

BASIC ASSESSMENT REPORT



destea

department of
economic, small business development,
tourism and environmental affairs
FREE STATE PROVINCE

(For official use only)

File Reference Number:

Application Number:

Date Received:

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

Kindly note that:

1. This **basic assessment report** is a standard report that may be required by a competent authority in terms of the EIA Regulations, 2014 as amended and is meant to streamline applications. Please make sure that it is the report used by the particular competent authority for the activity that is being applied for.
2. This report format is current as of **09 August 2022**. It is the responsibility of the applicant to ascertain whether subsequent versions of the form have been published or produced by the competent authority
3. The report must be typed within the spaces provided in the form. The size of the spaces provided is not necessarily indicative of the amount of information to be provided. The report is in the form of a table that can extend itself as each space is filled with typing.
4. Where applicable **tick** the boxes that are applicable in the report.
5. An incomplete report may be returned to the applicant for revision.
6. The use of "not applicable" in the report must be done with circumspection because if it is used in respect of material information that is required by the competent authority for assessing the application, it may result in the rejection of the application as provided for in the regulations.
7. This report must be handed in at offices of the relevant competent authority as determined by each authority.
8. No faxed or e-mailed reports will be accepted.
9. The signature of the EAP on the report must be an original signature.
10. The report must be compiled by an independent and **EAPASA registered** environmental assessment practitioner.
11. Unless protected by law, all information in the report will become public information on receipt by the competent authority. Any interested and affected party should be provided with the information contained in this report on request, during any stage of the application process.
12. A competent authority may require that for specified types of activities in defined situations only parts of this report need to be completed.

13. Should a specialist report or report on a specialised process be submitted at any stage for any part of this application, the terms of reference for such report must also be submitted.
14. Two (2) colour hard copies and one (1) electronic copy of the report must be submitted to the competent authority.
15. Shape files (.shp) for maps must be included in the electronic copy of the report submitted to the competent authority.

SECTION A: ACTIVITY INFORMATION

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

YES

NO

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

1. PROJECT DESCRIPTION

Table 1: Summary of technical information with regard to the proposed development

Distance of the pipeline	Approximately +/-12.7 km
Pipe size (inner diameter)	• 710 mm • 630 mm • 500 mm • 400 mm • 355 mm • 250 mm
Water demand parameters	• Annual Average Daily Demand (AADD): 120.19 l/s • Gross Annual Average Daily Demand (GAADD): 132.21 l/s • Peak Average Daily Demand (PADD): 429.321 l/s • Seasonal Peak Average Daily Demand (SPADD): 643.982 l/s (assuming a seasonal peak factor of 1.5)
Estimated pipeline throughput capacities	Range between approximately 41.29 l/s and 659.57 l/s.
Support infrastructure	• Isolating Valve Chambers • Air Valve Chambers • Scour Valve Chambers • Pressure Reducing Valve Chamber
Site access	• R700 • N1 • Internal farm roads

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

Environmental Management Group (Pty) Ltd has been appointed by **BVi Consulting Engineers Central (Pty) Ltd (the Consulting Engineer)**, on behalf of **Mangaung Metropolitan Municipality (the Applicant)**, as the independent Environmental Assessment Practitioner (EAP) to undertake the Basic Assessment (BA) process for the proposed construction of a Bulk Water Distribution Pipeline within the Free State Province.

The proposed bulk water pipeline development forms part of a broader regional infrastructure initiative aimed at enhancing bulk water supply capacity and ensuring long-term water security within the province. The project specifically seeks to augment the existing bulk distribution network by increasing the conveyance capacity of potable water to the northern extensions of Bloemfontein. These areas are experiencing ongoing residential and commercial expansion, resulting in increased pressure on the existing water supply infrastructure.

Project location:

The proposed development is located in the Free State Province of South Africa, specifically in the northern extension of Bloemfontein, ward 44. This project falls within the jurisdiction of Mangaung Metropolitan Municipality (MMM). The approximate geographical coordinates of the project site are

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29°03'27.9"S latitude and 26°13'47.1"E longitude.

The project lies in close proximity to several key towns and a major city, including:

-  Dewetsdorp is about 80 km to the southeast
-  Dealesville is approximately 70 km to the northwest
-  Wepener is approximately 117 km to the southeast

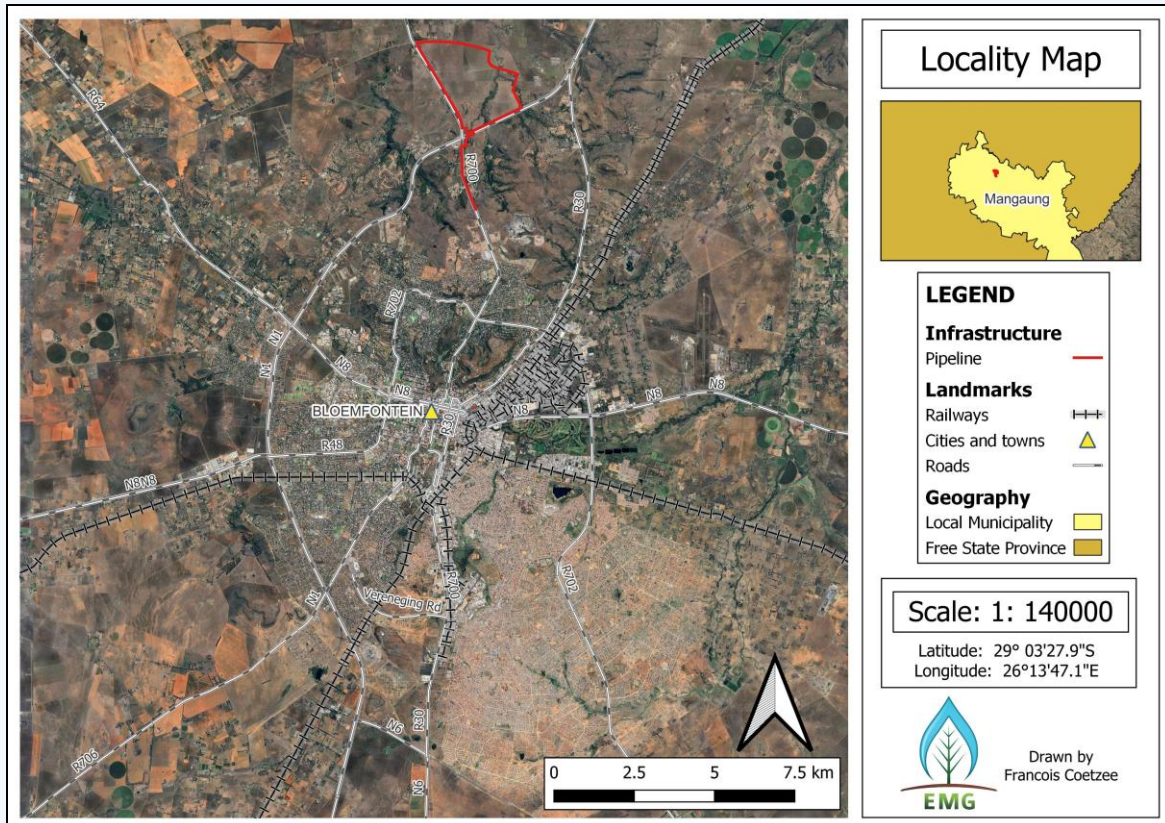


Figure 1: Locality map of the proposed development.

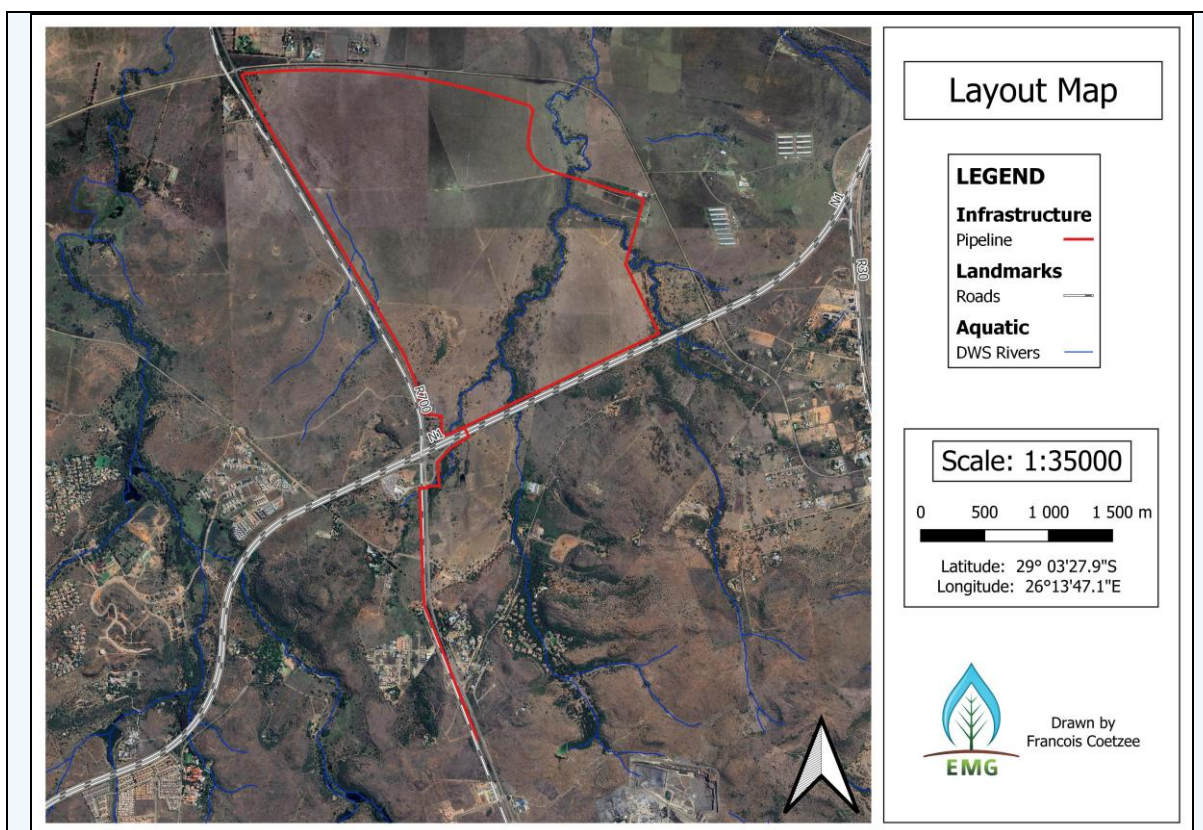


Figure 2: Layout map of the proposed development.

Water Demand and System Requirements

The proposed infrastructure has been designed to accommodate current and future potable water demands associated with the planned development areas. The system demand parameters are as follows:

- Annual Average Daily Demand (AADD): 120.19 l/s
- Gross Annual Average Daily Demand (GAADD): 132.21 l/s
- Peak Average Daily Demand (PADD): 429.321 l/s
- Seasonal Peak Average Daily Demand (SPADD): 643.982 l/s (assuming a seasonal peak factor of 1.5)

These demand projections inform the sizing of the pipeline and associated infrastructure to ensure adequate capacity during peak usage periods while maintaining system efficiency and resilience.

Pipeline Infrastructure

The proposed development comprises the construction of a bulk water distribution pipeline with a total length of approximately +/-12.7km. The proposed pipeline will comprise varying pipe diameters ranging from 250 mm (inner diameter) to 710 mm (inner diameter) to accommodate the hydraulic and operational requirements along different sections of the alignment. The variation in pipe diameters is intended to ensure adequate flow capacity, pressure management, and efficient water distribution throughout the system. Estimated pipeline throughput capacities along the alignment are anticipated to range between approximately 41.29 l/s and 529.02 l/s, depending on the specific section and operational demand requirements.

The pipeline will predominantly be installed underground within a trench excavation. Installation depths are expected to vary along the alignment in response to local topography, engineering design specifications, and crossing requirements. The anticipated burial depths will range from

approximately 1 m to 2 m below ground level. Ancillary infrastructure associated with the proposed development includes Isolating Valve Chambers, Air Valve Chambers, Scour Valve Chambers, Pressure Reducing Valve Chamber, and other supporting infrastructure necessary for the operation and maintenance of the bulk water distribution system.

Environment:

The project site traverses the Bloemfontein Dry Grassland, Winburg Grassy Shrubland, and Bloemfontein Karroid Shrubland vegetation types, all of which are classified as Least Concern (LC). The alignment intersects several non-perennial watercourses. The proposed pipeline route has been strategically positioned predominantly within already disturbed areas, such as existing servitudes and transformed landscapes, to minimise additional environmental disturbance. The development falls within Ecological Support Areas (ESA 1 and ESA 2). The project is also located in close proximity to the Woodland Hills Golf and Wildlife Estate and the Dwaal Valley Private Nature Reserve.



Figure 3: Proposed pipeline route



Figure 4: Proposed pipeline crossing of the N1.

Socio-Economic Benefits

The planned pipeline is anticipated to contribute positively to the economy of the MMM. The growing demand for housing within the Northern Extension serves as a key driver for development, which is expected to stimulate further economic growth and expansion as the area continues to develop. The proposed project will enhance the supply of potable water to the northern areas of Bloemfontein, thereby improving municipal service delivery, public health, and overall quality of life. Improved water security supports residential growth, local economic development, and the functioning of social infrastructure. During the construction phase, the project is expected to generate temporary employment opportunities, particularly for unskilled and semi-skilled labour from surrounding communities. This includes opportunities for site preparation, trenching, pipe laying, backfilling, and general construction support activities.

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

Listed activity as described in GN 327,325 and 324	Description of project activity
Example: GN 327 Item xx xx): The construction of a bridge where such construction occurs within a watercourse or within 32 metres of a watercourse, measured from the edge of a watercourse, excluding where such construction will occur behind the development setback line.	A bridge measuring 5 m in height and 10m in length, no wider than 8 meters will be built over the Orange river
GN R.327 Listing Notice 1 Activity 9(i)(ii): The development of infrastructure exceeding 1 000 metres in length for the	The proposed development includes the construction of bulk water distribution infrastructure exceeding 1 000 m in length, with certain pipeline sections having an

<i>bulk transportation of water or storm water</i> — (i) <i>with an internal diameter of 0,36 metres or more; or</i> (ii) <i>with a peak throughput of 120 litres per second or more;</i>	internal diameter greater than 0.36 m. The internal diameter of the proposed pipelines ranges from approximately 0.25 m to 0.71 m. Pipeline sections exceeding the applicable thresholds of 0.36 m in diameter and 1 000 m in length, and which occur outside of an existing road reserve, are listed below: • New PVC-O 630 mm diameter pipeline (Class 10) • New PVC-O 500 mm diameter pipeline (Class 12.5) • New PVC-O 400 mm diameter pipeline (Class 12.5) In addition, the calculated peak throughput of the proposed bulk water pipeline system is estimated to range between approximately 41.29 litres per second (L/s) and 659.57 L/s, with portions of the system exceeding the 120 L/s threshold stipulated in the activity description. This activity is triggered as it constitutes the development of bulk water transportation infrastructure exceeding 1 000 m in length, with internal pipeline diameters exceeding 0.36 m and peak throughput capacities exceeding 120 L/s. Refer to Appendix A for an indication of the pipeline alignment and areas to be impacted by the proposed development.
GN R.327 Listing Notice 1 Activity 19: <i>The infilling or depositing of any material of more than 10 cubic metres into, or the dredging, excavation, removal or moving of soil, sand, shells, shell grit, pebbles or rock of more than 10 cubic metres from a watercourse</i>	The proposed pipeline alignment will directly traverse approximately five non-perennial watercourses located within the project area. Construction activities associated with the installation of the proposed pipelines, including trench excavation, bedding preparation, backfilling, and the temporary stockpiling and deposition of excavated material, will result in the excavation, removal, movement, and deposition of soil and rock exceeding 10 m³ within the affected watercourses. This listing notice is triggered as the infilling, excavation, removal, or movement of more than 10 m³ of material within a watercourse, as these activities will occur during the construction phase at the identified crossing points.

	Estimated volume triggered: 1071 m³ Refer to Appendix A for maps indicating the sections of pipe that trigger this activity.
GN R. 324 Listing Notice 3 Activity 12(b)(iv): <i>The clearance of an area of 300 square metres or more of indigenous vegetation except where such clearance of indigenous vegetation is required for maintenance purposes undertaken in accordance with a maintenance management plan.</i> <i>b. Free State</i> <i>iv Areas within a watercourse or wetland; or within 100 metres from the edge of a watercourse or wetland</i>	The proposed development will result in the clearance of indigenous vegetation exceeding 300 m² within identified watercourses and within 100 m of the edge of delineated watercourses associated with the proposed pipeline alignment. Vegetation clearance will be required for construction activities, including site preparation, trench excavation, establishment of temporary working areas, and access along sections of the pipeline route intersecting sensitive riparian and drainage areas. This listing notice is triggered as the applicable listed activity for the clearance of indigenous vegetation within watercourses and regulated buffer areas in the Free State Province, as the extent of vegetation clearance will exceed the 300 m² threshold. Estimated area triggered: 4901 m² Refer to Appendix A for maps indicating the sections of pipe that trigger this activity.
GN R. 324 Listing Notice 3 Activity 14(ii)(a)(c)(b)(i)(ff)(hh): <i>The development of—</i> <i>(ii) infrastructure or structures with a physical footprint of 10 square metres or more</i> <i>Where such development occurs—</i> <i>(a) within a watercourse;</i> <i>(c) if no development setback has been adopted, within 32 metres of a watercourse, measured from the edge of a watercourse;</i> <i>b. Free State</i> <i>i. Outside urban areas:</i> <i>(ff) Critical biodiversity areas or ecosystem service areas as identified in systematic biodiversity plans adopted by</i>	The proposed pipeline alignment traverses environmentally sensitive areas situated outside of an urban area, including areas identified as Ecological Support Areas (ESA 1 and ESA 2) and a FEPA sub-catchment in applicable biodiversity planning instruments. The development is also located within the prescribed proximity to protected areas, including the Woodland Hills Wildlife Estate and the Dwaal Valley Private Nature Reserve. Estimated area triggered: 595 m² Refer to Appendix A for maps indicating the sections of pipe that trigger this activity.

