
ENVIRONMENTAL IMPACT ASSESSMENT: **DRAFT** BASIC ASSESSMENT REPORT

PROPOSED UPGRADING OF THE BULK WATER SUPPLY TO NORVALSPONT, NORTHERN CAPE PROVINCE

Applicant: Umsobomvu Municipality
MDA Ref No: 40611
Date: July 2014



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BASIC ASSESSMENT REPORT

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(For official use only)

File Reference Number:

Application Number:

Date Received:

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

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, 2010 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. The report must be typed within the spaces provided in the form. The size of the spaces provided are 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.
3. Where applicable **tick** the boxes that are applicable or **black out** the boxes that are not applicable in the report.
4. An incomplete report may be returned to the applicant for revision.
5. 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.
6. This report must be handed in at offices of the relevant competent authority as determined by each authority.
7. No faxed or e-mailed reports will be accepted.
8. The report must be compiled by an independent environmental assessment practitioner.
9. 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.
10. A competent authority may require that for specified types of activities in defined situations only parts of this report need to be completed.

SECTION A: ACTIVITY INFORMATION

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

	NO
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If YES, please complete form XX for each specialist thus appointed:
Any specialist reports must be contained in Appendix D.

1. ACTIVITY DESCRIPTION

Describe the activity, which is being applied for, in detail:

The proposed project entails the upgrading of the bulk water supply system of Norvalspont. This includes the abstraction facility, bulk supply pipeline, water treatment works (WTW) and elevated storage facility to supply the needed water demand of Norvalspont (an estimated 107.14 KI daily). The bulk storage facility has to be upgraded to a 500 KI facility, at a height of 20 m above natural ground level, to ensure that the high lying area receives adequate pressure.

Norvalspont is a small settlement within the Umsobomvu Municipality that forms part of the Pixley ka Seme District Municipality. This settlement with a population of 2000 people lies east of Colesberg, on the banks on the Orange River. The Local Municipality is the Water Service Authority and Water Service Provider of Norvalspont.

The abstraction facility of Norvalspont is located on the banks of the Orange River. The raw water is conveyed by means of a 760 m rising main and water is purified and stored in an elevated pressed galvanized steel tank (181 KI), from where it is distributed to Norvalspont. This system is continuously encountering water supply problems (supply interruption and low pressures at certain areas) due to aging and inadequate infrastructure. The existing abstraction point poses a danger for operating and maintenance personnel as the pumps are installed approximately 7 m below the natural ground level and within the 1:100 year flood line.

Note that the construction of a pipeline within towns and road reserves does not fall within the ambit of a listed activity in terms of the NEMA EIA Regulations. The sections of the pipeline proposed through and near watercourses (such as the river) along the proposed route do require Environmental Authorization. This application for Environmental Authorization however includes the entire proposed route for the pipeline for clarity.

The construction activities for the proposed pipeline will mainly consist of the following:

- Site clearance by hand, limited machinery will be used;
- Excavation (0-3 m) to be done with TLB;
- Hauling of material;
- Installing of PVC pipe;
- General concrete work – mixing and placing of concrete; and
- General electrical work.

Additional construction activities at the river bank entails the following:

- A raft will be attached to rocks by means of chemical anchors;
- Flexible pipes will be positioned between the raft and the river bank;
- Steel pipes will be placed above ground, between the river bank to the boundary of the 1:50 year flood line; and
- From here, an additional set of flexible pipes will be attached to valves where after the pipeline will be placed underground as described in the above paragraph.

The listed activity, which is being applied for, entails the following:

Activity 11 (xi) of Regulation 544, 18 June 2010:

The construction of infrastructure or structures covering 50 m² or more where such construction occurs within a watercourse or within 32 m of a watercourse, measured from the edge of a watercourse, excluding where such construction will occur behind the development setback line.

Activity 18 of Regulation 544, 18 June 2010:

The infilling or depositing of any material of more than 5 m³ into, or the dredging, excavation, removal or moving of soil, sand, shells, shell grit, pebbles or rock or more than 5 m³ from:

(i) A watercourse;

Excluding where such infilling, depositing, dredging, excavation, removal or moving:

a) Is for maintenance purposes undertaken in accordance with a management plan agreed to by the relevant environmental authority; or
Occurs behind the development setback line

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. Alternatives should include a consideration of all possible means by which the purpose and need of the proposed activity 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.

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

NOTE:

Three main options to provide water to Norvalspont were investigated:

Option 1:

Purchase potable water from a nearby Water Service Authority (Kopanong Local Municipality) and construct the related infrastructure needed for this option.

Option 2:

Upgrading the existing infrastructure.

Option 3:

The development of a groundwater resource.

However, the development of a groundwater resource was not seen as a viable option due to the excessive high capital costs and the complex operating system required. This option was therefore not investigated in more detail. Additionally, the first option (purchasing of potable water) was also eliminated as an option due to the capital and operational costs, and the fact that the municipality will be responsible for the operational and maintenance costs.

The proposed upgrading of the existing infrastructure was decided upon as this option would be more beneficial for the Municipality from a socio-economic point of view.

Please take note of the description of the preferred- as well as the alternative projects regarding the proposed upgrading of the existing infrastructure:

Alternative 2 Design – Potable water from Kopanong Local Municipality (KLM)

- Construction of a pump station to pump potable water from the Kopanong - Reservoir to a new elevated tank at Norvalspont.
- Construction of a DN110 pipeline from the Kopanong Reservoir to a new elevated tank at Norvalspont.
- Construction of an elevated tank adjacent to the existing Norvalspont Water Treatment Works.

The pump station will be located approximately 0.6 km downstream of the Kopanong Reservoir in a low lying area adjacent to an existing surfaced road. The pipeline will comprise of a 0.6 km suction pipeline to the pump station and a 2.8 km pump line to the new elevated tank adjacent to the existing Norvalspont WTW. The pumps and pipeline will be sized to operate 10 – 16 hours a day. The pump station will be an above ground brickwork building with a reinforced concrete roof. The general layout will comprise of a single pump room to house the pumping equipment and the pumps motor control centre. The existing Norvalspont WTW and the existing raw water abstraction

works at the Orange River will become redundant and can be decommissioned.

Alternative 3 Locality – Bridge piers

Bulk raw water will be supplied to Norvalspont by pumping from an abstraction facility fixed to one of the piers of the existing road bridge across the Orange River. The following infrastructure will be required:

- A raw water bridge abstraction facility fixed to the piers of the existing road bridge across the Orange River;
- A DN110/100 pipeline from the abstraction facility to the existing elevated tank located adjacent to the existing water treatment works at Norvalspont;
- Refurbishment of the existing WTW; and
- New elevated treated water tank adjacent to the existing Norvalspont WTW.

The raw water abstraction facility will be fixed to one of the piers of the existing road bridge. The section of the pipeline from the abstraction facility to the river bank will be a DN100 galvanized steel pipe and will be fixed to the bridge structure. From the river bank to the existing elevated water tank adjacent to the existing water treatment works, the pipeline will be an uPVC class 9 trenched pipeline. The total length of the pipeline (DN100 and DN110) will be 815 m. The abstraction facility will comprise of an access platform at the level of the bridge deck, a circular or rectangular steel pump sump below the river water surface level and support steelwork to which an access ladder and the pump delivery pipework will be fixed. An all-weather pump motor control centre will be provided on the river bank. The pumping equipment will comprise of one duty pump and a standby pump will be provided to replace the duty pump when required. The pumps and pipeline will be sized to operate 16 hours per day. The existing WTW, raw water abstraction works and AC pipeline from the existing abstraction works will become redundant and can be decommissioned. The existing elevated steel tank adjacent to the existing WTW will be used to provide balancing storage for raw water upstream of the new WTW.

