



**environmental affairs**

Department:  
Environmental Affairs  
REPUBLIC OF SOUTH AFRICA

(For official use only)

**File Reference Number:**

**Application Number:**

**Date Received:**


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

**Kindly note that:**

1. This **basic assessment report** is a standard report that may be required by a competent authority in terms of the EIA Regulations, 2014 and is meant to streamline applications. Please make sure that it is the report used by the particular competent authority for the activity that is being applied for.
2. This report format is current as of **08 December 2014**. It is the responsibility of the applicant to ascertain whether subsequent versions of the form have been published or produced by the competent authority
3. The report must be typed within the spaces provided in the form. The size of the spaces provided is not necessarily indicative of the amount of information to be provided. The report is in the form of a table that can extend itself as each space is filled with typing.
4. Where applicable **tick** the boxes that are applicable in the report.
5. An incomplete report may be returned to the applicant for revision.
6. The use of "not applicable" in the report must be done with circumspection because if it is used in respect of material information that is required by the competent authority for assessing the application, it may result in the rejection of the application as provided for in the regulations.
7. This report must be handed in at offices of the relevant competent authority as determined by each authority.
8. No faxed or e-mailed reports will be accepted.
9. The signature of the EAP on the report must be an original signature.
10. The report must be compiled by an independent environmental assessment practitioner.
11. Unless protected by law, all information in the report will become public information on receipt by the competent authority. Any interested and affected party should be provided with the information contained in this report on request, during any stage of the application process.
12. A competent authority may require that for specified types of activities in defined situations only parts of this report need to be completed.
13. Should a specialist report or report on a specialised process be submitted at any stage for any part of this application, the terms of reference for such report must also be submitted.

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14. Two (2) colour hard copies and one (1) electronic copy of the report must be submitted to the competent authority.
15. Shape files (.shp) for maps must be included in the electronic copy of the report submitted to the competent authority.

## 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 in Appendix I.

### 1. PROJECT DESCRIPTION

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

Proposed installation of bulk underground electrical cables in the municipal areas of Mogale City and the City of Johannesburg Metropolitan Municipality.

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

Listed activity as described in GN 734, 735 and 736	Description of project activity
<b>Example:</b> <b>GN 734 Item xx xx): The construction of a bridge where such construction occurs within a watercourse or within 32 metres of a watercourse, measured from the edge of a watercourse, excluding where such construction will occur behind the development setback line.</b>	<b>A bridge measuring 5 m in height and 10m in length, no wider than 8 meters will be built over the Orange river</b>
GN R. 983 Item 12 (xii) (a)	The development of- (xii) infrastructure or structures with a physical footprint of 100 square metres or more;  where such development occurs - (a) within a watercourse  <b>Electrical cables will be installed through wetland areas.</b>
GN R. 983 Item 19 (i)	The infilling or depositing of any material of more than 5 cubic metres into, or the dredging, excavation, removal or moving of soil, sand, shells, shell grit, pebbles or rock of more than 5 cubic metres from - (i) a watercourse  <b>Electrical cables will be installed through wetland areas.</b>

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GN R. 985 Item 12 (a) (ii)	<p>The clearance of an area of 300 square metres or more of indigenous vegetation except where such clearance of indigenous vegetation is required for maintenance purposes undertaken in accordance with a maintenance management plan.</p> <p>(a) In Eastern Cape, Free State, Gauteng, Limpopo, North West and Western Cape provinces:</p> <p style="padding-left: 40px;">(ii) Within critical biodiversity areas identified in bioregional plans;</p> <p><b><i>The proposed electrical cable route goes through an area classified as a Critical Biodiversity Area (CBA) and Ecological Support Area (ESA) according to C-plan 3.3.</i></b></p>
GN R. 985 Item 14 (xii) (a) B (iii)	<p>The development of- (xii) infrastructure or structures with a physical footprint of 10 square metres or more;</p> <p>where such development occurs-</p> <p>(a) within a watercourse;</p> <p>B) In Gauteng:</p> <p style="padding-left: 40px;">(iii) Sites identified as Critical Biodiversity Areas (CBAs) and Ecological Support Areas (ESAs) in the Gauteng Conservation Plan or in bioregional plans;</p> <p><b><i>The proposed electrical cable route goes through an area classified as a Critical Biodiversity Area (CBA) and Ecological Support Area (ESA) according to C-plan 3.3.</i></b></p>

## 2. FEASIBLE AND REASONABLE ALTERNATIVES

“**alternatives**”, in relation to a proposed activity, means different means of meeting the general purpose and requirements of the activity, which may include alternatives to—

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

**The majority of the route falls within an existing Eskom servitude. However, where the installation is required along a road, the installation can be within the road reserve but on either side of the road.**

- **Alternatives for cable installation along Marina Street (S2):** The cables could be installed on either (western or eastern) side of the road. It is preferred that the cables be installed on the western side of Marina Street as there is an existing road reserve in which the vegetation has already been cleared. The eastern side of Marina Street is relatively undisturbed and therefore installing the cables on the eastern side would most likely be more expensive and have a more significant impact on the natural environment. The options will be discussed and agreed with Johannesburg Roads Agency.



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- **Alternative for cable installation along Lake view Drive (S3):** The cables could be installed on either (western or eastern) side of the road. It is preferred that the cables be installed on the western side of Lake view Drive as there is an existing Eskom servitude.
- (b) the type of activity to be undertaken;  
Underground electrical cables were selected because of the following benefits when comparing overhead power lines with underground cables:
- Underground cables are better protected against weather than overhead cables.
  - Underground cables are better protected against theft than overhead cables.
  - Underground cables have lower transmission loss than overhead power lines.
  - Underground cables emit no electric field and can be engineered to emit a lower magnetic field than overhead power lines.
  - Theft of power cables and illegally tapping into the electrical infrastructure are a major problems within the area. Underground cables are difficult to reroute, tap or modify once they have been installed due to inability to readily access line (overhead power cables) or to relocate sections of the line.
- (c) the design or layout of the activity;  
The layout of the activity is limited due to existing Eskom servitude thus the only two alternative considered are at Marina Street and Lake view Drive within road reserves.
- (d) the technology to be used in the activity;  
Trenching and horizontal directional drilling were considered as methods of installation. Trenching is easier and will therefore be conducted in non-sensitive areas and where there is a reserve or servitude.
- Trenching: Along the route where the cables would not cross wetlands or roads.
  - Horizontal drilling: Where cables cross a road or watercourse (wetlands), horizontal directional drilling is the preferred option.
    - 4.5m<sup>3</sup> is excavated on both sides of the road or in the buffer of the wetland to allow horizontal drilling.
    - The initial drill out is carried out using high-pressure water through drill rods.
    - Attached to the front of the rod is a cutting head and transmitter, which is controlled by a locator to achieve the correct line and level required.
    - The rods pass through mixing natural soil with the mud/water causing a small bentonite filled tunnel and at no time is a cavity formed.
    - Once the initial drill out is achieved the transmitter and cutting head are removed. This is done by removing the securing collar and unscrewing the cutting head.
    - A reamer is then attached which contains multiple water jets and cutting face. This is attached by screwing it to the drilling rods and replacing the securing collar.
    - The passing of different size reamers, mixing natural soil with mud on a continual rotating system, is carried out until a bentonite filled tunnel is ready to receive the sleeves.
    - If at any time a drill rod becomes bent, it is removed when it returns to the drilling rig.
    - The final reamer is then attached to a towing head that is inserted and expanded in the sleeve to be installed.
    - The sleeve displaces the bentonite as it is drawn through the tunnel and the bentonite fills the excavated pits.
    - The bentonite from the tunnel or from any blow outs will have to be removed by means of an excavator.

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- At no time is there a cavity created in the ground and the pipes are fully grouted in by displacement.

(e) the operational aspects of the activity; and  
No alternatives were considered.

- (f) the option of not implementing the activity.
- Job opportunities will not be created.
  - Support industries that provide goods, materials and services will not benefit from the construction, resulting in further loss of income in the local economy.
  - Without the necessary upgrades, development within the area will not occur.
  - Theft of power cables and illegally tapping into the electrical infrastructure are major problems within the area. Underground cables are difficult to reroute, tap or modify once they have been installed due to inability to readily access line (overhead power cables) or to relocate sections of the line.

Describe alternatives that are considered in this application as required by Appendix 1 (3)(h), Regulation 2014. Alternatives should include a consideration of all possible means by which the purpose and need of the proposed activity (NOT PROJECT) could be accomplished in the specific instance taking account of the interest of the applicant in the activity. The no-go alternative must in all cases be included in the assessment phase as the baseline against which the impacts of the other alternatives are assessed.

The determination of whether site or activity (including different processes, etc.) or both is appropriate needs to be informed by the specific circumstances of the activity and its environment. After receipt of this report the, competent authority may also request the applicant to assess additional alternatives that could possibly accomplish the purpose and need of the proposed activity if it is clear that realistic alternatives have not been considered to a reasonable extent.

The identification of alternatives should be in line with the Integrated Environmental Assessment Guideline Series 11, published by the DEA in 2004. Should the alternatives include different locations and lay-outs, the co-ordinates of the different alternatives must be provided. The co-ordinates should be in degrees, minutes and seconds. The projection that must be used in all cases is the WGS84 spheroid in a national or local projection.

**a) Site alternatives**

<b>Alternative 1 (preferred alternative)</b>		
Description	Lat (DDMMSS)	Long (DDMMSS)
<b>Alternative 2</b>		
Description	Lat (DDMMSS)	Long (DDMMSS)
<b>Alternative 3</b>		
Description	Lat (DDMMSS)	Long (DDMMSS)

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In the case of linear activities:

**Alternative:**

Alternative S1 (preferred)

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

**Latitude (S):**

**Longitude (E):**

26°02' 11.27"	27° 54' 43.14"
26° 01' 55.74"	27° 54' 04.03"
26° 02' 10.20"	27° 53' 17.95"

Alternative S2 (if any)

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

26°02' 11.27"	27° 54' 43.14"
26°02' 02.57"	27° 54' 34.37"
26°01' 46.32"	27° 54' 32.12"

Alternative S3 (if any)

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

26°02' 05.65"	27° 53' 32.42"
26°02' 12.58"	27° 54' 34.62"
26°02' 18.96"	27° 54' 36.80"

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

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

**b) Lay-out alternatives (See a)**

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

**c) Technology alternatives**

Alternative 1 (preferred alternative)
Combination of trenching and horizontal directional drilling. Horizontal directional drilling where installation cross roads and wetlands.
Alternative 2
Trenching.
Alternative 3
Horizontal directional drilling.

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

Alternative 1 (preferred alternative)		
Alternative 2		
Alternative 3		

e) No-go alternative

The following impacts in terms of the no-go option were identified:

- Job opportunities will not be created.
- Support industries that provide goods, materials and services will not benefit from the construction phase, resulting in further loss of income in the local economy.
- Without the installation of bulk power cables, development within the area will be limited / hindered.
- Theft of power cables and illegally tapping into the electrical infrastructure are major problems within the area. Underground cables (versus overhead power cables) are difficult to reroute, tap or modify once these have been installed.

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

3. PHYSICAL SIZE OF THE ACTIVITY

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

**Alternative:**

Alternative A1<sup>1</sup> (preferred activity alternative)  
 Alternative A2 (if any)  
 Alternative A3 (if any)

**Size of the activity:**

	m <sup>2</sup>
	m <sup>2</sup>
	m <sup>2</sup>

or, for linear activities:

**Alternative:**

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

**Length of the activity:**

	3 800m
	3 800m (910m along Marina Street)
	3 800m (430m along Lake View Drive)

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

**Alternative:**

Alternative A1 (preferred activity alternative)

**Size of the site/servitude:**

	3 800m <sup>2</sup>
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<sup>1</sup> "Alternative A.." refer to activity, process, technology or other alternatives.

