

DRAFT

**BASIC ASSESSMENT REPORT FOR
THE PROPOSED HALFWAY HOUSE
BULK WATER PIPELINE UPGRADE,
WITHIN THE JURISDICTION OF THE
CITY OF JOHANNESBURG
METROPOLITAN MUNICIPALITY,
GAUTENG PROVINCE.**

GDARD REF: GAUT 001/22-23/0665

DATE

JUNE 2023

PREPARED FOR



PREPARED BY



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DOCUMENT CONTROL

PROJECT TITLE:

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ACRONYMS	
AEL	Atmospheric Emission Licence
ASAPA	Association of Southern African Professional Archaeologists
BA	Basic Assessment
BAR	Basic Assessment Report
BMPs	Biodiversity Management Plans
CA	Competent Authority
CARA	Conservation of Agriculture Resources Act
CBA	Critical Biodiversity Area
C-Plan	Conservation Plan
CR	Critically Endangered
DFFE	Department of Fisheries, Forestry Environmental

DM	District Municipality
DWS	Department of Water and Sanitation (previously known as Department of Water Affairs)
EA	Environmental Authorisation
EAP	Environmental Assessment Practitioner
EIA	Environmental Impact Assessment
EM&C	Environmental Management and Compliance
EMF	Environmental Management Framework
EMPr	Environmental Management Programme
EMS	Environmental Management System
GNR	Government Notice Regulation
HIA	Heritage Impact Assessment
I&AP	Interested and Affected Party
IWUL	Integrated Water Use Licence
NEMA	National Environmental Management Act
NEM:AQA	NEM Air Quality Act
NEM:BA	NEM Biodiversity Act
NEM:ICMA	National Environmental Management: Integrated Coastal Management Act
NEM:PAA	NEM Protected Areas Act
NEM:WA	NEM Waste Act
NFEPA	National Freshwater Ecosystem Priority Area
NHRA	National Heritage Resources Act
NPAES	National Protected Areas Expansion Strategy
NWA	National Water Act
PPP	Public Participation Process
WMA	Water Management Area
WML	Waste Management Licence
WUL	Water Use Licence
WULA	Water Use Licence Application



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

Kindly note that:

1. This **Basic Assessment Report** is the standard report required by GDARD in terms of the EIA Regulations, 2014.
2. This application form is current as of 8 December 2014. It is the responsibility of the EAP to ascertain whether subsequent versions of the form have been published or produced by the competent authority.
3. **A draft Basic Assessment Report must be submitted, for purposes of comments within a period of thirty (30) days, to all State Departments administering a law relating to a matter likely to be affected by the activity to be undertaken.**
4. **A draft Basic Assessment Report (1 hard copy and two CD's) must be submitted, for purposes of comments within a period of thirty (30) days, to a Competent Authority empowered in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998), as amended to consider and decide on the application.**
5. Five (5) copies (3 hard copies and 2 CDs-PDF) of the final report and attachments must be handed in at offices of the relevant competent authority, as detailed below.
6. The report must be typed within the spaces provided in the form. The size of the spaces provided is not necessarily indicative of the amount of information to be provided. The report is in the form of a table that can extend itself as each space is filled with typing.
7. Selected boxes must be indicated by a cross and, when the form is completed electronically, must also be highlighted.
8. An incomplete report may lead to an application for environmental authorisation being refused.
9. **Any report that does not contain a titled and dated full colour large scale layout plan of the proposed activities including a coherent legend, overlain with the sensitivities found on site may lead to an application for environmental authorisation being refused.**
10. The use of "not applicable" in the report must be done with circumspection because if it is used in respect of material information that is required by the competent authority for assessing the application, it may result in the application for environmental authorisation being refused.
11. No faxed or e-mailed reports will be accepted. Only hand delivered or posted applications will be accepted.
12. Unless protected by law, and clearly indicated as such, all information filled in on this application will become public information on receipt by the competent authority. The applicant/EAP must provide any interested and affected party with the information contained in this application on request, during any stage of the application process.
13. Although pre-application meeting with the Competent Authority is optional, applicants are advised to have these meetings prior to submission of application to seek guidance from the Competent Authority.

DEPARTMENTAL DETAILS

Gauteng Department of Agriculture and Rural Development
Attention: Administrative Unit of the of the Environmental Affairs Branch
P.O. Box 8769
Johannesburg
2000

Administrative Unit of the of the Environmental Affairs Branch
Ground floor Diamond Building
11 Diagonal Street, Johannesburg
Administrative Unit telephone number: (011) 240 3377
Department central telephone number: (011) 240 2500

(For official use only)

NEAS Reference Number:	
File Reference Number:	GAUT 001/22-23/0665
Application Number:	
Date Received:	

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

Not Applicable

Is a closure plan applicable for this application and has it been included in this report? **No**

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

Not Applicable

Has a draft report for this application been submitted to a competent authority and all State Departments administering a law relating to a matter likely to be affected as a result of this activity? **No**

Is a list of the State Departments referred to above attached to this report including their full contact details and contact person? **No**

This draft report is yet to be submitted to the Competent Authority and State Departments for a 30 day review/commenting period. The stakeholder database (a list of all affected stakeholders) however will be included in the final BAR.

If no, state reasons for not attaching the list.

Not Applicable

Have State Departments including the competent authority commented? **No**

If no, why?

The Draft Basic Assessment Report has not been submitted to the State Departments including the Competent Authority for comments and review.

SECTION A: ACTIVITY INFORMATION

1. PROPOSAL OR DEVELOPMENT DESCRIPTION

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

Project Title: The Proposed Halfway House Bulk Water Pipeline Upgrade within the jurisdiction of the City of Johannesburg Metropolitan Municipality, Gauteng Province.

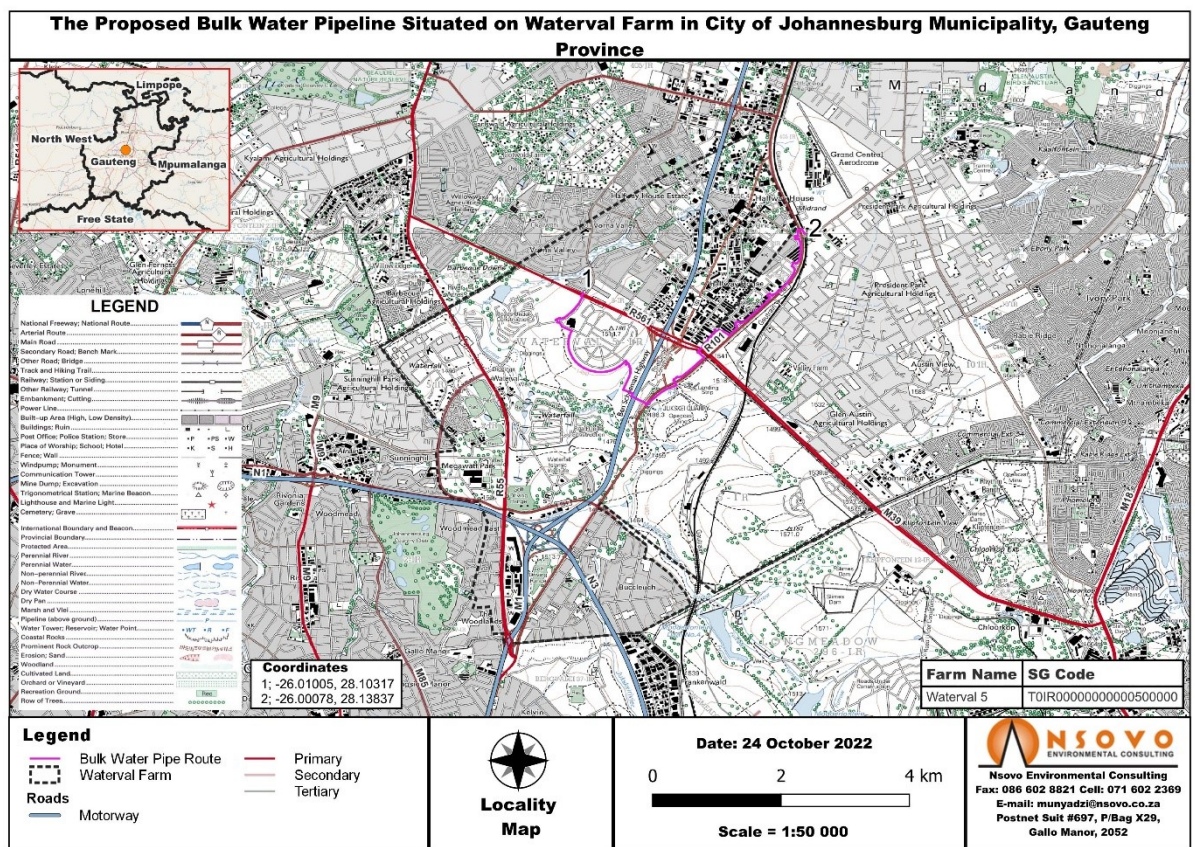


Figure 1: Locality Map of the Proposed Water Pipeline

1.2 Development Description

The proposed Halfway House Water pipeline upgrade project is in the industrial suburb of Halfway House. The proposed project includes the installation of bulk water pipelines covering approximately 7km and will include 13 pipe crossings, five (5) pipe jacking crossings, and eight (8) horizontal drilling crossings.