Preferred Alternative (Alternative 1 Preferred)

Bulk raw water will be pumped from a river abstraction works at the Orange River, located upstream from the existing road and rail bridges across the river. The following infrastructure will be required:

- Raw water abstraction works on the river bank;
- DN110 pipeline from the abstraction works to the new elevated tank located adjacent to the existing WTW at Norvalspont and
- New elevated treated water tank adjacent to the existing Norvalspont WTW.

Additionally, the existing WTW will be upgraded and refurbished.

The raw water abstraction works will be located approximately 150 m upstream from the existing road and rail bridges across the river. The pipeline will be an uPVC class 9 trenched pipeline with a length of approximately 885 m. The abstraction works will comprise of a steel float structure with two submersible pumps (one duty, one standby). An access walkway will be provided to allow for a variation in river water surface level. The float

structure will be anchored to the river bank to ensure that the structure is not washed away during minor storm events. An all-weather pump motor control centre will be provided on the river bank. The pumps and pipeline will be sized to operate 10 – 16 hours a day. The existing raw water abstraction works at the Orange River and the existing AC pipeline from the abstraction works to Norvalspont will become redundant and will be decommissioned. The existing steel tank adjacent to the existing WTW will be used to provide balancing storage of raw water upstream of the refurbished WTW.

From an engineering economic point of view, this alternative is the recommended way forward as the implementation of the preferred alternative results in the optimal ratio of hydraulic capacity and pipe material. It will also imply the simplest operation.

*NOTE: Two alternative layouts are proposed as part of the preferred alternative (Route A and Route B). See Appendix A for more information. If this alternative is approved, the applicant will notify the Department which one of the two alternative routes will be followed, before the construction activities at this section is undertaken.

No-go alternative:

The no-go alternative is not recommended, as this will imply that the water users will not have sufficient volumes of water to utilize as the current infrastructure is not capable of handling the required water needs.

The no-go option will be discussed in this report.

3. ACTIVITY POSITION

Indicate the position of the activity using the latitude and longitude of the centre point of the site for each alternative site. The co-ordinates should be in 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.

List alternative sites if applicable.

Alternative:

Alternative S1¹ (preferred or only site alternative)

Alternative S2 (if any)

Alternative S3 (if any)

In the case of linear activities:

Alternative:

Alternative 1 Preferred

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

Alternative 2 Potable water from KLM

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

Alternative 3 Bridge piers

- Starting point of the activity

Latitude (S):

Longitude (E):

°	'	°	'
°	'	°	'
°	'	°	'

Latitude (S):

Longitude (E):

Refer to attached list

30°	37.675'	25°	27.576'
30°	37.491'	25°	27.715'
30°	37.380'	25°	27.895'

30°	37.675'	25°	27.576'
30°	37.431'	25°	28.501'
30°	37.440'	25°	28.990'

30°	37.675'	25°	27.576'
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¹ "Alternative S.." refer to site alternatives.

- Middle point of the activity
- End point of the activity

30°	37.491'	25°	27.715'
30°	37.274'	25°	27.886'

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

4. PHYSICAL SIZE OF THE ACTIVITY

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

Alternative:

- Alternative A1² (preferred activity alternative)
- Alternative A2 (if any)
- Alternative A3 (if any)

or, for linear activities:

Alternative:

- Alternative 1 Preferred
- Alternative 2 Potable water from KLM
- Alternative 3 Bridge piers

Size of the activity:

m ²
m ²
m ²

Length of the activity:

870 m
3 300 000 m
865 m

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

NOTE:

Please note that servitudes of 30 m were taken into account.

Alternative:

- Alternative 1 Preferred
- Alternative 2 Potable water from KLM
- Alternative 3 Bridge piers

Size of the site/servitude:

26 100 m ²
99 000 000 m ²
25 950 m ²

5. SITE ACCESS

Does ready access to the site exist?

YES	
m	

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

Describe the type of access road planned:

N/A

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.

6. SITE OR 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:

- 6.1 the scale of the plan which must be at least a scale of 1:500;
- 6.2 the property boundaries and numbers of all the properties within 50 metres of the site;
- 6.3 the current land use as well as the land use zoning of each of the properties adjoining the site or sites;
- 6.4 the exact position of each element of the application as well as any other structures on the site;
- 6.5 the position of services, including electricity supply cables (indicate above or underground), water supply pipelines, boreholes, street lights, sewage pipelines, storm water infrastructure and telecommunication infrastructure;
- 6.6 all trees and shrubs taller than 1.8 metres;
- 6.7 walls and fencing including details of the height and construction material;
- 6.8 servitudes indicating the purpose of the servitude;
- 6.9 sensitive environmental elements within 100 metres of the site or sites including (but not limited thereto):
 - rivers;
 - the 1:100 year flood line (where available or where it is required by DWA);
 - ridges;
 - cultural and historical features;
 - areas with indigenous vegetation (even if it is degraded or invested with alien species);

² "Alternative A.." refer to activity, process, technology or other alternatives.

- 6.9 for gentle slopes the 1 metre contour intervals must be indicated on the plan and whenever the slope of the site exceeds 1:10, the 500mm contours must be indicated on the plan; and
- 6.10 the positions from where photographs of the site were taken.

7. 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 form. It must be supplemented with additional photographs of relevant features on the site, if applicable.

8. FACILITY ILLUSTRATION

A detailed illustration of the activity must be provided at a scale of 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.

9. ACTIVITY MOTIVATION

9(a) Socio-economic value of the activity

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

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

Will the activity contribute to service infrastructure?

Is the activity a public amenity?

How many new employment opportunities will be created in the development phase of the activity?

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

What percentage of this will accrue to previously disadvantaged individuals?

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

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

What percentage of this will accrue to previously disadvantaged individuals?

R 8 million	
Not applicable	
YES	
	NO
17 - 20	
Unknown	
90 %	
2	
Unknown	
90%	

9(b) Need and desirability of the activity

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

A need exists to provide Norvalspont with the increased volume of water on a daily basis.

The 2030 population of Norvalspont was based on historic data and on anticipated growth resulting from future initiatives and push-factors and the growth rate has been set between 0.35 – 0.5% per year. The population is estimated to reach 1086 in 2030 and the Average Annual Daily Demand for 2030 was calculated to 107.14KL.

Indicate any benefits that the activity will have for society in general:

The capacity of existing water infrastructure is unable to meet the current need for water demand and therefore the most viable option is to upgrade the existing system with a pipeline that will be able to provide the required volume of water to Norvalspont, until 2030, where after an additional upgrading process will be investigated (if required).

Indicate any benefits that the activity will have for the local communities where the activity will be located:

Apart from the provision of water to Norvalspont, job opportunities will also be created during the construction phase for local community members.

DESIRABILITY:

1.	Does the proposed land use / development fit the surrounding area?	YES	
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2.	Does the proposed land use / development conform to the relevant structure plans, SDF and planning visions for the area?	YES	
3.	Will the benefits of the proposed land use / development outweigh the negative impacts of it?	YES	
4.	If the answer to any of the questions 1-3 was NO, please provide further motivation / explanation:		
5.	Will the proposed land use / development impact on the sense of place?		NO
6.	Will the proposed land use / development set a precedent?		NO
7.	Will any person's rights be affected by the proposed land use / development?		NO
8.	Will the proposed land use / development compromise the "urban edge"?		NO
9.	If the answer to any of the question 5-8 was YES, please provide further motivation / explanation.		
BENEFITS:			
1.	Will the land use / development have any benefits for society in general?	YES	
2.	Explain: The capacity of the existing pipeline is unable to meet the current water demand. The proposed new pipeline will be able to meet the estimated water demand until 2030, where after additional upgrading processes will be investigated.		
3.	Will the land use / development have any benefits for the local communities where it will be located?	YES	
4.	Explain: Water will be provided to the local communities. Additionally, employment opportunities will be created during the construction phase.		