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Alternative A2 (if any)  
Alternative A3 (if any)

	m <sup>2</sup>
	m <sup>2</sup>

### 4. SITE ACCESS

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

<b>YES</b>	<b>NO</b>
m	

Describe the type of access road planned:

Include the position of the access road on the site plan and required map, as well as an indication of the road in relation to the site.

### 5. LOCALITY MAP

An A3 locality map must be attached to the back of this document, as Appendix A. The scale of the locality map must be relevant to the size of the development (at least 1:50 000. For linear activities of more than 25 kilometres, a smaller scale e.g. 1:250 000 can be used. The scale must be indicated on the map.). The map must indicate the following:

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

### 6. LAYOUT/ROUTE PLAN

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

The site or route plans must indicate the following:

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

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- a north arrow.

### 7. SENSITIVITY MAP

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

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

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

### 8. SITE PHOTOGRAPHS

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

### 9. FACILITY ILLUSTRATION

A detailed illustration of the activity must be provided at a scale of at least 1:200 as Appendix C for activities that include structures. The illustrations must be to scale and must represent a realistic image of the planned activity. The illustration must give a representative view of the activity.

### 10. ACTIVITY MOTIVATION

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

<b>1. Is the activity permitted in terms of the property's existing land use rights?</b>	<b>YES</b>	NO	Please explain
The proposed activity is within the existing Eskom servitude for the majority of the route, within road reserves and on one property a servitude needs to be established.			
<b>2. Will the activity be in line with the following?</b>			
<b>(a) Provincial Spatial Development Framework (PSDF)</b>	<b>YES</b>	NO	Please explain
Gauteng SDF states that they wish to optimise the way in which they operate, to create economic opportunities, deliver social services, infrastructure, life-enhancing living environments and efficient, sustainable use of energy and contained carbon footprints.			
<i>The proposed activity will create job opportunities during the construction phase and unlock economic development potential in the area post-construction as well as provide service infrastructure. The activity will therefore implement infrastructure for better service delivery within the area creating life-enhancing living environments.</i>			

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<b>(b) Urban edge / Edge of Built environment for the area</b>	<b>YES</b>	<b>NO</b>	Please explain
<p>Gauteng PSDF states that they wish to ensure the containment of urban development within certain boundaries with a view to preserving the natural environment and preventing urban sprawl.</p> <p><i>The proposed activity falls within the Gauteng urban edge.</i></p>			
<b>(c) Integrated Development Plan (IDP) and Spatial Development Framework (SDF) of the Local Municipality (e.g. would the approval of this application compromise the integrity of the existing approved and credible municipal IDP and SDF?).</b>	<b>YES</b>	<b>NO</b>	Please explain
<p>Mogale City IDP is intended to promote Local Economic Development, Spatial Development, Infrastructure Development, Institutional Transformation and Budget Alignment.</p> <p>City of Johannesburg commits itself to pro-active delivery and the creation of a city environment by 2040 that is resilient, sustainable and liveable. It aims to achieve this through long-term 2040 plans, targeted programmes, services and enabling support that drives economic growth, optimal management of natural resources and the environment, the development of society and the individuals within it, and the practice and encouragement of sound governance.</p> <p><i>The proposed activity will lead to economic growth and development due to the provision of electricity services.</i></p>			
<b>(d) Approved Structure Plan of the Municipality</b>	<b>YES</b>	<b>NO</b>	Please explain
<p>The proposed activity falls within the approved structure plan of both municipalities (Mogale City and City of Johannesburg)</p>			
<b>(e) An Environmental Management Framework (EMF) adopted by the Department (e.g. Would the approval of this application compromise the integrity of the existing environmental management priorities for the area and if so, can it be justified in terms of sustainability considerations?)</b>	<b>YES</b>	<b>NO</b>	Please explain
<p><i>This application will not compromise the integrity of the existing environmental management priorities for the area. The EMF suggests that Agricultural Land be conserved for agricultural practices and should not be developed into an urban area. The proposed activity falls within an existing Eskom servitude and thus would not alter the land use.</i></p>			
<b>(f) Any other Plans (e.g. Guide Plan)</b>	<b>YES</b>	<b>NO</b>	Please explain
<p><i>The proposed development is in line with all plans and programmes of the Municipalities (Mogale City and City of Johannesburg) and the Gauteng Province.</i></p>			



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<p><b>3. Is the land use (associated with the activity being applied for) considered within the timeframe intended by the existing approved SDF agreed to by the relevant environmental authority (i.e. is the proposed development in line with the projects and programmes identified as priorities within the credible IDP)?</b></p>	YES	NO	Please explain
<p><i>The proposed project is in line with the projects and programmes and is a priority for service delivery to the area. Without services, development cannot take place and socio-economic upliftment will not occur.</i></p>			
<p><b>4. Does the community/area need the activity and the associated land use concerned (is it a societal priority)? (This refers to the strategic as well as local level (e.g. development is a national priority, but within a specific local context it could be inappropriate.)</b></p>	YES	NO	Please explain
<p><i>Socio-economic impacts on residents, businesses and community services will be positive.</i></p> <ul style="list-style-type: none"> <li>• <i>Will unlock the development potential of the area.</i></li> <li>• <i>New developments will create jobs.</i></li> <li>• <i>Development in the area will have economic and financial benefits.</i></li> <li>• <i>The development of new businesses will increase the number of commuters into the area, which could have a positive impact for businesses due to an increased potential market and improve the income of existing businesses.</i></li> <li>• <i>Development in the area may increase business opportunities.</i></li> <li>• <i>Increases in property value, potential job creation opportunities, potential for community services and amenities.</i></li> <li>• <i>Businesses (e.g. convenience stores and take-away food businesses) may benefit from the sales to the construction workers.</i></li> </ul>			
<p><b>5. Are the necessary services with adequate capacity currently available (at the time of application), or must additional capacity be created to cater for the development? (Confirmation by the relevant Municipality in this regard must be attached to the final Basic Assessment Report as Appendix I.)</b></p>	YES	NO	Please explain
<p><i>The proposed activity entails installation of service thus no additional services are required.</i></p>			
<p><b>6. Is this development provided for in the infrastructure planning of the municipality, and if not what will the implication be on the infrastructure planning of the municipality (priority and placement of services and opportunity costs)? (Comment by the relevant Municipality in this regard must be attached to the final Basic Assessment Report as Appendix I.)</b></p>	YES	NO	Please explain
<p><i>The proposed activity entails installation of service thus no additional services are required.</i></p>			

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<b>7. Is this project part of a national programme to address an issue of national concern or importance?</b>	<b>YES</b>	NO	Please explain
<i>The project will address local economic growth and unemployment within the area but is not an issue of national concern. The project will however increase service delivery in the area, which is of national concern.</i>			
<b>8. Do location factors favour this land use (associated with the activity applied for) at this place? (This relates to the contextualisation of the proposed land use on this site within its broader context.)</b>	<b>YES</b>	NO	Please explain
<i>The current zoning of the area is mixed and the area is developing at an significant rate, together with better service delivery the land use zoning for the area might change in the future. The majority of the route is within an existing Eskom servitude.</i>			
<b>9. Is the development the best practicable environmental option for this land/site?</b>	<b>YES</b>	NO	Please explain
<i>It will increase service delivery within the area.</i>			
<b>10. Will the benefits of the proposed land use/development outweigh the negative impacts of it?</b>	<b>YES</b>	NO	Please explain
<p><i>Socio-economic impacts on residents, businesses and community services will be positive.</i></p> <ul style="list-style-type: none"> <li><i>• Will unlock the development potential of the area.</i></li> <li><i>• New developments will create jobs.</i></li> <li><i>• Development in the area will have economic and financial benefits.</i></li> <li><i>• The development of new businesses will increase the number of commuters into the area, which could have a positive impact for businesses due to an increased potential market and improve the income of existing businesses.</i></li> <li><i>• Development in the area may increase business opportunities.</i></li> <li><i>• Increases in property value, potential job creation opportunities, potential for community services and amenities.</i></li> <li><i>• Businesses (e.g. convenience stores and take-away food businesses) may benefit from the sales to the construction workers.</i></li> </ul>			
<b>11. Will the proposed land use/development set a precedent for similar activities in the area (local municipality)?</b>	<b>YES</b>	NO	Please explain
<i>Increase service delivery may unlock economic development within the area.</i>			

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<b>12. Will any person's rights be negatively affected by the proposed activity/ies?</b>	YES	NO	Please explain
<p>The majority of the installation will occur in an existing Eskom servitude and road reserves. Only one (1) property will require the registration of a servitude.</p>			
<b>13. Will the proposed activity/ies compromise the "urban edge" as defined by the local municipality?</b>	YES	NO	Please explain
<p><i>The proposed activity falls within the urban edge of both municipalities (Mogale City and City of Johannesburg). The municipalities do not have capacity to install new services within the area and this restricts development. The project should thus be seen as a contribution towards service delivery.</i></p>			
<b>14. Will the proposed activity/ies contribute to any of the 17 Strategic Integrated Projects (SIPs)?</b>	YES	NO	Please explain
<p><i>SIP 4: Unlocking the economic opportunities in the Gauteng Province.</i></p>			
<b>15. What will the benefits be to society in general and to the local communities?</b>	Please explain		
<p><i>Socio-economic impacts on residents, businesses and community services will be positive.</i></p> <ul style="list-style-type: none"> <li>• <i>Will unlock the development potential of the area.</i></li> <li>• <i>New developments will create jobs.</i></li> <li>• <i>Development in the area will have economic and financial benefits.</i></li> <li>• <i>The development of new businesses will increase the number of commuters into the area, which could have a positive impact for businesses due to an increased potential market and improve the income of existing businesses.</i></li> <li>• <i>Development in the area may increase business opportunities.</i></li> <li>• <i>Increases in property value, potential job creation opportunities, potential for community services and amenities.</i></li> <li>• <i>Businesses (e.g. convenience stores and take-away food businesses) may benefit from the sales to the construction workers.</i></li> <li>• <i>Underground cables are better protected against weather than overhead cables.</i></li> <li>• <i>Underground cables have lower transmission loss than overhead power lines.</i></li> <li>• <i>Underground cables emit no electric field and can be engineered to emit a lower magnetic field than overhead power lines.</i></li> <li>• <i>Theft of power cables and illegally tapping into the electrical infrastructure are major problems within the area. Underground cables are difficult to reroute, tap or modify once they have been installed due to inability to readily access line (overhead power cables) or to relocate sections of the line.</i></li> </ul>			