The proposed water pipeline will start at an existing water meter chamber located at the intersection of Dale Road and K101 Old Pretoria Main Road at the proposed 25ML Halfway House Reservoir. Then runs parallel the K101 Main Road and terminates at the new 25ML Halfway House Reservoir on Erf 520 at Halfway House Extension 65 (Midrand), between Pretoria Main (R101) Road and Morkels Close. From the new 25ML Halfway House Reservoir the pipeline connects to the existing 710mm diameter PC-O pipeline located at Allandale Road. It then connects

from the 800mm diameter pipeline to the new 600mm diameter pipeline at Maxwell Drive, and finally, the pipeline terminates at the intersection of Allandale Road and Harry Gulaun Drive. Reference is made to Figure 1. A summary of the details of the water pipelines is indicated in Table 1 below:

Table 1. Water Pipeline details:

Pipe diameter(mm)	Approximate pipe length(km)	Supply/Feeder Pipe	Location
600 mm	3 km	Feeder	Starts from an existing water meter chamber located at the intersection of Dale Road and K101 Old Pretoria Main to the proposed 25ML Halfway House Reservoir.
700 mm	0.5 km	Supply	From the proposed 25ML Halfway House Reservoir to connection point at the start of the existing 710mm diameter PVC-O pipeline at Allandale Road.
700 mm	2.8 km	Supply	From the connection point at the end of the existing 800mm diameter steel pipeline located along K101 Old Pretoria Main Road and connect to new 600mm diameter pipeline at Maxwell Drive.
600 mm	0.7 km	Supply	From 700mm diameter pipeline at Maxwell Drive the pipeline will connect to the existing reticulation at the corner of Allandale Road and Harry Galaun Drive

The proposed development triggers the NEMA EIA listed activities; as such, Nsovo Environmental Consulting was appointed by Zutari and Johannesburg Water to undertake the Basic Assessment (BA) process to obtain an Environmental Authorisation (EA) before construction of the above-mentioned activities in accordance with the EIA Regulations, 2014 (promulgated in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998) (NEMA), as amended.

Furthermore, the proposed development will trigger Section 21 (c) and (i) water use activities; as such, Johannesburg Water has lodged a Water Use Licence Application (WULA) in terms of Section 40 the National Water Act, 1998 (Act No. 36 of 1998) (NWA) to obtain a General Authorisation (GA) from the Department of Water and Sanitation (DWS) before the commencement of any listed Section 21 water use activity.

Select the appropriate box

The application is for an upgrade of an existing development

The application is for a new development

Other, specify

Table 2: NEMA EIA Regulations, 2014 as amended – Listed Activities to be Authorised

Indicate the number of the relevant Government Notice:	Activity No (s) (relevant notice): e.g., Listing notices 1, 2 or 3	Describe each listed activity as per the wording in the listing notices	Applicability on the application
GN R 983	Activity 19, Listing 1	<i>(a) The infilling or depositing of any material of more than 10 cubic meters into, or the dredging, excavation, removal or moving of soil, sand, shells, shell grit, pebbles, or rock of more than 10 cubic meters from (i) a watercourse.</i>	The proposed pipeline will include the excavations.
GN R 985	Activity 14, Listing 3	<i>The development of— (ii) infrastructure or structures with a physical footprint of 10 square meters or more; where such development occurs— (a) within a watercourse; c. Gauteng iv Sites identified as Critical Biodiversity Areas (CBAs) or Ecological Support Areas (ESAs) in the Gauteng Conservation Plan or in bioregional plans;</i>	The footprint of the proposed pipeline within the existing road reserve, crossing the watercourse is equivalent to 82.5m ² (55m length of pipe with trench excavation of 1.5m in width).

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

YES X	NO
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If yes, describe the legislation and the Competent Authority administering such legislation

Water Use License	
Legislation	Competent Authority
National Water Act, 1998 Act No 36 of 1998	Department of Water and Sanitation

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

YES X	NO
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If yes, have you received approval(s)? (Attach in appropriate appendix)

YES	NO X
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A General Authorisation Application has been lodged with the Department of Water and Sanitation.

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:	Description of compliance
Constitution of the Republic of South Africa (Act No 108 of 1990)	Government of South Africa	18 December 1996	<p>The Constitution provides for an environmental right (section 24). The State is obliged “to respect, protect, promote and fulfil the social, economic and environmental rights of everyone...”</p> <p>The environmental right states that: “Everyone has the right -</p> <ul style="list-style-type: none"> a) To an environment that is not harmful to their health or well-being; and b) To have the environment protected, for the benefit of present and future generations, through reasonable legislative and other measures that - <ul style="list-style-type: none"> • Prevent pollution and ecological degradation; • Promote conservation; and • Secure ecologically sustainable development and use of natural resources while promoting justifiable economic and social development.” <p>The undertaking of the BA process is in line with the state’s obligations as outlined in the constitution in its effort to ensure sustainability.</p>
National Environmental Management Act, 1998 (Act No. 107 of 1998 as amended).	Department of Forestry, Fisheries and the Environment (DFFE) and Gauteng Department of Agriculture and Rural Development (GDARD)	27 November 1998	<p>The overarching principles of sound environmental responsibility as reflected in the National Environmental Management Act, 1998 (Act No. 107 of 1998) apply to all projects triggering listed activities. Construction and operation of activities must be conducted in line with the generally accepted principles of sustainable development, integrating social, economic, and environmental factors.</p>

			<p>The BA process followed the NEMA, and the EIA Regulations of December 2014 as amended.</p> <p>The proposed development triggers “listed activities”, as defined by NEMA. Listed activities are an activity that may potentially have detrimental impacts on the environment and therefore require an EA from the relevant Competent Authority, in this case, GDARD.</p>
National Environmental Management: Biodiversity Act, Act 10 of 2004	National & Provincial Government	2004	<p>The purpose of the Biodiversity Act is to provide for the management and conservation of South Africa’s biodiversity within the framework of the NEMA and the protection of species and ecosystems that warrant national protection.</p> <p>The study area falls within the Grassland Biome. The vegetation type found on the study site is <i>Egoli Granite Grassland</i>. According to the 2021 National List of threatened terrestrial ecosystems this vegetation type is Critically Endangered. An assessment summary conducted on site suggests that <i>Egoli Granite Grassland</i> is narrowly distributed with high rates of habitat loss in the past 28 years (1990- 2018), placing the ecosystem type at risk of collapse.</p>
Regulations GN. R. 982, 983, 984 and 985 promulgated under Chapter 5 of the National Environmental Management Act (NEMA, Act 107 of 1998) in Government Gazette 38282 on 4 December 2014 as amended.	Gauteng Department of Agriculture and Rural Development (GDARD)	4 December 2014	<p>GDARD is the provincial authority to implement the Regulations for Environmental Impact Assessment in Gauteng as such this application for an Environmental Authorisation is being lodged with GDARD.</p> <p>Some of the activities to be undertaken as part of the project are indicated in Listing Notice 1 (GN.R 983 of 2014, as amended) and Listing Notice 3 (GN.R 985 of 2014, as amended). As such this Basic Assessment process follows the Environmental Impact Assessment Regulations of 2014 (Government Notice No R982 of December 2014, as amended).</p>
National Water Act (Act No 36 of 1998)	Department of Water Affairs (DWA)	26 August 1998	<p>This Act provides for fundamental reform of the law relating to water resources and use. The preamble to the Act recognises that the ultimate aim of water resource management is to achieve</p>

			<p>sustainable use of water for the benefit of all users and that the protection of the quality of water resources is necessary to ensure sustainability of the nation's water resources in the interests of all water users.</p> <p>The proposed pipeline will cross a wetland and thus triggers the requirements of the Act. In addition, a Water Use Licence/ General Authorisation is required in terms of Section 21(c) and (i) of NWA, Government Notice 509 of 2016.</p>
National Environmental Management: Air Quality Act, Act 39 of 2004	National & Provincial Government	24 February 2004	<p>The objective of the Act is to protect the environment by providing reasonable measures for the protection and enhancement of air quality and to prevent air pollution. The Act makes provision for measures to control dust, noise, and offensive odours.</p> <p>Section 32 of the National Environmental Management: Air Quality Act, 2004 (Act 39 of 2004) deals with dust control measures in respect of dust control. The Minister or MEC may prescribe measures for the control and management of dust in specified places or areas, either in general or by specified machinery or in specified instances, the steps to be taken to prevent nuisance or other measures aimed at the control of dust. The National Dust Control Regulations (2013) provide for the management and monitoring of dust.</p> <p>The proposed project may create minimal dust during excavations and is expected to be short term and site specific.</p>
National Heritage Resources Act No 25 of 1999 (Act No 25 of 1999 as amended)	South African Heritage Resources Agency (SAHRA)	28 April 1999	<p>The National Heritage Resources Act, 1999 (Act No. 25 of 1999) legislates the necessity for cultural and heritage impact assessment in areas earmarked for development, which exceed 0.5</p>

			<p>ha. The Act provides for the potential destruction to existing sites, pending the archaeologist's recommendations through permitting procedures.</p> <p>No heritage resources were recorded on the site, however, if features of heritage importance are discovered during construction activities and clearing of the application site, the correct "procedures for an Environmental incident" must be followed.</p>
National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008)	National and Provincial Government	6 March 2008	No waste management license would be required for the construction or operational phases of the proposed activity. Only a limited amount of solid construction waste will be stored and handled on the site, before being hauled away and dumped at the nearest registered landfill site.
Gauteng Provincial Environmental Management Framework (GPEMF)	Gauteng DARD	2017	<p>The purpose of the Framework is to guide protection and enhancement of environmental assets, natural resources along with development patterns to ensure sustainable environmental management and development patterns within and around the Gauteng Province.</p> <p>Its objectives include efficiency in urban development, optimal use of land, to protect Critical Biodiversity Areas (CBAs as defined in the revised C-Plan 3.3) within urban and rural environments and to use ESA's as defined in municipal bioregional plans in spatial planning of urban open space corridors and links within urban areas.</p> <p>The proposed development falls within:</p> <p><u>Zone 1 (urban development zone):</u></p> <p>The intention with Zone 1 is to streamline urban development activities in it and to promote development infill, densification, and concentration of urban development within the urban development zones as defined in the Gauteng Spatial Development Framework (GSDF), in order</p>

