DRAFT BASIC ASSESSMENT REPORT IN SUPPORT OF THE ATMOSPHERIC EMISSIONS LICENSE (AEL) APPLICATION FOR THE:

PROPOSED EXPANSION OF THE UPINGTON CREMATORIUM, ERF 16450, UPINGTON ǁKHARA HAIS LOCAL MUNICIPALITY, IN THE ZF MGCAWU DISTRICT MUNICIPALITY, NORTHERN CAPE

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agriculture, environmental affairs,
land reform and rural development

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

PROPOSED EXPANSION OF THE UPINGTON CREMATORIUM, ERF 16450, UPINGTON

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	(For official use only)
File Reference Number:	
Application Number:	
Date Received:	

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

Kindly note that:

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

SECTION A: ACTIVITY INFORMATION

Has a specialist been consulted to assist with the completion of this section?	YES	**NO ✓**

If YES, please complete the form entitled "Details of specialist and declaration of interest" for the specialist appointed and attach it in Appendix I.

1) ACTIVITY DESCRIPTION

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

The proposed expansion of the Upington crematorium, located on erf 16450, Upington (at the following co-ordinates: 28°26'1.21"s; 21°17'50.03"e) in the ǁKhara Hais local municipality, in the ZF Mgcawu district municipality, Northern Cape, and will include the installation and operation of an additional cremator (approximately 3m length x 2.6m width x 2.6m height)

With the following approximate capacity data

: Continuous Burn Rate (kg/h)	132
Intermittent Burn Rate (kg/h)	60 – 80
Grate Hearth Area (m^2)	2.27
Primary Volume (m^3)	2.38
Incinerator Weight (kg)	11 800
Chimney Weight (kg)	760

The Atmospheric Emissions License for the existing cremator (NC/AEL/ZFM/UPCR01/2014), valid until the 1st of March 2025 was issued in terms of section 41(1)(a) of the National Environmental Management: Air Quality Act, 2004 (Act No. 39 of 2004) in respect to Listed Activity Category 8: Thermal Treatment of Hazardous and general Waste subcategory No. 8.2 Cremation and Veterinary Waste Incineration. The additional cremator and existing cremator will not be operated at the same time whereby the existing cremator will be used as a backup (i.e., no net increase in emissions per day). The additional cremator will be placed adjacent to the existing cremator (Figure 1).

Figure 1. Existing cremator and proposed location of new cremator (yellow arrow).

A concrete ramp (<10m^3 / < 100m^2) will be constructed for access. The existing cremator has been in operation since 2000. The oven of the cremator gets replaced every three (3) years.

Six (6) Liquefied Petroleum (LP) gas cylinders (48kg LPC/cylinder) are used at one time for the cremation process (Figure 2) whereby six LP gas cylinders last for fourteen (14) cremations (average of 2.33 cremations per gas cylinder).

Figure 2. Liquefied Petroleum (LP) gas cylinders (48kg LPC/cylinder) were used for the cremation process. Six (6) gas cylinders are used at one time for each cremation.

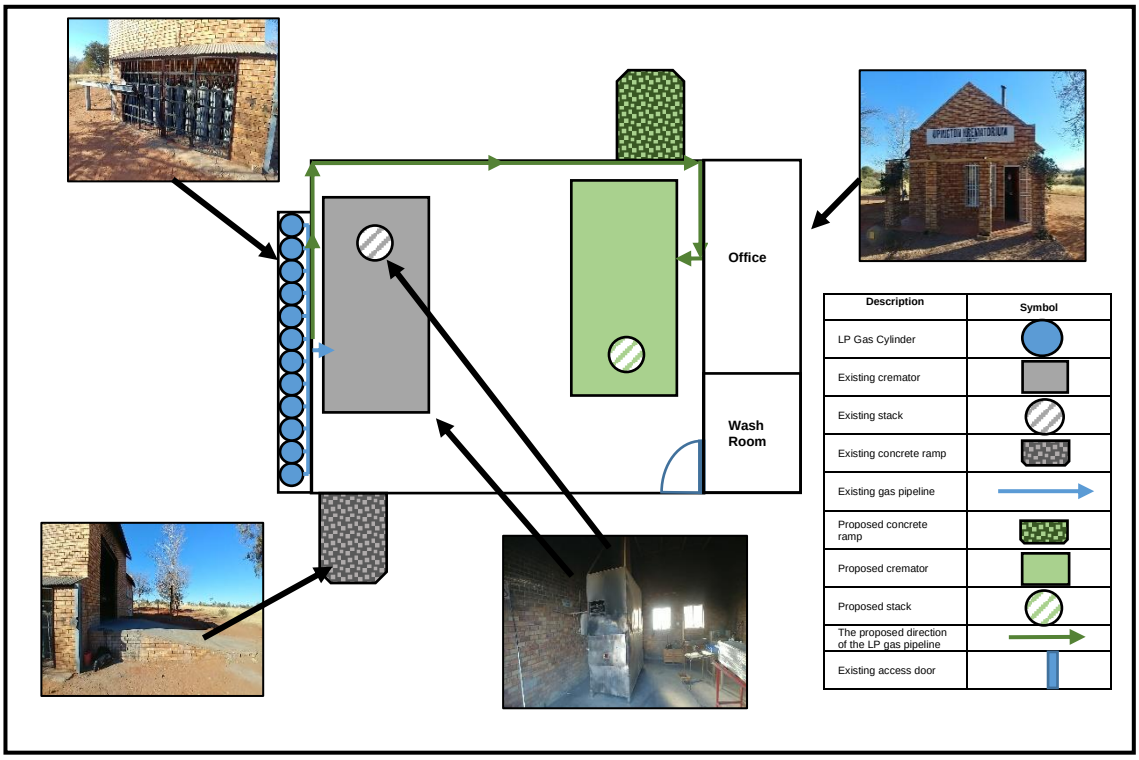


Figure 3. Process diagram showing the existing cremator and proposed expansion of the crematorium, namely the addition of a new cremator.

Bodies are currently received via the existing concrete ramp (Figure 3) and stored on a bench. The average combustion time is 75 minutes per casket with approximately six (6) cremations taking

place per day. Ashes are recovered from the cremator chamber and are disposed of at a registered disposal facility (as per communication with the DENC official) or kept in an urn. Ashes can also be spread at memorial walls, gardens, and ash graves. The new cremator will be more efficient than the existing cremator. As only one cremator will be used at any given point in time, maintenance can be adequately undertaken without compromising the operation of the Upington Crematorium.

Environmental Requirements

The National Environmental Management Act (NEMA, Act 107 of 1998), as amended, makes provision for the identification and assessment of activities that are potentially detrimental to the environment and which require authorisation from the competent authority based on the findings of an Environmental Assessment. NEMA is a national act, which is enforced by the Department of Environmental Affairs (DEA). In the Northern Cape, these powers are delegated to the Department of Agriculture, Environmental Affairs, Land Reform, and Rural Development (DAEARDL), formerly known as the Department of Environment and Nature Conservation (DE&NC). Thus, this application is to be submitted in terms of the NEMA (as amended), and the Environmental Impact Assessment Regulations, 2014 (as amended) in support of an Atmospheric Emissions License (AEL) Application in terms of the National Environmental Management: Air Quality Act (NEM: AQA; Act No. 36 of 1998) for the proposed expansion of the existing Upington Crematorium. According to the regulations of Section 24(5) of NEMA, authorisation is required for the following:

Category 8: Thermal Treatment of Hazardous Waste and General Waste - Subcategory 8.2: Crematoria and Veterinary Waste Incineration

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

Listed activity as described in GN 327, 325 and 324, EIA Regulations (2014 as amended)	Description of project activity
GN 327 Listing Notice 1	
Activity 34: The expansion of existing facilities or infrastructure for any process or activity where such expansion will result in the need for a permit or licence or an amended permit or licence in terms of national or provincial legislation governing the release of emissions, effluent or pollution, excluding— (i) where the facility, infrastructure, process or activity is included in the list of waste management activities published in terms of section 19 of the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008) in which case the National Environmental Management: Waste Act, 2008 applies; (ii) the expansion of existing facilities or infrastructure for the treatment of effluent, wastewater, polluted water or sewage where the capacity will be increased by less than 15 000 cubic metres per day; or (iii) the expansion is directly related to aquaculture facilities or infrastructure where the wastewater discharge capacity will be increased by 50 cubic meters or less per day.	The proposed development entails the expansion of the crematorium by additionally adding another furnace to the already existing facility.

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 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 coordinates 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.

Needs and Desirability

South African municipalities face various challenges associated with the management of cemeteries. This includes, but is not limited to, the shortage and acquisition (i.e., insufficient budgets for cemetery management and purchasing of new, suitable land) of suitable land for cemeteries[1]. With the growing population, the number of deaths per capita is also expected to increase – placing additional pressure on the existing challenges concerning the management of cemeteries. Cremation reduction is a sustainable alternative to traditional burial. It must be noted that cremation is forbidden in the Islamic and Orthodox Judaism faiths but is permissible in the Christian, Jewish, Hindu, Parsi, and Buddhist faiths.

Need and desirability in terms of the proposed location and accessibility

The proposed expansion is located on Erf 16450, Upington, Northern Cape. The proposed expansion will be located at an existing facility, namely the Upington Crematorium, located adjacent to the Keidebees Cemetery. The site is located approximately 2.6km from the middle of Upington town. Existing signage is present for the existing crematorium facility and is accessible by an existing dirt access road. Approximately 97.9% of the population in the Northern Cape are Christian[2]. This highlights that cremation is permissible to the majority of the Northern Cape population-based on faith.

