- **Mitigation Measures:**
  - Implement a **heritage chance-find procedure** during construction.
  - If significant artefacts or fossils are uncovered, work must stop and the **South African Heritage Resources Agency (SAHRA)** must be notified.
  - Maintain a **buffer** around any identified artefact clusters.
  - Ensure workers are briefed on recognising and reporting heritage finds.

**Compliance Statement**

The assessment concludes that the proposed cemetery expansion will have **low impact on cultural and historical resources**, provided that chance-find protocols and monitoring are implemented. The development is therefore considered acceptable under the **National Heritage Resources Act (Act 25 of 1999)**.

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

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

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

NO

NO

**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:

Unemployment in Askham and its surrounding communities is high (35-40%), reflecting broader Northern Cape trends. As of mid-2025, the official unemployment rate in the Northern Cape stood at about **32.7%**, one of the highest in South Africa. In rural settlements like Askham, where the economy is dominated by small-scale agriculture, tourism, and limited municipal services, unemployment is estimated to be **above the provincial average, often exceeding 35–40%** due to fewer formal job opportunities.

Economic profile of local municipality:

David Kruiper Local Municipality, with Upington as its administrative seat, functions as a regional economic hub in the Northern Cape. The local economy is diverse, with key sectors including transport and logistics, trade and retail, agriculture and agro-processing, manufacturing, tourism, hospitality, and services. The municipality's transport advantages (road, rail, and air) underpin its role in freight and trade, while agriculture and associated manufacturing provide employment and economic activity.

Askham's economy is rural, low-income, and service-dependent, with agriculture and tourism as the main drivers but insufficient to absorb the labour force. Poverty and unemployment remain the defining features, making local development projects important for community resilience.

Level of education:

Education levels in Askham and its surrounding communities are modest: adult literacy is around 68–70%, mean years of schooling are about 7.5, and while primary school access is widespread, progression to secondary and tertiary education is limited. Poverty and rural isolation constrain higher education attainment, though matric pass rates in the broader ZF Mgcawu District (which includes Askham) are improving.

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

|                                                                                                                      |                                                                                                                                                                                                     |
|----------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| What is the expected capital value of the activity on completion?                                                    | +/- R 2,000,000                                                                                                                                                                                     |
| What is the expected yearly income that will be generated by or as a result of the activity?                         | Not determined                                                                                                                                                                                      |
| Will the activity contribute to service infrastructure?                                                              | <div style="display: flex; justify-content: space-between;"><div style="width: 80%; background-color: black;"></div><div style="width: 20%; background-color: black; color: white;">NO</div></div>  |
| Is the activity a public amenity?                                                                                    | <div style="display: flex; justify-content: space-between;"><div style="width: 80%; background-color: black; color: white;">YES</div><div style="width: 20%; background-color: black;"></div></div> |
| How many new employment opportunities will be created in the development and construction phase of the activity/ies? | Approx. 5 temporary jobs (labourers, operators, supervisors, and technical staff)                                                                                                                   |
| What is the expected value of the employment opportunities during the development and construction phase?            | Approximately +/-R 500 000 over the construction period                                                                                                                                             |
| What percentage of this will accrue to previously disadvantaged individuals?                                         | Municipal Staff                                                                                                                                                                                     |
| How many permanent new employment opportunities will be created during the operational phase of the activity?        | Undetermined                                                                                                                                                                                        |

|                                                                                               |                 |
|-----------------------------------------------------------------------------------------------|-----------------|
| What is the expected current value of the employment opportunities during the first 10 years? | Undetermined    |
| What percentage of this will accrue to previously disadvantaged individuals?                  | Municipal Staff |

## 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)**

| Systematic Biodiversity Planning Category | If CBA or ESA, indicate the reason(s) for its selection in biodiversity plan |
|-------------------------------------------|------------------------------------------------------------------------------|
| Other Natural Area (ONA)                  |                                                                              |

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

| Habitat Condition | Percentage of habitat condition class (adding up to 100%) | Description and additional Comments and Observations<br>(including additional insight into condition, e.g. poor land management practises, presence of quarries, grazing, harvesting regimes etc).                                                                                                                                                                                                                                                                                                                                                                                                                |
|-------------------|-----------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Natural           | 15 %                                                      | <p>The area is not representative/reminiscent of the natural climax state of the relevant Least Concerned Southern Kalahari Mekgacha (AZi 3)- and Auob Duneveld (SVkd 3) vegetation types. The area also does not house any locally distinct or conservationally important habitat features or plant species communities or -populations associated with these vegetation types.</p> <p>Fifty-seven individuals of the nationally protected tree species <i>Vachellia erioloba</i> were found to be present throughout the study area of which thirty are situated within the proposed development footprint.</p> |

|                                                                                      |      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|--------------------------------------------------------------------------------------|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                      |      | A single significantly sized- and three small tree individuals of the nationally protected tree species <i>Boscia albitrunca</i> were also found to be present throughout the study area.                                                                                                                                                                                                                                                                             |
| Near Natural<br>(includes areas with low to moderate level of alien invasive plants) | 80 % | Due to the moderate to highly disturbed and degraded ecological state of the study area, the area is not representative/reminiscent of the natural climax state of the relevant Least Concerned Southern Kalahari Mekgacha (AZi 3)- and Auob Duneveld (SVkd 3) vegetation types. The area also does not house any locally distinct or conservationally important habitat features or plant species communities or -populations associated with these vegetation types |
| Degraded<br>(includes areas heavily invaded by alien plants)                         | 0%   | No areas of heavy disturbance, erosion, or alien plant invasion were identified. The ecological assessment confirms the absence of degraded habitat.                                                                                                                                                                                                                                                                                                                  |
| Transformed<br>(includes cultivation, dams, urban, plantation, roads, etc)           | 5 %  | A small, transformed section is located in the northern corner of the proposed cemetery site. This section has historically been used as a dumping ground.                                                                                                                                                                                                                                                                                                            |

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

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

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

Based on the **Askham Cemetery Expansion Ecological Site Sensitivity Verification & Compliance Statement**, the vegetation and aquatic ecosystems on site are described as follows:

**Vegetation Type**

- The site is dominated by **open thornveld savannah habitat**, with a **sparse medium-height grass layer**.
- Vegetation is **moderately to highly disturbed and degraded**, largely due to adjacent township activities, informal landfill sites, and the existing cemetery.
- A **linear red sandy dune** forms part of the north-eastern boundary of the study area, but no development is planned there.

- Plant species recorded include **general savannah flora**, with some **nationally protected species** and **alien invasive species** noted in the plant list.
- The specialist confirmed that the site is of **low sensitivity for terrestrial biodiversity and plant species**, with limited potential for Species of Conservation Concern (SCC).

#### **Aquatic Ecosystem**

- The site falls within a **quaternary surface water catchment** associated with the Kuruman River system.
- **Ephemeral drainage lines** and **small depression wetlands/pans** were identified in the broader study area.
- These aquatic features are **low-functioning and degraded**, providing limited ecological services.
- The specialist confirmed that the site is of **low sensitivity for aquatic biodiversity**, with no critical aquatic habitats present.

#### **Important Biodiversity Features**

- **Species of Conservation Concern (SCC):**
  - Potential occurrence of some threatened floral and faunal species was noted, but none were confirmed during the site visit.
  - The degraded state of the habitat reduces the likelihood of SCC persistence.
- **Ecological Drivers:**
  - Connectivity and ecological corridors are weak due to disturbance.
  - No Critical Biodiversity Areas (CBA), Ecological Support Areas (ESA), or Freshwater Ecosystem Priority Areas (FEPA) overlap the site.

#### **Compliance Findings**

The site is classified as low sensitivity across terrestrial, aquatic, plant, and animal biodiversity themes.

The proposed cemetery expansion is unlikely to significantly impact biodiversity, provided mitigation measures (buffer zones, stormwater management, alien plant control) are implemented.

## SECTION C: PUBLIC PARTICIPATION

### 1. ADVERTISEMENT AND NOTICE

|                             |                   |                  |
|-----------------------------|-------------------|------------------|
| <b>Publication name</b>     | Gemsbok           |                  |
| <b>Date published</b>       | 15 May 2026       |                  |
| <b>Site notice position</b> | <b>Latitude</b>   | <b>Longitude</b> |
|                             | 26° 58'41.093"S,  | 20° 46'0.0085"E  |
| <b>Date placed</b>          | 28 September 2025 |                  |

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.

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

| <b>Title, Name and Surname</b> | <b>Affiliation/ key stakeholder status</b>               | <b>Contact details (tel number or e-mail address)</b>                  |
|--------------------------------|----------------------------------------------------------|------------------------------------------------------------------------|
| Mr. Setimela Sebashe           | David Kruiper Local Municipality, surrounding land owner | <a href="mailto:manager@kharahais.gov.za">manager@kharahais.gov.za</a> |

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> |
|-------------------------------------------------------------------------------------------------------------------------|-------------------------------------|
| To be included in a comments and response trail report after the 30 days draft participation period, e.g. 13 July 2026. |                                     |

### 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:

| Authority/Organ of State                                                                       | Contact person (Title, Name and Surname) | Tel No                         | e-mail                                                                                                                                 |
|------------------------------------------------------------------------------------------------|------------------------------------------|--------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|
| David Kruiper Local Municipality                                                               | Mr. Setimela Sebashe                     | 054-338 7000                   | <a href="mailto:manager@kharahais.gov.za">manager@kharahais.gov.za</a>                                                                 |
| ZF Mgcawu District Municipality                                                                | Ms. Samantha Aumaureen Tatas-Titus       | 054-337 2800                   | <a href="mailto:mmanyeh@zfm-dm.gov.za">mmanyeh@zfm-dm.gov.za</a> ,<br><a href="mailto:admin@zfm-dm.gov.za">admin@zfm-dm.gov.za</a>     |
| Provincial Department of Agriculture, Environmental Affairs, Rural Development (Northern Cape) | Mr. H. Roux                              | 053-807 7300 /<br>071 860 7550 | <a href="mailto:hroux@ncpg.gov.za">hroux@ncpg.gov.za</a>                                                                               |
| Department of Water and Sanitation                                                             | Ms. Lerato Maropong                      | 054-338 5800,<br>076 435 5456  | <a href="mailto:warmorange@dws.gov.za">warmorange@dws.gov.za</a>                                                                       |
| Northern Cape Department of Roads and Public Works                                             | Mr. C. Robertson                         | 054-332 4473                   | <a href="mailto:crobertson@ncpg.gov.za">crobertson@ncpg.gov.za</a> ,<br><a href="mailto:pmarekwa@ncpg.gov.za">pmarekwa@ncpg.gov.za</a> |
| David Kruiper LM, Upington Ward 5 Counsellor                                                   | Cllr. Solly Abel                         | 054-338 7000                   | <a href="mailto:info@dkm.gov.za">info@dkm.gov.za</a>                                                                                   |

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.

| Activity                                                     | Impact summary                                                                                           | Significance before Mitigation | Proposed mitigation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Significance after Mitigation |
|--------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|--------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|
| <b>Alternative 1 (preferred alternative)</b>                 |                                                                                                          |                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                               |
| <b>Planning Phase</b>                                        |                                                                                                          |                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                               |
| Project Design, Layout Finalization and Land Use Application | <b>Direct impacts:</b><br>No physical disturbance occurs during planning.                                | Neutral                        | N/A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Neutral                       |
|                                                              | <b>Indirect impacts:</b><br>Poor layout design could influence stormwater flow patterns across the site. | Low                            | <ul style="list-style-type: none"> <li>- Maintain natural north-easterly sheet-flow across the site.</li> <li>- Avoid concentrating stormwater into channels.</li> <li>- Keep the development footprint compact and within the approved area.</li> <li>- Avoid unnecessary disturbance of the eastern main water drainage channel.</li> <li>- Ensure layout does not alter the small ephemeral drainage flow path located within the vicinity of the site.</li> <li>- Incorporate erosion-prevention measures into final layout.</li> <li>- Maintain a buffer from property boundaries where feasible to prevent off-site runoff impacts.</li> </ul> | Very Low                      |

## BASIC ASSESSMENT REPORT

| Activity                                     | Impact summary                                                                              | Significance before Mitigation | Proposed mitigation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Significance after Mitigation |
|----------------------------------------------|---------------------------------------------------------------------------------------------|--------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|
|                                              | <b>Cumulative impacts:</b><br>The project will add an additional area of cleared land.      | Low                            | - Keep all development strictly within the approved footprint.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Very Low                      |
| Finding in situ or ex situ fossils.          | <b>Direct impacts:</b><br>Risk of encountering additional artefacts during grave excavation | Low                            | No pre-construction mitigation or specialist palaeontological monitoring is recommended. A standard chance-find protocol is, however, advised during construction. Should fossil material be unexpectedly encountered, work in the immediate area should cease and a qualified palaeontologist should be notified to assess the find and advise on appropriate mitigation measures.<br>If significant artefacts or features are uncovered, work must stop and the South African Heritage Resources Agency (SAHRA) must be notified.<br><br>A qualified archaeologist should be available on call during initial site clearance to verify finds.<br><br>Workers must be briefed on recognising artefacts and reporting them immediately. | Very Low                      |
|                                              | <b>Indirect impacts:</b><br>None during planning                                            | -                              | N/A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | -                             |
|                                              | <b>Cumulative impacts:</b><br>None anticipated.                                             | -                              | N/A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                               |
| <b>Alternative 1 (preferred alternative)</b> |                                                                                             |                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                               |
| <b>Construction Phase</b>                    |                                                                                             |                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                               |
| Vegetation Clearance                         | <b>Direct impacts:</b><br>Loss of individuals of the nationally protected tree              | Low                            | - The proposed development footprint must be kept as small as practicably possible. No unnecessary/unauthorised                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Very Low                      |

# BASIC ASSESSMENT REPORT

| Activity                                   | Impact summary                                                                                                          | Significance before Mitigation | Proposed mitigation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Significance after Mitigation |
|--------------------------------------------|-------------------------------------------------------------------------------------------------------------------------|--------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|
|                                            | species <i>Vachellia erioloba</i> .                                                                                     |                                | footprint expansion may take place.<br>- Adequately cordon off the proposed development construction footprint.<br>- Demarcate construction footprint to avoid unnecessary clearing.<br>- Rescue and relocate any Species of Conservation Concern (SCC) if encountered.                                                                                                                                                                                                                                                                                |                               |
|                                            | <b>Indirect impacts:</b><br>Temporary faunal displacement; dust generation; and increased erosion risk on exposed soils | Low                            | - Stabilise exposed soils immediately after clearing (mulch, brush-packing, or similar).<br>- Apply dust suppression during windy periods.                                                                                                                                                                                                                                                                                                                                                                                                             | Very Low                      |
|                                            | <b>Cumulative impacts:</b><br>Removal of 30 identified nationally protected tree species <i>Vachellia erioloba</i> .    | Low                            | - A Nationally Protected Tree License has to be obtained from the Department of Forestry, Fisheries and the Environment (competent authority), prior to the commencement of any construction activities and the subsequent potential removal/destruction of any identified nationally protected tree species individuals. It is however recommended that as many of the nationally protected tree species <i>Vachellia erioloba</i> individuals as practicably possible/feasible, should not be removed/damaged and should be left in situ and intact. | Very Low                      |
| Earthworks, Excavation and Soil Compaction | <b>Direct impacts:</b><br>Soil disturbance, compaction, and erosion risk during levelling.                              | Low - Medium                   | - Implement adequate stormwater and erosion management measures to sufficiently manage storm water runoff and clean/dirty water                                                                                                                                                                                                                                                                                                                                                                                                                        | Low                           |

# BASIC ASSESSMENT REPORT

| Activity                                               | Impact summary                                                                       | Significance before Mitigation | Proposed mitigation                                                                                                                                                                                                                                                                     | Significance after Mitigation |
|--------------------------------------------------------|--------------------------------------------------------------------------------------|--------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|
|                                                        |                                                                                      |                                | separation and prevent any significant soil erosion.<br>- Water flow-breaks and dispersal infrastructure should be installed to reduce water flow velocity and disperse the water.<br>- Cut-off berms/trenches must be constructed around the upslope boundaries if deemed necessary.   |                               |
|                                                        | <b>Indirect impacts:</b><br>Sediment movement during rainfall events.                | Low                            | - Maintain natural sheet-flow direction.<br>- Prevent runoff from entering adjacent properties.                                                                                                                                                                                         | Very Low                      |
|                                                        | <b>Cumulative impacts:</b><br>Incremental soil disturbance in the cemetery footprint | Low                            | Rehabilitate temporary disturbed areas immediately after use.                                                                                                                                                                                                                           | Very Low                      |
| Construction Machinery Operation and Material Handling | <b>Direct impacts:</b><br>Noise, dust, emissions; and minor risk of spills.          | Low                            | - Adequate operational procedures for construction machinery and equipment must be developed to strictly govern and restrict movement of machinery.<br>- Implement suitable dust suppression and management measures.<br>- Construction areas and roads to be sufficiently wetted down. | Very Low                      |
|                                                        | <b>Indirect impacts:</b><br>Temporary disturbance to fauna.                          | Low                            | - Limit working hours.<br>- Dust suppression,<br>- Vehicle speed control.                                                                                                                                                                                                               | Very Low                      |
|                                                        | <b>Cumulative impacts:</b><br>Minor contribution to regional construction emissions. | Very Low                       | Keep machinery in good working order.                                                                                                                                                                                                                                                   | Negligible                    |
| Surface Water Features: Potential disturbance of       | <b>Direct impacts:</b><br>Potential alteration of natural sheet-flow                 | Low                            | - Implement erosion control (silt fences, berms).                                                                                                                                                                                                                                       | Very Low                      |

## BASIC ASSESSMENT REPORT

| Activity                                                     | Impact summary                                                                                       | Significance before Mitigation | Proposed mitigation                                                                                                                                                                                                                                                                                   | Significance after Mitigation |
|--------------------------------------------------------------|------------------------------------------------------------------------------------------------------|--------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|
| ephemeral drainage lines.                                    | and disturbance to drainage lines.                                                                   |                                | - Manage stormwater to prevent ponding and runoff contamination.                                                                                                                                                                                                                                      |                               |
|                                                              | <b>Indirect impacts:</b><br>Erosion if stormwater is not controlled.                                 | Low–Moderate                   | - Inspect stormwater controls weekly during construction.                                                                                                                                                                                                                                             | Low                           |
|                                                              | <b>Cumulative impacts:</b><br>Slight increase in hardened surfaces in the area.                      | Low                            | - Ensure controlled discharge into natural landscape                                                                                                                                                                                                                                                  | Very Low                      |
| Alien Plant Spread                                           | <b>Direct impacts:</b><br>Risk of invasive species spreading due to soil disturbance.                | Low                            | - Remove invasive species during site clearance.<br>- Monitor and control regrowth throughout construction.                                                                                                                                                                                           | Very Low                      |
| Excavation into surface and subsurface Geological Formations | <b>Direct impacts:</b><br>Risk of encountering additional artefacts during construction excavations. | Low                            | - A Chance Finds Protocol is recommended.<br>- If significant artefacts or features are uncovered, work must stop and the South African Heritage Resources Agency (SAHRA) must be notified.<br>- A qualified archaeologist should be available on call during initial site clearance to verify finds. | Low                           |
|                                                              | <b>Indirect impacts:</b><br>None                                                                     | -                              | N/A                                                                                                                                                                                                                                                                                                   | -                             |
|                                                              | <b>Cumulative impacts:</b><br>None anticipated.                                                      | -                              | N/A                                                                                                                                                                                                                                                                                                   | -                             |
| <b>Alternative 1 (preferred alternative)</b>                 |                                                                                                      |                                |                                                                                                                                                                                                                                                                                                       |                               |
| <b>Operational Phase</b>                                     |                                                                                                      |                                |                                                                                                                                                                                                                                                                                                       |                               |
| Surface Water & Drainage                                     | <b>Direct impacts:</b><br>Altered runoff patterns due to paved areas, graves, and landscaping.       | Low                            | - Maintain minimum burial depth above water table (1.5–2 m).<br>- Implement stormwater management (swales, berms, infiltration strips).                                                                                                                                                               | Very Low                      |
|                                                              | <b>Indirect impacts:</b><br>None                                                                     | -                              | N/A                                                                                                                                                                                                                                                                                                   | -                             |
|                                                              | <b>Cumulative impacts:</b><br>Long-term cemetery use compacts soils,                                 | Low                            | - Direct stormwater away from burial areas into controlled landscaped zones.                                                                                                                                                                                                                          | Very Low                      |

| Activity                                                                                                                                                                                                       | Impact summary                                                                                                                                                    | Significance before Mitigation | Proposed mitigation                                                                                                                                                           | Significance after Mitigation |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|
|                                                                                                                                                                                                                | reducing infiltration capacity.                                                                                                                                   |                                |                                                                                                                                                                               |                               |
| Vegetation & Habitat Loss                                                                                                                                                                                      | <b>Direct impacts:</b><br>Reduced habitat for small mammals, reptiles, and avifauna.                                                                              | Low                            | <ul style="list-style-type: none"> <li>- Create green corridors and buffer zones around fence lines.</li> <li>- Avoid planting invasive ornamentals.</li> </ul>               | Very Low                      |
| Noise & Disturbance                                                                                                                                                                                            | <b>Direct impacts:</b><br>Funeral traffic, amplified sound, and maintenance activities.                                                                           | Low                            | <ul style="list-style-type: none"> <li>- Restrict mechanical maintenance to daylight hours.</li> <li>- Limit amplified sound during funerals to acceptable levels.</li> </ul> | Very Low                      |
|                                                                                                                                                                                                                | <b>Indirect impacts:</b><br>None                                                                                                                                  | -                              | N/A                                                                                                                                                                           | -                             |
|                                                                                                                                                                                                                | <b>Cumulative impacts:</b><br>None                                                                                                                                | -                              | N/A                                                                                                                                                                           | -                             |
| Waste Management                                                                                                                                                                                               | <b>Direct impacts:</b><br>Ongoing waste from funerals (plastic, flowers, wreaths, packaging).                                                                     | Low                            | Provide bins and recycling facilities.                                                                                                                                        | Very Low                      |
|                                                                                                                                                                                                                | <b>Indirect impacts:</b><br>None                                                                                                                                  | -                              | N/A                                                                                                                                                                           | -                             |
|                                                                                                                                                                                                                | <b>Cumulative impacts:</b><br>Risk of illegal dumping if not properly managed.                                                                                    | Low                            | Regular municipal collection and disposal at licensed landfill.                                                                                                               | Very Low                      |
| <b>Alternative 1 (preferred alternative)</b>                                                                                                                                                                   |                                                                                                                                                                   |                                |                                                                                                                                                                               |                               |
| <b>Decommissioning Phase</b>                                                                                                                                                                                   |                                                                                                                                                                   |                                |                                                                                                                                                                               |                               |
| Decommissioning of the cemetery is not foreseen. The cemetery will be protected by the SAHRA.                                                                                                                  |                                                                                                                                                                   |                                |                                                                                                                                                                               |                               |
| <b>No-go option (No development to occur)</b>                                                                                                                                                                  |                                                                                                                                                                   |                                |                                                                                                                                                                               |                               |
| Under the No-Go option, no development would occur and therefore: <ul style="list-style-type: none"> <li>• No vegetation clearing or habitat loss would take place.</li> <li>• No soil disturbance,</li> </ul> | <b>Direct impacts:</b><br>The site remains in its current slightly disturbed condition; no vegetation clearing, earthworks, or infrastructure installation occur. | Neutral                        | N/A                                                                                                                                                                           | Neutral                       |
|                                                                                                                                                                                                                | <b>Indirect impacts:</b><br>No change to existing ecological or                                                                                                   | Neutral                        |                                                                                                                                                                               | Neutral                       |

| Activity                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Impact summary                                                                        | Significance before Mitigation | Proposed mitigation | Significance after Mitigation |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|--------------------------------|---------------------|-------------------------------|
| erosion, or stormwater alteration would occur. <ul style="list-style-type: none"> <li>No additional dust, noise, traffic, lighting, or air emissions would be generated.</li> <li>No risk of hydrocarbon spills, groundwater contamination, or waste generation would arise.</li> <li>No faunal displacement or disturbance would occur.</li> <li>No subsurface excavation would take place, and therefore no impact on archaeological heritage resources would occur.</li> </ul> | surface-flow conditions.                                                              |                                |                     |                               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | <b>Cumulative impacts:</b><br>No additional contribution to landscape transformation. | Neutral                        |                     | Neutral                       |

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

## 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)

The assessment of potential environmental impacts indicates that the proposed cemetery facility will be developed on a site characterised by low overall ecological sensitivity. The proposed development footprint is confirmed to be of 'low' Terrestrial- and Aquatic Biodiversity- as well as Plant- and Animal

Species Themes sensitivity and no potential ecological fatal flaws were identified for the proposed development. (AJH Lamprecht, 2025). The entire 2 ha footprint is considered acceptable for full clearance, with no no-go areas identified.

Potential environmental impacts are primarily associated with the construction phase, including vegetation removal, soil disturbance, dust generation, temporary noise, and short-term disturbance to fauna. These impacts are localised, short-term, and low in significance, and can be effectively managed through standard construction phase controls such as dust suppression, erosion prevention measures, and restricting disturbance to the approved footprint. The likelihood of these impacts occurring is high, given the nature of activities, but their post mitigation significance remains very low.

Hydrological impacts are limited, on the site that do not contain wetlands, drainage lines, or surface water features. Only natural sheet flow occurs across the landscape. With appropriate stormwater design that maintains natural flow direction and avoids concentrating runoff, the duration and significance of hydrological impacts remain low, and the likelihood of adverse effects is low.

Evidence of prior and ongoing anthropogenic disturbance was documented over approximately 0.65 hectares of the study area, in the form of extensive informal rubbish dumping and old, shallow diggings. These activities have resulted in exposure of subsoil and hardpan surfaces and the mixing of recent refuse with underlying sediments.

- No in situ Stone Age artefact scatters were observed on deflated blowouts or hardpan surfaces.
- No above-ground indications of graves, burial cairns, or stone-walled structures were recorded.
- No historically significant buildings or structures older than 60 years (as contemplated under Section 34 of the NHRA) were identified within the study area.
- The adjacent Askham Cemetery was noted as the only formally recognised heritage-related feature in the immediate surroundings.

Operational impacts are expected to be low intensity and long-term, including minor dust generation, low level noise from vehicles and funeral events, and small volumes of general waste. These impacts are highly predictable, readily manageable, and low in significance after mitigation.