<i>the competent authority or in bioregional plans;</i> <i>(hh) Areas within 10 kilometres from national parks or world heritage sites or 5 kilometres from any other protected area identified in terms of NEMPAA or from the core area of a biosphere reserve;</i>	
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2. FEASIBLE AND REASONABLE ALTERNATIVES

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

- (a) the property on which or location where it is proposed to undertake the activity;
- (b) the type of activity to be undertaken;
- (c) the design or layout of the activity;
- (d) the technology to be used in the activity;
- (e) the operational aspects of the activity; and
- (f) the option of not implementing the activity.

Describe alternatives that are considered in this application as required by Appendix 1 (3)(h) of GN 326, Regulation 2014 as amended. Alternatives should include a consideration of all possible means by which the purpose and need of the proposed activity (NOT PROJECT) could be accomplished in the specific instance taking account of the interest of the applicant in the activity. The no-go alternative must in all cases be included in the assessment phase as the baseline against which the impacts of the other alternatives are assessed.

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

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

a) Site alternatives

Alternative 1 (preferred alternative)		
Description	Lat (DDMMSS)	Long (DDMMSS)
The preferred alternative for the proposed development extends across four properties, namely Farm Orlig No. 1710 Portion 0, Farm Annex Wildealskloof No. 2607 Portion 0, Farm Annex	29° 03' 28" S	26° 13' 47" E

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Wildealskloof No. 2607 Sectional Portion 7, and Farm Wildealskloof No. 1205 Portion 4. These properties are located adjacent to the N1 and R700 road reserves and are the only properties that will be directly affected by the proposed pipeline development. This alternative is preferred as it follows the route underlain by the softest geological material, thereby minimising the need for extensive blasting activities during construction. In addition, the selected alignment makes use of sections of the road reserve that are largely undeveloped and free from existing infrastructure constraints, allowing for a more practical and efficient construction corridor. Furthermore, the preferred route has been positioned to minimise potential environmental impacts by avoiding sensitive areas where possible and limiting disturbance to surrounding land uses. The use of existing disturbed corridors alongside the road reserve also reduces the extent of vegetation clearing and overall environmental footprint associated with the proposed development.		
Alternative 2		
Description	Lat (DDMMSS)	Long (DDMMSS)
Alternative 3		
Description	Lat (DDMMSS)	Long (DDMMSS)

In the case of linear activities:

Alternative:

Alternative S1 (preferred)

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

Latitude (S):

Longitude (E):

29° 3' 29.80" S	26° 13' 45.82" E
29° 2' 11.07" S	26° 13' 41.99" E
29° 0' 41.67" S	26° 12' 38.92" E

Alternative S2 (if any)

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

Alternative S3 (if any)

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

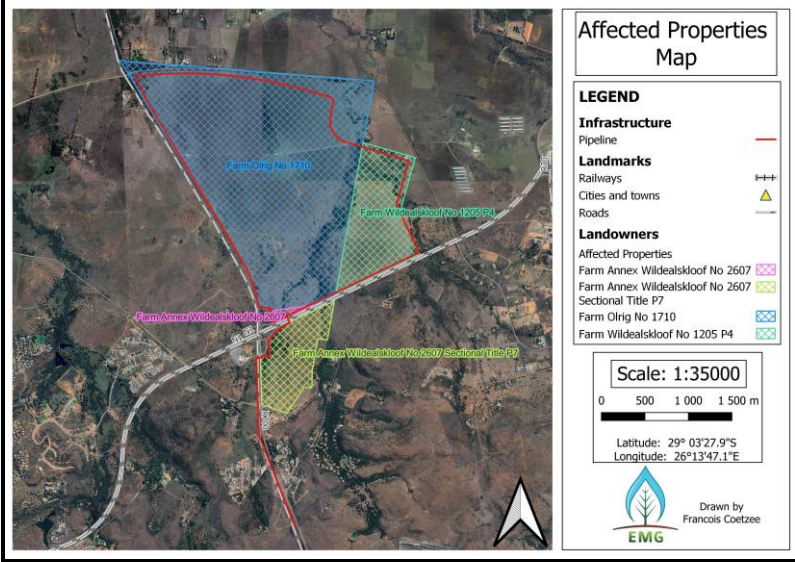
For route alternatives that are longer than 500 m, please provide an addendum with co-ordinates taken every 250 meters along the route for each alternative alignment.

*Please find attached in Appendix A

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

b) Lay-out alternatives

Alternative 1 (preferred alternative)		
Description	Lat (DDMMSS)	Long (DDMMSS)
The proposed pipeline commences adjacent to the R700 within the left-hand road reserve and continues in a northerly direction towards the Shell Ultra City. Before reaching the Shell Ultra City, the pipeline crosses beneath the R700 and enters Farm Annex Wildealskloof No. 2607 Sectional Title Portion 7. The alignment then turns south-eastward, crossing beneath the N1 through an existing culvert and entering Farm Annex Wildealskloof No. 2607, before continuing into Farm Orlig No. 1710 Portion 0. Thereafter, the pipeline follows a north-westerly direction along the right-hand side of the R700, remaining within Farm Orlig No. 1710 Portion 0. Before reaching the north-western corner of Farm Orlig No. 1710 Portion 0, the alignment turns eastward and continues into Farm Wildealskloof No. 1205 Portion 4. The pipeline then proceeds in an easterly direction up to the eastern property boundary, after which it turns southward until the N1 is reached. At this point, the alignment changes to a south-westerly direction, continuing back into Farm Orlig No. 1710 Portion 0, where it ultimately connects back to the existing pipeline network.	Beginning point: 29° 3' 29.80" S Middle point: 29° 2' 11.07" S Northern point: 29° 0' 41.67" S	Beginning point: 26° 13' 45.82" E Middle point: 26° 13' 41.99" E Northern point: 26° 12' 38.92" E
		
Alternative 2		
Description	Lat (DDMMSS)	Long (DDMMSS)
N/A		
Alternative 3		
Description	Lat (DDMMSS)	Long (DDMMSS)
N/A		

c) Technology alternatives

Alternative 1 (preferred alternative)
The proposed pipeline consists of approximately $\pm 12,7$ km of PVC-O piping with diameters ranging from 250 mm (inner diameter) to 710 mm (inner diameter). Pipe classes 10 and 12.5 have been selected to accommodate the expected internal pressures, based on hydraulic design requirements. The associated infrastructure includes isolating valve chambers, air valve chambers, scour valve chambers, and a pressure reducing valve chamber. These will be constructed using 1500 mm diameter precast manhole chambers and reinforced concrete chambers, depending on site-specific structural and operational requirements. PVC-O has been selected as the preferred pipe material due to its favourable hydraulic and mechanical properties. These include high hydraulic efficiency, enhanced ductility, strong resistance to crack propagation, excellent impact resistance, and good fatigue performance under variable loading conditions. In addition, PVC-O pipes are lightweight and easy to handle, which improves constructability and reduces labour intensity during installation. The material is widely available in the market and supported by established supply chains. As a result, municipal technical and maintenance teams are expected to experience no significant constraints in sourcing standard fittings, bends, pipe sections, and couplings for future maintenance and repairs.
Alternative 2
N/A
Alternative 3
N/A

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

Alternative 1 (preferred alternative)
No other alternatives (e.g., scheduling, demand, input, scale, and design alternatives) have been proposed. Should any such alternatives arise, it will be communicated through and presented in the final BAR.
Alternative 2
N/A
Alternative 3
N/A

e) No-go alternative

The “no-go” alternative assumes that the proposed development does not proceed, and therefore no pipeline or associated infrastructure is constructed. Under this scenario, the site would remain in its current condition, and no direct environmental disturbance from construction activities would occur. This option serves as the baseline against which the proposed development and other alternatives are assessed. In the short term, the no-go alternative would present certain advantages:  Avoidance of capital expenditure associated with bulk earthworks, deep excavations, pipeline installation, and associated civil structures such as valve chambers and tie-ins.
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-  It would eliminate construction-phase disturbances such as vegetation clearing, soil excavation, temporary access roads, construction traffic, noise, dust generation, and waste production.
-  No disturbance would occur within or adjacent to watercourses, thereby avoiding potential short-term risks such as sediment mobilisation, erosion, or accidental contamination from construction-related activities (e.g., fuels and oils).
-  Prevent direct physical disturbance to indigenous vegetation.
-  Not proceeding would avoid development within sensitive biodiversity and conservation planning areas, including portions of the footprint within watercourses and regulated areas, within an NPEAS Priority Focus Area, and within ESA 1 and ESA 2.
-  It would avoid placing new infrastructure near the Woodland Hills Golf and Wildlife Estate and the Dwaal Valley Private Nature Reserve, thereby reducing exposure to ecological sensitivity and the complexity of mitigation and rehabilitation requirements.

Despite these short-term environmental and financial advantages, the benefits of the no-go alternative are largely temporary and must be weighed against longer-term operational and service delivery considerations. Not implementing the pipeline carries several significant operational, water-quality, environmental, and socio-economic implications:

-  Reduced ability to support planned urban expansion and future development within the service area.
-  Loss of opportunity to enhance long-term water security and service delivery efficiency.
-  No creation of direct employment opportunities during the construction phase (e.g., local labour, contractors, and service providers).
-  No indirect economic benefits associated with the procurement of materials, equipment, and services.
-  No stimulation of local economic activity linked to infrastructure development and maintenance.
-  Potential continued inefficiencies in water distribution that may result in higher operational stress on existing infrastructure over time.

Overall, while the no-go alternative avoids immediate construction-related environmental disturbances and capital costs, it does not contribute to long-term infrastructure development, service reliability, or socio-economic uplift associated with the proposed pipeline.

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

3. PHYSICAL SIZE OF THE ACTIVITY

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

Alternative:

Alternative A1¹ (preferred activity alternative)
 Alternative A2 (if any)
 Alternative A3 (if any)

Size of the activity:

	m ²
	m ²
	m ²

or, for linear activities:

¹ "Alternative A.." refer to activity, process, technology or other alternatives.

Alternative:

Alternative A1 (preferred activity alternative)

Alternative A2 (if any)

Alternative A3 (if any)

Length of the activity:

12 732 m
m
m

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

Alternative:

Alternative A1 (preferred activity alternative)

Alternative A2 (if any)

Alternative A3 (if any)

Size of the site/servitude:

127 320 m ²
m ²
m ²

4. SITE ACCESS

Does ready access to the site exist?

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

YES	NO
m	

Describe the type of access road planned:

Existing access roads are readily available within the study area, and no new access roads will be constructed as part of the proposed development. Access to the pipeline route can be obtained directly from the N1 and R700. In addition, existing farm roads located within the affected properties will be utilised.

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

5. LOCALITY MAP

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

- an accurate indication of the project site position as well as the positions of the alternative sites, if any;
- indication of all the alternatives identified;
- closest town(s);
- road access from all major roads in the area;
- road names or numbers of all major roads as well as the roads that provide access to the site(s);
- all roads within a 1km radius of the site or alternative sites; and
- a north arrow;
- a legend; and
- locality GPS co-ordinates (Indicate the position of the activity using the latitude and longitude of the centre point of the site for each alternative site. The co-ordinates should be in degrees and decimal

minutes. The minutes should have at least three decimals to ensure adequate accuracy. The projection that must be used in all cases is the WGS84 spheroid in a national or local projection.

6. LAYOUT/ROUTE PLAN

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

The site or route plans must indicate the following:

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

7. SENSITIVITY MAP

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

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

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

8. SITE PHOTOGRAPHS

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

9. FACILITY ILLUSTRATION

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

10. ACTIVITY MOTIVATION

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

1. Is the activity permitted in terms of the property's existing land use rights?	YES	NO	Please explain
The proposed pipeline constitutes a linear infrastructure development that will traverse multiple properties. The activity is not anticipated to conflict with the existing land use rights of the affected properties, as the pipeline will largely be installed within existing road reserves and servitude areas where possible. All affected landowners have been informed of the proposed development, and engagement with landowners will continue throughout the project lifecycle.			
2. Will the activity be in line with the following?			
(a) Provincial Spatial Development Framework (PSDF)	YES	NO	Please explain
The proposed bulk water pipeline is aligned with the objectives of the Free State Provincial Spatial Development Framework (FS PSDF) (2025), which promotes the development and upgrading of strategic infrastructure to support sustainable settlement patterns, economic development, improved service delivery, and long-term resource security within the province. The proposed development constitutes essential bulk water infrastructure intended to strengthen water supply capacity to the northern areas of Bloemfontein. The project forms part of a broader regional infrastructure initiative aimed at improving the reliability, efficiency, and resilience of the municipal water distribution network and ensuring long-term water security. The development supports the PSDF's objective of providing adequate infrastructure to facilitate sustainable urban growth and development. By increasing the conveyance capacity of potable water to areas experiencing ongoing residential, commercial, and institutional expansion, the project will assist in accommodating future development while maintaining acceptable levels of service delivery. Furthermore, the project is consistent with the strategic infrastructure and service delivery priorities identified in the Mangaung Metropolitan Municipality Integrated Development Plan (IDP), which is aligned with provincial and national development objectives. As the pipeline will be installed underground, the activity will not result in permanent sterilisation of agricultural land or significant alteration of existing land-use patterns. The development is therefore considered compatible with the applicable spatial planning categories and objectives identified in the Free State PSDF.			

(b) Urban edge / Edge of Built environment for the area	YES	NO	Please explain
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According to the Free State Spatial Development Framework, the proposed development is located outside the designated National Urban Nodes and does not fall within any identified Regional Development Anchors or Rural Service Centres (Figure 6). The development area is also situated outside the existing built-up area and beyond the defined urban edge. However, it is located within a water infrastructure development zone, where strategic bulk services are supported to enable future growth and service provision.

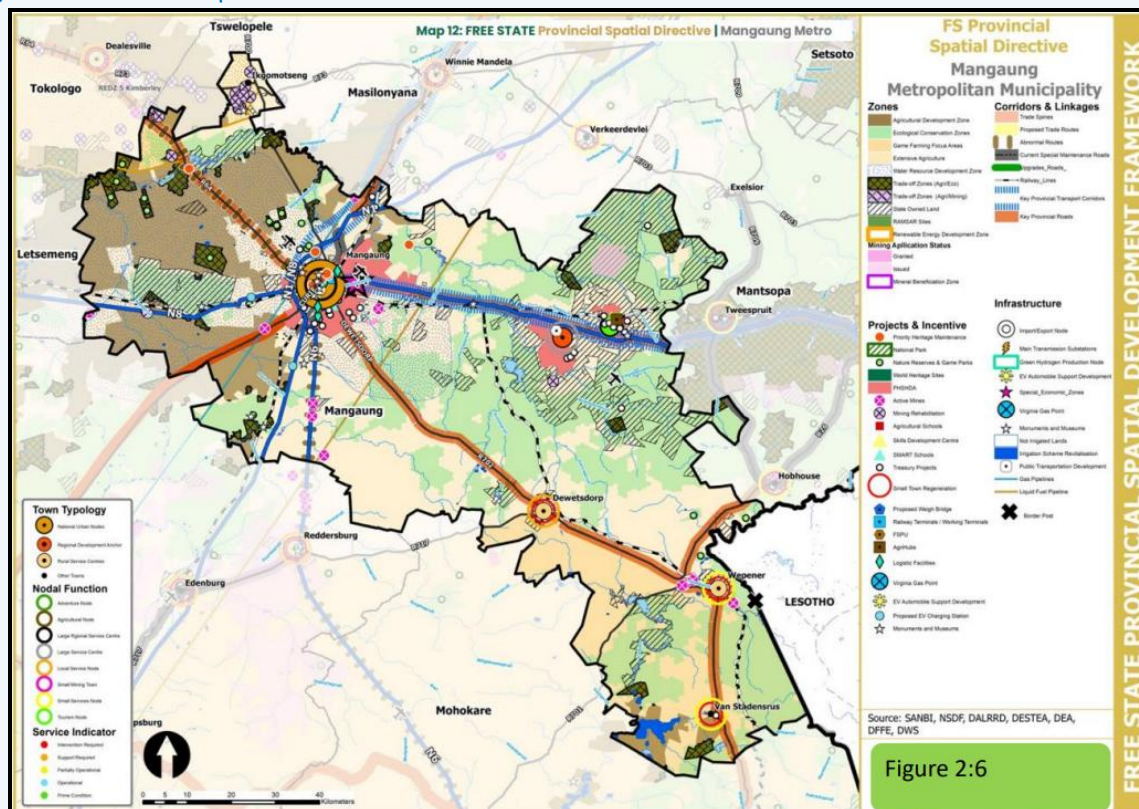


Figure 6: Free State Provincial Spatial Directive

(c) Integrated Development Plan (IDP) and Spatial Development Framework (SDF) of the Local Municipality (e.g. would the approval of this application compromise the integrity of the existing approved and credible municipal IDP and SDF?).	YES	NO	Please explain
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The approval of this application will not compromise the integrity of the existing IDP or SDF of Mangaung Metropolitan Municipality. Instead, the proposed development is aligned with and supportive of the strategic objectives contained within these planning instruments. The construction of the proposed pipeline is consistent with the core development priorities of the Municipal IDP, particularly those relating to improved service delivery, infrastructure development, and the facilitation of sustainable economic growth. The IDP identifies service delivery enhancement as a key priority area, aimed at strengthening municipal infrastructure and ensuring reliable access to essential services.

