



## Gauteng Department of Agriculture and Rural Development (GDARD)

### **Basic Assessment Report in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998), as amended, and the Environmental Impact Assessment Regulations, 2010 (Version 1)**

List of all organs of state and State Departments where the draft report has been submitted, their full contact details and contact person

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**Kindly note that:**

1. This **Basic Assessment Report** is the standard report required by GDARD in terms of the EIA Regulations, 2010.
  2. This application form is current as of 2 August 2010. It is the responsibility of the EAP to ascertain whether subsequent versions of the form have been published or produced by the competent authority.
  3. **A draft Basic Assessment Report must be submitted to all State Departments administering a law relating to a matter likely to be affected by the activity to be undertaken. The draft reports must be submitted to the relevant State Departments and on the same day, two CD's of draft reports must also be submitted to the Competent Authority (GDARD) with a signed proof of such submission of draft report to the relevant State Departments.**
  4. 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.
  5. Selected boxes must be indicated by a cross and, when the form is completed electronically, must also be highlighted.
  6. An incomplete report shall be rejected.
  7. 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.
  8. Five (5) copies (3 hard copies and 2 CDs-PDF) of the final report and attachments must be handed in at offices of the relevant competent authority, as detailed below.
  9. No faxed or e-mailed reports will be accepted. Only hand delivered or posted applications will be accepted.
  10. Unless protected by law, and clearly indicated as such, all information filled in on this application will become public information on receipt by the competent authority. The applicant/EAP must provide any interested and affected party with the information contained in this application on request, during any stage of the application process.
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#### **DEPARTMENTAL DETAILS**

Gauteng Department of Agriculture and Rural Development  
Attention: Administrative Unit of the Sustainable Utilisation of the Environment (SUE) Branch  
P.O. Box 8769  
Johannesburg  
2000

Administrative Unit of the Sustainable Utilisation of the Environment (SUE) Branch  
18<sup>th</sup> floor Glen Cairn Building  
73 Market Street, Johannesburg

Admin Unit telephone number: (011) 355 1345  
Department central telephone number: (011) 355 1900

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# BASIC ASSESSMENT REPORT [REGULATION 22(1)]

(For official use only)

<b>File Reference Number:</b>					
<b>Application Number:</b>					
<b>Date Received:</b>					

**\* Submission to State Departments (Number 3 above)**

Has a draft report for this application been submitted to all State Departments administering a law relating to a matter likely to be affected as a result of this activity?  Yes

Is a list of State Departments referred to above been attached to this report?  Yes

if no, state reasons for not attaching the list.

n/a

## SECTION A: ACTIVITY INFORMATION

### 1. ACTIVITY DESCRIPTION

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

Construction of Water Supply for the R21 Corridor and Surrounding areas: Pipeline extension to 9th Road, Bredell Agricultural Holdings, Kempton Park

Select the appropriate box

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

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

YES

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

Water Use License in terms of Sections 21 (c ) and (i) of the National Water Act, 1998

If yes, have you applied for the authorisation(s)?  YES   
 If yes, have you received approval(s)? (attach in appropriate appendix)  NO

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

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

Title of legislation, policy or guideline:	Administering authority:	Promulgation Date:
National Environmental Management Act No. 107 of 1998 as amended.	National & Provincial	27 November 1998
<b>Listing Notice 1: GNR 983, 2014, Activity 19:</b> 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;	Gauteng Department of Agriculture and Rural Development (GDARD)	04 December 2014
<b>Listing Notice 3: GNR 985, 2014, Activity 14:</b> (xii) infrastructure or structures with a physical footprint of 10 square meters or more where such development occurs-within a watercourse; In front of a development setback; or If no development setback has been adopted, within 32 metres of a watercourse, measured from the edge of a watercourse. b. In Gauteng (iv) Sites identified as Critical Biodiversity Areas	Gauteng Development of Agriculture and Rural Development (GDARD)	04 December 2014

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(CBAs) and Ecological Support Areas (ESAs) in the Gauteng Conservation Plan or in bioregional plans;		
Water Use License in terms of Section 21 (c) and (i) of the National Water Act (Act No. 36 of 1998) as amended	Department of Water and Sanitations (DWS)	1998 and 2014
Ekurhuleni Water Services By-Laws, 2002	Ekurhuleni Metropolitan Municipality	2002
Ekurhuleni Solid Waste By-Laws	Ekurhuleni Metropolitan Municipality	2002
National Environmental Management: Biodiversity Act, 2004 (Act No. 10 of 2004)	The South African National Biodiversity Institute	1 September 2004
Occupational Health and Safety Act , 1983(Act No. 85 of 1993) and relevant Regulations	Department of Labour	23 June 1993
South African Heritage Resource Act, 1999 (Act No. 25 of 1999)	South Africa Heritage Resources Agency (SAHRA) Provincial Heritage Resources Authority- Gauteng (PHRA-G)	28 April 1999

### 3. ALTERNATIVES

Describe the proposal and alternatives that are considered in this application. Alternatives should include a consideration of all possible means by which the purpose and need of the proposed activity could be accomplished. The determination of whether the site or activity (including different processes etc.) or both is appropriate needs to be informed by the specific circumstances of the activity and its environment.

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

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

Provide a description of the alternatives considered

No.	Alternative type, either alternative: site on property, properties, activity, design, technology, operational or other(provide details of "other")	Description
1.	Proposal for the pipeline development (Preferred)	<p>The original Environmental Authorisation (EA) was granted for the construction of a water supply system for the R21 corridor and surrounding areas which include a 22 Mega Litre bulk storage reservoir and booster pump station to supply water to the pump station zone, bulk water supply line to the reservoir and bulk water supply network from the reservoir to the Witfontein and Glen Erasmia Township as well as the booster pump station and reservoir will be located along First Road (<b>GAUT: 002/09-10/N0294</b>).</p> <p>The proposed pipeline is located along the R21 Corridor in the proximity of the following roads: First Road; High Road; Serengeti Boulevard, R25; and R21 on the farm Witfontein.</p> <p>The amendment to the original EA approved of the 30m high 2ml pressure tower and the alignment of the line from the pump station to the pressure tower and the area west of the R21 with addition of a 710mm pipeline from Randwater Connection to reservoir. (<b>GAUT: 006/11-12/E0046</b>).</p> <p>Ekurhuleni Metropolitan Municipality (EMM) had already deployed a contractor for the works when the Environmental Control Office (ECO) identified the unauthorised wetland crossing (<b>Refer to Figure 1</b>). The ECO instructed that works should stop before the wetland. The contractors therefore demobilized in this area.</p> <p>Eon Consulting on behalf of EMM is currently applying for an EA. A Draft Basic Assessment Report was compiled in term of Section 24 and Section 24 (D) of the National Environmental Management Act (NEMA), 1998 (Act No. 107 of 1998), as amended. This report was circulated on the 4th of November 2015 and the review period</p>

	<p>ended on the 4th of December 2015 (GAUT: 002/15-16/E0087).</p> <p>A wetland study (<b>Wetland Ecological Assessment by Steven van Staden from Scientific Aquatic Services cc, January 2015-Appendix G</b>) was conducted by a registered specialist who found that: Based on the impact assessment, it is evident that there are three possible impacts on the wetland ecology within the study area. During construction phase the impacts on wetland habitat and ecological structure as well as impacts on the hydrological function and sediment balance are considered to be low level impacts prior to mitigation.</p> <p>However, should mitigation be implemented, the impact on wetland habitat and ecological structure will remain as a low level impact whereas the impact on wetland hydrological function and sediment balance will be reduced to very-low level impact. The impact on wetland ecological service provision is considered a very-low level impact both prior to mitigation as well as after mitigation.</p> <p>During operation phase the impacts on the wetland habitat and ecological structure as well as impacts on the hydrological function and sediment balance are considered to be low-level impacts prior to mitigation. However, should mitigation be implemented, both impacts will be reduced to very-low level impacts. The impact on wetland ecological service provision is considered very-low level impact both prior to mitigation as well as after mitigation.</p> <p>The open trench excavation through the wetland has the potential to create the following negative environmental impacts:</p> <ol style="list-style-type: none"> <li>1. Sedimentation of the water course during construction.</li> <li>2. Wetland erosion if the trench is not properly rehabilitated and any compacted soil are not properly restored.</li> <li>3. Damage to red data flora species if these species are not identified and removed beforehand in order to re-establish them in the area.</li> <li>4. Changing the hydrology of the wetland resulting in a loss of portions of the wetland if the trench is not properly restored.</li> <li>5. Disruption of breeding and migration patterns of fauna species if construction takes place during the summer months.</li> </ol> <p>This wetland plays no role in terms of socio-cultural service provision, since there are no households which depend on the wetland for benefits such as crop cultivation, water supply and resource harvesting.</p> <p>The proposed route alignment is located approximately 4km to the east of the Glen Marais suburb and 3km north-east of the Bredell suburb. The water crossing is required in order to connect the new water pipeline to the bulk water pipeline from Randwater. This includes the addition of a 30m high 2MI pressure tower and the alignment of the line from the pump station to the pressure tower and the area west of the R21 with the addition of a 710mm pipeline from the Randwater Connection to the reservoir.</p> <p>The proposed pipeline will service the Serengeti Township as well as the proposed developments of the Silkwood Lifestyle Estate and Witfontein Extension 54, 55, 56 and 57. The area is zoned as agricultural and public services. Future townships are envisaged for the area, but due to the lack of infrastructure in the surrounding area such as potable water this will increase the health risk to the</p>
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		<p>individuals and the communities.</p> <p>The area of the crossing is over 500m long stretches on both sides of the K109 (9th Road). Due to the large size of the crossing, it would be practically impossible to do the entire necessary crossing by method of trenchless technology. It is proposed that the crossing of the water course be constructed by trenchless technology (horizontal drilling) and the remaining portion of the works be done by open trenches.</p> <p>The provision of the Bulk Water Supply Pipeline will tie in with the Rand Water Supply line to the existing and future housing development as an essential service. The proposed pipeline forms part of an additional 30m high 2ML pressure tower and alignment of the line from the pump station to the pressure tower and the area west of the R21 with addition of a 710m pipeline from Rand Water Supply line.</p> <p>A general Locality Map as per <b>Figure 1</b> below illustrated where the Bulk Water Supply Pipeline will cross the identified wetland.</p> <p>The construction will include the following:</p> <ul style="list-style-type: none"> <li>• Installation of 800mm diameter H.D.P.E pipe via trenchless technology (horizontal drilling);</li> <li>• Horizontal drill pit will be 2.5m x 2m and the depth will be 3m at chainage 460m. Excavation material will be temporarily stockpiled adjacent to the pit which is more than 36m from the river;</li> <li>• The horizontal drilling machine will be stationed at chainage 460m on the eastern side of the river. The river is at chainage 500m the distance of the horizontal drill will be 90m; and</li> <li>• The second excavation will be at chainage 550 which is more than 36m from the river on the western side.</li> </ul> <p>The length of the 800mm diameter H.D.P.E pipe is 18m. Therefore 5 pipes will be off-loaded 50m away from the river on the western side where they will be joined together using the butt welding machine. This activity will also take place 50m away from the river on the western side as well.</p> <p>When the drill is complete and the hole is more than 800mm in diameter. The welded pipe will be pulled using a reamer and the Horizontal drilling machine, from the west to the eastern side of the river.</p> <p>When the pipe is completely pulled through the horizontal drill the drilling pit will be backfilled, compacted and rehabilitated using the stockpiled topsoil on site.</p>
2.	Alternative 1	No site, property or technology alternatives have been considered for this project.
3.	Alternative 2	No site, property or technology alternatives have been considered for this project.

