THE PROPOSED DEVELOPMENT OF A CEMETERY ON REMAINDER OF ERF 13 FARM PUTFONTEIN 26-IR, IN BENONI, WITHIN THE JURISDICTION OF CITY OF EKURHULENI METROPOLITAN MUNICIPALITY, GAUTENG PROVINCE

DRAFT BASIC ASSESSMENT REPORT

MARCH 2021

Prepared for :	**Prepared by:**
City of Ekurhuleni Environmental Resource & Waste Management Department	Tshanduko Environmental Engineering (Pty) Ltd

GAUTENG PROVINCE
AGRICULTURE AND RURAL DEVELOPMENT
REPUBLIC OF SOUTH AFRICA

Basic Assessment Report in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998), as amended, and the Environmental Impact Assessment Regulations, 2014 (Version 1)

Kindly note that:

1. This **Basic Assessment Report** is the standard report required by GDARD in terms of the EIA Regulations, 2014.
2. This application form is current as of 8 December 2014. It is the responsibility of the EAP to ascertain whether subsequent versions of the form have been published or produced by the competent authority.
3. A draft Basic Assessment Report must be submitted, for purposes of comments within a period of thirty (30) days, to all State Departments administering a law relating to a matter likely to be affected by the activity to be undertaken.
4. A draft Basic Assessment Report (1 hard copy and two CD's) must be submitted, for purposes of comments within a period of thirty (30) days, to a Competent Authority empowered in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998), as amended to consider and decide on the application.
5. Five (5) copies (3 hard copies and 2 CDs-PDF) of the final report and attachments must be handed in at offices of the relevant competent authority, as detailed below.
6. 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.
7. Selected boxes must be indicated by a cross and, when the form is completed electronically, must also be highlighted.
8. An incomplete report may lead to an application for environmental authorisation being refused.
9. **Any report that does not contain a titled and dated full colour large scale layout plan of the proposed activities including a coherent legend, overlain with the sensitivities found on site may lead to an application for environmental authorisation being refused.**
10. 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 application for environmental authorisation being refused.
11. No faxed or e-mailed reports will be accepted. Only hand delivered or posted applications will be accepted.

12. Unless protected by law, and clearly indicated as such, all information filled in on this application will become public information on receipt by the competent authority. The applicant/EAP must provide any interested and affected party with the information contained in this application on request, during any stage of the application process.
13. Although pre-application meeting with the Competent Authority is optional, applicants are advised to have these meetings prior to submission of application to seek guidance from the Competent Authority.

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DEPARTMENTAL DETAILS

Gauteng Department of Agriculture and Rural Development

Attention: Administrative Unit of the of the Environmental Affairs Branch

P.O. Box 8769

Johannesburg

2000

Administrative Unit of the of the Environmental Affairs Branch

Ground floor Diamond Building

11 Diagonal Street, Johannesburg

Administrative Unit telephone number: (011) 240 3377

Department central telephone number: (011) 240 2500

(For official use only)

NEAS Reference Number:						
File Reference Number:						
Application Number:						
Date Received:						

If this BAR has not been submitted within 90 days of receipt of the application by the competent authority and permission was not requested to submit within 140 days, please indicate the reasons for not submitting within time frame.

Not applicable

Is a closure plan applicable for this application and has it been included in this report?	N/A

if not, state reasons for not including the closure plan.

This application does not relate to the decommissioning or closure of a facility.

Has a draft report for this application been submitted to a competent authority and all State Departments administering a law relating to a matter likely to be affected as a result of this activity?	NO
Is a list of the State Departments referred to above attached to this report including their full contact details and contact person?	YES

If no, state reasons for not attaching the list.

N/A

Have State Departments including the competent authority commented?	NO

If no, why?

No comments were received during the initial phase of the Public Participation Process. The Draft BAR is currently under public review, all comments received during the public review period will be included in the Final BAR.

SECTION A: ACTIVITY INFORMATION

1. PROPOSAL OR DEVELOPMENT DESCRIPTION

Project title (must be the same name as per application form):

The proposed development of a cemetery on Remainder of Erf 13 Farm Putfontein 26-IR, in Benoni, within the jurisdiction of City Of Ekurhuleni Metropolitan Municipality, Gauteng Province

Select the appropriate box

The application is for an upgrade of an existing development		The application is for a new development	X	Other, specify	

Does the activity also require any authorisation other than NEMA EIA authorisation?

YES	

If yes, describe the legislation and the Competent Authority administering such legislation

An application with the Department of Water and Sanitation for General Authorisation in accordance with the National Water Act, 1998 (Act No. 36 of 1998) is required.

If yes, have you applied for the authorisation(s)?

The proof of lodging of the application will be included with the Final Basic Assessment Report.

If yes, have you received approval(s)? (attach in appropriate appendix)

YES	
	NO

2. APPLICABLE LEGISLATION, POLICIES AND/OR GUIDELINES

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

Title of legislation, policy or guideline:	**Administering authority:**	**Promulgation Date:**
The Constitution of the Republic of South Africa, 1996	National	18 December 1996
The National Development Plan 2030 National Strategy for Sustainable Development	National	November 2011
National Environmental Management Act, 1998 (Act No. 107 of 1998 as amended).	National & Provincial	27 November 1998
National Environmental Management: Biodiversity Act, 2004 (Act No. 10 of 2004)	National & Provincial	07 June 2004
National Heritage Resources Act, 1999 (Act No. 25 of 1999)	National & Provincial	April 1999
National Environmental Management: Air Quality Act, 2004 (Act No. 39 of 2004)	National & Provincial	24 February 2005
National Health Act,2003 (Act No. 61 of 2003) as amended in 2013	National & Provincial	23 July 2004
National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008)	National & Provincial	10 March 2009
National Water Act, 1998 (Act No. 36 of 1998)	National & Provincial	06 December 1999
National Veld and Forest Fire Act, 1998 (Act No 101 of 1998)	National & Provincial	27 November 1998
Environmental Impact Assessment Regulations as amended on 07 April 2017 (GNR 327 and GNR 324)	National & Provincial	07 April 2017
National Road Traffic Act, 1996 (Act No. 93 of 1996)	National & Provincial	November 1996

Occupational Health and Safety Act, 1993 (Act No. 85 of 1993)	National & Provincial	June 1993
National Dust Control Regulations, 2013	National & Provincial	1 November 2013
Gauteng Conservation Plan Version 3.3 (C-Plan 3.3)	Provincial	2011
Gauteng Provincial Environmental Management Framework (GPEMF) 2015	Provincial	2015
Gauteng Provincial Government Noise Control Regulations (as published in the Gauteng Provincial Gazette Extraordinary, Volume 5 Number 75 of 20 August 1999).	Provincial	January 1999
Ekurhuleni Metropolitan Municipality Cemetery And Crematorium By-laws	Municipal	November 2003

Description of compliance with the relevant legislation, policy or guideline:	
Legislation, policy of guideline	**Description of compliance**
The Constitution of the Republic of South Africa, 1996	The right to an environment that is not harmful to the health and well-being of people will be protected.
National Environmental Management Act, 1998 (Act No. 107 of 1998) as amended. NEMA Environmental Impact Assessment Regulations, as amended of December 2014(as amended in 2017)	The proposed development triggers activities listed in listing notices GNR 327 and GN R. 324 of the NEMA EIA Regulations 2014 (as amended), A Basic Assessment is therefore being undertaken for Environmental Authorization as per GNR 326. Furthermore, in terms of Regulation 19 and Regulation 21 of the EIA Regulations the submission of a report generated from the national web-based environmental screening tool is required. This report has been included as **Appendix I2**.
National Heritage Resources Act, 1999 (Act No. 25 of 1999)	A Heritage Impact Assessment was undertaken in terms of the National Heritage Resources Act, 1999 (Act No. 25 of 1999).
National Environmental Management: Air Quality Act, 2004 (Act No. 39 of 2004)	The operational phase of the development should confirm to the ambient air quality and/or emission standards as determined in terms of the Act.
National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008)	Reasonable measures have been provided for the prevention of pollution and ecological degradation to ensure that the development is ecologically sustainable.
National Water Act, 1998 (Act No. 36 of 1998)	A General Authorisation will be applied for in terms of the National Water Act, 1998 (Act No. 36 of 1998) due to the