In this context, the proposed pipeline will directly contribute to improved water supply reliability and increased potable water security for the northern areas of Bloemfontein, specifically Ward 44. This

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supports the municipality's objective of addressing existing infrastructure constraints and meeting current and future demand. Furthermore, the development aligns with the SDF's intent to support the orderly expansion and upgrading of municipal services within existing and planned urban growth areas. The infrastructure will reinforce the spatial development objectives by improving bulk service capacity in areas identified for consolidation and service enhancement.

Overall, the proposed project is not in conflict with the IDP or SDF, but rather represents an enabling infrastructure intervention that supports their implementation and long-term municipal development goals.

(d) Approved Structure Plan of the Municipality	YES	NO	Please explain
The proposed development is aligned with the Municipality's Approved Structure Plan, which is currently reflected in the Metropolitan Spatial Development Framework (MSDF) and Integrated Development Plan (IDP) in accordance with the Spatial Planning and Land Use Management Act (SPLUMA). The MSDF provides strategic guidance for spatial growth, infrastructure investment, and the efficient provision of municipal services. The proposed pipeline supports these objectives by strengthening bulk water infrastructure and improving service delivery capacity within the municipal area.			
(e) An Environmental Management Framework (EMF) adopted by the Department (e.g. Would the approval of this application compromise the integrity of the existing environmental management priorities for the area and if so, can it be justified in terms of sustainability considerations?)	YES	NO	Please explain
It is uncertain whether an Environmental Management Framework (EMF) applicable to the project area has been formally adopted by the relevant MEC in terms of the National Environmental Management Act (NEMA) and associated EIA Regulations. The Environmental Screening Tool Report for the proposed development does not identify any interaction with an adopted EMF. It is therefore assumed that no adopted EMF currently applies to the project area for environmental decision-making purposes. Accordingly, the approval of the proposed development is not anticipated to compromise the integrity of any adopted Environmental Management Framework. Environmental sensitivities associated with the project area have nevertheless been identified and assessed through the specialist studies undertaken as part of the Environmental Impact Assessment process. Appropriate mitigation measures will be implemented to avoid, minimise, and manage potential impacts on ecological features, watercourses, and other sensitive environmental receptors, thereby ensuring compliance with applicable environmental legislation and sustainable development principles.			
(f) Any other Plans (e.g. Guide Plan)	YES	NO	Please explain
N/A			

3. Is the land use (associated with the activity being applied for) considered within the timeframe intended by the existing approved SDF agreed to by the relevant environmental authority (i.e. is the proposed development in line with the projects and programmes identified as priorities within the credible IDP)?	YES	NO	Please explain
The proposed development is consistent with the objectives of the Free State Spatial Development Framework (FS PSDF), the Mangaung Metropolitan Municipality (MMM) Integrated Development Plan (MMM LM IDP), and the Mangaung Metropolitan Municipality Spatial Development Plan (MMM LM SDF). The land use and associated activity fall within the planning horizon, infrastructure priorities, and implementation programmes identified in these approved strategic planning instruments.			
4. Does the community/area need the activity and the associated land use concerned (is it a societal priority)? (This refers to the strategic as well as local level (e.g. development is a national priority, but within a specific local context it could be inappropriate.)	YES	NO	Please explain
The community and broader service area have a clear need for the proposed activity, and it aligns with both strategic and local development priorities. At a strategic level, the development supports national and provincial objectives related to improved water security, infrastructure development, and the sustainable provision of basic services. Bulk water infrastructure is widely recognised as a critical enabler of socio-economic development, urban expansion, and public health protection. At a local level, the proposed pipeline addresses existing and anticipated capacity constraints within the municipal water supply network. It will improve the reliability, efficiency, and resilience of potable water distribution, particularly in the northern parts of Bloemfontein, including Ward 44. This is especially relevant in the context of population growth, increased demand, and the need to reduce service interruptions and system inefficiencies. The project also supports municipal priorities outlined in the IDP, which identify service delivery improvement and infrastructure upgrading as key focus areas. In this regard, the development is directly aligned with community needs and municipal service delivery obligations. In conclusion, the activity is considered a societal priority as it contributes to essential service provision, supports sustainable urban development, and enhances long-term water security for the affected communities.			
5. Are the necessary services with adequate capacity currently available (at the time of application), or must additional capacity be created to cater for the development? (Confirmation by the relevant Municipality in this regard must be attached to the final Basic Assessment Report as Appendix I.)	YES	NO	Please explain
At the time of application, the availability of services and existing capacity must be confirmed with the relevant Municipality, and such confirmation will be included in the final Basic Assessment Report as Appendix I.			

Based on preliminary project understanding, the proposed development is primarily aimed at augmenting and improving existing bulk water infrastructure capacity rather than relying solely on surplus capacity within the current system. This indicates that while parts of the existing network may be operational, additional capacity and infrastructure upgrades are required to adequately accommodate the proposed pipeline and to ensure long-term system reliability.

Accordingly, the development is not dependent on fully available spare capacity within the existing municipal services network. Instead, it forms part of a planned infrastructure expansion to address identified capacity constraints and to improve overall water distribution efficiency and resilience.

The Municipality's formal confirmation regarding service capacity and required upgrades will provide definitive verification of the above and will guide final design and implementation requirements.

6. Is this development provided for in the infrastructure planning of the municipality, and if not what will the implication be on the infrastructure planning of the municipality (priority and placement of services and opportunity costs)? (Comment by the relevant Municipality in this regard must be attached to the final Basic Assessment Report as Appendix I.)	YES	NO	Please explain
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The proposed development is fully provided for within the Mangaung Metropolitan Municipality's infrastructure planning framework, specifically the MMM Bulk Water Programme (MBWAP). The project is identified as a priority intervention within the Spatial Development Framework (SDF) and Integrated Development Plan (IDP), which collectively inform and guide the municipality's short-, medium-, and long-term water infrastructure investment strategy.

These statutory planning instruments explicitly recognise the need for the upgrading, augmentation, and replacement of existing bulk water infrastructure in order to improve service delivery, ensure system reliability, and accommodate current and future demand. The proposed development is therefore consistent with these planning directives and forms part of the municipality's strategic infrastructure implementation programme.

In this regard, the development will contribute to strengthening the municipal water supply system by enhancing long-term reliability, operational efficiency, and service continuity. Formal confirmation from the Mangaung Metropolitan Municipality regarding service provision and capacity requirements will be obtained and included as Appendix I in the Final Basic Assessment Report.

7. Is this project part of a national programme to address an issue of national concern or importance?	YES	NO	Please explain
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The proposed development forms part of a broader strategic response to a nationally recognised infrastructure and service delivery challenge, namely the provision of reliable, sustainable, and equitable access to potable water. At a national policy level, the project aligns with the objectives of the National Development Plan (NDP) and associated sector strategies, which prioritise the

expansion, rehabilitation, and sustainability of water infrastructure. These frameworks emphasise the need to improve system capacity, reduce service delivery constraints, and enhance resilience to increasing demand, urbanisation, and climate variability. The proposed development directly supports these objectives through the strengthening of bulk water distribution infrastructure.

In addition, the project is aligned with the objectives of the Mangaung Bulk Water Programme, which is specifically aimed at ensuring the future provision of basic and higher levels of water services in a sustainable and equitable manner. The programme further seeks to address existing service backlogs and to guide the phased short-, medium-, and long-term planning of water sources and distribution infrastructure for Bloemfontein and surrounding areas.

Access to clean water is a constitutionally enshrined basic human right in South Africa. In this context, the provision and maintenance of adequate water infrastructure is a critical governmental responsibility. National-level assessments have further highlighted that the water supply system within the Mangaung Metropolitan Municipality is under significant stress, reinforcing the need for infrastructure upgrades and capacity enhancement. Given Bloemfontein's role as a key administrative and economic centre, ensuring water security extends beyond local service delivery considerations and contributes to broader regional and national socio-economic stability. The proposed development therefore supports a nationally important objective by strengthening essential infrastructure, improving service reliability, and contributing to long-term water security.

8. Do location factors favour this land use (associated with the activity applied for) at this place? (This relates to the contextualisation of the proposed land use on this site within its broader context.)	YES	NO	Please explain
The proposed pipeline route is situated within an area that is functionally and strategically suitable for bulk water infrastructure, as it forms part of an existing and planned municipal service network. The alignment generally follows established transport and service corridors, which is consistent with best-practice infrastructure planning and reduces the need for extensive deviation into undisturbed areas. The proposed development is also located within an area identified in the MMM SDF for water resource development, further confirming its compatibility with the intended spatial planning framework. From an operational and engineering perspective, the location is well-suited to the proposed land use as it facilitates efficient integration with existing and future water supply nodes. This will enhance system reliability, improve hydraulic performance, and support long-term service continuity within the municipal network. Overall, the site is considered suitable for the proposed development, as it effectively balances technical feasibility, alignment with municipal planning objectives, and the ability to implement appropriate environmental management measures.			

9. Is the development the best practicable environmental option for this land/site?	YES	NO	Please explain
The proposed development is considered the best practicable environmental option for the site, based on a balanced assessment of environmental, technical, and planning considerations. The selected pipeline alignment makes use of existing and planned service corridors where feasible, thereby limiting the extent of disturbance to undisturbed land and reducing fragmentation of natural habitats. This approach aligns with good environmental planning principles for linear infrastructure. While portions of the route traverse environmentally sensitive areas such as Ecological Support Areas and regulated watercourse zones, these impacts are typically associated with bulk service infrastructure and can be effectively managed through established mitigation measures. These include refined route alignment, minimisation of the construction footprint, controlled construction methodologies, timing of activities to avoid sensitive periods, and full rehabilitation of disturbed areas. From a comparative perspective, alternative alignments were assessed in terms of environmental sensitivity, engineering feasibility, and service efficiency. The preferred route represents the most suitable balance between minimising environmental impact and ensuring functional, reliable, and sustainable infrastructure provision.			
10. Will the benefits of the proposed land use/development outweigh the negative impacts of it?	YES	NO	Please explain
Overall, the anticipated benefits of the proposed development are expected to outweigh the potential negative impacts, provided that the recommended mitigation measures are effectively implemented during the construction and operational phases of the project. The proposed bulk water pipeline will contribute positively toward improving bulk water supply capacity, enhancing system reliability, and supporting long-term water security for the northern extensions of Bloemfontein and surrounding areas experiencing ongoing growth and increased service demand. The development will therefore provide important socio-economic and infrastructure-related benefits through improved service delivery and support for future residential and commercial expansion. Potential negative impacts are expected to be largely localised, temporary, and manageable in nature. These may include temporary construction-related disturbances such as noise, dust generation, increased traffic, vegetation clearing, soil disturbance, and short-term risks associated with excavation works and pipeline tie-ins. With the implementation of appropriate mitigation measures, including erosion and sediment control, adherence to approved method statements, rehabilitation of disturbed areas, and environmental monitoring, the identified impacts are expected to remain of low to moderate significance.			

11. Will the proposed land use/development set a precedent for similar activities in the area (local municipality)?	YES	NO	Please explain
The proposed development is not anticipated to set an undesirable precedent for similar activities within the local municipality, as the project is infrastructure-specific and intended to address an identified need for bulk water supply within the area. The development is linear in nature and largely follows existing disturbed road reserve corridors, thereby limiting its broader influence on surrounding land uses or future development patterns. However, the development may establish a positive precedent within the municipality by demonstrating the importance of upgrading and maintaining strategic water service infrastructure to ensure long-term service reliability and municipal resilience. In the context of persistent water interruptions and ageing bulk water systems within the Mangaung Metropolitan area, the proposed development highlights the necessity of critical infrastructure renewal to support sustainable service delivery, economic stability, and future investment. Reliable bulk water supply is a key enabler of regional economic activity. By improving the security and efficiency of the metropolitan water distribution system, the project has the potential to enhance investor confidence within Bloemfontein and surrounding growth nodes. This supports broader municipal development objectives by ensuring that industries, businesses, residential areas, and public service institutions are able to operate without prolonged disruptions associated with deteriorating infrastructure. Furthermore, any future similar developments would remain subject to their own independent planning, engineering, and environmental authorisation processes in accordance with applicable legislation and regulatory requirements.			
12. Will any person's rights be negatively affected by the proposed activity/ies?	YES	NO	Please explain
The proposed activity is not expected to negatively affect any person's rights. On the contrary, the project is anticipated to enhance community rights through the improvement of bulk water supply infrastructure and the provision of a more reliable potable water supply to the affected areas. The development supports the constitutional right of access to sufficient water, the right to an environment that is not harmful to health and well-being, and the right to reliable municipal service delivery. By improving the capacity and reliability of the existing bulk water distribution network, the proposed development will contribute positively toward long-term water security and improved living conditions within the area. Temporary construction-related impacts, such as noise, dust generation, traffic disruptions, and increased vehicle movement, may occur during the construction phase. However, these impacts are expected to be short-term, localised, and manageable through the implementation of the mitigation			

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measures contained in the Environmental Management Programme (EMPr) (Appendix G). Overall, the proposed activity is expected to result in a net positive benefit by supporting uninterrupted potable water supply and contributing toward the protection of public health and environmental quality.			
13. Will the proposed activity/ies compromise the “urban edge” as defined by the local municipality?	YES	NO	Please explain
The proposed bulk water pipeline is intended to provide essential water infrastructure to support planned future development in accordance with the local municipality's spatial planning objectives. The pipeline does not alter or compromise the established urban edge but rather facilitates the provision of bulk services to areas identified for future urban expansion through the relevant planning processes.			
14. Will the proposed activity/ies contribute to any of the 17 Strategic Integrated Projects (SIPS)?	YES	NO	Please explain
N/A			
15. What will the benefits be to society in general and to the local communities?	Please explain		
The proposed pipeline development is anticipated to provide significant socio-economic and service delivery benefits to both the local communities and society in general within the Mangaung Metropolitan Municipality (MMM). The project forms part of the broader bulk water infrastructure network intended to improve potable water supply capacity and long-term water security to the northern areas of Bloemfontein, where ongoing residential and commercial growth is increasing pressure on the existing water supply system. The proposed development will contribute positively toward improved municipal service delivery, enhanced public health, and an overall improvement in the quality of life of affected communities through the provision of a more reliable and sustainable potable water supply. Improved water security further supports residential expansion, local economic development, and the continued functioning and future growth of social and economic infrastructure within the area. The project is also anticipated to contribute positively to the local economy of the Mangaung Metropolitan Municipality by supporting future development opportunities associated with the Northern Extensions. The increasing demand for housing and associated infrastructure within these areas serves as a key driver for continued urban growth and economic expansion. During the construction phase, the proposed development is expected to generate temporary employment opportunities, particularly for unskilled and semi-skilled labour from surrounding communities. Employment opportunities may include activities related to site preparation, trench excavation, pipe laying, backfilling, traffic control, rehabilitation, and general construction support services. The procurement of local goods and services during construction may also provide indirect economic benefits to local businesses and service providers.			

16. Any other need and desirability considerations related to the proposed activity?	Please explain
Yes. The proposed project presents additional need and desirability considerations, particularly in relation to socio-economic development, infrastructure strengthening, and local economic stimulation within the Mangaung Metropolitan Municipality. The construction phase of the project is expected to create temporary employment opportunities for local communities, particularly for unskilled and semi-skilled labour. Employment opportunities may include general construction labour, trench excavation, pipe laying, vegetation clearing, transportation services, pipe handling, traffic accommodation, rehabilitation activities, and other construction-related support services. These opportunities will provide short-term income generation for local households and contribute toward skills development and local contractor participation. In addition to direct employment, the project is expected to stimulate indirect economic activity through the procurement of construction materials, equipment, fuel, accommodation, and other local goods and services. This may contribute positively toward the growth of local businesses, suppliers, and service providers within the municipality. Furthermore, the strengthening and expansion of bulk water infrastructure is considered essential to support future residential, commercial, and economic development within the northern areas of Bloemfontein. A reliable potable water supply is critical for sustaining economic activity, supporting future investment, and enabling long-term urban growth and service delivery. Overall, the proposed development is considered both needed and desirable, as it supports immediate socio-economic benefits during construction while also contributing toward long-term infrastructure resilience, improved municipal service delivery, and future economic growth opportunities.	
17. How does the project fit into the National Development Plan for 2030?	Please explain
The proposed project aligns closely with the objectives of the National Development Plan (NDP) 2030, particularly those relating to infrastructure development, service delivery, and sustainable economic growth. A central objective of the NDP is to eliminate infrastructure backlogs and ensure universal access to reliable basic services, including potable water. The proposed bulk water pipeline directly supports this objective by improving the capacity, reliability, and efficiency of municipal water supply infrastructure. This contributes to reducing service delivery constraints and strengthening the resilience of water distribution systems. The NDP also emphasises the importance of investment in infrastructure as a catalyst for economic development and job creation. The project supports this goal through both direct and indirect economic benefits, including employment opportunities during the construction phase and improved enabling conditions for local economic activity through enhanced service delivery. In addition, the NDP prioritises sustainable urban development and improved spatial efficiency. The project supports these outcomes by reinforcing existing infrastructure networks, promoting more efficient service delivery within established urban areas, and reducing pressure on	

ageing or constrained systems. Furthermore, the NDP highlights the importance of strengthening local government capacity to deliver services effectively. The proposed development contributes to this objective by upgrading critical municipal infrastructure, thereby enhancing long-term operational efficiency and service continuity.