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<b>16. Any other need and desirability considerations related to the proposed activity?</b>	Please explain
<ul style="list-style-type: none"> <li>• <i>Job opportunities will be created for the locals during the construction phase.</i></li> <li>• <i>Support industries that provide goods, materials and services will benefit from the construction.</i></li> <li>• <i>Without the necessary upgrades (installation of services), development within the area will not occur.</i></li> <li>• <i>Theft of power cables and illegally tapping into the electrical infrastructure are major problems within the area. Underground cables are difficult to reroute, tap or modify once they have been installed due to inability to readily access line (overhead power cables) or to relocate sections of the line.</i></li> <li>• <i>The project will ultimately lead to better service delivery in the area.</i></li> </ul>	
<b>17. How does the project fit into the National Development Plan for 2030?</b>	Please explain
<p><i>This project is in line with the National Development Plan for 2030 which is bringing about faster economic growth, higher investment and greater labour absorption.</i></p>	
<b>18. Please describe how the general objectives of Integrated Environmental Management as set out in section 23 of NEMA have been taken into account.</b>	
<p><i>23. (1) The purpose of this Chapter is to promote the application of appropriate environmental management tools in order to ensure the integrated environmental management of activities,</i></p> <p><i>(2) The general objective of integrated environmental management is to</i></p> <p><i>(a) promote the integration of the principles of environmental management set out in section 2 into the making of all decisions which may have a significant effect on the environment</i></p> <p><i>(b) identify, predict and evaluate the actual and potential impact on the environment. socio-economic conditions and cultural heritage. the risks and consequences and alternatives and options for mitigation of activities, with a view to minimizing negative impacts, maximizing benefits. and promoting compliance with the principles of environmental management set out in section 2;</i></p> <p><i>(c) ensure that the effects of activities on the environment receive adequate consideration before actions are taken in connection with them;</i></p> <p><i>(d) ensure adequate and appropriate opportunity for public participation in decisions that may affect the environment;</i></p> <p><i>(e) ensure the consideration of environmental attributes in management and decision-making which may have a significant effect on the environment; and identify and employ the modes of environmental management best suited to ensuring that a particular activity is pursued in accordance with the principles of environmental management set out in section 2.</i></p> <p><i>(3) The Director-General must coordinate the activities of organs of state referred to in section 24(1) and assist them in giving effect to the objectives of this section and such assistance may include training, the publication of manuals and guidelines and the</i></p>	

## BASIC ASSESSMENT REPORT

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

*The principles of holistic evaluation and sustainable development were applied during this application whilst considering the sense of place, feasible alternatives and the precautionary principle.*

### 11. APPLICABLE LEGISLATION, POLICIES AND/OR GUIDELINES

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

Title of legislation, policy or guideline	Applicability to the project	Administering authority	Date
Constitution of the Republic of South Africa, 1996 (Act 108 of 1996)	Section 24 states that: "Everyone has the right <ul style="list-style-type: none"> <li>• to an environment that is not harmful to their health or well-being; and</li> <li>• to have the environment protected, for the benefit of present and future generations, through reasonable legislative and other measures that                             <ul style="list-style-type: none"> <li>○ prevent pollution and ecological degradation;</li> <li>○ promote conservation; and</li> <li>○ secure ecologically sustainable development and use of natural resources while promoting justifiable economic and social development."</li> </ul> </li> </ul>	Constitutional Court	1996
National Environmental Management Act, 1998 (Act 107 of 1998) (NEMA), as amended. GNR 982, 983 & 985	The proposed project triggers listed activities as per NEMA, 1998, GNR 983 and GNR 985. In addition, all processes related to this Basic Assessment process, such as the Public Participation Process (PPP) and impact assessment methodology was done in accordance with the Act and GNR 982.	Department of Environmental Affairs (DEA)	1998

## BASIC ASSESSMENT REPORT

National Heritage Resources Act, 1999 (Act 25 of 1999) (NHRA).	A Heritage Impact Assessment (HIA) was not undertaken as the proposed activity is within an existing Eskom servitude.  It is presumed that the HIA was done prior to the construction with the overhead power lines.	South African Heritage Resources Agency (SAHRA)	1999
National Environmental Management: Biodiversity Act, 2004 (Act 10 of 2004) (NEM:BA).	A fauna & flora assessment was not undertaken as the proposed activity is within an existing Eskom servitude that has already been cleared.	DEA	2004
Conservation of Agricultural Resources Act, 1983 (Act 43 of 1983) (CARA).	Land is still zoned as agricultural land.  Guidelines in terms of the management of alien invasive flora.	Department of Agriculture, Forestry and Fisheries (DAFF)	1983
Occupational Health and Safety Act, 1993 (Act 85 of 1993)	Safety of workers	Department of Labour	1993
National Water Act, 1998 (act 36 of 1998)	Risk to wetlands along the route. Section 21 (c) and (i) water use.	Department of Water and Sanitation (DWS)	1998

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

#### a) Solid waste management

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

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

<b>YES</b>	<b>NO</b>
250 m <sup>3</sup>	

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

## BASIC ASSESSMENT REPORT

All solid waste will be disposed of at a registered and licensed local municipal waste disposal facility. The waste will be collected in skips (to be placed on site by the construction contractor) and transported to the waste disposal site by the appointed construction contractor.

The waste will include:

- Building rubble generated during construction of new infrastructure.
- Vegetation cover that will be removed during the construction phase for the establishment of infrastructure resulting in garden type biodegradable waste.
- Waste generated by builders on site (food containers, plastic, paper etc.).

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

The construction waste will be transported and disposed of at the nearest registered and licensed landfill site.

Will the activity produce solid waste during its operational phase?

YES	NO
m <sup>3</sup>	

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

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

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

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

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

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
m <sup>3</sup>	

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

Will the activity produce any effluent that will be treated and/or disposed of on site?

YES	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.*



## BASIC ASSESSMENT REPORT

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

YES	NO
-----	----

If YES, provide the particulars of the facility:

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

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

Water will not be used for the proposed activity except during horizontal directional drilling. Water for this purpose will be brought to the project site with a bowser.

**c) Emissions into the atmosphere**

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

YES	NO
YES	NO

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

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

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

**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

**e) Generation of noise**

Will the activity generate noise?

YES	NO
YES	NO

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

Describe the noise in terms of type and level:

Noise of people and equipment during construction.

**BASIC ASSESSMENT REPORT**

**13. WATER USE**

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

Municipal	Water board	Groundwater	River, stream, dam or lake	Other	<b>The activity will not use water</b>
-----------	-------------	-------------	-------------------------------	-------	--

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:

litres	
<b>YES</b>	<b>NO</b>

Does the activity require a water use authorisation (general authorisation or water use license) from the Department of Water Affairs?

If YES, please provide proof that the application has been submitted to the Department of Water Affairs. **A General Authorisation application will be submitted to DWS within the next thirty (30) days.**

**14. ENERGY EFFICIENCY**

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

No alternative design measures have been considered as the activity falls within an existing Eskom servitude. The activity is for the distribution of energy.

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

- Underground cables are better protected against weather than overhead cables.
- Underground cables have lower transmission loss than overhead power lines.
- Underground cables emit no electric field and can be engineered to emit a lower magnetic field than overhead power lines.

**SECTION B: SITE/AREA/PROPERTY DESCRIPTION**

**Important notes:**

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

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

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

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

<b>YES</b>	<b>NO</b>
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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.

## BASIC ASSESSMENT REPORT

Property description/physical address:

<b>Province</b>	Gauteng
<b>District Municipality</b>	West Rand District Municipality
<b>Local Municipality</b>	1. Mogale City 2. City of Johannesburg
<b>Ward Number(s)</b>	1. Ward 23 2. Ward 97
<b>Farm name and number</b>	See Appendix C
<b>Portion number</b>	See Appendix C
<b>SG Code</b>	See Appendix C

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:

Agricultural
--------------

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:

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

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

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

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

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

BASIC ASSESSMENT REPORT

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

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

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

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

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

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

**5. SURFACE WATER**

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

Perennial River	YES	NO	UNSURE
Non-Perennial River	YES	NO	UNSURE
Permanent Wetland	YES	NO	UNSURE

## BASIC ASSESSMENT REPORT

Seasonal Wetland	<b>YES</b>	NO	UNSURE
Artificial Wetland	YES	NO	<b>UNSURE</b>
Estuarine / Lagoonal wetland	YES	<b>NO</b>	UNSURE

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

Two (2) unchannelled valley bottom wetlands along the route with PES of D (largely modified), EIS of D (low) and REC of D.
One (1) channelled valley bottom wetland along the route with PES of D (largely modified), EIS of C (moderate) and REC of C.
Refer to Wetland study in Appendix D.

### 6. LAND USE CHARACTER OF SURROUNDING AREA

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

<b>Natural area</b>	Dam or reservoir	Polo fields
<b>Low density residential</b>	Hospital/medical centre	Filling station <sup>H</sup>
Medium density residential	School	Landfill or waste treatment site
High density residential	Tertiary education facility	Plantation
Informal residential <sup>A</sup>	Church	<b>Agriculture (land zoning only)</b>
Retail-commercial & warehousing	Old-age home	<b>River, stream or wetland</b>
Light industrial	Sewage treatment plant <sup>A</sup>	Nature conservation area
Medium industrial <sup>AN</sup>	Train station or shunting yard <sup>N</sup>	Mountain, koppie or ridge
Heavy industrial <sup>AN</sup>	Railway line <sup>N</sup>	Museum
Power station	Major road (4 lanes or more) <sup>N</sup>	Historical building
Office/consulting room	Airport <sup>N</sup>	Protected Area
Military or police base/station/compound	Harbour	Graveyard
Spoil heap or slimes dam <sup>A</sup>	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 will this impact / be impacted upon by the proposed activity? Specify and explain:

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

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:

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

Critical Biodiversity Area (as per provincial conservation plan)	<b>YES</b>	<b>NO</b>
Core area of a protected area?	<b>YES</b>	<b>NO</b>
Buffer area of a protected area?	<b>YES</b>	<b>NO</b>
Planned expansion area of an existing protected area?	<b>YES</b>	<b>NO</b>
Existing offset area associated with a previous Environmental Authorisation?	<b>YES</b>	<b>NO</b>
Buffer area of the SKA?	<b>YES</b>	<b>NO</b>

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:

<b>YES</b>	<b>NO</b>
Uncertain	

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:

Will any building or structure older than 60 years be affected in any way?  
Is it necessary to apply for a permit in terms of the National Heritage Resources Act, 1999 (Act 25 of 1999)?

<b>YES</b>	<b>NO</b>
<b>YES</b>	<b>NO</b>

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**

**1. Mogale city**

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

Level of unemployment:

The unemployment rate for both the West Rand and Mogale City is slightly above the national unemployment rate of 24.9%. Mogale City has an unemployment rate of 26.3%. The rising unemployment rate is of concern and needs to be addressed. Approximately 8.5% of households in Mogale City earn no income while the majority (50.6%) of households earn between R9600 and R76000 a year (Urban-Econ (Development Economists), 2011).

Economic profile of local municipality:

Mogale City is situated on the Western side of the Gauteng Province. It also forms part of the broader West Rand District Municipality, which consist of four (4) local municipalities i.e. Randfontein, Westonaria, Mogale City and Merafong City. Mogale City is made up of the following areas: Kagiso & Rietvallei 1, 2 & 3, Azaadville, Krugersdorp and surrounding areas, Munsieville, Muldersdrift, Tarlton, Sterkfontein, Magaliesburg, Hekpoort. The largest part of Mogale City is rural in nature, with a specific urban concentration in the South-eastern part of the municipality where the municipality interfaces with the Gauteng urban complex (Urban-Econ, 2011).

In the past, gold mining was the core of the region's economy, but due to closure of mines, the focus has shifted to tourism, manufacturing and agribusiness. The commercial and industrial sectors within Mogale City employ over 33 000 people with males more likely to be employed than females. It appears that female-headed households are prone to live in poverty compared to male-headed households (Strategic Environmental Focus, 2002).