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

If the proposed pipeline and associated infrastructure are not constructed, it will impact negatively on the provision of potable water to the surrounding communities. The R21 Corridor has been earmarked for residential and industrial development this project ties in with the provision of services for the area. No site alternative, property alternative could be considered for this development.

**NOTE: The numbering in the above table must be consistently applied throughout the application report and process**

**4. PHYSICAL SIZE OF THE ACTIVITY**

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

Proposed activity <b>Alternatives:</b> Alternative 1 (if any) Alternative 2 (if any)	<p style="text-align: center;"><b>Size of the activity:</b></p> <div style="border: 1px solid black; height: 15px; width: 100%;"></div> <div style="border: 1px solid black; height: 15px; width: 100%;"></div> <div style="border: 1px solid black; height: 15px; width: 100%;"></div> <p style="text-align: right; font-size: small;">Ha/ m<sup>2</sup></p>
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or, for linear activities:

Proposed activity <b>Alternatives:</b> Alternative 1 (if any) Alternative 2 (if any)	<p style="text-align: center;"><b>Length of the activity:</b></p> <div style="border: 1px solid black; padding: 2px;">710m</div> <div style="border: 1px solid black; height: 15px; width: 100%;"></div> <div style="border: 1px solid black; height: 15px; width: 100%;"></div> <p style="text-align: right; font-size: small;">k/km</p>
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Indicate the size of the site(s) or servitudes (within which the above footprints will occur):

Proposed activity <b>Alternatives:</b> Alternative 1 (if any) Alternative 2 (if any)	<p style="text-align: center;"><b>Size of the site/servitude:</b></p> <div style="border: 1px solid black; height: 15px; width: 100%;"></div> <div style="border: 1px solid black; height: 15px; width: 100%;"></div> <div style="border: 1px solid black; height: 15px; width: 100%;"></div> <p style="text-align: right; font-size: small;">Ha/m<sup>2</sup></p>
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**5. SITE ACCESS**

**Proposal**

Does ready access to the site exist, or is access directly from an existing road? If NO, what is the distance over which a new access road will be built Describe the type of access road planned:	YES <span style="background-color: black; color: black;">          </span>

Include the position of the access road on the site plan.

**Alternative 1**

Does ready access to the site exist, or is access directly from an existing road? If NO, what is the distance over which a new access road will be built Describe the type of access road planned:	YES <span style="background-color: black; color: black;">          </span>

Include the position of the access road on the site plan.

**Alternative 2**

Does ready access to the site exist, or is access directly from an existing road? If NO, what is the distance over which a new access road will be built Describe the type of access road planned:	YES <span style="background-color: black; color: black;">          </span>

Include the position of the access road on the site plan.

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

Section A 6-8 has been duplicated	1	Number of times
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(only complete when applicable)

**6. SITE OR ROUTE PLAN**

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

- the scale of the plan, which must be at least a scale of 1:2000 ( scale can not be larger than 1:2000 i.e. scale can not be 1:2500 but could where applicable be 1:1500)
- the property boundaries and numbers of all the properties within 50m of the site;

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- the current land use as well as the land use zoning of each of the properties adjoining the site or sites;
- the exact position of each element of the application as well as any other structures on the site;
- the position of services, including electricity supply cables (indicate above or underground), water supply pipelines, boreholes, street lights, sewage pipelines, septic tanks, storm water infrastructure and telecommunication infrastructure;
- walls and fencing including details of the height and construction material;
- servitudes indicating the purpose of the servitude;
- sensitive environmental elements on and within 100m of the site or sites including (but not limited thereto):
  - Rivers and wetlands;
  - the 1:100 and 1:50 year flood line;
  - ridges;
  - cultural and historical features;
  - areas with indigenous vegetation (even if it is degraded or infested with alien species);
- for gentle slopes the 1m contour intervals must be indicated on the plan and whenever the slope of the site exceeds 1:10, the 500mm contours must be indicated on the plan; and
- the positions from where photographs of the site were taken.
- Where a watercourse is located on the site at least one cross section of the water course must be included (to allow the 32m position from the bank to be clearly indicated)

### **7. SITE PHOTOGRAPHS**

Colour photographs from the center of the site must be taken in at least the eight major compass directions with a description of each photograph. Photographs must be attached under the appropriate Appendix. It should be supplemented with additional photographs of relevant features on the site, where applicable.

### **8. FACILITY ILLUSTRATION**

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

## SECTION B: DESCRIPTION OF RECEIVING ENVIRONMENT

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

**Further:**

### Instructions for completion of Section B for linear activities

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

Section B has been duplicated for sections of the route  times

### Instructions for completion of Section B for location/route alternatives

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

Section B has been duplicated for location/route alternatives  times  
(complete only when appropriate)

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

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

- All significantly different environments identified for Alternative 1 is to be completed and attached in a chronological order; then
- All significantly different environments identified for Alternative 2 is to be completed and attached chronological order, etc.



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Section B - Section of Route  (complete only when appropriate for above)

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

## 1. PROPERTY DESCRIPTION

**Property description:**

Construction of Water Supply for the R21 Corridor and Surrounding areas: Pipeline extension to 9th Road, Bredell Agricultural Holdings, Kempton Park (Refer to Figure 1 Locality Map).

(Farm name, portion etc.)



Figure 1: Locality Map

 Pipeline Route

**2. ACTIVITY POSITION**

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

**Alternative:**

<b>Latitude (S):</b>	<b>Longitude (E):</b>
°	°

**In the case of linear activities:**

**Alternative:**

<b>Latitude (S):</b>	<b>Longitude (E):</b>
26° 3'37.66"	28°19'2.00"
26°4'35.16"	28°16'8.48"
26°3'33.00"	28°17'13.70"

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

Addendum of route alternatives attached

**3. GRADIENT OF THE SITE**

Indicate the general gradient of the site.

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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**4. LOCATION IN LANDSCAPE**

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

Ridgeline	Plateau	Side slope of hill/ridge	Valley	Plain	Undulating plain/low hills	River front
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**5. GROUNDWATER, SOIL AND GEOLOGICAL STABILITY OF THE SITE**

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

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

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

NO

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

<b>Latitude (S):</b>	<b>Longitude (E):</b>
°	°

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

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

<b>Latitude (S):</b>	<b>Longitude (E):</b>
°	°

d) are any sinkholes located within a 300m radius of the site(s)  NO

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

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Latitude (S):

Longitude (E):

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

## 6. AGRICULTURE

Does the site have high potential agriculture as contemplated in the Gauteng Agricultural Potential Atlas (GAPA 3)?

	NO
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**Please note:** The Department may request specialist input/studies in respect of the above.

## 7. GROUNDCOVER

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

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

Natural veld - good condition % = <b>50</b>	Natural veld with scattered aliens % = <b>20</b>	Natural veld with heavy alien infestation % =	Veld dominated by alien species % =	Landscaped (vegetation) % =
Sport field % =	Cultivated land % =	Paved surface (hard landscaping) % =	Building or other structure % = <b>25</b>	Bare soil % = <b>5</b>

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

Are there any rare or endangered flora or fauna species (including red list species) present on the site

YES	
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If YES, specify and explain:

**Hypoxis Hemerocallidea (Orange List) occurs on the uncultivated areas within the sites ambient. (Refer to Annexure G)**

Are there any rare or endangered flora or fauna species (including red list species) present within a 200m (if within urban area as defined in the Regulations) or within 600m (if outside the urban area as defined in the Regulations) radius of the site.

YES	
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If YES, specify and explain:

Are there any special or sensitive habitats or other natural features present on the site?

YES	
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If YES, specify and explain:

**A portion of the study area is located within a Critical Biodiversity Area (CBA), as well as an Ecological Support Area (ESA) which is a minor portion on the north-eastern side of the study area. In addition, the study area falls within an Irreplaceable Area which falls within a wetland buffer and a river buffer.**

Was a specialist consulted to assist with completing this section

YES	
-----	--

If yes complete specialist details

Name of the specialist:

Qualification(s) of the specialist:

Postal address:

Postal code:

Telephone:

E-mail:

Are any further specialist studies recommended by the specialist?