Need and desirability in terms of land use potential

The proposed expansion of the Upington Crematorium will be located at the existing facility (Figures 2 and 3). Thus, no new facility will need to be developed for the proposed expansion of the Upington Crematorium.

Need and desirability in terms of socio-economic benefits

The proposed expansion of the Upington Crematorium will benefit the local community and surrounding area, creating a sustainable alternative method to traditional burials. Cremations are typically cheaper than traditional burials and require less space (whereby land can be used to benefit the community). *The lack of cemetery space may disrupt social networks which will bring about changes in the social ethos of the community.*

SITE ALTERNATIVE

No feasible alternative sites were considered due to:

1. **Location of the proposed site**: the proposed site for development is located within the current crematorium's development footprint and thus, the existing land use is in line with the proposed activities of the development. The area surrounding the existing crematorium is mostly arid wide-open spaces with no development directly adjacent.
2. **Proximity to watercourses**: The closest water course is located approximately 2kms south of the development on the other side of town.
3. **Use of existing services**: the construction of the proposed development will be contained with the current development footprint; no expansion will be required, and the additional burner will make use of the current systems and services in place.
4. **Ownership**: No other site alternatives were considered. The site is owned by the Applicant, and within the urban edge, and is therefore considered the only reasonable and feasible site

[1] https://www.salga.org.za
[2] South African religious demography: The 2013 General Household Survey: http://www.scielo.org.za/pdf/hts/v73n2/01.pdf

a) Site alternatives

No other site alternatives were considered. The site is owned by the Applicant, within the urban edge, and will tie in with existing services and is therefore considered the only reasonable and feasible site.

See **Figure 4** for the location of GPS coordinates.

Alternative 3 (preferred alternative)		
Description	**Lat (DDMMSS)**	**Long (DDMMSS)**
Corner 1	**28°26'1.03"S;**	**21°17'49.91"E**
Corner 2	**28°26'1.03"S;**	**21°17'50.28"E**
Corner 3	**28°26'1.40"S;**	**21°17'50.27"E**
Corner 4	**28°26'1.43"S;**	**21°17'49.90"E**
Alternative 2		
Description	Lat (DDMMSS)	Long (DDMMSS)
Corner 1 (N):		
Corner 2 (E):		
Corner 3 (S):		
Corner 4 (W):		
Alternative 3		
Description	Lat (DDMMSS)	Long (DDMMSS)

In the case of linear activities:

Alternative 1 (preferred alternative)		
Description	Lat (DDMMSS)	Long (DDMMSS)
N/A		
Alternative 2		
Description	Lat (DDMMSS)	Long (DDMMSS)
N/A		
Alternative 3		
Description	Lat (DDMMSS)	Long (DDMMSS)
N/A		

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

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

Figure 4. GPS coordinates of the proposed site.

b) Lay-out alternatives

No layout alternatives were considered as the area of operation is predefined and altering the design would have more impact than simply using the current layout.

Alternative 1		
Description	Lat (DDMMSS)	Long (DDMMSS)
Alternative 2		
Description	Lat (DDMMSS)	Long (DDMMSS)
Alternative 3 (preferred alternative)		
Description	Lat (DDMMSS)	Long (DDMMSS)

c) Technology alternatives

No technology alternatives were considered. The burner will be a high-quality thermal technology burner, designed for controlled combustion and minimized air pollution, which currently complies with South African as well as International Standards.

Alternative 1 (preferred alternative)
Alternative 2
Alternative 3
Alternative 4

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

NA

Alternative 1 (preferred alternative)		
N/A		
Alternative 2		
N/A		
Alternative 3		
N/A		

e) No-go alternative

No development would take place and the proposed site will remain as is. No new, negative environmental impact(s) will take place however, the additional burner will obtain an air emissions licence.

There will be no alterations made to the current infrastructure supplied to the site. The no-go alternative will impede socioeconomic development in the area as no short- and long-term employment and skills-development opportunities will be created relative to this proposed development.

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:	**Size of the activity:**
Alternative A1 (preferred activity alternative)	The Burner's Dimensions are: L- 2859 mm W- 2570mm H- 2545mm No expansion will take place.
Alternative A2 (if any)	
Alternative A3 (if any)	

or, for **linear activities**: N/A

	Length of the activity:
Alternative A1 (preferred activity alternative)	

Alternative A1 (preferred activity alternative)	
Alternative A2 (if any)	
Alternative A3 (if any)	
Alternative A4 (if any)	

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

	Length of the activity:
Alternative A1 (preferred activity alternative)	m^2

Alternative A1 (if any)	
Alternative A2 (if any)	
Alternative A3 (preferred activity alternative)	
Alternative A4 (if any)	

4) SITE ACCESS

	YES	~~NO~~
Does ready access to the site exist?		
If NO, what is the distance over which a new access road will be built		

Describe the type of access road planned:

Access to the proposed development would be via existing the N14

Include the position of the access road on the site plan and required map, as well as an indication of the road about 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:

- 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 coordinates (Indicate the position of the activity using the latitude and longitude of the centre point of the site for each alternative site. The coordinates 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):

• **Is the activity permitted in terms of the property's existing land use rights?**	**YES**	~~NO~~	Please explain
The site is zoned as Business Crematorium. Meaning that no rezoning will have to take place			
• **Will the activity be in line with the following?**			
(a) Provincial Spatial Development Framework (PSDF)	**YES**	~~NO~~	Please explain
The Northern Cape Provincial Spatial Development Framework states that the first structuring element is the development and reinforcement of a system of varied growth centres. This will enable greater access to development opportunities, as well as equitable access to a system of local opportunities. The Northern Cape Provincial Spatial Development Framework/ Development & Resource Management Plan was completed in 2012 and reviewed in 2018[3].			

[3] Northern Cape – Reviewed PSDF Executive Summary 2018. Accessed at: http://app.spisys.gov.za/download.php?201809271245138HLWTRHI3MO3ECI2CM26

Spatial development strategies, as highlighted in the PSDF, includes the improvement of basic services. One of the key issues identified in the province and especially in the ZF Mgcawu District Municipality is the lack of sufficient cemeteries to cater for the increased mortality rate. These strategic development strategies are in line with the Global Sustainable Development guidelines to ensure that the needs of the current generation are met without exploiting resources that will be required by future generations. Therefore, as the proposed development includes the construction expansion of the crematorium it will not only create employment opportunities but also lessen the strain on expanding cemetery spaces which have a higher overall environmental impact.			
(b) Urban edge / Edge of Built environment for the area	**YES**	~~NO~~	Please explain
The site is located within the urban edge of Uppington.			
(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?).	**YES**	~~NO~~	Please explain

ZF Mgcawu District Municipality Draft Integrated Development Plan (IDP) 2017 – 2022 (2018 / 2019)

The vision of the ZF Mgcawu DM as contained within its IDP 2017 – 2022 (2018 / 2019) is as follows: "Quality support to deliver quality services."

The mission of the ZF Mgcawu DM is: "Centre of excellence in providing quality basic services through support to local municipalities."

The following strategic objectives and development objectives have been identified for the ZF Mgcawu DM:

The following core values give character to the organizational culture of the municipality: 1. Commitment to the development of people 2. Integrity in the performance of our duty 3. Respect for our natural resources 4. Transparency in accounting for our actions 5. Regularly consult with customers on the level and quality of services 6. Ensure higher levels of courtesy and professionalism in the workplace 7. Efficient spending and responsible utilization of municipal assets

A balanced approach is being fostered through the greening of the economy, boosting energy security, promoting integrated municipal infrastructure investment, facilitating integrated urban development, accelerating skills development, investing in rural development and enabling regional integration

The implementation of crematorium expansion would contribute positively towards the strategic objective of supporting and guiding the development of a diversified, resilient and sustainable district economy, and the development objectives of creating investment opportunities in sectoral development (i.e. investment activities; Entrepreneurial business support programme), and enabling an environment for business establishment and support initiatives (i.e. Increase of umber of businesses; entrepreneurial support) through its local content and local economic development requirements as prescribed under the REIPPPProgramme.

IIKhara HaisLM IDP 2017 / 2022 (2018 / 2019)

The vision of the Dawid Kruiper LM as contained within the IDP 2017 / 2022 (2018 / 2019) is as follows:

"*To provide an affordable quality service to Dawid Kruiper and its visitors and to execute the policies andprogrammes of the Council.*"

The mission of the Dawid Kruiper LM is as follows:

"*As an authority that delivers Municipal Services to Dawid Kruiper, we attempt utilizing a motivatedstaff, to develop Dawid Kruiper increasingly as a pleasant, safe and affordable living and workplace for its residents and a hospitable relaxed visiting place for its visitors*."

According to the IDP 2017 / 2022 (2018 / 2019), the focus of the IDP is still on the present (status quo) situation, but with strategic development, objectives set the focus is set to shift to the future. Development objectives were aligned with national imperatives and frameworks and in line with the powers and functions of themunicipality.