It is the opinion of the specialists from an archaeological, paleontological and ecological perspective, that the proposed development can be considered by the competent authority for Environmental Authorization.

#### **Alternative B**

No additional Alternative B was identified. The proposed activity is an extension of a small existing cemetery. The preferred alternative remains the only practicable option and is environmentally acceptable after mitigation.

#### **Alternative C**

No additional Alternative C was identified for the same reasons described above. The preferred alternative remains the only reasonable and feasible development configuration.

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

Under the No-go scenario, the site would remain in its current slightly disturbed state, with no construction, vegetation clearance, or operational activity taking place. This would avoid all project related impacts, resulting in neutral biophysical outcomes. The likelihood of further environmental degradation under this scenario is low, as the site is already modified and subject to existing land use pressures.

However, the No-go alternative would prevent the applicant from establishing the cemetery and would result in the continued pressure to provide suitable space for burials.

The overall environmental significance of the no-go alternative is therefore neutral, but it provides no socio-economic or land use benefit and is not considered the preferred option.

## 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

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).

Not Applicable

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.

Based on the specialist assessments and impact evaluation conducted, the environmental assessment practitioner is of the opinion that the information contained in this report and the supporting documentation is sufficient to enable a decision to be made regarding the proposed activity. Should authorisation be granted, the following conditions and mitigation measures are recommended for inclusion in any environmental authorisation:

### EAP:

- A formal and acceptable stormwater management plan should be drawn up for the proposed development, it should include the general and site-specific measures to address any erosional, sedimentation or pollution events. This includes incorporating the recommendations as per the specialist input, obtained during this environmental assessment.
- This stormwater management plan should be implemented during the construction and operational phases of the project.
- The groundwater should not be used for potable consumption within 250 m of the existing or expanded cemetery.
- The proposed expansion must conform to the standard industry mitigations measures for developing a cemetery in order to minimize contamination on site.

### Ecologist:

- The proposed development footprint must be kept as small as practicably possible to reduce the surface impact on surrounding vegetation and no unnecessary/unauthorised footprint expansion into the surrounding undeveloped landscape outside the proposed development footprint may take place.
- No temporary or permanent site construction basecamps may be established within the surrounding undeveloped landscape outside the proposed development footprint.
- Adequately cordon off the proposed cemetery construction footprint and ensure that no construction activities, machinery or equipment operate or impact within the surrounding undeveloped landscape outside the cordoned off area.
- Adequate operational procedures for construction machinery and equipment must be developed to strictly govern and restrict movement of machinery only within the proposed

development construction footprint and to ensure environmentally responsible construction practices and activities.

- A Nationally Protected Tree License must be obtained from the Department of Forestry, Fisheries and the Environment (competent authority), prior to the commencement of any construction activities and the subsequent potential removal/destruction of any identified nationally protected tree species individuals.
- A Provincial Flora Permit must be obtained from the Northern Cape Department: Agriculture, Environmental Affairs, Rural Development and Land Reform (competent authority), prior to the commencement of any construction activities and the subsequent removal/destruction of any identified indigenous- and provincially protected flora.
- Implement adequate alien invasive species management and prevention measures during the construction- and subsequent operational phases of the proposed development.
- An Alien Invasive Species Management Plan must be compiled by a suitably qualified and experienced SACNASP registered ecologist.
- It is recommended that sufficient stormwater cut-off berms/trenches be constructed around the upslope boundaries of the proposed raisin drying facility, if deemed necessary by the competent authority. These cut-off berms/trenches must assist with- and manage clean/dirty water separation by diverting and channelling clean surface water runoff from the surrounding natural landscape around the proposed raisin drying facility during seasonal rainfall events, for continued flow. The cut-off berms/trenches are to be adequately line internally, if deemed necessary by the engineer to prevent channel erosion. The cut-off berms/trenches are to be adequately maintained and regularly cleaned out, as and when necessary.
- Water flow-breaks and dispersal infrastructure should be installed at the water release-points of the of the design layouts. This infrastructure must be able to adequately reduce the water flow velocity and disperse the water over a larger surface area, prior to entering into the surrounding landscape. This is necessary to prevent any potential localised erosion, which could occur at the water release-points due to high water volume concentration and flow velocity build-up. The water flow-breaks and dispersal infrastructure are to be adequately maintained and regularly cleaned out, as and when necessary.
- The detailed design layouts including the slope- and measurement/capacity parameters of the water flow-breaks and dispersal infrastructure, must be calculated and determined by a suitably qualified and experienced engineer, in order to achieve this objective.
- The original proposed development footprint was therefore proactively revised after the initial site sensitivity verification, based on the recommended buffer zone associated with the stream Water saving initiatives must be implemented for the established development.

#### Archaeology:

- The appointed EAP must provide a copy of the approved Heritage Impact Assessment report and the Archaeological Chance Find Protocol to the contractor prior to commencement of any ground-disturbing activities so that construction personnel is made aware of the types of

archaeological material (e.g., stone tools, bone, pottery, burial goods) that may be encountered, and the procedures to follow in the event of a chance find.

- During ground-clearing of the new cemetery area, the existing boundary of the Askham Cemetery must be clearly demarcated to prevent inadvertent encroachment or disturbance of existing graves.
- During the ongoing operational life of the cemetery, any heritage material exposed natural erosion, further grave excavations, or maintenance activities must be managed in accordance with the Chance Find Protocol.

Environmental authorisation period required:

The period for which the EA is required = 5 years

The date the activity will be concluded = 10 years

When the post construction monitoring requirements should be finalised = 10 years

Is an EMPr attached?

YES

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.

Danie Krynauw

NAME OF EAP



SIGNATURE OF EAP

10 June 2026

DATE

## **SECTION F: APPENDIXES**

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

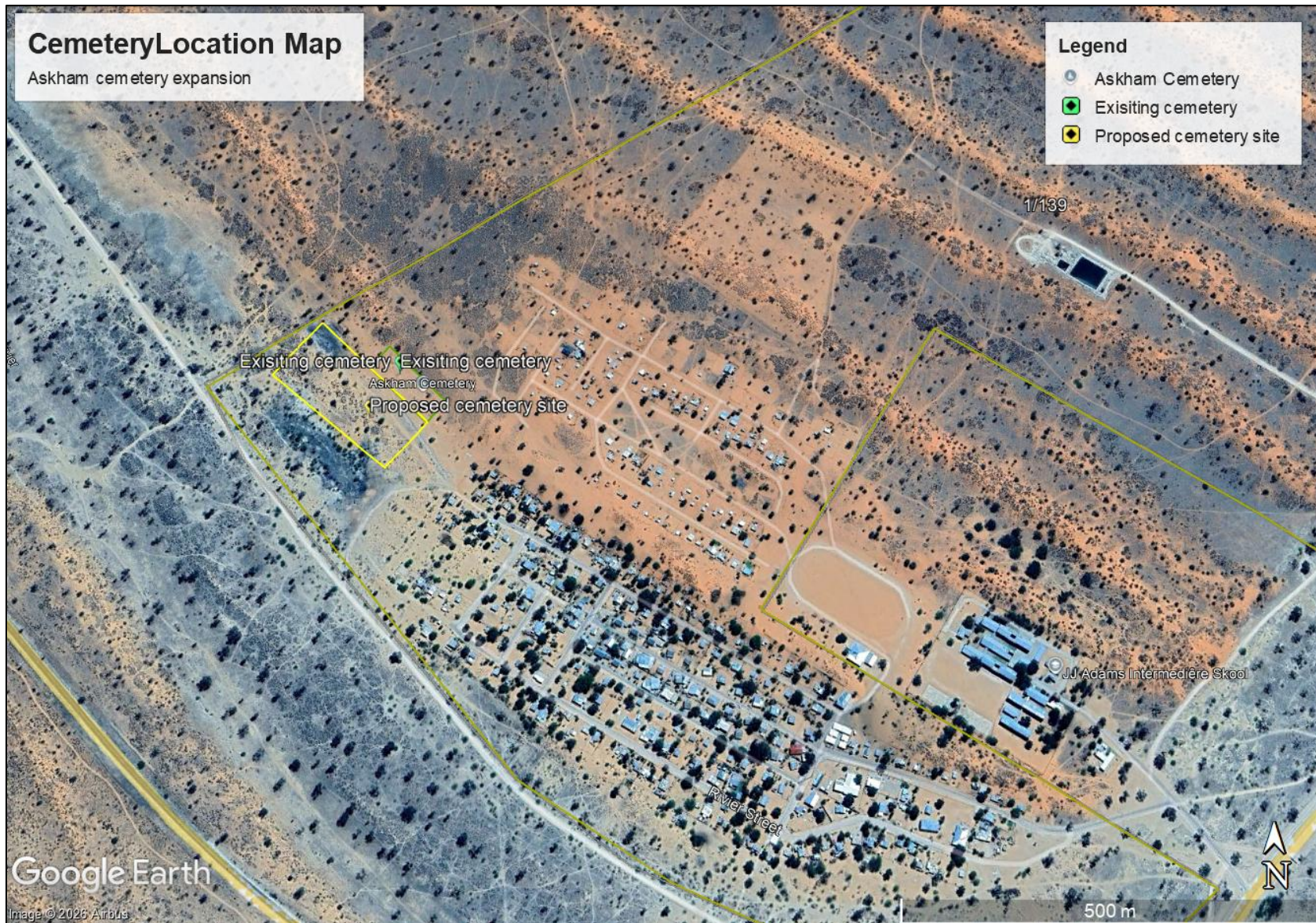
Appendix I: Specialist's declaration of interest

Appendix J: Additional Information

## **Appendix A: Maps**

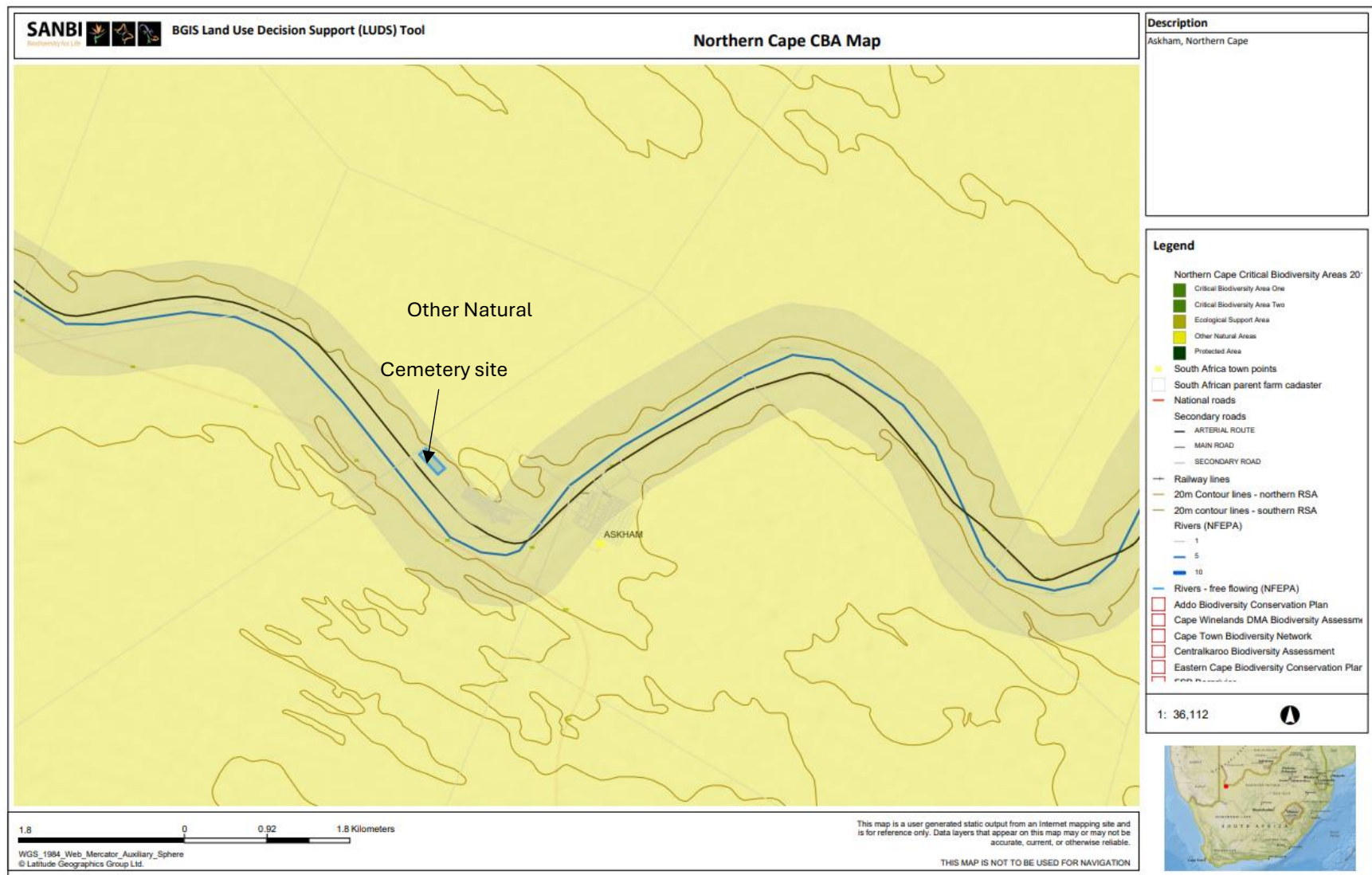


*Locality map of the proposed Cemetery (Source: Google Maps)*

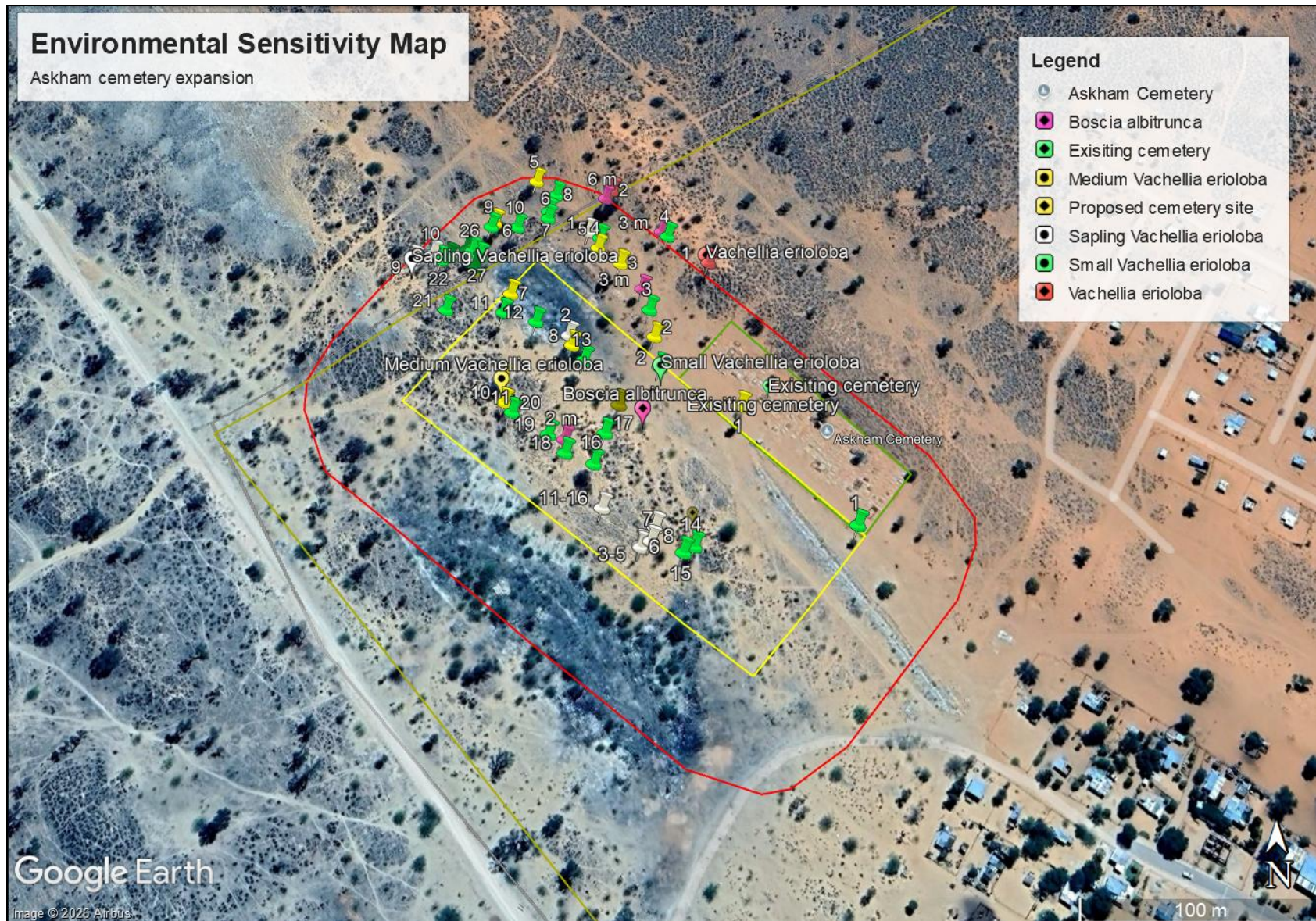


Aerial image of proposed cemetery site (Source: Google Earth Pro, 2023)

# BASIC ASSESSMENT REPORT



Critical Biodiversity Map (Source: Sanbi: BGIS, 2016)



Site sensitivity map

## **Appendix B: Photographs**



Access road towards cemetery site



View towards the area proposed for the cemetery expansion



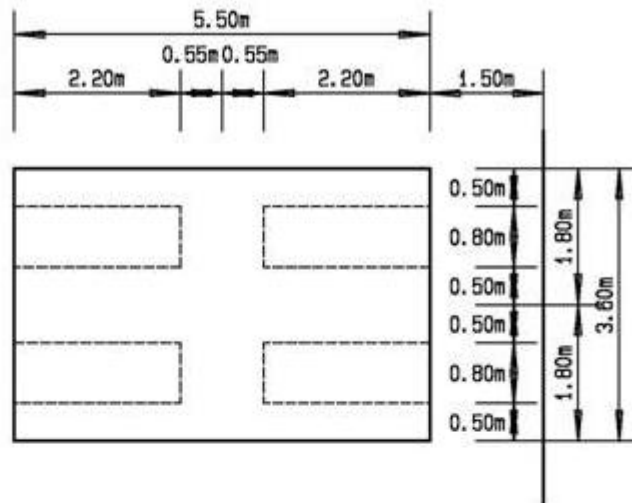
Landfill site located to the south of the cemetery expansion proposal



Existing cemetery

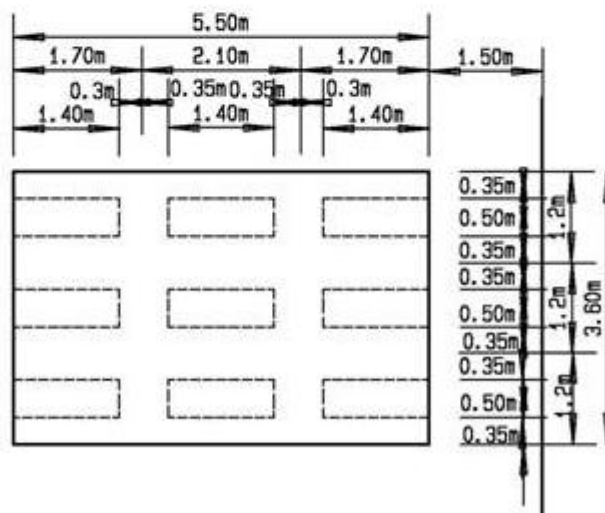
## **Appendix C: Facility illustration**

## DETAIL GRAVES LAYOUT:



### ADULT GRAVES

SCALE 1 : 100



### CHILDREN GRAVES

SCALE 1 : 100

*Typical grave spacing design*

## **Appendix D: Specialists Reports**

1. Ecological Impact Assessment
2. Archaeological/ palaeontological impact assessment

## **Appendix E: Public Participation**

# Notice for public participation provided to Stakeholders and Interested and Affected Parties

The following was also conducted:

|                      |                   |
|----------------------|-------------------|
| Publication name     | Gemsbok           |
| Date published       | 15 May 2026       |
| Site notice position | Latitude          |
|                      | 26° 58'41.093"S,  |
|                      | Longitude         |
|                      | 20° 46'0.0085"E   |
| Date placed          | 28 September 2025 |

BLADSY 10

**Geklassifiseerde Advertensies**

1. PERSOONLIK  
15. ALGEMEEN TE KOOP  
23. SPESIALE DIENSTE  
23. SPESIALE DIENSTE

1. PERSOONLIK

LEESPROBLEEM? Kan jou kind moeilik of glad nie lees nie? Kontak 082 650 6178

1. PERSOONLIK

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15. ALGEMEEN TE KOOP  
23. SPESIALE DIENSTE  
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23. SPESIALE DIENSTE  
23. SPESIALE DIENSTE

GEMSBOK

**Geklassifiseerde Advertensies**

1. PERSOONLIK  
15. ALGEMEEN TE KOOP  
23. SPESIALE DIENSTE  
23. SPESIALE DIENSTE

1. PERSOONLIK

1. PERSOONLIK  
15. ALGEMEEN TE KOOP  
23. SPESIALE DIENSTE  
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Gemsbok 15 May 2026 newspaper

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K15/15/05

**NOTICE - ENVIRONMENTAL IMPACT ASSESSMENT.** Call for Inter-  
ested and Affected Parties to register and comment on the EIA Pro-  
cess for the expansion of cemeteries at Louisvale Road and Askham,  
Northern Cape. In terms of the Environmental Impact Assessment  
(EIA) Regulations, 2014 (as amended April 2017) published under the  
National Environmental Management Act, 1998 (Act No.107 of 1998)  
(NEMA), as amended, notice is hereby given of DAVID KRUIPER  
LOCAL MUNICIPALITY intention to obtain environmental authorisation  
for the proposed expansion of two cemeteries, one at Louisvale Road  
and the other at Askham. Location of the proposed development site:  
An 8ha portion of erf RE/1037, Louisvale Road, situated south-east  
of Upington. Site middle point coördinates are at: 28°28'56.25"S,  
21°17'21.22"E. As well as a 2ha portion of the farm Kammelduil 139,  
Askham, situated north-west of the town Askham. Site middle point  
coördinates are at: 26°58'37.44"S 20°45'55.46"E Environmental Au-  
thorisation: The projects triggers activities under Listing 1 (GN R 327)  
of the 2014 EIA Regulations (as amended April 2017), published under  
the NEMA and therefore requires environmental authorisation via the  
undertaking of a Basic Assessment process. The competent authority  
responsible for issuing environmental authorization is the Northern  
Cape Department of Agriculture, Environment, Rural Development  
and Land Reform (DAERL). The listed activities for authorisation  
includes Listing Notice 1, activities no. 27 and 44. Please note that  
comments will be sought from the South African Heritage Resources  
Agency (SAHRA) in terms of the National Heritage Resources Act,  
Act 25 of 1999. Green-Box Consulting is appointed as the Environ-  
mental Assessment Practitioner (EAP) to undertake and manage the  
legislative processes. Should you be interested in registering as an  
Interested and / or Affected Party (I&AP) and to provide comments on  
the application documentation, you are kindly requested to send your  
name, contact details, with an indication of interest, along with any  
comments, to the EAP at: Danie Krynauw, Green-Box Consulting- P.O.  
Box 37738, Langenhovenpark 9330, Cell: 082 435 2108, or e-mail:  
[danie@green-box.co.za](mailto:danie@green-box.co.za)

K16/15/05

Close-up of advert, Gemsbok Newspaper

## Site Notices:



Site notice: 26° 58' 41.093"S, 20° 46' 0.0085"E



28 Sept 2025 09:22:46  
26°58'41.10839"S 20°46'0.06975"E

Site notice: 26° 58'41.093"S, 20° 46'0.0085"E

Background Information Document:

# Background Information Document:

Expansion of a Cemetery, located in  
Askham, Portion of the farm Kammelduil  
139, Dawid Kruiper Local Municipality,  
Northern Cape



**GREEN-BOX**  
CONSULTING

INTEGRATED ENVIRONMENTAL MANAGEMENT



*The information contained in this document is private and confidential and may not be distributed, copied or otherwise circulated without the permission of both the consultant, Green-Box Consulting and the client, Dawid Kruiper Local Municipality.*

*This information is based on information supplied by the client, Dawid Kruiper Local Municipality. All information is given in good faith; however, no physical testing or chemical analyses were performed during this document compilation.*

*Although every effort was made to request and obtain all pertinent information, Green-Box Consulting cannot be held accountable or accept responsibility for any discrepancies in this information or for the disclosure or review of information which has not been presented to the consultant. All information submitted to the consultant for review has been referenced.*

*Please note that Green-Box Consulting cannot be held responsible for any activities conducted or undertaken before any consultation with the relevant Competent Authorities and other stakeholders where such activities are non-compliant with legislative and regulatory requirements, this includes supporting legal documentation.*

## ABBREVIATIONS:

|       |                                                                                         |
|-------|-----------------------------------------------------------------------------------------|
| DAERL | Northern Cape department of Agriculture, Environment, Rural Development and Land Reform |
| BAR   | Basic Assessment Report                                                                 |
| BID   | Background Information Document                                                         |
| CA    | Competent Authority                                                                     |
| DWS   | Department of Water and Sanitation                                                      |
| EIA   | Environmental Impact Assessment                                                         |
| EMPr  | Environmental Management Programme                                                      |
| GA    | General Authorisation                                                                   |
| I&APs | Interested & Affected Parties                                                           |
| LM    | Local Municipality                                                                      |
| NEMA  | National Environmental Management Act, 1998 (Act No. 107 of 1998)                       |
| PPP   | Public Participation Process                                                            |
| WUL   | Water Use License                                                                       |

## DEFINITIONS:

|                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                       |
|---------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>ENVIRONMENT</b><br>(National Environmental Management Act, 107 of 1998)      | The surroundings within which humans exist and that are made up of –<br>(i) the land, water, and atmosphere of the earth; (ii) micro-organisms, plant and animal life; (iii) any part or combination of (i) and (ii) and the interrelationships among and between them; and (iv) the physical, chemical, aesthetic and cultural properties and conditions of the foregoing that influence human health and wellbeing. |
| <b>ENVIRONMENTAL MANAGEMENT PROGRAMME</b><br>(EIA Regulations, 2014 as amended) | A working document on environmental and socio-economic mitigation measures, which must be implemented by several responsible parties during all the phases of the proposed project.                                                                                                                                                                                                                                   |
| <b>DEVELOPMENT</b><br>(EIA Regulations, 2014 as amended)                        | The building, erection, construction, or establishment of a facility, structure, or infrastructure, including associated earthworks or borrow pits, that is necessary for the undertaking of a listed or specified activity.                                                                                                                                                                                          |
| <b>APPLICANT</b><br>(EIA Regulations, 2014 as amended)                          | Any person who applies for an Authorisation to undertake an activity or to cause such activity to be undertaken as                                                                                                                                                                                                                                                                                                    |



|                                                                                     |                                                                                                                                                            |
|-------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                     | contemplated in sections 24(5), 24M and 44 of the National Environmental Management Act, 1998 (Act No. 107 of 1998).                                       |
| <b>INTERESTED AND AFFECTED PARTY</b><br><i>(EIA Regulations, 2014 as amended)</i>   | Any person or groups of persons who may express interest in a project or be affected by the project, positively or negatively.                             |
| <b>DEVELOPMENT FOOTPRINT</b><br><i>(EIA Regulations, 2014 as amended)</i>           | Any evidence of physical alteration because of the undertaking of any activity.                                                                            |
| <b>ENVIRONMENTAL IMPACT ASSESSMENT</b><br><i>(EIA Regulations, 2014 as amended)</i> | The systematic process of identifying, assessing, and reporting environmental impacts associated with an activity and includes basic assessment and S&EIR. |



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## 1. INTRODUCTION

Green-Box Consulting was appointed by Dawid Kruiper Local Municipality, to fulfil the role of Environmental Assessment Practitioners. Green-Box Consultants will undertake the Environmental Impact Assessment for the proposed development of a cemetery. The construction corridor is situated within the Askham area in ward 16 of the Dawid Kruiper Local Municipality. Dawid Kruiper falls under the ZF Mgcawu District Municipality.