	presence of wetlands on site.
National Road Traffic Act, 1996 (Act No. 93 of 1996)	A Traffic Impact Assessment (TIA) was undertaken for the proposed development. All vehicles and relevant operators will adhere to the National Road Traffic Act, 1996 (Act No. 93 of 1996) and all regulations under this Act.
National Dust Control Regulations, 2012	The developer and contractor shall abide by the regulations in order to control the generation of dust.
Occupational Health and Safety Act, 1993 (Act No. 85 of 1993)	The Contractor will ensure the health and safety of all workers and that of others that may be at risk as per the Occupational Health and Safety Act, 1993 (Act No. 85 of 1993)
Gauteng Provincial Environmental Management Framework (GPEMF)	The purpose of the GPEMF is to assist environmental impact management including EIA processes, spatial planning and sustainable development, the GPEMF has been taken into account as part of this Environmental Impact Assessment. The proposed development lies in Zone 1, however it is not listed as an excluded activity.
Gauteng Conservation Plan Version 3.3 (C-Plan 3.3)	The main purposes of C-Plan 3.3 are: • to serve as the primary decision support tool for the biodiversity component of the Environmental Impact Assessment (EIA) process within the Gauteng Province; • to inform protected area expansion and biodiversity stewardship programmes in the province; • to serve as a basis for development of Bioregional Plans in municipalities within the province. Furthermore, the C-plan 3.3 assists in the classification of areas e.g., whether an area lies in a protected, critical biodiversity or ecological support area which assists GDARD in ensuring adequate protection of biodiversity and the environment within the

	province. The proposed development falls within an Ecological Support Area as shown in **Appendix A4**.
Gauteng Department of Agriculture and Rural Development Requirements for Biodiversity Assessments.	The Gauteng Department of Agriculture and Rural Development Requirements for Biodiversity Assessments provides guidelines for the preparation of various biodiversity assessment, the guidelines have been taken into account in the preparation of the Ecological Assessment.
Gauteng Provincial Government Noise Control Regulations (as published in the Gauteng Provincial Gazette Extraordinary, Volume 5 Number 75 of 20 August 1999).	The Gauteng Provincial Government Noise Control Regulations have been taken into account and will be implemented as required.
Ekurhuleni Metropolitan Municipality Cemetery And Crematorium By-Laws (November 2003)	The By-laws have been considered for the proposed use and regulation for the proposed development.

3. ALTERNATIVES

Describe the proposal and alternatives that are considered in this application. Alternatives should include a consideration of all possible means by which the purpose and need of the proposed activity could be accomplished. The determination of whether the 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.

The no-go option must in all cases be included in the assessment phase as the baseline against which the impacts of the other alternatives are assessed. **Do not** include the no go option into the alternative table below.

Note: After receipt of this report the competent authority may also request the applicant to assess additional alternatives that could possibly accomplish the purpose and need of the proposed activity if it is clear that realistic alternatives have not been considered to a reasonable extent.

Please describe the process followed to reach (decide on) the list of alternatives below

No alternatives were considered for the proposed development due to the following factors:

1) Availability and size of the site for the proposed development
2) Current land use: The site lies vacant, is currently used as an illegal dumping ground and for other activities such as prostitution. A re-zoning application has also been lodged.
3) Suitability of the receiving environment
4) Land ownership : The site is owned by the proponent
5) Economic viability of the project and associated socio-economic impacts

Provide a description of the alternatives considered

No.	**Alternative type**, either alternative: site on property, properties, activity, design, technology, energy, operational or other(provide details of "other")	**Description**

1	**Proposal**	The proposed development includes the following: • Chapel • Mausoleum and above ground crypts • Crematorium • Burial area • Remembrance gardens with memorial walls • Administration and maintenance yard • Ablution facilities • Parking area • Landscaping and ornamental planting

In the event that no alternative(s) has/have been provided, a motivation must be included in the table below.

DISCUSSION AND MOTIVATION FOR NOT PROVIDING 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.

f) the option of not implementing the activity.

In terms of the definition for "alternatives" listed above, the below section provides a discussion and motivation for the exclusion of alternatives in relation to the proposed development.

a) The property on which or location where it is proposed to undertake the activity

b) The type of activities 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:

f) The option of not implementing the activity: **The option of not implementing the activity would result in the status qou being maintained. The land is currently lying vacant and is being utilised for activities such as sourcing of firewood, illegal dumping and prostitution. The non-utilisation of the land would also result in the loss of the socio economic benefits associated with the proposed project including the shortage of burial space within the City of Ekurhuleni. The option of not implementing the activity was therefore not considered for the above mentioned reasons.**

No alternatives were considered for the proposed development due to the following factors:

1) Availability and size of the site for the proposed development

2) Current land use: The site lies vacant, is currently used as a dumping ground and an area for other activities such as prostitution. A re-zoning application has also been lodged.

3) Suitability of the receiving environment

4) Land ownership : The site is owned by the proponent

5) Economic viability of the project and associated socio-economic impacts

4. PHYSICAL SIZE OF THE ACTIVITY

Indicate the total physical size (footprint) of the proposal as well as alternatives. Footprints are to include all new infrastructure (roads, services etc), impermeable surfaces and landscaped areas:

	Size of the activity:
Proposed activity ***(Total environmental (landscaping, parking, etc.) and the building footprint)***	35,49ha
Alternatives:	
Alternative 1 (if any)	N/A
Alternative 2 (if any)	

Ha/ m^2

or, for linear activities:

	Length of the activity:
Proposed activity	
Alternatives:	
Alternative 1 (if any)	
Alternative 2 (if any)	

m/km

Indicate the size of the site(s) or servitudes (within which the above footprints will occur):

Size of the site/servitude:

Proposed activity	35,49ha

Alternatives:

Alternative 1 (if any)	N/A
Alternative 2 (if any)	

Ha/m^2

5. SITE ACCESS

Proposal

Does ready access to the site exist, or is access directly from an existing road?	YES	■
If NO, what is the distance over which a new access road will be built	N/A	

Describe the type of access road planned:

Main access will be from the existing Springs Road. A Traffic Impact Assessment was undertaken and has been included as **Appendix G2**.

Include the position of the access road on the site plan (if the access road is to traverse a sensitive feature the impact thereof must be included in the assessment).

No sensitive features will be traversed as there is existing access to the site.

Alternative 1

Does ready access to the site exist, or is access directly from an existing road?	YES	■
If NO, what is the distance over which a new access road will be built		m

Describe the type of access road planned:

N/A

Include the position of the access road on the site plan. (if the access road is to traverse a sensitive feature the impact thereof must be included in the assessment).

Alternative 2

Does ready access to the site exist, or is access directly from an existing road? YES NO

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

Describe the type of access road planned:

Include the position of the access road on the site plan. (if the access road is to traverse a sensitive feature the impact thereof must be included in the assessment).

PLEASE NOTE: Points 6 to 8 of Section A must be duplicated where relevant for alternatives

Section A 6-8 has been duplicated	**0**	Number of times

(only complete when applicable)

6. LAYOUT OR ROUTE PLAN

A detailed site or route (for linear activities) plan(s) must be prepared for each alternative site or alternative activity. It must be attached to this document. The site or route plans must indicate the following:

- the layout plan is printed in colour and is overlaid with a sensitivity map (if applicable);
- layout plan is of acceptable paper size and scale, e.g.
  - A4 size for activities with development footprint of 10sqm to 5 hectares;
  - A3 size for activities with development footprint of > 5 hectares to 20 hectares;
  - A2 size for activities with development footprint of >20 hectares to 50 hectares);
  - A1 size for activities with development footprint of >50 hectares);
- The following should serve as a guide for scale issues on the layout plan:
  - A0 = 1: 500
  - A1 = 1: 1000

- A2 = 1: 2000
- A3 = 1: 4000
- A4 = 1: 8000 (±10 000)

- shapefiles of the activity must be included in the electronic submission on the CD's;
- the property boundaries and Surveyor General numbers of all the properties within 50m of the site;
- the exact position of each element of the activity as well as any other structures on the site;
- the position of services, including electricity supply cables (indicate above or underground), water supply pipelines, boreholes, sewage pipelines, septic tanks, storm water infrastructure;
- servitudes indicating the purpose of the servitude;
- sensitive environmental elements on and within 100m of the site or sites (including the relevant buffers as prescribed by the competent authority) including (but not limited thereto):
  - Rivers and wetlands;
  - the 1:100 and 1:50 year flood line;
  - ridges;
  - cultural and historical features;
  - areas with indigenous vegetation (even if it is degraded or infested with alien species);
- Where a watercourse is located on the site at least one cross section of the water course must be included (to allow the position of the relevant buffer from the bank to be clearly indicated)

FOR LOCALITY MAP (NOTE THIS IS ALSO INCLUDED IN THE APPLICATION FORM REQUIREMENTS)

- the scale of locality map must be 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 locality map and all other maps must be in colour;
- locality map must show property boundaries and numbers within 100m of the site, and for poultry and/or piggery, locality map must show properties within 500m and prevailing or predominant wind direction;
- for gentle slopes the 1m contour intervals must be indicated on the map and whenever the slope of the site exceeds 1:10, the 500mm contours must be indicated on the map;
- areas with indigenous vegetation (even if it is degraded or infested with alien species);
- locality map must show exact position of development site or sites;

- locality map showing and identifying (if possible) public and access roads; and
- the current land use as well as the land use zoning of each of the properties adjoining the site or sites.