Guidelines governing these development objectives and strategies include the national key priority (focal) areas:

» Focal Area 1: Basic Service Delivery
» Focal Area 2: To promote Local Economic Development
» Focal Area 3: To promote municipal Transformation and Organisational Development
» Focal Area 4: Ensure Financial Viability and Management
» Focal Area 5: Ensure Good Governance and Public Participation
» Focal Area 6: Spatial Development Framework

The implementation of Upington Crematorium expansion would contribute positively towards several of the developmentpriorities and development objectives identified by the Dawid Kruiper LM, specifically with regards to economic growth and job creation, and could also contribute towards the LM achieving some of the otherdevelopment priorities and objectives through the provision of increased revenue which would enable municipal spending.

contributions towardslocal economic development and social upliftment, to be focused on benefitting local communities within the vicinity of the project site.

(d) Approved Structure Plan of the Municipality	**YES**	~~NO~~	Please explain
Unknown.			
(e) An Environmental Management Framework (EMF) adopted by the Department (e.g. Would the approval of this application compromise the integrity of the existing environmental management priorities for the area and if so, can it be justified in terms of sustainability considerations?)	**YES**	~~NO~~	Please explain
No EMF was identified. However, the proposed development is simply an expansion to a development that has obtained prior approval in terms of environmental legislation.			
(f) Any other Plans (e.g. Guide Plan)	**YES**	~~NO~~	Please explain
The crematorium and burner operate under the guidance of the South African Local Government Association in Good Practices in Cemeteries Management as well as Macro Burn's Cremators Engineering Specifications			

• **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)?**	**YES**	~~NO~~	Please explain
As mentioned, the IDP focuses on growth and development, and the crematorium expansion has a positive impact on the IDP. The facility is already built and fully operational, some of their business comes from the neighbouring country of Namibia, which also provides an influx of capital into the region through employment creation.			
• **Does the community/area need the activity and the associated land use concerned (is it a societal priority)? (This refers to the strategy as well as the local level (e.g. development is a national priority, but within a specific local context it could be inappropriate.)**	**YES**	~~NO~~	Please explain
Spatial development strategies, as highlighted in the PSDF, includes the improvement of basic services. One of the key issues identified in the province and especially in the ZF Mgcawu District Municipality is the lack of sufficient cemeteries to cater for the increased mortality rate. These strategic development strategies are in line with the Global Sustainable Development guidelines to ensure that the needs of the current generation are met without exploiting resources that will be required by future generations. Therefore, as the proposed development includes the construction expansion of the crematorium it will not only create employment opportunities but also lessen the strain on expanding cemetery spaces which have a higher overall environmental impact			
• **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.)**	**YES**	~~NO~~	Please explain
Electricity: Provided through municipal structures and systems **Water**: Municipal Supply **Sewage**: The property makes use of a Septic tank system for sewage **Solid waste**: Solid waste, generated during construction activities, will be consolidated and disposed of by the local municipality. Waste receipts will be obtained by the applicant as proof of safe disposal. **Stormwater Management:** N/A **Roads:** As per the Engineering Services Investigation Report (Appendix D5), access to the proposed development will be via Keidebees Meet, no access restrictions are in place			

• **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.)**	~~YES~~	**NO**	Please explain
N/A			
• **Is this project part of a national programme to address an issue of national concern or importance?**	~~YES~~	**NO**	Please explain
N/A			
• **Do location factors favour this land use (associated with the activity applied for) at this place? (This relates to the contextualisation of the proposed land use on this site within its broader context.)**	**YES**	~~NO~~	Please explain
The proposed site for expansion is currently developed and no further development would take place, it is conveniently located and can provide adequate services.			
• **Is the development the best practicable environmental option for this land/site?**	**YES**	~~NO~~	Please explain
The site is currently being used for cremation purposes, it is located on the outskirts of development and adjacent to a cemetery, the land use for this development adequately suites what the expansion entails.			
• **Will the benefits of the proposed land use/development outweigh the negative impacts?**	**YES**	~~NO~~	Please explain
Adpoint trading aims to facilitate the Municipality's aims to promote socio-economic development through the improvement of basic services within Upington. Therefore, the expansion of the proposed development is in line with the IDPs key strategic and development objectives, namely, to improve and maintain basic service delivery through specific infrastructural projects.			
• **Will the proposed land use/development set a precedent for similar activities in the area (local municipality)?**	~~YES~~	**NO**	Please explain
If the expansion is granted no further crematoriums will be required in the area, furthermore the need to expand the existing cemetery will decrease. As per the Integrated Development Plan (IDP) 2019/2020, a key performance indicator includes the provision of infrastructure and basic service.			
• **Will any person's rights be negatively affected by the proposed activity/ies?**	~~YES~~	**NO**	Please explain
The rights of residents, local farmers, the community etc. are not expected to be negatively impacted as the proposed activity is expected to have a positive impact on the surrounding area. All interested and affected parties will be informed of all planning and phases of the proposed expansion development and their comments will be captured in the comments and responded to accordingly.			

• **Will the proposed activity/ies compromise the "urban edge" as defined by the local municipality?**	~~YES~~	**NO**	Please explain
The activity is not expected to compromise the urban edge.			
• **Will the proposed activity/ies contribute to any of the 17 Strategic Integrated Projects (SIPS)?**	**YES**	~~NO~~	Please explain
The project may contribute to the following SIPS (note **bold and underlined text** represents aspects of SIPS relevant to the proposed development): • **SIP 11:** Agri-logistics and rural infrastructure (Improve investment in agricultural and **rural infrastructure that supports the expansion of production and employment**, small-scale farming and rural development, including facilities for storage, transport links to main networks, fencing of farms, irrigation schemes to poor areas, improved R&D on rural issues (including expansion of agricultural college colleges), processing facilities, aquaculture incubation schemes, and rural tourism infrastructure; • **SIP 18:** Water and sanitation infrastructure (Provide for **new infrastructure**, rehabilitation and **upgrading of existing infrastructure**, as well as improve management of water infrastructure).			
• **What will the benefits be to society in general and the local communities?**			Please explain
The development is largely favoured by the community as it will reduce the costs of travelling out of the district for cremation facilities. It will lessen the financial burden placed on families due to extended waiting periods in mortuaries as crematoriums in the surrounding areas are more often than not, operating at capacity. Cremation reduces the body to cremated remains within a matter of hours whereas traditional burial follows the process of slow and natural decomposition. The development will further reduce the pressure on land space as burial space has been placed under severe strain within recent years and this is a problem that's experienced on a national level. Burial places a greater strain on the natural environment than cremation. The provision of cremation services would therefore constitute a strategic investment that will generate social benefits through the provision of needed cremation services to the community.			
• **Any other need and desirability considerations related to the proposed activity?**			Please explain
N/A			
• **How does the project fit into the National Development Plan for 2030?**			Please explain
The proposed development falls in line with the National Development Plan 2030[4], with regards to promoting development. Moreover, the National Development Plan aims to promote the development of infrastructure that supports improving public services.			
• **Please describe how the general objectives of Integrated Environmental Management as set out in section 23 of NEMA have been taken into account.**			
The general objectives of Integrated Environmental Management (namely to promote sustainable development through the integration of social, economic and environmental features as well as to address intra- and inter-generational equity) have been taken into account through the following: • The actual and potential impacts of the activity on the environment, socio-economic conditions, and cultural heritage, relative to the proposed site for development, have been identified, predicted, evaluated, as well as the risks and consequences of these impacts, site and technology alternatives. The proposed mitigation measures of activities, with a view to minimize negative impacts on the environment, socioeconomic conditions, and any cultural			

[4]National Development Plan, 2030. Accessed at https://www.gov.za/sites/default/files/Executive%20Summary-NDP%202030%20-%20Our%20future%20-%20make%20it%20work.pdf

heritage, while maximizing benefits and promoting compliance with the principles of environmental management, were assessed (please refer to Section D).

- The potential impacts associated with the expansion of the Crematorium Project on the environment have been identified, assessed, and mitigation measures proposed to reduce these impacts (Appendix F).
- The identification of potential temporary employment opportunities to promote socio-economic development in the local community.
- Comprehensive and adequate opportunity for public participation is ensured through the public participation process thereby integrating intra- and inter-generational input (Please refer to Appendix E).
- The environmental features of the proposed site for development have been considered and evaluated in the management and decision-making of the activity. An EMP has been compiled and included (Appendix G) relative to the proposed activity, along with potential impacts and mitigation measures (as well as conditions stipulated by applicable state authorities which will be included), must be adhered to and implemented during the application phase of activity to reduce and mitigate identified impacts.

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

The principles of environmental management, as per section 2 of the NEMA, have been taken into account. The principles about this activity include:

- **Socioeconomic development**: People and their needs have been placed at the forefront while serving their physical, psychological, developmental, cultural, and social interests – the proposed activity is not expected to have any adverse effect on people. Temporary job employment and skills-development opportunities will be created.
- **Sustainable development**: Development must be socially, environmentally and economically sustainable. The environmental impacts associated with the proposed development will be minimized by implementing the proposed mitigation measures as per the EMPr (Appendix G). The identified impacts will be negated through good engineering practices and environmental advice. The social, economic and environmental impacts of the proposed activity have been considered, assessed and evaluated, including the disadvantages and benefits, and proposed mitigation measures that will be implemented (Appendix F).
- **Social and Environmental Awareness**: where waste cannot be avoided, sustainable waste management practices will be implemented. This includes the consolidation of generated waste, the separation of general and hazardous waste, separation and subsequent recycling of recyclable waste, safe storage of waste, and the disposal of stored waste at a registered disposal facility. Waste disposal receipts will be obtained as proof of safe disposal.
- **Responsible use and handling of non-renewable resources**: the storage and handling of non-renewable resources will be carried out responsibly in an environmentally and socially safe manner. No exploitation of non-renewable natural resources occurs with the proposed activity.
- **Environmental rights**: The negative impacts on the environment and people's environmental rights have been predicted, identified, minimized, mitigated and prevented where applicable (**Appendix F**). The consequences of decisions on all aspects of the environment and all people in the environment have been considered, by pursuing what is considered the best practicable environmental option.
- **Transparent Public Participation Process:** The interests, needs and values of all interested and affected parties will be considered in decisions through the Public Participation Process (**Appendix E**).
- **Waste Management:** Sustainable waste management practices, namely reducing, re-using, and recycling, waste generated on-site will be implemented. This will reduce the proposed construction's impact, regarding waste generation and disposal, on the surrounding environment.