## 2. PURPOSE OF THE BID

This Background Information Document (BID) provides stakeholders and Interested and Affected Parties (I&APs) with information on the proposed project and details regarding the EIA processes to be undertaken by Green-Box Consulting. It also aims to emphasize the importance of public participation during the assessment phase and allows for input from I&APs on the potential issues that may arise. The BID provides I&APs with an opportunity to register as I&APs in this process and encourages response to documents distributed for public review.

## 3. BACKGROUND, NEED & DESIRABILITY

**The guideline document on need and desirability in terms of the Environmental Impact Assessment (EIA) Regulations, 2014 (as amended) has been consulted to inform and provide information on the Need and Desirability section outlined below.**

The Dawid Kruiper Local Municipality (Applicant) wishes to expand an existing cemetery for Askham town. There is currently an existing cemetery, this proposal is to expand and therefore to provide additional burial space. The town of Askham has approached their maximum capacity, therefore creating an urgent need for the expansion of their cemetery. The overall benefit of the proposed development is to ensure that the local community has burial plots to bury their loved ones in a respectful and dignified manner and to enable the municipality to provide the basic service of provision of a cemetery, which includes grave-digging, landscaping. The social impacts are clear, as it is a need and desirability of the community to have formal burial space.

## 4. PROJECT DESCRIPTION

The Dawid Kruiper Local Municipality has identified a need to plan and develop a cemetery within their area of jurisdiction. A 2ha portion has been identified next to the existing cemetery in Askham to expand the cemetery for future use.

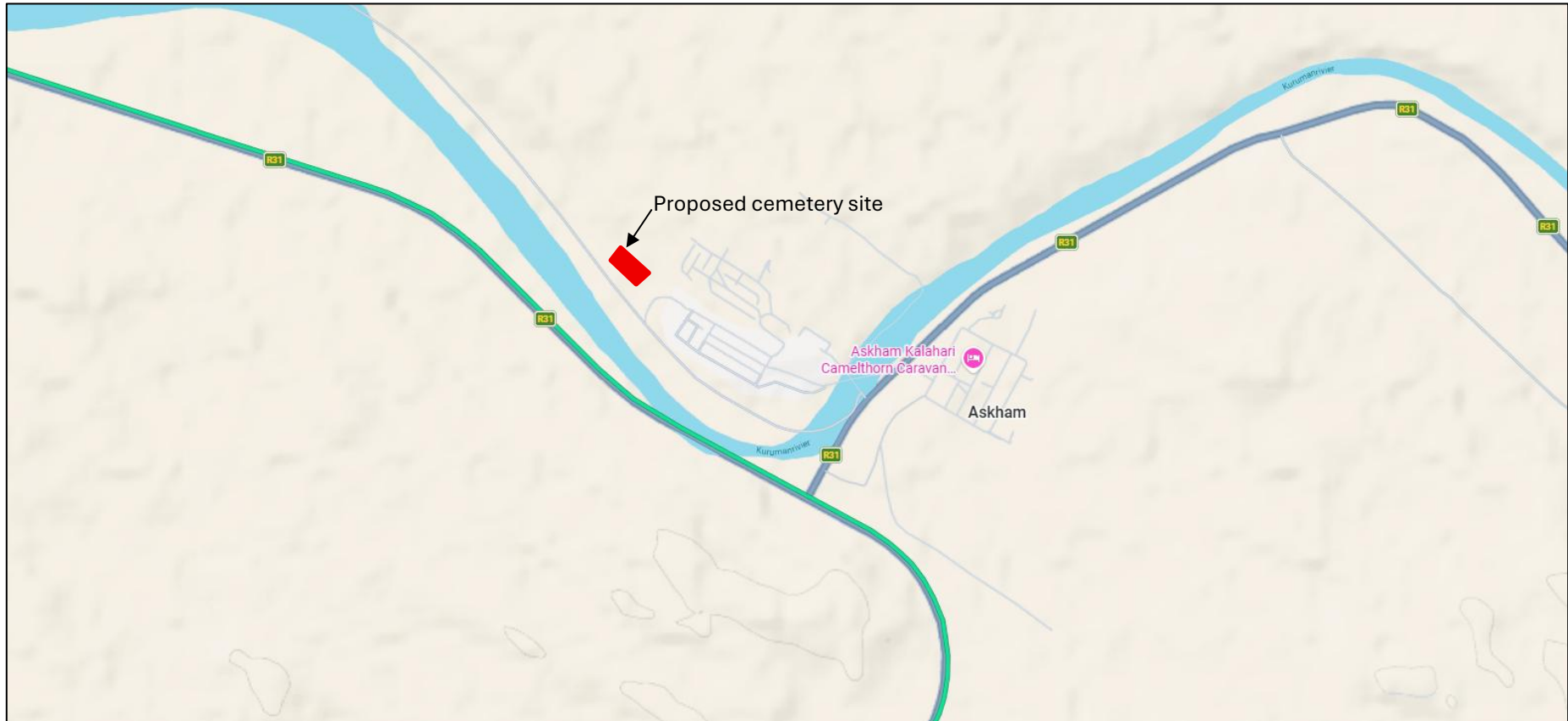
The proposed development will accommodate adults and children, which will be divided into a 70% and 30% split between adults and children respectively. The cemetery will also have provisions for formalized walkways between gravesites, enough parking facilities as well as adequate sanitary services for the public. The cemetery will also be fenced. The project is within the Askham area, in Ward 16, which is located within the Dawid Kruiper Local Municipality. The Cemetery will be located directly north-west approximately 1.5km from Askham town.

## 5. SITE LOCATION

The property for the cemetery is described as portion of the farm Kammelduil 139, Askham. Askham is located approximately 180km north of Upington, in the Northern Cape. The middle point coordinates of the proposed cemetery site are as follows (also refer to Figure 1 for the location map):

Table 1: Coordinates of the middle point of the proposed cemetery

| Point          | Latitude      | Longitude     |
|----------------|---------------|---------------|
| Preferred site | 26°58'37.44"S | 20°45'55.46"E |



*Figure 1: Locality map of the proposed Cemetery (Source: Google Maps)*

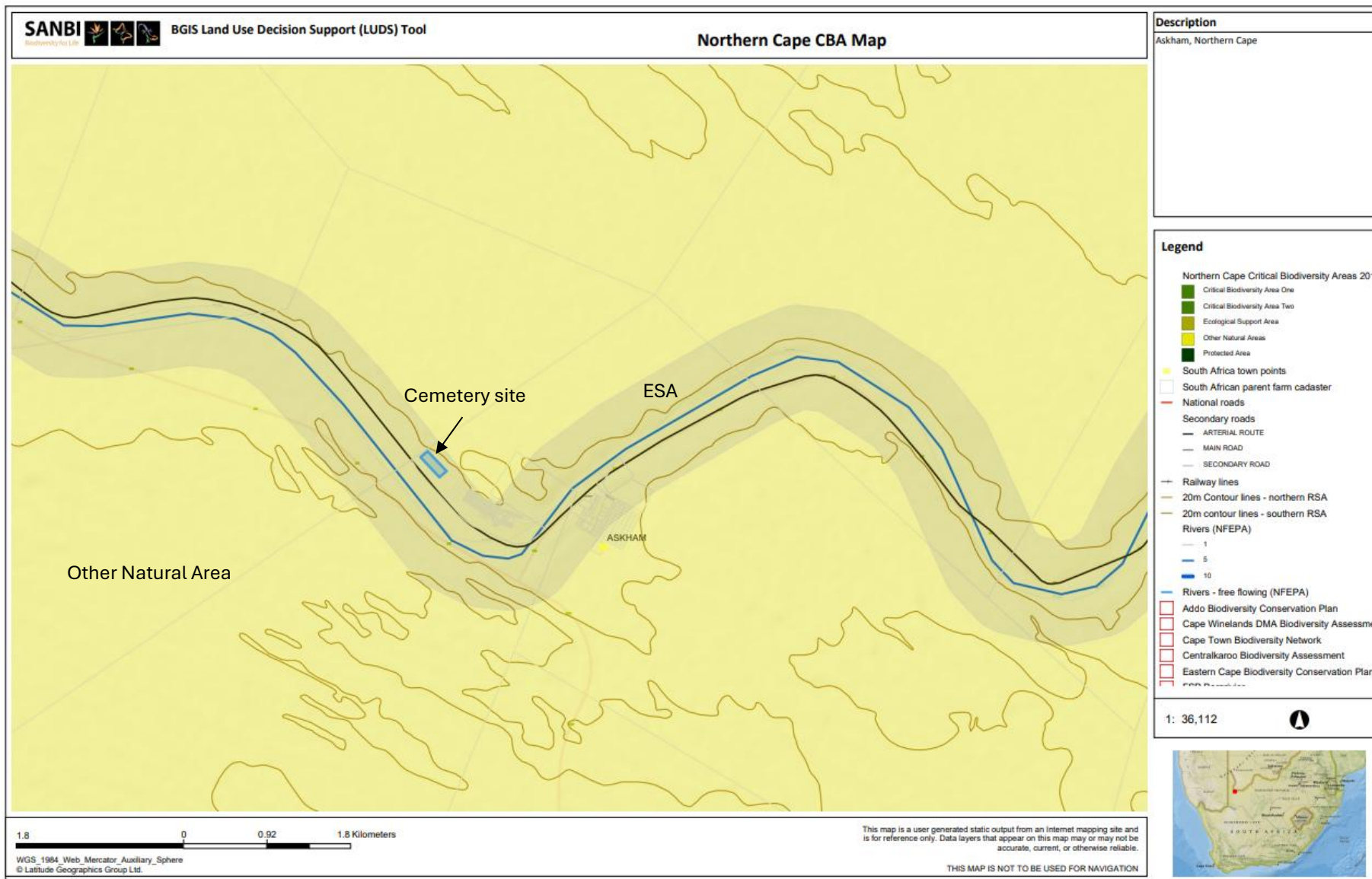


Figure 2: Critical Biodiversity Map (Source: Sanbi: BGIS, 2016)

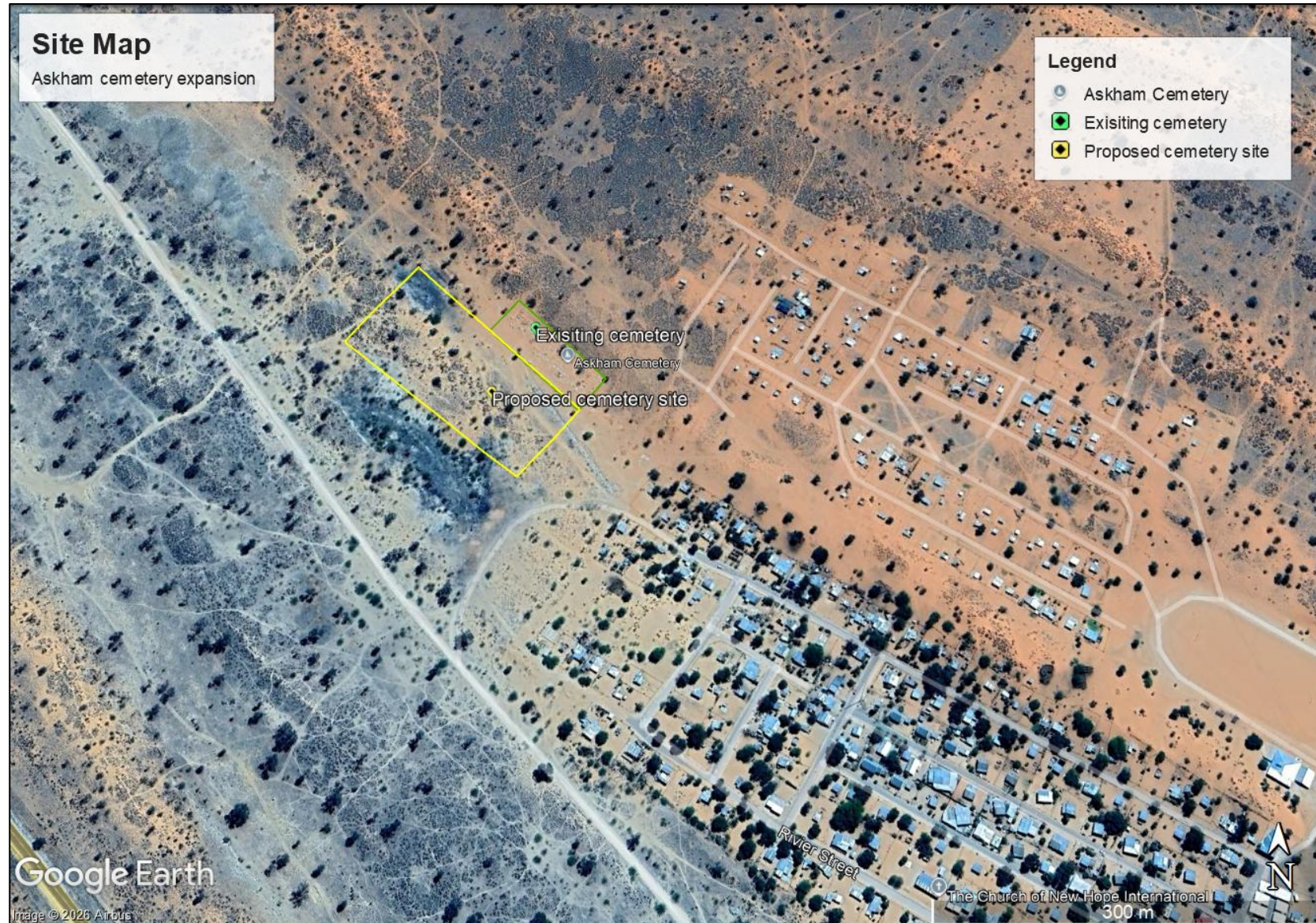


Figure 3: Aerial image of proposed cemetery site (Source: Google Earth Pro, 2023)

## 6. TRIGGERED ACTIVITIES

Table 2: List of EIA triggering activities

| No. and date of the relevant notice                                                      | Activity No(s) (in terms of the relevant notice)                                                                                                                                                              | Description of each listed activity                                                                                                                      |
|------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| National Environmental Management Act (Act 107 of 1998) GNR 327, Listing Notice 1 (2017) | <b>Activity 44 of Listing Notice 1</b> “The expansion of cemeteries by 2500 square meters or more”.                                                                                                           | The proposed development footprint of the Cemetery will be 20 000 Square Meters.                                                                         |
| National Environmental Management Act (Act 107 of 1998) GNR 327, Listing Notice 1 (2017) | <b>Activity 27 of Listing Notice 1</b> “The clearance of an area of 1 hectare or more, but less than 20 hectares of indigenous vegetation, except where such clearance of indigenous vegetation is required.” | The proposed development footprint of the Cemetery is 2 hectares. The site proposed for the cemetery contains more than 1ha indigenous vegetation cover. |

## 7.YOUR ROLE AS AN I&AP

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Should you wish to register as an Interested/Affected Party kindly follow the process outlined below:

1. Complete the associated I&AP Registration Form and email it to:  
[danie@green-box.co.za](mailto:danie@green-box.co.za)
2. Contact the environmental consultant directly via email or telephonically, if you have any queries or require further information on the project.

Kindly note that in terms of Regulation 56 (c), an I&AP is required to disclose any direct business, financial, personal, or other interest that they may have concerning the approval or refusal of the application.

Please register by the 27<sup>th</sup> of February 2026 by completing the attached comments and registration sheet.

For all queries / issues / concerns please contact:

**Environmental Assessment Practitioner**

**Danie Krynauw**

Tel No: 082 435 2108

Email: [danie@green-box.co.za](mailto:danie@green-box.co.za)

All registered I&APs agree to have their personal information (PI) gathered and stored by Green-Box Consulting and have it thereafter be distributed to third parties (competent authorities, stakeholders and other registered I&APs). The competent authority requires this PI as part of the application process. It is further used to communicate updates to registered I&APs. This PI will be stored on our database and saved on our secure server.

## 8. I&AP REGISTRATION FORM

**Attention: Danie Krynauw**

**Project:** Development of Askham Cemetery

|                            |  |                  |  |
|----------------------------|--|------------------|--|
| <b>TITLE:</b>              |  | <b>TEL/CELL:</b> |  |
| <b>NAME &amp; SURNAME:</b> |  | <b>EMAIL:</b>    |  |
| <b>ORGANISATION:</b>       |  | <b>FAX:</b>      |  |
| <b>ADDRESS:</b>            |  |                  |  |

**Please tick the appropriate box:**

- I would like to register as an Interested and Affected Party
- Please remove me from the distribution sheet for the proposed project. I would prefer not to receive any further correspondence regarding this process.

|                          |
|--------------------------|
| <input type="checkbox"/> |
| <input type="checkbox"/> |

**Do you have any direct business, financial, personal or other interest in the approval or refusal of this application?**

|            |           |
|------------|-----------|
| <b>Yes</b> | <b>No</b> |
|------------|-----------|

**If yes, please explain:**

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**Comments:**

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**All registrations are to be submitted within 14 days of receipt of the BID to:**  
[danie@green-box.co.za](mailto:danie@green-box.co.za)

**Key stakeholders:**

| <b>Title, Name and Surname</b> | <b>Affiliation/ key stakeholder status</b>               | <b>Contact details (tel number or e-mail address)</b>                  |
|--------------------------------|----------------------------------------------------------|------------------------------------------------------------------------|
| Mr. Setimela Sebashe           | David Kruiper Local Municipality, surrounding land owner | <a href="mailto:manager@kharahais.gov.za">manager@kharahais.gov.za</a> |

| <b>Authority/Organ of State</b>                                                                | <b>Contact person (Title, Name and Surname)</b> | <b>Tel No</b>                  | <b>e-mail</b>                                                                                                                          |
|------------------------------------------------------------------------------------------------|-------------------------------------------------|--------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|
| David Kruiper Local Municipality                                                               | Mr. Setimela Sebashe                            | 054-338 7000                   | <a href="mailto:manager@kharahais.gov.za">manager@kharahais.gov.za</a>                                                                 |
| ZF Mgcawu District Municipality                                                                | Ms. Samantha Aumaureen Tatas-Titus              | 054-337 2800                   | <a href="mailto:mmanyeh@zfm-dm.gov.za">mmanyeh@zfm-dm.gov.za</a> ,<br><a href="mailto:admin@zfm-dm.gov.za">admin@zfm-dm.gov.za</a>     |
| Provincial Department of Agriculture, Environmental Affairs, Rural Development (Northern Cape) | Mr. H. Roux                                     | 053-807 7300 /<br>071 860 7550 | <a href="mailto:hroux@ncpg.gov.za">hroux@ncpg.gov.za</a>                                                                               |
| Department of Water and Sanitation                                                             | Ms. Lerato Maropong                             | 054-338 5800,<br>076 435 5456  | <a href="mailto:warmorange@dws.gov.za">warmorange@dws.gov.za</a>                                                                       |
| Northern Cape Department of Roads and Public Works                                             | Mr. C. Robertson                                | 054-332 4473                   | <a href="mailto:crobertson@ncpg.gov.za">crobertson@ncpg.gov.za</a> ,<br><a href="mailto:pmarekwa@ncpg.gov.za">pmarekwa@ncpg.gov.za</a> |
| David Kruiper LM, Upington Ward 8 Counsellor                                                   | Cllr. Solly Abel                                | 054-338 7000                   | <a href="mailto:info@dkm.gov.za">info@dkm.gov.za</a>                                                                                   |

## **Appendix F: Impact Assessment**

| Activity                                                     | Impact summary                                                                                           | Significance before Mitigation | Proposed mitigation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Significance after Mitigation |
|--------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|--------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|
| <b>Alternative 1 (preferred alternative)</b>                 |                                                                                                          |                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                               |
| <b>Planning Phase</b>                                        |                                                                                                          |                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                               |
| Project Design, Layout Finalization and Land Use Application | <b>Direct impacts:</b><br>No physical disturbance occurs during planning.                                | Neutral                        | N/A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Neutral                       |
|                                                              | <b>Indirect impacts:</b><br>Poor layout design could influence stormwater flow patterns across the site. | Low                            | <ul style="list-style-type: none"> <li>- Maintain natural north-easterly sheet-flow across the site.</li> <li>- Avoid concentrating stormwater into channels.</li> <li>- Keep the development footprint compact and within the approved area.</li> <li>- Avoid unnecessary disturbance of the eastern main water drainage channel.</li> <li>- Ensure layout does not alter the small ephemeral drainage flow path located within the vicinity of the site.</li> <li>- Incorporate erosion-prevention measures into final layout.</li> <li>- Maintain a buffer from property boundaries where feasible to prevent off-site runoff impacts.</li> </ul> | Very Low                      |
|                                                              | <b>Cumulative impacts:</b><br>The project will add an additional area of cleared land.                   | Low                            | <ul style="list-style-type: none"> <li>- Keep all development strictly within the approved footprint.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Very Low                      |
| Finding in situ or ex situ fossils.                          | <b>Direct impacts:</b><br>Risk of encountering additional artefacts during grave excavation              | Low                            | No pre-construction mitigation or specialist palaeontological monitoring is recommended. A standard chance-find protocol is, however, advised during construction. Should fossil material be unexpectedly encountered, work in the immediate area should cease and a qualified palaeontologist should be notified to assess the find and advise on appropriate mitigation measures.                                                                                                                                                                                                                                                                  | Very Low                      |

| Activity                                     | Impact summary                                                                                                          | Significance before Mitigation | Proposed mitigation                                                                                                                                                                                                                                                                                                                                                                                                                                         | Significance after Mitigation |
|----------------------------------------------|-------------------------------------------------------------------------------------------------------------------------|--------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|
|                                              |                                                                                                                         |                                | <p>If significant artefacts or features are uncovered, work must stop and the South African Heritage Resources Agency (SAHRA) must be notified.</p> <p>A qualified archaeologist should be available on call during initial site clearance to verify finds.</p> <p>Workers must be briefed on recognising artefacts and reporting them immediately.</p>                                                                                                     |                               |
|                                              | <b>Indirect impacts:</b><br>None during planning                                                                        | -                              | N/A                                                                                                                                                                                                                                                                                                                                                                                                                                                         | -                             |
|                                              | <b>Cumulative impacts:</b><br>None anticipated.                                                                         | -                              | N/A                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                               |
| <b>Alternative 1 (preferred alternative)</b> |                                                                                                                         |                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                               |
| <b>Construction Phase</b>                    |                                                                                                                         |                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                               |
| Vegetation Clearance                         | <b>Direct impacts:</b><br>Loss of individuals of the nationally protected tree species <i>Vachellia erioloba</i> .      | Low                            | <ul style="list-style-type: none"> <li>- The proposed development footprint must be kept as small as practicably possible. No unnecessary/unauthorised footprint expansion may take place.</li> <li>- Adequately cordon off the proposed development construction footprint.</li> <li>- Demarcate construction footprint to avoid unnecessary clearing.</li> <li>- Rescue and relocate any Species of Conservation Concern (SCC) if encountered.</li> </ul> | Very Low                      |
|                                              | <b>Indirect impacts:</b><br>Temporary faunal displacement; dust generation; and increased erosion risk on exposed soils | Low                            | <ul style="list-style-type: none"> <li>- Stabilise exposed soils immediately after clearing (mulch, brush-packing, or similar).</li> <li>- Apply dust suppression during windy periods.</li> </ul>                                                                                                                                                                                                                                                          | Very Low                      |
|                                              | <b>Cumulative impacts:</b><br>Removal of 30 identified nationally protected tree                                        | Low                            | <ul style="list-style-type: none"> <li>- A Nationally Protected Tree License has to be obtained from the Department of Forestry, Fisheries and the</li> </ul>                                                                                                                                                                                                                                                                                               | Very Low                      |

| Activity                                   | Impact summary                                                                             | Significance before Mitigation | Proposed mitigation                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Significance after Mitigation |
|--------------------------------------------|--------------------------------------------------------------------------------------------|--------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|
|                                            | species <i>Vachellia erioloba</i> .                                                        |                                | Environment (competent authority), prior to the commencement of any construction activities and the subsequent potential removal/destruction of any identified nationally protected tree species individuals. It is however recommended that as many of the nationally protected tree species <i>Vachellia erioloba</i> individuals as practicably possible/feasible, should not be removed/damaged and should be left in situ and intact.                                          |                               |
| Earthworks, Excavation and Soil Compaction | <b>Direct impacts:</b><br>Soil disturbance, compaction, and erosion risk during levelling. | Low - Medium                   | <ul style="list-style-type: none"> <li>- Implement adequate stormwater and erosion management measures to sufficiently manage storm water runoff and clean/dirty water separation and prevent any significant soil erosion.</li> <li>- Water flow-breaks and dispersal infrastructure should be installed to reduce water flow velocity and disperse the water.</li> <li>- Cut-off berms/trenches must be constructed around the upslope boundaries if deemed necessary.</li> </ul> | Low                           |
|                                            | <b>Indirect impacts:</b><br>Sediment movement during rainfall events.                      | Low                            | <ul style="list-style-type: none"> <li>- Maintain natural sheet-flow direction.</li> <li>- Prevent runoff from entering adjacent properties.</li> </ul>                                                                                                                                                                                                                                                                                                                             | Very Low                      |
|                                            | <b>Cumulative impacts:</b><br>Incremental soil disturbance in the cemetery footprint       | Low                            | Rehabilitate temporary disturbed areas immediately after use.                                                                                                                                                                                                                                                                                                                                                                                                                       | Very Low                      |
| Construction Machinery                     | <b>Direct impacts:</b>                                                                     | Low                            | <ul style="list-style-type: none"> <li>- Adequate operational procedures for construction machinery</li> </ul>                                                                                                                                                                                                                                                                                                                                                                      | Very Low                      |