According to Census 2011, the Krugersdorp area has a population of 140 643 (568.89 per km<sup>2</sup>) that stretches over an area of 247.22 km<sup>2</sup>. There are 46 678 (188.81 per km<sup>2</sup>) households in the Krugersdorp area with 50.22% of the population being White and 47.27% Black African. The Kagiso area covers 14.17 km<sup>2</sup>, with a population of 115 802 (8 172.93 per km<sup>2</sup>), there are 35 098 households (2 477.10 per km<sup>2</sup>). Black Africans constitute 99.33% of the population in the Kagiso area (Frith, 2015).

The urban areas reflect different levels of development. The former black townships are a mixture of clearly laid out sections and a concentration of informal settlements. The formal township is also divided into 'old sections', which houses a lot of shacks within their yards and 'recently developed sections' (less than 15 years old) which houses the original formal structures, with no backyard settlements (Urban-Econ, 2011).

Level of education:

Mogale City has an estimated 220 000 residents, 67% reside in the urban area and 33% in the rural



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area. Poverty is highest in rural areas with poverty directly related to education and health status. Poverty is therefore higher in rural areas where the residents have little or no education. Only around 7.6% of the population does not have any schooling while 22% of Mogale City's population has completed high school (Urban-Econ, 2011). Significant lower percentage of poverty in urban areas where residents has received secondary or tertiary education (Strategic Environmental Focus, 2002).

### 2. City of Johannesburg

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

Level of unemployment:

Unemployment in Johannesburg calculated on official figures was approximately 25% in 2011 down from approximately 29.6% in 2001. Using the broader definition that includes discouraged workers, the rate is pushed to above 80% in 2011.

Youth employment remains a major challenge both nationally (above 35%) and for the City of Johannesburg. Education levels and slow formal sector growth are two of the major causes of youth unemployment. The vast majority of the youthful population in Johannesburg has only a matric certificate preventing access to the labour market.

Economic profile of local municipality:

The City of Johannesburg (CoJ) is centrally located within the Province of Gauteng. To the north lies the City of Tshwane Metropolitan Municipality and to the east, Ekurhuleni Metropolitan Municipality. The District Councils of West Rand and Sedibeng border the City's western and southern municipal boundaries, respectively. The City enjoys favourable linkages via road and rail to immediate municipal and provincial neighbours and beyond international borders.

It is the largest city in South Africa with a recorded population of 3.2 million (approximately 1 million households) residing in an area of 1 644km<sup>2</sup>. This translates to an average population density of 1,962 persons per km<sup>2</sup>. Spatially, densities differ between locations and income groups, the highest densities are found in the City's informal settlements. Conversely, the lowest densities can be found on the peri-urban fringe and a number of the historical residential suburbs. It remains a rapidly growing city with an estimated population growth of 14.6% since 1996, accounting for 7.2% of the total population of South Africa.

Although the City has the highest Human Development Index (HDI) (0.73) in the country, it still faces the global challenges of increasing urbanisation and in-migration, poverty, high levels of unemployment (estimated at 30% versus a 40% National average) and increasing the accessibility to basic services.

Private investment patterns remain rooted in the "established" central and northern nodes of the City, largely to the exclusion of the marginalised areas south (Soweto, Orange Farm) and north (Diepsloot and Ivory Park) of the City. This economic inequality is compounded by the lengthy travel distances and financial costs incurred by the residents of the marginalised areas as they seek to access the economic opportunities of the established and emerging nodal points of the City. Johannesburg remains the focal point for economic opportunities nationally and in sub-Saharan Africa and is a

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desired location of choice for a large percentage of the poor given the City's inherent economic and social network opportunities. Key to bringing jobs closer to people and people closer to jobs is the accelerated spatial restructuring of the City.

Gauteng is responsible for 49,6% of all employee remuneration in the country and 52% of all turnover of institutions; economic activity in Gauteng generates 41% of the total national Gross Value Added (GVA); and the province is without exception the highest contributor to each of the national GVA categories.

The City has actively sought the advice and opinion of its neighbouring municipalities on cross-border planning issues and current planning thinking and discourse. These include: Interface between North Western areas of Johannesburg and eastern extent of Mogale (specifically in relation to the proposed Northern Development Frameworks developed during 2007/08). On the North Western interface (Region C), there are specific issues around the developmental direction that the respective municipalities (CoJ and Mogale) have adopted. Beyond the Cosmo City initiative, matters such as Urban Development Boundary / Edge alignment, roads planning and phasing of development are also relevant in this area.

Transportation modes within the City are strongly related to income levels. The majority of low-income groups are dependent on public transport, both subsidised (e.g. bus and rail) and unsubsidised. Conversely, middle-high income groups are more dependent on private vehicular modes of transport. Further: 34% of Johannesburg citizens use public transport to commute to work or school; 34% of Johannesburg citizens use private transport to travel to work or school; 32% walk to work or school. Minibus taxis are the most utilised public transport mode across all regions for work related trips; and average travel cost to work is R186 per month. Traffic congestion has increased by 26% since 1999; the road network in the South Western and Western areas of the City is poorly defined. The largest percentage of the City's gravel roads backlog falls within the City's Marginalised Areas, notably Ivory Park, Orange Farm, Vlaktefontein and Diepsloot. Surfacing these gravel roads will address a number of concerns not least environmental and health issues as well as maintenance and life cycle costs. Relieving congestion, upgrading of traffic signals and public transport facilities are also considered as priority issues.

Whilst congestion and increased private car sales / usage are not unique to South Africa or Johannesburg, they represent a real threat to the competitiveness and efficiency of the City in the short, medium and long-term. Further, the impact of the congestion if not addressed may lead to fresh and increased demands for decentralised commercial and retail development.

Infrastructure networks relating to water, power, storm water and sewer are all under significant pressure from development. In some instances new developments have outstripped the ability of the City and its service providers to keep pace with delivery. The City collects 1.8 million tons of garbage each year. 244,200 tons are in the forms of illegal dumping, and 1,779 tons of litter from the streets. The lifespan of certain landfill sites for the City's solid waste is reaching full capacity and a process has been put in place to identify new sites within the City. In addition to these challenges, recycling of solid waste should play a far more important role in waste disposal since only 13% of the City's waste is recycled.

Given the limited capital budget available to the City in the current economic downturn, and the Growth and Development Strategy that makes both social upliftment and economic growth development an imperative, the city must prioritise its capital expenditure.

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Level of education:

The following facts about education in the City of Johannesburg are extrated from results of census 2011:

- The proportion of holders of at least a degree and higher increased by 1.5% between 2001 and 2011.
- The number of masters and PhD's increased by 0.2%.
- There is a significant reduction in residents with only grade 10/ standard 8/ form 3 or less.
- There was a huge increase in those with matric exemption - an increase of 4% between 2001 and 2011.
- As a result, the literacy rate is expected to rise in the City of Johannesburg.
- 

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

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

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

Will the activity contribute to service infrastructure?

Is the activity a public amenity?

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

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

What percentage of this will accrue to previously disadvantaged individuals?

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

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

What percentage of this will accrue to previously disadvantaged individuals?

R 12 million
R (unknown – depends on consumption)
<b>YES</b> <b>NO</b>
<b>YES</b> <b>NO</b>
30
R 540 000
100 %
0
R0
0%

## 9. BIODIVERSITY

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

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

<b>Systematic Biodiversity Planning Category</b>	<b>If CBA or ESA, indicate the reason(s) for its selection in biodiversity plan</b>
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<b>Critical Biodiversity Area (CBA)</b>	<b>Ecological Support Area (ESA)</b>	Other Natural Area (ONA)	No Natural Area Remaining (NNR)	It is the opinion of the EAP that due to the desktop nature of the classification system that this area is wrongly classified as a CBA and should not be classified as a CBA area due to development that has already taken place in the area indicated to be CBA and ESA. There are however wetland areas which are sensitive.

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

Habitat Condition	Percentage of habitat condition class (adding up to 100%)	Description and additional Comments and Observations (including additional insight into condition, e.g. poor land management practises, presence of quarries, grazing, harvesting regimes etc).
Natural	0%	
Near Natural (includes areas with low to moderate level of alien invasive plants)	15%	Very little of the area is still natural with no disturbance.
Degraded (includes areas heavily invaded by alien plants)	25%	The area within the servitude is highly invaded by alien invasive species.
Transformed (includes cultivation, dams, urban, plantation, roads, etc)	60%	The area has been transformed due to previous agricultural activities and increasing urbanisation in the area.

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

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

Terrestrial Ecosystems		Aquatic Ecosystems		
<b>Ecosystem threat status as per the National Environmental Management:</b>	Critical (CBA)	<b>Wetland (including rivers, depressions, channelled and unchannelled wetlands, flats, seeps pans, and artificial wetlands)</b>	Estuary	Coastline
	Endangered			
	Vulnerable (ESA)			
	Least			

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Terrestrial Ecosystems		Aquatic Ecosystems						
Biodiversity Act (Act No. 10 of 2004)	Threatened	YES	NO	UNSURE	YES	NO	YES	NO

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

**SECTION C: PUBLIC PARTICIPATION**

**1. ADVERTISEMENT AND NOTICE**

<b>Publication name</b>	Cosmo City Chronicle & Krugersdorp News	
<b>Date published</b>	26 October 2016 & 4 November 2016	
<b>Site notice position</b>	<b>Latitude</b>	<b>Longitude</b>
1.	26° 02' 28.47"	27° 53' 02.69"
2.	26° 02' 6.49"	27° 53' 31.73"
3.	26° 01' 47.08"	27° 54' 31.21"
4.	26° 02' 15.57"	27° 54' 36.28"
<b>Date placed</b>	27 October 2016	

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

**2. DETERMINATION OF APPROPRIATE MEASURES**

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

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

<b>Title, Name and Surname</b>	<b>Affiliation/ key stakeholder status</b>	<b>Contact details (tel number or e-mail address)</b>
<b>Neighbouring land owners, Residents And Businesses</b>		
Willem Hartzler	Fairoak Investment Holdings (Pty) Ltd.	willem.h@mweb.co.za
Richard Maddern	Maddern property trust	richard@wri.co.za
Isabella (Elsa) Mostert	Portion 166 of the farm Rietfontein 189 IQ.	elsaeaglevalley@hotmail.co.za
Brian Jensen	Jenchem Property cc	brian@masterbatch.co.za
Eduart Reimeringer Visser(Eddie Visser )	Polkadots Property 224 (Pty) Ltd.	eddie@edan.co.za
Chrizzelle Brentot	Brentospring Farming cc Nicolas Plants cc	info@nicolasplants.co.za
Natalie Plociennik	Portion 108 of the farm Zandspruit 191 IQ.	nat.plociennik@gmail.com
Peter Kinnear	Reliance Distributors (Pty) Ltd.	peter@reliancepoltutry.co.za
Hilda Letitia Grant	Portion 39, 107 of the farm Zandspruit 191 IQ, and Holdings 1 of Sonnedal Agricultural Holdings	P.O. Box 113 Honeydew 2040.
Peter Pretorius Kierran Horn	FOOD Property Holdings	kierran.horn@jamint.com
Wayne Kotze	Portion 156 of the farm Zandspruit 191 IQ.	P O Box 1150 Johannesburg 2000
Ndishavhelephi Enoc Madau	Holdings 4 of Sonnedal Agricultural Holdings	P.O. Box 6628 Cresta 2118