Overall, the project is consistent with the strategic intent of the NDP 2030, as it supports improved water security, infrastructure development, and sustainable socio-economic development at both local and regional levels.

18. Please describe how the general objectives of Integrated Environmental Management as set out in section 23 of NEMA have been taken into account.

The general objectives of Integrated Environmental Management (IEM) as set out in section 23 of the National Environmental Management Act (NEMA), 1998, have been incorporated into the planning and assessment process for the proposed development. These objectives have informed the decision-making framework to ensure that environmental considerations are integrated into all phases of project development.

In this regard, the following key elements of Section 23 of NEMA have been addressed:

-  The Environmental Impact Assessment (EIA) process for listed activities is being undertaken in accordance with the 2014 EIA Regulations.
-  An application for Environmental Authorisation will be submitted to the Department of Economic, Small Business Development, Tourism and Environmental Affairs (DESTEA) together with this Basic Assessment Report (BAR).
-  Baseline environmental studies and specialist assessments have been conducted to inform the impact assessment process.
-  A Draft BAR has been compiled, incorporating the findings of the assessments and identifying potential environmental impacts associated with the proposed development.
-  The Draft BAR will be submitted to the competent authority for review, consideration, and potential amendment requirements.
-  The Final BAR will subsequently be submitted for decision-making by the competent authority.
-  An Environmental Management Programme (EMPr), containing mitigation and management measures to minimise potential environmental impacts, is included as Appendix G to the BAR.
-  Interested and Affected Parties (I&APs) have been identified and notified of the proposed development through public notices, site notices, and written correspondence.
-  I&APs will be provided with the opportunity to register and submit comments on the Draft BAR once acknowledgement of receipt has been obtained from the competent authority.
-  The Final BAR will be made available to registered I&APs for review and reference.

Furthermore, the assessment process has been undertaken by trained and competent Environmental Assessment Practitioners, supported by independent specialists, to ensure that all potential environmental impacts have been adequately identified, assessed, and documented in compliance with the NEMA 2014 EIA Regulations. A structured Public Participation Process has been implemented to ensure transparency and to provide Interested and Affected Parties with sufficient opportunity to engage with the process and provide input on the proposed development and associated assessment documentation.

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

The principles of environmental management as set out in Section 2 of the National Environmental Management Act (NEMA), 1998, provide the overarching framework for environmental decision-making in South Africa. These principles have been applied throughout the assessment and planning process for the proposed development to ensure that it is implemented in a manner that is socially, environmentally, and economically sustainable.

A comprehensive Basic Assessment process was undertaken to identify, predict, and evaluate potential biophysical, socio-economic, and cultural heritage impacts associated with the development. This process included the use of national screening tools, spatial datasets, and relevant environmental sensitivity mapping to inform project planning and design. Specialist studies were commissioned where required, including:

-  Aquatic assessment
-  Terrestrial ecology assessment
-  Heritage assessment

These studies were used to adjust the proposed design, identify sensitive areas (e.g., watercourses, heritage resources, high-value vegetation), and propose mitigation measures. This ensured:

-  Avoidance and minimisation of ecosystem disturbance and biodiversity loss
-  Avoidance or minimisation of impacts on heritage resources
-  Use of a risk-averse, evidence-based approach in areas with uncertainty
-  Protection of vulnerable ecological features

The project applied the mitigation hierarchy, Avoid, Minimise, Rehabilitate, Compensate, throughout the assessment:

-  Avoidance: The development will be developed within an existing transformed area, avoiding new disturbance and ecologically sensitive areas as far as practically possible.
-  Minimisation: Where avoidance is not feasible (e.g., encroaching wetlands), impacts are minimised through construction method controls, timing restrictions, erosion protection, and rehabilitation plans.
-  Rehabilitation: The EMPr requires disturbed areas to be rehabilitated to pre-construction condition.

A legally compliant, transparent public participation process will be undertaken, allowing I&APs to register, review the Draft BAR, and submit comments. This process ensures:

-  Meaningful engagement with surrounding landowners, communities, NGOs, and affected stakeholders
-  Transparency regarding project risks, alternatives, and mitigation
-  Documentation of all comments and demonstration of how they were considered in decision-making will be presented in the Final BAR.

This fulfils NEMA's requirement that people must be able to participate in environmental governance. The applicant has a legal duty of care to prevent pollution and environmental degradation. This is demonstrated through:

-  Commitment to implementing the EMPr
-  Clear spill-response procedures, waste management protocols, and erosion controls
-  Appointment of an Environmental Control Officer (ECO) to ensure compliance
-  Internalisation of environmental costs (polluter-pays principle), including rehabilitation costs and mitigation responsibilities

The project ensures that current communities receive a reliable water supply while preventing unnecessary environmental harm that could disadvantage future generations. Access to clean, reliable water is a fundamental human right, and maintaining this system protects the welfare of current and future users.

By avoiding new disturbances, integrating specialist input, adopting a risk-averse approach, ensuring transparent public participation, applying the mitigation hierarchy, and adhering to a strict duty of care, the proposed development fully complies with and gives effect to the environmental management principles outlined in Section 2 of NEMA.

11. APPLICABLE LEGISLATION, POLICIES AND/OR GUIDELINES

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

Title of legislation, policy or guideline	Applicability to the project	Administering authority	Date
The Constitution of South Africa Act, 1996 (Act No. 108 of 1996).	The applicant must ensure that the construction or operation of the proposed development adheres to the Constitution. To comply with constitutional requirements, the proponent should guarantee that no pollution or ecological degradation results from the development and should adopt environmentally sustainable practices. The Environmental Management Plan (Appendix G) outlines stringent mitigation measures designed to prevent and minimise potential adverse impacts.	Minister for Justice and Constitutional Development	1996
National Environmental Management Act (NEMA), 1998 (Act No. 107 of 1998)	This Act serves as the foundation for Environmental Governance in South Africa, establishing key principles for decision-making on environmental issues. It mandates that certain listed activities obtain environmental authorisation before proceeding. Consequently, the proposed development has	Free State Department of Small Business Development, Tourism and Environmental Affairs (DESTEA)	1998

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	triggered the requirement to apply for Environmental Authorisation for the identified activities		
NEMA Environmental Impact Assessment (EIA) Regulations	These regulations outline procedures for conducting Environmental Impact Assessments (EIAs), including assessment processes and public participation. The regulations categorise activities into Listing Notices that specify the required level of assessment. In the case of the proposed development, activities identified in Listing Notice 1 and Listing Notice 3 have been activated. Consequently, a Basic Assessment Process will be undertaken to secure Environmental Authorisation.	Free State Department of Small Business Development, Tourism and Environmental Affairs (DESTEA)	1998
The National Water Act, 1998 (Act No. 36 of 1998).	The development impedes watercourses, triggering Section 21(c) and 21(i) water uses. A Water Use Licence Application (WULA) must therefore be submitted for authorisation of watercourse crossings, disturbance of beds and banks, and associated construction activities.	Department of Water and Sanitation (DWS).	1998
The National Heritage Resources Act (Act 25 of 1999)	This Act requires that a Heritage Impact Assessment be conducted. Refer to Appendix D for the complete Heritage Impact Assessment Report.	South African Heritage Resources Agency (SAHRA)	1999
National Environmental Management: Biodiversity Act (NEMBA), 2004 (Act 10 of 2004)	Ensures the protection of threatened ecosystems, species, and biodiversity-sensitive areas. Any interaction with protected species or listed invasive species must comply with NEMBA requirements.	Department of Forestry, Fisheries and the Environment (DFFE)	2004
National Protected Areas Expansion Strategy (2008) (NPAES)	The National Protected Areas Expansion Strategy (NPAES) for South Africa outlines objectives for expanding protected areas, identifies potential sites for this expansion, and recommends mechanisms to facilitate it. According to the National	Department of Forestry, Fisheries and the Environment (DFFE)	2009

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	Environmental Management: Protected Areas Act (NEM:PAA), protected areas recognised by the NPAES are classified as 'formal' protected areas. Additionally, the NPAES categorises 'National Parks,' 'informal protected areas,' and 'focus areas.' The proposed development occurs in close proximity to NPEAS Priority Focus Areas.		
National Environmental Management: Protected Areas Act (Act 57 of 2003) (NEM:PAA)	The National Protected Areas Expansion Strategy (NPAES) for South Africa outlines objectives for expanding protected areas, identifies potential sites for expansion, and recommends mechanisms to facilitate this expansion. According to the National Environmental Management: Protected Areas Act (NEM:PAA), protected areas recognised by the NPAES are classified as 'formal' protected areas. Additionally, the NPAES categorises 'National Parks,' 'informal protected areas,' and 'focus areas.'	Department of Forestry, Fisheries and the Environment (DFFE)	2003
Conservation of Agricultural Resources Act, Act No. 43 of 1983 (CARA)	The purpose of this Act is to ensure that the natural agricultural resources of South Africa are conserved by maintaining the land's production potential, combating and preventing erosion, preventing the weakening or destruction of water sources, protecting vegetation, and combating weeds and invasive plants. As part of the BA process, recommendations will be made to implement measures to maintain the surrounding land's agricultural production, prevent soil erosion, and protect any water bodies and natural vegetation on the site.	Department of Agriculture, Land Reform and Rural Development (DALRRD)	1983

12. WASTE, EFFLUENT, EMISSION AND NOISE MANAGEMENT**a) Solid waste management**

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

YES**NO**

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

1-5 m³

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

Minimal construction waste is anticipated during the pipeline construction phase. General construction waste generated during the activity will be managed in accordance with the approved EMP and applicable municipal waste management bylaws.

Construction waste will be collected daily to maintain a clean, safe, and organised worksite. All waste materials will be placed in designated waste skips or bins located at established construction laydown areas to facilitate efficient waste handling and storage. Waste will be separated at source into distinct waste streams to maximise recycling opportunities and minimise the amount of waste disposed of at landfill facilities.

Recyclable materials, including scrap metal, plastics, wood, and other recyclable items, will be separated and transported to registered recycling facilities. Non-recyclable waste will be placed in designated waste containers for disposal at authorised landfill facilities. No waste will be stockpiled, buried, dumped, or burned on-site. All waste disposal and transportation activities will be undertaken by licensed waste management contractors using appropriate tipper or skip trucks. Waste will only be disposed of at operational and legally permitted landfill or waste disposal facilities that comply with relevant environmental legislation and standards. Transportation of waste will be undertaken in a manner that prevents spillage, pollution, or contamination during transit.

Through the implementation of these measures, the proposed development aims to ensure environmentally responsible waste management practices throughout the construction phase.

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

The construction waste that cannot be recycled into the project will be disposed of at the nearest licensed landfill facility.

Will the activity produce solid waste during its operational phase?

YES**NO**

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

m³

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

N/A

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

N/A

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

N/A

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

Can any part of the solid waste be classified as hazardous in terms of the NEM:WA? ☐ YES ☒ NO

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

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

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

b) Liquid effluent

Will the activity produce effluent, other than normal sewage, that will be disposed of in a municipal sewage system? ☐ YES ☒ NO

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

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

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

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:	N/A		
Contact person:	N/A		
Postal address:	N/A		
Postal code:	N/A		
Telephone:	N/A	Cell:	N/A
E-mail:	N/A	Fax:	N/A

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

Minimal wastewater is anticipated to be generated during the construction phase of the proposed development. To ensure the optimal reuse and recycling of wastewater, greywater will be reused wherever practicable for non-potable activities such as equipment washing, vehicle cleaning, and dust suppression, thereby reducing the demand for potable water resources.

The primary activity likely to generate wastewater is cement mixing and associated equipment cleaning. Water used during cement mixing will be carefully measured to minimise the generation of excess contaminated water. In addition, water used to clean tools and equipment contaminated with cement will be collected and reused, where possible, in subsequent cement mixing activities.

Any remaining wash water that cannot be reused will be contained within a broad-based collection container to allow suspended cement particles to settle out. Once settlement has occurred, the clarified water will be decanted into the municipal sewage system, subject to municipal requirements and approvals, while the remaining cementitious sludge will be disposed of at a licensed landfill facility in accordance with the requirements of the National Environmental Management: Waste Act (NEM:WA).

No wastewater will be discharged directly into the natural environment, including surrounding soils, drainage lines, or watercourses. All wastewater management measures will be implemented in accordance with the approved EMP and applicable municipal by-laws to prevent pollution and ensure environmentally responsible construction practices.

c) Emissions into the atmosphere

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

YES	NO
YES	NO

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

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

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

During the construction phase, temporary and localised air quality impacts may arise from vegetation clearing, trench excavation, stockpiling of excavated material, and the movement of construction vehicles and machinery along access roads and the pipeline servitude. The primary air quality impact is expected to be the generation of nuisance dust, particularly during dry and windy conditions.

If not appropriately managed, dust emissions may affect nearby receptors. However, these impacts are anticipated to be short-term, localised, and of low significance. Effective mitigation can be achieved through the implementation of standard dust control measures, including the wetting of exposed surfaces where necessary, restricting vehicle speeds on unpaved roads, and rehabilitating disturbed areas as soon as practicable following construction activities.

Minor exhaust emissions from construction vehicles and equipment will also occur; however, these emissions are expected to be temporary and negligible within the context of the receiving environment.

During the operational phase, the proposed buried pipeline will not generate atmospheric emissions.

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As such, no significant air quality impacts are anticipated once construction activities have been completed.

d) Waste permit

Will any aspect of the activity produce waste that will require a waste permit in terms of the NEM:WA?

YES

NO

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

e) Generation of noise

Will the activity generate noise?

YES

NO

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

YES

NO

Describe the noise in terms of type and level:

During the construction phase, noise will be generated primarily by diesel-powered construction equipment, light and heavy-duty vehicles, and on-site construction activities associated with trenching, earthworks, pipe laying, and backfilling operations. Typical noise sources will include excavators, graders, compaction equipment, tipper trucks, and hand-held tools. Noise impacts will be localised to the immediate vicinity of active work areas and will decrease rapidly with distance. At greater distances from the construction corridor, noise levels are expected to attenuate to background or near-background levels, depending on topography and intervening features. The impacts will be temporary in nature, occurring only during the active construction period. To minimise disturbance, construction activities will be restricted to standard daytime working hours (07:00–17:00) in accordance with the EMPr and applicable municipal requirements. This scheduling reduces potential disturbance to nearby sensitive receptors, including surrounding farmsteads and ecological areas.

No continuous or operational noise sources are anticipated once construction is complete. During the operational phase, the infrastructure will not generate any significant noise, with only negligible, short-duration noise potentially arising during periodic maintenance activities involving light vehicles or equipment. Overall, construction-related noise will be temporary, localised, and manageable through standard mitigation measures, including controlled working hours, proper maintenance of equipment to prevent excessive noise emissions, and adherence to EMPr requirements, thereby ensuring compliance with applicable environmental and municipal noise standards.

13. WATER USE

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

☒ Municipal	☐ Water board	☐ Groundwater	☐ River, stream, dam or lake	☐ Other	☐ The activity will not use water
--	---	---	--	---	---

If water is to be extracted from groundwater, river, stream, dam, lake or any other natural feature, please indicate the volume that will be extracted per month:

litres

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

YES

NO

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

14. ENERGY EFFICIENCY

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

The proposed development does not entail activities that are anticipated to utilise a great amount of electricity; however, diesel will be required for the operation of the machinery in the construction of the pipeline.

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

It is not anticipated that the proposed development will entail the utilisation of energy during its operational phase.

SECTION B: SITE/AREA/PROPERTY DESCRIPTION

Important notes:

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

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

A

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

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

YES

NO

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

Property description/physical address:

Province	Free State
District Municipality	Mangaung District Municipality
Local Municipality	Mangaung Metropolitan Municipality
Ward Number(s)	Ward 44
Farm name and number	1. Orlig 1710 2. Wildeaskloof 1205 3. Annex Wildeaskloof 2607 4. Annex Wildeaskloof 2607 Sectional title
Portion number	1. Portion RE 2. Portion 4 3. Portion RE 4. Portion 7
SG Code	1. F00300000000171000000 2. F00300000000120500004 3. F00300000000260700000 4. F00300000000260700007

Where a large number of properties are involved (e.g. linear activities), please attach a full list to this application including the same information as indicated above.

Current land-use zoning as per local municipality IDP/records:

Farms.