If YES, specify:

If YES, is such a report(s) attached?

If YES list the specialist reports attached below

Scientific Aquatic Services CC	
B.Sc. Hons. Aquatic Health, M. Sc. Environmental Management, SA RHP	
Acccr. Practitioner (Pr. Sc.Nat.)	
P. O Box 751779, Gardenview	
2047	
011 616 7893	Cell: 083 415 2356
Stephen@sasenvironmental.co.za	Fax: 011 615 6240

	NO
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n/a

	NO
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Signature of specialist:

Date:

19/10/2015

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

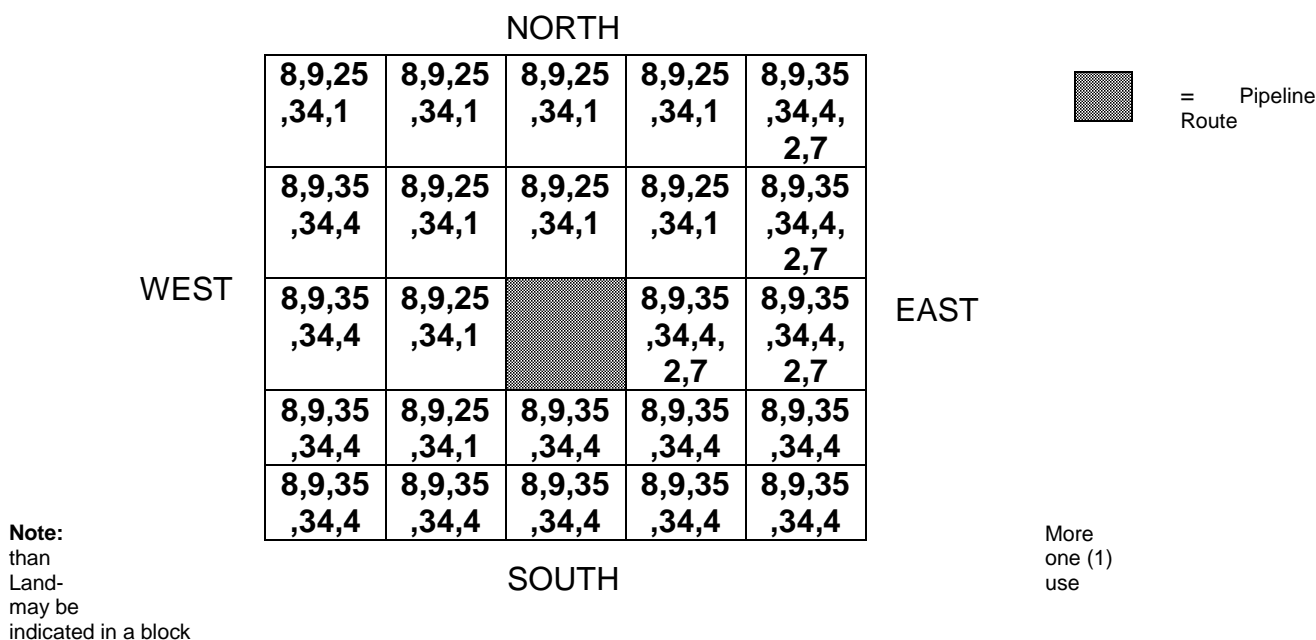
## 8. LAND USE CHARACTER OF SURROUNDING AREA

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

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

**NOTE: Each block represents an area of 250m X250m**



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

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

YES

Wetland Ecological Assessment by Steven van Staden from Scientific Aquatic Services cc (Refer to Annexure G).

### 9. SOCIO-ECONOMIC CONTEXT

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

***The following information is derived from Metropolitan Spatial Development Framework (2011) for the Ekurhuleni Metropolitan Municipality***

The proposed development falls within an areas known as the Core Development Triangle of the EMM, namely Kempton Park, Germiston and Boksburg which includes OR Tambo Airport. This area has been ear marked for future development because of its high level of accessibility, due to its recent road and rail line infrastructure upgrade before and after the 2010 Fifa World Cup which was held in South Africa. The project falls under Region C (Ward 100), which is located on the north-east zone of the EMM, compromising mostly of the area north of the N12, and east of the OR Tambo Airport. Economic development is directly linked to the airport and by implication; infrastructure is geared to be on par with its development.

According to the Metropolitan Spatial Development Framework (2011), the magnitude of development ear marked for Remainder of Portion 1 Witfontein 16 IR is under distress due to lack of services in this area. It is noted that the following water bulk supply infrastructure would have to be constructed in order to meet its growing economy and improve the lively hood of communities in its ambient:

- Constriction of a new sewer outfall from Pomona pump station all the way to the new Serengeti pump station;
- A new Reservoir (Bredell Reservoir) is required;
- A new Rand Water connection is required with a new bulk water main from the connection point to the proposed Bredell Reservoir;
- A new main line is required from the Reservoir to the Serengeti and surrounding areas which might include Portion 1 Farm Witfontein;
- A number of other Witfontein and Glen Erasmia proposed township are also in the waiting for these new bulk services; and
- Capacity at the ERWAT Hartebeesfontein Works can be provided over the short term.

The construction and completion of this bulk water supply pipeline and associated infrastructure is fundamental to the supply of portable water to the surrounding communities. More importantly, however is the roll out of the remainder of the noted bulk water supply upgrades that will take place once it is completed.

***The following profile is derived from Stats SA for the Ekurhuleni Metropolitan Municipality***

People

According to Census 2011, the municipality has a total population of just 3, 2 million individuals, 78, 7% of whom are black African. Whites makes 15, 8%, and other race groups comprises the remaining 5,5%. Of those aged 20 years and older, 3, 3% have completed primary school, 35, 3% have some secondary education, 35,5% have completed matric and 14,6% have some form of higher education.

Living Conditions

There are just over 1million households in Ekurhuleni with an average of 2, 9 persons per household. The percentage of residents residing in formal households is 77,4%. In terms of services, 57, 2% of households have access to water within the dwelling. Most households have access to electricity, with 82, 2% households using electricity for lighting.

Sources of water percentage:

Regional/Local water scheme (operated by municipality or other water services provider)	95,8%
Borehole	1,1%
Spring	0,1%
Rain Water Tank	0,1%
Dam/Pool/Stagnant water	0,1%
River/Stream	0%
Water Vendor	0,4%
Water Tanker	0,9%
Other	1,5%

**10. CULTURAL/HISTORICAL FEATURES**

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

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

- (a) the construction of a road, wall, powerline, pipeline, canal or other similar form of linear development or barrier exceeding 300m in length;
- (b) the construction of a bridge or similar structure exceeding 50m in length;
- (c) any development or other activity which will change the character of a site-
  - (i) exceeding 5 000 m2 in extent; or
  - (ii) involving three or more existing erven or subdivisions thereof; or
  - (iii) involving three or more erven or divisions thereof which have been consolidated within the past five years; or
  - (iv) the costs of which will exceed a sum set in terms of regulations by SAHRA or a provincial heritage resources authority;
- (d) the re-zoning of a site exceeding 10 000 m2 in extent; or
- (e) any other category of development provided for in regulations by SAHRA or a provincial heritage resources authority, must at the very earliest stages of initiating such a development, notify the responsible heritage resources authority and furnish it with details regarding the location, nature and extent of the proposed development.

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

	NO
--	----

If YES, explain:

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

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

No important Cultural Heritage Resources or graves where found on the proposed development site. If during construction any Cultural Heritage Resources or graves are unearthed, all work has to be stopped until the site has been inspected and mitigated by a Cultural Heritage 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)?

	NO
	NO

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

## SECTION C: PUBLIC PARTICIPATION

### 1. ADVERTISEMENT

The Environmental Assessment Practitioner must follow any relevant guidelines adopted by the competent authority in respect of public participation and must at least –

1(a) Fix a site notice at a conspicuous place, on the boundary of a property where it is intended to undertake the activity which states that an application will be submitted to the competent authority in terms of these regulations and which provides information on the proposed nature and location of the activity, where further information on the proposed activity can be obtained and the manner in which representations on the application may be made;

*(Refer to Appendix E1 for the site Notice)*

1(b) inform landowners and occupiers of adjacent land of the applicant's intention to submit an application to the competent authority;

*(Refer to Appendix E9 to the Interested and Affected Parties (I&AP's) database)*

1(c) inform landowners and occupiers of land within 100 metres of the boundary of the property where it is proposed to undertake the activity and whom may be directly affected by the proposed activity of the applicant's intention to submit an application to the competent authority;

*(Refer to the I&AP's database in Appendix E9 for the list of landowners and occupiers)*

1(d) inform the ward councillor and any organisation that represents the community in the area of the applicant's intention to submit an application to the competent authority;

*Refer to I&AP's database Appendix E9 for the details of the Ward Councillor*

1(e) inform the municipality which has jurisdiction over the area in which the proposed activity will be undertaken of the applicant's intention to submit an application to the competent authority; and

*Refer to I&AP's database Appendix E9 for the municipal departments/divisions informed*

1(f) inform any organ of state that may have jurisdiction over any aspect of the activity of the applicant's intention to submit an application to the competent authority; and

*Refer to I&AP's database Appendix E9 of the organ of state informed*

1(g) place an advertisement in one local newspaper and any Gazette that is published specifically for the purpose of providing notice to the public of applications made in terms of these regulations.

*Refer to Appendix E3 for the Newspaper Advert placed in the Kempton Express*

### 2. LOCAL AUTHORITY PARTICIPATION

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

Has any comment been received from the local authority? NO

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

n/a

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

The applicant is the Ekurhuleni Metropolitan Municipality.