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Friedel Martin Weihe	Holdings 5 of Sonnedal Agricultural Holdings	friedel@colonialstone.co.za
Gerhard John James	Holdings 2 of Sonnedal Agricultural Holdings Holdings 3 of Sonnedal Agricultural Holdings	john.j@serendipity-inv.co.za
Leslie Mackie	Holdings 6 of Sonnedal Agricultural Holdings	083 975 0298
Ronnie Lubisi	Holdings 7 of Sonnedal Agricultural Holdings	Plot 4, C/O Marina Street and Nooiens Street (Residential address).
Riaan Jacobus Pretorius	Holding Nine Aanwins (Pty) Ltd.	riaanp@telesure.co.za
Louise Hanford	Portion 170 of the farm Rietfontein 189 IQ.	louise.handford@gmail.com
Rudolf Arnold Quirin Frobos	Portion 171 of the farm Rietfontein 189 IQ	reception@hakunamatata.co.za
Dereick Lo	Portion 172 of Rietfontein 189 IQ.	fishfantacyworld@gmail.com
Ellias Soko	Forward in Faith Church in the Republic of South Africa. (Portion 131 of Zandspruit 534 IQ.)	ezsoko@yahoo.com
De Wet Botha	Prism EMS	dewet@prismems.co.za
Mr. Tebogo Natsaanaka	City of Johannesburg - City Power (Portion 85 of Erf 10798 in Cosmo City Ext 10)	T.Natsaanaka@citypower.co.za
Thabile Shabangu (Operational Manager)	City of Johannesburg - Infrastructure department (Erf 10266, 10264, 10270, 10267, 10271, 10274, 10275, 10262, 15606, 10265, 10268, 10269, 10272, 10273, 10276, 10260, and 10261 in Cosmo City Ext 9)	thabiles@joburg.org.za
Kathy van der Vlies Glen Dames	Afroprop Natal (Pty) Ltd – Geengate Extension 19	kathy@afroprop.co.za glen@afroprop.co.za
Neo Masemola	Eskom: Manager (Acting) Environmental Management	neo.masemola@eskom.co.za
Lyoiso Pethu	Eskom: Project Manager	PethuLO@eskom.co.za
Maurice Makoni	RPS Switchgear SA (Electrical engineer)	mauricem@rpsswitchgearsa.co.za

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

- e-mail delivery reports;
- registered mail receipts;
- courier waybills;



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- 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

Summary of main issues raised by I&APs	Summary of response from EAP
<p><b>Mogale City Local Municipality:</b></p> <ul style="list-style-type: none"> <li>• All impacts associated with the proposed development have been identified in terms of scale, severity, certainty, direction and significance. The degree of the impacts with and without mitigation measures has also been addressed. The Department Integrated Environmental Management (DIEM), therefor enforces that the proposed mitigation measures must be implemented to prevent or reduce negative environmental impacts that may result from the proposed development.</li> <li>• According to MCLM's Waste Management By-Laws (2007) please be advised that the municipality can render a service for the collection and removal of business, domestic, garden, builders, dry industrial refuse, bulk mass, special refuse form the premises on payment of a tariff charge.</li> <li>• All mitigation measures as stipulated in the final amended EMP must be adhered to.</li> <li>• All recommendations proposed in the specialist studies within the report must be complied with.</li> <li>• Cognizance must be taken that all recommendations contained in the Environmental Management Plan is binding on all contractors, labourers and personnel on site.</li> <li>• A copy of the Record of Decision must be submitted to this office for compliance monitoring purposes.</li> <li>• No construction must take place prior to DEA granting Environmental Authorisation.</li> <li>• Non-compliance with the above will result in the relevant authority issuing a directive to address the non-compliance, including an order to stop the activity.</li> <li>• All the statutory requirements including those of National, Provincial</li> </ul>	<ul style="list-style-type: none"> <li>• Noted.</li> <li>• Noted.</li> <li>• Noted.</li> <li>• Noted.</li> <li>• Noted.</li> <li>• Noted.</li> <li>• Noted.</li> <li>• Noted.</li> <li>• Noted.</li> </ul>

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<p>Governments and MCLM's by-laws and policies must be adhered to.</p>	
<p><b>Department of Environmental Affairs (DEA):</b></p> <ul style="list-style-type: none"> <li>• Please ensure that all relevant listed activities are applied for, are specific and that it can be linked to the development activity or infrastructure as described in the project description.</li> <li>• If the activities applied for in the application form differ from those mentioned in the final BAR, an amended application form must be submitted.</li> <li>• The Environmental Assessment Practitioner (EAP) must ensure that an adequate motivation on the applicability of each listed activity that triggers the proposed development is provided. The applicability of each activity against the actual threshold for the proposed development must be verified.</li> <li>• Please ensure that all issues raised and comments received during the circulation of the BAR form registered I&amp;AP's and organs of state which have jurisdiction in respect of the proposed activity are adequately addressed in the final BAR.             <ul style="list-style-type: none"> <li>○ Proof of correspondence with the various stakeholders must be included in the final BAR. Should you be unable to obtain comments, proof of the attempts that were made to obtain comments must be submitted to the Department.</li> </ul> </li> <li>• The Public Participation Process must be conducted in terms of Regulation 39, 40, 41, 42, 43 &amp; 44 of the EIA Regulations 2014.</li> <li>• Please provide a description of all identified alternatives for the proposed activity that are feasible and reasonable, including the advantages and disadvantages that the proposed activity or alternatives will have on the environment and on the community that may be affected by the activity as per Appendix 1(2)(e) and 3(1)(h), (i) of GNR 982 of 2014.</li> <li>• The final BAR must provide an assessment of the impacts and mitigation measures for each of the listed activities applied for.</li> </ul>	<ul style="list-style-type: none"> <li>• See page 3 &amp; 4 (Detailed description of the listed activities associated with the project as applied for) of the BAR.</li> <li>• The activities remained the same as the within application form.</li> <li>• See page 3 &amp; 4 (Detailed description of the listed activities associated with the project as applied for) of the BAR. See page 16 &amp; 17 (Applicable legislation, policies and/or guidelines) of the BAR.</li> <li>• See appendix 5, 6, 7, 8 &amp; 10 of the Public Participation Report (Appendix E)             <ul style="list-style-type: none"> <li>○ See appendix 3, 4 &amp; 9 of the Public Participation Report (Appendix E)</li> </ul> </li> <li>• The PPP was conducted in terms of the EIA Regulations, see Appendix E (Public Participation Report).</li> <li>• See page 4 - 6 (Feasible and reasonable alternatives) of the BAR.</li> <li>• See Appendix G (EMP) and page 37 - 58 (Impacts that may result from the planning and design, construction, operational, decommissioning and</li> </ul>

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<ul style="list-style-type: none"> <li>• Cumulative impacts of similar type of developments in the area must form part of the studies that must be assessed as part of the final BAR process.</li> <li>• The final BAR must provide the technical details for the proposed facility in a table format as well as their description and/or dimensions.</li> <li>• In terms of Appendix 1 of the EIA Regulations, 2014, the report must include an undertaking under oath or affirmation by the EAP in relation to:             <ul style="list-style-type: none"> <li>○ the correctness of the information provided in the reports;</li> <li>○ the inclusion of comments and inputs from stakeholders and I&amp;AP's;</li> <li>○ the inclusion of inputs and recommendations from the specialist reports where relevant;</li> <li>○ any information provided by the EAP to interested and affected parties; and</li> <li>○ responses by the EAP to comments or inputs made by interested or affected parties.</li> </ul> </li> <li>• In terms of Appendix 1(3)(1)(a) of the EIA Regulations 2014, the details of             <ul style="list-style-type: none"> <li>○ the EAP who prepared the report; and</li> <li>○ the expertise of the EAP to carry out Scoping and Environmental Impact assessment procedures, must be submitted.</li> </ul> </li> <li>• You are further reminded that the final BAR to be submitted to this Department must comply with all the requirements in terms of the timeframes prescribed in terms of the Regulations, unless an extension has been granted in terms of Regulation 3(7). Please submit a CD together with the final BAR</li> </ul>	<ul style="list-style-type: none"> <li>• closure phases as well as proposed management of identified impacts and proposed mitigation measures) of the BAR.</li> <li>• See page 58 (Environmental Impact Statement preferred alternative) of the BAR</li> <li>• EMP (Appendix G) section 2 page 1 (Project).</li> <li>• See page 60 (Section E: Recommendations of practitioner)</li> <li>• See Appendix H (Details of EAP and expertise).</li> <li>• Submission of the report does comply with the required timeframes in terms of GNR 982 Chapter 2 Regulation (3).             <ul style="list-style-type: none"> <li>○ Application form and draft BAR was submitted on 7 November 2016.</li> <li>○ Acknowledgement of receipt for the draft BAR was received on 10 November 2016 from DEA.</li> <li>○ Comments on the draft BAR was received on 18 November 2016 (DEA) and 6 December 2016 (Mogale City Local Municipality)</li> <li>○ The final BAR will be submitted on 8 December 2016.</li> </ul> </li> <li>• The activity has not yet commenced.</li> </ul>
<ul style="list-style-type: none"> <li>• Hereby reminded of Section 24F of the</li> </ul>	

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National Environmental Management Act, Act No 107 of 1998, as amended, that no activity may commence prior to an environmental authorisation being granted by the Department.	
<b>Mr Willem Hartzler:</b> Agreed to have a servitude crossing through his property for the installation of the underground power cables.	Noted.
<b>Johannesburg Roads Agency (JRA):</b> Agreed to have underground power cables installed within their road reserve provided the necessary wayleaves were obtained.	Noted.

#### 4. COMMENTS AND RESPONSE REPORT

The practitioner must record all comments received from I&APs and respond to each comment before the Draft BAR is submitted. The comments and responses must be captured in a comments and response report as prescribed in the EIA regulations and be attached to the Final BAR as Appendix E3.

#### 5. AUTHORITY PARTICIPATION

Authorities and organs of state identified as key stakeholders:

Contact person (Name and Surname)	Position	Tel No	Fax No	e-mail	Postal address
<b>Local Municipality: Mogale City</b>					
Morakane Mokoena	Executive Manager: Integrated Environmental Management	011 951 2110		peter.tladi@mogalecity.gov.za	P.O. Box 94 Krugersdorp 1740.
Samu Mdlalose	Manager: Environmental Management	011 951 2112		samu.mdlalose@mogalecity.gov.za	
Andre Botes	Manager: Roads and Surface Drainage Infrastructure Services	011 951 2103 011 951 2119 011 951 2128	011 660 9672	andre.botes@mogalecity.gov.za	
Sandile Mbanjwa	Manager: Water and Sanitation and Infrastructure Services	011 668 0724	011 660 4712	sandile.mbanjwa@mogalecity.gov.za	
Selibo Molefi	Ward Councillor Ward 23	011 957 3023		selibo100@webmail.co.za	
Wiseman Mzimba	Acting Manager: Waste Management	011 660 8757	011 660 1507	wisemanm@mogalecity.gov.za	
Mr Dan Mashitisho	Municipal Manager	011 951 2013	011 953 2547	mm@mogalecity.gov.za	