In instances where there is more than one current land-use zoning, please attach a list of current land use zonings that also indicate which portions each use pertains to, to this application.

Is a change of land-use or a consent use application required?

YES

NO

BASIC ASSESSMENT REPORT

1. GRADIENT OF THE SITE

Indicate the general gradient of the site.

Alternative S1:

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

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

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

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

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

3. GROUNDWATER, SOIL AND GEOLOGICAL STABILITY OF THE SITE

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

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

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

4. GROUNDCOVER

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

Natural veld - good condition^E	Natural veld with scattered aliens^E	Natural veld with heavy alien infestation^E	Veld dominated by alien species^E	Gardens
Sport field	Cultivated land	Paved surface	Building or other structure	Bare soil

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

5. SURFACE WATER

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

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

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

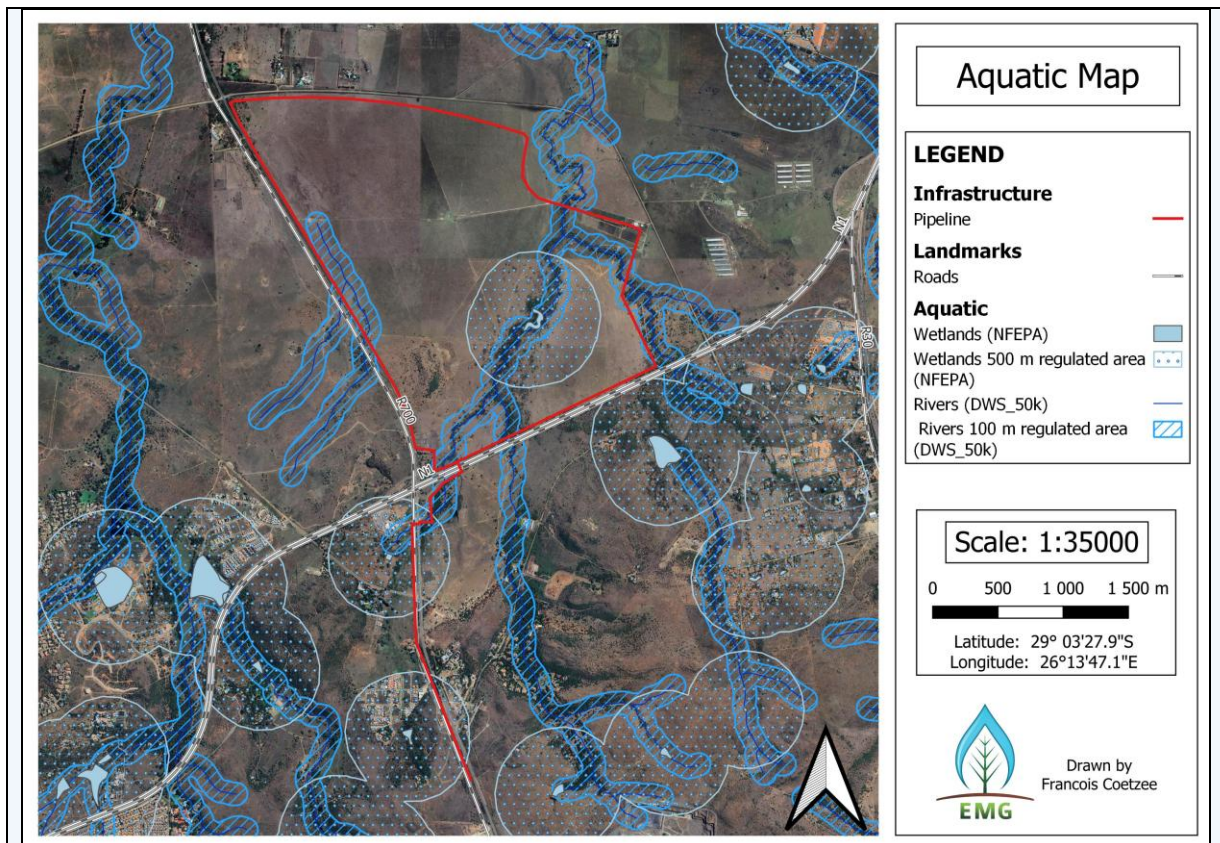


Figure 7: Aquatic map for the proposed development.

Yes. Several watercourses occur within or in close proximity to the proposed development footprint. These comprise predominantly non-perennial natural drainage lines, including a number of first-order watercourses and several higher-order seasonal streams. In addition, an artificially established wet area associated with altered drainage patterns, stormwater runoff, and sewage discharge occurs adjacent to portions of the southern section of the pipeline route. Five non-perennial watercourses are traversed by the proposed development footprint, as can be seen in Figures 7 and 8.

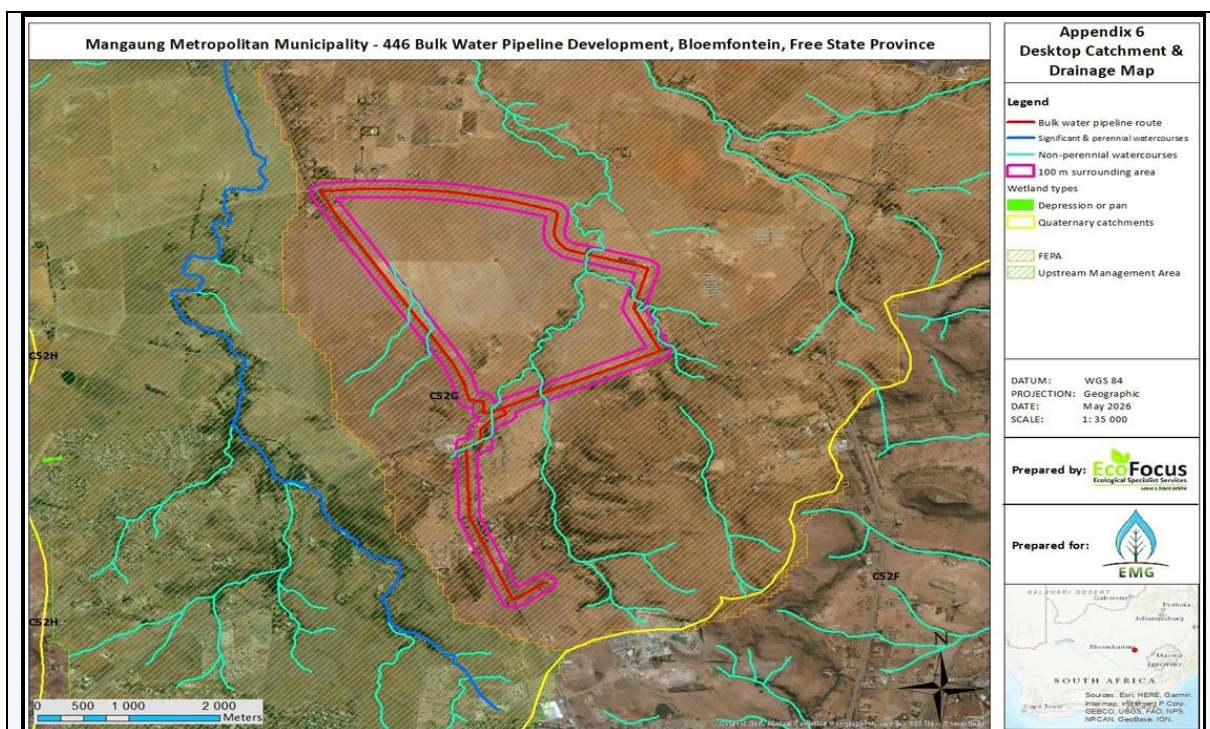


Figure 8: Catchment and drainage map for the proposed development.

A small depression wetland is also located within 100 m of the central section of the proposed development footprint. According to the aquatic specialist assessment, the wetland and watercourses are not considered to be significantly affected by the proposed development and are exempt from requiring a detailed aquatic assessment and Water Use Licence Application (WULA) Risk Assessment Matrix.

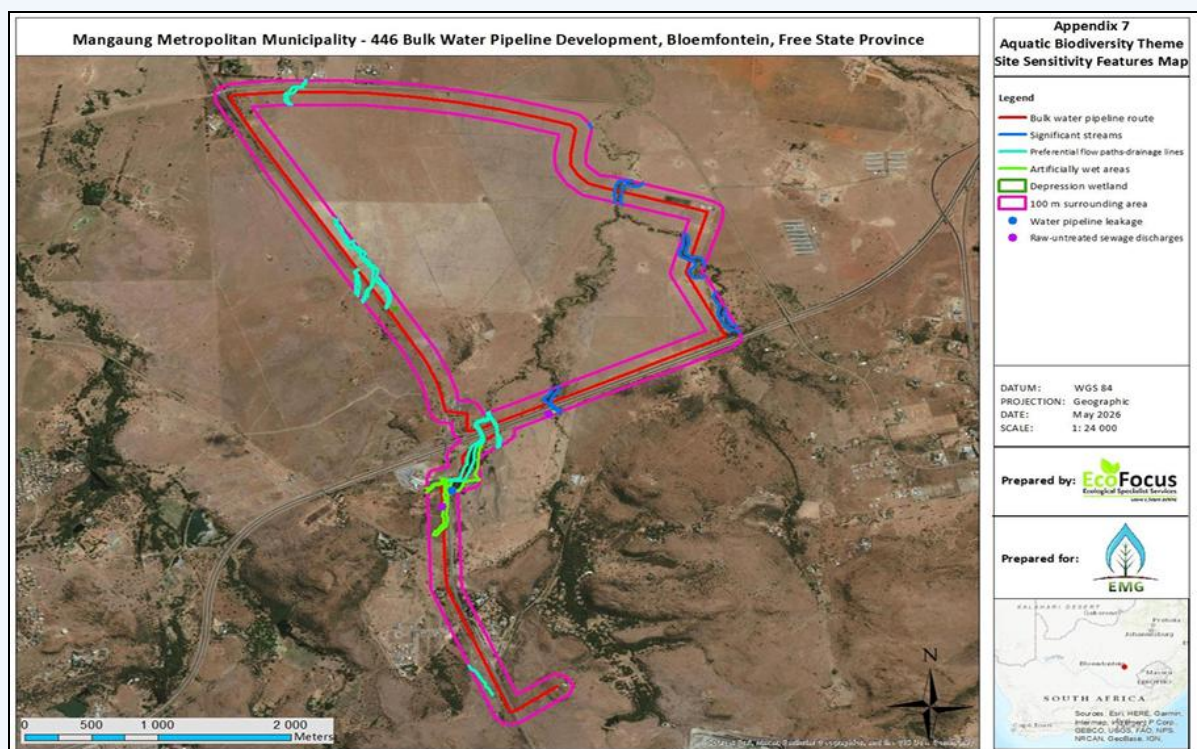


Figure 9: Map from the aquatic specialist indicating the aquatic ecological features.

The proposed pipeline will be installed underground and will result in a narrow, linear disturbance footprint during construction. Potential impacts on watercourses are expected to be temporary and localised, primarily associated with trench excavation and construction activities at crossing points. No significant alteration of flow regimes, wetland functioning, or aquatic habitat integrity is anticipated. Following construction, disturbed areas will be rehabilitated, and no long-term impacts on the identified watercourses are expected.

Further details regarding the identified watercourses, their characteristics, and the assessment findings are provided in the Aquatic Biodiversity Impact Assessment.

6. LAND USE CHARACTER OF SURROUNDING AREA

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

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

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

The proposed bulk water pipeline will cross the N1 by utilising an existing culvert beneath the roadway. Construction activities in the vicinity of the N1 may result in temporary dust generation, increased noise levels, and the movement of construction vehicles. These impacts will be localised, short-term, and managed through the implementation of appropriate mitigation measures, including dust suppression, regular maintenance of construction equipment, and adherence to designated working hours. Appropriate traffic management measures will be implemented where required to ensure the safe and efficient movement of road users during construction. The pipeline will be installed within an existing culvert, avoiding excavation of the road carriageway and minimising disruption to traffic and road infrastructure. No significant long-term impacts on the operation or integrity of the N1 are anticipated following completion of construction.

BASIC ASSESSMENT REPORT

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

N/A

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

A filling station is located within 500 m of the proposed pipeline route. Construction activities may result in temporary dust generation, increased noise levels, and the movement of construction vehicles in the vicinity of the filling station. These impacts will be localised, short-term, and managed through the implementation of appropriate mitigation measures, including dust suppression, maintenance of construction equipment, and adherence to designated working hours. Access to the filling station will be maintained throughout construction by implementing suitable traffic management measures where required. No significant long-term impacts on the filling station or its operations are anticipated following completion of the pipeline installation.

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

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

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

7. CULTURAL/HISTORICAL FEATURES

Are there any signs of culturally or historically significant elements, as defined in section 2 of the National Heritage Resources Act, 1999, (Act No. 25 of 1999), including Archaeological or paleontological sites, on or close (within 20m) to the site? If YES, explain:

YES

NO

Uncertain

A Phase 1 Palaeontological and Heritage Impact Assessment was undertaken for the proposed pipeline. Two stone-built gateway pillars were recorded adjacent to an unpaved access track connecting a modern homestead to the R700 public road. These features may predate the current peri-urban landscape and are located approximately 16 m east of the bulk pipeline footprint. The identified historical homestead cluster and the stone-built gateway pillars were assessed as being of Local Significance (Grade 3A) and Generally Protected (GP A), respectively. **Both heritage resources are situated outside the direct pipeline footprint and will not be directly affected by the proposed development.**

If uncertain, conduct a specialist investigation by a recognised specialist in the field (archaeology or palaeontology) to establish whether there is such a feature(s) present on or close to the site. Briefly explain the findings of the specialist:

N/A

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

YES

NO

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

YES

NO

If YES, please provide proof that this permit application has been submitted to SAHRA or the relevant provincial authority.

8. SOCIO-ECONOMIC CHARACTER

a) Local Municipality

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

Level of unemployment:

The level of unemployment within the Mangaung Metropolitan Municipality (MMM) has fluctuated over the past decade and remains a significant socio-economic challenge. The most recent data indicates a rate of 28.2% in Quarter 4 of 2024. Throughout 2024, unemployment levels were reported to have fluctuated up to 30.1%, reflecting continued economic instability. Earlier estimates show a similar trend: in 2018, unemployment stood at 27.1%, approximately 1.8 percentage points higher than the 25.3% recorded in 2011. Youth unemployment remains a structural concern, with indicators showing a youth unemployment rate of approximately 24%.

Historically, Census 2011 data revealed that 16% of the working-age population (15–64 years) in the major urban centres of Bloemfontein, Botshabelo, and Thaba Nchu were unemployed, compared to 12% in the smaller towns of Dewetsdorp, Wepener, and Vanstadensrus. Fluctuations continued in subsequent years, with unemployment recorded at 22.8% in 2015, increasing to 34.5% in 2016, and later declining slightly to 32.5% during the COVID-19 period in 2020.

Economic profile of local municipality:

MMM serves as the administrative and economic nucleus of the Free State Province. Its economic profile is characterised by resilience and diversity in the service sector, alongside persistent challenges of inequality, unemployment, and ageing infrastructure.

The municipality is the largest economic contributor in the province, accounting for approximately 40% of provincial GDP and 2% of national GDP. In terms of Gross Value Added (GVA), the metropolitan economy is dominated by the tertiary sector (services and trade), which contributes 87.3%, while the secondary sector contributes 9.0% and the primary sector 3.7% (refer to Figure 13). Over a 10-year period, the metropolitan economy showed overall GDP growth; however, it experienced a negative growth rate of approximately -4.9% in 2020 due to the impacts of COVID-19, which significantly affected sectors such as agriculture and trade.

MMM continues to face substantial socio-economic challenges, with unemployment remaining persistently high. The BEPP report of MMM discussed the income profile of the entire Metro, but this data was based on the 2011 census. It revealed that 61% of all households earn less than R 3 500 per

month, which aligns with the government's threshold for subsidised housing. The average income in Bloemfontein/Mangaung is R 10 921 per month, approximately three times higher than in nearby towns Botshabelo and Thaba Nchu (R 3 509 per month).