7. SITE PHOTOGRAPHS

Colour photographs from the center 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 the appropriate Appendix**.** It should be supplemented with additional photographs of relevant features on the site, where applicable.

8. FACILITY ILLUSTRATION

A detailed illustration of the activity must be provided at a scale of 1:200 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 to be attached in the appropriate Appendix.

SECTION B: DESCRIPTION OF RECEIVING ENVIRONMENT

Note: Complete Section B for the proposal and alternative(s) (if necessary)

Instructions for completion of Section B for linear activities

1) For linear activities (pipelines etc) it may be necessary to complete Section B for each section of the site that has a significantly different environment.
2) Indicate on a plan(s) the different environments identified
3) Complete Section B for each of the above areas identified
4) Attach to this form in a chronological order
5) Each copy of Section B must clearly indicate the corresponding sections of the route at the top of the next page.

Section B has been duplicated for sections of the route	**"insert No. of duplicates"**	**0 times**

Instructions for completion of Section B for location/route alternatives

1) For each location/route alternative identified the entire Section B needs to be completed
2) Each alterative location/route needs to be clearly indicated at the top of the next page
3) Attach the above documents in a chronological order

Section B has been duplicated for location/route alternatives	**"insert No. of duplicates"**	**0 times**

(complete only when appropriate)

Instructions for completion of Section B when both location/route alternatives and linear activities are applicable for the application

Section B is to be completed and attachments order in the following way:

- All significantly different environments identified for Alternative 1 is to be completed and attached in a chronological order; then

- All significantly different environments identified for Alternative 2 is to be completed and attached chronological order, etc.

Section B - Section of Route		(complete only when appropriate for above)
Section B – Location/route Alternative No.		(complete only when appropriate for above)

1. PROPERTY DESCRIPTION

Property description: (Including Physical Address and Farm name, portion etc.)

The proposed project is located on Putfontein 26-IR, Erf Number R/13/26-IR, in Benoni, within the City of Ekurhuleni Metropolitan Municipality, Gauteng Province. The site is situated within Crystal Park Ext 3, and is located adjacent to the existing Lala Ngoxolo Cemetery (southeast of the site) along Springs Road and Combrink Street.

Property Description for the Proposed Project	
Province	Gauteng Province
Municipality	City of Ekurhuleni
Nearest town(s)	Benoni
Farm name(s) and number(s)	Farm Putfontein 26 IR
SG 21 Digit Code	T0IR0000-00000026-00013

2. ACTIVITY POSITION

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

Proposal:	**Latitude (S):**	**Longitude (E):**
	26°06'41.99"S	28°22'18.34"E
	26°06'38.59"S	28°22'46.26"E
	26°06'53.30"S	28°22'27.74"E
	26°06'28.91"S	28°22'23.52"E

Alternative 1: N/A	**Latitude (S):**	**Longitude (E):**

In the case of linear activities: N/A

Alternative:	**Latitude (S):**	**Longitude (E):**

Starting point of the activity	o	o
Middle point of the activity	o	o
End point of the activity	o	o

For route alternatives that are longer than 500m, please provide co-ordinates taken every 250 meters along the route and attached in the appropriate Appendix

Addendum of route alternatives attached	**N/A**

The 21 digit Surveyor General code of each cadastral land parcel

T0IR0000-00000026-00013

PROPOSAL	T	0	I	R	0	0	0	0	0	0	0	0	0	0	2	6	0	0	0	1	3

3. GRADIENT OF THE SITE

Indicate the general gradient of the site.

	1:50 – 1:20					

4. LOCATION IN LANDSCAPE

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

				Plain		

5. GROUNDWATER, SOIL AND GEOLOGICAL STABILITY OF THE SITE

a) Is the site located on any of the following?

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

(Information in respect of the above will often be available at the planning sections of local authorities. Where it exists, the 1:50 000 scale Regional Geotechnical Maps prepared by Geological Survey may also be used).

b) are any caves located on the site(s)		**NO**

If yes to above provide location details in terms of latitude and longitude and indicate location on site or route map(s)

Latitude (S):	**Longitude (E):**

c) are any caves located within a 300m radius of the site(s)		NO

If yes to above provide location details in terms of latitude and longitude and indicate location on site or

route map(s)

Latitude (S):	**Longitude (E):**
°	°

d) are any sinkholes located within a 300m radius of the site(s) : [redacted] **NO**

If yes to above provide location details in terms of latitude and longitude and indicate location on site or route map(s)

Latitude (S):	**Longitude (E):**
°	°

If any of the answers to the above are "YES" or "unsure", specialist input may be requested by the Department

Geotechnical investigations were undertaken on the site (**refer to Appendix G1**). **It was recommended that the site can be developed, however due cognizance should be taken with regards to the sidewalls collapse that was observed at some of the test pits. This has been attributed to the prevalence of eucalyptus tree roots which are deeply embedded in the soil.**

6. AGRICULTURE

Does the site have high potential agriculture as contemplated in the Gauteng Agricultural Potential Atlas (GAPA 4)? [redacted] **NO**

Please note: The Department may request specialist input/studies in respect of the above.

7. GROUNDCOVER

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

Indicate the types of groundcover present on the site and include the estimated percentage found on site

	Natural veld with heavy alien infestation % = 10%	Veld dominated by alien species % =85%	
			Bare soil % =5%

Please note: The Department may request specialist input/studies depending on the nature of the groundcover and potential impact(s) of the proposed activity/ies.

Are there any rare or endangered flora or fauna species (including red list species) present on the site		NO

If YES, specify and explain:

Two vegetation units were discovered on the site and these include the following; 1) Wetland areas

2) Eucalyptus woodland

The *Eucalyptus* woodland comprises the largest section of the study area. The area is completely overgrown by declared alien invasive trees, shrubs and weeds. As a result the natural vegetation has been displaced with little to no natural habitat remaining. Rubble and litter are strewn throughout the entire area. Various footpaths are present with vagrants living in the area. The area is utilised by vagrants to harvest wood. The alien invasive plants pose a threat to the environment and negatively affect ecosystem processes. From a plant ecological and ecosystem functioning point of view, this vegetation unit is considered to have a low (none) conservation value.

No red data species were found on site, mainly due to the area being largely transformed. The vegetation is dominated by the declared alien invader trees which include *Eucalyptus camaldulensis* and *Melia azedarach*. Prominent species include various alien invasive species as well as pioneer weedy species such as the declared invader shrub *Robinia pseudoacacia*, declared invader weeds *Ipomoea purpurea, Mirabilis jalapa, Datura stramonium*, pioneer forbs *Tagetes minuta, Bidens pilosa, Lepidium bonariense, Trifolium repens*, the grasses *Cynodon dactylon, Melinis repens* and the alien invasive grass *Pennisetum clandestinum*. Alien plant species discovered on site include *Acacia melanoxylon, Acacia mearnsii, Agave americana, Araujia sericifera, Opuntia ficusindica, Pinus pinaster, Solanum mauritianum, Tipuana tipu*. The Vegetation Ecological and Wetland Assessment is included as **Appendix G3**.

Are there any rare or endangered flora or fauna species (including red list species) present within a 200m (if within urban area as defined in the Regulations) or within 600m (if outside the urban area as defined in the Regulations) radius of the site.	[redacted]	NO