			<p>to establish a more effective and efficient city region that will minimise urban sprawl into rural areas.</p> <p>Certain currently listed activities may be exempted from environmental assessment requirements at the discretion of the competent authority.</p> <ul style="list-style-type: none"> • Development in this area must be sustainable in respect to the capacity of the environment and specifically the hydrological system to absorb additional sewage and stormwater loads as a result of increased densities; • Existing open spaces and urban parks should be retained as open space to cater for the open space needs of the foreseen increased densities; and • Stormwater drainage must be in accordance with the Water Research Commission Report, 2012 and the South African Guidelines for Sustainable Drainage Systems. <p><u>Zone 5 (industrial and large commercial focus zone).</u></p> <p>The intention with Zone 5 is to streamline non-polluting industrial and large-scale commercial (warehouses etc.) activities in areas that are already used for such purposes and areas that are severely degraded but near required infrastructure (such as old and even current mining areas). Certain currently listed activities, in addition to those intended for Zone 1 may be excluded from environmental assessment requirements in this zone in future.</p> <ul style="list-style-type: none"> • Development in this area must be sustainable in respect to the capacity of the environment and specifically the hydrological system to absorb additional sewage and stormwater loads of increased densities; and • Development in this area must identify any unmapped wetlands, especially seep areas that may occur on any site and when necessary, apply for the required water use licence.
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			<ul style="list-style-type: none"> Non-polluting Industrial promotion areas where selected activities are to be excluded from EIA processes in addition to those excluded in Zone 1.
Gauteng Conservation Plan 3.3			<p>According to the Gauteng C-Plan the site is partially located in an Ecological Support Area (ESA), as well as an Important Area.</p> <p>Sensitive and Important areas within the proposed area should be conserved and where linear development (roads etc.) cannot avoid these areas, a proper assessment and implementation of alternatives should be undertaken.</p> <p>The C-Plan was considered in the compilation of this Basic Assessment Report (BAR).</p>
Red List Plant Species Guidelines			<p>The purpose of these guidelines is the promotion and conservation of the Red List Plant Species in Gauteng, these are species of flora that face risk of extinction in the wild.</p> <p>By protecting Red List Plant Species, conservation of diverse landscapes is promoted which forms part of the overall environmental preservation of diverse ecosystems, habitats, communities, populations, species, and genes in Gauteng.</p> <p>There are no Red Listed plant species found on the area proposed for the development.</p>
Gauteng Noise Control Regulations	Provincial Government	1999	Practical mitigation measures for noise pollution are low, but certain measures can be implemented to mitigate the severity. These measures have been provided for in the EMPr.
Occupational Health and Safety Act (No 85 of 1993)	National Department of Labour	April 1999	The Act provides for the health and safety of persons at work and for the health and safety of persons in connection with the use of machinery; the protection of persons other than persons at work, against hazards to health and safety arising out of or in connection with the activities of

			persons at work. The EMPr provides for measures to ensure that objectives of the Act are met on this site
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DESCRIPTION OF COMPLIANCE WITH THE RELEVANT LEGISLATION, POLICY OR GUIDELINES:

3. ALTERNATIVES

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

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

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

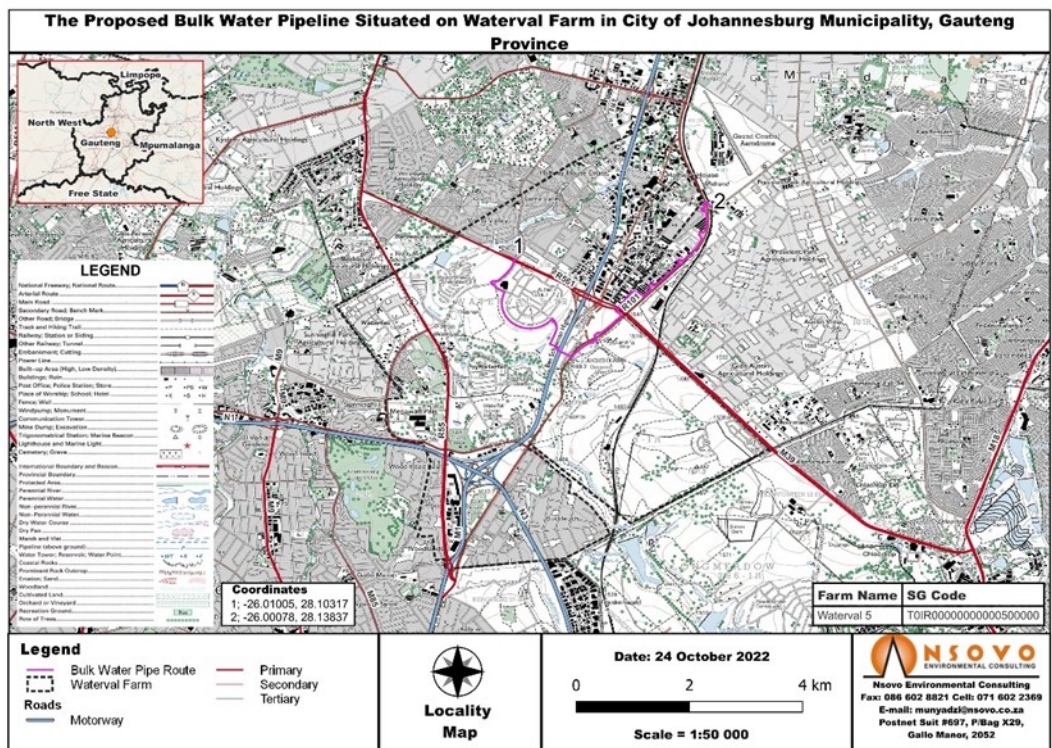
Please describe the process followed to reach (decide on) the list of alternatives below:

The assessment of alternatives is an objective of the EIA Regulations 2014 (as amended). The Integrated Environmental Management (IEM) procedure requires that an environmental investigation needs to consider feasible alternatives for any proposed development. Therefore, alternatives should be considered as a norm within the Environmental Process. These should include, if applicable:

- Site Alternatives – not applicable
- Location alternatives – not applicable
- Activity alternatives – not applicable
- Technology alternatives – not applicable

For any alternative to be considered feasible, the alternative must meet the need and purposes of the development proposal without presenting significantly high associated impacts. The consideration of alternatives was informed by the provisions of the City of Johannesburg Spatial Plans, the roads servitudes that could not be utilised, engineering requirements for the optimum functioning of the pipeline, location of the existing pipeline, and the receiving environment, especially the river crossing.

Provide a description of the alternatives considered

No.	Alternative Type	Description												
1.	<p>PROPOSED ACTIVITY – The proposed activity does not have alternatives as it is an upgrade of the existing water pipeline.</p>	<p>The proposed water pipeline is 7km in length within the jurisdiction of City of Johannesburg Metropolitan Municipality in Gauteng Province, South Africa, as depicted on the locality map below. The proposed development will take place on Farms Waterval 5, Portion no. 0, 1, 732 within Wards 32, 110 and 132 of Region A.</p>  <p>Figure 2 - Map indicating the water pipeline route.</p> <p>The project includes the installation of bulk water pipelines covering approximately 7km and will include 13 pipe crossings, comprising of five (5) pipe jacking crossings, and eight (8) horizontal drilling crossings.</p> <p>The bulk water pipelines are presented below:</p> <p>Table 1. New Bulk Water Pipelines:</p> <table border="1" data-bbox="465 1657 1529 2048"> <thead> <tr> <th>Pipe diameter(mm)</th> <th>Approximate pipe length(km)</th> <th>Supply/Feeder Pipe</th> <th>Location</th> </tr> </thead> <tbody> <tr> <td>600 mm</td> <td>3 km</td> <td>Feeder</td> <td>Starts from an existing water meter chamber located at the intersection of Dale Road and K101 Old Pretoria Main to the proposed 25ML Halfway House Reservoir.</td> </tr> <tr> <td>700 mm</td> <td>0.5 km</td> <td>Supply</td> <td>From the proposed 25ML Halfway House Reservoir to connection point at start of</td> </tr> </tbody> </table>	Pipe diameter(mm)	Approximate pipe length(km)	Supply/Feeder Pipe	Location	600 mm	3 km	Feeder	Starts from an existing water meter chamber located at the intersection of Dale Road and K101 Old Pretoria Main to the proposed 25ML Halfway House Reservoir.	700 mm	0.5 km	Supply	From the proposed 25ML Halfway House Reservoir to connection point at start of
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700 mm	0.5 km	Supply	From the proposed 25ML Halfway House Reservoir to connection point at start of											

No.	Alternative Type	Description			
					existing 710mm diameter PVC-O pipeline at Allandale Road.
		700 mm	2.8 km	Supply	From the connection point at the end of the existing 800mm diameter steel pipeline located along K101 Old Pretoria Main Road and connecting to new 600mm diameter pipeline at Maxwell Drive.
		600 mm	0.7 km	Supply	From connection to new 700mm diameter pipeline at Maxwell Drive to connect to existing reticulation at the corner of Allandale Road and Harry Galaun Drive

No-Go Alternative

According to the GN R.982 of the 2014 EIA Regulations, as amended, consideration must be given to the option not to act when an alternative considered is envisaged to have significant adverse environmental impacts that mitigation measures cannot ameliorate effectively. The no-go alternative would be the option of not undertaking the proposed upgrade. Should the no-go option be adopted, the Erand and Grand Central Water District will be under pressure in terms of water demand and supply, meaning that adequate water supply for current and future developments cannot be ensured. The employment opportunities for local communities and socioeconomic development would also not be realised should the no-go option be adopted.

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

The proposed project aims to ensure water supply for both the current and future developments within the Erand and Grand Central Water District. This will result in the improvement of service delivery to customers and water supply interruptions will be reduced. The pipeline route was determined based on the off-take positions identified. Therefore, the position of the pipeline is highly reliant on the existing infrastructure, hence no site alternatives were considered as it would defeat the purpose, and not economically viable.