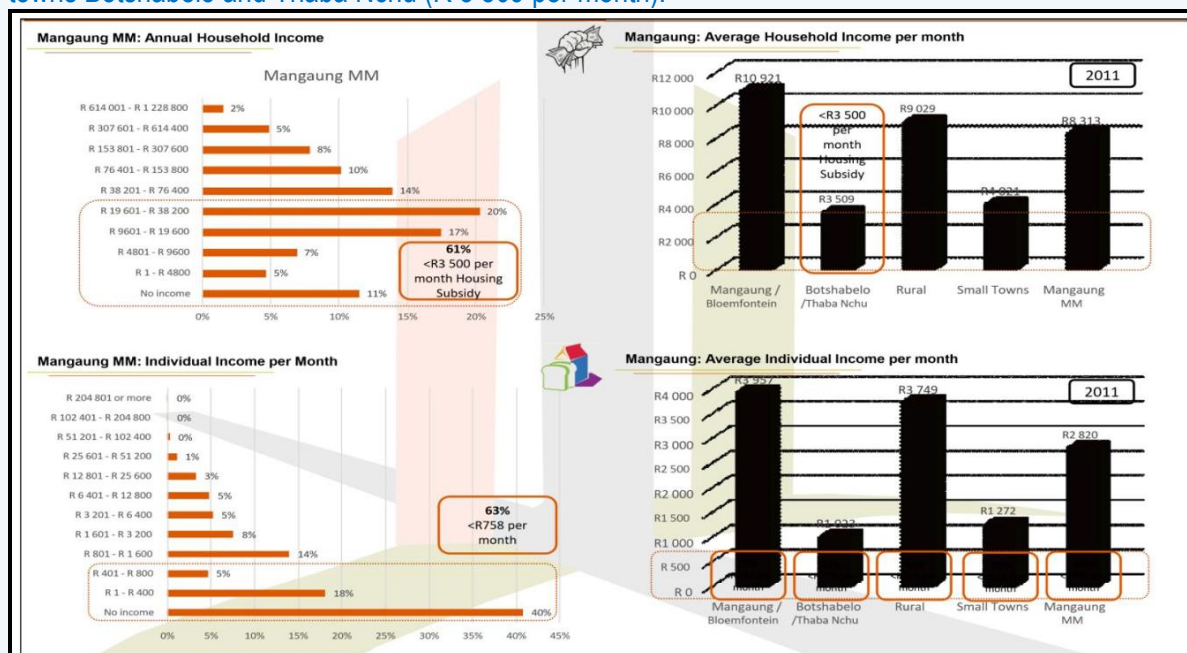


Figure 10: MMM Income Graphical representation based on 2011 consensus data

Economically, MMM is heavily dependent on the tertiary sector for employment, which accounts for approximately 82% of jobs across community services, trade, finance, and household services. This dominance is supported by the presence of provincial government headquarters, three higher education institutions, and major healthcare facilities. The secondary sector contributes approximately 14% of employment, primarily through construction (7%) and manufacturing (6%), while the primary sector contributes the least, with agriculture accounting for approximately 3% of total employment, largely driven by crop farming, which constitutes over 67% of agricultural activity.

Tourism accounted for 5.8% of the workforce and 6.4% of GVA in 2019. It is regarded as a priority sector due to the region's cultural heritage assets, tourism infrastructure (including the National Museum), and its status as the judicial capital of South Africa.

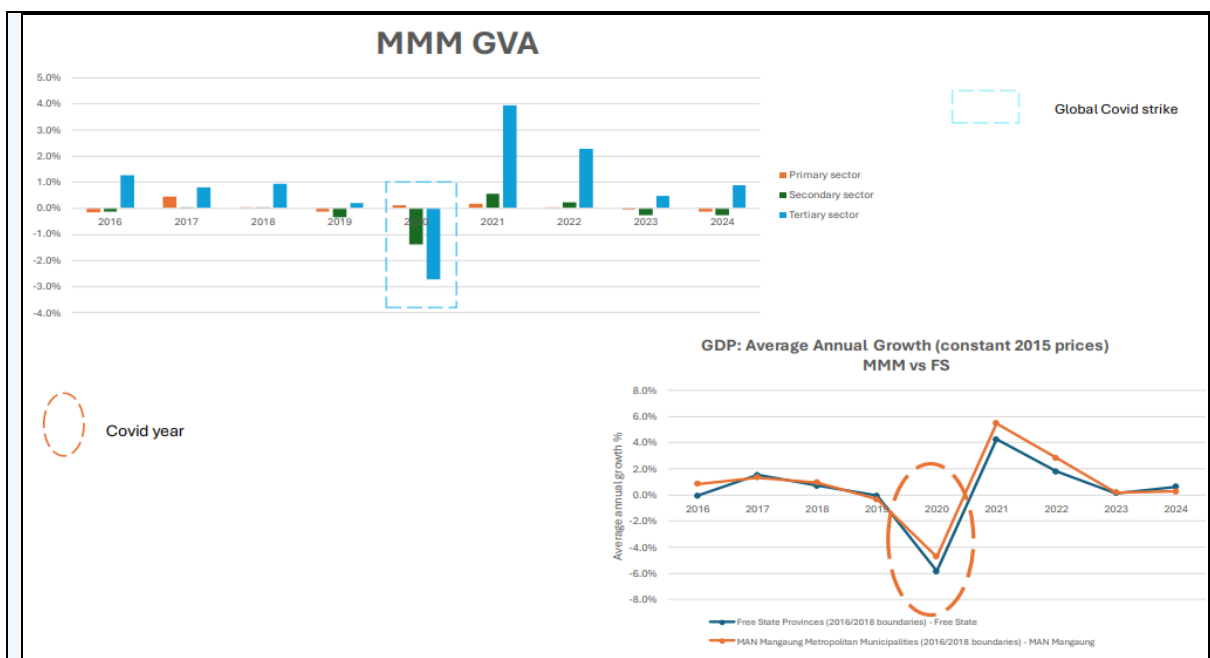


Figure 11: Gross Value Added (GVA) Trends by Sector in the Mangaung Metropolitan Municipality (MMM), 2016–2024.

The spatial structure of MMM reflects the complexities of a dual rural–urban economy. Persistent spatial fragmentation continues to reinforce inequality, with large settlements such as Botshabelo and Thaba Nchu located far from Bloemfontein, the metropolitan core. These areas rely heavily on Bloemfontein for employment, resulting in high commuter volumes, including approximately 13,000 daily commuters along the N8 corridor. The job-to-household ratio reflects a significant spatial-economic imbalance, with Botshabelo and Thaba Nchu recording 2.8 households per job. Infrastructure deterioration further constrains economic performance, including ageing ICT infrastructure, unreliable water supply systems, and frequent electricity interruptions, all of which limit private-sector investment. High unemployment simultaneously places pressure on the municipality's financial position, increasing the municipal debt burden and the need for provisions for bad debt.



Figure 12: MMM's SDF presents an economic profile, which includes four detailed graphs illustrating labour prices from

The municipality's strategy aims to boost economic development. The Economic Development Strategy and Investment Plan (approved in May 2024) has the vision: "To create a prosperous, inclusive, and sustainable economy that provides opportunities for all its residents and businesses". (SDF, 2025). The strategy identifies several priority focus areas, including agriculture and agri-processing, business and logistics-based light industry, and tourism development. Key initiatives include the Mangaung Agri Park in Thaba Nchu, intended to stimulate rural agricultural production and support agrarian transformation. The municipality also seeks to drive a Smart City vision through enhanced ICT applications for governance, service delivery, safety, and economic development. Improving investment readiness remains central to the strategy, with measures such as reviewing commercial land availability, strengthening investment facilitation processes, and actively pursuing private-sector investment.

Level of education:

The educational profile of the MMM shows that most adults have attained at least some level of secondary education, with 38% of residents aged 20 years and older having completed Grade 12/Matric, according to the 2022 Census. An additional 32% have achieved partial secondary schooling but did not complete matric. Only a smaller proportion of the population continues into tertiary studies, with about 13–13.5% of adults holding a higher education qualification. Meanwhile, 4.5% of the population still has no formal schooling. This distribution reflects a largely semi-skilled workforce, with limited proportions of highly skilled labour, which, in turn, influences employment prospects, earning potential, and long-term socio-economic development within the municipality.

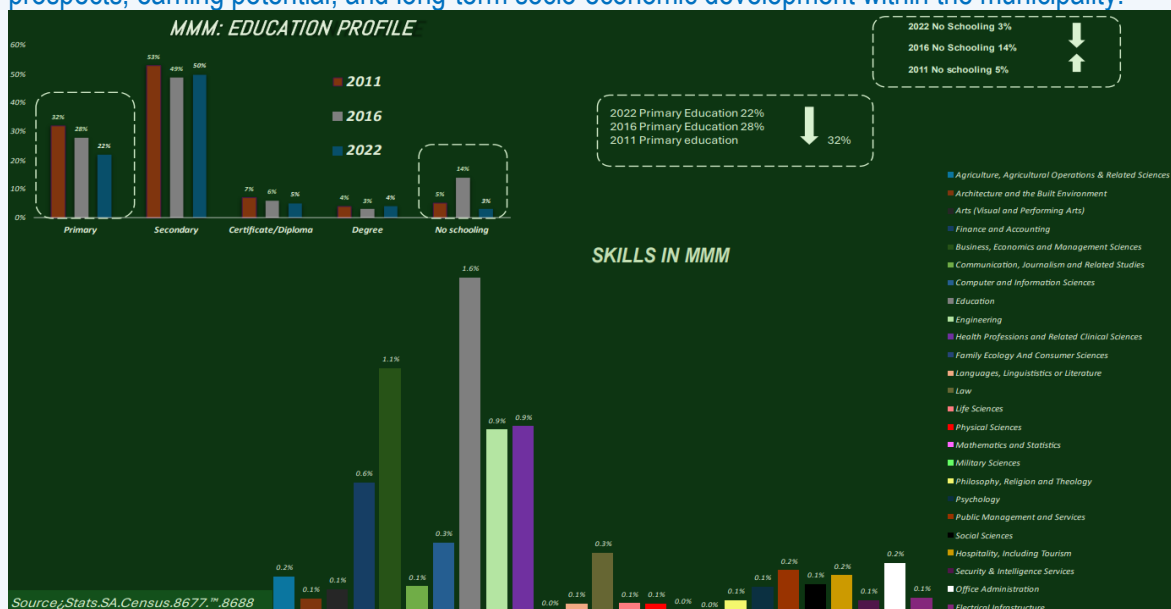


Figure 13: MMM's Education Profile

Among children aged 5 to 24 years, 78% are attending school, while 22% are not (2022 Census). Higher education is considered one of MMM's chief advantages. The city hosts tertiary educational institutions, notably the University of Free State (UFS) and the Central University of Technology (CUT), primarily concentrated in Bloemfontein. A substantial number of students, at least 48,719, reside in and around Bloemfontein to pursue their education.

The municipality shows an acute shortage in skills such as "family ecology and consumer sciences," "mathematics and statistics," and "military sciences" (0.0% of the population). Furthermore, despite being a rural metropolitan, only 0.2% of the population is highly skilled in agriculture and agricultural operations. This educational profile indicates that while Mangaung boasts strong tertiary institutions, a substantial portion of its population possesses secondary or vocational level skills, highlighting the municipal strategy to align tertiary education and skills training with priority economic sectors.

b) Socio-economic value of the activity

What is the expected capital value of the activity on completion?	R95 680 724.59
What is the expected yearly income that will be generated by or as a result of the activity?	N/A
Will the activity contribute to service infrastructure?	YES NO
Is the activity a public amenity?	YES NO
How many new employment opportunities will be created in the development and construction phase of the activity/ies?	Estimate of 40
What is the expected value of the employment opportunities during the development and construction phase?	Not specified, as employment terms and remuneration will be determined by the appointed contractor.
What percentage of this will accrue to previously disadvantaged individuals?	Not specified but local labour will be prioritised.
How many permanent new employment opportunities will be created during the operational phase of the activity?	Unknown at this point
What is the expected current value of the employment opportunities during the first 10 years?	Unknown at this point
What percentage of this will accrue to previously disadvantaged individuals?	Unknown at this point

9. BIODIVERSITY

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

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

Systematic Biodiversity Planning Category				If CBA or ESA, indicate the reason(s) for its selection in biodiversity plan
Critical Biodiversity Area (CBA)	Ecological Support Area (ESA)	Other Natural Area (ONA)	No Natural Area Remaining (NNR)	The study area is situated within Ecological Support Areas (ESA) 1 and ESA 2, as identified in the applicable Free State biodiversity planning framework. ESA 1 areas are generally in a near-natural condition and are important for maintaining ecological and hydrological processes that support the functioning of Critical Biodiversity Areas and protected areas. ESA 2 areas are typically more modified landscapes, including transformed or developed areas, that nevertheless contribute to the maintenance of ecosystem functioning, ecological connectivity, and hydrological processes. These areas continue to provide important ecosystem services despite a higher degree of transformation.

- b) Indicate and describe the habitat condition on site

Habitat Condition	Percentage of habitat condition class (adding up to 100%)	Description and additional Comments and Observations (including additional insight into condition, e.g. poor land management practises, presence of quarries, grazing, harvesting regimes etc).
Natural	<50%	It was noted that, in spite of some disturbances and alterations to the expected vegetation units, the site consists of poor to moderate species richness, with some alien and invasive species occurring.
Near Natural (includes areas with low to moderate level of alien invasive plants)	25%	Mostly minor current negative ecological impacts with some major impacts (e.g., established population of alien and invasive flora) and a few signs of minor past disturbance.
Degraded (includes areas heavily invaded by alien plants)	N/A	N/A
Transformed	20%	Only minor current negative ecological impacts (e.g., few

BASIC ASSESSMENT REPORT

(includes cultivation, dams, urban, plantation, roads, etc)		livestock utilising area) with no signs of major past disturbance (e.g. ploughing) and good rehabilitation potential. Roads are in close proximity to the development such as the N1 and R700.
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c) Complete the table to indicate:

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

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

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

The terrestrial ecological assessment identified three vegetation units (VUs) within the study area.

Vegetation Unit A (VU A) comprises the majority of the site and resembles the Bloemfontein Dry Grassland vegetation type. The vegetation is characterised by a well-developed grass layer dominated by species such as *Themeda triandra*, *Tragus koelerioides* and *Cynodon dactylon*, with a sparse tree and shrub component. This vegetation unit is largely intact, with limited disturbance associated with existing access tracks and historical grazing activities. The ecological condition of VU A is considered to be good and near-natural.

Vegetation Unit B (VU B) occurs along seasonally wet or inundated areas associated with a suspected spring system. This unit contains a more developed woody component and shares characteristics with the Winburg Grassy Shrubland and Bloemfontein Karroid Shrubland vegetation types. The vegetation includes a well-developed tree and shrub layer dominated by species such as *Searsia lancea*, *Vachellia karoo*, *Ziziphus mucronata* and *Olea europaea* subsp. *africana*. The unit represents an important biodiversity feature due to its association with wetland-related habitat and is considered to be in a good ecological condition.

Vegetation Unit C (VU C) occurs adjacent to the R700 road reserve and includes rocky outcrop habitat. The vegetation exhibits characteristics of both Winburg Grassy Shrubland and Bloemfontein Karroid Shrubland and supports a mixture of woody, grassland and succulent species. Due to its proximity to existing infrastructure, this unit displays a greater degree of disturbance and invasion by

alien plant species and is considered to be in a moderately modified ecological condition.

Several alien and invasive plant species were recorded within the study area, including *Datura ferox*, *Datura stramonium*, *Verbena bonariensis*, *Cestrum laevigatum*, *Eucalyptus camaldulensis*, *Pinus pinaster* and *Pyracantha angustifolia*. No threatened plant species were recorded during the assessment. Important biodiversity features identified on site include the near-natural grassland habitat, rocky outcrops, and the spring-associated wet habitat represented by VU B, which contributes to local ecological functioning and habitat diversity.

SECTION C: PUBLIC PARTICIPATION

1. ADVERTISEMENT AND NOTICE

Publication name	Bloem Nuus News Express	
Date published	21 May 2026	
Site notice position	Latitude	Longitude
	29°00'39.3"S	26°13'18.2"E
	29°02'25.7"S	26°13'28.2"E
	29°03'30.3"S	26°13'47.9"E
Date placed	7 May 2026	

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

2. DETERMINATION OF APPROPRIATE MEASURES

Provide details of the measures taken to include all potential I&APs as required by Regulation 41(2)(e) and 41(6) of GN 326

Key stakeholders (other than organs of state) identified in terms of Regulation 41(2)(b) of GN 326

Title, Name and Surname	Affiliation/ key stakeholder status	Contact details (tel number or e-mail address)
Refer to Appendix E – Public Participation Report		

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

- e-mail delivery reports;
- registered mail receipts;
- courier waybills;
- signed acknowledgements of receipt; and/or
- or any other proof as agreed upon by the competent authority.

3. ISSUES RAISED BY INTERESTED AND AFFECTED PARTIES

Summary of main issues raised by I&APs	Summary of response from EAP
Pending 30–Day Public Participation. Comments to be included in the Final BAR.	