11) 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

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

Title of legislation, policy or guideline	Applicability to the project	Administering authority	Date
National Environmental Management Act (NEMA) and the Environmental Impact Assessment (EIA) Regulations 2014	The National Environmental Management Act (Act 107 of 1998) (NEMA) is South Africa's overarching environmental legislation. It includes a set of principles that govern environmental management and against which all Environmental Management Programmes (EMPr) and actions are measured. These principles include and relate to sustainable development, protection of the natural environment, waste minimisation, public consultation, the right to an environment that is not harmful to one's health or wellbeing, and a general duty of care. The Environmental Impact Assessment (EIA) Regulations, 2014: GNR.982, R.983, and R.985 under Section 24 of the NEMA define the activities that require Environmental Authorisation and the processes to be followed to assess environmental impacts and obtain Environmental Authorisation. The environmental authorisation has required the expansion of the Crematorium facility [Refer to Section A, Paragraph 1(b) for detail of applicable listed activities]; therefore, this application is in line with the requirements of NEMA.	DENC	This Application
The National Environment Management: Air Quality Act 39 of 2004	To reform the law regulating air quality to protect the environment by providing reasonable measures for the prevention of pollution and ecological degradation and for securing ecologically sustainable development while promoting justifiable economic and social development	DEA and DENC	In this application
National Water Act, Act 36 of 1998	Standards and norms for the management and control of water use.	Department of Water and Sanitation (DWS)	N/A
National Environmental Management: Biodiversity Act 10 of 2004 (NEMBA)	To provide the framework, norms, and standards for the conservation, sustainable use and equitable benefit-sharing of South Africa's biological resources. Section 52 allows for the publication of a list of threatened ecosystems in need of protection. The list was published in Government Gazette No. 34809 Notice No. 1002, dated 9 November 2011.	DENC	N/A
National Heritage Resources Act, Act 25 of 1999 (NHRA)	For the protection of South African Heritage to nurture and conserve communities' legacy. The proposed site for development is above 5ha (5000m^2). Heritage Impact (HIA) and	SAHRA	N/A

	Paleontological Impact (PIA) Assessments have been conducted.		
The National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008	The law regulates waste management to prevent pollution and ecological degradation. Section 19 allows the Minister to publish a list of activities, which require a Waste Management License. The most recent list is published in Government Gazette 37083 Notice No. 921 dated 29 November 2013. It is unlikely that any activities carried out by the development will trigger a Waste Management Activity.	DEA and DENC	N/A
Integrated Environmental Management Information Series	Criteria to be used for evaluating environmental impacts of the proposed activity during the NEMA EIA application process (a copy of the Integrated Environmental Management Information Series can be accessed at https://www.environment.gov.za/documents/strategies/integrated_environmentalmanagement_eim).	DENC	This application
By-laws of Local Municipality and Z.F. Mgcawu District Municipality	To be adhered to during the construction and operational phase.	Local and District Municipalities	In progress

12) WASTE, EFFLUENT, EMISSION AND NOISE MANAGEMENT

a) Solid waste management

Will the activity produce solid construction waste during the construction/initiation phase?	**YES**	~~NO~~
If YES, what estimated quantity will be produced per month?	Unknown m^3	

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

Waste generated on-site during construction activities (concrete, plastic wrapping, and general waste) will be consolidated, adequately stored, and disposed of at a registered, municipal-approved waste disposal facility (with Municipal approval). Before disposal, general waste will be separated and recycled accordingly.

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

Waste generated on-site during construction activities (concrete, plastic wrapping, and general waste) will be consolidated, adequately stored, and disposed of at a registered, municipal-approved waste disposal facility (with Municipal approval). Before disposal, general waste will be separated and recycled accordingly.

Will the activity produce solid waste during its operational phase?	**YES**	~~NO~~
If YES, what estimated quantity will be produced per month?	Unknown m^3	

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

Solid waste will be disposed of at a municipal approved waste disposal site.

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

To be confirmed.

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

N/A

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?	~~YES~~	**NO**

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

Is the activity that is being applied for a solid waste handling or treatment facility?	~~YES~~	**NO**

If YES, then the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA. An application for a waste permit in terms of the NEM: WA must also be submitted with this application.

b) Liquid effluent

Will the activity produce effluent, other than normal sewage, that will be disposed of in a municipal sewage system?	~~YES~~	**NO**
If YES, what estimated quantity will be produced per month?	m^3	
Will the activity produce an effluent that will be treated and/or disposed of on-site?	~~YES~~	**NO**

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

Will the activity produce effluent that will be treated and/or disposed of at another facility?	~~YES~~	**NO**

If YES, provide the particulars of the facility:

Facility Name:			
Contact person:			
Postal address:			
Postal code:			
Telephone:		**Cell:**	
E-mail:		**Fax:**	

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

N/A

c) Emissions into the atmosphere

Will the activity release emissions into the atmosphere other than exhaust emissions and dust associated with construction phase activities?	**YES**	~~NO~~
If YES, is it controlled by any legislation of any sphere of government?	**YES**	~~NO~~

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:

The expansion of existing facilities or infrastructure for any process or activity where such expansion will result in the need for a permit or licence or an amended permit or licence in terms of national or provincial legislation governing the release of emissions, effluent or pollution, excluding—

(i) where the facility, infrastructure, process or activity is included in the list of waste management activities published in terms of section 19 of the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008) in which case the National Environmental Management: Waste Act, 2008 applies;

(ii) the expansion of existing facilities or infrastructure for the treatment of effluent, wastewater, polluted water or sewage where the capacity will be increased by less than 15 000 cubic metres per day; or

(iii) the expansion is directly related to aquaculture facilities or infrastructure where the wastewater discharge capacity will be increased by 50 cubic meters or less per day.

d) Waste permit

Will any aspect of the activity produce waste that will require a waste permit in terms of the NEM: WA?	~~YES~~	**NO**

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

e) Generation of noise

Will the activity generate noise?	**YES**	~~NO~~
If YES, is it controlled by any legislation of any sphere of government?	~~YES~~	**NO**

Describe the noise in terms of type and level:

Normal construction-related noise will occur but will be within construction hours as outlined in the EMPr and EA. The noise that will be generated is comparable to the noise of other filling stations of the same size which will be negligible.

13) WATER USE – (AADD: 119.3M³/DAY)

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

~~Municipal~~	~~Waterboard~~	~~Groundwater~~	~~River, stream, dam or lake~~	~~Other~~	**The activity will not use 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:	To be confirmed.	
Does the activity require a water use authorisation (general authorisation or water use license) from the Department of Water Affairs?	~~YES~~	**NO**

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

14) ENERGY EFFICIENCY

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

N/A

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

At present no viable alternative energy sources are available.

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):	

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

- Has a specialist been consulted to assist with the completion of this section? ~~YES~~ **NO**

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

Property description/physical address:	**Province**	Northern Cape Province	
	District Municipality	Z. F. Mgcawu District Municipality	
	Local Municipality	!Kheis Local Municipality	
	Ward Number(s)	ǁKhara Hais Ward 13	
	Farm name and Number	Erf 16450, Upington	
	SG Code	Erf 16450, Upington	C02800030000011300000
	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:	Business Crematorium		
	In instances where there is more than one current land-use zoning, please attach a list of current land use zonings that also indicate which portions each use pertains to, to this application.		
Is a change of land-use or a consent use application required?		~~YES~~	**NO**

1) GRADIENT OF THE SITE

Indicate the general gradient of the site.