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Contact person (Name and Surname)	Position	Tel No	Fax No	e-mail	Postal address
Koogan Naidoo	Environmental Management Unit: Specialist - Environmental Planning.	011 951 2113		Koogan.naidoo@mogalecity.gov.za	
Thabang Matlala	Environmental Management Unit	011 951 2113		Thabang.Matlala@mogalecity.gov.za	
<b>Local Municipality: City of Johannesburg (CoJ)</b>					
Ms Jane Eagle	Assistant Director: Environmental Quality Control	011 407 6727	011 403 4142	janee@joburg.org.za	P.O. Box 1049 Johannesburg 2000.
Ms Mashudu Ratshitanga	Unit: Impact Management & Compliance Environmental Impact Management	011 587 4244 011 587 4225	011 403 4142 086 627 7516	Mashudur@joburg.org.za	
Ms Rajeshree Bhana	EIA	011 407 6439	011 403 4142	rajeshreeb@joburg.org.za	
Gloria Matshusa	Roads and Storm Water	011 358 3733 011 298 5058	011 358 3408/9	theod@joburg.org.za	
Theo de Jager (engineer)	Ward Councillor Ward 97	011 761 0433		jacoe6@gmail.com	
Johannes Engelbrecht	Mayor	011 407 7300	011 403 1012	ntswakih@joburg.org.za	
Mr Trevor Fowler	City of Johannesburg (EIA)	011 587 4229		GiftMab@joburg.org.za	
Gift Mabasa	Johannesburg Roads Agency Operations Manager: Roads and Storm water planning	011 298 5099	086 685 2891	66 Sauer Street, Johannesburg Anel@jra.org.za	
Andre Nel	Assistant Director: Environmental Quality Control	011 407 6727	011 403 4142	janee@joburg.org.za	
Thabile Shabangu (Operational Manager)	City of Johannesburg - Infrastructure dept	011 587 4343	082 568 0600	thabiles@joburg.org.za	
<b>Provincial: Gauteng Department of Agricultural and Rural Development (GDARD)</b>					
Mr Steven Mukhola	EIA			Steven.mukhola@gauteng.gov.za	P.O Box 8769 Johannesburg 2000
Ms Basani Ndindani	EIA			Basani.Ndindani@gauteng.gov.za	
Faith Mlambo	EIA			faith.mlambo@gauteng.gov.za	
Boniswa Belot	EIA Admin	011 240 3377		Boniswa.Belot@gauteng.gov.za	

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Contact person (Name and Surname)	Position	Tel No	Fax No	e-mail	Postal address
Musa Zwane				Musa.Zwane@gauteng.gov.za	
Caleb Masangane		011 240 3220	011 240 3381	11 Diagonal Street, Johannesburg Caleb.Masangane@gauteng.gov.za	
Tendani Rambuda	EIA	011 240 3386		Tendani.Rambuda@gauteng.gov.za	
<b>National: Department of Environmental Affairs</b>					
Mr Albi Modise	National Department of Environment	012 310 3132		amodise@environment.gov.za	Private Bag X447 Pretoria 0001
Masina Litsoane	EIA's	012 399 9375		mlitsoane@environment.gov.za	
Franz Scheepers	EIA's	012 399 9285	082 332 3367	fscheepers@environment.gov.za	
<b>Department of Water and Sanitation (DWS)</b>					
Mr. Mogale Ephraim Matseba	DWS	012 392 1374		matsebae@dws.gov.za	Private Bag X313 Pretoria 0001
Charlotte Tema	Regional Officer	012 392 1412		TemaC@dw.gov.za	
Lilian Siwelan	Regional Officer	012 392 1411		SiwelaneL@dws.gov.za	
<b>District Municipality: West Rand District Municipality (WRDM)</b>					
Musa Zwane	WRDM	011 411 5137/8		mzwane@wrdm.gov.za	Private Bag X033 Randfontein 1760
Susan Stoffberg	Environmental Officer			sstoffberg@wrdm.gov.za	
Sias Botha	Management	011 411 5203		sbotha@wrdm.gov.za	
<b>Department of Energy</b>					
Mr Ompi Aphane	Policy, Planning and Clean Energy	012 406 7660		ompi.aphane@energy.gov.za	Private Bag X96 Pretoria 0001
Dr. Wolsey Otto Barnard	Energy Programs and Project	012 406 7667/7676		Wolsey.Barnard@energy.gov.za	

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

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

### 6. CONSULTATION WITH OTHER STAKEHOLDERS

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

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

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

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

**SECTION D: IMPACT ASSESSMENT**

The assessment of impacts must adhere to the minimum requirements in the EIA Regulations, 2014 and should take applicable official guidelines into account. The issues raised by interested and affected parties should also be addressed in the assessment of impacts.

**1. IMPACTS THAT MAY RESULT FROM THE PLANNING AND DESIGN, CONSTRUCTION, OPERATIONAL, DECOMMISSIONING AND CLOSURE PHASES AS WELL AS PROPOSED MANAGEMENT OF IDENTIFIED IMPACTS AND PROPOSED MITIGATION MEASURES**

Provide a summary and anticipated significance of the potential direct, indirect and cumulative impacts that are likely to occur as a result of the planning and design phase, construction phase, operational phase, decommissioning and closure phase, including impacts relating to the choice of site/activity/technology alternatives as well as the mitigation measures that may eliminate or reduce the potential impacts listed. This impact assessment must be applied to all the identified alternatives to the activities identified in Section A(2) of this report.

Activity	Impact summary	Significance	Proposed mitigation
<b>Construction phase</b>			
Fauna & Flora	<p><b>Direct impacts:</b></p> <p>Vegetation will be removed throughout the linear activity area (route). A 1.1 m wide area will be disturbed along the approximately 5km route.</p>	Positive	<ul style="list-style-type: none"> <li>• Remain within demarcated areas during construction/installation to limit disturbance to surrounding areas (neighbouring properties and natural or undisturbed areas), no dumping etc. on surrounding properties.</li> <li>• Remove all exotic/invasive species as Conservation of Agricultural Resources Act (CARA), 1983 (Act 43 of 1983) and National Environmental Management Biodiversity Act (NEMBA), 2004 (Act 10 of 2004) requires. Remove manually as only a registered weed control officer can chemically treat invader species.</li> <li>• Care must be taken to avoid the spread of seeds of alien vegetation.</li> <li>• Limit construction/installation activities</li> </ul>



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Activity	Impact summary	Significance	Proposed mitigation
			<p>(noise disturbance) to the day time and working hours for the purpose of not disturbing activities and ecological processes of nocturnal birds, small mammals etc.</p> <ul style="list-style-type: none"> <li>• No animals may be captured or killed.</li> <li>• No animals may be removed from the surrounding environment. A trained person must be contacted to relocate animals if any are encountered.</li> <li>• Have a Waste Management Plan in place, as not to pollute the surrounding ecology thereby further reducing the ecological integrity.</li> <li>• Prevent encroachment and spreading of invasive and exotic species through on-going monitoring after construction/installation activities have ceased. An alien eradication programme is to be established as part of the maintenance programme (see Section 12).</li> <li>• An ECO shall be appointed during the construction/installation phase to ensure mitigation is applied and incidents are reported and reflect non-compliance to the EMPr.</li> </ul>
Soil	<p><b>Direct impacts:</b> Due to vegetation clearance, soils will be left exposed and vulnerable to erosion. Soils will be disturbed as trenching will be used in certain areas and horizontal directional drilling in others to install sleeves</p>	12	<ul style="list-style-type: none"> <li>• No heavy machinery or vehicles in wetland to prevent compaction of soil.</li> <li>• Construct appropriate erosion control and water diversion structures to prevent</li> </ul>

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Activity	Impact summary	Significance	Proposed mitigation
	for the cables.		<p>exposure and vulnerability of loosened soil and cleared areas to erosion.</p> <ul style="list-style-type: none"> <li>• Reduce the likelihood of exposed soils being eroded by surface runoff, by limiting main construction activities to the dry season when the probability of rainfall events is very low.</li> <li>• Rehabilitate all presently eroded areas to a state comparable to the surrounding area.</li> <li>• The Contractor's Programme must include measures for stabilisation of areas that may be prone to erosion.</li> <li>• On completion of the construction/installation work, all trenches and excavations must be backfilled and reinstated.</li> <li>• Soil must be stored and backfilled in the same layers (horizons) in which they were removed.</li> <li>• The area, which is excavated/ trenched, must always be kept to a minimum (safety and erosion concerns).</li> <li>• The trench must be uniform in length and in depth. In other words, the sides must be parallel and vertical. The top of the trench must be cut with a saw to ensure smooth, uniform edges.</li> <li>• Trench dimensions for the three (3) cables (from Dalkeith to the 3R ring main unit) will be</li> <li>• 1.1m wide and 1m deep, and for the 2</li> </ul>

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Activity	Impact summary	Significance	Proposed mitigation
			<p>cables (from 2R1B ring) will be 0.65m wide and 1m deep.</p> <ul style="list-style-type: none"> <li>• The area of disturbance will be limited to 25m.</li> <li>• The cables to be installed are 2 x 185mm and 1 x 300mm, 3C XLPE Aluminium 11kV rated cables.</li> <li>• Six (6) 160mm HDPE cable sleeves are to be installed</li> <li>• All excavation will be carried out by machine.</li> <li>• Where the trench runs in Eskom's servitude next to the high voltage line, excavations will be done by hand.</li> </ul>
Land use	<p><b>Direct impacts:</b> Land use may change from an agricultural/rural area to an urban area due to development potential created in the area due to electrical installation. Privately owned land may have to be expropriated due to servitudes required.</p>	Positive	<ul style="list-style-type: none"> <li>• Most of the land along the proposed route is an already proclaimed Eskom servitude.</li> <li>• Some of the route falls within road reserves.</li> <li>• Expropriation of land to accommodate new servitude will be negotiated with land owners.</li> <li>• Demarcate servitude to limit disturbance to surrounding properties and areas.</li> <li>• Construction contractor must ensure management of staff/workers and give instructions as to acceptable behaviour and no access to surrounding properties.</li> <li>• No overnight stays and no loitering during working hours allowed.</li> <li>• No ad-hoc employment in construction area as this will encourage job-seekers to loiter in the area (safety risk).</li> <li>• If any street furniture (e.g. street names,</li> </ul>

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Activity	Impact summary	Significance	Proposed mitigation
			<p>traffic signs, etc.) along Marina Road, have to be removed, arrangements must be made with the relevant authority for the removal, storage and re-erection.</p> <ul style="list-style-type: none"> <li>Show respect to property owners on whose properties servitudes are located in terms of privacy and security</li> </ul>
Visual Impact	<p><b>Direct impacts:</b> There will be no long term impact as the installation of the new cables will be underground, under an existing servitude. Underground cables have no visual impact compared to overhead power lines.</p>	Positive & 21	<ul style="list-style-type: none"> <li>No refuse or builders rubble generated shall be place, dumped or deposited on adjacent/surrounding properties/areas including road verges, roads or public places and open spaces during or after the construction period.</li> <li>No waste will be burnt.</li> <li>No waste may remain on the construction site for more than two (2) weeks.</li> <li>The construction crew camp must be placed in a position removed from the adjacent properties and any natural area (wetlands).</li> <li>On completion of the construction work, all trenches and excavations must be backfilled and reinstated.</li> <li>Contracts must specify that sub-contractors be required to clean their work area after construction.</li> </ul>
Waste Management	<p><b>Direct impacts:</b> Spillage of building aggregate (concrete, bitumen, bentonite) and other construction related materials as</p>	21	<ul style="list-style-type: none"> <li>Collect general waste (building rubble and waste generated by workers) in suitable containers (drums/skips/bins) and</li> </ul>