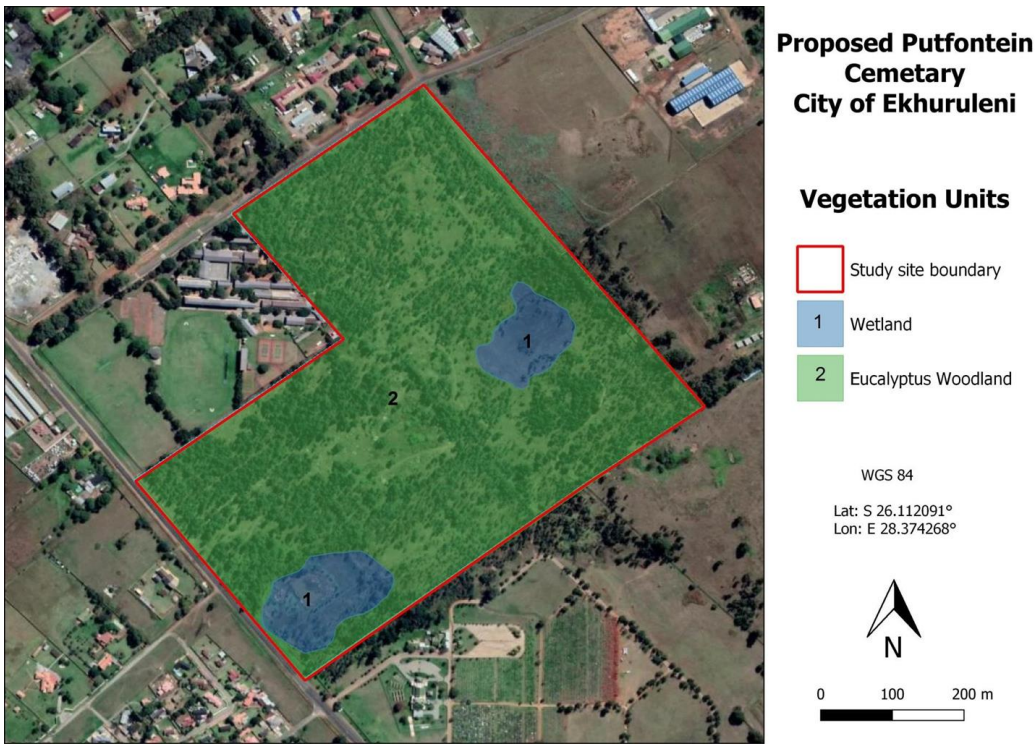
If YES, specify and explain:

N/A

Are there any special or sensitive habitats or other natural features present on the site?	YES	[redacted]

If YES, specify and explain:

Two wetland areas are present within the study area, one located in the southern and one in the north-eastern section of the site.



The wetlands are classified as belonging to the Mesic Highveld Grassland Group and are classified as artificial by NFEPA (as shown in the table below):

Wetland type	Description	Condition	NFEPA rank	FEPA status
Mesic Highveld Grassland Group	*Artificial*	Z3	6	No status
# wetland units: 1				

This HGM unit is indicated on the historical 1:50 000 maps as a reservoir or water abstraction source an not indicated as a wetland. It could potentially be a permanent sink for storm water or water runoff from the existing cemetery roads and hard infrastructure. The neglect of the area could have resulted in sediment build-up due to situation and aggregates from hard surfaces and caused hydrophytes to establish. These areas have nonetheless developed into wetlands with wetland soil, vegetation and topography albeit having a low-moderate PES, EIS and Ecosystem Services.

Was a specialist consulted to assist with completing this section	**YES**

If yes complete specialist details

Name of the specialist:	Professor Leslie Brown
Qualification(s) of the specialist:	PhD Terrestrial Plant Ecology Reg. No. 400075/98 (Botanical Science and Ecological Science) MSc. Water ecology BSc Hons (Botany) BSc (Ed) (Botany, Zoology, Education) Wetland and Riparian Delineation (DWAF Accredited Course) Soil Classification and Wetland Delineation Short Course – TERRASOIL Science Wetland Legislation Course - Wetrest
Postal address:	Enviroguard Ecological Services Cc PO Box 703 Heidelberg
Postal code:	1438
Telephone:	082 464 1021
E-mail:	envguard@telkomsa.net

Are any further specialist studies recommended by the specialist?		NO
If YES, specify:	N/A	
If YES, is such a report(s) attached?		NO

If YES list the specialist reports attached below

N/A

Signature of specialist: _____ Date:

Please note; If more than one specialist was consulted to assist with the filling in of this section then this table must be appropriately duplicated

Was a specialist consulted to assist with completing this section	**YES**	

The Geotechnical Investigation has been included as Appendix G1.

If yes complete specialist details

Name of the specialist:	CH Badenhorst

Qualification(s) of the specialist:	PrTech Eng (Civil) ECSA Nr 9170001		
Postal address:	SGS Matrolab (Pty) Ltd		
Postal code:			
Telephone:	082 441 7309		
E-mail:	casperb@iburst.co.za		
Are any further specialist studies recommended by the specialist?		**NO**	[redacted]
If YES, specify:	It was recommended that the site can be developed, however due cognizance should be taken with regards to the sidewalls collapse that was observed at some of the test pits. This has been attributed to the prevalence of then eucalyptus tree roots which are deeply embedded in the soil.		
If YES, is such a report(s) attached?		[redacted]	NO
If YES list the specialist reports attached below			
N/A			

Signature of specialist: _____ Date:

8. LAND USE CHARACTER OF SURROUNDING AREA

Using the associated number of the relevant current land use or prominent feature from the table below, fill in the position of these land-uses in the vacant blocks below which represent a 500m radius around the site

1. Vacant land	**2. River, stream, wetland**	**3. Nature conservation area**	4. Public open space	**5. Koppie or ridge**
6. Dam or reservoir	7. Agriculture	**8. Low density residential**	**9. Medium to high density residential**	**10. Informal residential**
11. Old age home	12. Retail	13. Offices	**14. Commercial & warehousing**	15. Light industrial
16. Heavy industrial[AN]	17. Hospitality facility	**18. Church**	**19. Education facilities**	20. Sport facilities
21. Golf course/polo fields	22. Airport[N]	23. Train station or shunting yard[N]	24. Railway line[N]	25. Major road (4 lanes or more)[N]
26. Sewage treatment plant[A]	27. Landfill or waste treatment site[A]	28. Historical building	**29. Graveyard**	30. Archeological site
31. Open cast mine	32. Underground mine	33.Spoil heap or slimes dam[A]	**34. Small Holdings**	
Other land uses (describe):				

NOTE: Each block represents an area of 250m X 250m, if your proposed development is larger than this please use the appropriate number and orientation of hashed blocks

NORTH

	9,14	**14**	**14**	**1**	**1**
	9	**1**	**1**	**2,10**	**9**
WEST	**19**	**19**		**29**	**1**
	9	**9**	**2,9**	**29**	**1**
	9	**9**	**9**	**29**	**9**

EAST

SOUTH

Note: More than one (1) Land-use may be indicated in a block

Please note: The Department may request specialist input/studies depending on the nature of the land use character of the area and potential impact(s) of the proposed activity/ies. Specialist reports that look at health & air quality and noise impacts may be required for any feature above and in particular those features marked with an "A" and with an "N" respectively.

Have specialist reports been attached	**YES**
If yes indicate the type of reports below	

Specialist studies have been attached as follows:

Appendix G1: Geotechnical Investigations

Appendix G2: Traffic Impact Assessment

Appendix G3: Vegetation Ecological and Wetland Assessment

Appendix G4: Geohydrological Report

Appendix G5: Heritage Impact Assessment

9. SOCIO-ECONOMIC CONTEXT

Describe the existing social and economic characteristics of the area and the community condition as baseline information to assess the potential social, economic and community impacts.

The City of Ekurhuleni, was established in the year 2000 from the amalgamation of two existing regional entities, namely Kyalami Metropolitan and the Eastern Gauteng Services Council. Unlike the other metropolitan regions formed after the 2000 local government elections which were formed around large cities, Ekurhuleni agglomerated a set of relatively small and fragmented nine towns: Alberton, Benoni, Boksburg, Brakpan, Edenvale, Germiston and Kempton Park, Nigel and Springs1 . Of these, Kempton Park, Benoni and Springs are the largest. With its legacy of 9 towns and 17 townships, previously without a single large administration, as in the case of the former cities of Johannesburg, Cape Town, Pretoria and Durban – which had to coalesce around relatively mature big city administrations, this resulted in fragmented and dispersed urban structure, the City had no identifiable city centre and suffers from a diffuse and problematic civic identity gravely challenged by the relics of the former East Rand identity.

The inherited fragmentation also manifests itself through extreme social isolation and as the worst excesses of apartheid planning placed ever larger townships on the periphery of a weakened urban spine. Four major concentrations of previously disadvantaged communities exist in the area. These include Tembisa, the Katorus complex, the Kwatsaduza complex, and the Daveyton Etwatwa area. These low income residential clusters are located on the urban periphery and are far removed from the majority of social and economic opportunities in the metropolitan area, and are linked to the main economy via rail and/or road networks. Collectively these areas represent approximately 61% of the total population of Ekurhuleni. The cumulative effect of all this includes high levels of poverty and homelessness for the majority of citizens. Further to this is ageing infrastructure together with vast service areas. Already, these attest to the magnitude of service delivery challenges that Ekurhuleni is confronted with.