4. PHYSICAL SIZE OF THE ACTIVITY

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

Size of the activity:

Proposed activity

N/A

Alternatives:

Alternative 1 (if any)

N/A

Alternative 2 (if any)

or, for linear activities:

Length of the activity:

Proposed activity

7km

Alternatives:

Alternative 1

N/A

Alternative 2

m/km

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

Size of the site/servitude:

Proposed activity

35 000m²

Alternatives:

Alternative 1 (if any)

m²
N/A
N/A
N/A

Alternative 2 (if any)

Ha/m²

5. SITE ACCESS

Proposal

Does ready access to the site exist, or is access directly from an existing road?

YES X	NO
-------	----

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

N/A	
-----	--

Describe the type of access road planned:

Access to the proposed pipeline will be from K101 Old Pretoria Main Road, Allandale Road, and Harry Gulaun Drive.

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

Alternative 1

Does ready access to the site exist, or is access directly from an existing road?

YES	NO
-----	----

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

N/A	
-----	--

Describe the type of access road planned:

[Redacted]

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

Alternative 2

Does ready access to the site exist, or is access directly from an existing road?

YES	NO
-----	----

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

N/A	
-----	--

Describe the type of access road planned:

Not Applicable

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

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

Section A 6-8 has been duplicated

0

Number of times

(Only complete when applicable)

6. LAYOUT OR ROUTE PLAN

The Layout and Locality Maps are attached in **Appendix A1-2** respectively.

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

- the layout plan is printed in colour and is overlaid with a sensitivity map (if applicable);
- layout plan is of acceptable paper size and scale, e.g.
 - A4 size for activities with development footprint of 10sqm to 5 hectares;
 - A3 size for activities with development footprint of > 5 hectares to 20 hectares;
 - A2 size for activities with development footprint of >20 hectares to 50 hectares);
 - A1 size for activities with development footprint of >50 hectares);
- The following should serve as a guide for scale issues on the layout plan:
 - A0 = 1: 500
 - A1 = 1: 1000
 - A2 = 1: 2000
 - A3 = 1: 4000
 - A4 = 1: 8000 (±10 000)
- shapefiles of the activity must be included in the electronic submission on the CD's;
- the property boundaries and Surveyor General numbers of all the properties within 50m of the site;
- the exact position of each element of the activity as well as any other structures on the site;
- the position of services, including electricity supply cables (indicate above or underground), water supply pipelines, boreholes, sewage pipelines, septic tanks, storm water infrastructure;
- servitudes indicating the purpose of the servitude;
- sensitive environmental elements on and within 100m of the site or sites (including the relevant buffers as prescribed by the competent authority) including (but not limited thereto):
 - Rivers and wetlands;
 - the 1:100 and 1:50 year flood line;
 - ridges;
 - cultural and historical features;
 - areas with indigenous vegetation (even if it is degraded or infested with alien species);
- Where a watercourse is located on the site at least one cross section of the water course must be included (to allow the position of the relevant buffer from the bank to be clearly indicated).

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

- the scale of locality map must be at least 1:50 000. For linear activities of more than 25 kilometers, a smaller scale e.g., 1:250 000 can be used. The scale must be indicated on the map;
- the locality map and all other maps must be in colour;
- locality map must show property boundaries and numbers within 100m of the site, and for poultry and/or piggery, locality map must show properties within 500m and prevailing or predominant wind direction;

- for gentle slopes the 1m contour intervals must be indicated on the map and whenever the slope of the site exceeds 1:10, the 500mm contours must be indicated on the map;
- areas with indigenous vegetation (even if it is degraded or infested with alien species);
- locality map must show exact position of development site or sites;
- locality map showing and identifying (if possible) public and access roads; and
- the current land use as well as the land use zoning of each of the properties adjoining the site or sites.

7. SITE PHOTOGRAPHS

Eight - directional colour photographs are attached as **Appendix B**

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

Facility Illustration is attached as **Appendix C**

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

SECTION B: DESCRIPTION OF RECEIVING ENVIRONMENT

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

Instructions for completion of Section B for linear activities

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

Section B has been duplicated for sections of the route

0

times

Instructions for completion of Section B for location/route alternatives

- 1) For each location/route alternative identified the entire Section B needs to be completed
- 2) Each 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

0 times

(Complete only when appropriate)

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

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

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

Section B - Section of Route

0 (Complete only when appropriate for above)

Section B – Location/route Alternative No.

0 (Complete only when appropriate for above)

1. PROPERTY DESCRIPTION

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

Province	Gauteng Province
District Municipality	City of Johannesburg Metropolitan Municipality (CoJ)
Local Municipality	CoJ is a Metropolitan Municipality.
Region	Region A
Ward Number(s)	The wards are: <ul style="list-style-type: none"> • 32 • 92 • 110 • 132
Farm name and number	The farm Names and Numbers are: <ol style="list-style-type: none"> 1) Waterval 5 2) ERF No. 10 in Allandale 3) ERF No. 405 in Randjesfontein 4) ERF No. 53 in Grand Central 5) ERF No. 212,213, 214, 215, 216, 217,218 in Halfway House 6) ERF No. 710, 711 in Halfway House
Portion number	The Portions Numbers are: <ol style="list-style-type: none"> 1) 0,1,732, 773, 827, 872 2) 0, 1, 6, 12, 72, 78, 79, 80, 81, 82, 108, 121, 123, 126, 129, 134, 194, 195 3) 0, 3 4) 0 5) 0 6) 0

The list of affected Farms is attached as **Appendix D**.

2. ACTIVITY POSITION

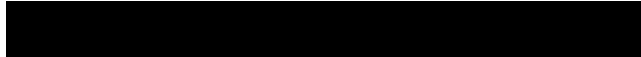
Indicate the position of the activity using the latitude and longitude of the centre point of the site for each alternative site. The co-ordinates should be in decimal degrees. The degrees should have at least six decimals to ensure adequate accuracy. The projection that must be used in all cases is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

Alternative:

Latitude (S):

Longitude (E):

1. Project Proposal



In the case of linear activities:

Alternative: Preferred Route

- Starting point of the activity
- Middle point of the activity (at crossing of watercourse)
- End point of the activity

Latitude (S):

Longitude (E):

26° 00' 00.01" S	28° 08' 15.00" E
26° 1' 14.34" S	28° 6' 36.59" E
26° 0' 33.66" S	28° 6' 10.79" E

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

Addendum of route alternatives attached

N/A

The 21digit Surveyor General code of each cadastral land parcel

T	O	I	R	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0
T	O	I	R	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
T	O	I	R	0	2	9	2	0	0	0	0	0	9	1	3	0	0	0	0	0
T	O	I	R	0	2	9	2	0	0	0	0	0	9	1	4	0	0	0	0	0
T	O	I	R	0	2	9	2	0	0	0	0	0	9	3	6	0	0	0	0	0
T	O	I	R	0	2	9	2	0	0	0	0	0	9	3	7	0	0	0	0	0
T	O	I	R	0	2	9	2	0	0	0	0	0	9	3	8	0	0	0	0	0
T	O	I	R	0	2	9	2	0	0	0	0	0	9	3	8	0	0	0	0	0
T	O	I	R	0	2	9	2	0	0	0	0	0	9	3	9	0	0	0	0	0
T	O	I	R	0	2	9	2	0	0	0	0	0	9	4	0	0	0	0	0	0
T	O	I	R	0	2	9	2	0	0	0	0	0	2	1	2	0	0	0	0	0
T	O	I	R	0	2	9	2	0	0	0	0	0	2	1	3	0	0	0	0	0
T	O	I	R	0	2	9	2	0	0	0	0	0	2	1	4	0	0	0	0	0
T	O	I	R	0	2	9	2	0	0	0	0	0	2	1	5	0	0	0	0	0

T	O	I	R	0	2	9	2	0	0	0	0	0	2	1	6	0	0	0	0
T	O	I	R	0	2	9	2	0	0	0	0	0	2	1	7	0	0	0	0
T	O	I	R	0	2	9	2	0	0	0	0	0	2	1	8	0	0	0	0
T	O	I	R	0	2	9	2	0	0	0	0	0	5	1	7	0	0	0	0
T	O	I	R	0	2	9	2	0	0	0	0	0	5	1	8	0	0	0	0
T	O	I	R	0	2	9	2	0	0	0	0	0	5	1	9	0	0	0	0
T	O	I	R	0	2	9	2	0	0	0	0	0	5	2	0	0	0	0	0
T	O	I	R	0	2	9	2	0	0	0	0	0	6	0	8	0	0	0	0
T	O	I	R	0	2	9	2	0	0	0	0	0	6	4	6	0	0	0	0
T	O	I	R	0	2	9	2	0	0	0	0	0	6	8	3	0	0	0	0
T	O	I	R	0	0	7	7	0	0	0	0	0	0	7	8	0	0	0	0
T	O	I	R	0	0	7	7	0	0	0	0	0	0	7	7	0	0	0	0
T	O	I	R	0	7	6	4	0	0	0	0	0	0	5	3	0	0	0	0
T	O	I	R	0	0	0	0	0	0	0	0	0	4	0	5	0	0	0	0

The list of affected Farms is attached as **Appendix D**.

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
------	-------------	-------------	-------------	--------------	-------------	------------------

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
-----------	---------	--------------------------	--------	-------	----------------------------	-------------

5. GROUNDWATER, SOIL AND GEOLOGICAL STABILITY OF THE SITE

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

Shallow water table (less than 1.5m deep)

YES	NO
-----	----

Dolomite, sinkhole or doline areas

YES	NO
-----	----

- Seasonally wet soils (often close to water bodies)
- Unstable rocky slopes or steep slopes with loose soil
- Dispersive soils (soils that dissolve in water)
- Soils with high clay content (clay fraction more than 40%)
- Any other unstable soil or geological feature
- An area sensitive to erosion*

YES	NO
YES	NO
YES	NO
YES	NO
YES	NO
YES	NO

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

b) are any caves located on the site(s)

YES	NO
-----	----

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

Latitude (S):

Longitude (E):

N/A

N/A

c) are any caves located within a 300m radius of the site(s)

YES	NO
-----	----

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

Latitude (S):

Longitude (E):

N/A

N/A

d) are any sinkholes located within a 300m radius of the site(s)

YES	NO
-----	----

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

Latitude (S):

Longitude (E):

N/A

N/A

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 4)?