Alternative S1 (Preferred):

~~Flat~~	**1:50 – 1:20 Average**	~~1:20 – 1:15~~	~~1:15 – 1:10~~	~~1:10 – 1:7,5~~	~~1:7,5 – 1:5~~	~~Steeper than 1:5~~

Alternative S2 (if any):

~~Flat~~	~~1:50 – 1:20 Average~~	~~1:20 – 1:15~~	~~1:15 – 1:10~~	~~1:10 – 1:7,5~~	~~1:7,5 – 1:5~~	~~Steeper than 1:5~~

Alternative S3 (if any):

~~Flat~~	~~1:50 – 1:20 Average~~	~~1:20 – 1:15~~	~~1:15 – 1:10~~	~~1:10 – 1:7,5~~	~~1:7,5 – 1:5~~	~~Steeper than 1:5~~

2) LOCATION IN LANDSCAPE

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

~~2.1 Ridgeline~~		~~2.4 Closed valley~~		~~2.7 Undulating plain / low hills~~	
~~2.2 Plateau~~		~~2.5 Open valley~~		~~2.8 Dune~~	
~~2.3 Side slope of hill/mountain~~		2.6 Plain	**X**	~~2.9 Seafront~~	
~~2.10 At sea~~					

3) GROUNDWATER, SOIL AND GEOLOGICAL STABILITY OF THE SITE

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

	Alternative A1		**Alternative A2**		**Alternative A3**		**Alternative A4**	
Shallow water table (less than 1.5m deep)	~~YES~~	**NO**	YES	NO	YES	NO	YES	NO
Dolomite, sinkhole or doline areas	~~YES~~	**NO**	YES	NO	YES	NO	YES	NO
Seasonally wet soils (often close to water bodies)	~~YES~~	**NO**	YES	NO	YES	NO	YES	NO
Unstable rocky slopes or steep slopes with loose soil	~~YES~~	**NO**	YES	NO	YES	NO	YES	NO
Dispersive soils (soils that dissolve in water)	~~YES~~	**NO**	YES	NO	YES	NO	YES	NO
Soils with high clay content (clay fraction more than 40%)	~~YES~~	**NO**	YES	NO	YES	NO	YES	NO
Any other unstable soil or geological feature	~~YES~~	**NO**	YES	NO	YES	NO	YES	NO
An area sensitive to erosion	~~YES~~	**NO**	YES	NO	YES	NO	YES	NO

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

4) GROUNDCOVER

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

~~Natural veld - good condition~~	~~Natural veld with scattered aliens~~	~~Natural veld with a heavy alien infestation~~	~~Veld dominated by alien species~~	~~Gardens~~
~~Sport field~~	**Cultivated land (Previously Cultivated)**	~~Paved surface~~	**The building or other structure**	**Bare soil**

Please see Appendix B for Site Photographs and further descriptions of site vegetation.

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.

N/A

5) SURFACE WATER

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

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

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

N/A

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 a description of how this influences the application or may be impacted upon by the application:

Natural area	~~Dam or reservoir~~	~~Polo fields~~
Low density ~~residential~~	~~Hospital/medical centre~~	~~Filling station~~ H *
Medium-density residential	~~School~~	~~Landfill or waste treatment site~~
~~High density residential~~	~~Tertiary education facility~~	~~Plantation~~
~~Informal residential~~ A	~~Church~~	~~Agriculture~~
~~Retail commercial & warehousing~~	~~Old age home~~	**River, stream or wetland**
~~Light industrial~~	~~Sewage treatment plant~~ A	~~Nature conservation area~~
~~Medium industrial~~ AN	~~Train station or shunting yard~~ N	~~Mountain, koppie or ridge~~
~~Heavy industrial~~ AN	~~Railway line~~ N	~~Museum~~
~~Power station~~	~~Major road (4 lanes or more)~~ N	~~Historical building~~
~~Office/consulting room~~	**Airport** N	~~Protected Area~~
~~Military or police base/station/compound~~	~~Harbour~~	**Graveyard**
~~Spoil heap or slimes dam~~ A	~~Sport facilities~~	~~Archaeological site~~
~~Quarry, sand or borrow pit~~	**Golf course**	~~Other land uses (describe) –~~

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

The Airport is approximately 5km Northwest of the crematorium, seeing as the facility is currently operational and causing no significant impact on the airport no additional impact is predicted by adding capacity to the facility

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:

N/A

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:

N/A

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

Critical Biodiversity Area (as per provincial conservation plan) **(Refer to Figure 7 below)**	~~YES~~	**NO**
A core area of a protected area?	~~YES~~	**NO**
A buffer area of a protected area?	~~YES~~	**NO**
The planned expansion area of an existing protected area?	~~YES~~	**NO**
Existing offset area associated with a previous Environmental Authorisation?	~~YES~~	**NO**
A buffer area of the SKA?	~~YES~~	**NO**

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

7) CULTURAL/HISTORICAL FEATURES

Are there any signs of culturally or historically significant elements, as defined in section 2 of the National Heritage Resources Act, 1999, (Act No. 25 of 1999), including Archaeological or paleontological sites, on or close (within 20m) to the site? If YES, explain:	~~YES~~	**NO**
	Uncertain	
The graveyard located adjacent to the property is without the 20m boundary and no items or features of historical significance is located on the site.		

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:
N/A

Will any building or structure older than 60 years be affected in any way?	~~YES~~	**NO**
Is it necessary to apply for a permit in terms of the National Heritage Resources Act, 1999 (Act 25 of 1999)?	~~YES~~	**NO**
If YES, please provide proof that this permit application has been submitted to SAHRA or the relevant provincial authority.		

8) SOCIO-ECONOMIC CHARACTER

a) Local Municipality

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

Level of unemployment:

As per the!Kheis Local Municipality, Land Development Plan/ Rural Spatial Development Framework, (2014), the unemployment level in 1996 was 21.6%, which decreased by -1.5% (2001) and subsequently increased by 8% to a total of 28.1% in 2011. See a comparison of the unemployment rate between!Kheis Local Municipality (KLM), ZF Mgcawu District Municipality (ZFM DM), and the Northern Cape Province (NCP) are below. Although the unemployment rate in KLM was below the ZFM DM and Provincial averages between 1996-2001, the unemployment rate was higher than the ZFM DM and equal to the Provincial average in 2011.

Table 1. Unemployment rate comparisons between KLM, ZFM DM, and the NCP.

Unemployment Rate	1996	2001	2011
KLM	21,6	20,1	28,1
ZFM DM	24,5	26,5	21,0
NCP	32,4	35,7	28,1

Although the SDF (2014) does not stipulate the employment rate of Upington, neighbouring informal townships were identified. For example, in 2011 the KLM settlements, namely Wegdraai (32.5%), Topline (42.8%), and Boegoeberg (51.7%) possessed the lowest employment rates in the KLM (see Table 2 below). These averages were below the total employment rate for the KLM.

Table 2. Official employment status of those aged between 15 and 64 per settlement in the!Kheis LM (2011)[5].

Settlement	Employed (%)	Unemployed (%)	Discouraged work-seeker	Other not economically active*
Grootdrink	82,3	17,7	4	35
!Kheis NU	89,4	10,6	3	30
Topline	42,8	57,2	6	41
Wegdraai	32,5	67,5	9	47
Groblershoop	77,0	23,0	6	41
Boegoeberg	51,7	48,3	6	42
KLM	**72**	**28,0**	**5**	**39**
ZFM DM	80,8	19,2	3	38
Northern Cape	72,6	27,4	5	42

* 'Other not economically active': People aged between 15 and 64 who are not available for work such as full-time scholars and students, full-time homemakers, those who are retired and those who are unable or unwilling to work

Labour participation rate in the economy is low (ranges between 43.8-66.5%) whereas Topline, Wegdraai and Boegoeberg have the highest unemployment rate along with the lowest rate of labour force participation.

Table 3. Several people are unemployed at a Settlement, Local (!Kheis) and District (ZFM) Municipality, and Provincial (NC) level.

	Employed	Unemployed	Labour force	Unemploy-ment rate	LFPR*
Grootdrink	723	156	879	17,7%	60,5%
!Kheis NU	1435	170	1605	10,6%	66,5%
Topline	193	258	451	57,2%	52,7%
Wegdraai	173	359	532	67,5%	43,8%
Groblershoop	1252	373	1625	23,0%	52,9%
Boegoeberg	272	254	526	48,3%	51,6%
KLM	**4047**	**1570**	**5617**	**28,0%**	**56,0%**
ZFM DM	74449	17696	92145	19,2%	58,6%
Northern Cape	282791	106723	389514	27,4%	52,9%

*LFPR: Labour Force Participation Rate

Therefore, with regards to the rate of unemployment and labour force participation rates, the proposed development will promote socio-economic development within the KLM through employment and skills development.

Economic profile of local municipality:

The main sectors (and occupations) contributing to the GDP of the ZF Mgcawu District Municipality are agriculture, forestry, and fishing (see Figure 8 below). Agriculture-based occupations are generally in the form of seasonal manual labour on farms and are concentrated in areas along the Orange River. The lowest sector contributing to the ZFM DM's GDP was mining and electricity production. The development, is located near the Orange River and associated activities presenting employment opportunities may include but are not limited to, agricultural, construction, and recreational employment opportunities.

[5] Land Development Plan/ Rural Spatial Development Framework, 2014.

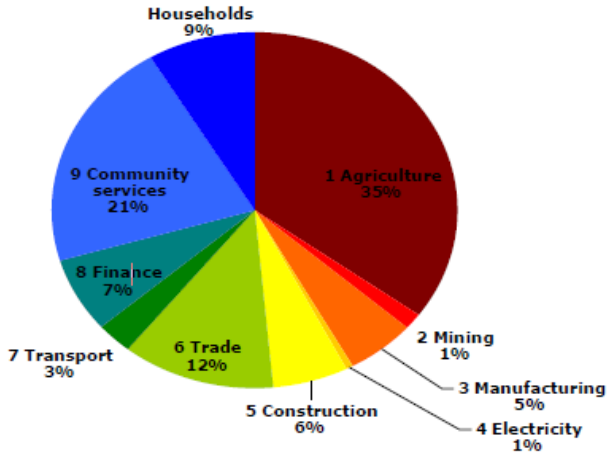
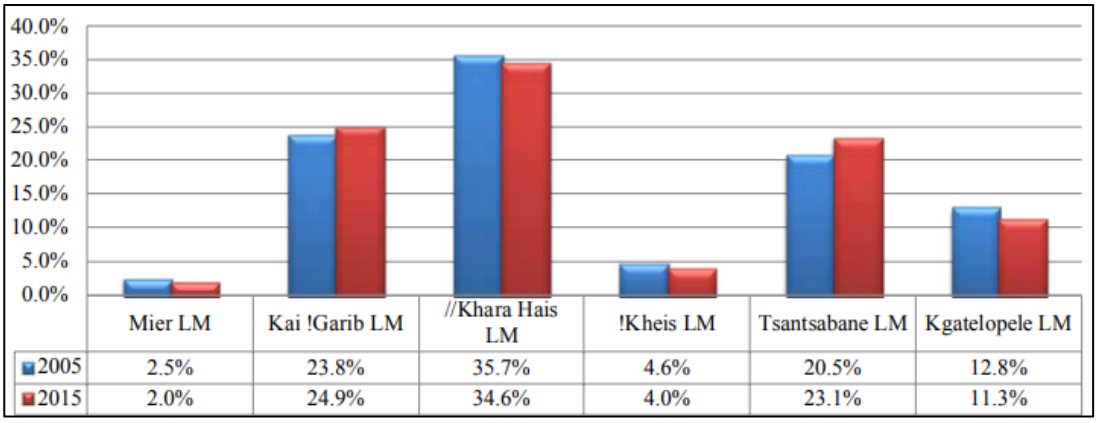


Figure 5. Employment composition, relative to various sectors, within the!Kheis Local Municipality contributing to the ZF Mgcawu DM's GDP.