| Activity                                                                   | Impact summary                                                                                          | Significance before Mitigation | Proposed mitigation                                                                                                                                                                                                                                                                                   | Significance after Mitigation |
|----------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|--------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|
| Operation and Material Handling                                            | Noise, dust, emissions; and minor risk of spills.                                                       |                                | and equipment must be developed to strictly govern and restrict movement of machinery.<br>- Implement suitable dust suppression and management measures.<br>- Construction areas and roads to be sufficiently wetted down.                                                                            |                               |
|                                                                            | <b>Indirect impacts:</b><br>Temporary disturbance to fauna.                                             | Low                            | - Limit working hours.<br>- Dust suppression,<br>- Vehicle speed control.                                                                                                                                                                                                                             | Very Low                      |
|                                                                            | <b>Cumulative impacts:</b><br>Minor contribution to regional construction emissions.                    | Very Low                       | Keep machinery in good working order.                                                                                                                                                                                                                                                                 | Negligible                    |
| Surface Water Features: Potential disturbance of ephemeral drainage lines. | <b>Direct impacts:</b><br>Potential alteration of natural sheet-flow and disturbance to drainage lines. | Low                            | - Implement erosion control (silt fences, berms).<br>- Manage stormwater to prevent ponding and runoff contamination.                                                                                                                                                                                 | Very Low                      |
|                                                                            | <b>Indirect impacts:</b><br>Erosion if stormwater is not controlled.                                    | Low–Moderate                   | - Inspect stormwater controls weekly during construction.                                                                                                                                                                                                                                             | Low                           |
|                                                                            | <b>Cumulative impacts:</b><br>Slight increase in hardened surfaces in the area.                         | Low                            | - Ensure controlled discharge into natural landscape                                                                                                                                                                                                                                                  | Very Low                      |
| Alien Plant Spread                                                         | <b>Direct impacts:</b><br>Risk of invasive species spreading due to soil disturbance.                   | Low                            | - Remove invasive species during site clearance.<br>- Monitor and control regrowth throughout construction.                                                                                                                                                                                           | Very Low                      |
| Excavation into surface and subsurface Geological Formations               | <b>Direct impacts:</b><br>Risk of encountering additional artefacts during construction excavations.    | Low                            | - A Chance Finds Protocol is recommended.<br>- If significant artefacts or features are uncovered, work must stop and the South African Heritage Resources Agency (SAHRA) must be notified.<br>- A qualified archaeologist should be available on call during initial site clearance to verify finds. | Low                           |
|                                                                            | <b>Indirect impacts:</b><br>None                                                                        | -                              | N/A                                                                                                                                                                                                                                                                                                   | -                             |

| Activity                                     | Impact summary                                                                                       | Significance before Mitigation | Proposed mitigation                                                                                                                     | Significance after Mitigation |
|----------------------------------------------|------------------------------------------------------------------------------------------------------|--------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|
|                                              | <b>Cumulative impacts:</b><br>None anticipated.                                                      | -                              | N/A                                                                                                                                     | -                             |
| <b>Alternative 1 (preferred alternative)</b> |                                                                                                      |                                |                                                                                                                                         |                               |
| <b>Operational Phase</b>                     |                                                                                                      |                                |                                                                                                                                         |                               |
| Surface Water & Drainage                     | <b>Direct impacts:</b><br>Altered runoff patterns due to paved areas, graves, and landscaping.       | Low                            | - Maintain minimum burial depth above water table (1.5–2 m).<br>- Implement stormwater management (swales, berms, infiltration strips). | Very Low                      |
|                                              | <b>Indirect impacts:</b><br>None                                                                     | -                              | N/A                                                                                                                                     | -                             |
|                                              | <b>Cumulative impacts:</b><br>Long-term cemetery use compacts soils, reducing infiltration capacity. | Low                            | - Direct stormwater away from burial areas into controlled landscaped zones.                                                            | Very Low                      |
| Vegetation & Habitat Loss                    | <b>Direct impacts:</b><br>Reduced habitat for small mammals, reptiles, and avifauna.                 | Low                            | - Create green corridors and buffer zones around fence lines.<br>- Avoid planting invasive ornamentals.                                 | Very Low                      |
| Noise & Disturbance                          | <b>Direct impacts:</b><br>Funeral traffic, amplified sound, and maintenance activities.              | Low                            | - Restrict mechanical maintenance to daylight hours.<br>- Limit amplified sound during funerals to acceptable levels.                   | Very Low                      |
|                                              | <b>Indirect impacts:</b><br>None                                                                     | -                              | N/A                                                                                                                                     | -                             |
|                                              | <b>Cumulative impacts:</b><br>None                                                                   | -                              | N/A                                                                                                                                     | -                             |
| Waste Management                             | <b>Direct impacts:</b><br>Ongoing waste from funerals (plastic, flowers, wreaths, packaging).        | Low                            | Provide bins and recycling facilities.                                                                                                  | Very Low                      |
|                                              | <b>Indirect impacts:</b><br>None                                                                     | -                              | N/A                                                                                                                                     | -                             |
|                                              | <b>Cumulative impacts:</b><br>Risk of illegal dumping if not properly managed.                       | Low                            | Regular municipal collection and disposal at licensed landfill.                                                                         | Very Low                      |
| <b>Alternative 1 (preferred alternative)</b> |                                                                                                      |                                |                                                                                                                                         |                               |
| <b>Decommissioning Phase</b>                 |                                                                                                      |                                |                                                                                                                                         |                               |

| Activity                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Impact summary                                                                                                                                                    | Significance before Mitigation | Proposed mitigation | Significance after Mitigation |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|---------------------|-------------------------------|
| Decommissioning of the cemetery is not foreseen. The cemetery will be protected by the SAHRA.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                   |                                |                     |                               |
| <b>No-go option (No development to occur)</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                   |                                |                     |                               |
| Under the No-Go option, no development would occur and therefore: <ul style="list-style-type: none"> <li>No vegetation clearing or habitat loss would take place.</li> <li>No soil disturbance, erosion, or stormwater alteration would occur.</li> <li>No additional dust, noise, traffic, lighting, or air emissions would be generated.</li> <li>No risk of hydrocarbon spills, groundwater contamination, or waste generation would arise.</li> <li>No faunal displacement or disturbance would occur.</li> <li>No subsurface excavation would take place, and therefore no impact on archaeological heritage resources would occur.</li> </ul> | <b>Direct impacts:</b><br>The site remains in its current slightly disturbed condition; no vegetation clearing, earthworks, or infrastructure installation occur. | Neutral                        | N/A                 | Neutral                       |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | <b>Indirect impacts:</b><br>No change to existing ecological or surface-flow conditions.                                                                          | Neutral                        |                     | Neutral                       |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | <b>Cumulative impacts:</b><br>No additional contribution to landscape transformation.                                                                             | Neutral                        |                     | Neutral                       |

## **Appendix G: Environmental Management Programme**

# **David Kruiper Local Municipality, Askham cemetery expansion**

## **ENVIRONMENTAL MANAGEMENT PROGRAMME (EMPR)**

June 2026

|                      |                                                                               |
|----------------------|-------------------------------------------------------------------------------|
| <b>TITLE</b>         | Expansion of Askham cemetery, Dawid Kruiper Local Municipality, Northern Cape |
| <b>REPORT TYPE</b>   | Environmental Management Programme (EMPr)                                     |
| <b>REPORT STATUS</b> | DRAFT                                                                         |
| <b>REVISION</b>      | 1                                                                             |
| <b>REVISION DATE</b> | 10 June 2026                                                                  |
| <b>AUTHOR</b>        | Danie Krynauw                                                                 |

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## Letter of Undertaking and Statement of Independence

The Author / Environmental Assessment Practitioner (EAP) herewith confirms the correctness of the information provided in this Report, including supporting documents and reports, to the best of his/ her knowledge.

Neither Green-Box Consulting nor any of the authors of this Report have any material present or contingent interest in the outcome of this Project, nor do they have any pecuniary or other interest that could be reasonably regarded as being capable of affecting their independence or that of Green-Box Consulting.

Green-Box Consulting has no beneficial interest in the outcome of the assessment which is capable of affecting its independence.

Danie Krynauw  
(Environmental Assessment Practitioner)



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**Signature of the Environmental Assessment Practitioner**

Green-Box Consulting.

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**Name of the Company**

10 June 2026

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**Date**

# Terminology

The following abbreviations are used in this report:

| Abbreviations | Description                                                                               |
|---------------|-------------------------------------------------------------------------------------------|
| BPEO          | Best Practical Environmental Option                                                       |
| CA            | Competent authority                                                                       |
| CBA           | Critical Biodiversity Area                                                                |
| CBD           | Convention on Biological Diversity                                                        |
| C&RT          | Comments and Responses Table                                                              |
| DFFE          | Department of Forestry, Fisheries, and the Environment                                    |
| DWS           | Department of Water and Sanitation                                                        |
| EA            | Environmental Authorisation                                                               |
| EAP           | Environmental Assessment Practitioner                                                     |
| EAPASA        | Environmental Assessment Practitioners Association of South Africa                        |
| ECO           | Environmental Control Officer                                                             |
| EIA           | Environmental Impact Assessment                                                           |
| EMC           | Environmental Management Consulting                                                       |
| EMPr          | Environmental Management Programme                                                        |
| ESA           | Ecological Support Area                                                                   |
| GDPR          | Gross Domestic Product                                                                    |
| ha            | Hectare                                                                                   |
| IAIAsa        | International Association for Impact Assessment South Africa                              |
| I&APs         | Interested and Affected Parties                                                           |
| IDP           | Integrated Development Plan                                                               |
| MSDS          | Material Safety Data Sheet                                                                |
| NAAQS         | National Ambient Air Quality Standards                                                    |
| NEMA          | National Environmental Management Act, 1998 (Act No 107 of 1998), as amended              |
| NEM:BA        | National Environmental Management: Biodiversity Act, 2004 (Act No. 10 of 2004)            |
| NEM:AQA       | National Environmental Management: Air Quality Act, 2004 (Act No. 29 of 2004), as amended |
| NWA           | National Water Act, 1998 (Act No. 36 of 1998), as amended                                 |
| NFEPA         | National Freshwater Ecosystems Priority Area                                              |
| NHRA          | National Heritage Resources Act, 1999 (Act No. 25 of 1999), as amended                    |
| NWA           | National Water Act                                                                        |
| PSDF          | Provincial Spatial Development Framework                                                  |

|         |                                                          |
|---------|----------------------------------------------------------|
| PPP     | Public Participation Process                             |
| SACNASP | South African Council for Natural Scientific Professions |
| SANS    | South African National Standards                         |
| SDP     | Spatial Development Plan                                 |
| SDF     | Spatial Development Framework                            |

# 1 ACTIVITY INFORMATION

---

## 1.1 Introduction

The Environmental Management Programme (EMPr) outlines the procedures that control the way the Applicant<sup>1</sup>, David Kruiper Local Municipality, the Project Manager and the Contractors appointed for the construction phase activities and the operational phase activities of the proposed Cemetery expansion site (hereafter referred to as 'the site'), shall conduct himself/ herself/ themselves.

The EMPr covers the spectrum of pre-construction, construction (including post-construction and rehabilitation), and operation phases, and incorporates the recommendations of the Basic Assessment Report (BAR) and specialist studies in respect of the various actions that need to be taken to avoid / minimize / mitigate potential adverse impacts and enhance potential beneficial impacts of the project.

The EMPr describes impact management outcomes and impact management actions that need to be implemented during the various phases of the proposed project, including the careful implementation and management of the various proposed activities on the site from conception to implementation. The focus is usually placed on the activities to occur on the application property, i.e., the site; however, consideration of the adjacent or receiving environment (socially and ecologically) is equally important.

The impact management actions represented in this EMPr should not be regarded as static measures, but rather as procedures that can be adapted, as and when site conditions require. This EMPr sufficiently serves to provide the most practicable methods to promote sound environmental management during the construction and operational phases of the development. The EMPr subsequently is an on-site working and dynamic document.

This EMPr must be read in conjunction with the BAR, and the conditions of authorisation that the Authorising Authority is likely to put forward should authorisation be granted. In the unlikely event of any conflicting responsibilities or procedures, the precautionary principle must be adopted. Hard copies of the aforementioned documents should be kept on site along with the EMPr.

*The EMPr is a fundamental element of the management process that is aimed at ensuring the environmental sustainability of the proposed development. The implementation of the EMPr will also aim to ensure that the conditions of approval laid down by the competent authority will be met. It is imperative for the EMPr to be actively implemented and used at all management levels as an integral part of the project. It is equally important to revise the EMPr in accordance with information that becomes available from the monitoring processes during the construction and operational phases and any new management practices that may be developed in the future.*

## 1.2 Property Description

The Dawid Kruiper Local Municipality (Applicant) wishes to expand the Askham Town cemetery. There is currently an existing cemetery, this proposal is to expand and therefore to provide additional burial space. The town of Askham is fast approaching their maximum burial capacity, therefore creating an urgent need for the expansion of their cemetery. The overall benefit of the proposed development is to ensure that the local community has burial plots to bury their loved ones in a respectful and dignified manner and to enable the municipality to provide the basic service of provision of a cemetery, which includes grave-digging, and landscaping. The social impacts are clear, as it is a need and desirability of the community to have formal burial space.

An 2ha portion has been identified next to the existing cemetery to expand the cemetery for future use.

The proposed development will accommodate adults and children, which will be divided into a 70% and 30% split between adults and children respectively. The cemetery will also have provisions for formalized walkways between gravesites, enough parking facilities as well as adequate sanitary services for the public. Ther cemetery will also be fenced. The project is within the Askham area, in Ward 5, which is located within the Dawid Kruiper Local Municipality. The Cemetery expansion area is located 100m west of Askham Town.

The size of the proposed cemetery is calculated by considering the following factors:

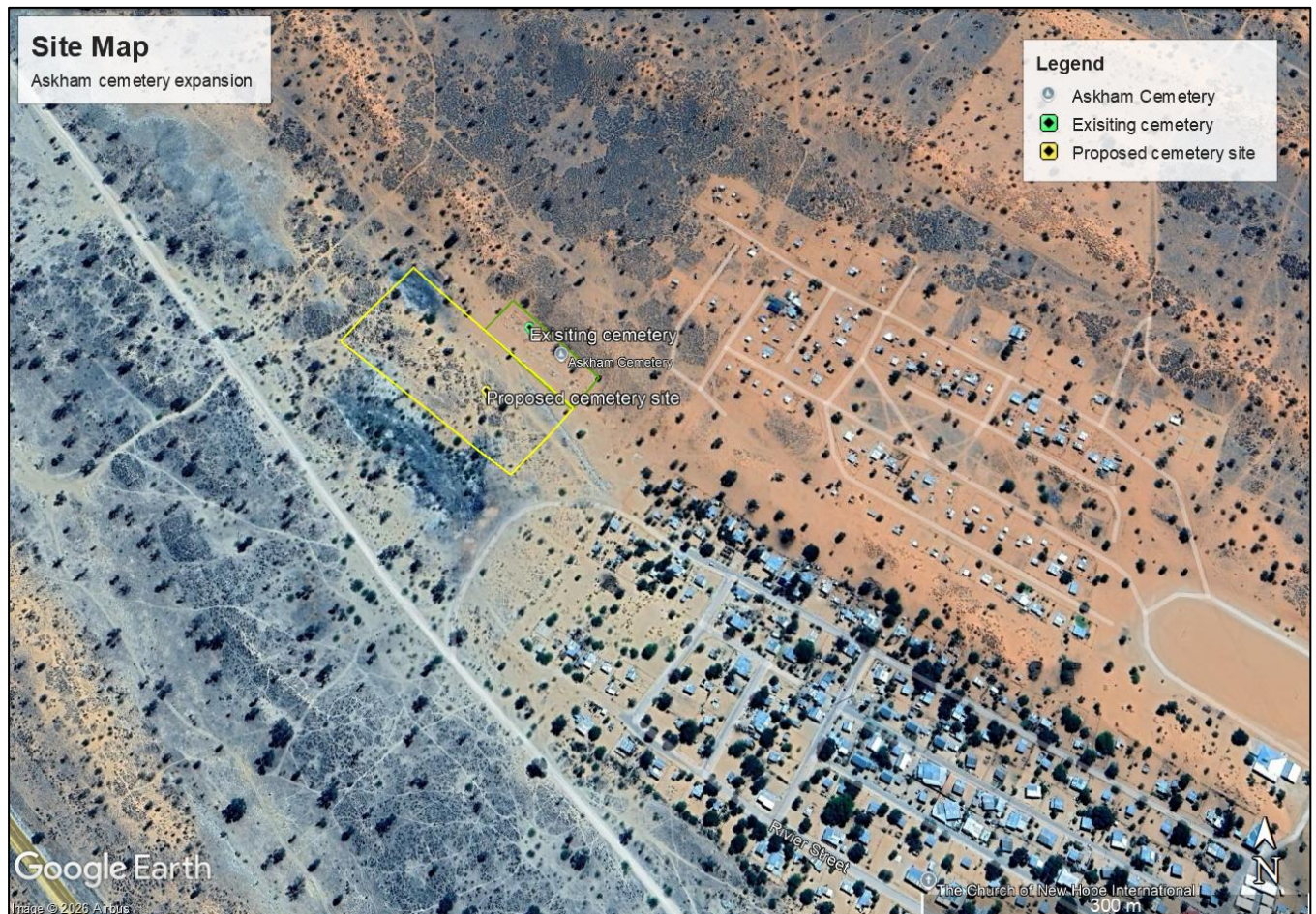
- Cemetery service period;
- Population growth rate;

- Current deaths per year in the local community;
- Percentage of adult deaths per year;
- Percentage children's deaths per year; and
- Area of child and adult graves.

The measurements for adult graves (older than 10 years) will be 2100 x 760 cm, with the child grave measurements being 1500 x 530 cm.

The development of this cemetery will include:

- ◆ Blocks for adult graves;
- ◆ Blocks for children graves;
- ◆ Blocks for pauper graves;
- ◆ Ablution Area;
- ◆ Access roads;
- ◆ Vehicle parking bays; and
- ◆ Perimeter fencing and access gate of cemetery area.



**Figure 1: Locality Map**

The property for the cemetery is described as portion 1 of the farm, Cammelduin 139, Askham. Askham is located approximately 180km north of Uptington, in the Northern Cape. The middle point coordinates of the proposed cemetery site are as follows 26°58'37.06"S, 20°45'54.40"E (also refer to Figure 1 for the location map).

### 1.3 Project Description / Components (Scope)

A 2 ha portion has been identified next to the existing cemetery in Askham to expand the cemetery for future use.

The proposed development will accommodate adults and children, which will be divided into a 70% and 30% split between adults and children respectively. The cemetery will also have provisions for formalized walkways between gravesites, enough parking facilities as well as adequate sanitary services for the public. The cemetery will also be fenced. The project is within

the Askham area, in Ward 5, which is located within the Dawid Kruiper Local Municipality. The Cemetery will be located directly west approximately 100m from Askham town.

The size of the proposed cemetery is calculated by considering the following factors:

- Cemetery service period;
- Population growth rate;
- Current deaths per year in the local community;
- Percentage of adult deaths per year;
- Percentage children's deaths per year; and
- Area of child and adult graves.

The measurements for adult graves (older than 10 years) will be 2100 x 760 cm, with the child grave measurements being 1500 x 530 cm.

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- ◆ Ablution Area;
- ◆ Access roads;
- ◆ Vehicle parking bays; and
- ◆ Perimeter fencing and access gate of cemetery area.

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<sup>1</sup>The term 'Applicant' and 'Holder of the Environmental Authorisation' are interchangeable.

## 2 PURPOSE OF THE EMPr

### 2.1 Scope of the EMPr

The aim of the EMPr is to ensure that proper controls are in place to address the potential environmental and social impacts of the proposed pre-construction, construction, and operation phases of the development. The key activities to be undertaken in each phase are elaborated below.

The **pre-construction (or planning/ design)** phase of the proposed development will include, amongst other activities, the following:

- Undertaking the various application processes for the required/retrospective authorisations (permits) from the relevant competent authorities to implement the proposed development. This phase also involves planning for and preparing/ refining the site layout plan for the proposed asphalt plant.
- Appointment of a suitably experienced project team, including a Project Manager, Consulting Engineer (if required), Environmental Control Officer (ECO), External Auditor and an Occupational Health and Safety (H&S) Officer (if required).
- If required, refine the Site Development Plan.
- If required, prepare a Rehabilitation Plan for the remaining vegetation and clearance of the expansion area.
- Preparation of a 'staff procurement policy' to encourage the use of local labour/ staff.

The **construction** of the proposed development will include the following primary activities:

- The establishment of a construction yard/ office on the application site in non-environmentally sensitive area(s), to be ratified on-site by the ECO.
- Site clearance, including the demolition of existing structures and disposal of building rubble/ spoil to landfill.
- Site preparation by the Applicant/ Developer's contractor(s), including creation of building platforms on the development site, installation of services infrastructure, stormwater detention pond<sup>8</sup>.
- Training for members of the project team, contractors, and subcontractors in accordance with the provisions of the EMPr and the implementation of all safety measures in accordance with the Occupational Health and Safety Act, 1993 (Act No. 85 of 1993), as amended (OHSA).
- The appointed ECO is to undertake site inspections at the frequency stipulated in the EMPr.

The **operational** phase of the proposed development will include the following primary activities:

- Undertake continuous soil erosion and groundwater hazardous risk reduction activities.

### 2.2 Legal Requirements

The provisions of the EMPr are binding on the Applicant and all Contractors during the life of the project and the lives of all contracts. If any conflict occurs between the terms of the EMPr and the project specifications, or pending Environmental Authorisation, the terms in the EMPr shall be subordinate.

The EMPr is a dynamic document subject to similar influences and changes as are wrought by variations to the provisions of the project specification. Any substantial changes must be submitted to the relevant authorities in writing for approval, in accordance with the National Environmental Management Act, 1998 (Act No. 107 of 1998), as amended (NEMA), and the Environmental Impact Assessment (EIA) Regulations (2014), as amended.

The construction and operational phase aspects of this development must be undertaken according to best industry practice, as identified in the EMPr and any relevant project documentation. This EMPr, which forms an integral (**and compulsory**) part of all Contract Documents, informs the Contractors/ Responsible Persons as to his/ her/ their duties in the fulfilment of the project objectives, with particular reference to the prevention and mitigation of potential negative environmental impacts caused by the activities associated with the project.

All Contractors must note that obligations imposed by the EMPr are legally binding in terms of environmental statutory legislation. If any rights and obligations contained in this document contradict those specified in the standards or project specifications, then the latter will prevail.

### 2.2.1 Statutory and other applicable legislation

It is expected that the Contractor(s) is conversant with all environmental legislation pertaining to the project. In addition, the Contractor must also take cognizance of Provincial and Local Government Ordinances and by-laws, which may be applicable to the project.

## 2.3 Impact Management Outcomes and Impact Management Actions

Impact management outcomes, and proposed impact management actions to achieve these outcomes, have been determined for the project based on the impact assessment undertaken and recommendations made by the EAP and specialist practitioners. The impact management actions include measures to avoid, manage and/or mitigate the identified impacts.

## 2.4 Fundamental Principles of the EMPr

The EMPr is based on fundamental principles<sup>9</sup> derived from applicable government policy statements contained in various government documents and legislation (e.g., NEMA). The following principles contained in these documents and laws will be used in the EMPr to guide the various phases of the proposed development, namely:

- Environmental management must place people and their needs at the forefront of its concern, and serve their physical, psychological, developmental, cultural, and social interests equitably.
- Development must be socially, environmentally, and economically sustainable, i.e., meet the “triple bottom line” criteria for development.
- Sustainable development requires the consideration of all relevant factors including the following:
  - that the disturbance of ecosystems and loss of biological diversity are avoided, are minimised and remedied;
  - that the disturbance of landscapes and sites that constitute the nation's cultural heritage is avoided, or where it cannot be altogether avoided, is minimised and remedied;
  - that the development, use and exploitation of renewable resources and the ecosystems of which they are a part do not exceed the level beyond which their integrity is jeopardised;
  - that a risk-averse and cautious approach is applied (also called the Precautionary Approach), which takes into account the limits of current knowledge about the consequences of decisions and actions;
- Environmental management must be integrated, acknowledging that all elements of the environment are linked and interrelated, and it must take into account the effects of decisions on all aspects of the environment and all people in the environment by pursuing the selection of the best practicable environmental option.
- Community well-being and Empowerment (e.g., of the construction personnel) must be promoted through environmental education, the raising of environmental awareness, the sharing of knowledge and experience and other appropriate means.
- Capacity building and education: The EMPr must play a dynamic role in developing the understanding, skills, and capacity of the Employees (e.g., construction personnel) in order to promote sustainable development.
- Consider all alternatives: Considering all alternatives results in making the best decisions. The BAR and EMPr must therefore ensure that all alternatives are considered in all decision-making. Developmental and environmental planning, problem solving, and decision-making is often complex. Possible consequences of conflicting interest as well as the consequences of not acting need careful consideration.
- Co-ordination: Various concerns and issues cut across the key sectors and functions in the area. Sustainability and integrated planning and management (including monitoring) therefore will depend on co-ordination and integration of the relevant role players in the construction and operational phases of the proposed development.
- Due process: Due process must be applied in all integrated management activities. This includes adherence to the provisions in the Constitution and statutes dealing with just administration and public participation in regional and local governance.
- Duty of care: Every person (e.g., the Applicant and the contract workers) associated with the development and its associated infrastructure has a duty to act with due care to avoid damage to the environment, or pollution of the environment or waste a precious resource. Also called the Environmental Responsibility Principle.
- Equity: The EMPr is to ensure equitable access to natural resources, benefits, and services to meet basic needs and ensure human wellbeing. Each generation has a duty to avoid impairing the ability of future generations to ensure their wellbeing.
- Full cost accounting: Decisions must be based on an assessment of the full social and environmental costs.
- Good governance: Good governance depends on mutual trust and reciprocal relations between the various

groups and sectors of the area and the controlling officials. This must be based on the fulfilment of constitutional, legislative, and executive obligations, and the maintenance of transparency and accountability.