YES	NO
-----	----

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

7. GROUNDCOVER

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

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

Natural veld - good condition % =	Natural veld with scattered aliens % =	Natural veld with heavy alien infestation % =	Veld dominated by alien species % =	Landscaped (vegetation) % =10
Sport field % =	Old Cultivated land % =	Paved surface (hard landscaping) % = 10	Building or other structure % = 80	Bare soil % = 10

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.

Biodiversity Compliance Statement is attached as Appendix F		
Are there any special or sensitive habitats or other natural features present on the site?	YES	NO
If YES, specify and explain:		
The study area falls within the Grassland Biome. The vegetation type found on the study site is <i>Egoli Granite Grassland</i> . According to the 2021 National List of threatened terrestrial ecosystems this vegetation type is Critically Endangered. The Gauteng Conservation Plan indicates that the site falls within Important Area and Ecological Important Area, however, the survey conducted along the pipeline route, showed that the pipeline will be located in areas that have been transformed due to residential and business establishment. Areas such the sensitivity for terrestrial animals and vegetation species is rated low.		

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

YES	NO
-----	-----------

If YES, specify and explain:

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	NO
-----	-----------

If YES, specify and explain:

N/A

Was a specialist consulted to assist with completing this section

YES	NO
-----	----

If yes complete specialist details

Name of the specialist:	Mokgatla J. Molepo		
Qualification(s) of the specialist:	<ul style="list-style-type: none"> • Principal Ecologist • MSc Zoology - Nelson Mandela University • British Ecological Society - BES (Reg No. 1010709) • Member of Birds And Renewable Energy Specialist Group (BARESG) • Member of Gauteng Wetland Forum 		
Postal address:	317 Albertus Street, La Montagne, Pretoria, 0184		
Postal code:	0184		
Telephone:	N/A	Cell:	081 410 3763
E-mail:	mokgatlam@gmail.com	Fax:	N/A

8. LAND USE CHARACTER OF SURROUNDING AREA

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

1. Vacant land	2. River, stream, wetland	3. Nature conservation area	4. Public open space	5. Koppie or ridge
6. Dam or reservoir	7. Agriculture	8. Low density residential	9. Medium to high density residential	10. Informal residential
11. Old age home	12. Retail	13. Offices	14. Commercial & warehousing	15. Light industrial
16. Heavy industrial ^{AN}	17. Hospitality facility	18. Church	19. Education facilities	20. Sport facilities
21. Golf course/polo fields	22. Airport ^N	23. Train station or shunting yard ^N	24. Railway line ^N	25. Major Road (4 lanes or more) ^N
26. Sewage treatment plant ^A	27. Landfill or waste treatment site ^A	28. Historical building	29. Graveyard	30. Archeological site
31. Open cast mine	32. Underground mine	33. Spoil heap or slimes dam ^A	34. Small Holdings	
Other land uses (describe):		35.		

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

NORTH						
	9	25	25	4	9	
	9	9	9	9	9	
WEST	9	9	9	25	9	EAST
	14	27	14	25	9	
	9	13	13	25	13	
SOUTH						

= Site

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

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

Have specialist reports been attached

YES	NO
------------	-----------

If yes indicate the type of reports below

Wetland Assessment Report is attached as **Appendix E**

9. SOCIO-ECONOMIC CONTEXT

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

The City of Johannesburg Local Municipality covers an area of 1 645km² making it the largest city in the country. According to 2011 census the City of Johannesburg Local Municipality has a total population of over 4,4 million of which 76,4% are black African, 12,3% are white people, 5,6% are coloured people, and 4,9% are Indian/Asian.

The socio-economic status of the City of Johannesburg Metropolitan Municipality are depicted in the table below (Stats SA, 2011):

Key Statistics in the City of Johannesburg Metropolitan Municipality	
Total Population	4 434 827
Growth Rate	3.18%
Population Density	2 696 persons/km ²
Sex Ratio	100,7
Unemployment Rate	25%
Matriculated (aged 20+)	34.7%
Number of Households	1 434 856
Average Household size	2,8

Female headed households	36.3%
Access to flushing toilets connected to sewage	87.1%
Weekly refusal removal	95.3%
Piped water within dwellings	64.7%
Access to Electricity	90.8%

The pipeline is within Region A of the City of Johannesburg Metropolitan Municipality. The Region is characterised by open space and is predominantly made up of no agricultural holdings and large tracts of developed land. Commercial interests are concentrated in Kya Sand, Lanseria and Fourways, however the area has plenty of developmental opportunities.

Rapidly growing Midrand is the focus area in the eastern part of the region, with development originally confined along the old main road between Johannesburg and Pretoria, the K101, as well as, the construction of the Gautrain Rapid Rail Link that will make its way through Midrand, on its way from Marlboro to Centurion.

Despite some parts of the region comprising low residential densities, most of the region is developed at medium to high densities. Suburbs within the Region are connected through several mobility roads and spines, which experience severe traffic congestion. Most of the area falls within the Urban Development Boundary. (Source – City of Johannesburg: Municipal Handbook, 2018)

City of Johannesburg Metropolitan Municipality: Region A

The region is home to more than 250 000 residents, most of whom are concentrated in Midrand. The western part of the region is scarcely populated, although approximately 56 000 people reside in the township of Deipsloot alone. Unemployment levels in Diepsloot stands at over 50 percent, and more than 70 percent of the residents live below the poverty line. Most people living in the townships and informal settlements are poor, with low levels of school education. In the Midrand area, approximately 70 percent of residents earn less than R2 500 a month, while 34 percent earn no income at all. (Source – City of Johannesburg: Municipal Handbook, 2018).

Region A contributed 12% to the economy of Johannesburg in 2018.

Areas such as Fourways Gardens, Bloubosrand, Cedar Lakes and Dainfern contain affluent developments, mainly on single stands and at a low density. While the formal residential areas are home to prosperous and well-educated residents.

The population in the region is relatively young, with some 24 percent being between the ages of 20 and 29.

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 categorized 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 resource 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?

YES	NO
-----	----

If YES, explain:

Not Applicable

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:

Not Applicable

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

YES	NO
-----	----

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

YES	NO
-----	----

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

Not Applicable

SECTION C: PUBLIC PARTICIPATION (SECTION 41)

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

1. LOCAL AUTHORITY PARTICIPATION

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

Was the draft report submitted to the local authority for comment?

YES	NO
-----	----

If yes, has any comments been received from the local authority?

YES	NO
-----	----

This draft report has not been submitted to the Stakeholders yet. However, the Public Participation approach adopted in this process will be in line with the process contemplated in Regulation 39 through 44 of the EIA Regulations as amended, in terms of NEMA, which provides that I&APs must be notified about the proposed project. The plan considers other regulations, including the Protection of Personal Information Act, 2013 (Act 4 of 2013) (POPIA) as amended, regulates information sharing and record keeping.

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

Not Applicable

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

Public participation will be undertaken for the draft BAR and comments and concerns raised together with the responses provided by the Environmental Assessment Practitioner (EAP) will be presented in the final BAR.

2. CONSULTATION WITH OTHER STAKEHOLDERS

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

Has any comment been received from stakeholders?

YES	NO
-----	----

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

No public participation process was undertaken, yet.

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

Not Applicable.

3. GENERAL PUBLIC PARTICIPATION REQUIREMENTS

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

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

4. APPENDICES FOR PUBLIC PARTICIPATION

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

Not Applicable.

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.
- 2) Each alternative needs to be clearly indicated in the box below.
- 3) 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 & 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)?

YES	NO
Unknown at this stage	

The proposed development will generate general construction waste which will be removed by a waste contractor and disposed of at a registered waste disposal site. Excess soil generated from excavations will be stored on site for rehabilitation. Should any hazardous waste be generated, it shall be disposed of at a registered hazardous waste disposal site. Records of the type and quantity of waste disposed will be kept on site.

. Further, details on solid waste management are provided in the Environmental Management Programme (EMPr). Solid waste could include the following:

- Excess construction material.
- concrete rubble from structure foundations.
- any vegetation cleared; and
- general waste produced by the construction workers.

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

Solid waste will be managed and disposed of in accordance with the attached EMPr and includes:

- General waste will be disposed and collected in a waste skip and disposed of at a registered site, such as Chlookop Landfill.
- Re-usable and excess material (cut-off steel pipes), which can be used at the sites will be reused and the remainder will be carefully packaged and transported to the depot.
- Hazardous waste will be disposed of accordingly at a registered hazardous waste disposal site.
- Refuse will always be disposed of at a registered landfill site, which is approved by local authority. Refuse will not be burned or buried on or near the site but will be appropriately disposed of.
- Records of the type and quantity of waste disposed will be kept on site

Will the activity produce solid waste during its operational phase?

YES	NO

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

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

No solid waste will be produced during the operational phase of the project

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?

YES	NO
-----	----

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

A permission will be sought from the Municipality before commencement of the construction activities. It is assumed that the closest waste disposal site to the approved site and alignment will be used.

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?

YES	NO
-----	----

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?

YES	NO
-----	----

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

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

General Waste Management

- All waste generated on site will be separated into metal, paper, plastic, glass and contaminated paper, glass, plastic, and polystyrene and will be recycled.

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?

YES	NO
-----	----

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

N/A	
-----	--

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

N/A	N/A
-----	-----

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

Yes	NO
-----	----

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

N/A	
-----	--

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

Not Applicable

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?

YES	NO
-----	----

If yes, provide the particulars of the facility:

Facility name:
Contact person:
Postal address:
Postal code:
Telephone:
E-mail:

	Cell:	
	Fax:	

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

Non Identified.