As per the Comparative Analysis for the ZF Mgcawu District Municipality, (2017)[6], KLM was the second-lowest contributing LM to the overall GDP of the ZF Mgcawu DM between 2005 and 2015 (see Figure 9 below).



	Mier LM	Kai !Garib LM	//Khara Hais LM	!Kheis LM	Tsantsabane LM	Kgatelopele LM
2005	2.5%	23.8%	35.7%	4.6%	20.5%	12.8%
2015	2.0%	24.9%	34.6%	4.0%	23.1%	11.3%

Figure 6. GDP contributions of Local Municipalities to the overall GDP of the ZF Mgcawu DM. Source: Global Insight, (2016) – version 933, 2.5v.

[6] Comparative Analysis for the ZF Mgcawu District Municipality, 2017, Northern Cape Provincial Treasury.

Level of education:

Within the KLM, the number of individuals aged 20 years and older, with no schooling decreased from 26.8% (1996) to 22.2% (2001) to 13.3% (2011). Although the percentage of individuals with no schooling decreased over time, these percentages are higher compared with the ZF Mgcawu DM and the Northern Cape Province (see Table 4 below). Although the number of individuals who received Grade 12 Matric certification increased over time, the percentage of individuals were still lower than the ZF Mgcawu DM statistics in 2011 (see below).

Table 4. Percentage of population, within the!Kheis Local Municipality, aged 20 years and older, relative to the level of education attained.

	1996	2001	2011
KLM			
No schooling	26,8	22,2	13,3
Complete primary	11,6	10,8	9,8
Grade 12	6,6	10,4	13,8
Higher	4,0	3,8	4,5
ZFM DM			
No schooling	19,8	16,5	9,4
Complete primary	5,9	9,3	7,3
Grade 12	6,5	15,8	21,3
Higher	3,9	4,7	3,2
Northern Cape			
No schooling	22,7	19,3	11,1
Complete primary	8,5	8,0	6,4
Grade 12	11,1	15,8	22,2
Higher	6,2	5,9	7,5

b) Socio-economic value of the activity

What is the expected capital value of the activity on completion?	Not Yet Determined*	
What is the expected yearly income that will be generated by or as a result of the activity?	Not Yet Determined*	
Will the activity contribute to service infrastructure?	**YES**	~~NO~~
Is the activity a public amenity?	**YES**	~~NO~~
How many new employment opportunities will be created in the development and construction phase of the activity/ies?	Not Yet Determined*	
What is the expected value of the employment opportunities during the development and construction phase?	Not Yet Determined*	
What percentage of this will accrue to previously disadvantaged individuals?	~ 100%	
How many permanent new employment opportunities will be created during the operational phase of the activity?	Not Yet Determined*	
What is the expected current value of the employment opportunities during the first 10 years?	Not Yet Determined*	
What percentage of this will accrue to previously disadvantaged individuals?	Not Yet Determined*	

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. 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
Critical Biodiversity Area (CBA)	~~Ecological Support Area (ESA)~~	~~Other Natural Area (ONA)~~	~~No Natural Area Remaining (NNR)~~	CBA – Critical Biodiversity Area 2

b) Indicate and describe the habitat condition on site (will be described once assessments have been received)

Habitat Condition	Percentage of habitat condition class (adding up to 100%)	Description and additional Comments and Observations (including additional insight into the condition, e.g. poor land management practises, presence of quarries, grazing, harvesting regimes etc).
Natural		
Near Natural (includes areas with low to moderate levels of alien invasive plants)	~27.73%	**The site I**: only site supporting notable indigenous vegetation. Due to the topography of the area, namely above the Orange River floodplain, the vegetation was characteristic of Bushmanland Arid Grassland compared with Lower Gariep Alluvial vegetation; The comprised of open, trampled terrain with sparse shrubland and supported a low species diversity
Degraded (includes areas heavily invaded by alien plants)		
Transformed (includes cultivation, dams, urban, plantation, roads, etc)	~72.26%	Comprised of previously established buildings and working areas as well as and areas of physical disturbance including excavated areas and areas where waste (general and hazardous) has been stored

c) Complete the table to indicate:

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

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

Please note that a drainage line is located adjacent to and touches the boundary of the proposed site for development. Thus, a section of the drainage line is located within the proposed site for development.

d) Please describe 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)

BIODIVERSITY

An NFEPA wetland, associated with the Orange River, is located within 1.5km of the proposed site.

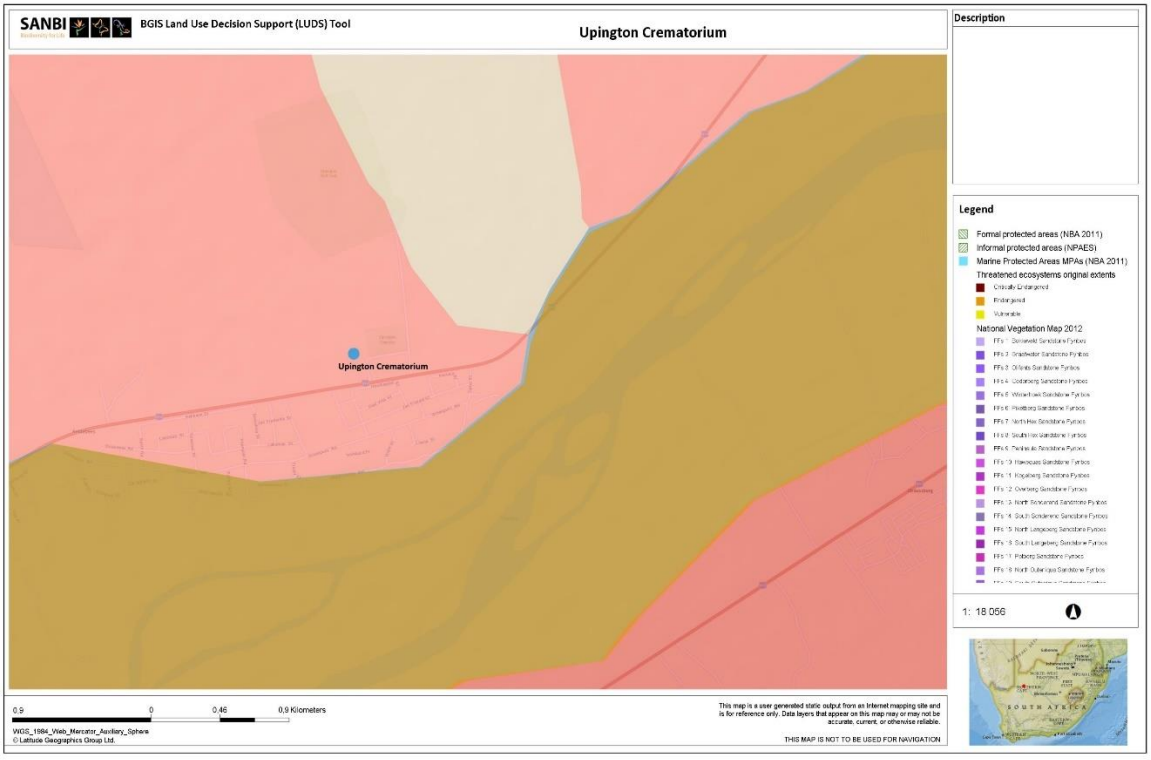


Figure 7: Biodiversity Sensitivity Map (Sours LUDS 2021)

Vegetation

the proposed site is classified as either disturbed or transformed and is comprised of a very dry and reduced vegetation layer. The area of interest falls within the Kalahari Karroid Shurubland.

Figure 8: Vegetation map indicating the development footprint in blue

Critical Biodiversity Area priority network (Appendix A4)

According to the 2016 Northern Cape Critical Biodiversity Areas[7], the site is located within a CBA2. The proposed development will not result in the clearance of any vegetation as all development is contained within an existing building.