10. 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:	Administering authority:	Date:
• National Environmental Management Act, 1998 (Act 107 of 1998)	DENC	1998
• National Water Act, 1998 (Act 36 of 1998)	DWA	1998
• National Heritage Resources Act (Act No 25 of 1999)	SAHRA	1999

11. WASTE, EFFLUENT, EMISSION AND NOISE MANAGEMENT

11(a) Solid waste management

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

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

Unknown m³

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

The contractor will be responsible for the disposal of waste generated during the construction phase.
The contractor will remove the construction waste and dispose thereof at an authorized landfill site.

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

Solid waste disposal sites in Norvalspont.

Will the activity produce solid waste during its operational phase?

	NO
m ³	

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

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

N/A

Where will the solid waste be disposed 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 relevant legislation?

	NO
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If yes, inform the competent authority and request a change to an application for scoping and EIA.

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

	NO
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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.

11(b) Liquid effluent

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

	NO
m ³	

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?

	NO
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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?

	NO
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If yes, provide the particulars of the facility:

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

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

N/A

NOTE:

Temporary chemical toilet facilities (during construction) will be serviced regularly. Proof thereof will be made available during the environmental monitoring assessments.

11(c) Emissions into the atmosphere

Will the activity release emissions into the atmosphere?

YES	
	NO

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

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

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

Vehicular emissions and dust is likely to be generated during the construction phase. This will be temporary and the formation of dust will be controlled, when required.

11(d) Generation of noise

Will the activity generate noise?

YES	
	NO

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

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

If no, describe the noise in terms of type and level:

Noise due to the construction activities is expected to occur. This will be temporary and limited to normal working (day time) hours. No noise will be generated during the operational phase.

12. WATER USE

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

<input checked="" type="checkbox"/> municipal	<input type="checkbox"/> water board	<input type="checkbox"/> groundwater	<input type="checkbox"/> river, stream, dam or lake	<input type="checkbox"/> other	<input type="checkbox"/> the activity will not use water
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If water is to be extracted from groundwater, river, stream, dam, lake or any other natural feature, please indicate the volume that will be extracted per month:

liters	
YES	

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

If yes, please submit the necessary application to the Department of Water Affairs and attach proof thereof to this application if it has been submitted.

NOTE:

The water use license applications required for the proposed workings in and / or nearby surface water resources are in process. Proof thereof will be made available in the final BAR, as part of Annexure G₃.

13. ENERGY EFFICIENCY

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

N/A

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

Not applicable

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 C and indicate the area, which is covered by each copy No. on the Site Plan.

Section C Copy No. (e.g. 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	
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If YES, please complete form XX for each specialist thus appointed:
All specialist reports must be contained in Appendix D.

1. GRADIENT OF THE SITE

Indicate the general gradient of the site.

Alternative 1 Preferred

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 2 Potable water from KLM

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 3 Bridge piers

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:

	Alternative 1 Preferred	Alternative 2 Potable water from KLM	Alternative 3 Bridge piers
2.1 Ridgeline			
2.2 Plateau			
2.3 Side slope of hill / mountain		✓	
2.4 Closed valley			
2.5 Open valley			
2.6 Plain	✓	✓	✓
2.7 Undulating plain / low hills			
2.8 Dune			
2.9 Seafront			

3. GROUNDWATER, SOIL AND GEOLOGICAL STABILITY OF THE SITE

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

	Alternative 1 Preferred	Alternative 2 Potable water from KLM	Alternative 3 Bridge piers
Shallow water table (less than 1.5m deep)	YES	YES	YES
Dolomite, sinkhole or doline areas	YES	YES	YES
Seasonally wet soils (often close to water bodies)	YES	YES	YES
Unstable rocky slopes or steep slopes with loose soil		NO	NO
Dispersive soils (soils that dissolve in water)		NO	NO
Soils with high clay content (clay fraction more than 40%)	YES	YES	YES
Any other unstable soil or geological feature	YES	YES	YES
An area sensitive to erosion	YES	YES	YES

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:

- 4.1 Natural veld – good condition^E (most areas)
- 4.2 Natural veld – scattered aliens^E
- 4.3 Natural veld with heavy alien infestation^E
- 4.4 Veld dominated by alien species^E
- 4.5 Gardens
- 4.6 Sport field
- 4.7 Cultivated land
- 4.8 Paved surface
- 4.9 Building or other structure
- 4.10 Bare soil

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.

NOTE:

The vegetation on the banks of the river at the preferred abstraction point is relatively disturbed and not in a good condition. The construction of an abstraction point will not have a major impact on the vegetation of the area. However, a protected tree species, *Celtis Africana* (White Stinkhout) occurs on the banks of the river and permits should be acquired before the removal of these trees (if required).

The river bank itself must be regarded as a sensitive area and the integrity of the river banks must not be affected. Construction activities should therefore endeavour to maintain impacts to a minimum and the areas to be disturbed should be kept as small as possible. The occurrence of erosion and / or alien vegetation establishment should be monitored and proper mitigation measures should be implemented, if necessary.

The pipeline follows a somewhat degraded slope uphill from the proposed abstraction point towards the WTW. Protected plant species such as *Aloe broomii* (Mountain Aloe), *A. grandidentata* (Bontaalwyn) and *Olea europaea* subsp. *Africana* (Wild Olive / Olienhout) may occur in the area. The pipeline route must be surveyed and a permit for the removal / transplantation of any specimens of Aloe or Wild Olives must be obtained.

Please refer to Appendix D₁ for a copy of the Ecological Report.

5. LAND USE CHARACTER OF SURROUNDING AREA

Indicate land uses and/or prominent features that does 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:

Land Use Character	Alternative 1	Alternative 2	Alternative 3
	Preferred	Potable water from KLM	bridge piers
5.1 Natural area	✓	✓	✓
5.2 Low density residential	✓	✓	✓
5.5 Informal residential ^A			
5.6 Retail commercial & warehousing			
5.7 Light industrial			
5.8 Medium industrial ^{AN}			
5.9 Heavy industrial ^{AN}			
5.10 Power station			
5.11 Office/consulting room			
5.12 Military or police base/station/compound			
5.13 Spoil heap or slimes dam ^A			
5.14 Quarry, sand or borrow pit			
5.15 Dam or reservoir	✓	✓	✓
5.16 Hospital/medical centre			
5.17 School			
5.18 Tertiary education facility			
5.19 Church			
5.20 Old age home			
5.21 Sewage treatment plant ^A	✓	✓	✓
5.22 Train station or shunting yard ^N			
5.23 Railway line ^N	✓	✓	✓
5.24 Major road (4 lanes or more) ^N			
5.25 Airport ^N			
5.26 Harbour			
5.27 Sport facilities			
5.28 Golf course			
5.29 Polo fields			
5.30 Filling station ^H			
5.31 Landfill or waste treatment site			
5.32 Plantation	✓	✓	✓
5.33 Agriculture	✓	✓	✓
5.34 River, stream or wetland	✓	✓	✓
5.35 Nature conservation area			
5.36 Mountain, koppie or ridge	✓	✓	✓
5.37 Museum			
5.38 Historical building	✓ (bridge)	✓ (bridge)	✓ (bridge)
5.39 Protected Area			
5.40 Graveyard			
5.41 Archaeological site			
5.42 Other land uses (describe)			

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

If YES, specify and explain:	Approval to be obtained from Transnet Mitigation measures will be implemented to minimise the effect of the proposed activities on the environment. No impact on / by the railway lines is anticipated.
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If any of the boxes marked with an "AN" are ticked, how will this impact / be impacted upon by the proposed activity.