4. COMMENTS AND RESPONSE REPORT

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

5. AUTHORITY PARTICIPATION

Authorities and organs of state identified as key stakeholders:

Authority/Organ of State	Contact person (Title, Name and Surname)	Tel No	Fax No	e-mail	Postal address
Refer to Appendix E – Public Participation Report					

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

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

6. CONSULTATION WITH OTHER STAKEHOLDERS

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

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

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

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

SECTION D: IMPACT ASSESSMENT

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

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

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

Activity	Impact summary	Significance	Proposed mitigation
Alternative 1 (preferred alternative)			
Habitat loss	Direct impacts:  Physical clearance of vegetation  Habitat fragmentation leading to edge effects  Trampling  Accidental events such as fire  Loss of protected species	Pre-mitigated: Low Post-mitigated: Low	 Removal of indigenous flora should be kept at a minimum.  No collection of plants other than for holding for use in rehabilitation is allowed.  Disturbance-related activities may only occur in the authorised area.  Vehicle movement should strictly be kept on designated dirt/gravel roads and/or bypasses.  Soil erosion mitigation measures need to be implemented.  Post-development open/barren areas should be revegetated and kept free of exotic plant species.  Vehicles may only move within the demarcated space of the development area.  Any other relevant recommendations listed in this report should be implemented.
	Indirect impacts:  Introduction of alien and invasive species  Soil compaction reducing re-establishment success  Soil erosion  Reduced biodiversity  Disrupted general animal behaviour	Pre-mitigated: Low Post-mitigated: Low	
	Cumulative impacts:  Loss of biodiversity and ecological function	Pre-mitigated: Low Post-mitigated:	

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Activity	Impact summary	Significance	Proposed mitigation
	 Displacement of organism's dependent on vegetation for food and shelter.  Localised ecosystem disruption.	Low	
Loss of ESA's	Direct impacts:  Physical clearance of vegetation  Loss of protected species  Habitat fragmentation  Accidental events such as fire  Increased anthropogenic movement  Loss of biomass and biodiversity	Pre-mitigated: Low Post-mitigated: Low	 General Mitigation:  Limit the removal of vegetation in these ESA/Protected areas.  Vegetation and topsoil must be kept for use in rehabilitation.  Holding areas for plants and soil must be demarcated and utilised.  Topsoil storage must be prevented from contamination and invasion by alien and invasive species.  General works should, where possible, take place from the edge of any existing road to the side opposite a watercourse. In cases where the watercourses intersect the pipe, care must be taken to limit the distance across affected by construction activities.  No heavy machinery or material storage should occur on the side closest to a water course or within 100 m of a watercourse.  A comprehensive fire management plan and alien invasive management plan needs to be drafted prior to construction.  Removal of indigenous flora should be kept at a minimum.  Disturbance related activities may only occur in the authorised area.  No unnecessary clearance of vegetation or topsoil may take place outside of the development area.
	Indirect impacts:  Introduction of alien and invasive species  Soil compaction reducing re-establishment success  Soil erosion  Thinning of local genetic diversity  Increased ecological disturbance  Loss in ecological functionality	Pre-mitigated: Low Post-mitigated: Low	
	Cumulative impacts:  Deterioration of the ecological functioning of the ESA, leading to the subsequent deterioration of the CBAs that the ESA	Pre-mitigated: Low Post-mitigated: Low	

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Activity	Impact summary	Significance	Proposed mitigation
	supports.		 No other activity than that authorised may be taken within the authorised area.  Post-development open areas should be revegetated and kept free of exotic plant species.  Vehicles may only move within the demarcated space of the development area.  Any other relevant recommendations listed in this report should be implemented.
Loss of indigenous floral and faunal diversity	Direct impacts:  Disturbance or removal of indigenous vegetation.  Trampling, road mortalities, and accidental injury.  Noise disrupting faunal behaviour.  Habitat fragmentation  Unlawful harvesting of plants  Unlawful hunting/poaching of animals  Road mortalities  Accidental entrapment  Accidental injury	Pre-mitigated: Low Post-mitigated: Low	 Development may only occur within the clearly demarcated area.  Monitoring for the emergence of exotic species should be conducted.  An alien invasive species management plan must be drafted.  Vehicle movement should remain within the authorised boundary.  A comprehensive rehabilitation plan must be adhered to.  No unnecessary destruction or removal of vegetation is allowed.  Wildlife elements such as nests and burrows should be carefully inspected, and animals responsibly removed by a relevant specialist.  Post-development open areas should be revegetated and kept free of exotic plant species by way of an alien and invasive management plan (AIMP). The AIMP should be developed to avoid the possibility of invasions
	Indirect impacts:  Introduction of unnatural competitors, i.e. alien and invasive species  Reduced fecundity through reduced reproductive ability and success  Reduced survivability  Disrupted general animal behaviour  Disrupted circadian rhythms	Pre-mitigated: Low Post-mitigated: Low	

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Activity	Impact summary	Significance	Proposed mitigation
	 Noise pollution (construction phase)		and supply eradication techniques should they arise in the development area.
	 Cumulative impacts:  The permanent alteration of the vegetation type and characteristics through the introduction of alien.	Pre-mitigated: Low Post-mitigated: Low	 Quarterly alien and invasive species monitoring should take place according to the AIMP.  Any other relevant recommendations listed in this report should be implemented.
Loss of floral and faunal species of conservation concern	Direct impacts:  Clearance of vegetation  Loss of protected species  Habitat fragmentation  Poaching, unlawful hunting and gathering of plants and animals  Careless and reckless behaviour  Trampling  Accidental road mortalities  Accidental events such as fire	Pre-mitigated: Low Post-mitigated: Low	 A botanical specialist should be commissioned to survey the servitude to identify any present SCC or protected species. Such exercises should be done in the appropriate season and be done prior to construction.  All staff should be trained on SCC/protected species, observations of SCC/protected species and the reporting procedure.  On-site environmental and health and safety officers must report any observations of SCC/protected species to a qualified botanist and apply the recommended buffer area for that SCC/protected species.  Protected plant species should be located and demarcated.
	Indirect impacts:  Thinning of local genetic diversity  Reduced fecundity through reduced reproductive ability and success  Disrupted circadian rhythms  Interruption of lifecycle patterns due to noise pollution.	Pre-mitigated: Low Post-mitigated: Low	 Removal or relocation of the SCC are prohibited without the appropriate permits.  DARDEA should be consulted with regard to the feasibility of transplanting or removing provincially protected species.  Removal or transplant permits from DARDEA must be obtained for all provincially protected fauna / flora.  If DARDEA indicates transplant or relocation of some of the provincially protected flora, a formal relocation management plan should be drafted and
	Cumulative impacts:  The permanent alteration of the	Pre-mitigated: Low Post-mitigated:	

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Activity	Impact summary	Significance	Proposed mitigation
	vegetation type and characteristics through the introduction of alien.	Low	implemented.  Construction phase:  All construction staff should be informed on SCC and protected species or species of special conservation concern.  A relevant specialist should be notified when any of the mentioned SCC and protected flora are observed during construction.  All disturbance-related activities must be restricted to the authorised development boundary.  No illegal harvesting of plant material is allowed.  Any other relevant recommendations listed in this report should be implemented.
Archaeological and Heritage Resources	Direct impacts:  Grubbing  Trenching  Destruction of fossils and archaeological material during trenching.	Pre-mitigated: Low Post-mitigated: Low	 The identified historical features and stone-built gateway pillars are protected by a minimum 30 m no-go buffer and a 10 m no-go buffer, respectively  Construction remains confined to approved corridors.
	Indirect impacts:  Trampling  Loss of contextual heritage information.	Pre-mitigated: Low Post-mitigated: Low	 A CFP is implemented during all ground disturbances.  SAHRA and a qualified archaeologist are to be consulted immediately in the event of accidental archaeological exposure.
	Cumulative impacts:  The loss of cultural heritage, degradation of ecosystems, and economic decline.	Pre-mitigated: Low Post-mitigated: Low	 In the unlikely event of an accidental archaeological exposure, all excavations should stop immediately.  No loose chance finds, such as stone age artefacts (arrowheads, stone flake blades, etc.), may be collected.  Regular site inspections and toolbox talks should be conducted to raise awareness among construction personnel about the potential for heritage

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Activity	Impact summary	Significance	Proposed mitigation
			finds and the importance of reporting them.  The on-site environmental representative should consult the appointed ECO regarding any such discoveries.
Palaeontological Resources	Direct impacts:  Grubbing  Trenching	Pre-mitigated: Low Post-mitigated: Low	 A Chance Find Protocol must be implemented during construction to safeguard against unexpected discoveries.
	Indirect impacts:  Trampling  Disturbance of geological layers of palaeontological sensitivity.	Pre-mitigated: Low Post-mitigated: Low	 Notification of a qualified palaeontologist for routine palaeontological monitoring if excavations extend into unweathered sedimentary (Adelaide Subgroup) bedrock below the soil mantle.
	Cumulative impacts:  The loss of palaeontological heritage, degradation of ecosystems, and economic decline.	Pre-mitigated: Low Post-mitigated: Low	 Developers must follow a strict protocol if anomalous or irregular shapes are identified in the rock or sediments  If a find is made, the material must not be washed or cleaned  The find must be protected by a rigid object (like a box or bucket) and a no-go buffer zone implemented until a professional palaeontologist can confirm the discovery  Pending professional verification, all potential fossil exposures must be demarcated and protected by a no-go buffer zone to prevent disturbance.  If the uncovered material is deemed to hold palaeontological significance, a Phase 2 mitigation or rescue excavation may be required, subject to the issuance of appropriate permits by SAHRA in accordance with Section 35 of the National Heritage Resources Act (Act 25 of 1999).  Regular site inspections and toolbox talks should be conducted to raise awareness among construction personnel

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Activity	Impact summary	Significance	Proposed mitigation
			about the potential for heritage finds and the importance of reporting them.  The on-site environmental representative should consult the appointed ECO regarding any such discoveries.
Surface Water Qualities	Direct impacts:  Direct pollution of watercourses.	Pre-mitigated: Low-medium Post-mitigated: Low	 No littering may be allowed. All litter must be removed from the site  The timeframe for construction through the watercourses should be kept to a minimum.
	Indirect impacts:  Construction activities leading to runoff of pollutants into watercourses.  Disturbance of bed and banks of watercourses promoting sedimentation.  Erosion and runoff from stockpiling of construction materials, waste and topsoil leading to ground and surface water contamination.	Pre-mitigated: Low-medium Post-mitigated: Low	 If hydrocarbons or other chemicals are stored on site, storage areas must be situated a minimum distance of 40 m away from any watercourses and wetlands.  Storage areas must be adequately bunded to contain a minimum of 150% of the capacity of storage tanks/units.  Adequate hydrocarbon and other chemical storage, handling, usage and spillage clean-up procedures must be developed, and employees must be sufficiently trained and apply these procedures.
	Cumulative impacts:  The deterioration of water quality by introduction of pollutants associated with construction and sedimentation associated with alteration of bed and banks of watercourses will lead to the decline of aquatic organisms as well as organisms which depend on them (food sources, pollination etc.). Impaired aquatic community structures will reduce the watercourses capacity to buffer disturbances and provide ecosystem	Pre-mitigated: Low-medium Post-mitigated: Low	 Spill kits must be readily available at the construction site, and all relevant employees must be adequately trained on their correct use  Implement suitable dust management and prevention measures during construction and operation.  Construction areas and roads must be sufficiently wetted down during construction, if necessary, to prevent significant fugitive dust generation.  Construction within any of the watercourses should preferably be undertaken during the winter months (June to September)

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Activity	Impact summary	Significance	Proposed mitigation
	<i>functions.</i>		when flooding will be unlikely.  A construction method statement must be compiled and available on site. It must consider any no-go areas and include methods to avoid unnecessary disturbance and prevent material from being washed downslope into the river.  Monitoring of the project activities is essential to ensure the mitigation measures are implemented. Compliance with the mitigation recommendations must be audited by a suitably qualified independent Environmental Control Officer with an appropriately timed audit report.  All stockpiles must be protected and located in flat areas where run-off will be minimised and sediment recoverable.  Disturbed areas must be adequately rehabilitated concurrently with, or as soon as practicably possible after, construction.  Implement adequate stormwater and erosion management measures during the construction- and subsequent operational phases of the proposed development. This must be done to sufficiently manage storm water runoff and clean/dirty water separation, in order to prevent any significant surface water contamination of the local and broader surrounding landscape.  Immediate steps must be taken by the Mangaung Metropolitan Municipality to identify and alleviate the sources of the continued unlawful raw/untreated sewage discharges which feed into the

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Activity	Impact summary	Significance	Proposed mitigation
			identified watercourses
Alteration of Hydrology and Flow Regimes	Direct impacts:  Mechanical clearance,  Trench excavation,  Subsequent trench backfilling	Pre-mitigated: Low Post-mitigated: Low	 Trench excavation, pipeline placement and subsequent trench backfilling at the proposed watercourse crossings must be conducted concurrently, in order to ensure continued flow through the area during the construction period. Under no circumstances may the flow of the watercourses be significantly impeded/blocked for any period of time, during construction  Access to and from the development area should be either via existing roads or within the construction zone.  Monitoring of the project activities is essential to ensure the mitigation measures are implemented. Compliance with the mitigation recommendations must be audited by a suitably qualified independent Environmental Control Officer with an appropriately timed audit report.  It is recommended that the pipeline be buried at a minimum depth of 1.5 m at the proposed watercourse crossings in order to allow for continued surface- and subsurface interflow of the watercourses over the pipeline  It is recommended that adequate hydraulic designs such as siphons or culverts be incorporated underneath the pipeline at the proposed watercourse crossings if required, in order to allow for continued surface- and interflow of the watercourses underneath the pipeline  Trench excavation, pipeline placement and subsequent trench backfilling at the proposed watercourse crossings
	Indirect impacts:  Construction activities leading to runoff of pollutants into watercourses.  Disturbance of bed and banks of watercourses promoting sedimentation.  Erosion and runoff from stockpiling of construction materials, waste and topsoil leading to ground and surface water contamination.	Pre-mitigated: Low Post-mitigated: Low	
	Cumulative impacts:  Alteration/Impeding of the flow regimes (volumes and peak flow), which directly impacts the ecological functionality and integrity of the local watershed and broader quaternary surface water catchment and drainage area.	Pre-mitigated: Low Post-mitigated: Low	

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Activity	Impact summary	Significance	Proposed mitigation
			must be conducted manually underneath the riparian woodland- and woody thicket canopies and no trees may be removed, as far as practicably possible/feasible.  Materials excavated from the proposed pipeline trench at the proposed watercourse crossings must be adequately placed/stockpiled outside the watercourse extents on the upstream side of the trench, before being backfilled into the trench after pipeline placement.  Construction within any of the watercourses should preferably be undertaken during the winter months (June to September) when flooding will be unlikely.  Lower flow during the winter season must, however, still be adequately diverted/channelled around the construction area of the proposed watercourse crossings  The construction of the proposed watercourse crossings must be completed within a maximum 10-day period, during which the weather forecast predicts no possibility of rainfall  If required, sufficient culvert designs be installed underneath the proposed service road at the proposed watercourse crossings  Construction must have contingency plans for high rainfall events during construction. Even in the operational phase, measures to contain impacts caused during high rainfall events must be planned for and available for use.  The contractor or ECO must educate all staff undertaking the work on the best practice

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Activity	Impact summary	Significance	Proposed mitigation
			methods and environmentally sensitive areas (general dos and don'ts).
Erosion & Sedimentation	Direct impacts:  Grubbing and clearing.  Trenching.  Stockpiling.  Soil Exposure on Engineered Surfaces	Pre-mitigated: Low Post-mitigated: Low	 Implement adequate stormwater and erosion management measures during the construction- and subsequent operational phases of the proposed development. This must be done to sufficiently manage stormwater runoff and clean/dirty water separation.
	Indirect impacts:  Pollution and runoff resulting in the deterioration of the aquatic and riparian ecosystems.	Pre-mitigated: Low Post-mitigated: Low	 A construction method statement must be compiled and available on site. It must consider any no-go areas and include methods to avoid unnecessary disturbance and prevent material being washed downslope into the river.
	Cumulative impacts:  Grubbing and clearing in the riparian and immediate terrestrial habitats will result in the loss of aquatic biodiversity. The disturbance of soils may result in the proliferation of alien and invasive vegetation. The loss of biodiversity through active clearing as well as the indirect loss of biodiversity by introducing greater competition for resources in the form of alien and invasive vegetation, will result in impaired ecosystem function.	Pre-mitigated: Low Post-mitigated: Low	 All stockpiles must be protected and located in flat areas where run-off will be minimised and sediment recoverable.  The contractor or ECO must educate all staff undertaking the work on the best practice methods and environmentally sensitive areas (general dos and don'ts).  Stormwater from the construction footprint must be managed so that flow is dispersed and slowed before re-entering the broader system, using measures such as level spreaders, temporary check structures or roughened surfaces.  All stockpiles should be positioned on elevated, stable ground (ideally outside of the wet areas and not near the river) within the transformed footprint and surrounded by berms or silt barriers to prevent sediment release.  Regular inspection of the

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Activity	Impact summary	Significance	Proposed mitigation
			footprint and access routes is required to identify erosion, sediment build-up, or preferential flow pathways; corrective actions should be implemented immediately to maintain surface stability.
Aquatic and Riparian Ecosystems	Direct impacts:  Grubbing  Clearing  Movement of construction workers and vehicles.	Pre-mitigated: Low-medium Post-mitigated: Low	 Implement adequate alien invasive species management and prevention measures during the construction- and subsequent operational phases of the proposed development.
	Indirect impacts:  Pollution and runoff resulting in the deterioration of the aquatic and riparian ecosystems.	Pre-mitigated: Low-medium Post-mitigated: Low	 Problematic weeds must be eradicated where these establish on the proposed pipeline development section.  The construction of the proposed watercourse crossings must be completed within a maximum 10-day period
	Cumulative impacts:  The permanent alteration of the vegetation type and characteristics through the introduction of alien and invasive species of plants. Hydraulic alterations on account of the decreased protective benefits of vegetation in the watercourses.	Pre-mitigated: Low-medium Post-mitigated: Low	 Immediate steps must be taken by the Mangaung Metropolitan Municipality to identify and alleviate the sources of the continued unlawful raw/untreated sewage discharges which feed into the identified watercourses  Any disturbance and removal of vegetation within these watercourses should be kept to a minimum.  Vegetation clearance must be restricted to the narrow linear route of the proposed pipeline, as far as practicably possible/feasible  The linear development footprint of the proposed pipeline at the proposed watercourse crossings must be kept as narrow as practicably possible/feasible  Adequate operational procedures for machinery and equipment must be developed to strictly govern and restrict movement of machinery

Activity	Impact summary	Significance	Proposed mitigation
			 No bright light from any spotlights or perimeter lights or loud/excessive noise should be emitted into the surrounding landscape, during the nighttime.  Environmentally responsible water-use practices and activities must be adopted  Existing roads and farm tracks in close proximity to the proposed development construction footprint, must be used during the construction phase. No new temporary roads or tracks may be constructed or implemented through any aquatic features within the surrounding undeveloped landscape outside the proposed development footprint  Disturbed areas within and immediately surrounding the proposed development construction footprints associated with the proposed watercourse crossings must be adequately rehabilitated concurrently with- or as soon as practicably possible after the construction processes.
Aesthetic of the Construction of Infrastructure	Direct impacts:  Grubbing and clearing.  Trenching.  Stockpiling.  Movement of construction vehicles.	Pre-mitigated: Low-medium Post-mitigated: Low	 Construction debris should be removed regularly and not allowed to pile up.  A designated construction waste area should be demarcated and marked. All general waste and construction debris should be removed to a registered landfill.
	Indirect impacts:  Temporary reduction in landscape character.  Public complaints due to visible construction.	Pre-mitigated: Low-medium Post-mitigated: Low	 Complaints register needs to remain on site, where all complaints raised by the public are to be filed.
	Cumulative impacts:  The aesthetic quality of the area would be reduced.	Pre-mitigated: Low-medium Post-mitigated: Low	 Construction should finish as quickly as possible. All open spaces after construction need to be revegetated.  Limit construction activities to the development footprint.