Liquid Effluent (Domestic Sewage)

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

YES	NO
-----	----

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

N/A	
-----	--

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

YES	NO
-----	----

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

YES	NO
-----	-----------

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

N/A.

Emissions into the Atmosphere

Will the activity release emissions into the atmosphere?

YES	NO
-----	-----------

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

YES	NO
-----	-----------

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

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

Dust is expected from the excavation of soil and movement of vehicles, however appropriate dust suppression measures will be implemented to reduce dust impacts. Air emissions are also expected from the exhausts of vehicles driving to site and delivering construction material. These emissions will be short term with a low significance.

2. WATER USE

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

Municipality	Directly from water board	groundwater	river, stream, dam or lake	other	the activity will not use water
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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

Not Applicable

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	NO
------------	----

If yes, list the permits required

A General Authorisation (GA) in terms of the National Water Act (Act no. 36 of 1998) (NWA).

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

YES	NO
------------	----

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

YES	NO
-----	-----------

3. POWER SUPPLY

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

The proposed water pipeline will require power supply from the Municipality.

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

Not Applicable

4. ENERGY EFFICIENCY

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

Leak detection systems, pressure control, and meters (to regulate unauthorized water use) will assist in mitigating real and apparent water losses/ non-revenue water. A flow overview assessment of real and apparent water losses aids in responding to system loss. Based on the assessment, a water loss reduction program can be implemented, which may include repair of equipment (pipes, storage tanks, meters), installation of modern and high-efficiency systems such as leak detection systems, new data-handling software, etc. Implementation of one or more of these response measures will considerably reduce system losses.

A hydropower unit also forms part of the project. The residual energy in the system will be converted into electricity. This energy will be supplied to the grid.

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

A hydropower unit also forms part of the project. The residual energy in the system will be converted into electricity. This energy will be supplied to the grid.

SECTION E: IMPACT ASSESSMENT

The assessment of impacts must adhere to the minimum requirements in the EIA Regulations, 2014, and should take applicable official guidelines into account. The issues raised by interested and affected parties should also be addressed in the assessment of impacts as well as the impacts of not implementing the activity (Section 24(4)(b)(i)).

1. ISSUES RAISED BY INTERESTED & AFFECTED PARTIES

Summarize the issues raised by interested and affected parties.

The draft BAR has not been out for review; therefore, no issues have been raised.

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

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

Comments and concerns raised together with the responses provided by the Environmental Assessment Practitioner (EAP) will be presented in the final BAR.

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

Briefly describe the methodology utilized in the rating of significance of impacts.

Table 3: Methodology to Assess Impacts

Occurrence		Severity	
Probability of occurrence	Duration of occurrence	Magnitude (severity) of impact	Scale / extent of impact

To assess each of these factors for each impact, the following four ranking scales are used:

Probability	Duration
5 – Definite/don't know	5 – Permanent
4 – Highly probable	4 – Long-term
3 – Medium probability	3 – Medium-term (8-15 years)
2 – Low probability	2 – Short-term (0-7 years) (impact ceases after the operational life of the activity)
1 – Improbable	1 – Immediate
0 – None	
Scale	Magnitude
5 – International	10 – Very high/don't know
4 – National	8 – High
3 – Regional	6 – Moderate
2 – Local	4 – Low
1 – Site only	2 – Minor
0 – None	

Once these factors are ranked for each impact, the significance of the two aspects, occurrence and severity, is assessed using the following formula:

$$SP \text{ (significance points)} = (\text{probability} + \text{duration} + \text{scale}) \times \text{magnitude}$$

The maximum value is 150 significance points (SP). The impact significance will then be rated as follows:

SP >75	Indicates high environmental significance	An impact which could influence the decision about whether or not to proceed with the project regardless of any possible mitigation.
SP 30 – 75	Indicates moderate environmental significance	An impact or benefit which is sufficiently important to require management, and which could have an influence on the decision unless it is mitigated.
SP <30	Indicates low environmental significance	Impacts with little real effect and which should not have an influence on or require modification of the project design.

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.

Refer to Table 4.

Table 4: Assessment of potential impacts and proposed mitigation measures

Potential Impacts	Significance rating of impacts before mitigation	Proposed mitigation	Significance rating of impacts after mitigation
Planning/ pre-construction phase			
<p>The planning and design of the proposed development requires input from various specialists, resulting in employment opportunities. This additional employment would include both direct (e.g. Environmental Consultants, Engineers, Project Managers, Planners, etc.) and indirect (e.g. reviewing and commenting authorities such as the Local Authority and the Competent Authorities). The extent and magnitude of this impact is relatively low compared to the other economic impacts, and is typically restricted to a limited number of professionals.</p> <p>The identified technical alternatives are likely to result in the same level of</p>	Medium	No mitigation measures have been identified.	Medium

Potential Impacts	Significance rating of impacts before mitigation	Proposed mitigation	Significance rating of impacts after mitigation
<p>significance for this impact. The impact is definite, short term and of medium significance.</p>			
<p>Employment Opportunities</p> <p>The planning and design of the proposed development requires input from various specialists, resulting in employment opportunities. This additional employment would include both direct (e.g. Environmental Consultants, Engineers, Project Managers, Planners, etc.) and indirect (e.g. reviewing and commenting authorities such as the Local Authority and the Competent Authorities). The extent and magnitude of this impact is relatively low compared to the other economic impacts and is typically restricted to a limited number of professionals.</p>	<p>Low</p>	<ul style="list-style-type: none"> • No mitigation required 	<p>Low</p>
Construction phase			
<p>Employment Opportunities</p> <p>This additional employment would include both direct (e.g. Contractor; unskilled, skilled, and semi-skilled labourers, SMMEs, CLOs, Engineers, Project Managers, Planners, etc.) The extent and magnitude of this impact is relatively low because typically only a limited number of time and skills are required for the construction phase.</p>	<p>Low</p>	<ul style="list-style-type: none"> • No mitigation required 	<p>Low</p>

Potential Impacts	Significance rating of impacts before mitigation	Proposed mitigation	Significance rating of impacts after mitigation
<p>Air Pollution – Low levels of dust emissions may also be expected from excavations during the construction phase.</p>	Low	<ul style="list-style-type: none"> • Dampening of surfaces with grey water as may be required or use of alternative methods of dust suppression. • No abstraction of water from any water sources for dust suppression. • Construction of speed humps along the service road. • Appropriate dust control measures must be put in place as may be required. Further detail on dust management is provided in the EMPr. 	Low
<p>Noise -</p> <p>The noise intrusion levels during the Construction phase of the proposed development will be restricted to the place of activity during the day.</p> <p>Noise generating activities on site include the following:</p> <ul style="list-style-type: none"> • Earthworks; • Delivery of building material; • Civil construction activities; • Earth drilling; • TLB activities; <p>An increase in noise is expected during construction as these activities will generate noise of medium significance without mitigation. Provided that the mitigations</p>	Low	<ul style="list-style-type: none"> • It must be ensured that all vehicles used during construction are properly maintained. • Surrounding residents should be notified in advance of construction schedules. • Working hours must be restricted to daytime only (7am – 5pm). • Selecting equipment with lower sound power levels which is in accordance with the Health and Safety Regulations. 	Low

Potential Impacts	Significance rating of impacts before mitigation	Proposed mitigation	Significance rating of impacts after mitigation
<p>provided are adhered to, the noise impact will be manageable and of low significance. This impact will be low.</p>			
<p>Soils and Erosion -</p> <ul style="list-style-type: none"> • Where soils are highly erodible, adequate measures must be implemented to prevent undue soil erosion. • Removal of vegetation in preparation for construction may result in erosion. • Movement of vehicles on site may lead to spillages of harmful substances, such as hydrocarbons and sewage; leading to soil and water pollution. • The potential impact on soils will be medium significance however, proper mitigation can reduce it to low significance. 	<p>Low</p>	<ul style="list-style-type: none"> • Vegetation clearance must be limited to the footprint of the site. • Proper storm water management measures must be put in place. • Implementation of anti-erosion measures such as the construction of berms to reduce the water velocity is essential. • Drip trays are to be utilised during daily greasing and re-fueling of machinery and to catch incidental spills and pollutants. 	<p>Low</p>
<p>Surface and Groundwater</p> <ul style="list-style-type: none"> • Construction of pipelines at crossings and floodplains may impact the drainage and flow regime of the river. • Possible contamination of freshwater soils and surface water, leading to reduced ability to support biodiversity. • Altered water quality due to chemical waste disposal; • Potential of backfill material to enter the river, increasing the sediment load of the river. 	<p>Medium</p>	<ul style="list-style-type: none"> • Should it be necessary to clear any areas of vegetation, these areas, including contractor laydown areas, must remain as small as possible, to reduce the risk of further proliferation of alien vegetation, and to retain a level of protection to the river during construction (e.g. sediment trapping, slowing of storm water runoff etc.); • Open trenching should be done in a phased manner, in half width sections of the river; • All proposed activities will potentially result in bank destabilisation, and reduction in bank incision and sedimentation of the river, therefore, sediment control devices should be installed in place prior to diverting the flow; 	<p>Low</p>

Potential Impacts	Significance rating of impacts before mitigation	Proposed mitigation	Significance rating of impacts after mitigation
		<ul style="list-style-type: none"> • Ensure that the creation of the diversion (by means of sandbags) does not result in a significant water level difference upstream or downstream of the installation site; • The diversion sandbags should be filled with material from the river so as to prevent foreign material to be introduced to the river; • The duration of impacts within the river should be minimised as far as possible by ensuring that the duration of time in which flow alteration and sedimentation will take place is minimised. Therefore, the construction period should be kept as short as possible; and • Restrict construction activities to the drier months wherever possible, so as to limit the possibility of permanent changes to the system. • During trenching, soil removed from the dewatered section should be stockpiled as far as possible from the riparian zone of the river; • Excavated materials (from the trenches) should not be contaminated and it should be ensured that the minimum surface area is taken up, however the stockpiles may not exceed 2m in height. Mixture of the lower and upper layers of the excavated soil should be kept to a minimum, so as for later usage as backfill material; and • All exposed soils must be protected for the duration of the construction phase with a suitable geotextile (e.g. Geojute or hessian sheeting) in order to prevent erosion and sedimentation of the river. 	
<p>Heritage Impact Potential damage to burial site, and/or colonial period artefacts.</p>	<p>Low</p>	<p>Any artefacts or cultural resources encountered during construction must be preserved and removed with the assistance of a qualified specialist</p>	<p>Low</p>