- Prevention: The EMPr must be flexible enough to be adapted to take into account any potential problems that may arise in the future and thereby prevent any negative impacts on the environment, and on people's rights.
- Polluter Pays: Those responsible for environmental damage must pay the repair costs both to the environment and human health and must carry the costs of preventative measures to reduce or prevent further pollution or degradation.
- Subsidiary: Regulatory responsibilities belong at the most local level at which the tasks can be carried out effectively. Environmental management structures must match the ecological scale of the managed resource.
- Waste management: Waste management must minimise and avoid the creation of waste at source. The EMPr is to encourage waste recycling, separation at source and safe disposal of unavoidable waste.

## 3 GENERAL SITE MANAGEMENT

### 3.1 Project and Environmental Management Team

The Project Management Team will consist of the Applicant (Developer), Project/ Site Manager (Resident Engineer/ Site Agent), Environmental Control Officer (ECO), External Environmental Auditor, Health and Safety Officer, Contractors and associated sub-contractors.

The specific names and contact details of the persons responsible within these positions and the sub- contractors involved are tabulated below.

The daily on-site activities will be controlled by the Project/ Site Manager.

**Table 2: Site Management Contact Details**

| Designation                                                  | Name                             | Contact Details                                                                      |
|--------------------------------------------------------------|----------------------------------|--------------------------------------------------------------------------------------|
| <b>Applicant / Developer / Holder of EA</b>                  | David Kruiper Local Municipality | Willem Brand<br><a href="mailto:willem.brand@dkm.gov.za">willem.brand@dkm.gov.za</a> |
| <b>Project / Construction Site Manager / Principal Agent</b> | To be appointed                  |                                                                                      |
| <b>Environmental Control Officer (ECO)</b>                   | To be appointed                  |                                                                                      |
| <b>External Environmental Auditor</b>                        | To be appointed                  |                                                                                      |
| <b>Occupational Health and Safety Officer</b>                | To be appointed                  |                                                                                      |
| <b>Contractor(s)</b>                                         | To be appointed                  |                                                                                      |

### 3.2 Communication, Responsibilities and Complaints Management

#### 3.2.1 General Public

It is the responsibility of the **Applicant** to facilitate interaction with the public. This responsibility includes:

- Informing the neighbouring residents of the intent to commence with the activities and in doing so provide background information as to the duration of the project, the working hours, and necessary contact details;
- Responding to all public complaints or queries whether such complaints are received by the Project/Site Manager, ECO and/or the appointed Contractors;
- Develop and maintain a register of all public complaints/ queries, as well as the Applicant's response to these complaints and queries; and
- Respond to the media and prepare media reports should such requests be received.

#### 3.2.2 Duty of Care

The Applicant, Project Manager and Contractors have a *Duty of Care* towards the environment in terms of Section 28 of NEMA. Section 28 states that "Every person who causes, has caused, or may cause significant pollution or degradation of the environment must take reasonable measures to prevent such pollution or degradation from occurring, continuing or recurring, or, in so far as such harm to the environment is authorised by Law or cannot reasonably be avoided or stopped, to minimise and rectify pollution or degradation of the environment."

The EMPr requires all involved with the development to act in the spirit of "Duty of Care" throughout the various phases of the project.

### 3.2.3 Contractors

It is the responsibility of the Contractor(s) to:

- Undertake all work on site in accordance with the requirements of the EMPr and Environmental Authorisation;
- Undertake all work on site in accordance with the requirements of the applicable legislation, including the Basic Conditions of Employment Act, 1997 (Act No. 75 of 1997), as amended and the OHSA.
- Undertake regular (at least weekly) “tool-box talks” with personnel, the contents of which must include reference to the EMPr (with a focus on any issues raised by the ECO). Personnel to be made aware of the dangers associated with the work and that they have the right to refuse work that is harmful to human health or the environment;
- Liaise directly with the Applicant, Project/ Site Manager regarding any queries concerning the EMPr or complaints received from the public;
- Liaise directly with the Project/ Site Manager should any environmental problems be identified or actions in breach of the objectives set, take place e.g., littering, oil spill;
- Keep on file proof of safe/ lawful disposal of all wastes generated during the construction phase
- Carry out instructions issued by the Project/ Site Manager; and
- Implementation of / Adherence to the Procurement Strategy.

### 3.2.4 Project Applicant / Holder of the Environmental Authorisation

The Project Applicant's (Holder of the Environmental Authorisation) responsibilities include the following:

- Attain all necessary approvals and ensure that they are acted on within their validity period and that the conditions of approval are adhered to;
- Appoint a project team capable of implementing the requirements of the EMPr and EA, including an ECO and Landscape Architect (if necessary);
- Fulfil all public relations responsibilities in conjunction with the Municipality;
- Inform the relevant authorities of any site-related problems that may occur during the various phases of the project;
- Attend site meetings when appropriate;
- Liaise with the Project/ Site Manager regarding environmental management on site; and
- Assist the Project/ Site Manager in making decisions and finding solutions to environmental problems that may arise during the operation and closure phases.

**NOTE:** The Holder of the Environmental Authorisation is ultimately **responsible for ensuring compliance** with the conditions of authorisation by any person acting on its behalf, including, but not limited to, an agent, sub-contractor, employee, or any person rendering a service to the holder of the authorization.

### 3.2.5 Local Authority

The Local Authority's responsibilities include the following:

- Attend site meetings when appropriate;
- Liaise with the Project/ Site Manager regarding environmental management on site; and
- Assist the Applicant, Project/ Site Manager in making decisions and finding solutions to environmental problems that may arise.

### 3.2.6 Project (Construction) Site Manager / Principal Agent

The Project/ Site Manager's responsibilities include the following:

- Oversee the day-to-day activities on the site and keep an up-to-date diary of site activities;
- Ensure that the requirements as set out in the EMPr and the conditions of EA are adhered to throughout the lifecycle of the project;
- Direct the Contractors, whenever necessary, to comply with the conditions of the EMPr and EA and recommend corrective action where there is non-compliance with the EMPr;
- The Project/ Site Manager must attend site meetings where required to be able to report on, and respond to any environmental issues, and be issued with copies of minutes of such meetings;
- The Project/ Site Manager must obtain, examine, and approve method statements where applicable;
- Advise the project team on environmental issues within the defined work and surrounding areas;
- Collect and record all waste manifest data sheets;
- Maintain the public complaints register on the site; and
- Review the results of the ECO site visits (Reports) and facilitate any corrective actions that may be necessary.

The Project/ Site Manager has the authority to **stop works** if in his/ her opinion there is a serious threat to, or impact on the natural and/or social environment because of construction activities. This authority is to be limited to emergency situations where consultation with the applicant and/or contractor is not immediately possible. In all such work stoppage situations the Project/ Site Manager is to inform the applicant and contractor of the reasons for the stoppage as soon as possible. The necessary instructions should be issued verbally and followed up with written instruction (e.g., via email).

Upon failure by the contractor to show adequate consideration to the environmental aspects of this contract, the Project/ Site Manager may recommend having the contractor's representative or any employee(s) removed from the site or suspend work until the matter is remedied. No extension of time will be considered in the case of such suspensions, and all costs will be borne by the responsible contractor.

### 3.2.7 Environmental Control Officer

The Environmental Control Officer's (ECO) responsibilities (if required by the Environmental Authorisation conditions) include the following:

- The ECO must submit written notification of the commencement of work on site to the competent authority;
- The ECO must monitor and report on the level of compliance by the Applicant, Project Manager and Contractors with the approved EMPr and the conditions stipulated in the Environmental Authorisation for the proposed development at the frequency(ies) as stipulated in Section 3.2.7.2 below;
- The ECO must meet with the Project Manager and Contractor(s) before construction begins to present the environmental education training and to go through the contents of the EMPr and EA. The ECO must explain to the Contractors, their environmental responsibilities whilst employed on the site, in particular their Duty of Care towards the environment;
- The ECO will issue an ECO Report/ Checklist after each site visit (or at a minimum once per month) which provides a summary of project progress in general and the findings of the site visit and the level of compliance with the EMPr and EA. The ECO Report must be circulated to the DEA&DP and the Municipality.
- The ECO must be contacted to attend to environmental problems, should they arise on site, and shall recommend corrective action where there is partial- or non-compliance with the EMPr and/or EA;
- The ECO must attend site meetings where required to be able to report on, and respond to, any environmental issues, and be issued with copies of minutes of such meetings;
- The ECO must obtain, examine, and approve method statements where applicable;
- The ECO must manage and keep an up-to-date diary of site activities and a detailed photo record of all site visits;

- The ECO must advise the applicant, Project/ Site manager and Contractors on environmental issues within the defined work areas;
- The ECO shall liaise with the local authority's environmental officer on an as required basis.

The ECO has the authority to **stop works** if in his/ her opinion there is a serious threat to or impact on the environment because of construction activities. This authority is to be limited to emergency situations where consultation with the Project/ Site Manager or Applicant is not immediately available. In all such work stoppage situations the ECO is to inform the Project/ Site Manager and Applicant of the reasons for the stoppage as soon as possible. The necessary instructions should be issued verbally and followed up with written instruction (e.g., via email).

Upon failure by the Contractor or his employee to show adequate consideration to the environmental aspects of this contract, the ECO may recommend to the Project/ Site Manager to have the Contractor's representative, or any employee(s) removed from the site or work suspended until the matter is remedied. No extension of time will be considered in the case of such suspensions, and all costs will be borne by the responsible Contractor.

#### **3.2.7.1 Level and Type of Competency of ECO**

A suitably experienced environmental practitioner(s), with at least 3 years relevant site supervision experience, will need to act as the ECO.

#### **3.2.7.2 Frequency of ECO Site Visits**

The frequency of ECO site visits during the construction phase of civils infrastructure should be as follows:

- Once during the first month of the construction works.
- Thereafter once per month for the duration of the construction phase, based on the level of compliance with the EMPr and EA.

The monthly site visits should, as far as possible, coincide with the monthly site meetings [with the Project Manager and contractor(s)].

An ECO checklist must be completed once per month and must be forwarded to the Project Manager, Contractor(s) and Applicant (developer) within 5 days of the site visit and meeting. *Any environmental problems noted during a site inspection should, however, be brought to the attention of the Project Manager and Contractor as soon as reasonably possible.*

The ECO should undertake *ad hoc* site inspections should environmental problems arise during the construction phases, or when certain milestones have been reached.

The ECO will carry out a final site inspection at the end of the civils construction phase, to undertake an environmental 'close-out' inspection/ audit, to assess compliance with the EA, EMPr and the construction guidelines, and to ensure that satisfactory rehabilitation of any disturbed areas and access roads around the construction sites have been carried out.

Should any environmental problems arise during the construction phase, the RE and/or contractor must immediately inform the ECO to undertake a site visit to assess and attend to the potential environmental problem(s). All works where problems exist are to be stopped until the ECO has been to site and assessed the situation and rectified the problem(s).

#### **3.2.7.3 Report on Compliance**

The ECO is required to report on compliance in writing to the Project Manager, Applicant, and relevant authorities monthly during the construction phase.

Refer to **Section 3.3** with respect to external auditing requirements.

#### **3.2.8 Communication and Record Keeping Procedures on Site**

All records related to the implementation of this EMPr (e.g., site instruction book, Site Manager Diary, method statements, environmental authorisation) must be kept together on site where it is safe and can be retrieved easily. These records should be kept for submission to the relevant authorities, if requested.

#### 3.2.8.1 Site Instruction Entries

An instruction book/ file should be kept on site by the appointed Contractor for the purposes of recording specific important site instructions that need immediate attention. The site instruction book will also be used for issuing “stop work” orders for the purposes of immediately stopping any activities on site due to the environmental risk or impact that may result.

Site inspections will be conducted by an ECO appointed by Applicant/ Developer. The ECO Checklists will serve as a general record of compliances and non-compliances in accordance with the content of the EMPr and EA that need to be addressed during the construction or operational phases of the development. The Project Manager must give immediate attention to any environmental issues that need to be dealt with.

#### 3.2.8.2 Environmental Incidents and External Complaints Register

A register should be maintained by the Project Manager for all environmental incidents occurring on site. The register should record the following information for each incident: date, time, type of incident, person responsible for the incident, corrective action required, immediate corrective action implemented, and whether the incident was reported to the ECO and/or other parties. A register should also be maintained for any complaints and/or comments received from external parties (such as from neighbours and members of the surrounding community or staff of the proposed development site). The register should record the following information for each complaint and/or comment received: date, time, details of the person who lodged the complaint/ comment, details of the complaint/ comment, action required, immediate action implemented, whether the complaint/ comment was reported to the ECO and/or other parties.

#### 3.2.8.3 Minutes of the Site Meetings

The Minutes of each monthly site meeting must be forwarded to the ECO, Contractor, and the Applicant within one week of the meeting taking place. The minutes of the meeting must record any environmental issues that have been raised by the ECO, and that need to be addressed or rectified.

#### 3.2.8.4 Photographs

It is recommended that photographs are taken of the site regularly by the Project Manager and during site visits by the ECO as a visual reference. These photographs should be filed with other records related to this EMPr.

#### 3.2.8.5 Method Statements

##### Method Statements

Written submissions by the Contractor(s) must be prepared prior to any activity occurring on site if requested by the Applicant, Project/ Site Manager or ECO, or for activities not addressed in this EMPr. The submission will include the plant or equipment to be used as well as materials, labour, and methods to be used to undertake the activity.

The method statement must be completed in such detail that the Project/ Site Manager is enabled to assess whether the Contractor's proposal is in accordance with the environmental objectives set. The format for such a method statement should follow the following format and include the following information:

- **What?** A brief description of the project;
- **How?** A detailed description of the process of work, methods and materials; and where material will be stored;
- **Where?** A description/sketch map of the locality of work (if applicable); and compliance/ noncompliance with the specifications;
- **When?** The sequencing of actions with due commencement and completion date estimates (duration of the activity);
- **Who?** The names of the person/s or companies who are going to undertake the work; and
- **Why?** An explanation of the reason why the work needs to be carried out.

Copies of all approved Method Statement must be kept on site as required in **Section 3.2.8** above.

### 3.3 External Auditing Requirements

Auditing of compliance with the EA and EMPr needs to be undertaken in accordance with Section 34 of the EIA Regulations 2014 (as amended from time to time). Audit Reports need to meet the objectives and content requirements as

laid out in Appendix 7 to the EIA Regulations 2014 (GNR326) (as amended from time to time). The Authorizing Authority is likely to include conditions relating to auditing in the EA.

### **3.4 Environmental Awareness**

All Contractor teams involved in work on the development are to be briefed on their obligations towards environmental controls and methodologies in terms of this EMPr and conditions of the EA prior to work commencing.

### **3.5 Financing of Environmental Control**

Financing all control measures is the direct responsibility of the Applicant, or each contractor appointed by the Applicant. It is therefore accepted that the costs incurred for implementing the required environmental controls to ensure compliance with local authority By-laws, Provincial and National legislation, the EA and the objectives or requirements specified in this EMPr would be provided for in the specific tender documents.

All responsibilities not defined in the EMPr, or which fall outside of the tender specifications will be the responsibility of the Applicant.

## 4 ENVIRONMENTAL MANAGEMENT: PRE-CONSTRUCTION PHASE

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### 4.1 Description of the Impact Management Outcomes for the Pre- Construction Phase

The impact management outcomes for the pre-construction phase include the following:

- To ensure that the recommended plans and strategies are prepared and implemented timeously to maximise the benefits of the proposed development and manage the anticipated negative impacts prior to the construction phase commencing.

### 4.2 Environmental Specifications: Pre-Construction

#### 4.2.1 Prepare Recommended Plans and Strategies

**Responsible Entity:** The Applicant must take responsibility for ensuring that the required plans and strategies as recommended by the specialist practitioners are timeously prepared and implemented.

The appointed **ECO** is to monitor compliance with the required actions below.

**NOTE:** The required actions below must be prepared **prior to** commencement of construction.

#### Required Actions:

- Guidelines should be prepared, where relevant, for the implementation of a Procurement and Communication Strategy that includes the following:
  - Initiate the activity during the first phase of the development after which the implementation of the strategy becomes the responsibility of the contractor(s) collectively under the guidance of the developer;
  - Develop a database of local contractors who are competitive and possess the required skills and capacity to obtain contracts; and
  - Local contractors are invited to tender for work in the context of the terms and conditions that should be included in Request for Proposal (RFP) documentation.
  - Inform local people that enquire about employment opportunities of the procurement strategy and the terms of conditions that are applicable to procurement and employment.
- Define/ determine the performance criteria for the project and institute a monitoring programme of construction performance.

## **5 ENVIRONMENTAL MANAGEMENT: CONSTRUCTION PHASE**

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### **5.1 Description of the Impact Management Outcomes for the Construction Phase**

The impact management outcomes for the construction phase include the following:

- To control all aspects of the construction phase by implementing the necessary impact management actions and recommendations to manage any temporary or permanent negative environmental impacts.
- To ensure the conservation of the natural resource base on the site, and institute measures to prevent the degradation of the natural resource base from taking place, including:
  - To protect and conserve animal life, including birds and snakes which may occur within the development area.
  - To prevent fires from arising from the construction site.
- To ensure the conservation and sustainable use of scarce water resources by instituting measures to minimise water use during the construction phase of the project.
- To ensure waste minimisation and recycling of all waste at source and ensure that recyclables enter the waste stream by engendering an ethic of waste management amongst construction staff.
- To ensure that no stormwater is discharged to the working areas and further to ensure that the stormwater leaving the footprint of the proposed development area is not contaminated by any substance.
- To prevent any impacts on air quality, such as dust and smoke pollution, that could result during the construction phase of the project.
- To minimise the visual (aesthetic) impact of the development, during the construction phase, on the surrounding environment.
- To ensure the conservation of the archaeological and heritage resources on the site, by checking for such resources in any excavations undertaken.
- To optimise the social benefits of the development, local builders and contractors should enjoy preferential appointments to install infrastructure.
- To maintain and/or enhance security levels around the development site, during the construction phase of the development.

## 5.2 Environmental Specifications: Construction

| CONSTRUCTION PHASE MANAGEMENT                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                       |                                                                                                                               |                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                  |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| POTENTIAL IMPACT                                                                                                                                                                                                                                                                                                                                                                                                                                                   | REQUIRED ACTIONS                                                                                                                                                                      | SPECIFIC TARGETS AND RESPONSIBILITY                                                                                           | RESPONSIBLE ENTITY (TO IMPLEMENT REQUIRED ACTIONS/MITIGATION)                                                                                                                                                                             | MONITORING: RESPONSIBLE PARTY, ACTION AND FREQUENCY                                                                                                                                                                                                              |
| E.1 GENERAL CONSTRUCTION MANAGEMENT                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                       |                                                                                                                               |                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                  |
| ENVIRONMENTAL ASPECTS (PROJECT ACTIVITY):                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                       |                                                                                                                               |                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                  |
| E.1.1 Establish appropriate partnerships and good relationships with local authorities, local community (including adjacent landowners), and contractors                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                       |                                                                                                                               |                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                  |
| <p><b>Potential Impact:</b> Poor relations with project stakeholders and the negative implications for project support, such as <i>developer interest</i>, and for project implementation, such as <i>authority approval</i>.</p> <p><b>Target Outcome:</b> Appropriate partnerships and good relationships with local authorities, the local community (including adjacent landowners) and contractors established for the duration of the project life-span.</p> | 1. Ensure appropriate communication with all local authorities, local communities, and contractors.                                                                                   | To be undertaken by professional team and ECO, project manager (consulting engineer and/or site agent) as an ongoing process. | The <b>Project Manager</b> must take responsibility for establishing good relations.                                                                                                                                                      | The appointed <b>ECO</b> is to monitor environmental contractual obligations of contractors on an ongoing basis and must undertake the required environmental inductions and training of contractors.<br><br><b>Monitoring Frequency:</b> Monthly ECO Checklists |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 2. Contractors to be fully informed by the ECO as to their environmental contractual obligations.                                                                                     | ECO to monitor environmental contractual obligations of contractors on an ongoing basis.                                      |                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 3. The ECO to give a presentation to contractor and site staff to familiarise them with the environmental aspects of the contract. The Contractor and staff must attend this meeting. | ECO and RE to meet with Contractor and staff before construction commences to initiate the EMPr.                              |                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                  |
| ENVIRONMENTAL ASPECTS (PROJECT ACTIVITY):                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                       |                                                                                                                               |                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                  |
| E.1.2 Set-up of construction site and site offices:                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                       |                                                                                                                               |                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                  |
| <p><b>Potential Impact:</b> Deterioration of environment surrounding construction site.</p> <p><b>Target Outcome:</b> Undertake construction works without adversely affecting the environment through the implementation of appropriate management measures.</p>                                                                                                                                                                                                  | 1. Communicate with Contractor to ensure that all the environmental specifications are understood and carried out.                                                                    | To be undertaken by ECO and site agent before construction commences.                                                         | The <b>Project Manager</b> must take responsibility for the setting up of the construction site and site offices and must ensure that construction activities are undertaken in such a manner as to not adversely affect the environment. | The appointed <b>ECO</b> is to ratify the areas designated for the below uses and must monitor compliance with the required actions.                                                                                                                             |

| CONSTRUCTION PHASE MANAGEMENT |                                                                                                                                                                |                                                                                                                                                                                                                                          |                                                               |                                                     |
|-------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------|-----------------------------------------------------|
| POTENTIAL IMPACT              | REQUIRED ACTIONS                                                                                                                                               | SPECIFIC TARGETS AND RESPONSIBILITY                                                                                                                                                                                                      | RESPONSIBLE ENTITY (TO IMPLEMENT REQUIRED ACTIONS/MITIGATION) | MONITORING: RESPONSIBLE PARTY, ACTION AND FREQUENCY |
|                               | 2. The Contractor must point out and demarcate the construction site and site offices. This area is to be fenced off and must be locked outside working hours. | To be sanctioned by the site agent before construction commences.                                                                                                                                                                        |                                                               | <b>Monitoring Frequency:</b> Monthly ECO Checklists |
|                               | 3. Control all construction in terms of the EMPr.                                                                                                              | ECO to inform and educate the construction staff and RE of the <i>Construction Guidelines</i> and the <i>Recommendations for Clearing of Invasive Alien Vegetation</i> prior to commencement of construction. ECO to monitor compliance. |                                                               |                                                     |
|                               | 4. Construction material (concrete and raw materials) must be stored in designated areas in a neat and orderly manner.                                         | Area for construction material to be designated by the ECO and to be in a secure area. ECO to monitor compliance.                                                                                                                        |                                                               |                                                     |
|                               | 5. Contractor to store building rubble in a suitable designated area, with rubble removed from the site on a weekly basis (if not to be used as fill).         | Area for building rubble storage to be designated by the ECO.<br><br>Contractor to remove builder's rubble on a weekly basis. ECO to monitor compliance.                                                                                 |                                                               |                                                     |

| CONSTRUCTION PHASE MANAGEMENT |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                          |                                                               |                                                     |
|-------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------|-----------------------------------------------------|
| POTENTIAL IMPACT              | REQUIRED ACTIONS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | SPECIFIC TARGETS AND RESPONSIBILITY                                                                                                                                      | RESPONSIBLE ENTITY (TO IMPLEMENT REQUIRED ACTIONS/MITIGATION) | MONITORING: RESPONSIBLE PARTY, ACTION AND FREQUENCY |
|                               | 6. The Contractor must indicate the storage area for all spoil from the site. Trucks removing spoil must remain on designated access road/s. Access Road/s must be well maintained.                                                                                                                                                                                                                                                                                                                                                                                                              | ECO assesses spoil storage areas and to monitor the condition of the road.                                                                                               |                                                               |                                                     |
|                               | 7. All other solid waste is to be kept in appropriate containers with lids and removed from the site on a weekly basis to a licensed waste disposal facility. The burning of solid waste and paper on site will not be allowed. Recyclable waste (e.g., paper, glass, tin, plastic) should be recycled if possible.                                                                                                                                                                                                                                                                              | Contractor to remove the solid waste on a weekly basis. ECO to monitor compliance.                                                                                       |                                                               |                                                     |
|                               | 8. Only one refuelling area should be provided at the stores/site office. A bunded pit (large enough to contain 110% of the fuel volume to be stored) must be built beneath the fuel container. A concrete apron must be cast on the outside of the bunded area to contain diesel spills and drips. A sand layer, ± 150 mm thick, can be placed on top of the floor of the bunded pit. The sand layer must be replenished from time to time according to the degree of contamination. The contaminated soil must be removed to a licensed waste disposal facility that accepts such toxic waste. | ECO to supervise and monitor. Contractor to report all fuel and oil spills to the ECO immediately and to remove contaminated soil to a licensed waste disposal facility. |                                                               |                                                     |

| CONSTRUCTION PHASE MANAGEMENT |                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                          |                                                               |                                                     |
|-------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------|-----------------------------------------------------|
| POTENTIAL IMPACT              | REQUIRED ACTIONS                                                                                                                                                                                                                                                                                                          | SPECIFIC TARGETS AND RESPONSIBILITY                                                                                                                                                                                                                                                      | RESPONSIBLE ENTITY (TO IMPLEMENT REQUIRED ACTIONS/MITIGATION) | MONITORING: RESPONSIBLE PARTY, ACTION AND FREQUENCY |
|                               | 9. Concrete mixing must be restricted to a designated area on site and cement residues to be removed from site as soon as possible. Two wastewater catch pits must be constructed in series for the capture of cement residues from cleaning of the cement mixer. Residues are to be removed from site from time to time. | ECO to monitor compliance. Contractor to remove cement residues from site as directed or at the end of contract.                                                                                                                                                                         |                                                               |                                                     |
|                               | 10. Prevent cement spills or clear such accidental spills on any exposed soil on/near the site as soon as possible as cement powder has a high alkalinity pH rating that can contaminate and affect both soil and water pH dramatically. This will have negative impacts on surrounding vegetation.                       | Contractor to remove any spilt cement on exposed soil as soon as possible.                                                                                                                                                                                                               |                                                               |                                                     |
|                               | 11. All parked mechanical vehicles must have a drip tray present to prevent spillage of oils and fuels. Used oil (from servicing of vehicles) should be recycled or disposed of at a hazardous waste disposal facility. All spills are to be addressed immediately to prevent seeping into the ground.                    | ECO to monitor compliance. Contractor to recycle or dispose of used oils at hazardous WDF. Contractor is also to dispose of contaminated soil at a hazardous waste disposal site and to ensure that spillage of hazardous substances on site is addressed immediately and appropriately. |                                                               |                                                     |
|                               | 12. All spills are to be addressed immediately to prevent seeping into the ground.                                                                                                                                                                                                                                        | Safety, Health & Environmental Officer to monitor the generation of any dust and advise the Contractor to mitigate accordingly.                                                                                                                                                          |                                                               |                                                     |
|                               | 13. A hydrocarbon spill kit must be provided on-site, and personnel must be trained in its use.                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                          |                                                               |                                                     |
|                               | 14. Disturbed areas where dust can arise should be kept moist by spraying with water from a bowser or by using other suitable means such as straw stabilisation. Water use for wetting of roads should not be potable water. It can be obtained from dams or the use of treated effluent.                                 |                                                                                                                                                                                                                                                                                          |                                                               |                                                     |