According to the 2016 Community Survey, the City of Ekurhuleni has an estimated population of 3 379 1042, up 200 634 people from 3 178 470 in the 2011 census. The population growth rate has slowed from as high as 4% in the period between 1996 and 2001 to 2.47% between 2001 and 2013. This represents over 6% of the population of South Africa. An important feature of the growth in the Ekurhuleni population is the net migration into the City as together with Tshwane and Johannesburg are the largest recipients of in-migration in the country. The figure below shows other key population attributes from the 2011 census such as the dependency ratio, sex ratio, number of households and household size. Major shifts seem to have occurred in the population composition by broad age groups between 2011 and 2016, for example the promotion of the young, the 0-14-year age group increasing from 24% to 35% and that of elderly, the 65+ population more than doubling from 4% to 9%.

Comparing the 2005 with the 2015 population pyramid for the City of Ekurhuleni, interesting differences are visible: • In 2005, there were a larger share (albeit marginal) of young working age people – aged 20 to 34 (30.7%) – compared to 2015 (29.6%). • Fertility in 2005 was slightly lower compared to that of 2015. • The share of children between the ages of 0 to 14 years is slightly smaller in 2005 (25.4%) compared to 2015 (26.0%). • Life expectancy appears to be increasing. This is broadly in line with national trends as revealed in the latest mortality rates and causes of death report, 2015 (released in February 2017). In terms of this report South Africa is experiencing fewer deaths in an increasing population and that life expectancy is also increasing in the country. In 2015, the female population for the 20 to 34 years' age group amounted to 14.6% of the total female population while the male population group for the same age amounted to 16.0% of the total male population. In 2005 the male working age population at 15.4% still exceeds that of the female population working age population at 14.2%.

With 3.38 million people, Ekurhuleni housed 6.2% of South Africa's total population in 2015. Between 2005 and 2015 the population growth averaged 2.39% per annum which is close to double than the growth rate of South Africa as a whole (1.51%). Compared to Gauteng's average annual growth rate (2.67%), the growth rate in Ekurhuleni's population at 2.39% was very similar to that of the province.

South Africa's largest cities are facing a shortage of available grave sites, as population growth and migration to urban areas puts pressure on both available land and the number of graves required. City of Ekurhuleni's cemeteries are speedily reaching capacity, and only 19 of its 63 cemeteries are in use, with 44 having already filled up. The City had previously allowed residents to pre-book burial sites, and this process has induced the issue of shortage of burial sites. City of Ekurhuleni intends to give its community members an alternative burial experience and is currently developing a specification for prospective investors to develop, manage, operate, and maintain the private cemetery. Therefore, the City has opted to avail land to private sector to assist in developing private cemeteries, as it cannot carry the cost of such development and seeks to explore ways to fund such developments in an economical way.

The proposed private cemetery development should address the following challenges within the jurisdiction of the City;

- Shortage of burial space in the City
- Compatible prices of private cemeteries in the area and South Africa as a whole
- Distance within the City of Ekurhuleni
- Safety and security in cemeteries
- Recycling of graves
- Acceptance and recognition of all cultures and burial methods
- Maintenance fees

The City of Ekurhuleni has a shortage of burial sites and has identified the site, **Putfontein 26-IR, Erf Number R/13/26-IR** as suitable to develop a private cemetery. The site identified has a potential yield of about 224 000 burial sites.

10. CULTURAL/HISTORICAL FEATURES

Please be advised that if section 38 of the National Heritage Resources Act 25 of 1999 is applicable to your proposal or alternatives, then you are requested to furnish this Department with written comment from the South African Heritage Resource Agency (SAHRA) – Attach comment in appropriate annexure

38. (1) Subject to the provisions of subsections (7), (8) and (9), any person who intends to undertake a development categorised as-

(a) the construction of a road, wall, powerline, pipeline, canal or other similar form of linear development or barrier exceeding 300m in length;

(b) the construction of a bridge or similar structure exceeding 50m in length;

(c) any development or other activity which will change the character of a site-

(i) exceeding 5 000 m2 in extent; or

(ii) involving three or more existing erven or subdivisions thereof; or

(iii) involving three or more erven or divisions thereof which have been consolidated within the past five years; or

(iv) the costs of which will exceed a sum set in terms of regulations by SAHRA or a provincial heritage resources authority;

(d) the re-zoning of a site exceeding 10 000 m2 in extent; or

(e) any other category of development provided for in regulations by SAHRA or a provincial heritage resources authority, must at the very earliest stages of initiating such a development, notify the responsible heritage resources authority and furnish it with details regarding the location, nature and extent of the proposed development.

Are there any signs of culturally (aesthetic, social, spiritual, environmental) or historically significant elements, as defined in section 2 of the National Heritage Resources Act, 1999, (Act No. 25 of 1999), including archaeological or palaeontological sites, on or close (within 20m) to the site?	[redacted]	**NO**

If YES, explain:

N/A

If uncertain, the Department may request that specialist input be provided to establish whether there is such a feature(s) present on or close to the site.

Briefly explain the findings of the specialist if one was already appointed:

No archaeological resources were found during the site investigations. The Heritage Impact Assessment Report is included as **Appendix G5**.

Will any building or structure older than 60 years be affected in any way?		**NO**
Is it necessary to apply for a permit in terms of the National Heritage Resources Act, 1999 (Act 25 of 1999)?		**NO**

If yes, please attached the comments from SAHRA in the appropriate Appendix

SECTION C: PUBLIC PARTICIPATION (SECTION 41)

The Environmental Assessment Practitioner must conduct public participation process in accordance with the requirement of the EIA Regulations, 2014.

1. LOCAL AUTHORITY PARTICIPATION

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

Was the draft report submitted to the local authority for comment?		**YES**
If yes, has any comments been received from the local authority?		**NO**

If "YES", briefly describe the comment below (also attach any correspondence to and from the local authority to this application):

N/A

If “NO” briefly explain why no comments have been received or why the report was not submitted if that is the case.

No comments were received during the initial phase of the Public Participation Process. The Draft BAR is currently under public review, all comments received during the public review period will be included in the Final BAR.

2. CONSULTATION WITH OTHER STAKEHOLDERS

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

Has any comment been received from stakeholders?		**NO**

If "YES", briefly describe the feedback below (also attach copies of any correspondence to and from the stakeholders to this application):

N/A

If "NO" briefly explain why no comments have been received

No comments were received during the initial phase of the Public Participation Process. The Draft BAR is currently under public review, all comments received during the public review period will be included in the Final BAR.

3. GENERAL PUBLIC PARTICIPATION REQUIREMENTS

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

The EAP must record all comments and respond to each comment of the public / interested and affected party before the application report is submitted. The comments and responses must be captured in a Comments and Responses Report as prescribed in the regulations and be attached to this application.

4. APPENDICES FOR PUBLIC PARTICIPATION

All public participation information is to be attached in the appropriate Appendix. The information in this Appendix is to be ordered as detailed below

Appendix 1 – Proof of site notice

Appendix 2 – Written notices issued as required in terms of the regulations

Appendix 2.1 – Background Information Document

Appendix 3 – Proof of newspaper advertisements

Appendix 4 –Communications to and from interested and affected parties

Appendix 5 – Minutes of any public and/or stakeholder meetings

Appendix 6 - Comments and Responses Report

Appendix 7 –Comments from I&APs on Basic Assessment (BA) Report

Appendix 8 –Comments from I&APs on amendments to the BA Report

Appendix 9 – Copy of the register of I&APs

SECTION D: RESOURCE USE AND PROCESS DETAILS

Note: Section D is to be completed for the proposal and alternative(s) (if necessary)

Instructions for completion of Section D for alternatives

1) For each alternative under investigation, where such alternatives will have different resource and process details (e.g. technology alternative), the entire Section D needs to be completed

4) Each alterative needs to be clearly indicated in the box below

5) Attach the above documents in a chronological order

Section D has been duplicated for alternatives | **0 times** | 0 times

(complete only when appropriate)

Section D Alternative No. | **0 times** | (complete only when appropriate for above)

1. WASTE, EFFLUENT, AND EMISSION MANAGEMENT

Solid waste management

Will the activity produce solid construction waste during the construction/initiation phase?	**YES**
If yes, what estimated quantity will be produced per month?	**100m^3**

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

Spoil material will consists of excess spoil material from soil excavation and trenching activities. Spoil material will be reused where possible (as backfill or erosion mitigation works) while excess spoil will need to be disposed of off-site. Spoil material will be hauled with tipper trucks to the nearest registered waste disposal facility for appropriate disposal.

Construction waste will comprise mainly of vegetation, construction material and general waste from site personnel (including packets, plastic, rubble, off-cut building materials, etc.). Construction waste must be kept in bins within the construction site camp and be collected and disposed of on a weekly basis at the nearest landfill site.

Hazardous Waste: Waste will comprise mainly of spent canisters for paint, solvents, oil, diesel and adhesives. The safe disposal will be the responsibility of the respective contractor and shall be disposed of at a suitably licensed landfill site or recycled as required. Certificates of safe disposal must be obtained and records must be kept on site.