### 3. CONSULTATION WITH OTHER STAKEHOLDERS

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

Has any comment been received from stakeholders? YES

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

Please refer to Appendix E6 for the Comments and Response Report.

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

### 4. GENERAL PUBLIC PARTICIPATION REQUIREMENTS

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

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

### **5. APPENDICES FOR PUBLIC PARTICIPATION**

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

Appendix 1 – Proof of site notice

Appendix 2 – Written notices issued to those persons detailed in 1(b) to 1(f) above

Appendix 3 – Proof of newspaper advertisements

Appendix 4 – Communications to and from persons detailed in Point 2 and 3 above

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

Appendix 6 - Comments and Responses Report

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

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

Appendix 9 – Copy of the register of I&APs

Appendix 10 – Comments from I&APs on the application

Appendix 11 – Other



# SECTION D: RESOURCE USE AND PROCESS DETAILS

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

## Instructions for completion of Section D for alternatives

- 1) For each alternative under investigation, where such alternatives will have different resource and process details (e.g. technology alternative), the entire Section D needs to be completed
- 4) Each alternative needs to be clearly indicated in the box below
- 5) Attach the above documents in a chronological order

Section D has been duplicated for alternatives  times  
(complete only when appropriate)

Section D Alternative No.  (complete only when appropriate for above)

## 1. WASTE, EFFLUENT, AND EMISSION MANAGEMENT

### Solid waste management

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

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

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

Construction waste to be collected at the construction camp and on site through bulk containers and bins, and to be transported for disposal at a registered municipal landfill. Contractors to keep bins on site, and these bins must be regularly emptied depending on the volume of waste generated. Mitigation measures for waste management will be included in the Environmental Management Programme (EMPr).

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

All waste will be disposed of at the nearest municipal landfill (i.e. waste disposal site) or other registered landfill site. Any solid waste that cannot be reused or recycled will be removed and disposed at a registered landfill site.

Will the activity produce solid waste during its operational phase?

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

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

n/a

Has the municipality or relevant service provider confirmed that sufficient air space exists for treating/disposing of the solid waste to be generated by this activity?

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

n/a

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

Can any part of the solid waste be classified as hazardous in terms of the relevant legislation?

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

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

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

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

n/a

### Liquid effluent (other than domestic sewage)

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

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

If yes, has the municipality confirmed that sufficient capacity exist for treating / disposing of the liquid effluent to be generated by this activity(ies)?

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

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

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

n/a

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

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

If yes, provide the particulars of the facility:

Facility name:

Contact person:

Postal address:

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Postal code:  
Telephone:  
E-mail:

[Redacted]  
Cell:  
Fax: [Redacted]

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

The water used on site will be reused and recaptured as far as possible. Portable ablution facilities will be made available on site during construction phase and emptied at a licensed waste water treatment works. Washing or bathing in any natural water bodies will be prohibited.

## Liquid effluent (domestic sewage)

Will the activity produce domestic effluent that will be disposed of in a municipal sewage system?

[Redacted] NO

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

[Redacted]

If yes, has the municipality confirmed that sufficient capacity exist for treating / disposing of the domestic effluent to be generated by this activity(ies)?

YES [Redacted]

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

YES [Redacted]

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

[Redacted]

## Emissions into the atmosphere

Will the activity release emissions into the atmosphere?

YES [Redacted]

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

[Redacted] NO

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

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

Air Quality Management and dust control is governed by the National Environmental Management Act: Air Quality Act (Act No. 39 of 2004). However, no formal authorisation is required under the aforementioned legislation for the activities associated with the project. During construction phase there will be localised and particulate emission associated with site clearing, cleaning and earthwork activities and vehicle/plant exhaust that will impact on site and in immediate surrounding areas. Dust will be mitigated through the use of dust suppression techniques

## 2. WATER USE

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

[Redacted] the activity will not use water

If water is to be extracted from groundwater, river, stream, dam, lake or any other natural feature, please indicate

the volume that will be extracted per month:

[Redacted] liters

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

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

YES [Redacted]

If yes, list the permits required

Water Use Authorisation in terms of Section 21 (c) and (i) of the National Water Act, 1998 (Act No. 36 of 1998) is required for the development.

If yes, have you applied for the water use permit(s)?

YES [Redacted]

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

[Redacted] NO

## 3. POWER SUPPLY

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

The power supply will be sourced from Eskom and generators.

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

n/a

## 4. ENERGY EFFICIENCY

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

The nature of the proposed development does not provide for energy efficiency considerations in design. Energy efficiency in term of the proposed development will be limited to the efficient and effective utilization of materials and minimal wastage.

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

Alternative energy sources such as standby generators in the event that the electricity cuts shall be considered should such a need arise.

## SECTION E: IMPACT ASSESSMENT

The assessment of impacts must adhere to the minimum requirements in the EIA Regulations, 2006, 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. ISSUES RAISED BY INTERESTED AND AFFECTED PARTIES

Summarise the issues raised by interested and affected parties.

[Refer to Appendix E6 for Comments and Response Report](#)

Summary of response from the practitioner to the issues raised by the interested and affected parties

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

[Refer to Appendix E6 for Comments and Response Report](#)

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

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

The Significance Assessment Methodology used in accordance to the Department of Environmental Affairs and Tourism (DEAT, 2006), Guideline Document 5 (Assessment of Impacts). The mentioned document states that the significance of impacts can be determined through a synthesis of the aspects produced in terms of the nature, duration, intensity, extent and probability of identified impacts. Furthermore, the significance of an impact is the product of a probability rating and a severity rating. A detailed description of the mentioned methodology follows:

- **Methodology to Rate and Assess Significance**
- \* **Significance Rating**

Significance is the product of probability and severity rating divided by the mitigation potential:

$$\text{Significance} = \frac{\text{Probability} \times \text{Severity}}{\text{Mitigation}}$$

Probability describes the likelihood of the impact actually occurring, and is related as follows:

- **Improbable** - Low possibility of impact occurring due to design or history. **Rating: 2**
- **Probable** - Distinct possibility that impact will occur. **Rating: 3**
- **Highly Probable** - Most likely that impact will occur. **Rating 4**
- **Definite** - Impact will occur regardless of any prevention measures. **Rating: 5**
- \* **Severity Rating**

The severity rating is calculated from the factors allocated to intensity and duration. Intensity and duration factors are awarded to each impact, as described below:

- \* **Intensity Factor**

The intensity factor is awarded each impact according to the following method:

- **Low Intensity** - Nature and/or man-made functions not affected (minor process damage or human/wildlife injury could occur). **Factor 1**
- **Medium Intensity** - Environment affected but natural and/or man/made functions and processes continue (Some process damage or human/wildlife injury may occurred)
- **High Intensity** - Environment affected to the extent that natural and/or human-made functions are altered to the extent that it will temporarily or permanently cease (Major process damage or human/wildlife injury could occur)

- \* **Duration**

Duration is assessed and a factor in accordance with following:

- **Short Term** - ≤1 to 5 years. **Factor 2**
- **Medium Term** - 5-15 years. **Factor 3**
- **Long Term** - Impact will only cease after the operational life of the activity has ended, either because of natural process or by human intervention. **Factor 4**

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<ul style="list-style-type: none"> <li>▪ <b>Permanent -</b> Mitigation, either by natural process or by human intervention, will not occur in such a way or in such a time span that the impact can be considered transient. <b>Factor 4</b></li> </ul>
<p>* <b>Severity Factor</b></p> <p>The Severity Rating is obtained from calculating a Severity Factor, and comparing the severity factor to the rating.</p> <p>Severity Ratings:</p> <ul style="list-style-type: none"> <li>▪ <b>Low Severity (Rating 2)</b>-Calculated values 2 to 4</li> <li>▪ <b>Medium Severity (Rating 3)</b>- Calculated values 5 to 8</li> <li>▪ <b>High Severity (Rating 4)</b>-Calculate values 9 to 12</li> <li>▪ <b>Very High Severity (Rating 5)</b>- Calculated values 13-16</li> </ul> <p><i>Severity factors below 3 indicated no significant impact.</i></p>
<p>* <b>Significance Rating</b></p> <p>A significance rating is calculated by multiplying the severity rating with the probability rating: The significance rating should influence the development project as described below:</p> <ul style="list-style-type: none"> <li>• <b>Low significance (calculated Significance Rating 4 to 6)</b> Positive and Negative impacts of low significance should have no significant influence on the proposed development project.</li> <li>• <b>Medium significance (calculated Significance Rating ≥ 7 to 12)</b> Positive Impacts: should weigh towards a decision to continue Negative Impacts: Should be mitigated before the project can be approved</li> <li>• <b>High significance (calculated Significance Rating ≥13 to 18)</b> Positive Impacts: Should weigh towards a decision to continue, should be enhanced in final design. Negative Impacts: Should weigh towards a decision to terminate proposal, or mitigation should be performed to reduce significance to at least a low significance rating.</li> <li>• <b>Very High significance (calculated Significance Rating ≥19 to 25)</b> Positive Impacts: Continue Negative Impacts: If mitigation cannot be implemented effectively, proposal should be terminated.</li> </ul>

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

**NOTE: The following impacts which may result from the pre-construction and construction applies to the Pipeline Proposal Route**

### Proposed Pipeline Route

Potential impacts:	Significance rating of impacts:	Proposed mitigation:	Significance rating of impacts after mitigation:
<b>CONSTRUCTION PHASE</b>			
<b>Beneficial Impacts</b>			
Top soil will be stripped and stockpiled during excavation.	2	<ul style="list-style-type: none"> <li>• In areas to be affected by construction activities, topsoil (minimum of 300mm of top layer) is to be stored separately and preserved for rehabilitation purposed in the final phase of construction.</li> <li>• Suitable storage areas must be identified along the servitude, in consultation with the ECO, prior to commencement of construction.</li> <li>• Protect stockpiled topsoil by preventing compaction (vehicle movement), contaminating and mixing with any other material. Institute wind and water erosion-control measures to prevent loss</li> </ul>	1