| CONSTRUCTION PHASE MANAGEMENT                                                                                                                                              |                                                                                                                                                             |                                                                                                                                                                           |                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| POTENTIAL IMPACT                                                                                                                                                           | REQUIRED ACTIONS                                                                                                                                            | SPECIFIC TARGETS AND RESPONSIBILITY                                                                                                                                       | RESPONSIBLE ENTITY (TO IMPLEMENT REQUIRED ACTIONS/MITIGATION)                                                                                                                                                                                                                          | MONITORING: RESPONSIBLE PARTY, ACTION AND FREQUENCY                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>ENVIRONMENTAL ASPECTS (PROJECT ACTIVITY):</b><br><b>E.1.3 Prevent possible negative impacts of construction personnel on the environment</b>                            |                                                                                                                                                             |                                                                                                                                                                           |                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Potential Impact:</b> Deterioration of environment surrounding construction site.<br><br><b>Target Outcome:</b> Preserve conditions of surrounding natural environment. | 1. Contractors will be responsible for the conduct of their personnel on site, as it pertains to trespassing, littering, and unacceptable social behaviour. | Contractor responsible for social management. ECO to monitor for duration of contract.                                                                                    | The <b>Project Manager</b> and responsible <b>Contractor(s)</b> must take responsibility for regular Staff training and education regarding the environmental implications of construction activities to prevent / minimise the impacts of construction activities on the environment. | The <b>appointed ECO</b> is to monitor compliance with the required actions below for the duration of the contract(s). ECO must inform construction personnel of environmental rules, which apply during the construction period. This includes informing personnel of the environmental sensitivities of the receiving environment as well as how they should conduct themselves on site.<br><br><b>Monitoring Frequency:</b> Monthly ECO Checklists |
|                                                                                                                                                                            | 2. ECO must inform construction personnel of environmental rules to apply during construction period.                                                       | ECO to meet with Contractor prior to commencement of construction in new areas to inform workers of the sensitivities of the site and how they should conduct themselves. |                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|                                                                                                                                                                            | 3. Maintain strict supervision over all construction activities.                                                                                            | ECO to monitor construction activities and if any adverse impacts occur, he must inform the Site Agent, RE and client of such conduct on an ongoing basis.                |                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|                                                                                                                                                                            | 4. All construction workers must stay within the development area demarcation and no personnel will be allowed beyond the demarcated area.                  | Contractor responsible for ensuring that personnel do not move beyond the demarcated areas of the site. ECO to monitor for duration of contract.                          |                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|                                                                                                                                                                            | 5. The contractor must provide temporary chemical toilet facilities at the stores/ site office area, and work sites, where possible.                        | Contractor responsible for the functionality of the toilet facilities on site. ECO to monitor                                                                             |                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                       |

| CONSTRUCTION PHASE MANAGEMENT |                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                             |                                                               |                                                     |
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| POTENTIAL IMPACT              | REQUIRED ACTIONS                                                                                                                                                                                                                                                                                                                                                                                            | SPECIFIC TARGETS AND RESPONSIBILITY                                                                                                         | RESPONSIBLE ENTITY (TO IMPLEMENT REQUIRED ACTIONS/MITIGATION) | MONITORING: RESPONSIBLE PARTY, ACTION AND FREQUENCY |
|                               | A minimum of one toilet and one handwash basin shall be provided per 15 persons at each working area or as stipulated by the local authority. In addition, at least one urinal should be provided for every 40 males on site or as stipulated by the local authority. The toilets and urinal(s) must be kept in a clean and sanitary condition and must be regularly serviced (on at least a weekly basis). | Condition of such facilities.                                                                                                               |                                                               |                                                     |
|                               | 6. Contractors must be informed of the efficient energy (electricity) use during construction. When not in use lights, angle grinders, motors etc. must be switched off.                                                                                                                                                                                                                                    | Contractor to ensure energy used on site is conserved wherever possible.                                                                    |                                                               |                                                     |
|                               | 7. Designated eating areas must be provided for staff. Lidded bins must be provided for any waste.                                                                                                                                                                                                                                                                                                          | Contractor to indicate areas suitable for eating on/off site. Safety, Health & Environmental Officer to monitor cleanliness of such area/s. |                                                               |                                                     |
|                               | 8. Construction staff will not be allowed to stay on site and must be bussed to site each day.                                                                                                                                                                                                                                                                                                              | ECO to monitor for duration of contract.                                                                                                    |                                                               |                                                     |

| ENVIRONMENTAL ASPECTS (PROJECT ACTIVITY):                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                            |                                                                                                                                  |                                                                                                                                                                                                    |                                                                                                                                                                                          |
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| CONSTRUCTION PHASE MANAGEMENT                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                            |                                                                                                                                  |                                                                                                                                                                                                    |                                                                                                                                                                                          |
| POTENTIAL IMPACT                                                                                                                                                                                                                                                                                                                                                                                     | REQUIRED ACTIONS                                                                                                                           | SPECIFIC TARGETS AND RESPONSIBILITY                                                                                              | RESPONSIBLE ENTITY (TO IMPLEMENT REQUIRED ACTIONS/MITIGATION)                                                                                                                                      | MONITORING: RESPONSIBLE PARTY, ACTION AND FREQUENCY                                                                                                                                      |
| <b>E.1.4 Ensure that the construction phase meets the required performance criteria</b>                                                                                                                                                                                                                                                                                                              |                                                                                                                                            |                                                                                                                                  |                                                                                                                                                                                                    |                                                                                                                                                                                          |
| <p><b>Potential Impact:</b> Sub-standard contractor work during the construction work could lead to several negative impacts, such as delayed deadlines, financial implications and unnecessary harm to the natural environment and/or surrounding the site.</p> <p><b>Target Outcome:</b> Contractor compliance with the EMP and hence, minimal environmental damage due to construction works.</p> | 1. Inform all contractors and their staff of the performance criteria.                                                                     | To be undertaken by ECO prior to Commencement of construction.                                                                   | The <b>Project Manager</b> must ensure that the construction phase meets the required performance criteria and inform the Client of any time delays or non-performance during the contract period. | <p>The appointed <b>ECO</b> is to monitor compliance with the required actions below for the duration of the contract(s).</p> <p><b>Monitoring Frequency:</b> Monthly ECO Checklists</p> |
|                                                                                                                                                                                                                                                                                                                                                                                                      | 2. Institute and maintain a monitoring programme of construction performance.                                                              | Site Agent to supervise worker behaviour on a daily basis and to be monitored by ECO.                                            |                                                                                                                                                                                                    |                                                                                                                                                                                          |
|                                                                                                                                                                                                                                                                                                                                                                                                      | 3. Monitor construction work.                                                                                                              | Project Engineer to monitor progress and impacts and inform client of any time delays or non-performance during contract period. |                                                                                                                                                                                                    |                                                                                                                                                                                          |
|                                                                                                                                                                                                                                                                                                                                                                                                      | 4. Ensure that contractors adhere to the guidelines in respect of littering, sanitation, spills of toxic substances and general behaviour. | ECO to monitor significant impacts.                                                                                              |                                                                                                                                                                                                    |                                                                                                                                                                                          |

| E2 BIOPHYSICAL MANAGEMENT PROGRAMMES                                                                                                                                                                                           |                                                                                                                                                          |                                                                                                                                                                                                                 |                                                                                                                                                                                                                                   |                                                                                                                                                |
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| ENVIRONMENTAL ASPECTS (PROJECT ACTIVITY):<br>E2.1 Fauna and Flora                                                                                                                                                              |                                                                                                                                                          |                                                                                                                                                                                                                 |                                                                                                                                                                                                                                   |                                                                                                                                                |
| E2.1.1 Alien plant management                                                                                                                                                                                                  |                                                                                                                                                          |                                                                                                                                                                                                                 |                                                                                                                                                                                                                                   |                                                                                                                                                |
| CONSTRUCTION PHASE MANAGEMENT                                                                                                                                                                                                  |                                                                                                                                                          |                                                                                                                                                                                                                 |                                                                                                                                                                                                                                   |                                                                                                                                                |
| POTENTIAL IMPACT                                                                                                                                                                                                               | REQUIRED ACTIONS                                                                                                                                         | SPECIFIC TARGETS AND RESPONSIBILITY                                                                                                                                                                             | RESPONSIBLE ENTITY (TO IMPLEMENT REQUIRED ACTIONS/MITIGATION)                                                                                                                                                                     | MONITORING: RESPONSIBLE PARTY, ACTION AND FREQUENCY                                                                                            |
| <p><b>Potential Impact:</b> Alien vegetation infestation on the site and ecosystem implications thereof.</p> <p><b>Target Outcome:</b> Effective management of the terrestrial habitat and vegetation present on the site.</p> | 1. Any alien vegetation present on the site must be removed by appropriate means according to national legislation requirement.                          | Alien plant management is a long- term commitment and must be continued by the holder of the EA.                                                                                                                | The <b>Project Manager</b> and <b>Contractor(s)</b> must ensure that the terrestrial habitat and vegetation present on and around the development site is effectively managed.                                                    | <p>The appointed <b>ECO</b> is to monitor compliance with the required actions.</p> <p><b>Monitoring Frequency:</b> Monthly ECO Checklists</p> |
| E2.1.2 Fire Management Plan                                                                                                                                                                                                    |                                                                                                                                                          |                                                                                                                                                                                                                 |                                                                                                                                                                                                                                   |                                                                                                                                                |
| <p><b>Potential Impact:</b> Fire outbreak due to construction activity.</p> <p><b>Target Outcome:</b> No incidents of fire outbreak on site due to effective fire management.</p>                                              | 1. Utmost caution must be taken not to make any fires on the site (e.g., burning of removed brushwood or for heating of food), especially during summer. | Contractor to reduce fire risk on site. ECO to monitor for duration of contract                                                                                                                                 | <p>The <b>Project Manager</b> and <b>Contractor(s)</b> must take the necessary measures to reduce the risk of fire on the property.</p> <p>The <b>Project Manager</b> must ensure that the required insurance(s) is in place.</p> | <p>The appointed <b>ECO</b> is to monitor compliance with the required actions.</p> <p><b>Monitoring Frequency:</b> Monthly ECO Checklists</p> |
|                                                                                                                                                                                                                                | 2. The contractor(s) must have the appropriate insurance for fires caused by their personnel.                                                            | Contractor to ensure that insurance against fire outbreaks due to activity of their construction personnel on site are established, to ensure recovery can be undertaken in the aftermath of any fire outbreak. |                                                                                                                                                                                                                                   |                                                                                                                                                |
|                                                                                                                                                                                                                                | 3. Fire safety equipment (fire beaters and extinguishers) should be kept on site, and fire training should be provided to personnel.                     | Contractor to provide fire safety equipment on site. ECO to monitor for duration of the contract.                                                                                                               |                                                                                                                                                                                                                                   |                                                                                                                                                |

| CONSTRUCTION PHASE MANAGEMENT                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                          |                                                                                                                                                        |                                                                                                                                                                                                                         |                                                                                                                                                |
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| POTENTIAL IMPACT                                                                                                                                                                                                                                                                                                                      | REQUIRED ACTIONS                                                                                                                                                                                                                                                         | SPECIFIC TARGETS AND RESPONSIBILITY                                                                                                                    | RESPONSIBLE ENTITY (TO IMPLEMENT REQUIRED ACTIONS/MITIGATION)                                                                                                                                                           | MONITORING: RESPONSIBLE PARTY, ACTION AND FREQUENCY                                                                                            |
| <b>E2.1.3 Minimise disturbance to fauna</b>                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                          |                                                                                                                                                        |                                                                                                                                                                                                                         |                                                                                                                                                |
| <p><b>Potential Impact:</b> Disturbance to and displacement of fauna on and/or surrounding site and/or poor handling of such instances.</p> <p><b>Target Outcome:</b> Minimise incidents of fauna disturbance/displacement and/or surrounding site due to construction works and appropriate intervention where such cases occur.</p> | 1. Contractors must not harm or disturb any wildlife, especially snakes, tortoises, lizards, and birds.                                                                                                                                                                  | ECO/Contractor to monitor. The Contractor must report all incidents of harm to any fauna to the ECO who will report such incidents to the authorities. | The <b>Project Manager</b> and <b>Contractor(s)</b> must ensure that harm to fauna and avifauna is prevented, and disturbance is minimised. All incidents must be recorded and reported to the ECO on an ongoing basis. | <p>The appointed <b>ECO</b> is to monitor compliance with the required actions.</p> <p><b>Monitoring Frequency:</b> Monthly ECO Checklists</p> |
|                                                                                                                                                                                                                                                                                                                                       | 2. Snakes, tortoises, and other animals must be physically removed from the construction site without harming them and taken to an appropriate location (e.g., a nature reserve). Only competent snake handlers must be Employed to move snakes, should it be necessary. | ECO/Contractor to monitor on a going basis.                                                                                                            |                                                                                                                                                                                                                         |                                                                                                                                                |
|                                                                                                                                                                                                                                                                                                                                       | 3. Care must be taken when driving on site to not accidentally drive over tortoises or other animals.                                                                                                                                                                    | ECO/Contractor to monitor. The Contractor must report all incidents of harm to any fauna to the ECO who will report such incidents to the authorities. |                                                                                                                                                                                                                         |                                                                                                                                                |

| ENVIRONMENTAL ASPECTS (PROJECT ACTIVITY):<br>E2.2 Water                                                                                                                                                                                            |                                                                                                                                                                                                                                                                      |                                                                                                                                                                             |                                                                                                                                                                      |                                                                                                                                                                                  |
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| E2.2.1 Institute measures to minimise potable water use during construction phases of project                                                                                                                                                      |                                                                                                                                                                                                                                                                      |                                                                                                                                                                             |                                                                                                                                                                      |                                                                                                                                                                                  |
| CONSTRUCTION PHASE MANAGEMENT                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                      |                                                                                                                                                                             |                                                                                                                                                                      |                                                                                                                                                                                  |
| POTENTIAL IMPACT                                                                                                                                                                                                                                   | REQUIRED ACTIONS                                                                                                                                                                                                                                                     | SPECIFIC TARGETS AND RESPONSIBILITY                                                                                                                                         | RESPONSIBLE ENTITY (TO IMPLEMENT REQUIRED ACTIONS/MITIGATION)                                                                                                        | MONITORING: RESPONSIBLE PARTY, ACTION AND FREQUENCY                                                                                                                              |
| <p><b>Potential Impact:</b> Wastage of potable water during the construction phase.</p> <p><b>Target Outcome:</b> Ensure that the necessary measures to reduce potable water use are undertaken during the construction phase, where possible.</p> | 1. No abstraction of any use of surface water or groundwater may be done without prior authorisation from the Department of Water and Sanitation unless it is a Schedule 1 Use or an Existing Lawful Use.                                                            | Project Manager to take note. ECO to monitor if any water is extracted from any surface- or ground-water source.                                                            | The <b>Project Manager</b> and <b>Contractor(s)</b> must institute the necessary measures to minimise the use of water during the construction phase of the project. | The appointed <b>ECO</b> is to monitor compliance with the required actions below throughout the construction period.<br><br><b>Monitoring Frequency:</b> Monthly ECO Checklists |
|                                                                                                                                                                                                                                                    | 2. No pollution of surface or ground water may occur due to any activity on the property. The relevant requirements of the National Water Act, 1998 (Act No. 36 of 1998), as amended (NWA) must be complied with at all times.                                       | The ECO or Project Engineer to monitor use of water during construction and advise accordingly. Appropriate training of staff in water management will be given by the ECO. |                                                                                                                                                                      |                                                                                                                                                                                  |
|                                                                                                                                                                                                                                                    | 3. Contractors must use water sparingly during the construction phase (e.g., for mixing of concrete and washing of equipment). Should dust become a nuisance to surrounding industries, efficient use of non-potable water to wet dusty surfaces should be employed. | No potable water is to be used for wetting of roads. Water from dams or treated sewerage effluent should be used.                                                           |                                                                                                                                                                      |                                                                                                                                                                                  |
|                                                                                                                                                                                                                                                    | 4. The necessary ablution facilities must be provided (one chemical toilet per 15 workers), if not already existing on site and available for use by construction personnel.                                                                                         | Project Manager to provide necessary amount of toilet facilities on site, if not already existing and available. ECO to monitor for duration of contract.                   |                                                                                                                                                                      |                                                                                                                                                                                  |

| CONSTRUCTION PHASE MANAGEMENT                                                                                                                                                                |                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                              |                                                                                                                                                                                                                   |                                                                                                                                                |
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| POTENTIAL IMPACT                                                                                                                                                                             | REQUIRED ACTIONS                                                                                                                                                                                                                                                                                         | SPECIFIC TARGETS AND RESPONSIBILITY                                                                                                                                          | RESPONSIBLE ENTITY (TO IMPLEMENT REQUIRED ACTIONS/MITIGATION)                                                                                                                                                     | MONITORING: RESPONSIBLE PARTY, ACTION AND FREQUENCY                                                                                            |
| <b>ENVIRONMENTAL ASPECTS (PROJECT ACTIVITY):</b><br><b>E2.4. Waste and Effluent Management</b>                                                                                               |                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                              |                                                                                                                                                                                                                   |                                                                                                                                                |
| <b>E2.3.4 Institute measures to reduce waste and effluent management</b>                                                                                                                     |                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                              |                                                                                                                                                                                                                   |                                                                                                                                                |
| <p><b>Potential Impact:</b> Pollution of the surrounding environment due to poor waste and effluent management.</p> <p><b>Target Outcome:</b> Appropriate waste and effluent management.</p> | <p>1. An integrated waste management approach must be used that is based on waste minimisation and must include reduction, recycling, re-use, and disposal where appropriate. Recycled waste (cement packets, paper, and cardboard) should be separately stored for inclusion into the waste stream.</p> | <p>ECO to advise on the integrated waste management approach undertaken and the implementation thereof for the duration of the contract.</p>                                 | <p>The <b>Project Manager</b> and <b>Contractor(s)</b> must institute measures to minimise the generation of waste and to implement the sorting (at source) or recyclables materials out of the waste stream.</p> | <p>The appointed <b>ECO</b> is to monitor compliance with the required actions.</p> <p><b>Monitoring Frequency:</b> Monthly ECO Checklists</p> |
|                                                                                                                                                                                              | <p>2. Solid waste must be properly disposed of at a licensed waste disposal facility and must comply with the relevant legislation.</p>                                                                                                                                                                  | <p>Solid waste to be removed from the site to a licensed WDF on a regular basis to be determined in consultation with the ECO, for the different phases of construction.</p> |                                                                                                                                                                                                                   |                                                                                                                                                |
|                                                                                                                                                                                              | <p>3. Waste bins must be used on site. The bins must have lids and an external closing mechanism to prevent scavenging and/or the contents from blowing out. Access to the temporary storage area should be controlled.</p>                                                                              | <p>ECO to monitor the maintenance of the waste bins and the conditions of the temporary storage area on site for duration of contract.</p>                                   |                                                                                                                                                                                                                   |                                                                                                                                                |

|  |                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                 |  |  |
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|  | 4. All waste must be deposited in the waste bins for removal. The bins must not be used for any other purpose than waste collection and must be emptied on a regular basis by the contractor at a suitably licensed waste disposal facility. Proof of disposal slips must be kept on site.                                                                                                                                                      | Site Agent to ensure that waste is correctly deposited into the waste bins on site and that all waste disposal slips are kept on file. ECO to monitor for duration of contract.                                                                 |  |  |
|  | 5. No domestic waste should be stored on site for longer than two (2) weeks.                                                                                                                                                                                                                                                                                                                                                                    | Site Agent to ensure that domestic waste is removed from site regularly, as and when needed – but no longer than two weeks.                                                                                                                     |  |  |
|  | 6. No solid waste is to be burnt on site.                                                                                                                                                                                                                                                                                                                                                                                                       | Site Agent to ensure that personnel are aware that no solid waste is to be burnt on site.                                                                                                                                                       |  |  |
|  | 7. Portable toilets to be placed further than 15 m from the closest industry, if not already existing on site and available for use by construction personnel.                                                                                                                                                                                                                                                                                  | ECO to advise on placement of portable toilets, if necessary, with Site Agent and to monitor the placement and condition of these toilets for duration of contract.                                                                             |  |  |
|  | 8. Building rubble generated during the construction phase should be diverted from landfill where possible for re-use in the construction of internal roads or taken to the nearest drop-off facility for crushing.                                                                                                                                                                                                                             | Site Agent should attempt to reduce waste sent to landfill through the re-purposing of builder's rubble in road construction for the site, where possible. ECO to advise Site Agent on rubble disposal where relevant for duration of contract. |  |  |
|  | 9. All general and hazardous waste generated, during all project phases must be recorded and records of applicable documentation are to be filed and kept on-site including safe disposal certificates from a registered service provider. The service provider must dispose of all general and hazardous waste at a registered waste disposal facility. All records of waste generated, and any waste related complaints must be kept on site. | ECO to monitor the record of waste generated and disposed of kept on site for all phases of construction, and throughout the duration of contract.                                                                                              |  |  |

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|  | <p>10. Waste storage must comply with the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008), as amended (NEM:WA), National Norms and Standards for Storage of Waste, 2013, if the storage of general waste exceeds 100 m<sup>3</sup> or that of hazardous waste exceeds 80 m<sup>3</sup>.</p> | <p>Site Agent to be aware of the relevant waste legislation applicable to waste storage for the construction phase. ECO to monitor the compliance of waste storage on site with the relevant legislation for duration of contract.</p> |  |  |
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| ENVIRONMENTAL ASPECTS (PROJECT ACTIVITY):                                                                                                                                                                                                                                                                                                                                                                             |    |                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                      |                                                                                                                                                |
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| E2.5 Traffic Management Plan                                                                                                                                                                                                                                                                                                                                                                                          |    |                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                      |                                                                                                                                                |
| E2.3.5 Institute measures to reduce traffic                                                                                                                                                                                                                                                                                                                                                                           |    |                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                      |                                                                                                                                                |
| <p><b>Potential Impact:</b> Increased traffic for existing motorist movement in the surrounding areas due to the influx of vehicle movement on and off site for the duration of the construction period and during peak traffic hours.</p> <p><b>Target Outcome:</b> Minimise risk of construction related traffic on existing motorists within the vicinity of the site, specifically within peak traffic hours.</p> | 1. | Road construction signs to be erected along appropriate roads, warning motorists of construction related activities and heavy vehicles. The use of flagmen should be considered, if necessary. | Site Agent to institute measures such as signs and other traffic signals to assist and notify existing motorists of construction activity around the site. ECO to assess the appropriateness of attempts by the Site Agent to warn motorists of construction activity.                             | <p>The <b>Project Manager</b> and <b>Contractor(s)</b> must institute measures to minimise the risk of construction related activities on motorists using the roads in the vicinity of the site.</p> | <p>The appointed <b>ECO</b> is to monitor compliance with the required actions.</p> <p><b>Monitoring Frequency:</b> Monthly ECO Checklists</p> |
|                                                                                                                                                                                                                                                                                                                                                                                                                       | 2. | Large construction vehicles and trucks must travel outside of typical weekday peak hours in the vicinity of the site.                                                                          | Contractors to be instructed by Site Agent to ensure large construction vehicles travel during off-peak traffic hours.                                                                                                                                                                             |                                                                                                                                                                                                      |                                                                                                                                                |
|                                                                                                                                                                                                                                                                                                                                                                                                                       | 3. | Promote carpooling among construction staff to reduce the number of individual vehicles on the road.                                                                                           | Contractors must encourage personnel to carpool to site daily to reduce pressure placed on existing traffic.                                                                                                                                                                                       |                                                                                                                                                                                                      |                                                                                                                                                |
|                                                                                                                                                                                                                                                                                                                                                                                                                       | 4. | Structural damage to roads in the vicinity of the construction site must immediately be repaired by the contractor responsible (in accordance with Provincial/ Municipal Road standards).      | Site Agent to liaise and communicate responsibility for structural road damage with Contractors. Project Manager to hold Contractors responsible for any structural road damage caused. ECO to monitor response to structural road damage caused by construction vehicles for duration of contract |                                                                                                                                                                                                      |                                                                                                                                                |
|                                                                                                                                                                                                                                                                                                                                                                                                                       | 5. | Roads must be kept clear of sediment due to construction activities.                                                                                                                           | Site Agent to commission personnel to sweep the adjacent roads off-site where they are affected by sediment deposition due to construction                                                                                                                                                         |                                                                                                                                                                                                      |                                                                                                                                                |

| CONSTRUCTION PHASE MANAGEMENT |                                                                                                                                             |                                                                                                                                                                                 |                                                               |                                                     |
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| POTENTIAL IMPACT              | REQUIRED ACTIONS                                                                                                                            | SPECIFIC TARGETS AND RESPONSIBILITY                                                                                                                                             | RESPONSIBLE ENTITY (TO IMPLEMENT REQUIRED ACTIONS/MITIGATION) | MONITORING: RESPONSIBLE PARTY, ACTION AND FREQUENCY |
|                               |                                                                                                                                             | work. ECO to monitor the condition of adjacent off-site roads for duration of contract.                                                                                         |                                                               |                                                     |
|                               | 6. Store construction materials and equipment in a way that minimizes interference with traffic flow.                                       | Site Agent to ensure that construction materials storage does not hinder traffic flow. ECO to monitor for duration of contract.                                                 |                                                               |                                                     |
|                               | 7. Continuously monitor traffic patterns and adjust mitigation measures as needed to address any changing conditions and issues that arise. | ECO to communicate with Site Agent regarding any regarding any changing conditions in surrounding traffic that demand a change in the current traffic management plan approach. |                                                               |                                                     |
|                               | 8. Store construction materials and equipment in a way that minimizes interference with traffic flow.                                       | Site Agent to ensure that construction materials storage does not hinder traffic flow. ECO to monitor for duration of contract.                                                 |                                                               |                                                     |
|                               | 9. Continuously monitor traffic patterns and adjust mitigation measures as needed to address any changing conditions and issues that arise. | ECO to communicate with Site Agent regarding any regarding any changing conditions in surrounding traffic that demand a change in the current traffic management plan approach. |                                                               |                                                     |