Plant species of conservational importance:

Threatened and Protected plant species

In the Northern Cape, species of conservation concern are also protected in terms of national and provincial legislation, namely:

- **The National Environmental Management:** Biodiversity Act, Act 10 of 2004, provides for the protection of species through the "Lists of critically endangered, endangered, vulnerable and protected species" (GN. R. 152 of 23 February 2007).
- **National Forest Act, Act 84 of 1998**, provides for the protection of forests as well as specific tree species through the "List of protected tree species" (GN 908 of 21 November 2014).
- **Northern Cape Nature Conservation Act, Act of 2009**, provides for the protection of "specially protected species" (Schedule 1), "protected species" (Schedule 2) and "common indigenous species" (Schedule 3).

The Red List of South African Plants online provides up to date information on the national conservation status of South Africa's indigenous plants (SANBI, 2015).

- No red-listed species was observed.

[7] http://bgisviewer.sanbi.org/Html5Viewer/Index.html?configBase=http://bgisviewer.sanbi.org/Geocortex/Essentials/REST/sites/2016_NorthernCape_CBA/viewers/Northern_Cape/virtualdirectory/Resources/Config/Default&user=&extent=&layerTheme=

NEM: BA protected plant species

The National Environmental Management: Biodiversity Act, Act 10 of 2004, provides for the protection of species through the "Lists of critically endangered, endangered, vulnerable and protected species" (GN. R. 152 of 23 February 2007).

- No **NEM: BA** protected species was observed.

Aquatic ecosystems

No wetland is present within the proposed site for development however, a wetland (associated with the Orange River) is located within 1km of the proposed site for development. There will not be a need for the construction of a formalised stormwater conduit.

The Orange River is protected from any contamination from the Gariep Township to a certain degree. The irrigation canal was constructed underneath the drainage line where stormwater flows within the drainage line. The stormwater will flow across the dirt road and into a cut-off trench, subsequently flowing into a concrete gulley and then the Orange River.

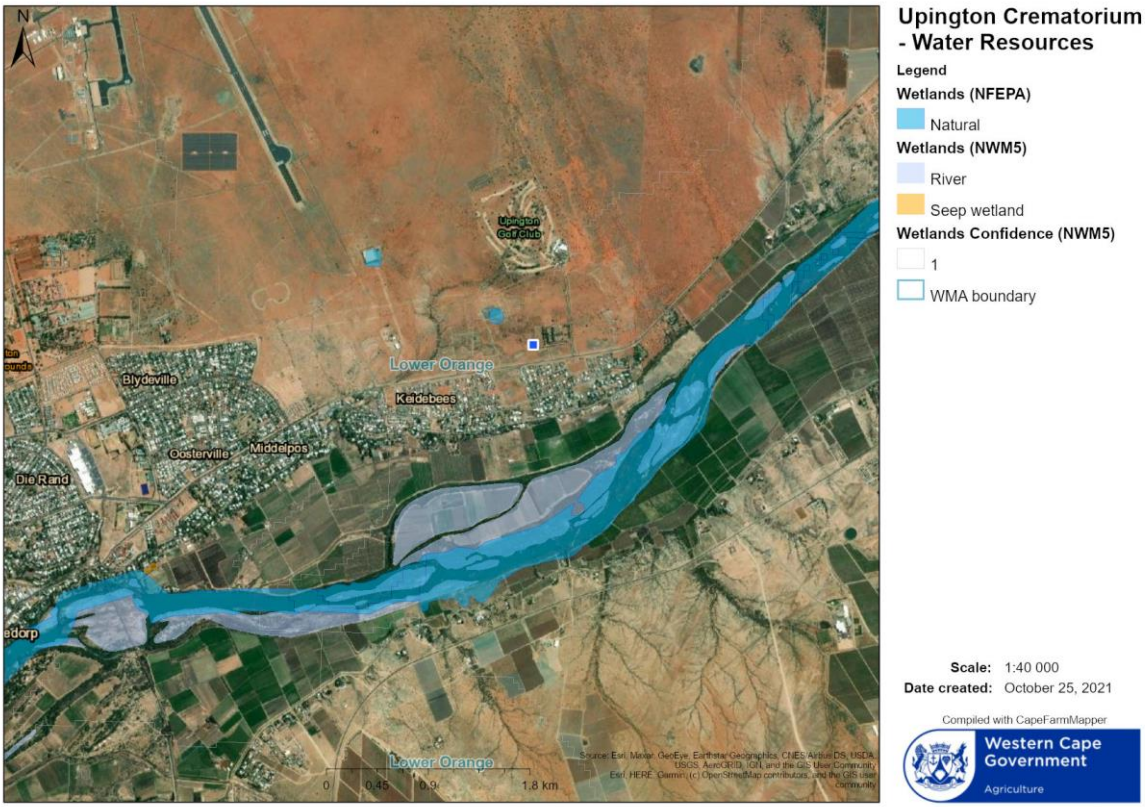


Figure 10. Wetland (associated with the Orange River) located within 1km of the proposed site for development

SECTION C: PUBLIC PARTICIPATION

1) ADVERTISEMENT AND NOTICE

Publication name	**The Gemsbok**
Date published	**4th August 2021**
Site notice position	
Entrance to Upington Crematorium	
Entrance to Upington Cemetery	
Eskom Sub Station Gardonia	
Entrance to Community Hall	
Along the Access Road on a post	
Southern Border of the proposed site for development	
Date placed	29th July 2021

Include proof of the placement of the relevant advertisements and notices (Refer to 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.

Initial PPP (Refer to Appendix E1)

- An advert was placed in the local newspaper (The Gemsbok) which was published on the 4th of August for a 30-day comment period. Refer to App. E1.1.
- Posters were placed on the public notice boards Dawid Kruiper Local Municipality, public notice board, entrance to the crematorium, entrance to the community hall/ sporting complex, and at the southern border of the proposed site for development (see Appendix E.1).
- Adjacent landowners/ occupiers were notified via letter drops.
- The landowner was contacted to assist with identifying occupiers of land.
- An initial register of possible interested and affected parties was compiled (Refer to App. E2.1)
- Site visits were performed to notify relevant personnel as well as identify environmental sensitivities associated with the proposed site of development.
- A Comments and Response Report (C&R Report) was compiled to address comments raised during the initial stage of public participation (Refer to App E1.3).

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

Title, Name and Surname	Affiliation/ key stakeholder status	Contact details (tel number or e-mail address)
Adpoint Trading	Landowner	Tell: 083 443 7344 Fax: Email: kottiekotze7@gmail.com
The Municipal Manager	ZF Mgcawu District Municipality	Tel: 054 461 6700 / 055 461 6700 Fax: 027 712 1635 Email: mm@kaigarib.gov.za / Tgalloway@zfm-dm.gov.za
Please refer to Appendix E2 and E4 for the Register of I&AP's		

Include proof that the key stakeholder received written notification of the proposed activities (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 (Please See Appendix E3)

Summary of main issues raised by I&APs	Summary of response from EAP
No comments were raised during the public participation period, no objections were filed during the mail drop sessions.	N/A

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 comments and response report as prescribed in the EIA regulations and be attached to the Final BAR as Appendix E3.

Please refer to Appendix E3 for the comments and response report.

5) AUTHORITY PARTICIPATION

Authorities and organs of state identified as key stakeholders:

Authority/Organ of State	Contact person (Title, Name and Surname)	Tel No	Fax No	e-mail	Postal address
Please refer to Appendix E2 & E4					

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 before the commencement of the public participation process.

A list of registered I&APs must be included in 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.

Please see Appendix F for Impact Assessment and Scoring Matrix.

Activity	Impact summary	Significance	Proposed mitigation
Alternative 1 (preferred alternative)			
Geographical and physical	***Direct impacts:***	Medium/ Low	- Implement EMP; - Minimise footprint; - ECO monitoring; - Waste management.
	Indirect impacts:	Low	
	Cumulative impacts: *After mitigation*	Low	
Biological: *(vegetation, protected species, CBA's, watercourse impacts)*	***Direct impacts:***	Low	- All construction must be done following an approved construction and operational phase Environmental Management Plan (EMP), which must include the recommendations made in this report. - A suitably qualified Environmental Control Officer must be appointed to monitor the construction phase in terms of the EMP and any other conditions about specialist studies. - Lay-down areas or construction sites must be located within the construction footprint. - No clearing of any area outside of the construction footprint may be allowed. - All waste must be removed to a Municipal approved waste disposal site. - An integrated waste management approach must be implemented during construction. Construction-related general and hazardous waste may only be disposed of at Municipal approved waste disposal sites. - The Municipality must ensure that adequate waste and sewerage facilities and or services are functional
	Indirect impacts:	Low	
	Cumulative impacts: *After mitigation*	Low positive	
Sewage Management	***Direct impacts:***	LOW	All sewer infrastructure is present and existing. The Municipality must ensure that adequate waste and sewerage facilities and or services are functional to service this community.
	Indirect impacts:	LOW	
	Cumulative impacts: *After mitigation*	Low	