Waste Management Requirements

- The accumulated rubble should be utilised for the establishment of the “above ground burials” (memorial walls and mausoleums). In as far as practically possible, construction waste on site should be reused or recycled. The contractor should consider alternatives that will eliminate, reduce, reuse and recycle waste during construction operations.
- The Contractor and ECO should ensure that waste on site is sorted or separated between general and hazardous waste to manage each waste category in a manner that leads to good housekeeping and reduces disposal costs.
- The Contractor and ECO should ensure that reusable waste, recyclable waste and waste to be

disposed will be stored in designated waste bins and/or storage facilities.

- The Contractor and ECO should ensure that only permitted or licensed off-site waste disposal facilities are used for the final disposal of waste.

All waste management records (i.e. waste manifests, certificate of issue and safe disposal) should be kept by the appointed superintendent responsible of the waste management contractors. The records must be kept for reporting and audit purposes.

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

A waste storage area should be designated at the construction camp site. All general waste must be disposed of at a licensed landfill site.

Will the activity produce solid waste during its operational phase?	**YES** [redacted]
If yes, what estimated quantity will be produced per month?	20 - 50m^3

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

Solid waste will be disposed of at a licensed landfill site.

Has the municipality or relevant service provider confirmed that sufficient air space exists for treating/disposing of the solid waste to be generated by this activity?	[redacted] **NO**

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

Solid waste will be disposed of at a licenced landfill site.

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

Can any part of the solid waste be classified as hazardous in terms of the relevant	[redacted] NO

legislation?	[redacted]

If yes, inform the competent authority and request a change to an application for scoping and EIA.

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

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

Waste will be collected in waste skips and disposed of at a registered licensed landfill site. Domestic waste generated during the construction will be separated where possible, into recyclable and non-recyclable waste. Recyclable waste will be collected in separate waste skips and removed by a licensed waste collector and delivered to reputable recycling facility.

Liquid effluent (other than domestic sewage)

Will the activity produce effluent, other than normal sewage, that will be disposed of in a municipal sewage system?	[redacted] NO
If yes, what estimated quantity will be produced per month?	N/A
If yes, has the municipality confirmed that sufficient capacity exist for treating / disposing of the liquid effluent to be generated by this activity (ies)?	[redacted] NO

Will the activity produce any effluent that will be treated and/or disposed of on site?	[redacted] NO
If yes, what estimated quantity will be produced per month?	m^3

If yes describe the nature of the effluent and how it will be disposed.

N/A

Note that if effluent is to be treated or disposed on site the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA

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

If yes, provide the particulars of the facility: **N/A**

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 waste water, if any:

- Grey water will be reused for watering of the landscaped area.
- Rain water harvesting will also be undertaken

Liquid effluent (domestic sewage)

Will the activity produce domestic effluent that will be disposed of in a municipal sewage system?	NO
If yes, what estimated quantity will be produced per month?	m^3
If yes, has the municipality confirmed that sufficient capacity exist for treating / disposing of the domestic effluent to be generated by this activity(ies)?	NO

Will the activity produce any effluent that will be treated and/or disposed of on site?	NO

If yes describe how it will be treated and disposed off.

N/A

Emissions into the atmosphere

Will the activity release emissions into the atmosphere?	YES
If yes, is it controlled by any legislation of any sphere of government?	YES

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

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

The facility shall be operated and managed in such a manner as to prevent the dispersion of ash into the atmosphere. Emission levels shall conform to the ambient air quality or emission standards. All Municipal By-Laws applicable to the operation of the facility shall be adhered to.

2. WATER USE

Indicate the source(s) of water that will be used for the activity

Municipal					

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:	N/A

If Yes, please attach proof of assurance of water supply, e.g. yield of borehole, in the appropriate Appendix

Does the activity require a water use permit from the Department of Water Affairs?	**YES**

If yes, list the permits required

A General Authorisation Application in terms of the National Water Act, 1998 (Act No. 36 of 1998) will be applied as there are wetlands occurring on site.

If yes, have you applied for the water use permit(s)?	NO
If yes, have you received approval(s)? (attached in appropriate appendix)	NO

Proof of the lodging of the application with the Department of Water and Sanitation will be included with the Final Basic Assessment Report.

3. POWER SUPPLY

Please indicate the source of power supply eg. Municipality / Eskom / Renewable energy source

Power will be sourced from Eskom and backup generators as well as solar lighting will also be utilised.

If power supply is not available, where will power be sourced from?

Backup generators as well as solar lighting will be utilised.

4. ENERGY EFFICIENCY

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

In order to ensure energy efficiency hence reducing demand on electricity supply the following has been considered:
- Solar energy, especially for the heating of water but also space heating, will be utilised in all buildings.
- Solar energy for the purpose of lighting together with the use of LED globes will also be utilised.
-The maximum usage of natural lighting will be incorporated into design facilities and
- Time switches will be used for outdoor lighting.

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

Alternative energy sources will be considered and built into the design of the facilities, such as the provision of solar panels and the usage of backup generators. All structures, where applicable, will be compliant with the relevant standards regarding energy efficiency e.g. SANS 204:11 relating to Energy Efficiency in Buildings.

SECTION E: 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 as well as the impacts of not implementing the activity (Section 24(4)(b)(i).

1. ISSUES RAISED BY INTERESTED AND AFFECTED PARTIES

Summarize the issues raised by interested and affected parties.

No issues have been raised by Interested and Affected Parties (IAPs) at this stage.

Summary of response from the practitioner to the issues raised by the interested and affected parties (including the manner in which the public comments are incorporated or why they were not included)

(A full response must be provided in the Comments and Response Report that must be attached to this report):

No issues have been raised by IAPs at this stage of the project. All issues raised during the Public Participation Period will be noted and included in the Comments and Response Report which will be included with the Final BAR.

2. IMPACTS THAT MAY RESULT FROM THE CONSTRUCTION AND OPERATIONAL PHASE

Briefly describe the methodology utilised in the rating of significance of impacts

The potential environmental impacts associated with the project will be evaluated according to its nature, extent, duration, intensity, probability and significance of the impacts, whereby:

- **Nature:** A brief written statement of the environmental aspect being impacted upon by particular action or activity.
- **Extent:** The area over which the impact will be expressed. Typically, the severity and significance of an impact have different scales and as such bracketing ranges are often required. This is often useful during the detailed assessment phase of a project in terms of further defining the determined significance or intensity of an impact. For example, high at a local scale, but low at a regional scale;
- **Duration:** Indicates what the lifetime of the impact will be;

- **Intensity:** Describes whether an impact is destructive or benign;
- **Probability:** Describes the likelihood of an impact actually occurring; and
- **Cumulative:** In relation to an activity, means the impact of an activity that in itself may not be significant but may become significant when added to the existing and potential impacts eventuating from similar or diverse activities or undertakings in the area.

Table 1: Impact Assessment Methodology

CRITERIA	DESCRIPTION			
Extent	**National (4)** The whole of South Africa	**Regional (3)** Provincial and parts of neighbouring provinces	**Local (2)** Within a radius of 2 km of the construction site	**Site (1)** Within the construction site
Duration	**Permanent (4)** Mitigation either by man or natural process will not occur in such a way or in such a time span that the impact can be considered transient	**Long-term (3)** The impact will continue or last for the entire operational life of the development, but will be mitigated by direct human action or by natural processes thereafter. The only class of impact which will be non-transitory	**Medium-term (2)** The impact will last for the period of the construction phase, where after it will be entirely negated	**Short-term (1)** The impact will either disappear with mitigation or will be mitigated through natural process in a span shorter than the construction phase
Intensity	**Very High (4)** Natural, cultural and social functions and processes are altered to extent that they permanently cease	**High (3)** Natural, cultural and social functions and processes are altered to extent that they temporarily cease	**Moderate (2)** Affected environment is altered, but natural, cultural and social functions and processes continue albeit in a modified way	**Low (1)** Impact affects the environment in such a way that natural, cultural and social functions and processes are not affected

Probability of Occurrence	**Definite (4)** Impact will certainly occur	**Highly Probable (3)** Most likely that the impact will occur	**Possible (2)** The impact ma occur	**Improbable (1)** Likelihood of the impact materializing is very low
Reversibility of Impact	**Highly Impossible** Impact reversal will certainly be impossible.	**Impossible** Impact can be reversed to some extent with loss of natural resources	**Moderate** Impact can be reversed with subsequent residual effects which can be mitigated.	**Probable** Impact can be totally reversed without any adverse or residual effects
Loss of irreplaceable resources	**Definite** Irreplaceable resources will definitely be lost.	**Highly Probable** Most likely that resources will be lost	**Possible** Some irreplaceable resources may be lost.	**Improbable** Loss of irreplaceable resources is highly unlikely

Significance is determined through a synthesis of impact characteristics. Significance is also an indication of the importance of the impact in terms of both physical extent and time scale, and therefore indicates the level of mitigation required. The total number of points scored for each impact indicates the level of significance of the impact.