If YES, specify and explain:	NA
------------------------------	----

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

If YES, specify and explain:	NA
------------------------------	----

NOTE:
The proposed pipeline will not have an impact on the existing sewage treatment plant.

6. 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?	NO
	Uncertain

If YES, explain:

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

Briefly explain the findings of the specialist:

A few heavily patinated stone flakes were noticed on the plateau near the water reservoir. The sample is very small but seems to be part of a general distribution of Middle Stone Age material in the area. The finds are considered of minor significance.

A single Anglo-Boer War milk tin top was found in the same area.

An Anglo-Boer War British blockhouse was modified into a residential unit and will not be affected by the proposed pipeline project.

The old pump house on the river bank is neglected.

No other historical or cultural remnants were found at the preferred construction site.

Mitigation measures will not be necessary and it is recommended that the proposed project may proceed.

Refer to the Archaeological and Heritage Assessment in Appendix D₂.

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

If yes, please submit or, make sure that the applicant or a specialist submits the necessary application to SAHRA or the relevant provincial heritage agency and attach proof thereof to this application if such application has been made.

NOTE:
As part of Alternative 3 described in this report, bulk raw water will be supplied to Norvalspont by pumping from an abstraction facility fixed to one of the piers of the existing road bridge across the Orange River.

As part of Alternative 2, the pipeline will be attached to the above mentioned bridge.

None of the proposed alternative activities is expected to cause any major harm to the bridge. However, the relevant Heritage Resources Agency would

have to be consulted and it would need to be ensured that no damage is caused to the bridge during the construction activities, if this alternative is decided upon.

If any changes / fixing of pipeline or other infrastructure are to be made on the existing road bridge, the relevant Heritage Resource Agency should be consulted.

No damage should be caused to the bridge.

No graves, or other material of archaeological or heritage significance were found on site.

However, the preferred alternative (Alternative 1_{Preferred}) will have no impact on the bridge.

SECTION C: PUBLIC PARTICIPATION

1. ADVERTISEMENT

The person conducting a public participation process must take into account any guidelines applicable to public participation as contemplated in section 24J of the Act and must give notice to all potential interested and affected parties of the application which is subjected to public participation by—

- (a) fixing a notice board (of a size at least 60cm by 42cm; and must display the required information in lettering and in a format as may be determined by the competent authority) at a place conspicuous to the public at the boundary or on the fence of—
 - (i) the site where the activity to which the application relates is or is to be undertaken; and
 - (ii) any alternative site mentioned in the application;
- (b) giving written notice to—
 - (i) the owner or person in control of that land if the applicant is not the owner or person in control of the land;
 - (ii) the occupiers of the site where the activity is or is to be undertaken or to any alternative site where the activity is to be undertaken;
 - (iii) owners and occupiers of land adjacent to the site where the activity is or is to be undertaken or to any alternative site where the activity is to be undertaken;
 - (iv) the municipal councillor of the ward in which the site or alternative site is situated and any organisation of ratepayers that represent the community in the area;
 - (v) the municipality which has jurisdiction in the area;
 - (vi) any organ of state having jurisdiction in respect of any aspect of the activity; and
 - (vii) any other party as required by the competent authority;
- (c) placing an advertisement in—
 - (i) one local newspaper; or
 - (ii) any official *Gazette* that is published specifically for the purpose of providing public notice of applications or other submissions made in terms of these Regulations;
- (d) placing an advertisement in at least one provincial newspaper or national newspaper, if the activity has or may have an impact that extends beyond the boundaries of the metropolitan or local municipality in which it is or will be undertaken: Provided that this paragraph need not be complied with if an advertisement has been placed in an official *Gazette* referred to in subregulation 54(c)(ii); and
- (e) using reasonable alternative methods, as agreed to by the competent authority, in those instances where a person is desiring of but unable to participate in the process due to—
 - (i) illiteracy;
 - (ii) disability; or
 - (iii) any other disadvantage.

2. CONTENT OF ADVERTISEMENTS AND NOTICES

A notice board, advertisement or notices must:

- (a) indicate the details of the application which is subjected to public participation; and
- (b) state—
 - (i) that the application has been submitted to the competent authority in terms of these Regulations, as the case may be;
 - (ii) whether basic assessment or scoping procedures are being applied to the application, in the case of an application for environmental

- authorisation;
- (iii) the nature and location of the activity to which the application relates;
- (iv) where further information on the application or activity can be obtained; and
- (iv) the manner in which and the person to whom representations in respect of the application may be made.

3. PLACEMENT OF ADVERTISEMENTS AND NOTICES

Where the proposed activity may have impacts that extend beyond the municipal area where it is located, a notice must be placed in at least one provincial newspaper or national newspaper, indicating that an application will be submitted to the competent authority in terms of these regulations, the nature and location of the activity, where further information on the proposed activity can be obtained and the manner in which representations in respect of the application can be made, unless a notice has been placed in any *Gazette* that is published specifically for the purpose of providing notice to the public of applications made in terms of the EIA regulations.

Advertisements and notices must make provision for all alternatives.

4. DETERMINATION OF APPROPRIATE MEASURES

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

5. COMMENTS AND RESPONSE REPORT

The practitioner must record all comments and respond to each comment of the public before the application 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 this application. The comments and response report must be attached under Appendix E.

6. AUTHORITY PARTICIPATION

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

List of authorities informed:

- Ward councillor: Ward 2
- Umsobomvu Local Municipality
- Pixley Ka Seme District Municipality
- Department of Water Affairs (DWA)
- Department of Public works, Road and Transport
- Department of Agriculture, Forestry and Fisheries
- SAHRA – Northern Cape

List of authorities from whom comments have been received:

No input has been received to date. A copy of any comments received during the Public Participation Process will be made available in the Final BAR.

7. CONSULTATION WITH OTHER STAKEHOLDERS

Note that, for linear activities, or 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.

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

Has any comment been received from stakeholders?

	NO
--	----

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

A number of role players were notified of the proposed project. The Department of Public Works and other stakeholders was also be notified of the application for environmental authorisation for the proposed upgrading of the said pipeline and abstraction works. No input has been received to date. A copy of any comments received during the Public Participation Process will be made available in the Final BAR.

SECTION D: IMPACT ASSESSMENT

The assessment of impacts must adhere to the minimum requirements in the EIA Regulations, 2010, and should take applicable official guidelines into account. The issues raised by interested and affected parties should also be addressed in the assessment of impacts.

1. ISSUES RAISED BY INTERESTED AND AFFECTED PARTIES

List the main issues raised by interested and affected parties.

Mr. Eksteen (adjacent landowner) registered as an IAP.
Requested an electronic map indicating the routes.
Wanted an indication of the expected impact on the current water supply routes inside Norvalspont will be.
Etc.

Response from the practitioner to the issues raised by the interested and affected parties (A full response must be given in the Comments and Response Report that must be attached to this report):

A copy of the dBAR was forwarded to all registered IAPs.
Please note that all responses (if any) will be attached as Annexure E₃ in the Final BAR.