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		<p>of topsoil.</p> <ul style="list-style-type: none"> <li>• Access road for earthmoving equipment and delivery of construction material must be clearly designated.</li> </ul> <p>The use of machinery in ecologically sensitive areas such as the wetland must be limited as far as possible.</p>	
<p><b>Soil may become compacted through heavy machinery movement and constant construction vehicle traffic.</b></p>	<b>3</b>	<ul style="list-style-type: none"> <li>• Compacted areas outside of development footprint to be scarified to allow for penetration of root systems.</li> <li>• During construction, wetland habitats must be avoided by construction vehicles and equipment, wherever possible, in order to reduce potential impacts.</li> <li>• Construction vehicles operating in mud conditions should be cleaned on exit to prevent mud deposition along tarred access roads leading to the development area.</li> </ul> <p>Traffic controllers must be positioned at strategic points along the access road to assist in the mitigating unnecessary soil compaction.</p>	<b>1</b>
<p><b>During the Construction Phase the land may be polluted by contaminants such as fuel and paint and/or waste (domestic, construction material, human).</b></p>	<b>2</b>	<ul style="list-style-type: none"> <li>• Where soil pollution has occurred, contaminated layers must be removed and disposed of at a licenced landfill site.</li> <li>• None reusable/recyclable building rubble and solid material substance must be disposed at a registered waste facility.</li> <li>• Waste to be managed. Suitable waste receptacles (e.g. bins, skips) to be provided. All waste to be disposed of at a registered landfill site.</li> <li>• The contractor is to ensure that waste disposal certificated are kept on file for record purposed should the GDARD request proof</li> <li>• Litter should be strictly prohibited as it pollutes the environment and degrade its aesthetic value.</li> <li>• General waste should be managed in terms of NEM: Waste Act 2008(Act No. 59 of 2008) and relevant Municipal Waste Management By-Law</li> <li>• No material may be dumped in the surrounding region.</li> <li>• Under no circumstances may an area be used for ablution purposes. Sufficient chemical toilets to be provided-1 per 20 workers and must be provided within walking distance to all construction workers. Chemical toilets to be serviced once per week.</li> <li>• No washing or bathing in any natural water bodies shall be allowed.</li> <li>• Liquid waste (oil, contaminated fuel and lubricants, as well as waste paint etc.) should be collected in original containers and stored inside a surfaced or bunded surface area volume should be equal to 110% of the total volume of the liquid stored.</li> <li>• The designated storage area</li> </ul>	<b>1</b>

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		<p>should have relevant warning signage (e.g. no smoking and open fires, fire extinguisher). Vehicles to be serviced under controlled conditions. Drip-trays to be used for leaks.</p>	
Soil to be removed for construction purposes which could lead to erosion.	3	<ul style="list-style-type: none"> <li>• Installation of erosion control measures before construction commences (e.g. temporary drains).</li> <li>• Careful and good practices will ensure that erosion will be kept at bay, during excavation.</li> <li>• Revegetate or stabilise all disturbed areas as soon as possible</li> <li>• Minimise the area which is to be cleared for construction.</li> <li>• Locate stockpiles away from concentrated flows and divert run-off around them.</li> <li>• To prevent erosion, material stockpiled for long periods (2 weeks) should be retained in a bermed area to avoid contact with storm water run-off.</li> </ul>	1
<b>Construction Phase</b>			
Pollution of surface water through contaminated storm water, disposal of waste, nearby ablution, discharge of wastewater into the unidentified tributary from Pomona Agricultural Holdings.	3	<ul style="list-style-type: none"> <li>• Discharge and divert storm water to sediment trap to allow particulate matter to settle out.</li> <li>• Control storm water velocity where necessary with temporary energy dissipater structures.</li> <li>• Diverting run-off around trench excavations or disturbed areas.</li> <li>• Waste to be managed. Suitable waste receptacles (e.g. bins, skips) to be provided. All waste to be disposed of at a registered landfill site.</li> <li>• Under no circumstances may an area be used for ablution purposes. Sufficient chemical toilets to be provided-1 per 20 workers and must be provided within walking distance to all construction workers. Chemical toilets to be serviced once per week.</li> <li>• No washing or bathing in any natural water bodies shall be allowed.</li> <li>• Liquid waste (oil, contaminated fuel and lubricants, as well as waste paint etc.) should be collected in original containers and stored inside a surfaced or banded surface area volume should be equal to 110% of the total volume of the liquid stored.</li> <li>• The designated storage area should have relevant warning signage (e.g. no smoking and open fires, fire extinguisher).</li> <li>• Vehicles to be serviced under controlled conditions. Drip-trays to be used for leaks.</li> <li>• No construction rubble, household rubbish or any other sanitary water to be dumped in the unidentified tributary from Pomona Agricultural holdings.</li> </ul>	1
<b>Construction Phase</b>			
Pollution of surface water through disposal of waste, nearby ablution,	3	<ul style="list-style-type: none"> <li>• No rubbish or any other</li> </ul>	1

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discharge or waste water into unidentified tributary from Pomona Agricultural Holdings.		unsanitary water to be dumped into the unidentified tributary from Pomona Agricultural holdings.	
<b>Construction Phase</b>			
Groundwater may be contaminated through percolation of contaminants.	3	<ul style="list-style-type: none"> <li>• Waste to be managed. Suitable waste receptacles (e.g. bins, skips) to be provided. All waste to be disposed of at a registered landfill site.</li> <li>• Under no circumstances may an area be used for ablution purposes. Sufficient chemical toilets to be provided-1 per 20 workers and must be provided within walking distance to all construction workers. Chemical toilets to be serviced once per week.</li> <li>• Toilets must be located within construction camp on a gentle gradient.</li> <li>• No washing or bathing in any natural water bodies shall be allowed.</li> <li>• Liquid waste (oil, contaminated fuel and lubricants, as well as waste paint etc.) should be collected in original containers and stored inside a surfaced or bunded surface area volume should be equal to 110% of the total volume of the liquid stored.</li> <li>• The designated storage area should have relevant warning signage (e.g. no smoking and open fires, fire extinguisher)</li> <li>• An area must be designated for the mixing of concrete, and must take place on an impervious surface such as a slab, metal or plastic sheeting which is provided with cut-off drains or berms to contain any contaminated run-off.</li> <li>• Contain water and slurry from cement and concrete mixing operations as well as from batching area wash bays. Direct such waste water into settlement pond or sludge dam for later disposal.</li> </ul>	1
<b>Construction Phase</b>			
Physical disruption of wetland and river crossing	5	<ul style="list-style-type: none"> <li>• As specified in the GDARD guidelines for undertaking biodiversity assessments, a 32m / 50m buffer area (according to whether the wetland is located within or out of the urban edge) must be maintained around each wetland. Within this buffer zone a setback buffer area must be preserved. In this setback area, ground, vegetation and root systems must remain.</li> <li>• Measures should be implemented to prevent the transport of excess silt downstream. This should include the erection of silt barriers within the wetland immediately downstream of the construction site.</li> <li>• Where possible, the construction earthworks activities should occur during dry (winter months) when water levels and seepage in</li> </ul>	1

**BASIC ASSESSMENT REPORT [REGULATION 22(1)]**

		<p>wetlands / rivers are lower.</p> <ul style="list-style-type: none"> <li>Where dewatering of trenches is required, the water from the dewatering operation should be cleaned of any excess silt and be discharged back into a downstream portion of the wetland in a manner that does not cause the initiation of soil erosion.</li> <li>No stockpile areas should be located within the wetland boundary, or within the associated buffer zone.</li> <li>No hazardous materials (such as oil) should be kept within 50m of the edge of a wetland buffer zone.</li> <li>No vehicles and access of persons should be allowed through the wetland.</li> </ul>	
<b>Construction Phase</b>			
Burning of waste and smoke from fires will reduce air quality.	3	<ul style="list-style-type: none"> <li>Ensure compliance with the NEM: Air Quality Act (Act No. 39 of 2004).</li> <li>All the necessary precautions have to be taken to avoid fires.</li> <li>Informal fires in the vicinity of the development area should be prohibited during all development phases</li> <li>No waste is allowed to be burnt, and must be removed from site and disposed of at registered landfill.</li> <li>Fire extinguishers must be provided at the site camp, where it is easily accessible.</li> <li>Fire extinguishers must be serviced, full and in good working condition.</li> <li>The contractor's Health and Safety Plan must include particulars in terms of firefighting and training.</li> </ul>	1
Emissions from construction vehicles and machinery.	3	<ul style="list-style-type: none"> <li>Vehicles to be properly maintained to avoid unnecessary emissions. Vehicles must be regularly serviced to ensure that no smoke is generated</li> </ul>	1
Bare patches may generate dust if used by vehicle or during windy periods.	3	<ul style="list-style-type: none"> <li>Dust suppression measures such as wetting down dirt roads, bare areas and stockpiled soil. Water used for this purpose must be used in quantities that must not result in the generation of run-off.</li> <li>Ensure dust emission generated during construction activities are within acceptable dustfall rates published in the National Dust Control Regulations, 2013.</li> <li>All bare patches created by construction related activities must be properly rehabilitated using indigenous grass mix. Construction vehicles must travel at low speeds to reduce the effect of dust.</li> </ul>	1
<b>Construction Phase</b>			
Damage to plant life and landscape area during construction.	3	<ul style="list-style-type: none"> <li>The developer and contractor shall liaise with the ECO during the pre-construction phase to</li> </ul>	1