Significance=Extent+ Duration +Intensity x Probability

Table 2: Significance Ratings

Low impact/Minor (3 -10 points)	A low impact has no permanent impact of significance. Mitigation measures are feasible and are readily instituted as part of a standing design, construction or operating procedure.
Medium impact/Moderate	Mitigation is possible with additional design and construction inputs.

(11 -20 points)	
High impact (21 -30 points)	The design of the site may be affected. Mitigation and possible remediation are needed during the construction and/or operational phases. The effects of the impact may affect the broader environment.
Very high impact/Major (31 - 48 points)	Permanent and important impacts. The design of the site may be affected. Intensive remediation is needed during construction and/or operational phases. Any activity which results in a "very high impact" is likely to be a fatal flaw.
Status	Denotes the perceived effect of the impact on the affected area.
Positive (+)	Beneficial impact.
Negative (-)	Deleterious or adverse impact.
Neutral (/)	Impact is neither beneficial nor adverse.

The suitability and feasibility of all proposed mitigation measures is included in the assessment of significant impacts. This was achieved through the comparison of the significance of the impact before and after the proposed mitigation measure is implemented.

A detailed Impact Assessment has been included as Appendix I1.

No Go
The option of not implementing the activity would result in the status qou being maintained. The land is currently lying vacant and is being utilised for activities such as sourcing of firewood, illegal dumping and prostitution. The non-utilisation of the land would also result in the loss of the socio economic benefits associated with the proposed project including the shortage of burial space within the City. The option of not implementing the activity was therefore not considered for the above mentioned reasons.

List any specialist reports that were used to fill in the above tables. Such reports are to be attached in the appropriate Appendix.

The Specialist studies undertaken include the following:

Appendix G1: Geotechnical Investigations

Appendix G2: Traffic Impact Assessment

Appendix G3: Vegetation Ecological and Wetland Assessment

Appendix G4: Geohydrological Report

Appendix G5: Heritage Impact Assessment

Describe any gaps in knowledge or assumptions made in the assessment of the environment and the impacts associated with the proposed development.

The impacts identified and assessed are based on the site investigations conducted by the EAP, the scope of work communicated by the applicant and the findings and recommendations of the specialist studies undertaken.

3. IMPACTS THAT MAY RESULT FROM THE DECOMISSIONING AND CLOSURE PHASE

Briefly describe and compare the potential impacts (as appropriate), significance rating of impacts, proposed mitigation and significance rating of impacts after mitigation that are likely to occur as a result of the decommissioning and closure phase for the various alternatives of the proposed development. This must include an assessment of the significance of all impacts.

Proposal

It is not anticipated that the proposed development will be decommissioned or closed in the near future, however typical impacts and mitigation measures recommended are with regards to the rehabilitation of the site after the construction activities. These have been included in the EMPr attached as Appendix H.

List any specialist reports that were used to fill in the above tables. Such reports are to be attached in the appropriate Appendix.

The Specialist studies undertaken include the following:
Appendix G1: Geotechnical Investigations
Appendix G2: Traffic Impact Assessment
Appendix G3: Vegetation Ecological and Wetland Assessment
Appendix G4: Geohydrological Report
Appendix G5: Heritage Impact Assessment

Where applicable indicate the detailed financial provisions for rehabilitation, closure and ongoing post decommissioning management for the negative environmental impacts.

N/A

4. CUMULATIVE IMPACTS

Describe potential impacts that, on their own may not be significant, but is significant when added to the impact of other activities or existing impacts in the environment. Substantiate response:

The cumulative impacts associated with the proposed development are discussed below, it is however anticipated that the significance of the negative impacts will be *Medium-Low*, and *Medium –High* for positive impacts after the implementation of mitigation measures. The cumulative impacts associated with the proposed project include the following;

- Impacts on the wetland habitats during construction and operational phases;
- Potential contamination of ground water resources during the operational phase
- Increased soil erosion (during construction phase) and generation of storm water run-off (during the operational phase) due to built-up areas and hardened surfaces such as pavements and parking areas;
- Potential generation of odours and emissions during the operational phase;
- Creation of short and long term employment opportunities for locals and utilisation of local businesses and SMME's as well as contribution to the local economy throughout the life span of the proposed development;

5. ENVIRONMENTAL IMPACT STATEMENT

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

A detailed Impact Statement has been included as Appendix I.

6. IMPACT SUMMARY OF THE PROPOSAL OR PREFERRED ALTERNATIVE

The impacts associated with the proposed project include the following:

- Loss of indigenous plant species and vegetation cover due to site clearing activities;
- Loss of faunal species and faunal habitat;
- Potential impacts on wetland habitats during construction and operational activities;
- Potential ground water contamination due to operational activities;
- Soil erosion due to loss of vegetation cover and placement of built up areas and hardened surfaces i.e. paving, walkways and drive ways;
- Visual intrusion during construction activities;
- Traffic congestion during construction activities ;
- Generation of waste, bad odour and air emissions during construction and operational activities;
- Generation of noise during construction activities;
- Accidents and/or injuries to workers, staff and patrons during the construction and operational phases of the proposed development;
- Socio-economic: Addressing the problem of shortage of burial space within Ekurhuleni;
- Socio-economic: The creation of short and long term employment opportunities as well as supporting of local businesses during the construction and operational phases of the project;
- Socio-economic: Health, Safety and security concerns during the construction and operational phases of the project;

The significance of the identified impacts can be largely mitigated to *MEDIUM – LOW* if the provisions of the EMPR are adhered to. Continuous monitoring and auditing from the relevant competent authorities will also ensure that the provisions of the EMPR and any other conditions recommended are fully complied with/adhered to by the Proponent.

Having assessed the significance of impacts of the proposal and alternative(s), please provide an overall summary and reasons for selecting the proposal or preferred alternative:

The proposal has been identified as the only option and no alternatives were considered for the proposed development due to the following factors:

1) Availability and size of the site for the proposed development

2) Current land use: The site lies vacant, is currently used as an illegal dumping ground and other activities such as prostitution. A re-zoning application has also been lodged.

3) Suitability of the receiving environment

4) Land ownership : The site is owned by the proponent

5) Economic viability of the project and associated socio-economic impacts

The land is currently lying vacant and is being utilised for activities such as sourcing of firewood, illegal dumping and prostitution. The non-utilisation of the land would result in the exacerbation of these activities and possibly the proliferation of criminal activities within the area. The associated socio-economic benefits of the proposed development including the need to address the shortage of burial space within the City Of Ekurhuleni's jurisdiction would also not be realised.

7. SPATIAL DEVELOPMENT TOOLS

Indicate the application of any spatial development tool protocols on the proposed development and the outcome thereof.

Gauteng Conservation Plan (C-Plan)

The main purposes of the Gauteng Conservation Plan (C-Plan) 3.3 are:

• to serve as the primary decision support tool for the biodiversity component of the Environmental Impact Assessment (EIA) process within the Gauteng Province;

• to inform protected area expansion and biodiversity stewardship programmes in the province;

• to serve as a basis for development of Bioregional Plans in municipalities within the province. Furthermore, the C-plan 3.3 assists in the classification of areas e.g., whether an area lies in a protected, critical biodiversity or ecological support area which assists GDARD in ensuring adequate protection of biodiversity and the environment within the province. The proposed development falls within an Ecological Support Area as shown in **Appendix A4**.

Gauteng Provincial Environmental Management Framework (EMF), 2015

The purpose of the GPEMF is to assist environmental impact management including EIA processes, spatial planning and sustainable development, the GPEMF has been taken into account as part of this Environmental Impact Assessment. The proposed development lies in Zone 1, however it is not listed as an excluded activity (refer to **Appendix I2: EIA Screening Report**).

SANBI BGIS

The wetlands are classified as belonging to the Mesic Highveld Grassland Group and are classified as artificial by NFEPA. The table below explains the classification of the wetland;

Wetland type	Description	Condition	NFEPA rank	FEPA status
Mesic Highveld Grassland Group	*Artificial*	Z3	6	No status
# wetland units: 1				

This HGM unit is indicated on the historical 1:50 000 maps as a reservoir or water abstraction source an not indicated as a wetland. It could potentially be a permanent sink for storm water or water runoff from the existing cemetery roads and hard infrastructure. The neglect of the area could have resulted in sediment build-up due to situation and aggregates from hard surfaces and caused hydrophytes to establish. These areas have nonetheless developed into wetlands with wetland soil, vegetation and topography albeit having a low-moderate PES, EIS and Ecosystem Services. The Wetland Assessment Report is included as **Appendix G3**.