2. 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

List the potential direct, indirect and cumulative property/activity/design/technology/operational alternative related impacts (as appropriate) 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.

Alternative 1 Preferred		
	Potential Impacts	Recommended Mitigation Measures
Planning and Design	<p>Direct Impacts</p> <ul style="list-style-type: none"> • None <p>Indirect Impacts</p> <ul style="list-style-type: none"> • None <p>Cumulative Impacts</p> <ul style="list-style-type: none"> • None <p>No-go alternative</p> <ul style="list-style-type: none"> • None 	<ul style="list-style-type: none"> • No impacts expected
Construction	<p>Direct Impacts</p> <ul style="list-style-type: none"> • Destruction of vegetation, including protected plant species • Noise elevation due to 	<ul style="list-style-type: none"> • Vegetation clearance will be limited to the area identified for the construction activities and the corridor, where needed • A permit for the removal of protected

Alternative 1 <small>Preferred</small>		
	Potential Impacts	Recommended Mitigation Measures
	<p>construction activities</p> <ul style="list-style-type: none"> • Nuisance dust generation • Visual impact of rock and spoil material dumps from trench excavation all along the route • Impact on waterways (including the natural habitat of the area), including pollution <p>Indirect Impacts</p> <ul style="list-style-type: none"> • Potential erosion of exposed soil • Establishment of alien / invader vegetation on disturbed areas • Dumping of construction rubble and general waste on site • Spillage of material to be utilised during the construction phase as well as untreated sewage to the surrounding environment • Surface and groundwater pollution due to spillage of potential hazardous substances such as hydraulic material and untreated sewage • Impact on traffic due to construction activities <p>Cumulative Impacts</p> <ul style="list-style-type: none"> • None <p>No-go alternative</p> <ul style="list-style-type: none"> • Restriction on water usage • Not enough water available at Norvalspont 	<p>plant species will be obtained before the removal of these species</p> <ul style="list-style-type: none"> • Establishment of alien vegetation will be monitored and alien species will be removed by hand or by an approved chemical before seeding thereof takes place • Storm water measures will be implemented in order to manage storm water (if necessary) and this will also prevent erosion • Visual inspections for the occurrence of erosion should be undertaken on a weekly basis • Speed limit will be enforced on the construction vehicles and these vehicles will only make use of designated roads / pathways • Dust control measures will be implemented if nuisance dust generation occurs during the construction period • No waste (general / construction / potential hazardous / etc.) may be dumped in the veld • Covered receptacles will be available on site for the temporary disposal of waste • Waste will be removed from site and disposed of at an authorised landfill site • The necessary precautions with regard to road safety should be implemented for construction work within road crossings.
Operational	<ul style="list-style-type: none"> • This phase consists of the use of the proposed pipeline • This will result in the deterioration of the pipeline and associated infrastructure in the long term • Establishment of alien / 	<ul style="list-style-type: none"> • Maintenance and repair will be undertaken, when necessary • Establishment of alien vegetation will be monitored and alien species will be removed by hand or by an approved chemical before seeding thereof takes place

Alternative 1 <small>Preferred</small>		
	Potential Impacts	Recommended Mitigation Measures
	invader species due to previous disturbance	
Decommissioning and Closure	<ul style="list-style-type: none"> Activities associated with the decommissioning phase will be limited to the rehabilitation of areas disturbed during the construction phase, other than the pipeline and associated infrastructure. All disturbed areas will be rehabilitated to its natural status. 	
	<p>Direct Impacts</p> <ul style="list-style-type: none"> The rehabilitation process will not result in any environmental impacts <p>Indirect Impacts</p> <ul style="list-style-type: none"> No impact <p>Cumulative Impacts</p> <ul style="list-style-type: none"> None <p>No-go alternative</p> <ul style="list-style-type: none"> Potential erosion of exposed soil Potential dumping of waste on site Potential establishment of alien vegetation in rehabilitated areas 	<ul style="list-style-type: none"> All temporary infrastructure related to the construction phase will be removed from site Temporary concrete surfaces will be removed and compacted areas ripped The establishment of natural occurring vegetation will be encouraged in the road reserve area No waste will be dumped on site and any waste occurring on site will be removed and disposed of according to best practices Establishment of extensive alien species will be monitored A rehabilitation plan will be developed, if it is decided to remove the pipeline and the associated infrastructures The rehabilitation plan will include management and mitigation measures to be implemented during the decommissioning of the pipeline and associated infrastructures.

Alternative 2 Potable water from KLM		
	Potential Impacts	Recommended Mitigation Measures
Planning and Design	<p>Direct Impacts</p> <ul style="list-style-type: none"> • None <p>Indirect Impacts</p> <ul style="list-style-type: none"> • None <p>Cumulative Impacts</p> <ul style="list-style-type: none"> • None <p>No-go alternative</p> <ul style="list-style-type: none"> • None 	<ul style="list-style-type: none"> • No impacts expected
Construction	<p>Direct Impacts</p> <ul style="list-style-type: none"> • Destruction of vegetation, including protected plant species • Noise elevation due to construction activities • Nuisance dust generation • Visual impact of rock and spoil material dumps from trench excavation all along the route • Impact on waterways (including the natural habitat of the area), including pollution <p>Indirect Impacts</p> <ul style="list-style-type: none"> • Potential erosion of exposed soil • Establishment of alien / invader vegetation on disturbed areas • Dumping of construction rubble and general waste on site • Spillage of material to be utilised during the construction phase as well as untreated sewage to the surrounding environment • Surface and groundwater pollution due to spillage of potential hazardous substances such as hydraulic material and untreated sewage 	<ul style="list-style-type: none"> • Vegetation clearance will be limited to the area identified for the construction activities and the corridor, where needed • A permit for the removal of protected plant species will be obtained before the removal of these species • Establishment of alien vegetation will be monitored and alien species will be removed by hand or by an approved chemical before seeding thereof takes place • Storm water measures will be implemented in order to manage storm water (if necessary) and this will also prevent erosion • Visual inspections for the occurrence of erosion should be undertaken on a weekly basis • Speed limit will be enforced on the construction vehicles and these vehicles will only make use of designated roads / pathways • Dust control measures will be implemented if nuisance dust generation occurs during the construction period • No waste (general / construction / potential hazardous / etc.) may be dumped in the veld • Covered receptacles will be available on site for the temporary disposal of waste • Waste will be removed from site and disposed of at an authorised landfill

Alternative 2 Potable water from KLM		
	Potential Impacts	Recommended Mitigation Measures
	<ul style="list-style-type: none"> Impact on traffic due to construction activities <p>Cumulative Impacts</p> <ul style="list-style-type: none"> None <p>No-go alternative</p> <ul style="list-style-type: none"> Restriction on water usage Not enough water available at Norvalspont 	<p>site</p> <ul style="list-style-type: none"> The necessary precautions with regard to road safety should be implemented for construction work within road crossings.
Operational	<ul style="list-style-type: none"> This phase consists of the use of the proposed pipeline This will result in the deterioration of the pipeline and associated infrastructure in the long term Establishment of alien / invader species due to previous disturbance 	<ul style="list-style-type: none"> Maintenance and repair will be undertaken, when necessary Establishment of alien vegetation will be monitored and alien species will be removed by hand or by an approved chemical before seeding thereof takes place
Decommissioning and Closure	<ul style="list-style-type: none"> Activities associated with the decommissioning phase will be limited to the rehabilitation of areas disturbed during the construction phase, other than the pipeline and associated infrastructure. All disturbed areas will be rehabilitated to its natural status. <p>Direct Impacts</p> <ul style="list-style-type: none"> The rehabilitation process will not result in any environmental impacts <p>Indirect Impacts</p> <ul style="list-style-type: none"> No impact <p>Cumulative Impacts</p> <ul style="list-style-type: none"> None <p>No-go alternative</p> <ul style="list-style-type: none"> Potential erosion of exposed soil Potential dumping of waste on site Potential establishment of alien vegetation in rehabilitated areas 	<ul style="list-style-type: none"> All temporary infrastructure related to the construction phase will be removed from site Temporary concrete surfaces will be removed and compacted areas ripped The establishment of natural occurring vegetation will be encouraged in the road reserve area No waste will be dumped on site and any waste occurring on site will be removed and disposed of according to best practices Establishment of extensive alien species will be monitored A rehabilitation plan will be developed, if it is decided to remove the pipeline and the associated infrastructures The rehabilitation plan will include management and mitigation measures to be implemented during the decommissioning of the pipeline and associated infrastructures.