**BASIC ASSESSMENT REPORT [REGULATION 22(1)]**

		<p>agree on acceptable limits of disturbance to area of natural vegetation adjacent to work area.</p> <ul style="list-style-type: none"> <li>• During pipeline construction, sensitive habitats must be avoided by construction vehicles and equipment, wherever possible, in order to reduce potential impacts.</li> <li>• All labourers to be informed of disciplinary actions for the wilful damage to plants.</li> <li>• Ensure protection of important resources by establishing protective buffers to avoid unintentional disturbance.</li> <li>• Workers and machinery to remain inside construction footprint.</li> <li>• Rehabilitation to include the following: <ul style="list-style-type: none"> <li>○ <i>Importing topsoil;</i></li> <li>○ <i>Seeding with mixed indigenous grasses;</i></li> <li>○ <i>Planting of indigenous trees;</i></li> <li>○ <i>Fertiliser application;</i></li> <li>○ <i>Irrigation; and</i></li> <li>○ <i>Landscaping of affected areas.</i></li> </ul> </li> <li>• The site is to be rehabilitated to its original state, as far as possible.</li> <li>• Rehabilitation to must be done as far as possible and make use of indigenous trees and plants. The use of exotic species must be limited.</li> </ul> <p>No vegetation must be unnecessarily removed.</p>	
<p><b>Exotic species for instance weeds can be introduced into new areas by importing topsoil and disturbing open areas.</b></p>	<p align="center"><b>3</b></p>	<ul style="list-style-type: none"> <li>• The spreading of alien species must be prevented through the utilisation of local topsoil and controlled through a proper herbicide maintenance plan. Rehabilitation to must be done as far as possible and make use of indigenous trees and plants. The use of exotic species must be limited.</li> </ul>	<p align="center"><b>1</b></p>
<p><b>Pollution of soil will affect vegetation</b></p>	<p align="center"><b>3</b></p>	<ul style="list-style-type: none"> <li>• Waste to be managed. Suitable waste receptacles (e.g. bins, skips) to be provided. All waste to be disposed of at a registered landfill site.</li> <li>• Under no circumstances may an area be used for ablution purposes. Sufficient chemical toilets to be provided-1 per 20 workers and must be provided within walking distance to all construction workers. Chemical toilets to be serviced once per week.</li> <li>• Toilets must be located within construction camp on a gentle gradient.</li> <li>• Prevent spillage from elevated fuel tanks during decanting.</li> <li>• Rehabilitation to include the following: <ul style="list-style-type: none"> <li>○ <i>Importing topsoil;</i></li> <li>○ <i>Seeding with mixed indigenous grasses;</i></li> <li>○ <i>Planting of indigenous trees;</i></li> </ul> </li> </ul>	<p align="center"><b>1</b></p>

**BASIC ASSESSMENT REPORT [REGULATION 22(1)]**

		<ul style="list-style-type: none"> <li>○ Fertiliser application;</li> <li>○ Irrigation; and</li> </ul> <p><i>Landscaping of affected areas.</i></p>	
Removal of plants for construction purposes.	3	Where indigenous trees have to be removed (if any) without damage, must be located and maintained in an on-site nursery and replanted within disturbed areas after completion of construction.	1
<b>Construction Phase</b>			
Damage to fauna by workers (e.g. poaching, wilful damage).	3	<ul style="list-style-type: none"> <li>• All activities on site must comply with regulations of the Animal Protection Act, 1962 (Act No. 71 of 1962).</li> <li>• No fauna to be poached, snared, hunted, captured or wilfully damaged or destroyed, unless declared a pest</li> <li>• Disturbances to nesting sites of birds must be avoided, as far as possible. Or alternatively relocated to conservation areas close by.</li> <li>• The Contractor shall advice workers of the penalties associated with the needless destruction of wildlife, as set out in the Animal Protection Act, 1962 (Act No. 71 of 1962).</li> <li>• All labourers to remain inside construction footprint, areas of increased ecological sensitivity beyond the development footprint should be No-Go area and be off limits.</li> </ul> <p>All disturbed habitat areas must be rehabilitated and reseeded with an indigenous seed mixture as soon as possible to ensure that faunal habitat ecology is reinstated.</p>	
<b>Construction Phase</b>			
Untidy construction site will cause a visual impact.	2	<ul style="list-style-type: none"> <li>• Sound housekeeping and waste management measures to be employed.</li> <li>• Construction material to be stored in a neat and safe manner, in designated areas.</li> <li>• The Stacking and Storage Supervisor to be appointed in terms of Regulation 26(a) of the Construction Regulation (GNR. 1010 of 2003), must be diligently execute their duties, as imposed by the aforementioned legislation.</li> <li>• Waste should be restricted to storage in specifically designated areas, and removed daily.</li> </ul>	1
<b>Construction Phase</b>			
Noise from construction machinery (e.g. TLB, excavator, compressor).	3	<ul style="list-style-type: none"> <li>• Ensure compliance to Provincial Noise Control requirements as outlines in the Provincial Notice, 5479 of 1999: Gauteng Noise Control Regulation during construction and Local Municipal By-Laws</li> <li>• All machinery to be maintained to be reduced noise levels. Labourers to be provided with hearing protection.</li> <li>• Unless otherwise specified, construction works to be conducted Monday to Friday</li> </ul>	

**BASIC ASSESSMENT REPORT [REGULATION 22(1)]**

		<p>between 7:00-17:00 and on Saturdays 8:00-15:00.</p> <ul style="list-style-type: none"> <li>No construction works to take place on Sundays and Public Holidays in order to minimise the disturbance caused by noise emanating from the construction site.</li> </ul>	
<b>Construction Phase</b>			
Possible damage to existing infrastructure during excavation and other construction activities.	2	<ul style="list-style-type: none"> <li>'As built' drawings to be obtained and existing infrastructure to be protected.</li> <li>The servitude of the pipeline must be acquire over properties along the route of the pipeline, and clearly demarcated prior to any construction activities.</li> <li>Construction schedules to indicate which servitude areas can be cleared.</li> <li>Necessary way leaves procedures to be followed. Damage to be repaired by Contractor.</li> </ul>	1
<b>Construction Phase</b>			
Possible criminal activities perceived to be associated with construction phase.	3	<ul style="list-style-type: none"> <li>All construction workers to remain within construction footprint.</li> <li>No building activities to be allowed after hours during weekdays, or over the weekend.</li> <li>Construction workers to be clearly identifiable.</li> <li>Contractor to mainly recruit labour from local communities</li> <li>Adequate access control and security measures to be provided at the construction camp and the development ambient, as far as possible.</li> </ul>	1
<b>Construction Phase</b>			
The contractor will be encouraged to use local products if available.	3	Contractor to mainly recruit labour from local communities	3
<b>Construction Phase</b>			
Blasting may be required if hard rock is encountered and alters the soil structure. Big boulders and rocks will be crushed.	2	<ul style="list-style-type: none"> <li>Keep the depth of excavations to a minimum. Maximum permissible wave velocity should not exceed 2mm/s as measured by a Nitro Combigraf Vibration meter or some similar standard at a distance of less than 5m of the 'blast point'.</li> </ul>	1

**BASIC ASSESSMENT REPORT [REGULATION 22(1)]**

<p><b>Inadequate waste management.</b></p>	<p align="center"><b>3</b></p>	<ul style="list-style-type: none"> <li>• General waste should be managed in terms of NEM: Waste Act 2008 (Act No. 59 of 2008) and relevant Local Municipality Waste Management By-Laws.</li> <li>• None reusable/recyclable building rubble and solid material substance must be disposed at a registered waste facility.</li> <li>• The contractor is to ensure that waste disposal certificates are kept on file for record purposes should GDARD request proof.</li> <li>• Littering on site and the surrounding areas is prohibited.</li> <li>• Clearly marked litterbins must be provided on site and fitted with lids to prevent littering.</li> <li>• All bins must be cleaned of litter regularly, on a weekly basis.</li> <li>• All domestic waste will be removed from site and disposed of at a registered landfill.</li> <li>• No material may be dumped in the surrounding region.</li> <li>• The contractor shall provide sufficient closed containers on site, as well as waste skips, which must be placed in the crew cramp, to handle the amount of litter, wastes, and builder's wastes generated on site.</li> <li>• No rubble or discarded building material may remain on site for more than one week.</li> <li>• Sufficient chemical toilets to be provided-1 per 20 workers and must be provided within walking distance to all construction workers. Chemical toilets to be serviced once per week.</li> <li>• All chemical spills must be contained and cleaned up by the supplier or professional pollution control personnel.</li> <li>• An area must be designated for mixing concrete, and must take place on an impervious surface such as a concrete slab, metal or plastic sheeting which is provided with cut-off drains or berms to contain any contaminated run-off.</li> <li>• Solid construction waste not posing a pollution hazard should be used on site as backfill material as much as possible. Should backfilling material be required, this waste should either be taken to a recycling facility or disposed at a registered landfill facility. No waste material may be burnt on site.</li> </ul>	<p align="center"><b>1</b></p>
<b>Construction Phase</b>			
<p><b>Damage to heritage resources.</b></p>	<p align="center"><b>3</b></p>	<ul style="list-style-type: none"> <li>• Human remains younger than 60 years should only be handled by a registered undertaker or an institution declared under the Human Tissue Act.</li> <li>• In terms of the National Heritage Resources Act (Act No. 25 of 1999), graves older than 60 years (not in a municipal graveyard) are protected.</li> <li>• Should any historically significant</li> </ul>	<p align="center"><b>1</b></p>