Activity	Impact summary	Significance	Proposed mitigation
Alternative 1 (preferred alternative)			
Watercourse	***Direct impacts:***	N/A	No water courses were located near or close to the development footprint, again it must be noted that no construction will take place and the application is for the additional burner that will be installed in the facility.
	Indirect impacts:	N/A	
	Cumulative impacts: *After mitigation*	N/A	
Socio-economic	***Direct impacts:***	Medium/low	The expansion of the crematorium will create employment and skills development opportunities during the operational phase. This will upskill local community members and lower the high unemployment rate within the !Kheis LM. No severe impacts on personal well-being are anticipated. The construction phase will be fast-tracked to ensure the minor impacts faced, are short-lived and the crematorium is speedily established. There is anticipated air emissions that will be generated by the burning of human remains however there is no anticipated impact on human health or wellbeing.
	Indirect impacts:	Medium	
	Cumulative impacts: *After mitigation*	Low (positive)	
Cultural Historical	***Direct impacts:***	N/A	No significant heritage sites or features were identified within the proposed site for development.
	Indirect impacts:	N/A	
	Cumulative impacts: *After mitigation*	N/A	
Noise impact	***Direct impacts:***	Low	Any noise generated by construction and operational activities will be a temporary impact however, the following mitigation measures will be implemented: - A complaints register must be maintained on-site. Any complaints received must be responded to and rectified accordingly. The ECO must be notified of any complaints; - Working hours must be limited to and strictly adhered to standard daylight working hours (08h00-17h00)
	Indirect impacts:	Low	
	Cumulative impacts: *After mitigation*	Low	
Visual impact	***Direct impacts:***	Low	The extent of the property will not be visible to commuters utilizing the road, some impact may be experienced from the additional air emissions, this is however advised to be mitigated.
	Indirect impacts:	Low	
	Cumulative impacts: *After mitigation*	Low negative	
Ambient Air Quality	***Direct impacts:***	High	Atmospheric pollutants in the exhaust gas include PM, CO, NO2, Hg and SO2. Emissions may result in a reduction in local ambient air quality with consequent health and nuisance impacts.
	Indirect impacts:	Medium	
	Cumulative impacts: *After mitigation*	Medium	

Activity	Impact summary	Significance	Proposed mitigation
Alternative 1 (preferred alternative)			
No-go option			
The "No-Go" option: Potential impact associated with the No-Go alternative.	***Direct impacts:***	Low	The vegetation present on site will remain as is. No development will take place and this refers to the inclusion of an additional burner.
	Indirect impacts:	Low	
	Cumulative impacts: *After mitigation*	Low	

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 occurring and the significance of impacts.

Please refer to Appendix F for the full Impact Assessment and proposed Mitigation Measures.

Upington Crematorium

A new cremator is proposed, equipped with 2 gas burners. The primary chamber will operate between 750 and 900 °C while the second chamber will operate between 800 and 1 100 °C. The project has made provision for gas storage tanks that are installed in a safe and locked location due to the explosive/combustible nature of LPG. The cremators will be equipped with stacks with a diameter of 600 mm and a height of 11.4 m to ensure the effective dispersion of pollutants produced during the cremation process.

Stack emission testing is generally considered to be the most accurate method for estimating emissions, as it entails the direct measurement of pollutant concentrations. In the absence of emission testing data, the alternate method is to use an activity number (in this case, the number of bodies cremated in a certain period) and apply appropriate emission factors to estimate emissions. The primary pollutants from the cremation of human remains are particulate matter, oxides of nitrogen (NOx), sulphur dioxide (SO2), carbon monoxide (CO), volatile organic compounds (VOC), mercury, other heavy metals organics and some persistent organic pollutants (POPs). Of these, only particulates (PM10 and PM2.5), NOX, SO2 and CO will be considered in this assessment since these pollutants are classified as priority pollutants in South Africa for which ambient air quality standards are in place.

There are no logical site or layout alternatives, which will either reduce construction, maintenance, or operational costs.

In the case of the crematorium, the activity is the number of cremations per year. Emissions increase with an increase in the number of bodies cremated.

MES and NAAQS, both regulatory mechanisms to govern emissions that may impact human health, have been published under NEM: AQA for nitrogen dioxide (NO2), particulate matter (PM10 and PM2.5), carbon monoxide (CO) and sulphur dioxide (SO2). The proposed crematorium must not exceed the applicable MES and NAAQS.

Currently, the site has been granted an air emissions licence for the operation of the first burner, additionally, a new air licence will be applied for incorporating the new emission volumes and activities.

the denc

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

Republic of South Africa

This Atmospheric Emission License issued to **AT Point Trading 80 Pty Ltd** in terms of section 41(1)(a) of the National Environmental Management: Air Quality Act, 2004 (Act No. 39 of 2004) in respect of Listed Activity **Category 8: Thermal Treatment of Hazardous & General Waste subcategory No. 8.2 Cremation & Veterinary waste incineration.** The Atmospheric Emission License has been issued on the basis of information provided in the company's application dated **06/03/2020** and information that became available during processing of the application.

The Atmospheric Emission License is valid until **1 March 2025**.

The reason issuance of the current license is **Renewal**.

The Atmospheric Emission License is issued subject to the conditions and requirements set out below which form part of the Atmospheric Emission License and which are binding on the holder of the Atmospheric Emission License **AT Point Trading 80 Pty Ltd**

1. ATMOSPHERIC EMISSION LICENSE ADMINISTRATION

Name of the Licensing Authority	**Depart: Environment & Nature Conservation**
Atmospheric Emission License Number	**NC/AEL/ZFM/UPCR01/2014**
Atmospheric Emission License Issue Date	16 March 2020
Atmospheric Emission License Type	Atmospheric Emission License
Review Date, not later than	01/03/2025

2. ATMOSPHERIC EMISSION LICENSE HOLDER DETAILS

Enterprise Name	AT Point Trading 80
Enterprise Registration Number (Registration Numbers if Joint Venture)	2001/018496/07
Registered Address	P O box 2953 Keidebees, Upington, //Khara Hais Local Municipality, 39, Northern Cape 8800

Licensing Officer Signature: _____ **Date:** 16-3-2020 **AEL #** NC/AEL/ZFM/UPCR01/2014

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Figure 11: Previous air emission licence issued

No-go alternative (compulsory)

The No-Go Alternative is to refrain from expansion and not develop the site as a crematorium. As such the societal benefit to the local community would not be realised. This includes access to a facility that is in great demand, employment, training, and local economic during operation.

It is very important to note that the "No-Go Alternative" will not result in a status quo or no impact. The existing infrastructure will remain under pressure (struggling to meet current demands) and is likely to prohibit/restrict future development in this area.

Upington Crematorium Alternative

SITE ALTERNATIVE

No feasible alternative sites were considered due to:

1. **Location of the proposed site**: the proposed site for development is located adjacent to the cemetery, the existing land use is in line with the proposed activities of the development. No site alternatives have been considered for the expansion.
2. **Use of existing services**: The proposed development will utilize existing services (namely existing roads) to access the site. As stated above, this would provide accessibility and allow the proposed development to link to the existing services infrastructure.
3. **Ownership**: No other site alternatives were considered. The site is owned by the Applicant, and within the urban edge, and is therefore considered the only reasonable and feasible site

LAYOUT ALTERNATIVES

No alternatives were considered

Considering the current land uses surrounding the property, limited options are available in terms of development. The new burner can be accommodated by the crematorium Furthermore, this site is already zoned as a business crematorium. There are impacts on ambient air associated with the operational phase due to the cremator requiring fuel for the cremation process.

Figure 12: Proposed layout for the additional burner (indicated in red).

No-go alternative (compulsory)

The No-Go Alternative is to retain the entire site and not further develop the site as a crematorium. As such the societal benefit to the local community would not be realised.

It is very important to note that the "No-Go Alternative" will not result in a status quo or no impact. The existing infrastructure will remain under pressure (struggling to meet current demands) and is likely to prohibit/restrict future development in this area.

SECTION E. RECOMMENDATION OF PRACTITIONER

Are the information contained in this report and the documentation attached hereto sufficient to decide in respect of the activity applied for (in the view of the environmental assessment practitioner)?	**YES**	~~NO~~

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 a further assessment).

N/A

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

Recommended conditions

- All construction must be done following an approved construction and operational phase Environmental Management Plan (EMP), which must be developed by a suitably experienced Environmental Assessment Practitioner.
- A suitably experienced ECO must be appointed to ensure compliance with environmental conditions of the Environmental Authorization.
- Application for an Air emissions licence must be made for the additional burner.
- Access should be limited to existing routes
- During reasonable working hours to minimise noise nuisance.
- Lay-down areas or construction sites must be located within already disturbed areas (e.g. no development should be associated with this expansion)
- Waste material on site must be addressed, namely removed from the site and disposed of at a registered disposal facility.

Is an EMPr attached?	YES	NO

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 in 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.

_____

NAME OF EAP

_____ _____

SIGNATURE OF EAP DATE

SECTION F: APPENDIXES

The following appendixes are attached:

APPENDIX A: MAPS

APPENDIX B: SITE PHOTOGRAPHS

APPENDIX C: FACILITY ILLUSTRATION

APPENDIX D: SPECIALIST REPORTS

APPENDIX D1: BOTANICAL IMPACT ASSESSMENT

APPENDIX D2: FRESHWATER IMPACT ASSESSMENT

APPENDIX D3: HERITAGE IMPACT ASSESSMENT

APPENDIX D4: GEOTECHNICAL INVESTIGATION

APPENDIX D5: ENGINEER'S SERVICES REPORT

APPENDIX D6: NEEDS AND DESIRABILITY

APPENDIX E: PUBLIC PARTICIPATION

APPENDIX E1:PROOF OF ADVERTISEMENT AND NOTICES

APPENDIX E2:COMMENTS AND RESPONSES

APPENDIX E3:I&AP REGISTER

APPENDIX F: IMPACT ASSESSMENT AND SCORING MATRIX

APPENDIX G: ENVIRONMENTAL MANAGEMENT PLAN (EMP)

APPENDIX H: DETAILS OF EAP AND EXPERTISE