Alternative 3 <small>Bridge piers</small>		
	Potential Impacts	Recommended Mitigation Measures
Planning and Design	<p>Direct Impacts</p> <ul style="list-style-type: none"> • None <p>Indirect Impacts</p> <ul style="list-style-type: none"> • None <p>Cumulative Impacts</p> <ul style="list-style-type: none"> • None <p>No-go alternative</p> <ul style="list-style-type: none"> • None 	<ul style="list-style-type: none"> • No impacts expected
Construction	<p>Direct Impacts</p> <ul style="list-style-type: none"> • Destruction of vegetation, including protected plant species • Noise elevation due to construction activities • Nuisance dust generation • Visual impact of rock and spoil material dumps from trench excavation all along the route • Impact on waterways (including the natural habitat of the area), including pollution <p>Indirect Impacts</p> <ul style="list-style-type: none"> • Potential erosion of exposed soil • Establishment of alien / invader vegetation on disturbed areas • Dumping of construction rubble and general waste on site • Spillage of material to be utilised during the construction phase as well as untreated sewage to the surrounding environment • Surface and groundwater pollution due to spillage of potential hazardous substances such as hydraulic material and untreated sewage 	<ul style="list-style-type: none"> • Vegetation clearance will be limited to the area identified for the construction activities and the corridor, where needed • A permit for the removal of protected plant species will be obtained before the removal of these species • Establishment of alien vegetation will be monitored and alien species will be removed by hand or by an approved chemical before seeding thereof takes place • Storm water measures will be implemented in order to manage storm water (if necessary) and this will also prevent erosion • Visual inspections for the occurrence of erosion should be undertaken on a weekly basis • Speed limit will be enforced on the construction vehicles and these vehicles will only make use of designated roads / pathways • Dust control measures will be implemented if nuisance dust generation occurs during the construction period • No waste (general / construction / potential hazardous / etc.) may be dumped in the veld • Covered receptacles will be available on site for the temporary disposal of waste • Waste will be removed from site and disposed of at an authorised landfill

Alternative 3 <small>Bridge piers</small>		
	Potential Impacts	Recommended Mitigation Measures
	<ul style="list-style-type: none"> Impact on traffic due to construction activities <p>Cumulative Impacts</p> <ul style="list-style-type: none"> None <p>No-go alternative</p> <ul style="list-style-type: none"> Restriction on water usage Not enough water available at Norvalspont 	<p>site</p> <ul style="list-style-type: none"> The necessary precautions with regard to road safety should be implemented for construction work within road crossings.
Operational	<ul style="list-style-type: none"> This phase consists of the use of the proposed pipeline This will result in the deterioration of the pipeline and associated infrastructure in the long term Establishment of alien / invader species due to previous disturbance 	<ul style="list-style-type: none"> Maintenance and repair will be undertaken, when necessary Establishment of alien vegetation will be monitored and alien species will be removed by hand or by an approved chemical before seeding thereof takes place
Decommissioning and Closure	<ul style="list-style-type: none"> Activities associated with the decommissioning phase will be limited to the rehabilitation of areas disturbed during the construction phase, other than the pipeline and associated infrastructure. All disturbed areas will be rehabilitated to its natural status. <p>Direct Impacts</p> <ul style="list-style-type: none"> The rehabilitation process will not result in any environmental impacts <p>Indirect Impacts</p> <ul style="list-style-type: none"> No impact <p>Cumulative Impacts</p> <ul style="list-style-type: none"> None <p>No-go alternative</p> <ul style="list-style-type: none"> Potential erosion of exposed soil Potential dumping of waste on site Potential establishment of alien vegetation in rehabilitated areas 	<ul style="list-style-type: none"> All temporary infrastructure related to the construction phase will be removed from site Temporary concrete surfaces will be removed and compacted areas ripped The establishment of natural occurring vegetation will be encouraged in the road reserve area No waste will be dumped on site and any waste occurring on site will be removed and disposed of according to best practices Establishment of extensive alien species will be monitored A rehabilitation plan will be developed, if it is decided to remove the pipeline and the associated infrastructures The rehabilitation plan will include management and mitigation measures to be implemented during the decommissioning of the pipeline and associated infrastructures.

3. 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.

No major impacts are anticipated with regard to the site. Possible impacts during the construction and operational phases can be mitigated and managed if the Environmental Management Programme (EMPr) in Appendix F is adhered to.

Alternative 1 Preferred

Establishment of alien vegetation will be monitored and alien species will be removed by hand or by an approved chemical before germination thereof takes place.

The expected impacts relating to the proposed pipeline are mostly temporary (during the construction phase) and the mitigation measures referred to in the EMPr will ensure that the disturbance is kept to a minimum and ensure that adequate rehabilitation takes place.

Alternative 2 Potable water from KLM

The same as above, including:

- Not cost efficient

- Time consuming

- Larger impact on environment as larger natural environments will be disturbed

It is therefore suggested that this option is not seen as a reasonable and / or viable option and that the preferred alternative should be approved.

Alternative 3 Bridge piers

The same as above, including:

- Not cost efficient

No-go alternative

The proposed pipeline is considered essential to increase and sustain the bulk water infrastructure for the area. As water provision is a basic service, the lack thereof will lead to major social impacts that will indirectly cause severe environmental concerns. The impacts expected during the construction phase of the pipeline can be minimised through the recommended mitigation measures and therefore the no-go alternative is not ideal.

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	
-----	--

Is an EMPr attached?

YES	
-----	--

The EMPr must be attached as Appendix F.