8. RECOMMENDATION OF THE PRACTITIONER

Is the information contained in this report and the documentation attached hereto sufficient to make a decision in respect of the activity applied for (in the view of the Environmental Assessment Practitioner as bound by professional ethical standards and the code of conduct of EAPASA).	**YES**

If "NO", indicate the aspects that require further assessment before a decision can be made (list the aspects that require further assessment):

N/A

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

Detailed mitigation measures have been included in the EMPR, however the following recommendations as noted by the specialists and EAP should be considered;

Geotechnical studies*: It was recommended that the site can be developed, however due cognizance should be taken with regards to the sidewalls collapse that was observed at some of the test pits. This has been attributed to the prevalence of then eucalyptus tree roots which are deeply embedded in the soil. Therefore the trees must be completely uprooted*

- All necessary authorisations and approvals required from the Department of Water and Sanitation (DWS) and all other relevant authorities should be acquired before the commencement of the development. All Municipal By-Laws applicable to the proposed development should be adhered to.
- A buffer zone of at least 32m from the wetland areas should be demarcated and designated as a "No-Go area", all activities within these area are prohibited. The wetland areas should be fenced off prior to development and no person shall be allowed within these areas unless for the purposes of alien plant control and removal.
- All alien vegetation should be eradicated within the study site and invasive species including the following should be given the highest priority: *Acacia mearnsii, Campuloclinium macrocephalum, Cirsium vulgare, Eucalyptus camaldulensis, Verbena bonariensis, Verbena brasiliensis*, *Acacia melanoxylon, Acacia mearnsii, Agave americana, Araujia sericifera, Datura stramonium, Eucalyptus camaldulensis, Melia azedarach, Mirabilis jalapa, Opuntia ficusindica, Pinus pinaster, Robinia pseudoacacia, Ipomoea purpurea, Pennisetum clandestinum, Solanum mauritianum, Tipuana tipu.*
- The use of herbicides shall only be allowed after a proper investigation into the necessity, the type to be used, the long-term effects and the effectiveness of the agent. Application shall be under the direct supervision of a qualified technician. All surplus herbicide shall be disposed of in accordance with the supplier's specifications. Where herbicides are used to clear vegetation, selective and biodegradable herbicides registered for the specific species should be applied to individual plants only. General spraying and the use of non-selective herbicides (e.g. Roundup, Mamba etc.) should be prohibited at all times.
- The preparation rooms should be sufficiently ventilated so as to ensure that obnoxious odours and vapours are eliminated. The rooms should also be adequately illuminated as laid down in the National Building Regulations and Standards Act, 1977 (Act No. 103 of 1977).
- The facility shall be operated and managed in such a manner as to prevent the dispersion of ash into the atmosphere. Emission levels shall conform to the ambient air quality or emission standards.
- Two groundwater monitoring boreholes should be drilled at both upper and down-gradients. At least

quarterly sampling should be undertaken for the first year, then the monitoring frequency can be reviewed after further consultation with DWS.

- Waste must be separated, stored and disposed of as green waste, hazardous, building rubble and general waste. In as far as possible recycling of waste will take place on site and items will be separated into paper, glass, metal, plastic, general waste and hazardous waste. Service providers must be appointed to dispose of the various waste streams and they should be registered in terms of NEM: WA and comply with all relevant Acts, Regulations and SANS accordingly. All waste generated in the preparation room during the operational phase shall be dealt with accordingly as health care risk waste. The collection, storage, handling and disposal of such waste should be undertaken in accordance with the Health Care Risk Waste Standards. An accredited service provider must be appointed to dispose of the waste.
- Storm water management measures must be implemented to ensure that there is no contaminated water entering the wetland areas;
- The accumulated construction rubble should be utilised for the establishment of the "above ground burials" (memorial walls and mausoleums). In as far as practically possible, construction waste on site should be reused or recycled. ;
- Premises should be kept free of insects, rodents, odours, gases and fumes.
- All working areas and surfaces where human remains are prepared should be cleaned and disinfected immediately after the preparation of any human remains.
- The loading and unloading of human remains and the cleansing of vehicles shall only take place in designated areas. Cleansing, loading and unloading facilities shall consist of a paved area, screened from public view with an adequate drainage system.
- Employees and all other persons involved in the handling of human remains should be provided with clean and appropriate protective clothing e.g. surgical gloves, gumboots, plastic aprons (designed that the front laps cover the top of the gumboots), face masks and linen overcoats. It should be ensured that these employees wear the appropriate protective clothing when necessary. All used protective clothing shall be washed, cleansed and disinfected daily at the premises.
- Adequate and effective facilities for back up source of electricity shall be provided in case of power failure.

9. THE NEEDS AND DESIRABILITY OF THE PROPOSED DEVELOPMENT

(as per notice 792 of 2012, or the updated version of this guideline)

South Africa's largest cities are facing a shortage of available grave sites, as population growth and migration to urban areas puts pressure on both available land and the number of graves required. City of Ekurhuleni's cemeteries are speedily reaching capacity, and only 19 of its 63 cemeteries are in use, with 44 having already filled up. The City had previously allowed residents to pre-book burial sites, and this process has induced the issue of shortage of burial sites. City of Ekurhuleni intends to give its community members an alternative burial experience and is currently developing a specification for prospective investors to develop, manage, operate, and maintain the private cemetery. Therefore, the City has opted to avail land to private sector to assist in developing private cemeteries, as it cannot carry the cost of such development and seeks to explore ways to fund such developments in an economical way.

The proposed private cemetery development should address the following challenges within the jurisdiction of the City;

- Shortage of burial space in the City
- Compatible prices of private cemeteries in the area and South Africa as a whole
- Distance within the City of Ekurhuleni
- Safety and security in cemeteries
- Recycling of graves
- Acceptance and recognition of all cultures and burial methods
- Maintenance fees

The site identified has a potential yield of about 224 000 burial sites. The proposed site has been identified as suitable for the proposed development due to the following factors:

- Availability and size of the site for the proposed development
- Current land use: The site lies vacant, is currently used as an illegal dumping ground and other activities such as prostitution. A re-zoning application has also been lodged.
- Suitability of the receiving environment
- Land ownership : The site is owned by the proponent

- Economic viability of the project and associated socio-economic impacts
- The identified impacts can be largely mitigated to MEDIUM-LOW significance with the implementation of the provisions of the EMPr.

10. THE PERIOD FOR WHICH THE ENVIRONMENTAL AUTHORISATION IS REQUIRED

(CONSIDER WHEN THE ACITIVTY IS EXPECTED TO BE CONCLUDED)

The Environmental Authorization should be authorized for the full lifecycle of the proposed project.

11. ENVIRONMENTAL MANAGEMENT PROGRAMME (EMPr)

(Must include post construction monitoring requirements and when these will be concluded.)

If the EAP answers "Yes" to Point 7 above then an EMP is to be attached to this report as an Appendix

EMPr attached	**YES**

SECTION F: APPENDIXES

The following appendixes must be attached as appropriate (this list is inclusive, but not exhaustive):

It is required that if more than one item is enclosed that a table of contents is included in the appendix

Appendix A1: Layout Plan

Appendix A2: Locality Map

Appendix A3: Vegetation Map

Appendix A4: Critical Biodiversity Areas/Ecological Support Areas Map

Appendix A5: Sensitivity Map

Appendix B: Photographs

Appendix C: Facility illustration(s)

Appendix D: Route position information

Appendix E: Public participation information

Appendix E1 – Proof of site notice

Appendix E2 – Written notices issued as required in terms of the regulations

Appendix E3 – Proof of newspaper advertisements

Appendix E4 –Communications to and from interested and affected parties

Appendix E5 – Minutes of any public and/or stakeholder meetings

Appendix E6 - Comments and Responses Report

Appendix E7 –Comments from I&APs on Basic Assessment (BA) Report

Appendix E8 –Comments from I&APs on amendments to the BA Report

Appendix E9 – Copy of the register of I&APs

Appendix E10- Background Information Document

Appendix F: Water use license(s) authorisation, SAHRA information, service letters from municipalities, water supply information

Appendix G: Specialist reports

Appendix G1: Geotechnical Investigations

Appendix G2: Traffic Impact Assessment

Appendix G3: Vegetation Ecological and Wetland Assessment

Appendix G4: Geohydrological Report

Appendix G5: Heritage Impact Assessment

Appendix H: EMPr

Appendix I: Other Information

Appendix I1: Impact Assessment

Appendix I2: EIA Screening Report