BASIC ASSESSMENT REPORT

Activity	Impact summary	Significance	Proposed mitigation
	<p>well as hydrocarbons (from vehicles and equipment) can cause soil and groundwater contamination.</p>		<p>remove from site for disposal to the local municipal landfill / waste management facility by the construction contractor on a regular basis (at least weekly or when skip is full).</p> <ul style="list-style-type: none"> <li>• Ensure sufficient containers are available for storage of waste prior to removal off site to prevent overflow and littering on the site and surroundings.</li> <li>• Reduce waste quantities and disposal costs through a reduction in the materials ordered and recycling.</li> <li>• Arrange "Take-back" schemes – setting up schemes with suppliers to take back surplus materials.</li> <li>• Though no special disposal methods are required (non-hazardous waste), non-biodegradable refuse such as glass bottles, plastic bags, etc. must be stored in suitable containers to allow for recycling and emptied on an as-required basis for recycling purposes during the construction and clean-up phase. Make sure that sub-contractors are aware of the placement of the bins and their responsibility to separate materials.</li> <li>• Material storage areas should be safe, secure and weather-proof to prevent damage to or degradation of material quality (resulting in waste generation) and theft as well as potential</li> </ul>

BASIC ASSESSMENT REPORT

Activity	Impact summary	Significance	Proposed mitigation
			<p data-bbox="1058 264 1177 293">pollution.</p> <ul style="list-style-type: none"> <li data-bbox="1010 300 1374 524">• Reduce and reuse – engage with the supply chain to supply products and materials that use minimal packaging, and segregate packaging for reuse.</li> <li data-bbox="1010 530 1374 732">• Contractors to report on the quantities of different waste streams they manage (landfill, reuse, recycling, energy recovery);</li> <li data-bbox="1010 739 1374 1135">• Ensure no litter, refuse, waste and building rubble generated on the premises will be placed, dumped or deposited on the site, adjacent or surrounding properties including road verges, roads or public places and open spaces during the construction and clean-up phase.</li> <li data-bbox="1010 1142 1374 1171">• No waste will be burnt.</li> <li data-bbox="1010 1178 1374 1305">• No waste may remain on the construction site for more than two (2) weeks.</li> <li data-bbox="1010 1312 1374 1574">• Ensure copies of all waste manifests (safe disposal certificates) are kept, showing responsible handling, transport and disposal by a reputable waste handler.</li> <li data-bbox="1010 1581 1374 1686">• Litter patrols will be organised by the contractor.</li> <li data-bbox="1010 1693 1374 2047">• Construction contractor will ensure that all building materials / chemicals are effectively stored and managed. In the unlikely event of a spillage, an incident will be registered and sufficient clean-up procedures will be carried out immediately</li> </ul>

## BASIC ASSESSMENT REPORT

Activity	Impact summary	Significance	Proposed mitigation
			<p>to prevent the spread of pollution.</p> <ul style="list-style-type: none"> <li>• No on-site maintenance of vehicles or equipment should be planned.</li> <li>• If emergency maintenance is required to on-site vehicles and/or equipment, drip trays and/or absorbent mats will be placed underneath the vehicles / equipment where maintenance work is conducted to prevent grease / oil spillages impacting the environment.</li> <li>• Keep spill kits readily available on site to clean hydrocarbon spillages. All hydrocarbon spillages to be cleaned within 24 hours to prevent spreading and impacts on the environment.</li> <li>• Waste containers for hydrocarbon waste must have covers to prevent rainwater infiltration.</li> <li>• Any hazardous substances will be handled according to the relevant legislation relating to transport, storage and use of the substance (Material Safety Datasheets).</li> <li>• Portable dry chemical toilets will be provided by the construction contractor for workers. Chemical toilets will be serviced as required to prevent overflows. Construction contractor will ensure that there are an appropriate number of mobile dry chemical toilets on site (typically 1 toilet for 20 people).</li> </ul>



BASIC ASSESSMENT REPORT

Activity	Impact summary	Significance	Proposed mitigation
			<ul style="list-style-type: none"> <li>• Contractor to provide suitable ablution facilities (washing and changing area) for construction workers.</li> <li>• No builders/workers will be housed on the site.</li> <li>• Ablutions outside the provided facilities are not to occur under any circumstances.</li> <li>• All re-usable material must be removed with care and re-used if possible.</li> </ul>
Air Quality	<p><b>Direct impacts:</b> Construction activities particularly earthworks, the use of cement and other building materials will produce airborne dust and possibly fumes.</p>	12	<ul style="list-style-type: none"> <li>• All vehicles and machinery/equipment used on, or entering the area, must be maintained and serviced regularly to ensure that they do not emit smoke or fumes. The contractor's representative must ensure that all on-site vehicles comply with the SANS 10181:2003 in conjunction with SANS 10282:2003 standards.</li> <li>• Limit idling time of vehicles / equipment.</li> <li>• Dispose waste as soon as possible to a municipal transfer station, skip or on a permitted landfill site. Waste must not be allowed to stand and decay, resulting in malodours and attracting vermin. Waste may not be burnt on site.</li> <li>• No ad hoc cooking fires are to be allowed except in designated cooking areas.</li> <li>• A complaints register must be kept throughout the construction and operational phase.</li> <li>• Dust must be</li> </ul>



BASIC ASSESSMENT REPORT

Activity	Impact summary	Significance	Proposed mitigation
			<p>supressed, on roads (where construction takes place) and construction sites, during dry periods, by the regular application of biodegradable soil stabilisation agent. Application of water to supress dust should be avoided due to water scarcity.</p> <ul style="list-style-type: none"> <li>• All mixing equipment will be closed systems with dust extractors.</li> <li>• Seal complete earthworks to reduce dust and air pollution.</li> </ul>
Storm Water Management	<p><b>Direct impacts:</b> Contamination of surface runoff from incorrect handling of building materials, spillages etc. Flooding or ponding of storm water due to poor or improper drainage</p>	<p>21 &amp; 12</p>	<ul style="list-style-type: none"> <li>• Contractor must ensure that all building materials/chemicals are effectively stored (sealed containers) and managed (mixing etc.) to prevent contamination. In the unlikely event of a spillage, an incident shall be registered and sufficient clean-up procedures will be carried out immediately.</li> <li>• All reagents, reagents storage tanks and mixing units must be supplied with a bunded area built to contain 110% of the capacity of the facility, to contain any spilled material and return back into the system if possible. The system must be maintained in a state of good repair and standby pumps must be provided.</li> <li>• Ensure that silting does not occur as a result of rain and erosion.</li> <li>• The cost of storm water implementation, management and</li> </ul>

BASIC ASSESSMENT REPORT

Activity	Impact summary	Significance	Proposed mitigation
			<p>maintenance, as well as flood risk, can be greatly reduced by identifying, retaining and enhancing the natural areas along which runoff flows and for natural habitat to retain ecological integrity.</p> <ul style="list-style-type: none"> <li>• Embankments and/or diversion drains must be established around excavation areas and stockpiles to divert surface runoff away from the lowest lying points to avoid any potential water pollution spreading to the surrounding area and prevent sediments or fine soil particles from washing away.</li> <li>• Topsoil stockpiles must be stored, shaped and sited (outside wetlands) so that they do not interfere with the flow of water to cause damming or erosion, or be eroded by water.</li> <li>• Any water that is present in a trench must be pumped out before backfilling may take place.</li> <li>• Storm water runoff must be controlled and kept to low velocity flows.</li> </ul>
Health & Safety Requirements	<b>Direct impacts:</b> Injury and health impacts.	14	<ul style="list-style-type: none"> <li>• An ECO shall be appointed during the construction phase to ensure mitigation is applied and incidents are reported and reflect non-compliance to the EMP.</li> <li>• Inform staff about environmental and safety risks associated with their work. Have documented work procedures. Make sure</li> </ul>

BASIC ASSESSMENT REPORT

Activity	Impact summary	Significance	Proposed mitigation
			<p>employees are competent for the work they perform.</p> <ul style="list-style-type: none"> <li>• All construction vehicle drivers will be trained in terms of driving protocols i.e. adhering to speed limits, ensuring materials are safely secured, etc.</li> <li>• Sign boards will be erected on both sides of the roads (where construction takes place) to make the public aware of slow moving construction vehicles (traffic control of heavy vehicles etc.).</li> <li>• The credentials of the drivers will be verified by the construction contractor.</li> <li>• No construction material must obstruct vehicle movement on public roads.</li> <li>• Ensure that staff is familiar with the Occupational Health and Safety Act (OHSA), 1983 (Act 85 of 1983) and Policy. All the necessary safety regulations must be abided by including building codes and fire practice requirements.</li> <li>• Supply personal protective equipment (PPE) required in work areas.</li> <li>• Construction along the roads in road reserves shall be in accordance with recognised civil engineering practices:             <ul style="list-style-type: none"> <li>○ The road authority must be informed 48 hours prior to the commencement of the work.</li> <li>○ On completion of the</li> </ul> </li> </ul>

BASIC ASSESSMENT REPORT

Activity	Impact summary	Significance	Proposed mitigation
			<p>work a completion notice must be sent to the road authority.</p> <ul style="list-style-type: none"> <li>• Construction contractor must ensure management of staff/workers and give instructions as to acceptable behaviour and no access to surrounding properties.</li> <li>• No overnight stays and no loitering during working hours allowed (safety risk to residents/land owners).</li> <li>• No ad-hoc employment in construction area as this will encourage job-seekers to loiter in the area (safety risk to residents/land owners).</li> <li>• Where the trench runs in Eskom's servitude next to the high voltage line, excavations will be done by hand.</li> </ul>
Socio-economic	<p><b>Direct impacts:</b> The most significant impact will be disruption and inconvenience to residents / land owners, during the construction phase. Residents may be disrupted and inconvenienced by dust, noise, etc.</p>	Positive & 18	<ul style="list-style-type: none"> <li>• Construction contractor will ensure management of staff/workers and give instructions as to acceptable behaviour.</li> <li>• Contractor will transport workers to and from the site on a daily basis to prevent movement of workers onto surrounding properties and within the area.</li> <li>• No overnight stays and no loitering during working hours will be allowed.</li> <li>• No ad-hoc employment in construction area as this will encourage job-seekers to loiter in the area.</li> <li>• No construction must take place on Sundays and Public holidays, unless by prior arrangement with the</li> </ul>

BASIC ASSESSMENT REPORT

Activity	Impact summary	Significance	Proposed mitigation
			<p>I&amp;APs.</p> <ul style="list-style-type: none"> <li>• Construction activities will remain within the road reserve and servitude.</li> <li>• This project will provide job creation opportunities to many skilled and semi-skilled labourers, which will be viewed as positive by the impacted sectors. As far as possible, all labour should be sourced locally to reduce unemployment level in the area (albeit temporary).</li> <li>• Residents and businesses along the route / road may be inconvenienced due to construction (temporary).</li> <li>• Illegal structures will not be considered for relocation by Eskom and relocation will be at the cost of the landowner.</li> <li>• Employment of local labour will also avoid the need for temporary workers to need to seek accommodation in the area and/or disrupt social or relationship networks. This will reduce potential social disputes over employment and benefit.</li> <li>• Businesses (e.g. convenience stores and take-away food businesses) may benefit from the sales to the construction workers.</li> </ul>
Noise	<p><b>Direct impacts:</b> Noise generated by construction crew/equipment and construction vehicles.</p>	<b>21</b>	<ul style="list-style-type: none"> <li>• Ensure vehicles are road worthy.</li> <li>• Ensure proper lubrication and maintenance of</li> </ul>