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:

Refer to the EMPr in Appendix F for recommended mitigation measures.
--

SECTION F: APPENDIXES

The following appendixes must be attached as appropriate:

Appendix A: Site plan(s)

Appendix B: Photographs

Appendix C: Facility illustration(s)

Appendix D: Specialist reports

Appendix E: Comments and responses report

Appendix F: Environmental Management Programme (EMPr)

Appendix G: Other information

APPENDIX A

Site Plan(s)



TYPE OF PLAN: LOCALITY AND LAYOUT MAP

PROJECT: PROPOSED CONSTRUCTION OF A PIPELINE AND ASSOCIATED INFRASTRUCTURE, NORVALSPONT, NC

PROJECT BY: UMSOBOMVU LOCAL MUNICIPALITY

SCALE: 1:765m

DRAWN BY: HG

Legend:

- Alternative 1 Preferred Route A (A, B, H, G)
- Alternative 1 Preferred Route B (A, B, H, F)
- Alternative 2 Feasible water from KLM Route A (A, E, C, D, E)
- Alternative 2 Feasible water from KLM Route E (A, E, C, D, E)
- Alternative 3 Bridge piers (A, B, C)

Coordinates:


- A: 30.627778°S, 25.459460°E
- B: 30.623463°S; 25.462944°E
- C: 30.621071°S, 25.464647°E
- D: 30.618606°S, 25.466701°E
- E: 30.623777°S, 25.483055°E
- F: 30.622991°S, 25.464933°E
- G: 30.622546°S, 25.464640°E
- H: 30.622767°S, 25.464188°E



- Legend:**
- Alternative 1 Preferred Route A and Route B (A, B, H)
 - Alternative 1 Preferred Route A (Section H, G)
 - Alternative 1 Preferred Route B (Section H, F)

Coordinates:

A: 30.627778°S, 25.459460°E
B: 30.623463°S, 25.462944°E
F: 30.622991°S, 25.464933°E
G: 30.622546°S, 25.464640°E
H: 30.622767°S, 25.464188°E

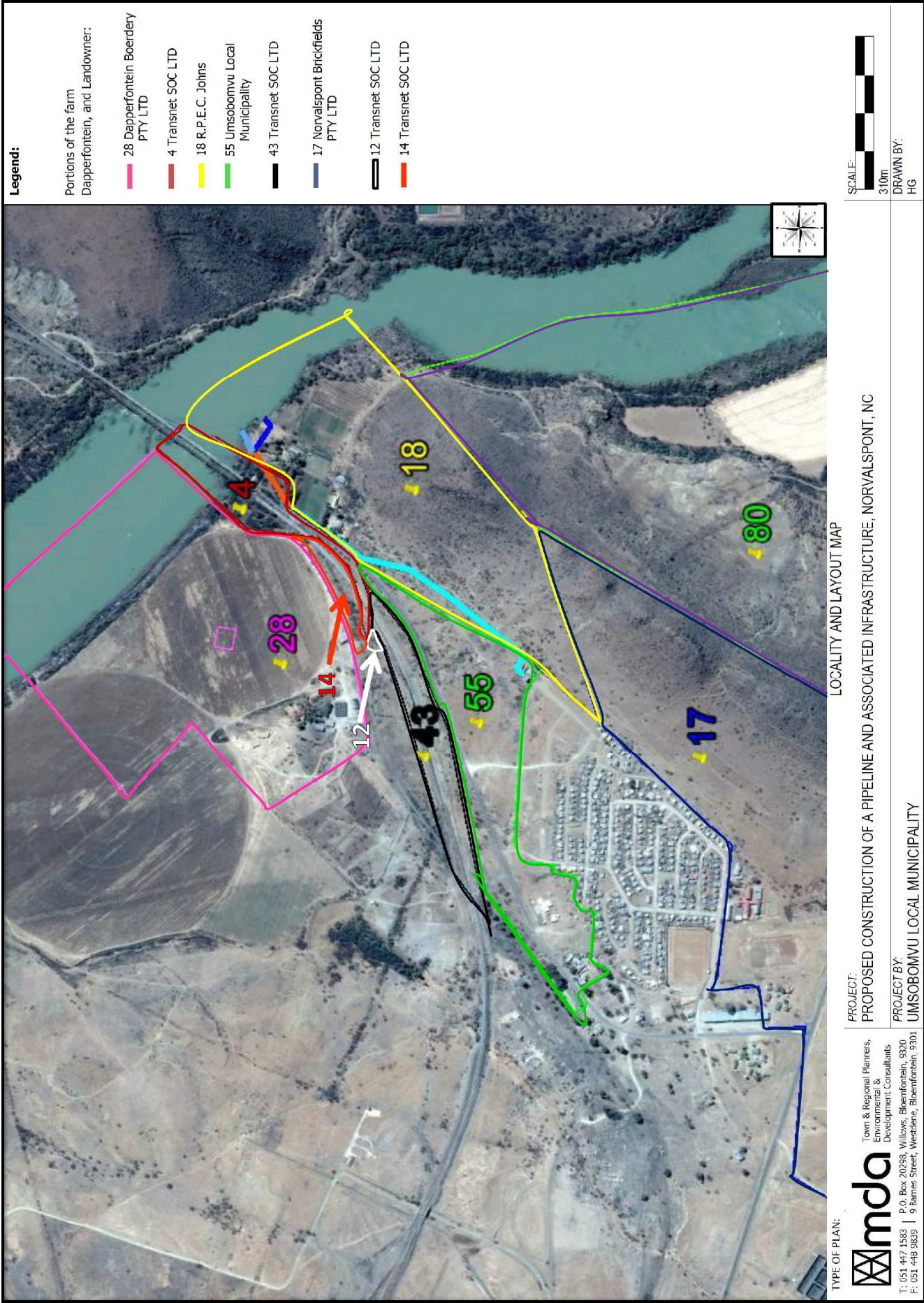
SCALE:  130m
 DRAWN BY: HG

LOCALITY AND LAYOUT MAP

PROJECT: PROPOSED CONSTRUCTION OF A PIPELINE AND ASSOCIATED INFRASTRUCTURE, NORVALSPONT, NC
PROJECT BY: UMSOBOMVU LOCAL MUNICIPALITY

TYPE OF PLAN:

 **mda**
 Town & Regional Planners,
 Environmental &
 Development Consultants
 P.O. Box 20296, Willovis, Bloemfontein, 9320
 T: 051 447 1583 | F: 051 448 9839 | 5 Barnes Street, Westdene, Bloemfontein, 9301



Legend:

Portions of the farm Dapperfontein, and Landowner:

- 28 Dapperfontein Boerederie PTY LTD
- 4 Transnet SOC LTD
- 18 R.P.E.C. Johns
- 55 Umsobomvu Local Municipality
- 43 Transnet SOC LTD
- 17 Norvalspont Brickfields PTY LTD
- 12 Transnet SOC LTD
- 14 Transnet SOC LTD

LOCALITY AND LAYOUT MAP

PROJECT: PROPOSED CONSTRUCTION OF A PIPELINE AND ASSOCIATED INFRASTRUCTURE, NORVALSPONT, NC

PROJECT BY: UMSOBOMVU LOCAL MUNICIPALITY

SCALE: 1:310m

DRAWN BY: HG

TYPE OF PLAN:

mda Town & Regional Planners, Environmental & Development Consultants
 T: 051 447 1583 | P.O. Box 20298, Willows, Bloemfontein, 9320
 F: 051 448 9839 | 9 Bames Street, Westdene, Bloemfontein, 9301

APPENDIX B

Photographs

Photographic indication of the proposed construction area:



Existing infrastructure associated with the proposed pipeline:



Photographs of the railway bridge and the piers of the bridge adjacent to the railway bridge that will be utilised if Alternative 3 is decided upon.



APPENDIX C

Facility Illustration(s)

Please note that the facility illustrations will only be drawn after approval is obtained from the relevant authorities, due to the costs involved to appoint such engineers.

APPENDIX D

Specialist reports

APPENDIX D₁

Ecological Report

APPENDIX D₂

Heritage Report

APPENDIX E

Comments and responses report

APPENDIX E₁

List of identified interested and affected parties

Date of notification: 26 March 2014.