**BASIC ASSESSMENT REPORT [REGULATION 22(1)]**

		<p>finds (e.g. artefacts, human remains or sites of cultural or archaeological importance) be located, work must cease and the South African Heritage and Resource Agency (SAHRA) must be contacted within 24 hours. Work in the area can only be resumed once the site has been completely investigated and permits issued.</p> <p>Under no circumstances may any worker destroy or interfere with archaeological sites or finds. A fence at least 2m outside the extremities of the site must be erected to protect archaeological sites.</p>	
<b>Construction Phase</b>			
Environmental pollution can occur from fuel or cement spillages	3	<ul style="list-style-type: none"> <li>• Elevated fuel storage tanks to be provided with impermeable floors and bund walls to prevent pollution during accidental spillages. The outflow of the bunded area to be supplied with an oil trap. The bund wall to be of sufficient height to allow for the containment of 110% of the tank(s) volume. The area must be provided with relevant warning signage (e.g. no smoking and open fires, fire extinguisher).</li> <li>• Prevent spillage from elevated fuel tanks during decanting.</li> <li>• In the event of a fuel spill in excess of 25ℓ, the spill must be confined and mopped up using oil absorbent fibres. Professionals should perform cleaning of large spills. The clean-up operation will initially involve aeration of the soil. This activates bacteria in the soil, which then partially digest the spilt fuel. Contaminated soil should then be removed to a depth of 0.5m below the saturated oil spill level. This soil must be disposed of at a registered landfill site. The efficacy of the clean-up should be monitored to ensure that all of the spilt fuel is removed from the soil.</li> <li>• An area must be designated for the mixing of concrete, and must take place on an impervious surface such as a slab, metal or plastic sheeting which is provided with cut-off drains or berms to contain any contaminated run-off. Contain water and slurry from cement and concrete mixing operations as well as from batching area wash bays. Direct such waste water into settlement pond or sludge dam for later disposal.</li> </ul>	1
<b>Construction Phase</b>			
Environmental pollution and untidy site	3	<ul style="list-style-type: none"> <li>• Proper storage facilities should be provided for the storage of oils, grease, fuels, chemicals and hazardous materials.</li> <li>• Spill trays should be placed around site.</li> <li>• Cement bags must be stored under a roof or inside a suitable</li> </ul>	1

**BASIC ASSESSMENT REPORT [REGULATION 22(1)]**

		<p>container. Cement must be mixed in designated areas, on impermeable surfaces. Material must be stored in a safe and neat manner.</p>	
<b>Construction Phase</b>			
Risks of accidents and incidents.	3	<ul style="list-style-type: none"> <li>• All projects must be conducted in accordance with the Occupational Health and Safety Act (Act 85 of 1993).</li> <li>• The contact details of the Safety Officer/Representative should be provided to the ECO.</li> <li>• Safety induction must be expanded to include environmental risks and mitigation measures.</li> <li>• Fire prevention: <ul style="list-style-type: none"> <li>○ The Contractor must take all the necessary precautions to protect the materials on site and to avoid fires.</li> <li>○ All waste bins must be kept away from fuel tank installations.</li> <li>○ No waste material may be burnt.</li> <li>○ Designated areas must be provided, where smoking can occur in a controlled environment. No trees may be felled to generate firewood</li> </ul> </li> </ul>	1
<b>Construction Phase</b>			
Improper reinstatement and rehabilitation.	3	<ul style="list-style-type: none"> <li>• Rehabilitation to must be done as far as possible and make use of indigenous trees and plants. The use of exotic species must be limited.</li> <li>• Reinstatement tasks must include (but are not restricted to) the following: <ul style="list-style-type: none"> <li>○ <i>Any damage caused by construction-related activities must be repaired.</i></li> <li>○ <i>The site must be cleaned, and all construction-related material and waste must be removed.</i></li> <li>○ <i>All cement residues must be cleaned.</i></li> <li>○ <i>All borrow pits (if applicable) must be filled and Areas where spillages of liquid waste (e.g. paint, oil, fuel) occurred must be cleaned appropriately.</i></li> <li>○ <i>Temporary buildings must be demolished and the concomitant material must be removed from site.</i></li> <li>○ <i>Site-specific rehabilitation measures need to be determined in consultation with the ECO.</i></li> <li>○ <i>Stockpiled topsoil should be replaced as the final soil layer.</i></li> </ul> <p><i>The grass mix, shrubs and trees used for rehabilitation must be compatible with the indigenous species rehabilitated.</i></p> </li> </ul>	1
<b>Construction Phase</b>			

**BASIC ASSESSMENT REPORT [REGULATION 22(1)]**

<p>Soil to runoff into unnamed tributary and wetland.                  Altering the hydrology of the wetland (the quantity, pattern, timing, water level and assurance of instream flow)</p>	<p align="center">3</p>	<ul style="list-style-type: none"> <li>• Design drawings of the wetland crossing must be approved by the Department of Water and Sanitation prior to construction.</li> <li>• Adequate erosion and sedimentation control measures must be instituted for the river crossing excavation or embankments.</li> <li>• Ensure that wetland crossing results in minimal disruption to flow patterns, both upstream and downstream of the crossing, and do not cause damming of the water at the crossing.</li> <li>• Vegetation associated with the wetland/riparian areas identified on site have a high sensitivity with a high conservation priority. No major alteration of these important drainage areas is recommended.</li> <li>• All construction and maintenance activities should be conducted in such a way that minimal damage is caused to the wetland or riparian zone.</li> <li>• During construction, wetland habitats must be avoided by construction vehicles and equipment, wherever possible, in order to reduce potential impacts.</li> <li>• Waste to be managed. Suitable waste receptacles (e.g. bins, skips) to be provided. All waste to be disposed of at a registered landfill site.</li> <li>• Under no circumstances may an area be used for ablution purposes. Sufficient chemical toilets to be provided-1 per 20 workers and must be provided within walking distance to all construction workers. Chemical toilets to be serviced once per week.</li> <li>• Toilets must be located within construction camp on a gentle gradient.</li> <li>• No washing or bathing in any natural water bodies shall be allowed.</li> <li>• Liquid waste (oil, contaminated fuel and lubricants, as well as waste paint etc.) should be collected in original containers and stored inside a surfaced or bunded surface area volume should be equal to 110% of the total volume of the liquid stored.</li> <li>• The designated storage area should have relevant warning signage (e.g. no smoking and open fires, fire extinguisher)</li> <li>• An area must be designated for the mixing of concrete, and must take place on an impervious surface such as a slab, metal or plastic sheeting which is provided with cut-off drains or berms to contain any contaminated run-off.</li> <li>• No concrete residue is to be washed into rivers, streams or wetlands.</li> <li>• Contain water and slurry from</li> </ul>	<p align="center">1</p>
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**BASIC ASSESSMENT REPORT [REGULATION 22(1)]**

		cement and concrete mixing operations as well as from batching area wash bays. Direct such waste water into settlement pond or sludge dam for later disposal.	
<b>Construction Phase</b>			
Accidental spillages that might occur during operation	3	<ol style="list-style-type: none"> <li>1) Rehabilitate the contaminated soil and the affected riparian and aquatic vegetation, including the wetland system in the unnamed tributary;</li> <li>2) Institute a monitoring programme for the Pump station to foresee or timeously identify possible failure;</li> <li>3) In the event of future spillages, prevent as far as reasonably practicable the ingress of sewage into the adjacent watercourse (e.g. construct berm to contain spill);</li> <li>4) Develop an Emergency Response Plan for future spillages, and consider the following –             <ol style="list-style-type: none"> <li>a) <b>Prevention:</b> Identify corrective maintenance practices to increase the asset reliability and availability which reduces the risk of any future emergencies from occurring due to failure or a loss in function.</li> <li>b) <b>Preparation:</b> Identify appropriate measures geared towards preparing for a sewage spill.</li> <li>c) <b>Response:</b> Implementation of the established Emergency Response Plan.</li> <li>d) <b>Recovery:</b> Restoring the system to normal operation and remediating the effects and impacts of the emergency.</li> </ol> </li> <li>5) In the event of a sewer spillage, notify (as a minimum) the relevant authorities (i.e. Department of Water Sanitations, Gauteng Department of Agriculture and Rural Development, Local Municipality) affected landowners and water users.</li> <li>6) Undertake a water quality assessment on a monthly basis over a six-month period to determine whether the water quality has improved from upstream of the discharge point to downstream of the pump station. Consider other sources of contamination, including informal settlements in catchment, urban land use, and other anthropogenic-related pollution sources.</li> </ol>	1

*The adverse biophysical and socio economic impacts associated with all the alternatives pipeline routes are of equal significance to the proposed pipeline route. No major environmental impacts are expected as a result of the construction and installation of the proposed pipeline.*

Alternative 1

Potential impacts:	Significance rating of impacts:	Proposed mitigation:	Significance rating of impacts after mitigation:
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**BASIC ASSESSMENT REPORT [REGULATION 22(1)]**


Alternative 2

Potential impacts:	Significance rating of impacts:	Proposed mitigation:	Significance rating of impacts after mitigation:

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

[Wetland Ecological Assessment by Steven van Staden from Scientific Aquatic Services cc \(Refer to Annexure G\)](#)

**3. IMPACTS THAT MAY RESULT FROM THE DECOMMISSIONING AND CLOSURE PHASE**

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

**Proposal**

Potential impacts:	Significance rating of impacts:	Proposed mitigation:	Significance rating of impacts after mitigation:
<b>Potential Job opportunity</b>	<b>3</b>	Contractor to mainly recruit labour from local communities	<b>1</b>
<b>Potential leakage of trapped sewerage residue during the removal of the pipeline</b>	<b>3</b>	Appropriate control measures must be undertaken to ensure any trapped affluent in the pipeline is completely and safely drained off, without polluting the soil.	<b>1</b>
<b>Generation of waste and rubble following the decommissioning of existing structure</b>	<b>4</b>	<ul style="list-style-type: none"> <li>• Waste material must be sorted, separated and recycled.</li> <li>• All materials that cannot be recycled or re-used must be collected and disposed of at a licensed building rubble disposal site.</li> </ul> All disassembled components of the pipeline must be stored on a bunded surface and recyclable material separated into appropriately marked receptacles	<b>1</b>
<b>Degradation of disturbed/excavated areas during decommissioning</b>	<b>3</b>	Rehabilitation to must be done as far as possible and make use of indigenous trees and plants. The use of exotic species must be limited.	<b>1</b>

Alternative 1

Potential impacts:	Significance rating of impacts:	Proposed mitigation:	Significance rating of impacts after mitigation:

## BASIC ASSESSMENT REPORT [REGULATION 22(1)]


**Alternative 2**

Potential impacts:	Significance rating of impacts:	Proposed mitigation:	Significance rating of impacts after mitigation:

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

[Wetland Ecological Assessment by Steven van Staden from Scientific Aquatic Services cc \(Refer to Annexure G\)](#)

### 4. CUMULATIVE IMPACTS

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

Construction, run-off and accidental spillages may serve as a source of pollution, while siltation may occur during construction. Wastewater and accidental spillages from the pipeline pump station may further damage the wetland riparian zones if mitigation measures are not followed. Any loss of wetland habitat will result in permanent loss or displacement of plants, invertebrates, birds and small mammal's dependant on the wetland. The construction phase also carries the risk of alien species being imported to the site and high levels of habitat disturbance also provide opportunities for such species to establish themselves.