| ENVIRONMENTAL ASPECTS (PROJECT ACTIVITY):<br>E2.6 Energy Management                                                                                                                                                                             |    |                                                                                                                                                                                                |                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                    |
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| E2.6.1 Use electricity sparingly during construction                                                                                                                                                                                            |    |                                                                                                                                                                                                |                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                    |
| <b>Potential Impact:</b> Waste of energy (electricity) sources on site.<br><br><b>Target Outcome:</b> Save energy (electricity) use on site, wherever possible.                                                                                 | 1. | The contractors must be informed of the efficient use of energy (electricity) during construction. When not in use appliances (lights, electrical machinery, motors etc) must be switched off. | ECO and site agent to monitor for the duration of the contract period.                                                                                                                                                      | <b>Engineers</b> to acknowledge the required actions regarding energy saving and to incorporate into their designs. The Municipality should only approve energy efficient designs.<br><br><b>ECO</b> and site agent to monitor for the duration of the contract period.<br><br><b>Monitoring Frequency:</b> Monthly ECO Checklists |
|                                                                                                                                                                                                                                                 | 2. | Electrical and electronic installations to be undertaken in accordance with the specifications of the appointed electrical engineers.                                                          | Municipality to ensure that such specifications are incorporated in the plans.                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                    |
|                                                                                                                                                                                                                                                 | 3. | Solar generated lighting should be used where possible, to reduce the developments dependence on electricity from the municipal supply grid.                                                   | Project Engineer/s to acknowledge the required actions with regard to energy saving. The Municipality to only approve energy efficient designs.                                                                             |                                                                                                                                                                                                                                                                                                                                    |
| ENVIRONMENTAL ASPECTS (PROJECT ACTIVITY):<br>E2.7.1. Dust and Air Quality Management                                                                                                                                                            |    |                                                                                                                                                                                                |                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                    |
| E2.7.1. Prevent Dust and other Air Quality impacts through effective management                                                                                                                                                                 |    |                                                                                                                                                                                                |                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                    |
| <b>Potential Impact:</b> Increased dust and air pollution due to poor management of dust on and off site caused by construction activities.<br><br><b>Target Outcome:</b> Minimise dust pollution during the construction phase of the project. | 1. | Any stored building material from which dust could be generated, such as stockpiled building sand, should be covered or kept moist during windy periods to prevent dust from being generated.  | Site Agent to source covering material/methods for exposed stockpiles on site during windy periods and when not in use. ECO to monitor provision and use of Stockpile covering material, particularly during windy periods. | The <b>Project Manager</b> and <b>Contractor(s)</b> must institute measures to minimise dust pollution during the construction phase of the project.<br><br>The appointed <b>ECO</b> is to monitor compliance with the required actions.                                                                                           |

| CONSTRUCTION PHASE MANAGEMENT |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                          |                                                               |                                                     |
|-------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------|-----------------------------------------------------|
| POTENTIAL IMPACT              | REQUIRED ACTIONS                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | SPECIFIC TARGETS AND RESPONSIBILITY                                                                                                                                                                                                                                      | RESPONSIBLE ENTITY (TO IMPLEMENT REQUIRED ACTIONS/MITIGATION) | MONITORING: RESPONSIBLE PARTY, ACTION AND FREQUENCY |
|                               | 2. The excavation, handling and transport of erodible materials must be avoided under high wind conditions.                                                                                                                                                                                                                                                                                                                                                                                  | Contractors should avoid the movement of erodible materials during windy conditions unless absolutely necessary. Site Agent to commission personnel to address any sediment deposition post- movement. ECO to monitor measures undertaken to reduce dust by Contractors. |                                                               |                                                     |
|                               | 3. Dust generated from the construction activities must comply with the National Environmental Management: Air Quality Act, 2004 (Act No. 39 of 2004), as amended (NEM:AQA), National Dust Control Regulation (GN No. R. 827) of 1 November 2013. These regulations prohibit a person from conducting any activity in such a way as to give rise to dust i such quantities and concentrations that the dust, or dust fall, has a detrimental effect on the environment and nearby receptors. | Contractors and Site Agent to take note of applicable dust legislation and to ensure compliance with such for duration of contract - ECO to monitor.                                                                                                                     |                                                               |                                                     |
|                               | 4. Staff may only be allowed to smoke within demarcated areas. Cigarette butts must be disposed of in the lidded waste bins provided.                                                                                                                                                                                                                                                                                                                                                        | Site Agent to demarcate dedicated smoking areas for Contractors and their personnel in consultation with the ECO. ECO to monitor smoking and signs of smoking in areas outside of this demarcated zone.                                                                  |                                                               |                                                     |

| CONSTRUCTION PHASE MANAGEMENT |                                                                                                                                                                                 |                                                                                                                                                                                                                                                                |                                                               |                                                     |
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| POTENTIAL IMPACT              | REQUIRED ACTIONS                                                                                                                                                                | SPECIFIC TARGETS AND RESPONSIBILITY                                                                                                                                                                                                                            | RESPONSIBLE ENTITY (TO IMPLEMENT REQUIRED ACTIONS/MITIGATION) | MONITORING: RESPONSIBLE PARTY, ACTION AND FREQUENCY |
|                               | 5. No fires will be allowed on site. The burning of solid waste and paper on site will therefore also not be allowed.                                                           | Contractors to take note of the prohibition of fires on site. ECO to monitor the management of waste on site and to record any signs of burning of waste on site.                                                                                              |                                                               |                                                     |
|                               | 6. All vehicles and motorised equipment used on site must be maintained in a good condition to prevent and/or minimise excessive diesel fumes from such vehicles and equipment. | Contractors to ensure construction vehicles are regularly serviced and in good-working order. ECO to record any construction equipment or vehicles spewing excessive diesel fumes and to address the relevant vehicles' service requirements with Contractors. |                                                               |                                                     |
|                               | 7. Use dust suppression techniques (e.g., spraying bare surfaces with non-potable water and limiting driving speeds).                                                           | Site Agent to Commission dust suppression techniques on site – such as the spraying of water on erodible material surfaces that have the potential to generate dust. Contractors to instruct personnel to limit driving speeds so as to reduce dust creation.  |                                                               |                                                     |

| E.3 SOCIO-ENVIRONMENTAL MANAGEMENT PROGRAMMES                                                                                                                                                                                                                                 |    |                                                                                                                                                                                                                                             |                                                                                                                                                                                                                            |                                                                                                                                                       |                                                                                                                                                |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|
| ENVIRONMENTAL ASPECTS (PROJECT ACTIVITY):<br>E3.1 Noise Management Plan                                                                                                                                                                                                       |    |                                                                                                                                                                                                                                             |                                                                                                                                                                                                                            |                                                                                                                                                       |                                                                                                                                                |
| E.3.1.1 Institute measures to minimise noise pollution during construction phase of the project                                                                                                                                                                               |    |                                                                                                                                                                                                                                             |                                                                                                                                                                                                                            |                                                                                                                                                       |                                                                                                                                                |
| <p><b>Potential Impact:</b> Increased noise pollution developing a nuisance for the surrounding communities and/or affecting the workable conditions for neighbours.</p> <p><b>Target Outcome:</b> Minimise noise pollution from construction activity wherever possible.</p> | 1. | All plant equipment, including vehicles, must be properly maintained to minimise noise generation.                                                                                                                                          | Contractors to ensure all plant equipment is in good working order and are fitted with silences, where necessary.                                                                                                          | The <b>Project Manager</b> and <b>Contractor(s)</b> must institute measures to minimise noise pollution during the construction phase of the project. | <p>The appointed <b>ECO</b> is to monitor compliance with the required actions.</p> <p><b>Monitoring Frequency:</b> Monthly ECO Checklists</p> |
|                                                                                                                                                                                                                                                                               | 2. | Any complaints regarding noise must be investigated, sources identified, and mitigation measures implemented. Feedback on resolution of the issue must be provided to the complainant and the noise control officer of the Local Authority. | Site Agent to ensure a complaints register is kept on file and the ECO is liaised with regarding noise complaints and the addressal of these with the complainant and the Local Authority.                                 |                                                                                                                                                       |                                                                                                                                                |
|                                                                                                                                                                                                                                                                               | 3. | Limit working hours to daylight hours.                                                                                                                                                                                                      | Contractors to ensure work only takes place after daylight hours if absolutely necessary and communicates such after-hour intentions with the ECO before-hand so as to ensure such works are managed for noise generation. |                                                                                                                                                       |                                                                                                                                                |
|                                                                                                                                                                                                                                                                               | 4. | Ensure silencers are installed on all vehicles.                                                                                                                                                                                             | Contractors to install silencers on all vehicles – ECO to monitor sound generation from vehicles on site.                                                                                                                  |                                                                                                                                                       |                                                                                                                                                |

| CONSTRUCTION PHASE MANAGEMENT                                                                                                                                                                                 |                                                                                                                                      |                                                                                                                                                                                            |                                                                                                                                            |                                                                                                                                         |
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| POTENTIAL IMPACT                                                                                                                                                                                              | REQUIRED ACTIONS                                                                                                                     | SPECIFIC TARGETS AND RESPONSIBILITY                                                                                                                                                        | RESPONSIBLE ENTITY (TO IMPLEMENT REQUIRED ACTIONS/MITIGATION)                                                                              | MONITORING: RESPONSIBLE PARTY, ACTION AND FREQUENCY                                                                                     |
|                                                                                                                                                                                                               | 5. Cover exposed waste daily to limit odours.                                                                                        | Site Agent to ensure that covering materials are available on site to cover exposed waste. ECO to monitor the covering of exposed waste and the significance of odours from waste on site. |                                                                                                                                            |                                                                                                                                         |
|                                                                                                                                                                                                               | 6. Noise generated from construction activity(ies) must comply with the Western Cape Noise Control Regulations P.N. 200/2013.        | Contractors and Site Agent to take note of relevant noise legislation applicable to construction work. ECO to ensure construction work compliance with relevant noise legislation.         |                                                                                                                                            |                                                                                                                                         |
| ENVIRONMENTAL ASPECTS (PROJECT ACTIVITY):<br>E3.1 Archaeological and Heritage Resources                                                                                                                       |                                                                                                                                      |                                                                                                                                                                                            |                                                                                                                                            |                                                                                                                                         |
| E.3.1.1 Conserve all archaeological settings and artefacts                                                                                                                                                    |                                                                                                                                      |                                                                                                                                                                                            |                                                                                                                                            |                                                                                                                                         |
| <p><b>Potential Impact:</b> Damage and/or the loss of valuable archaeological settings and artefacts.</p> <p><b>Target Outcome:</b> All archaeological settings and artefacts are reported and conserved.</p> | 1. If any unmarked human remains are uncovered or exposed during construction activities, these must immediately be reported to HWC. | ECO to monitor excavated materials and inform HWC of any finds.                                                                                                                            | The <b>Project Manager</b> and <b>Contractor(s)</b> must ensure that all archaeological settings and artefacts are reported and conserved. | The appointed <b>ECO</b> is to monitor compliance with the required actions.<br><br><b>Monitoring Frequency:</b> Monthly ECO Checklists |

| ENVIRONMENTAL ASPECTS (PROJECT ACTIVITY):<br>E3.2 Aesthetics (Visual) Impacts                                                                                                                                                                            |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                    |                                                                                                                                |                                                                                                                                                |
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| E.3.2.1 Institute measures to minimise the visual impacts of the development.                                                                                                                                                                            |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                    |                                                                                                                                |                                                                                                                                                |
| <p><b>Potential Impact:</b> Change in visual character of the site from a predominantly open area to a developed industrial area.</p> <p><b>Target Outcome:</b> No negative effect on the character of the landscape and enhanced scenic experience.</p> | 1. | For security and operational lighting to result in minimal visual impact to the immediate context, the Contractor should use lighting only where necessary, and lighting should be positioned at a lower level i.e., bollard height.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Contractors to reduce lighting exposure where possible. ECO to monitor how Contractors have Minimized light exposure for the construction works.                   | The <b>Project Manager</b> and <b>Contractor(s)</b> must institute measures to minimise the visual impacts of the development. | <p>The appointed <b>ECO</b> is to monitor compliance with the required actions.</p> <p><b>Monitoring Frequency:</b> Monthly ECO Checklists</p> |
|                                                                                                                                                                                                                                                          | 2. | <p>For the reduction of potential negative impacts during the construction phase, the following management procedures should be implemented:</p> <ul style="list-style-type: none"> <li>• Reduce the construction period through proper planning and management, in addition to the productive implementation of resources;</li> <li>• Restrict the activities and movement of construction workers and vehicles to the immediate construction site as much as possible; Ensure that rubble, litter, and disused construction materials are managed and removed regularly;</li> <li>• Ensure that all infrastructure and the site are maintained in a neat manner;</li> <li>• Reduce and control construction dust using approved dust suppression techniques;</li> </ul> <p>Rehabilitate all disturbed and construction areas to acceptable visual standards.</p> | ECO to monitor the visual condition of the site due to construction activity to ensure that measures have been instituted to reduce visual impacts where possible. |                                                                                                                                |                                                                                                                                                |

| ENVIRONMENTAL ASPECTS (PROJECT ACTIVITY):<br>E3.2 Socio-Economic Benefits of the Development: Procurement Strategy (Job Opportunities)                                                                                                                                         |                                                                                                                                                                                                                                                              |                                                                                                        |                                                                                                                                                                                                                                                          |                                                                                                                                                |
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| E.3.2.1 Institute measures to ensure a fair procurement strategy is maintained                                                                                                                                                                                                 |                                                                                                                                                                                                                                                              |                                                                                                        |                                                                                                                                                                                                                                                          |                                                                                                                                                |
| <p><b>Potential Impact:</b> Employment opportunity for locals through the construction phase of the project would be lost.</p> <p><b>Target Outcome:</b> Maintenance of a fair procurement policy and the empowerment of local/surrounding communities through employment.</p> | 1. Contractors need to show a commitment to employ people from the immediate area whenever possible.                                                                                                                                                         | Contractors to ensure compliance with and monitor the local Procurement strategy.                      | <p>The <b>Project Manager</b> and <b>Contractor(s)</b> must institute measures to ensure a fair procurement strategy is maintained.</p> <p>The <b>Applicant</b> or <b>Project Manager</b> is to report on compliance with the respective strategies.</p> | <p>The appointed <b>ECO</b> is to monitor compliance with the required actions.</p> <p><b>Monitoring Frequency:</b> Monthly ECO Checklists</p> |
|                                                                                                                                                                                                                                                                                | 2. Implementation of the Procurement Strategy referred to in Section 4.2.1 above. The temporary job opportunities during the construction phase should be allocated to persons from the local community (e.g., Worcester Municipal Area) as far as possible. | ECO to include the Procurement and Communication Strategies in the induction session with Contractors. |                                                                                                                                                                                                                                                          |                                                                                                                                                |
|                                                                                                                                                                                                                                                                                | 3. Implementation of the Communication Strategy referred to in <b>Section 4.2.1</b> above.                                                                                                                                                                   |                                                                                                        |                                                                                                                                                                                                                                                          |                                                                                                                                                |

| ENVIRONMENTAL ASPECTS (PROJECT ACTIVITY):<br>E3.4 Security                                                                                                                                                                                                                                       |                                                                                                                                                                                      |                                                                           |                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|
| E.3.4.1 Minimise security risk during the construction phase                                                                                                                                                                                                                                     |                                                                                                                                                                                      |                                                                           |                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                |
| <p><b>Potential Impact:</b> Theft and damage to construction site and/or equipment and vehicles as well as harm to any persons on site due to poor security on site and misconduct of personnel.</p> <p><b>Target Outcome:</b> Minimise security risk on site during the construction phase.</p> | <p>1. The Contractor(s) will be responsible for the security of their builder's site and the conduct of their personnel for the duration of the services and building contracts.</p> | <p>The Contractor and developer will need to monitor security issues.</p> | <p>The Project Manager and Contractor(s) must institute measures to minimise security risk during the construction phase.</p> <p><b>Contractor(s)</b> is responsible for the behaviour of their personnel on site and is to assume financial and functional responsibility for any theft undertaken by their personnel.</p> | <p>The appointed <b>ECO</b> is to monitor compliance with the required actions.</p> <p><b>Monitoring Frequency:</b> Monthly ECO Checklists</p> |

## 6 ENVIRONMENTAL MANAGEMENT: OPERATIONAL PHASE

### 6.1 Description of the Impact Management Outcomes for the Operational Phase

The impact management outcomes for the operational phase include the following:

- To control all aspects of the operational phase of the development by implementing the necessary impact management actions and recommendations to prevent any temporary or permanent negative environmental impacts from occurring in the future.
- To ensure the conservation and protection of groundwater resources during the operational phase of the project.

### 6.2 Environmental Specifications: Operation

| OPERATIONAL PHASE MANAGEMENT                                                                                                                                                                                                                                                           |                                                                                                                          |                                                                                                                                                              |                                                                                                                                                       |                                                          |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------|
| POTENTIAL IMPACT                                                                                                                                                                                                                                                                       | REQUIRED ACTIONS                                                                                                         | SPECIFIC TARGETS AND RESPONSIBILITY                                                                                                                          | RESPONSIBLE ENTITY (TO IMPLEMENT REQUIRED ACTIONS/MITIGATION)                                                                                         | MONITORING: RESPONSIBLE PARTY, ACTION AND FREQUENCY      |
| <b>E.1 GENERAL OPERATIONAL MANAGEMENT</b>                                                                                                                                                                                                                                              |                                                                                                                          |                                                                                                                                                              |                                                                                                                                                       |                                                          |
| <b>ENVIRONMENTAL ASPECTS (PROJECT ACTIVITY):</b><br><b>E.1.1 Terrestrial Habitat Offsite</b>                                                                                                                                                                                           |                                                                                                                          |                                                                                                                                                              |                                                                                                                                                       |                                                          |
| <b>Potential Impact:</b> The potential facilitation of alien vegetation invasion and the disturbance of the terrestrial habitat off-site due to the operation of the site.<br><br><b>Target Outcome:</b> Reduce risk of terrestrial habitat alien and invasive vegetation infestation. | 1. Removal of listed alien invasive species on the site according to national legislation requirement, where applicable. | To be undertaken by Applicant / project manager (consulting engineer and/or site agent), also referred to as the 'Management Entity', on an ongoing process. | The <b>Management Entity</b> of the site must ensure that the edge effects of the Cemetery on the various biological aspects are effectively managed. | <b>Management Entity</b> to monitor on an ongoing basis. |
|                                                                                                                                                                                                                                                                                        | 2. Ensure no exotic species spread into the surrounding vegetation.                                                      |                                                                                                                                                              |                                                                                                                                                       |                                                          |

**ENVIRONMENTAL ASPECTS (PROJECT ACTIVITY):****E.1.3 Water Use and Prevention of Water Pollution**

|                                                                                                                                                                                                                                                                                                          |                                                                                                                                       |                                                                                                                                                                                                                                                        |                                                                                                       |                                                   |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|---------------------------------------------------|
| <b>Potential Impact:</b> Wastage of water resources and the pollution of surface and groundwater through poor water management practices. During the operational phase.<br><br><b>Target Outcome:</b> Wise and efficient water use and the prevention of water pollution especially groundwater sources. | 1. Water conservation measures must be implemented within the site. Ensure that water is sparingly used during the operational phase. | The Management Entity should ensure that water points are effective and not leaking.                                                                                                                                                                   | The <b>Management Entity</b> of the Cemetery must engender an ethic of responsible water use on site. | Management Entity to monitor on an ongoing basis. |
|                                                                                                                                                                                                                                                                                                          | 2. No pollution of surface or ground water may occur due to burial activities.                                                        | The Management Entity must take note that a no pollution tolerance should be tolerated with regards to surface and ground water pollution from any activity on site, and in such cases, appropriate measures should be taken to rectify the pollution. |                                                                                                       |                                                   |

**ENVIRONMENTAL ASPECTS (PROJECT ACTIVITY):**  
**E3.5 Archaeological and Heritage Resources**

**E.3.5.1 Conserve all archaeological settings and artefacts**

|                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                 |                                                          |
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| <p><b>Potential Impact:</b> Damage and/or the loss of valuable archaeological settings and artefacts.</p> <p><b>Target Outcome:</b> All archaeological settings and artefacts are reported and conserved.</p> | <p>1. Under no circumstances must the Management Entity, his/ her employees, his/ her subcontractors, or his/ her sub-contractors' employees remove, destroy or interfere with archaeological artefacts. Any person who causes intentional damage to Archaeological or historical sites and/or artefacts could be penalised or legally prosecuted in terms of the National Heritage Resources Act, 1999 (Act No. 25 of 1999), as amended (NHRA).</p> | <p>The Management Entity must furthermore ensure that all developers and/or buyers within the operational industrial site are made aware, during the contractual process, of the legislative seriousness of the damage to any heritage resource found on site.</p> | <p>Should the <b>Management Entity</b> of the site find any archaeological objects of any nature (including fossils, graves, or remains of structures), the Management Entity must notify the appointed ECO. South African Heritage Resources Agency (SAHRA) must be consulted for further investigation and clarification.</p> | <p>Management Entity to monitor on an ongoing basis.</p> |
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## 7 MONITORING AND MANAGEMENT MEASURES

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In keeping with current environmental and associated legislation, all environmental management procedures and actions should be reviewed and refined on an on-going basis. This is in accordance with the dynamic nature of environmental management and allows for the timeous identification and mitigation of issues as they come to light. The process of review and refinement, built into the requirements of the EMPr, is known as Monitoring and Auditing.

### 7.1 Monitoring Procedures

Environmental Monitoring is the continuous evaluation of the status and condition of environmental elements. Its purpose is to detect changes that take place in the environment over time and involves the measuring and recording of physical, social, and economic variables associated with development impacts.

To these ends, the ECO will monitor the site for compliance (i.e., Compliance Monitoring) with the EMPr and EA. Many techniques for Environmental Monitoring have been proposed, each detailing a specific protocol. Regardless of which technique is used, the aim is that each environmental management specification (and associated impact management actions) be checked by means of a system in which a score may be allocated for:

- Full compliance;
- Satisfactory performance;
- Unsatisfactory performance; and,
- No action.

Monitoring will take place regularly (to coincide with safety inspections, where relevant). Completed ECO Monitoring Reports will be submitted to the Project Manager and Contractor(s), who will attend to issues/ rectify non-compliances and report back to the ECO. These ECO reports must be kept on record and be made available upon request by the Applicant and the Competent Authority.

The EMPr and EA conditions of authorisation apply as follows:

- All persons employed by the Applicant, Contractor(s) and/or Management Entity must abide by the requirements of these EMPr and EA conditions as they apply to the site.
- Any employees of the Applicant, Contractor(s) and/or Management Entity found to be in breach of any of the Environmental Specifications may be ordered to leave the site forthwith. The order may be given orally or in writing by the Project Manager or ECO. Confirmation of an oral order will be given as soon as practicable but lack of confirmation in writing shall not be a cause for the offender to remain on site.
- Supervisory staff of the Applicant, Contractor(s) and/or Management Entity may not direct any person to undertake any activities that would place such person in contravention of the environmental management specifications.

The Applicant, Contractor(s), Project Manager, and/or Management Entity are deemed not to have complied with the Performance Specifications if:

- There is evidence of willful or accidental contravention of any specification included in the EMPr and EA.
- There is evidence of the Applicant, Contractor(s), Project Manager and/or Management Entity carrying out activities not permitted in terms of the Specification.
- There is evidence of environmental negligence and/or mismanagement resulting in negative impacts on the environment.

The Applicant, Project Manager, Contractor(s) and/or Management Entity will be informed via ECO Reports as well as by means of direct instruction as to what corrective actions are required in terms of Environmental Compliance:

- Disregard for instruction, and failure to respond adequately to complaints from the public will be construed as non-compliance.
- Non-compliance may lead to the Contractor(s) and/or Management Entity Employee(s) being blacklisted, or, in more serious cases, the Contractor(s) and/or Management Entity Employee(s) may be evicted from site. Only the Project Manager may issue such instruction, claiming any costs required to remedy situations perpetuated by environmental negligence, mismanagement and / or non-compliance.

## 7.2 Document Control

The EMPr is a basic planning framework, guiding the various phases of the project. It is important for the EMPr to be revised (improved), if need be, by documenting all actions and management results in a structured format, and especially in accordance with the results of any external audits. It will be important for the EMPr and its supporting documents to be accessible to all the implementing and management members responsible for implementing its actions.

The content and results of the ECO checklist to be submitted after each site meeting can be used for compiling audits and making the necessary changes to the EMPr.

A dated photographic record of site works must be kept by the ECO and Site Agent/ RE.

## 7.3 Management Review

The EMPr should be a **dynamic document**, which depends on continual revision to maintain its relevance. It is therefore imperative for the EMPr to be updated and revised in accordance with information and data that emerges from the monitoring processes (such as ECO checklists), and any new management techniques and technology that may become available in the future.

To maintain continual revision, appropriateness, and effectiveness of the EMPr, and thereby enhance its performance, the ECO/ Auditor (as appropriate) should review and evaluate the EMPr at defined intervals. The reviews should include the following:

- review the results of the monitoring undertaken during ECO site inspections and audits;
- review the extent to which the impact management outcomes originally set in the EMPr have been met;
- review the applicability of the EMPr in relation to changing conditions, circumstances, and information; and
- obtain and review any concerns amongst relevant I&APs, property owners and relevant authorities that may arise during the construction phase and operational phase in the future.

## 8 ENVIRONMENTAL AWARENESS AND TRAINING

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Site training must be provided for all Contractors and Workers/ Personnel/ Employees in accordance with the provisions of this document.

Ensure that the relevant Environmental Awareness training is presented before the commencement of activities. Ensure that a Health and Safety Officer (compulsory) are appointed before the commencement of activities.