Potential Impacts	Significance rating of impacts before mitigation	Proposed mitigation	Significance rating of impacts after mitigation
<p>Impact on Flora and Fauna –</p> <ul style="list-style-type: none"> • Site preparation and construction may result in the disturbance of and the loss of natural vegetation. • Continued movement of personnel and vehicles on and off site may increase the spread of alien invasive species. • This impact will be of low significance as the area has more developments and the land is already disturbed. 	Low	<ul style="list-style-type: none"> • No sensitive plants species were observed during the site assessment. • Vegetation clearing should be kept to a minimum and only areas to be used for construction should be cleared. • No open fires are permitted within naturally vegetated areas. • The contractor must ensure that no fauna species are disturbed, trapped, hunted or killed during the construction phase. • No pets should be allowed on site 	Low
<p>Visual Impact-</p> <ul style="list-style-type: none"> • Majority of the proposed pipeline will be situated belowground so the water supply pipeline will have no visual impact on the surrounding environment when the proposed pipeline is completed. The only visual impact will arise from the aboveground portion at the stream crossing, as well as activities during construction and vehicle movement. • Unkempt site due to littering and illegal dumping on site and surrounding areas. 	Low	<ul style="list-style-type: none"> • All rubbish and excess rubble including excess soil and bedrock to be removed to a registered waste disposal facility. A certificate of disposal must be obtained for any waste that is disposed of. • Refuse bins must be provided on site and these must be emptied regularly. 	Low
<p>Traffic -</p> <p>During the construction phase, increased heavy vehicle traffic should be expected. Without management, such increased traffic loads may negatively impact existing traffic flow. Further unmanaged construction vehicles may decrease road safety for other road users.</p>	Low	<ul style="list-style-type: none"> • The delivery of construction material and equipment should be limited to hours outside peak traffic times (including weekends) prevailing on the surrounding roads. • Delivery vehicles must comply with all traffic laws and by laws. • A speed limit of 40 must be adhered to avoid dust 	Low

Potential Impacts	Significance rating of impacts before mitigation	Proposed mitigation	Significance rating of impacts after mitigation
<p>Waste – The construction activities may result in waste being produced.</p>	<p>Low</p>	<ul style="list-style-type: none"> • Adequate number of waste disposal bins are to be positioned at strategic locations within the development, and shall be disposed of on a regular basis. • Temporary waste storage points on site shall be determined and the points should be demarcated on an already disturbed area and should not be in areas which are highly visible from the surrounding properties. <p>All rubbish and excess rubble including excess soil and bedrock to be removed to a registered waste disposal facility. A certificate of disposal must be obtained for any waste that is disposed of.</p> <p>Refuse bins must be provided on site and these must be emptied regularly.</p> <ul style="list-style-type: none"> • The storage of solid waste on site must be in a manner acceptable to the relevant Authority. <p>Burning of waste material will not be permitted.</p> <p>Spillages of hazardous substances must be cleaned up using absorbent material provided in spill kits on site, and must be disposed of together with other hazardous material at a hazardous waste landfill. Absorbent materials used to clean up spillages should be disposed of in a separate hazardous waste bin.</p>	<p>Low</p>
<p>Operational Phase</p>			

Potential Impacts	Significance rating of impacts before mitigation	Proposed mitigation	Significance rating of impacts after mitigation
<p>Soils and Erosion- Soil erosion may occur along the installed pipeline.</p>	<p>Low</p>	<ul style="list-style-type: none"> Disturbed soil must be covered and re-seeded and vegetated with suitable ground covering (where applicable, otherwise pavements should cover the area as it was covered prior to construction). 	
<p>Fauna and Flora- The establishment of vegetation after rehabilitation. Pipe failure or leaks may cause increased flows due to leaks or pipe failures.</p>		<ul style="list-style-type: none"> It must be ensured that no additional impacts such as indigenous vegetation clearing are allowed to occur in the vicinity of the Hartbeesspruit River; No trapping, hunting or collection of faunal species must be allowed during maintenance or monitoring activities; Disposal of waste or litter must be prohibited in the Hartbeesspruit River. Any waste noted must be cleared immediately during maintenance activities; If vegetation adjacent to the pipeline is to be removed, it must be mowed or cut short to between approximately 6 – 9 inches as a maintenance procedure (at this height basal erosion of the grasses will be minimised (VDoT, 2007; CoB, 2014). and the grass must not be ploughed, as ploughing disturbs the soils creating conditions for alien plant species to invade the area, as well as increasing the possibility of soil erosion by water runoff. The grass cuttings must be carefully collected and disposed of at a separate waste facility and not be allowed to enter the river, as 	

Potential Impacts	Significance rating of impacts before mitigation	Proposed mitigation	Significance rating of impacts after mitigation
		high grass loads can impair the water quality during the low flow season; and <ul style="list-style-type: none"> All maintenance vehicles must remain on designated roads paths as far as possible with no indiscriminate driving through the Hartbeesspruit River. 	

NO GO:

No-Go Alternative

If the project is not undertaken, then none of the environmental impacts indicated above will occur (including positive and negative impacts). A summary is given below:

- The elevated dust emission within a specified timeframe will not occur;
- The disruption of traffic to cater for the construction servitude and activities will not occur;
- The possible sedimentation of the water courses and a decline in a decline in water quality due to spillages will not occur;
- Water shortages will still persist which also results in an increase in the cost of living as people will be buying water;
- No temporary or permanent employment of opportunities;
- No skills development;
- No waste being generated; etc.

Direct impacts: Socio-economic

The direct impact will be that current challenges with regards to water supply will persist. Should the proposed project not proceed, current and future water demands of the area will not be met, given the industrial and residential developments that are taking place within the area.

The identified job opportunities will not be realised, thus have a negative impact of medium to high significance given the current water crisis.

Indirect impacts:

Inadequate use and/or access to clean water may cause health-related issues.

The proposed project must proceed, and all recommendations and mitigation measures must be adhered to and implemented.

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

- Wetland Assessment Report
- Biodiversity Compliance Statement

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

ASSUMPTIONS AND LIMITATIONS

It is assumed that technical data supplied by the client was correct and valid at the time of the compilation of specialist studies and the draft BAR.

PUBLIC PARTICIPATION PROCESS

The Public Participation Process will be undertaken in line with Chapter 6 of the 2014 EIA Regulations. The EAP will endeavour to reach all the stakeholders. During this process, it is likely that some I&APs may not be reached. However, the effort will be made to reach the stakeholders and I&APs through newspaper adverts, site notices, and the Nsovo website.

LITERATURE REVIEWS IS VIEWED AS CORRECT

The compilation of the reports were based on various literature reviews and specialist input viewed as correct at the time. However, it is acknowledged that there might be some gaps in knowledge with regards to the literature reviewed, although concerted efforts were made to attain as much information as possible.

3. IMPACTS THAT MAY RESULT FROM THE DECOMMISSIONING & 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.

No significant impacts have been identified for the decommissioning phase of the proposed activity since decommissioning will not in the foreseeable future.

Proposal

Potential impacts:	Significance rating of impacts (positive or negative):	Proposed mitigation:	Significance rating of impacts after mitigation:	Risk of the impact and mitigation not being implemented
Not Applicable				

Alternative 1

Potential impacts:	Significance rating of impacts (positive or negative):	Proposed mitigation:	Significance rating of impacts after mitigation:	Risk of the impact and mitigation not being implemented
Not Applicable				

Alternative 2

Potential impacts:	Significance rating of impacts (positive or negative):	Proposed mitigation:	Significance rating of impacts after mitigation:	Risk of the impact and mitigation not being implemented
Not Applicable				

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

Not Applicable

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

Not Applicable

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:

Although the pipeline passes through an area classified as an ESA and the vegetation is threatened, the contribution of the pipeline to the cumulative impact on terrestrial biodiversity is low. Furthermore, taking into account urbanisation and other future projects the cumulative impacts is considered to be low as the habitat has been degraded and very few areas are characterised by vegetation.

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.

For Proposal:

Alternative 1 (preferred alternative)

PLANNING AND DEVELOPMENT PHASE

Impacts associated with the planning and development phase of the proposed activity include:

- the creation of job opportunities for skilled engineers and planning professionals. This positive impact will be definite and short term in duration. No significant negative impact has been associated with this phase.
- Poorly designed pipeline and infrastructure can negatively impact vulnerable species, habitats (streams and wetlands). There are recommended mitigation measures to adhere to, in order to keep the impacts minimal.

CONSTRUCTION PHASE

The positive impacts identified for this phase include job creation, economic growth and a positive economic outlook for the Municipality and the country at large, these impacts will be enhanced in order to maximise the benefits.

Negative impacts associated with the construction phase of the proposed activity can be regarded as high to medium significance without mitigation and medium to low with mitigation. These impacts include and can occur within the following:

- Vegetation;
- Water resources;
- Faunal and avifaunal communities;
- Heritage;

- Traffic; and
- Noise and vibration.

With corrective measures in place the identified negative impacts can be managed and reduced to low significance.

OPERATIONAL PHASE

The operational phase will have positive impacts associated with increased water supply to the area.

DECOMMISSIONING PHASE

No significant impacts have been identified for the decommissioning phase of the proposed activity since decommissioning for the proposed activity will not take place in the foreseeable future.