### 5. ENVIRONMENTAL IMPACT STATEMENT

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

**Proposed pipeline route:**

This is the preferred option for the section of the pipeline route. Due to the residents in the Pomona Agricultural Holdings living close to the unnamed tributary, the pipeline route will need to cross the stream and wetland. Environmental impacts associated with this development can be categorised into construction and operational phases. Construction is characterised with the most adverse impacts and these include the following:  
 Soil erosion and sedimentation;  
 Direct wetland destruction;  
 Soil and water pollution; and  
 Loss of and damage to natural vegetation.

Positive Impacts associated with the construction of the pipeline are as follows:  
 Employment and skills development;  
 Business opportunities or local construction material suppliers; and  
 Upgrade and maintenance of existing infrastructure.

Operational Phase, is also characterised by both positive and negative impacts:  
 Negative impacts are as follows:  
 Potential leakages or overflow of sewerage;  
 Pipeline blockage and defects which could lead to groundwater contamination; and  
 Odour emissions from potential sewerage leaks.

Positive impacts:  
 Improvement in sanitation system in the area;

# BASIC ASSESSMENT REPORT [REGULATION 22(1)]

The pipeline development will attract future investment in the area by private developers due to availability of services; and Contribution to Municipal revenue.

Alternative 1

Alternative 2

### No-go (compulsory)

If the proposed pipeline and associated infrastructure are not constructed, it will impact negatively on the provision of potable water to the surrounding communities. This will infringe of their Constitutional Right to have access to potable water and thereby increasing the health risk to the individual and the communities. Thus the no go alternative is not preferred.

## 6. IMPACT SUMMARY OF THE PROPOSAL OR PREFERRED ALTERNATIVE

For proposal:

The development of the proposed pipeline will adversely impact its surrounding ecological habitat mainly through vegetation clearance and destruction by construction vehicles and machinery in the construction phase. These impacts could lead to soil erosion and sedimentation. As well as groundwater pollution.

For alternative:

Same as above.

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

The original Environmental Authorisation. was granted for the construction of a water supply system for the R21 corridor and surrounding areas which including a 22 Mega L bulk storage reservoir and booster pump station to supply water to the pump station zone, bulk water supply line to the reservoir and bulk water supply network from the reservoir to the Witfontein and Glen Erasmia Township as well as the booster pump station and reservoir will be located along First Road. The Amendment to the original Environmental authorisation approved of the addition of 30m high 2ml pressure tower and the alignment of the line from the pump station to the pressure tower and the area west of the R21 with addition of a 710mm pipeline from Randwater Connection to reservoir.

The level and nature of the impacts associated with the linear development, as previously authorized remains the same; however, the footprint of the development is enlarged. The impact on the wetland, due to the extension of the footprint of the linear activity was assessed (See Annexure 6) and based on the wetland assessment, it is evident that there are three possible impacts on the wetland ecology within the study area.

During the construction phase the impacts on wetland habitat and ecological structure as well as impacts on the hydrological function and sediment balance are considered to be low level impacts prior to mitigation. However, should mitigation be implemented, the impact on wetland habitat and ecological structure will be remain as a low level impact whereas the impact on wetland hydrological function and sediment balance will be reduced to very-low level impact. The impact on wetland ecological service provision is considered a very-low level impact both prior to mitigation as well as after mitigation.

During operational phase the impacts on the impacts on wetland habitat and ecological structure as well as impacts on the hydrological function and sediment balance are considered to be low level impacts prior to mitigation. However, should mitigation be implemented, both impacts will be reduced to very-low level impacts. The impact on wetland ecological service provision is considered very-low level impact both prior to mitigation as well as after mitigation.

The impact on Interested and Affected Parties remains the same and no additional negative impacts on Interested and Affected Parties were identified. The provision of potable water to the surrounding communities positively impact on the communities and surrounding development.

## 7. RECOMMENDATION OF PRACTITIONER

Is the information contained in this report and the documentation attached hereto sufficient to make a decision in respect of the activity applied for (in the view of the Environmental Assessment Practitioner).

YES

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

n/a

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

The proposed mitigation measures listed below are recommended to manage the impacts, identified for the construction and operational phases associated with the construction of the water supply network for the R21 Corridor and Surrounding Areas which will include :

- The design and implementation of the infrastructure and services provision are to be done in accordance with engineering specifications so as to comply with the regulations and standards of the local controlling authority.
- Construction activities may only take place between the hours of 07H00 and 17H00 weekdays and Saturdays from 07H00 to 13H00. Operation is prohibited on Sundays and public holidays.
- Material loads shall be properly covered during transportation.
- Minimisation of the areas disturbed at any one time and protection of exposed soil against wind erosion, e.g. by dampening with water.
- Location and treatment of material stockpiles shall take consideration of prevailing wind directions and dwellings as well as to prevent erosion and run off.
- Dust suppression measures in the form of dampening with water shall be used particularly during the dry season.
- Only essential construction activities should occur within the wetland and associated buffer and all support activities should be located outside the 32m wetland buffer.
- Similarly the construction footprint should be minimised within the wetland and associated buffer.
- Special attention should be paid to alien and invasive species within these areas. Alien and invasive vegetation control should take place throughout all development phases to prevent loss of fauna and flora habitat.
- Adherence to provisions of the Occupational Health and Safety Act.
- Construction activities such as the excavation of trenches shall be strictly limited to the approved construction corridor.
- In the event of heritage artefacts unearthed during the construction phase, Heritage Authorities (HWC or SAHRA) shall be informed immediately, and appropriate measures shall be taken to avoid damage or destruction to artefacts.
- Regulations relating to traffic management shall be adhered to.
- Traffic control measures identified in the EMPr shall be implemented.
- Ensure that existing roads are used by the construction vehicles, and that these roads are maintained in accordance with the EMPr.
- Wherever possible the transportation of bulk equipment or materials shall not be conducted during peak times, before 9h00 and after 16h00.
- Access to and from roads and driveways abutting 1st Road, High Road, R21 and other smaller roads in the area shall not be permanently blocked and users must be able to access surrounding areas/ properties without being inconvenienced unduly.
- The size of the construction phase footprint shall be limited to the areas required for actual works.
- Appropriate traffic/ pedestrian management measures shall be put in place, including:
- Sign boards and flagmen to slow traffic down and to alert the public of the potential dangers presented by the construction activities.
- Other measures, as stipulated in the relevant contract specification.
- Appropriate refuse disposable containers shall be provided at the proposed construction site
- The construction phase activities shall be restricted to normal working hours, viz. between 06h00 and 18h00.
- The resident engineer shall ensure that municipal regulations relating to noise generation are observed.
- Equipment shall be well serviced and fitted with silencers as appropriate.
- The construction footprint shall be limited during the river crossing.
- Activities within the stream shall be minimised during the construction of the pipeline.
- Surface run-off shall be controlled, where necessary, via the implementation of relevant measures (e.g. cut off drains, berms and/ or silt traps).
- Measures to stabilise surfaces, in the form of watering down exposed areas shall be implemented as erosion (by water or wind) becomes evident.
- Construction phase activities within close proximity to streams shall be limited to the dry season.
- All activities/ components, including access, site clearing, lay down areas, site camp and excavation activities, shall be limited to the construction corridor, and the extent of the corridor shall be clearly demarcated.
- Ensure that the soil backfilled into the trench in a manner (e.g. by leveling and scarifying) that encourages re-growth of vegetation (primarily grass species).
- All imported sand shall be free of plant/ seed species which are invasive to the area.
- All activities/ components, including access, site clearing, lay down areas, site camp and excavation activities, shall be Limited to within the construction corridor, and that the extent of this corridor is clearly demarcated.
- No hunting/ trapping of animals shall take place.
- Ensure that construction and excavation will be strictly limited to the construction corridor.
- In the event of heritage artefacts unearthed during the construction phase or routine maintenance, Heritage Authorities must be informed immediately, and appropriate measures should be taken to avoid damage or destruction to artefacts.

**8. ENVIRONMENTAL MANAGEMENT PROGRAMME (EMPr)**

If the EAP answers yes to Point 7 above then an EMPr is to be attached to this report as an Appendix

EMPr attached

## SECTION F: APPENDIXES

The following appendixes must be attached as appropriate:

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

Appendix A: Site plan(s)

Appendix B: Photographs

Appendix C: Facility illustration(s)

Appendix D: Route position information

Appendix E: Public participation information

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

Appendix G: Specialist reports

Appendix H: EMPr

Appendix I: Other information

### CHECKLIST

To ensure that all information that the Department needs to be able to process this application, please check that:

- Where requested, supporting documentation has been attached;
- All relevant sections of the form have been completed; and