The Contractor must arrange that all of his/her employees receive a degree of environmental training during orientation. Such training should be compulsory for all employees, structured in accordance with their relevant rank, level and responsibility, in order that these employees:

- acquire a basic understanding of the environment and the environmental features pertaining to the site and its environs;
- are familiar with the requirements of the EMP and EA as they apply to the site.

### 8.1 Environmental Awareness Plan

The following training programmes will be presented:

- Occupational Health and Safety (OHS) – Done internally by Health Officer;
- Personal Protection Equipment (PPE) – Done internally by Safety Officer; and
- Environmental training - Done internally by ECO.

The training is done either annually or bi-annually depending on the need identified by management of the development, as well as training for any new personnel. The environmental training and awareness will be implemented as close as possible to the commencement of the works on site and the training materials will be provided to the Contractor/ Project Manager for environmental induction of new staff.

The Environmental Awareness Plan will serve as the basis for the induction of all new employees (as well as contractors pending the nature of their work on site) on matters as described herein. The Plan will also be used to hone awareness for all employees on a continuous basis.

Specific environmental awareness performance criteria will also form part of the job descriptions of employees, to ensure diligence and full responsibility at all levels of the organizational work force.

#### 8.1.1 Fostering Environmental Awareness

General environmental awareness will be fostered among the project's workforce to encourage the implementation of environmentally sound practices throughout its duration. This will ensure that environmental accidents are minimised and environmental compliance maximised.

Environmental awareness will be fostered in the following manner:

- Induction course for all workers on site, before commencing work on site;
- Refresher courses as and when required.

### **8.1.2 Training and environmental awareness**

The Applicant/ Management Entity accepts that environmental awareness training is critical for the workforce to understand how they can play a role in achieving the objectives specified in the EMPr and ensure that the actions specified in the EMPr are implemented effectively and efficiently. Training needs will be identified based on the available and existing capacity of site and project personnel to undertake the required EMPr management actions and monitoring activities. Environmental awareness training, conducted by the ECO prior to construction, will be in addition to any specific detailed training required to implementing the EMPr. It is vital that all personnel are adequately trained to perform their designated tasks to an acceptable standard.

### **8.1.3 The environmental awareness training course**

All employees should attend the course, regardless of position, status, or level of responsibility. With a background of basic environmental awareness and an understanding of basic environmental issues and sensitivities, personnel may be motivated and empowered to do their share in helping to maintain the integrity of the environment on the site through environmental impact management. The goal of this course is therefore to enable a shared understanding and common vision of the environment, the impact of the development on the environment (and why this is important) and the role of personnel in terms of environmental management and compliance. The induction course will comprise of the following steps:

- The first step will include background discussion of the environment concept: of what it comprises and how we interact with it;
- The second step will be a description of the components and phases of the operation;
- The third step will be a general account of how the operation and its associated activities can affect the environment, giving rise to what we call Environmental Impacts;
- The fourth and most important step will be a discussion of what staff can do in order to help prevent the negative environmental impacts from degrading our environment. This is known as Environmental Impact Management.
- Lastly the consequences of non-compliance will be explained.

### **8.1.4 Course content**

The following can be seen as draft course content as it will be building on as specific needs as it arises and will be supplemented with the handout of reading material and extracts of the EMPr on which the course will be based.

#### **8.1.4.1 The Environment**

The environment consists essentially of the living environment, the non-living environment, and the man- made environment.

The living environment consists of our plant and animal resources. The non-living environment includes the soil, water, and geological resources.

The man-made environment comprises our infrastructure, social, cultural, and archaeological resources.

These aspects of the living and man-made environment depend on one another, and man depends on them all for his survival. Damage to one will be felt by others so an effort must be made to try and protect the environment as well as their interactions with one another as they occur in nature. When undertaking an operation or any other form of development this concept must be kept in mind. Development must be implemented in such a way that we benefit today without compromising the ability of future generations to benefit as well. Employees should understand this concept of sustainability and sustainable development. The specific environment should also be explained as part of the induction course.

#### **8.1.4.2 Description of the components and phases of the operation**

The project description as set out in the BAR should be explained as part of induction together with the main components or activities that can affect the environment, giving rise to what we call Environmental Impacts. The operation consists of several different components including the following:

- Atmospheric Emissions Management;
- Hazardous Risk Management;
- Waste Management; and,
- Security.

#### **8.1.4.3 Description of Environmental impacts**

A general account of how the operation and its associated activities can affect the environment must be explained. This is basically a description of the concept of environmental impacts.

##### **a) What is an Environmental impact?**

An environmental impact is the result, either good or bad of man's actions on the natural environment. This results in one or many changes in the environment and may also affect the availability of resources and the environment's capacity to function.

Impacts can occur either because of:

- The use of a resource;
- Or the pollution of a resource.

In addition, impacts can be categorised as the following:

- Foreseen: such as the necessary clearing of the vegetation before works on site begin; or
- Unforeseen: such as the flooding of an area following heavy rains;
- Avoidable: such as the unnecessary spillage of diesel or oil;
- Unavoidable: such as the disturbance created during works;
- Simple: such as litter untidying the site; or
- Cumulative: such as the pollution of water upstream, which then makes downstream users sick.

##### **b) Types of Environmental Impacts**

Typical environmental impacts anticipated include the following:

- The loss of indigenous plants;
- The loss of animals;
- Dust liberation;
- Soil compaction and erosion;
- Litter and waste;
- Fire;
- Water pollution.

##### **c) Causes of environmental impacts**

These environmental impacts are caused primarily by inadequate planning and not adhering to the EMPr Specifications, e.g.:

- The injudicious removal / disturbance of vegetation and habitat;
- The unnecessary loss of soil;
- Uncontrolled vehicular movement and circulation;
- The haphazard storage of vehicles, equipment and material;
- The uncontrolled servicing, repair and refuelling of vehicles;
- Unclear policy on solid waste management;
- Unclear policy on waste water;
- The uninformed use, storage and disposal of hazardous material;
- The erosive power of storm water and runoff;
- Unintentional and/or uncontrolled fires.

The specific significant impacts of the operation as described in the BAR must be explained.

#### **8.1.4.4 Description of Environmental Mitigation**

The fourth and most important step of an induction course will be a discussion of what staff can do to help prevent the negative environmental impacts from degrading their environment. This is known as Environmental Impact Management and is described in the EMP. The course discussion should also include general environmental code of conduct practices that are not listed as a significant impact or as a mitigation measure such as:

##### ***Impact management: Health & Safety (general)***

- Always use the toilet and hand washing facilities provided;
- Only use the water provided on site - do not collect water from or dispose water into a natural water course;
- Make use of the specified protective gear for noisy and dusty conditions;
- Always wear proper protective head and foot gear while on site;
- Know where to find a list of emergency numbers in the event of one;
- Report accidents, injuries and unsafe site conditions to the Project Manager or Safety Officer;
- Adhere to the posted speed limits of construction vehicles whilst driving on the access roads.

##### ***Impact management: Storage of vehicles, equipment, and materials (general)***

- Store machinery, vehicles and materials only in demarcated areas, and within drip trays;
- Do not leave machinery and equipment standing around if not in use;
- Only park vehicles in designated areas;
- Do not park heavy vehicles or store equipment under or near trees;
- Do not store machinery, vehicles, or materials in undisturbed or rehabilitating areas.

##### ***Impact management: Servicing, repair and refuelling of vehicles (general)***

- No machinery and vehicles will be serviced on site;
- Regularly check your vehicle for fuel and oil leaks;
- Inform the foreman/ environmental manager of leaking vehicles and machinery so that it can be scheduled for repairs;
- Immediately clean any accidental fuel and oil spills using a hydrocarbon spill kit – do not hose spills into the natural environment;
- Dispose of contaminated soil as hazardous waste in the correct location on site;
- Explain the negative consequences of oil and diesel pollution.

##### ***Impact management: Solid waste management (general)***

- Do not litter – make use of refuse bins provided;
- Do not hose spills into the natural environment – inform the foreman / project manager of spills you are unable to clean yourself;
- Do not bury, hide or burn any waste of any nature;
- Inform the foreman / project manager of any illegal litter or dumping site that you encounter.

##### ***Impact management: Waste water management (general)***

- Do not use any natural watercourse to wash machinery, vehicles or equipment;
- Only wash machinery, vehicles or equipment in designated areas;
- Conserve water and report any leaks and overflow to the foreman / project manager.

##### ***Impact management: Management of hazardous material (general)***

- Make sure that you know how to handle all hazardous substances;
- Do not access stores for hazardous substances without permission;
- Immediately clean any minor accidental spills and leaks using an appropriate hydrocarbon spill kit;
- Do not hose any leaks or spills into the natural environment;
- Dispose of all hazardous waste in specified storage areas - if in doubt, ask;
- Immediately report any major leaks and spills to the foreman / project manager.

##### ***Impact management: Fire management (general)***

- Do not make open fires except in permitted areas and at permitted times;
- Do not leave any fires unattended. Extinguish fires before you leave the area;
- All cooking is to be done on gas / electric stoves and only in the areas provided;
- No burning of waste;
- Smoking only allowed in designated areas and cigarette butts must be disposed of in a bin;

- Ensure that you know where firefighting equipment is located.

***Impact management: Wildlife Management (general)***

- Any wildlife encountered during earthworks and construction must not be harmed;
- Snakes especially must be treated with care and should be left alone to escape from the construction area. If they do not escape by themselves, a competent person should remove them to a safe area;
- Snares may not be set to catch hares and small buck;
- Tortoises, lizards and other wildlife may not be harmed or collected and must be removed from the construction area or be allowed to escape from the construction area.

***Impact management: Soil Erosion (general)***

- Prevent erosion from diversion, restriction or increase in stormwater;
- Rainwater should be appropriately channelled to prevent erosion or flooding;
- If erosion or any damage caused by construction vehicles occurs (e.g. on access roads and tracks), appropriate measures will need to be undertaken to prevent erosion, and to rehabilitate any damage caused.

***Impact management: Dust Abatement (general)***

- Reasonable measures to minimise the generation of dust should be undertaken (e.g., removal of the bare minimum of vegetation);
- Areas where earth is moved should be kept wet with water in order to reduce dust.

***Impact management: Pollution (general)***

- Engender an ethic of waste pollution management and how plastic bags and paper waste cause, not only visual pollution, but can lead to animal deaths if ingested by them;
- All solid waste must be stored in wind – proof bins to prevent waste being blown around the site;
- Explain also that burning of waste, especially PVC can cause toxic air pollution that is harmful to man, and unsupervised fires can lead to run-away fires;
- The importance of the use of chemical or other toilets will also be emphasised.

**8.1.4.5 Consequences of non-compliance**

- Explain the consequences of not complying with the conditions of approval and the content of the EMP, which can include the issuing of fines and/or a stop works order and/or result in dismissal.

## 9 DETAILS OF EAP

### DETAILS OF PERSON PREPARING THE SCOPING REPORT

**REPORT PREPARED BY:** Danie Krynauw

**CONTACT DETAILS:** Email: [danie@green-box.co.za](mailto:danie@green-box.co.za)

**ENVIRONMENTAL CONSULTING COMPANY:** Green Box Consulting  
P.O. Box 37738  
Langenhovenpark  
Tel: 082 435 2108

**QUALIFICATIONS OF EAPs:** Danie Krynauw has a master's degree in Town and Regional Planning (UFS) and completing his dissertation to obtain a master's degree in Environmental Management (UFS). D. Krynauw has over 25 years' experience in the environmental management field. He is registered with EAPASA (2019/1348) and is a member of the International Association of Impact Assessments South Africa.

### **CURRICULUM VITAE – DANIE KRYNAUW**

1. Family name: Krynauw  
2. First name: Daniël  
3. Date of birth: 14/12/1971  
4. Nationality: South African  
5. Contacts: Cell: 082 435 2108  
Email: [danie@green-box.co.za](mailto:danie@green-box.co.za)

6. Education:

| Institution                                 | Degree(s) or Diploma(s) obtained                          |
|---------------------------------------------|-----------------------------------------------------------|
| University of the Free State<br>2001 – 2002 | Master in Environmental Management – Dissertation pending |
| University of the Free State<br>1996 – 1998 | Masters in Urban and Regional Planning                    |
| University of the Free State<br>1993 – 1995 | BA Geography and Sociology                                |

7. Membership of professional bodies:

- EAPASA – 2019/1348
- International Association of Impact Assessment South Africa (IAIAsa)

8. Present position:

- Environmental Scientist / Director – Green-Box Consulting

9. Current Responsibilities:

- Liaising with clients in both the private and public sectors.
- Conduct Environmental Impact Assessments and other Environmental Technical Investigations.
- Apply and obtain waste licenses, water licenses, mining permits and environmental authorisations for clients.
- Use different GIS datasets in order to create new information or investigate patterns for projects.
- Conduct environmental compliance and other environmental audits.
- Provide technical-level support for environmental remediation and mitigation projects, including remediation system design and determination of regulatory applicability for incoming projects.
- Collaborate with other environmental scientists, planners, engineers, and other specialists, and experts in law and

- business etc. to address environmental problems for clients.
- Conduct Environmental training.

10. Years within the organization:

- 16 years

11. Other skills (e.g. computer literacy, etc.):

- All suits of Microsoft Office, Arc View, ReGIS, and Project Professional.

12. Professional experience:

|              |                                                  |
|--------------|--------------------------------------------------|
| Date         | 2011 – Current                                   |
| Organisation | Green-Box Consulting (Environmental Consultants) |
| Position     | Environmental Scientist (Owner and Director)     |

|              |                                        |
|--------------|----------------------------------------|
| Date         | 2009 – 2016                            |
| Organisation | Terra Works Environmental Consultants  |
| Position     | Senior Environmental Scientist and COO |

|                       |                                                                                                                                                                                                   |
|-----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Date                  | 2001 – 2009                                                                                                                                                                                       |
| Organisation          | Department of Economic Development, Tourism and Environmental Affairs, Free State                                                                                                                 |
| Position              | Principal Environmental Officer                                                                                                                                                                   |
| Description of duties | <ul style="list-style-type: none"> <li>• Review Environmental Impact Assessments</li> <li>• Review Environmental Management Programmes</li> <li>• Issuing Environmental Authorisations</li> </ul> |

## APPENDIX A to the EMP GENERIC CONSTRUCTION GUIDELINES

### 1. INTRODUCTION

Construction is potentially one of the most destructive phases of the development process that can harm the environment permanently if it is not appropriately planned and the necessary mitigation correctly applied and managed.

Construction implies certain inevitable levels of change to the affected environment or 'place'. A certain degree of change to the environment, within acceptable environmental norms, nevertheless has to be accepted. It is, however, important for such inevitable change to be limited within confined boundaries, so as to protect ecological, social, and cultural characteristics (i.e. the 'sense of place') of the affected environment, by pursuing the best practicable environmental option(s) or practices.

**A primary environmental objective is, therefore, to limit the unavoidable disturbance or fragmentation of the environment to the '*limits of acceptable change*'.**

The EMP, together with these Construction Guidelines, is to form part of the construction contractual documentation, i.e. the appointed contracts must be fully aware of the environmental management programmes that need to be carried out as part of the construction programmes.

The construction programme is to be implemented by the appointed contractors, on behalf of the Implementing Agent, in accordance with the EMPs and these Construction Guidelines.

Compliance with the Construction Guidelines will be monitored by the ECO (Environmental Control Officer), to be appointed, who will also monitor compliance of the conditions of contract and conditions of approval (Environmental Authorisation).

This Construction Guideline document forms part of the Contractor's contractual documentation entered into between the Developer and the Contractor and must be signed by the appointed Contractor as acknowledgement of its content.

### 2. PRE-CONSTRUCTION PHASE

This phase is to be based on the following principles and guidelines:

- A construction contract must be established between the Implementing Agent and the appointed Contractor(s). The contract should include a penalty clause for both environmental and construction transgressions.
- The construction site office, stores, temporary storage of diesel and concrete batching equipment is to be located on an appropriate, non-environmentally sensitive site and must be accessible to large trucks and be large enough for the secure storage of equipment, pipes and fittings, and mechanical machinery and the delivery of raw materials.
- Construction personnel should not be housed on the site and will need to be transported to work on a daily basis. Only security personnel may live on site to maintain a security presence, should this be necessary.
- The Contractor should provide the necessary training of staff to fill certain construction jobs on site. The Contractor will also be obliged to apply a Stellenbosch first policy when employing staff.
- The ECO must inform all contractors and their personnel in respect of the environmental code of conduct prior to the commencement of any construction work.

- The Contractor must demarcate the boundaries of the construction sites with danger tape or fencing. Construction workers must remain in close proximity to the construction site.
- If a mobile fuel bowser is to be used it must be checked for leaks and efficient operation and must have a drip tray under it when parked. All oils diesel and release oils used in the construction process must be kept within the bunded area. Access to the bunded area must be controlled at all times and must be locked at all times.
- The parking and service area (if required) for construction vehicles should be well- compacted earth or concrete to prevent oil and diesel spills contaminating the soils of the site. Should oil or diesel spills occur, they should be treated with a suitable hydrocarbon absorption or remediation product. Absorbent spill mop-up products need to be on hand - Products to be investigated should include sunsorb absorbents.
- A suitable leak proof container for the storage of oiled equipment (filters, drip tray contents and oil changes etc.) must be provided if servicing of vehicles takes place at stores/site office. Fuels and oils must be safely located out of harms way from the elements (preferably within the bunded area) and safety and fire prevention must be strictly adhered to. The necessary fire hydrants should be on site.
- Alien vegetation should be cleared according to the directives contained in the EMP and MMP.
- Felled alien plant material must be removed from the property by appropriate means to reduce fire risk.
- Any removed topsoil is to be temporarily stockpiled in suitable designated areas for later use in the rehabilitation of the sites, if needed. It may be necessary for the Contractor to stabilise the exposed sandy areas to prevent erosion and dust by spreading straw or chipped vegetation (removed from the site) over the surface or by covering the stockpile with shade cloth. All soil stockpiles shall not exceed 2m in height. The access roads may also require wetting to suppress dust.
- The Contractor must provide temporary chemical toilet facilities at the stores/site office area. A minimum of **one toilet shall be provided per 15 persons at each working area** or as stipulated by the local authority. The toilets must be kept in a clean and sanitary condition, and must be regularly serviced (at least once per week). Toilet paper and potable water (for washing hands) is to be provided by the Contractor.

### 3. CONSTRUCTION PHASE

This phase is to be undertaken in accordance with the following principles and guidelines:

- The construction area must be clearly demarcated and no construction activity will be allowed outside of this area. All linear alignments of infrastructure must be appropriately demarcated.
- Construction and delivery vehicles must not be allowed to leave the demarcated areas and should only use the existing access road/s in and out of the construction area. All temporary access points to the river must be ratified by the ECO and rehabilitated after use).
- Any cultural-historic artefacts unearthed during excavations/ earth works must be reported to the ECO as soon as possible and all earthworks should be curtailed in those areas until such time as the ECO and/or a consulting archaeologist has surveyed the site(s) and made his/her recommendations. SAHRA must immediately be informed if the consulting archaeologist deems the finds to be significant. All vehicles, equipment, fuel and petroleum services and tanks must be maintained in a good condition that prevents leakage and possible contamination of soil or ground water supplies.
- All emergency servicing of vehicles must be conducted over a drip tray present to prevent accidental spillage of oils and fuels. Used oil should be recycled or disposed of at a hazardous waste disposal facility.
- All fuel/ oil spills must be reported to the ECO.

- Construction material must be stored in areas designated by the Site Agent and in a neat and orderly manner.
- The Contractor must store any building rubble in a suitable area designated by the ECO and should ideally be removed from site on a weekly basis (if not to be used as fill). The crushing of building rubble must be undertaken at a suitable site. Should dust become a problem, spraying of a water mist may be required. Stormwater controls may be required for diverting stormwater away from sensitive areas where erosion can take place.
- All other solid waste must be kept in appropriate containers and must be removed from the site by the Contractor on a weekly basis to a licensed waste disposal facility. **The burning of solid waste and paper will not be allowed on site.** Recyclable waste should be recycled if at all possible (metal, paper, cardboard, bottles, tins and plastic).
- Concrete mixing and the subsequent cement residues must be restricted to a designated area on the site. Such residues are to be removed from the site within one week of completing each phase of the construction period.
- **Used cement bags are to be stored in a wind and rainproof container for disposal.** Used bags may not lie around on site nor may they be burnt on site.
- Excess or spilled concrete should be confined within the works area and then removed to a waste site.
- Cement powder has a high alkalinity pH rating that can contaminate and affect both soil and water pH dramatically. Cement spills must therefore be prevented or cleared as soon after the spill as possible.
- All excavations (especially within deep unconsolidated sand) deeper than 1.5m must be shored up to prevent collapse of the sides and possible injury to workers or even loss of life.
- All open excavations must be protected with danger tape / danger fencing.
- The seeding or planting of indigenous grass or fynbos species may be considered over exposed soil surfaces to act as a quick binder of the soil in order to speed up the rehabilitation process of disturbed areas.
- Disturbed areas around the building sites, where dust can arise, may need to be kept moist by spraying with water from a water bowser or other suitable means, or alternatively straw can be worked into the surface to bind the soil and prevent windblown dust.
- The Contractor will be responsible for security on the site of works and will ensure that his staff do not trespass onto other properties.
- The Contractor must provide dedicated eating areas for staff. Waste bins with lids must be provided at such areas. Such eating areas are to be maintained in a neat condition.
- No fires will be permitted within the project area.
- The ECO/RE must monitor the contractors' compliance with the construction and progress in terms of the above environmental guidelines on a regular basis. The ECO will issue an ECO Checklist within 5 days after each site visit to provide a record of instructions given to the Contractor/Site Agent for environmental work that needs to be done or where problems have been noted.

#### 4. POST-CONSTRUCTION PHASE

This phase is to be undertaken in accordance with the following principles and guidelines:

- All temporary structures must be removed from the site within three weeks after completion of a particular phase of the project.
- The Contractor must remove all oil and cement spills as soon as possible. Alternatively spills may be picked up and stored in appropriate containers/waste skips prior to removal.
- All rubble and other forms of waste must be removed from the site, within one week after completing a particular phase.
- The Contractor must repair disturbed areas (e.g. ripping of deep tracks left by construction

- vehicles) within one week after completing each phase of the project.
- The rehabilitation/landscaping of disturbed areas can commence as soon as disturbed areas become available and once climatic conditions allow for it.
- Topsoil and and/or wood chips/straw are to be evenly spread over disturbed areas to facilitate the rehabilitation.
- The ECO must make sure that all the environmental stipulations put forward in the construction contracts and/or ECO Checklists have been complied with, and must advise the Developer/RE if the penalty clause needs to be applied for any environmental impacts that may have occurred.

The Contractor must accept the above Construction Guidelines. **It is expected that the Contractor sign this document as part of the main contract with the Implementing Agent.** The main Contractor will also be solely responsible for the conduct of all subcontractors that may be used in this contract.

Signed by: \_\_\_\_\_ on behalf of: \_\_\_\_\_

Name: \_\_\_\_\_

Signed by: \_\_\_\_\_ on behalf of: \_\_\_\_\_

Name: \_\_\_\_\_

Witness: \_\_\_\_\_

Name: \_\_\_\_\_

Date: \_\_\_\_\_

## **Appendix H: Details of EAP and expertise**

## **DETAILS OF PERSON PREPARING THE BAR AND EMP**

**REPORT PREPARED BY:** Danie Krynauw

**CONTACT DETAILS:** Email: [danie@green-box.co.za](mailto:danie@green-box.co.za)

**ENVIRONMENTAL CONSULTING COMPANY:** Green Box Consulting  
P.O. Box 37738  
Langenhovenpark  
Tel: 082 435 2108

**QUALIFICATIONS OF EAPs:** Danie Krynauw has a master's degree in Town and Regional Planning (UFS) and completing his dissertation to obtain a master's degree in Environmental Management (UFS). D. Krynauw has over 25 years' experience in the environmental management field. He is registered with EAPASA (2019/1348) and is a member of the International Association of Impact Assessments South Africa.

### **CURRICULUM VITAE – DANIE KRYNAUW**

1. Family name: Krynauw
2. First name: Daniël
3. Date of birth: 14/12/1971
4. Nationality: South African
5. Contacts: Cell: 082 435 2108  
Email: [danie@green-box.co.za](mailto:danie@green-box.co.za)

6. Education:

| Institution                                 | Degree(s) or Diploma(s) obtained                          |
|---------------------------------------------|-----------------------------------------------------------|
| University of the Free State<br>2001 – 2002 | Master in Environmental Management – Dissertation pending |
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| University of the Free State<br>1993 – 1995 | BA Geography and Sociology                                |

7. Membership of professional bodies:

- EAPASA – 2019/1348
- International Association of Impact Assessment South Africa (IAIASa)

8. Present position:

- Environmental Scientist / Director – Green-Box Consulting

9. Current Responsibilities:

- Liaising with clients in both the private and public sectors.
- Conduct Environmental Impact Assessments and other Environmental Technical Investigations.
- Apply and obtain waste licenses, water licenses, mining permits and environmental authorisations for clients.
- Use different GIS datasets in order to create new information or investigate patterns for projects.
- Conduct environmental compliance and other environmental audits.

- Provide technical-level support for environmental remediation and mitigation projects, including remediation system design and determination of regulatory applicability for incoming projects.
- Collaborate with other environmental scientists, planners, engineers, and other specialists, and experts in law and business etc. to address environmental problems for clients.
- Conduct Environmental training.

10. Years within the organization:

- 16 years

11. Other skills (e.g. computer literacy, etc.):

- All suits of Microsoft Office, Arc View, ReGIS, and Project Professional.

12. Professional experience:

|              |                                                  |
|--------------|--------------------------------------------------|
| Date         | 2011 – Current                                   |
| Organisation | Green-Box Consulting (Environmental Consultants) |
| Position     | Environmental Scientist (Owner and Director)     |

|              |                                        |
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| Date         | 2009 – 2016                            |
| Organisation | Terra Works Environmental Consultants  |
| Position     | Senior Environmental Scientist and COO |

|                       |                                                                                                                                                                                                   |
|-----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Date                  | 2001 – 2009                                                                                                                                                                                       |
| Organisation          | Department of Economic Development, Tourism and Environmental Affairs, Free State                                                                                                                 |
| Position              | Principal Environmental Officer                                                                                                                                                                   |
| Description of duties | <ul style="list-style-type: none"> <li>• Review Environmental Impact Assessments</li> <li>• Review Environmental Management Programmes</li> <li>• Issuing Environmental Authorisations</li> </ul> |

## **Appendix I: Specialist declaration of interest**

## **Appendix J: Additional Information**

1. DFFE Screening Tool Report