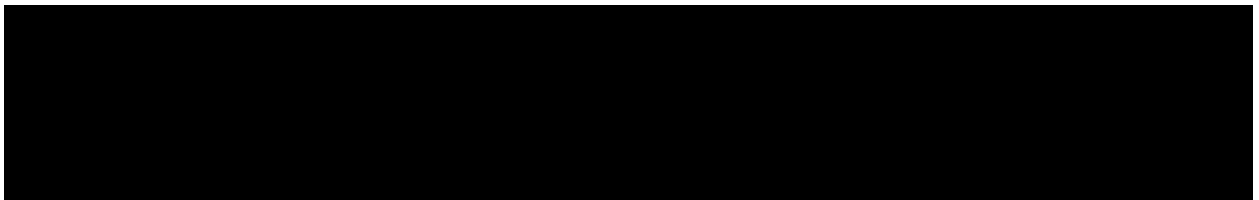
PHYSICAL AND SOCIAL ENVIRONMENT

It is perceived that these impacts will have sustainable benefits. It must be ensured that post-construction rehabilitation leaves the surrounding environments in a good state. After the construction phase of the project, the contractors must ensure that all hazardous materials are removed from the site and that rehabilitation of the land is undertaken. Certain factors have been considered when assessing the impact of the proposed activity on the physical environment.

FACTORS	COMMENTS
Environmental impact on the ecosystems of the locality.	The proposed activity is not expected to have any long-term impacts on the ecosystems of the locality. Mitigation measures are proposed to protect the surrounding environment.
Possible reduction of the aesthetic, recreational, scientific, or other environmental quality or value of a locality.	No reduction of the environmental quality of the locality is expected in the longer term. The construction phase which is short term may have a reduced visual impact.
Any possible effect upon a locality, place or building having aesthetic, anthropological, archaeological, architectural, cultural, historical, scientific, or social significance or other special value for present or future generations.	No heritage sites were noted near the proposed pipeline.

Any impact on the habitat of protected fauna (Within the meaning of the National Parks and Wildlife Act 1974).	The proposed site is not expected to have an impact on any habitat of protected fauna.
Any endangering of any species of animal, plant, or other form of life, whether living on land, in water or in the air.	There will be no endangering of animal and/or plant species due to the proposed activities.
Any long-term effects on the environment.	No long-term effect on the environment is expected.
Possible degradation of the quality of the environment.	Mitigation measures would be employed to ensure no significant degradation of the environment.
Any pollution of the environment.	The proposed activity is not expected to result in long term pollution of the environment. Mitigation measures are proposed to ensure pollution is restricted to short term localised effects.
Any environmental problems associated with the disposal of waste.	No long-term environmental problems associated with the disposal of waste material are expected.

Alternative 2:



Alternative 1: No – Go (Compulsory)

Should the “no-go” alternative be identified as the preferred alternative, then the following situations will occur:

- The property/properties will retain their current status and no construction activities will be undertaken;
- The identified employment opportunities for the local communities will not be realised.
- The sustainable water supply within the Erand and Grand Central Water District will be negatively affected.

Based on these reasons the “No-Go” alternative is not recommended. The environmental impacts associated with the proposed pipeline are considered an acceptable level and can be effectively managed with the implementation of effective mitigation methods.

2. IMPACT SUMMARY OF THE PROPOSAL OR PREFERRED ALTERNATIVE.

Table 5: Proposed Activity: Impact Summary

	Before Mitigation	After Mitigation
BIOPHYSICAL ENVIRONMENT		
1.1 Dust/Air pollution: The generation of dust associated with construction activities.	Low	Low
2.1 Visual Impacts: Topographical features contribute to the landscape character and sense of place of an area.	Low	Low
3.1 Soil erosion, loss of topsoil, deterioration of soil quality	Moderate	Low
4.1 Impact on cultural and heritage resources	Low	Low
6.1 Impacts on fauna and flora	Low	Low
SOCIO-ECONOMIC ENVIRONMENT		
7.1 Noise/ vibration	Low	Low
8.1 Safety and Security	Low	Low
9.2 Employment opportunities	Medium (Positive)	Low (Positive)
10.1 Waste	Low	Low
11.1 Traffic	Low	Low

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

Based on the EAPs assessment of impacts, it is concluded that the impacts associated with the construction of the proposed water pipeline are expected to be of Medium to Low significance with the implementation of adequate mitigation measures. No environmental and social fatal flaws were identified to be associated with the proposed project.

Furthermore, based on the nature and extent of the proposed development, the local levels of disturbance predicted vs. the expected benefits at a regional and national scale, the findings of the BA process and the understanding of the significance level of potential environmental and social impacts, it is the opinion of the EAP that the proposed project can proceed subject to the implementation of the mitigation measures detailed in Table 4 above and the EMPr.

7. SPATIAL DEVELOPMENT TOOLS

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

The proposed pipeline is in line with the objectives of the Spatial Development Framework (SDF) (City of Johannesburg Metropolitan Municipality: Draft Spatial Development Framework 2040, 2021/22), which states that the Municipality has priority areas that need upgrading, refurbishment, and replacement of existing infrastructure for roads, power, water and sewer, as well as expanding these services across the metropolitan. According to the Consolidated Infrastructure Plan, the existing pipelines and reservoirs need refurbishment and replacement, including expansion where service constraints exist (where demand currently exceeds capacity) and upgrading of capacity is required. Furthermore, it states that the Municipality has no backlogs in providing basic water services, but there are backlogs in maintaining the existing water infrastructure.

ArcGIS was used for mapping purposes of the proposed project and this included the use of the Gauteng Conservation Plan (C-Plan) Version 3.3 to identify ecologically sensitive features. According to the C-Plan, the site is located partially in an Ecological Support Area (ESA), as well as a Critical Biodiversity Area (CBA), categorized as "Important".

Screening tool was used to compile the Screening Report which indicated the environmental sensitivities within the area through the use of several datasets. The screening tool also identified the Specialist assessments required. The site verification done indicated medium to low sensitivities for most of the aspects.

8. RECOMMENDATION OF THE PRACTITIONER

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

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

Not Applicable

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

It is recommended that the proposed development proceed and be approved at the proposed location, provided that the following will be adhered to:

- Before the commencement of any construction activities, the outer edge of the approved construction footprint must be staked out by a surveyor and demarcated using brightly-colored shade cloth.
- All foreign and toxic materials must be removed from the site and managed accordingly.
- Any portion of land cleared off of vegetation must be regraded/ re-shaped/rejuvenated and topsoils must be reinstated.
- Compacted soils must be adequately ripped/loosened where compacted, as informed by the ECO.
- Topsoil should be piled and reinstated back to where possible to recover the areas back to nature.
- The identified environmental impacts are relatively of low significance given the disturbed nature of the proposed project site.
- The identified positive impacts far outweigh the negative impacts; and
- The proposed development will yield significant socioeconomic benefits for the region and country at large.

The prepared Environmental Management Programme (EMPr) will serve as the key reference of the EAPs recommendations. The EMPr has included measures proposed to mitigate any adverse impacts of the activities and ensure that there is sufficient monitoring. Some of the key recommendations are as follows:

- The requirements of the National Water Act, 1998 (Act 36 of 1998) must be complied with when applying for a Water Use Licence.
- The recommendations made by the wetland specialist must be adhered to.
- A site-specific Storm Water Management Plan must be prepared to prevent pollution on runoff. Further the storm water management measures recommended in the EMPr must be adhered to.
- The attached EMPr must be implemented and adhered to, in order to minimise all potential negative impacts and to enhance positive impacts where applicable.

9. THE NEEDS AND DESIRABILITY OF THE PROPOSED DEVELOPMENT (as per notice 792 of 2012, or the updated version of this guideline)

Due to the anticipated future developments within the area, the Municipality suggested additional storage to solidify the water supply hence the proposed construction of the Halfway Bulk water pipeline. The proposed Halfway House Water Distribution Sub-district will form part of the Erand & Grand Central Water District. Currently, developments that are to be supplied from the future Halfway House reservoir are presently provided by the existing Erand Reservoir and Marlboro Reservoir. Therefore, the proposed project falls under SIP 18 which entails:

- A 10-year plan to address the estimated backlog of adequate water to supply of 1.4 million households and basic sanitation to 2.1 million households.
- The project will involve provision of sustainable supply of water to meet social needs and support economic growth; and

- Provision for new infrastructure, rehabilitation and upgrading of existing infrastructure, as well improve management of water infrastructure.

Furthermore, the proposed project is within the existing approved water pipeline servitude, and therefore it forms part of the Municipality's infrastructure planning. It will allow for increased capacity and thus improve supply reliability to the end users, thus allowing the Municipality to achieve their plan as set out in the IDP.

10. THE PERIOD FOR WHICH THE ENVIRONMENTAL AUTHORISATION IS REQUIRED (consider when the activity is expected to be concluded)

Prior to construction the validity of the environmental authorization is required for 5 years; with regards to the operational phase, it is requested that the Environmental Authorisation (EA) be valid for the life of the bulk water supply pipeline as per Regulation 26 (d) of the EIA regulations 2014 (as amended).

11. ENVIRONMENTAL MANAGEMENT PROGRAMME (EMPR) (must include post construction monitoring requirements and when these will be concluded.)

If the EAP answers "Yes" to Point 7 above, then an EMPr is to be attached to this report as an **Appendix G**

EMPr attached

YES

SECTION F: APPENDIXES

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

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

Appendix A1: Location Map
Appendix A2: Site layout Plan
Appendix A3: Sensitivity Map
Appendix B: Site Photographs
Appendix C: Facility Illustrations
Appendix D: Affected Farm portions
Appendix E: Specialist reports
Appendix E1: Wetland Assessment
Appendix E2: Biodiveristy Compliance Statement
Appendix F: Public participation information
Appendix G: EMPr
Appendix H1: EAP CV
Appendix H2: EAP declaration

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 complete