BASIC ASSESSMENT REPORT

Activity	Impact summary	Significance	Proposed mitigation
			<p>machines.</p> <ul style="list-style-type: none"> <li>• Design, fabricate and use quieter machines to replace the noisy ones.</li> <li>• Reducing the noise produced from a vibrating machine by vibration damping i.e. making a layer of damping material (rubber, neoprene, cork or plastic) beneath the machine.</li> <li>• Operate construction equipment at low and slow settings.</li> <li>• Limit working hours (7:00 – 17:00 on weekdays).</li> <li>• Monitor and enforce noise levels to reduce noise pollution.</li> <li>• Reduce noise from construction vehicles and equipment by: turning off engines when they are not in use; checking the brakes are properly adjusted and don't squeal; no revving the engine unnecessarily; only using the horn in emergencies; and replacing exhaust systems as soon as they become noisy.</li> </ul>
Traffic	<p><b>Direct impacts:</b> Increase in traffic due to slow movement of heavy construction vehicles can impact traffic flow on public roads.</p>	14	<ul style="list-style-type: none"> <li>• All construction vehicle drivers will be trained in terms of driving protocols i.e. adhering to speed limits, ensuring materials are safely secured etc.</li> <li>• Sign boards will be created on both sides of all access roads to make the public aware of slow moving construction vehicles.</li> <li>• The credentials of the drivers will be verified by the construction</li> </ul>

BASIC ASSESSMENT REPORT

Activity	Impact summary	Significance	Proposed mitigation
			<p>contractor.</p> <ul style="list-style-type: none"> <li>• No construction material must obstruct vehicle movement on public roads.</li> <li>• Work sites must be properly barricaded and signed irrespective of how long the work will take.</li> <li>• Any traffic sign and barricading must be done according to the latest edition of the South African Roads and Traffic Signs Manual (SARTSM), Volume 2, Chapter 13.</li> </ul>
<p>Sensitive water environments (wetlands)</p>	<p><b>Direct impacts:</b> Existing impacts: infilling, illegal dumping, damming, alien infestation, erosion.</p>	<p>14</p>	<p>Existing condition of three (3) identified natural wetlands and one (1) drainage line:</p> <ul style="list-style-type: none"> <li>• Change in ecosystem processes.</li> <li>• Loss of natural habitat and biota but some natural habitat features remain.</li> <li>• Present Ecological Status (PES) = D (largely modified)</li> <li>• No red data species.</li> <li>• Low biodiversity.</li> <li>• Not sensitive to flow and habitat modifications.</li> <li>• Insignificant role in moderating quality and flow of water of major rivers in two (2) unchannelled valley bottom wetlands and small role for channelled valley bottom wetland.</li> <li>• Ecological Importance and Sensitivity (EIS) = D (low) for two (2) unchannelled valley bottom wetlands and C (moderate) for channelled valley bottom wetland.</li> </ul> <p>Recommended Ecological Category (REC) = D (largely</p>

## BASIC ASSESSMENT REPORT

Activity	Impact summary	Significance	Proposed mitigation
			<p>modified) for two (2) unchanneled valley bottom wetlands and C (moderately modified) for channelled valley bottom wetland.</p> <p>Management measures:</p> <ul style="list-style-type: none"> <li>• Minimise disturbance of wetland: No heavy machinery or vehicles in wetland to prevent damage and compaction of soil. Drilling equipment (rig) to stand outside wetland and its buffer (32m).</li> <li>• Trenching as installation method: Trenching in wetlands by hand. Trenching to be accompanied by installation of sub-soil drains to allow sub-surface flow to continue across the entire width of the wetland.</li> <li>• Horizontal directional drilling as installation method: For channelled valley bottom wetland but preferably for all three (3) wetlands. Six (6) 160mm HDPE cable sleeves are to be installed.</li> <li>• Where cables cross a road or watercourse (wetland), horizontal directional drilling is preferred. <ul style="list-style-type: none"> <li>○ 4.5m<sup>3</sup> is excavated on both sides of the road or in the buffer of the water resource to allow horizontal drilling.</li> <li>○ The initial drill out is carried out using high-pressure water through drill rods.</li> <li>○ Attached to the front of the rod is a cutting head and transmitter, which is</li> </ul> </li> </ul>



BASIC ASSESSMENT REPORT

Activity	Impact summary	Significance	Proposed mitigation
			<p>controlled by a locator to achieve the correct line and level required.</p> <ul style="list-style-type: none"> <li>○ The rods pass through mixing natural soil with the mud/water causing a small bentonite filled tunnel and at no time is a cavity formed.</li> <li>○ Once the initial drill out is achieved, the transmitter and cutting head are removed.</li> <li>○ This is done by removing the securing collar and unscrewing the cutting head.</li> <li>○ A reamer is then attached which contains multiple water jets and cutting face. This is attached by screwing it to the drilling rods and replacing the securing collar.</li> <li>○ The passing of different size reamers, mixing natural soil with mud on a continual rotating system, is carried out until a bentonite filled tunnel is ready to receive the sleeves.</li> <li>○ If at any time, a drill rod becomes bent, it is removed when it returns to the drilling rig.</li> <li>○ The final reamer is then attached to a towing head that is inserted and expanded in the sleeve to be</li> </ul>

BASIC ASSESSMENT REPORT

Activity	Impact summary	Significance	Proposed mitigation
			<p>installed.</p> <ul style="list-style-type: none"> <li>○ The sleeve displaces the bentonite as it is drawn through the tunnel and the bentonite fills the excavated pits.</li> <li>○ The bentonite from the tunnel or from any blow outs will have to be removed by means of an excavator.</li> <li>○ At no time is there a cavity created in the ground and the pipes are fully grouted in by displacement.</li> </ul> <ul style="list-style-type: none"> <li>• Water quality protection: No stockpiling (to prevent sedimentation) or storage or mixing of materials (to prevent contamination) in wetlands.</li> <li>• Driver of wetland: Prevent cut-off of storm water flow into the wetland.</li> <li>• Release from wetland: Ensure wetland releases water into downstream water resources.</li> <li>• Rehabilitation: Rehabilitate wetlands and buffer areas after installation – scarify, etc.</li> <li>• Monitoring: Monitor wetlands bi-annually (wet and dry season) after completion of project to compare with baseline assessment and ensure wetland integrity is maintained (see Section 14.2)</li> </ul>
<b>Operational phase</b>			
Socio-Economic	<p><b>Direct impacts:</b> Socio-economic impacts on residents, businesses and</p>	Positive	<ul style="list-style-type: none"> <li>• Unlock the development potential of the area.</li> <li>• New developments will</li> </ul>

BASIC ASSESSMENT REPORT

Activity	Impact summary	Significance	Proposed mitigation
	community services will be positive. If mitigation measures are implemented to the required level, any negative impacts will remain mostly short term (construction phase) and of low significance.		<p>create jobs.</p> <ul style="list-style-type: none"> <li>• Development in the area will have economic and financial benefits.</li> <li>• The development of new businesses will increase the number of commuters into the area, which could have a positive impact for businesses due to an increased potential market and improve the income of existing businesses.</li> <li>• Development in the area may increase business opportunities.</li> <li>• Increases in property value, potential job creation opportunities, potential for community services and amenities.</li> <li>• Businesses (e.g. convenience stores and take-away food businesses) may benefit from the sales to the construction workers.</li> </ul>
Maintenance & Safety measures	<b>Direct impacts:</b> Positive & Negative impacts	Positive & 14	<p>Positive impacts:</p> <ul style="list-style-type: none"> <li>• Underground cables are better protected against theft, damage etc. than overhead power lines.</li> <li>• Underground cables have lower transmission loss than overhead power lines.</li> <li>• Underground cables can be engineered to emit a lower magnetic field than overhead power lines.</li> </ul> <p>Management of negative impacts:</p> <ul style="list-style-type: none"> <li>• <b>Insulation deterioration:</b> Cables are susceptible to insulation deterioration because of the loading cycles the lines undergo during their lifetimes. As time passes the cables</li> </ul>

BASIC ASSESSMENT REPORT

Activity	Impact summary	Significance	Proposed mitigation
			<p>insulation weakens which increases the potential for a line fault. If the cables are installed properly, this debilitating process can take years and might be avoided altogether.</p> <ul style="list-style-type: none"> <li>• <b>Fault location:</b> If and when a fault occurs, the cost of finding its location is expensive and time consuming.</li> <li>• <b>Maintenance:</b> Only three (3) cables will be installed but six (6) sleeves will be installed to minimise disturbance at a later stage when additional cables need to be installed or when maintenance requires cables to be relocated due to damage to original sleeves or cables.</li> <li>• <b>Fire causing damage to cables:</b> Clearing of vegetation in the servitude will prevent fire risk and heat damage to cables.</li> </ul>
	<i>Indirect impacts:</i>		
	<i>Cumulative impacts:</i>		
	<i>Direct impacts:</i>		
	<i>Indirect impacts:</i>		
	<i>Cumulative impacts:</i>		
<b>Alternative 2</b>			
	<i>Direct impacts:</i>		
	<i>Indirect impacts:</i>		
	<i>Cumulative impacts:</i>		
	<i>Direct impacts:</i>		

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Activity	Impact summary	Significance	Proposed mitigation
	<i>Indirect impacts:</i>		
	<i>Cumulative impacts:</i>		
<b>Alternative 3</b>			
	<i>Direct impacts:</i>		
	<i>Indirect impacts:</i>		
	<i>Cumulative impacts:</i>		
	<i>Direct impacts:</i>		
	<i>Indirect impacts:</i>		
	<i>Cumulative impacts:</i>		
<b>No-go option</b>			
	<i>Direct impacts:</i>	27 & 18 & 40	<ul style="list-style-type: none"> <li>• Job opportunities will not be created.</li> <li>• Support industries that provide goods, materials and services will not benefit from the construction phase, resulting in further loss of income in the local economy.</li> <li>• Without the installation of bulk power cables, development within the area will be limited / hindered.</li> <li>• Theft of power cables and illegally tapping into the electrical infrastructure are major problems within the area. Underground cables (versus overhead power cables) are difficult to reroute, tap or modify once these have been installed.</li> </ul>
	<i>Indirect impacts:</i>		
	<i>Cumulative impacts:</i>		

## BASIC ASSESSMENT REPORT

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

### 2. ENVIRONMENTAL IMPACT STATEMENT

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

#### Alternative A (preferred alternative)

No long term cumulative impact is anticipated as the proposed project will fall within an existing Eskom servitude.

#### Alternative B

#### Alternative C

#### No-go alternative (compulsory)

- Job opportunities will not be created.
- Support industries that provide goods, materials and services will not benefit from the construction phase, resulting in further loss of income in the local economy.
- Without the installation of bulk power cables, development within the area will be limited / hindered.
- Theft of power cables and illegally tapping into the electrical infrastructure are major problems within the area. Underground cables (versus overhead power cables) are difficult to reroute, tap or modify once these have been installed.

**SECTION E. RECOMMENDATION OF PRACTITIONER**

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

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

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

During the installation of underground cables, monitoring and auditing of compliance with this EMPr, the environmental and other authorisation conditions and with OHSA Regulations are to be conducted. An Audit Protocol for the construction phase has to be drawn up by a suitably qualified person.
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Is an EMPr attached?

YES	NO
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The EMPr must be attached as Appendix G.

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

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

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

**Paulette Jacobs**

NAME OF EAP



SIGNATURE OF EAP

**2016-11-04**

DATE

**SECTION F: APPENDIXES**

The following appendixes must be attached:

Appendix A: Maps

Appendix B: Photographs

Appendix C: Facility illustration(s)

Appendix D: Specialist reports (including terms of reference)

Appendix E: Public Participation

Appendix F: Impact Assessment

Appendix G: Environmental Management Programme (EMPr)

Appendix H: Details of EAP and expertise

Appendix I: Specialist's declaration of interest

Appendix J: Additional Information