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Activity	Impact summary	Significance	Proposed mitigation
			 Implement housekeeping practices in which attention is given to the neat storage of materials.  Do not grub or clear beyond the operational area.  Implement rehabilitation methods where possible during construction activities.  Store stockpiles in demarcated areas.  Only utilise existing roads as far as possible.
Noise and Vibrations	Direct impacts:  Increased noise from vehicles and machinery	Pre-mitigated: Low-medium Post-mitigated: Low	 No loud music allowed.  Vehicles must be maintained in such a manner as to not cause excessive noise when operating them.  Avoiding unnecessary simultaneous noisy activities.  Slowing down the vehicles by enforcing a speed limit of 20 km/h and carrying the construction materials to reduce dust generation.  Select 'quiet' construction equipment and working methods by avoiding unnecessary revving and hooting.  Working schedule for activities with high noise levels will be limited to 07:00 AM to 17:00 PM.  Equipment should be regularly serviced.  All activities must strictly conform to the Mangaung Metropolitan Municipality (MMM) Noise Control By-law of 2016, which regulates nuisance noise and sets standards for the jurisdiction
	Indirect impacts:  Disturbance to fauna.  Temporary nuisance to surrounding residents/farms.	Pre-mitigated: Low-medium Post-mitigated: Low	
	Cumulative impacts:  The disturbance experienced by local residents on account of excessive noise.	Pre-mitigated: Low-medium Post-mitigated: Low	
Air quality	Direct impacts:  Dust from clearing, excavation, and movement.	Pre-mitigated: Low-medium Post-mitigated: Low	 Wetting down topsoil stockpiles, haul roads, and other areas where dust will likely arise. Dust screens or barriers should be installed around sensitive areas, especially near the
	Indirect impacts:  Localised deposition	Pre-mitigated: Low-medium	

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Activity	Impact summary	Significance	Proposed mitigation
	 affecting vegetation.  Temporary reduction in visibility.	Post-mitigated: Low	 watercourses.  Enforce a strict speed limit of 20 km/h for all vehicles along the construction route to reduce dust and vehicle emissions.  Optimise the construction schedule to minimise the number of vehicles mobilised at any given time, further reducing airborne pollutants.  Limit the amount of vegetation clearance.  The construction of new dirt roads should be restricted by prioritising existing roads.  Topsoil stockpile height should be restricted to 2 m in height. Lower stockpiles are less susceptible to wind erosion, reducing the risk of dust generation.  Ensure that all construction personnel are trained in dust mitigation practices and the importance of maintaining air quality.  Implement a curfew of only operating between the hours of 7:00 and 17:00.  Regular maintenance of construction vehicles to ensure minimal exhaust emissions.  Fuels stored on site in dedicated, demarcated and bunded areas. Fuel spill containment procedures and equipment are to be in place.
	Cumulative impacts:  Alteration in ecosystem functioning and economic repercussions.	Pre-mitigated: Low-medium Post-mitigated: Low	
General Solid and Hazardous Waste	Direct impacts:  Pollution from general and hazardous waste	Pre-mitigated: Low-medium Post-mitigated: Low	 Reduce, reuse and recycle strategy needs to be implemented.  Provide clearly marked waste bins or receptacles on-site for different waste streams (general waste, hazardous waste, and recyclable materials.)  Designate specific areas for waste storage away from watercourses and drainage
	Indirect impacts:  Contamination of soil or water from improper disposal.  Attraction of pests/scavengers.	Pre-mitigated: Low-medium Post-mitigated: Low	
	Cumulative impacts:	Pre-mitigated:	

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Activity	Impact summary	Significance	Proposed mitigation
	 <i>The accumulation of solid waste, as well as the chemicals that leach into the soil and water courses from construction material will result in the aesthetic degradation of the area, death and deformation of vegetation and fauna who ingest the toxins either directly (water borne) or indirectly (bioaccumulation).</i>	Low-medium Post-mitigated: Low	systems to prevent contamination.  Train workers on proper waste segregation practices to ensure compliance.  Keep records of all waste disposed, reused, or recycled and ensure proper documentation for regulatory reporting.  Waste may not be burned or buried.  Normal construction site practices for preventing and containing fuels/oil, etc., spills.  Spill clean-up procedures to be in place before commencing construction.  The long-term risk rating for contamination due to spills of hazardous materials on aquatic features (seep wetlands, Caledon River, and artificially wet areas) ○ If hydrocarbons or other chemicals are stored on site, storage areas must be situated a minimum distance of 40 m away from any watercourses and wetlands. These areas must be adequately bunded to contain at least 150% of the capacity of the storage tanks/units. ○ Adequate hydrocarbon and other chemical storage, handling, usage and spillage clean-up procedures must be developed and applied by sufficiently trained employees during the construction phase. ○ Spill kits must be readily available at the construction site, and all relevant employees must be

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Activity	Impact summary	Significance	Proposed mitigation
			adequately trained on their correct procedure and use.  All construction-related waste/material should be appropriately disposed of after construction has ceased.
Alternative 2			
	Direct impacts:		
	Indirect impacts:		
	Cumulative impacts:		
	Direct impacts:		
	Indirect impacts:		
	Cumulative impacts:		
Alternative 3			
	Direct impacts:		
	Indirect impacts:		
	Cumulative impacts:		
	Direct impacts:		
	Indirect impacts:		
	Cumulative impacts:		
No-go option			
Not proceeding with the proposed development.	Direct impacts:  Socio-economic benefits directly associated with the construction and maintenance of the proposed development:  job creation,  skills development,  local economic growth will be lost.	Pre-mitigated: Medium Post-mitigated: Low	Proceeding with the proposed development.
	Indirect impacts:  Continued reliance on the current water distribution system,	Pre-mitigated: Medium Post-mitigated: Low	

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Activity	Impact summary	Significance	Proposed mitigation
	which may be constrained in terms of capacity and operational performance.  Reduced ability to support planned urban expansion and future development within the service area.  Loss of opportunity to enhance long-term water security and service delivery efficiency.  No creation of direct employment opportunities during the construction phase (e.g., local labour, contractors, and service providers).  No indirect economic benefits associated with the procurement of materials, equipment, and services.  No stimulation of local economic activity linked to infrastructure development and maintenance.  Potential continued inefficiencies in water distribution that may result in higher operational stress on existing infrastructure over time.		
	<i>Cumulative impacts:</i>  Continued unintentional exclusion of numerous communities from rapid service delivery.	Pre-mitigated: Medium Post-mitigated: Low	

A complete impact assessment in terms of Regulation 19(3) of GN 326 must be included as Appendix F.

2. ENVIRONMENTAL IMPACT STATEMENT

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

Alternative A (preferred alternative)

The combined impact assessment for the proposed pipeline development indicates that the project's environmental and socio-economic risks are manageable and remain within acceptable levels, provided the prescribed mitigation measures are effectively implemented. The pre-mitigation construction activities place the overall impact within the Low significance range, primarily driven by temporary construction-related disturbances such as noise, air quality emissions, aesthetic alteration, and short-term effects on fauna, flora, and water resources.

Summary of Combined Impacts

Environmental Aspect	Potential Anticipated Impact	Phase	Status	Significance pre-mitigation	Significance post-mitigation
Ecological impacts					
Habitat loss	Loss of habitat and species diversity as a result of construction and the removal of natural elements.	Planning	N/A	N/A	N/A
		Construction	Negative	Low	Low
		Operation	N/A	N/A	N/A
Loss of ESA	Disturbance and loss of ecological habitat and ecological corridors.	Planning	N/A	N/A	N/A
		Construction	Negative	Low	Low
		Operation	N/A	N/A	N/A
Loss of indigenous floral and faunal diversity	Habitat loss and fragmentation due to vegetation clearance and construction activities	Planning	N/A	N/A	N/A
		Construction	Negative	Low	Low
		Operation	N/A	N/A	N/A
Loss of floral species of special conservation concern	Loss of species diversity as a result of construction and the removal of natural elements.	Planning	N/A	N/A	N/A
		Construction	Negative	Low	Low
		Operation	N/A	N/A	N/A
Heritage impacts					
Archaeological and Heritage Resources	Destruction of archaeological and heritage resources such as remains and graves.	Planning	N/A	N/A	N/A
		Construction	Negative	Low	Low
		Operation	N/A	N/A	N/A
Palaeontological Resources	Destruction of undiscovered artefacts of palaeontological significance.	Planning	N/A	N/A	N/A
		Construction	Negative	Low	Low
		Operation	N/A	N/A	N/A
Watercourse impacts					
Surface and Ground Water Contamination	Water and/or soil pollution cause negative changes in the physical, chemical and biological characteristics of water resources (i.e. water quality).	Planning	N/A	N/A	N/A

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	<i>This can result in possible deterioration in aquatic ecosystem integrity and a reduction in, or loss of, species of conservation concern (i.e. rare, threatened/endangered species).</i>	Construction	Negative	Low-Medium	Low
		Operation	N/A	N/A	N/A
Alteration of Hydrology and Flow Regimes	<i>Alteration or impeding of flow regimes (volumes and peak flows), which directly impacts the ecological functionality and integrity of the local watershed and the broader quaternary surface water catchment and drainage area.</i>	Planning	N/A	N/A	N/A
		Construction	Negative	Low	Low
		Operation	N/A	N/A	N/A
Erosion & Sedimentation	<i>Sedimentation and erosion refer to the alteration in the physical characteristics of rivers/wetlands because of increased turbidity and sediment deposition, caused by soil erosion and earthworks that are associated with construction activities, as well as instability and collapse of unstable soils during project operation</i>	Planning	N/A	N/A	N/A
		Construction	Negative	Low	Low
		Operation	N/A	N/A	N/A
Aquatic and Riparian Ecosystems	<i>The deterioration of biodiversity through the direct removal of species and the accidental introduction of alien and invasive species which outcompete indigenous fauna.</i>	Planning	N/A	N/A	N/A
		Construction	Negative	Low-Medium	Low
		Operation	N/A	N/A	N/A
Aesthetics					
Construction of Infrastructure	<i>Negative overall aesthetic value due to construction</i>	Planning	N/A	N/A	N/A
		Construction	Negative	Low-Medium	Low
		Operation	N/A	N/A	N/A
Air Quality, Noise and Vibrations:					
Noise and Vibrations	<i>Vehicles, machinery, and equipment used during construction activities increase noise and vibrations.</i>	Planning	N/A	N/A	N/A
		Construction	Negative	Low-Medium	Low
		Operation	N/A	N/A	N/A
Air quality	<i>Mobilisation of equipment, land clearing, earthworks, and general construction activities that generate dust, emissions, and fallout occur along the route.</i>	Planning	N/A	N/A	N/A
		Construction	Negative	Low-Medium	Low
		Operation	N/A	N/A	N/A
Waste Impact					

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General Solid and Hazardous Waste	Improper handling, storage, or disposal of general and hazardous waste, together with accidental spills of fuels, oils, lubricants, and other hazardous substances, may result in soil and groundwater contamination, degradation of water quality, and pollution of the surrounding environment.	Planning	N/A	N/A	N/A
		Construction	Negative	Low-Medium	Low
		Operation	N/A	N/A	N/A
Socio-economic impacts					
Job creation and the influx of job seekers	Impacts associated with the need for locally appointed construction/ operation workers.	Planning	N/A	N/A	
		Construction	Positive	Medium	
		Operation	Positive	Medium	

Based on the findings of the ecological, aquatic, and heritage specialist assessments, the proposed pipeline development is not anticipated to result in significant long-term environmental impacts, provided that the recommended mitigation measures are effectively implemented. The development comprises a temporary, narrow linear disturbance associated with the installation of an underground pipeline, with no significant residual impacts anticipated on ecological processes, aquatic systems, heritage resources, or the broader receiving environment. The overall impact of the proposed development is therefore considered to be of Low significance. Furthermore, specialist investigations indicate that disturbed areas can be successfully rehabilitated and restored to a condition comparable to the current baseline within approximately two years following completion of the construction phase.

In summary, with full adherence to the EMP and ongoing compliance monitoring, the proposed development is considered environmentally acceptable and socio-economically beneficial. The project's implementation is therefore supported from an environmental and regulatory perspective, subject to the continued application of all mitigation, monitoring, and management measures outlined in this assessment.

Alternative B

N/A

Alternative C

N/A

No-go alternative (compulsory)

The "no-go" alternative assumes that the proposed development does not proceed, and therefore no pipeline or associated infrastructure is constructed. Under this scenario, the site would remain in its current condition, and no direct environmental disturbance from construction activities would occur. This option serves as the baseline against which the proposed development and other alternatives are assessed.

In the short term, the no-go alternative would present certain advantages:

-  Avoidance of capital expenditure associated with bulk earthworks, deep excavations, pipeline installation, and associated civil structures such as valve chambers and tie-ins.
-  It would eliminate construction-phase disturbances such as vegetation clearing, soil excavation, temporary access roads, construction traffic, noise, dust generation, and waste production.
-  No disturbance would occur within or adjacent to watercourses, thereby avoiding potential short-term risks such as sediment mobilisation, erosion, or accidental contamination from

construction-related activities (e.g., fuels and oils).  Prevent direct physical disturbance to indigenous vegetation.  Not proceeding would avoid development within sensitive biodiversity and conservation planning areas, including portions of the footprint within watercourses and regulated areas, within an NPEAS Priority Focus Area, and within ESA 1 and ESA 2.  It would avoid placing new infrastructure near the Woodland Hills Golf and Wildlife Estate and the Dwaal Valley Private Nature Reserve, thereby reducing exposure to ecological sensitivity and the complexity of mitigation and rehabilitation requirements. Despite these short-term environmental and financial advantages, the benefits of the no-go alternative are largely temporary and must be weighed against longer-term operational and service delivery considerations. Not implementing the pipeline carries several significant operational, water-quality, environmental, and socio-economic implications:  Continued reliance on the current water distribution system, which may be constrained in terms of capacity and operational performance.  Reduced ability to support planned urban expansion and future development within the service area.  Loss of opportunity to enhance long-term water security and service delivery efficiency.  No creation of direct employment opportunities during the construction phase (e.g., local labour, contractors, and service providers).  No indirect economic benefits associated with the procurement of materials, equipment, and services.  No stimulation of local economic activity linked to infrastructure development and maintenance.  Potential continued inefficiencies in water distribution that may result in higher operational stress on existing infrastructure over time. Overall, while the no-go alternative avoids immediate construction-related environmental disturbances and capital costs, it does not contribute to long-term infrastructure development, service reliability, or socio-economic uplift associated with the proposed pipeline.
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SECTION E. RECOMMENDATION OF PRACTITIONER

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

YES

NO

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

N/A

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

All mitigations within the EMPr must be adhered to.

 No trees may be cleared in which active nesting is taking place without the necessary DFFE permits.

 All mitigation measures in the DFFE permit must be abided by.

 No construction may take place in any watercourses or buffer zones (Appendix A) without the

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-  appropriate water use licences being obtained.
-  Environmental Induction must include the Chance Finds Protocol as outlined in Appendix 4 of the EMPr.
-  The establishment of the site yard must be outside of all CBAs and ESAs, and regulated watercourses as confirmed by a competent environmental compliance officer.
-  The site yard may not have an area in excess of 1Ha.

Is an EMPr attached?

YES

NO

The EMPr must be attached as Appendix G.

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

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

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

CW Vermeulen

NAME OF EAP



SIGNATURE OF EAP

06/07/2026

DATE

SECTION F: APPENDIXES

The following appendixes must be attached:

Appendix A: Maps

Appendix B: Photographs

Appendix C: Facility illustration(s)

Appendix D: Specialist reports (including terms of reference)

Appendix E: Public Participation

Appendix F: Impact Assessment

Appendix G: Environmental Management Programme (EMPr)

Appendix H: Details of EAP and expertise

Appendix I: Specialist's declaration of interest

Appendix J: Additional Information