ORGANIZATION	CONTACT PERSON AND CONTACT DETAIL	POSTAL ADDRESS	TELEPHONE, FAX AND E-MAIL	NOTIFICATION MANNER
Authorities & Stakeholders				
Ward Councillor, Ward 2	Annie Fritz	Private Bag X6 Colesberg 9795	T: 051 753 0777 F: 051 753 0574	By post
Umsobomvu Local Municipality	The Municipal Manager: Mr. Amos China Mpela	Private Bag X6 Colesberg 9795	T: 051 753 0777 F: 051 753 1918 Mpela@Umsobomvumun.Co.Za	By post
Pixley Ka Seme District Municipality	The Municipal Manager: Mr. Macoollan Jack	Private Bag X1012 De Aar 7000	T: 053 631 0891 F: 053 631 2529 Pixley@Telkomsa.Net	By post
DWA	WQMA 13 Mr. Pius Lerotholi	P.O. Box 528 Bloemfontein 9300	T: 051 405 9163 lerotholit@dwa.gov.za	By post
Sahra – Northern Cape	The Provincial Manager South African Heritage Resources Agency	1 Robb Street Kimberley 8301 P.O. Box 1930 Kimberley 8300	T: 053 831 2537 F: 053 833 1435 Ksofeleng@Nc.Sahra.Org.Za	An on-line application was submitted on 23 July 2014
Department Of Agriculture, Forestry And Fisheries	Agriculture, Land Reform And Rural Development Hod: Mr Wonders Dimakatso Viljoen Mothibi	Private Bag X5018 Kimberley 8300 Kimberlite Building 162 George Street Kimberley 8300	T: 053 838 9102 F: 053 831 3635 C: 083 448 9151 Cfortune@Agri.Ncape.Gov.Za	By post
Department Of Public Works, Road And Transport	Head Of Department: Transport, Safety And Liaison: Ms Khwezi Jonkers (Acting)	Private Bag X1368 Kimberley 8300 Southey Chambers 1 st Floor Southey Street Kimberley	T: 053 839 1702 F: 053 839 2781 C: 083 320 2617 Twessels@Grand.Ncape.Gov.Za	By post
Department Of Public Works,	Head Of Department:	Po Box 3132 Kimberley	F: 053 839 2291 C: 083 255 8816	By post

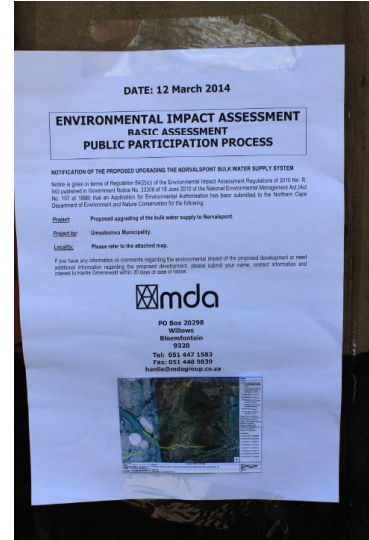
ORGANIZATION	CONTACT PERSON AND CONTACT DETAIL	POSTAL ADDRESS	TELEPHONE, FAX AND E-MAIL	NOTIFICATION MANNER
Road And Transport	Roads And Public Works Ms Ruth Palm (Acting)	8301 9 Stockroos Road Square Hillpark Floors Hostel Kimberley 8300	Klawrence@Trpw.Ncape.Gov.Za	
Transnet Soc Ltd	Mr Mboniso Sigonyela General Manager: Corporate Communications	P.O. Box 72501 Parkview South Africa 2122 Carlton Centre 150 Commissioner Street Johannesburg 2001	T: 011 308 2461 F: 011 308 2465 mboniso.sigonyela@transnet.net	By post
ADJACENT LANDOWNERS AND OTHER NOTIFIED PARTIES				
Dapperfontein Boerdery Pty Ltd (Dapperfontein 79, Portions 28, 40, 41, 42)	Nicholas Van Rensburg	P.O. Box 100 Colesberg 9795 Rietfontein Colesberg 9795		By post
(Dapperfontein 79/18)	Johns Rudolph Paul Eugen Christel	P O Box 21 Springfontein 9917 69 President Steyn Street Springfontein 9917	T: 0517555054	By post
Transnet Soc Ltd (Dapperfontein 79, Portion 4, 14)	Mr Mboniso Sigonyela General Manager: Corporate Communications	P.O. Box 72501 Parkview South Africa 2122 Carlton Centre 150 Commissioner	T: 011 308 2461 F: 011 308 2465 mboniso.sigonyela@transnet.net	By post

ORGANIZATION	CONTACT PERSON AND CONTACT DETAIL	POSTAL ADDRESS	TELEPHONE, FAX AND E-MAIL	NOTIFICATION MANNER
		Street Johannesburg 2001		
Umsobomvu Local Municipality (Dapperfontein 79/55)	The Municipal Manager: Mr. Amos China Mpela	Private Bag X6 Colesberg 9795	T: 051 753 0777 F: 051 753 1918 Mpela@Umsobomvumun.Co.Za	By post
Dapperfontein Cc (Dapperfontein 79/19)	Unknown	P O Box 111 Norvalspont 9797 Glasgow Pont Hotel Main Avenue Norvalspont 9787		By post
Dapperfontein Cc (Dapperfontein 79/19)	Active Member: Louis Jacobus Eksteen	3 Fluor Avenue Arconpark Vereeniging 1939		By post

APPENDIX E₂

Proof of notification

Site notices:





DATE: 12 March 2014

**ENVIRONMENTAL IMPACT ASSESSMENT
BASIC ASSESSMENT
PUBLIC PARTICIPATION PROCESS**

NOTIFICATION OF THE PROPOSED UPGRADING THE NORVALSPONT BULK WATER SUPPLY SYSTEM


Notice is given in terms of Regulation 62(2)(c) of the Environmental Impact Assessment Regulations of 2010 No. 16, (SI) published in Government Notice No. 33006 of 18 June 2010 of the National Environmental Management Act Act No. 107 of 1998 that an Application for Environmental Authorisation has been submitted to the Northern Cape Department of Environment and Nature Conservation for the following:


Project: Proposed upgrading of the bulk water supply to Norvalspont.

Project for: Unisaadree Municipality.

Location: Please refer to the attached map.

If you have any information or comments regarding the environmental impact of the proposed development or need additional information regarding the proposed development, please submit your comments in accordance with section 24 of the Environmental Act within 30 days of date of notice.


PO Box 20296
Bellville
7801
Tel: 081 447 3383
Fax: 081 448 9839
www.mda.gov.za



Example of the notice in a local newspaper:
28 March 2014, in Die Volksblad

VOLKSBLAD

NUUS MET MENING

Media24 Beperk • Reg-nr. 1950/038385/06
Nelson Mandelarylaan 79 • Posbus 267
Bloemfontein 9300 • Suid-Afrika
Tel 051 404 7600 • Faks 051 448 3771
Webtuiste: www.volksblad.com

Media 24 Limited • Reg. No. 1950/038385/06
79 Nelson Mandela Drive • PO Box 267
Bloemfontein 9300 • South Africa
Tel 051 404 7600 • Fax 051 448 3771
Website: www.volksblad.com

Aan Belanghebbendes

Ons verklaar hiermee dat die aangehegte advertensie soos geadverteer in die
Volksblad van 28 /03/2014



DATUM 3 April 2014

BERNADETTE CAMPBELL

D VAN
EMBER OF

Media24

Direkteure/Directors: GJ Gerwel (Voorsitter/Chairman), FE Groepe (Uitvoerende hoof/Chief executive officer),
HR Botman, SS de Swardt, RCC Jafta, SJZ Pacak, LP Retief, JJM van Zyl, GM Landman, TMF Phaswana, T Vosloc
JP Bekker
Sekretaris/Secretary: GM Coetsee