

# DRAFT BASIC ASSESSMENT REPORT FOR THE PROPOSED FORT KLIPDAM WATER INFRASTRUCTURE DEVELOPMENT

ON THE FARMS MAROELAPAN 613 LS, DE PUT 611 LS, FORT  
KLIPDAM 852 LS, AND THE REMAINDER OF PORTION 1 OF  
THE FARM UITKOMS 864 LS



REFERENCE: 12/1/9/1-C83

DECEMBER 2014

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# LIMPOPO

PROVINCIAL GOVERNMENT  
REPUBLIC OF SOUTH AFRICA

## DEPARTMENT OF ECONOMIC DEVELOPMENT, ENVIRONMENT & TOURISM

### BASIC ASSESSMENT REPORT - EIA REGULATIONS, 2010

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

File Reference Number:

12/1/9/1-C83

NEAS Reference Number:

(For official use only)

LIM/EIA/0000814/2014

Date Received:

Due date for acknowledgement:

Due date for acceptance:

Due date for decision

Kindly note that:

1. The report must be compiled by an independent Environmental Assessment Practitioner.
2. 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.
3. Where applicable **tick** the boxes that are applicable in the report.
4. 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 Department of Economic Development, Environment and Tourism as the competent authority (Department) for assessing the application, it may result in the rejection of the application as provided for in the regulations.
5. An incomplete report may be returned to the applicant for revision.
6. Unless protected by law, all information in the report will become public information on receipt by the department. Any interested and affected party should be provided with the information contained in this report on request. during any stage of the application process.

Cnr Suid & Dorp Streets, POLOKWANE, 0700, P O Box 55464, POLOKWANE, 0700  
Tel: 015 290 7138/ 7167, Fax: 015 295 5015, website: <http://www.ledet.gov.za>

***The heartland of southern Africa – development is about people!***

7. The Act means the National Environmental Management Act (No. 107 of 1998) as amended.
8. Regulations refer to Environmental Impact Assessment (EIA) Regulations of 2010.
9. The Department may require that for specified types of activities in defined situations only parts of this report need to be completed. No faxed or e-mailed reports will be accepted.
10. This application form must be handed in at the offices of the Department of Economic Development, Environment and Tourism:-

<p><b>Postal Address:</b></p> <p>Central Administration Office  Environmental Impact Management  P. O. Box 55464  <b>POLOKWANE</b>  0700</p>	<p><b>Physical Address:</b></p> <p>Central Administration Office  Environmental Affairs Building  Cnr Suid and Dorp Streets  <b>POLOKWANE</b>  0699</p>
<p><b>Queries should be directed to the Central Administration Office: Environmental Impact Management:-</b></p> <p><b>For attention:</b> Mr E. V. Maluleke</p> <p><b>Tel:</b> (015) 290 7138/ (015) 290 7167</p> <p><b>Fax:</b> (015) 295 5015</p> <p><b>Email:</b> <a href="mailto:malulekeev@ledet.gov.za">malulekeev@ledet.gov.za</a></p>	

View the Department's website at <http://www.ledet.gov.za> for the latest version of the documents.

## SECTION A: ACTIVITY INFORMATION

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

YES	<b>NO</b> <b>X</b>
-----	-----------------------

If YES, please complete the form entitled “Details of specialist and declaration of interest” or appointment of a specialist 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<sup>1</sup>:

The proposed project consists of water infrastructure development for agricultural and domestic purposes by means of constructing dams and pipelines on the farms Maroelapan 613 LS, De Put 611 LS, Fort Klipdam 852 LS, and the Remainder of Portion 1 of the farm Uitkoms 864 LS. It is furthermore also the intention of the applicant to withdraw water from boreholes for purposes of irrigation and domestic use. Water will be abstracted from Fort Klipdam 852 LS (as indicated on the layout map) and be transported via the pipeline across the Farm Maroelapan 613 LS to be used for domestic purposes on the Farm De Put 611 LS and irrigation on the other farms. The pipeline will in total cover a length of approximately 12.9 km.

**In the application form, which was submitted to the Department, it was indicated that the applicant wishes to apply for the following listed activities.**

**Listed activities applied for in terms of Notice 1 (R544, 18 June 2010):**

Activity 9, 11, 12, and 18.

Date and Number of the relevant Notice:	Activity No(s) in terms of the relevant Notice	Describe each listed activity as per the project description

<sup>1</sup> Please note that this description should not be a verbatim repetition of the listed activity as contained in the relevant Government Notice, but should be a brief description of activities to be undertaken as per the project description.  
LEDET BA Report, EIA 2010: Project Name: Water Infrastructure Development on the farms Maroelapan 613 LS, De Put 611 LS, Fort Klipdam 852 LS, and the Remainder of Portion 1 of the farm Uitkoms 864 LS

GN R 544	LN 1, Activity 9	<p>The construction of facilities or-infrastructure exceeding' 1000metres in length for the bulk transportation of water, sewage or storm water</p> <p>(i) with an internal diameter of 0,36 metres or more; or</p> <p>(ii) with a peak throughput of 120 litres per second or more,</p> <p>excluding where:</p> <p>a. such facilities or infrastructure are for bulk transportation of water, sewage or storm water or storm water drainage inside a road reserve; or</p> <p>b. where such construction will occur within urban areas but further than 32 metres from a watercourse, measured from the edge of the watercourse.</p>
<p><b>Reasons for inclusion</b></p> <p>This activity is triggered due to the transportation of bulk water from one dam via a pipeline to other farms for domestic and irrigation purposes. The internal diameter might be more than 0.36m. This depends on a variety of factors and therefore this activity is included as it might be triggered by the development.</p>		
GN R544	LN 1, Activity 11	<p>The construction of:</p> <ul style="list-style-type: none"> <li>i. canals;</li> <li>ii. channels;</li> <li>iii. bridges;</li> <li>iv. dams</li> <li>v. weirs;</li> <li>vi. bulk stormwater outlets structures;</li> <li>vii. ..</li> <li>viii. ..</li> <li>ix. ..</li> <li>x. Buildings exceeding 50 square metres in size; or</li> <li>xi. Infrastructure or structures covering 50 square metres or more</li> </ul> <p>where such construction occurs within a watercourse or within 32 metres of a watercourse, measured from the edge of watercourse, excluding where such construction will occur behind the development setback line.</p>
<p><b>Reasons for inclusion</b></p> <p>The dam and pipeline will originate next to a perennial stream, within 32m of the stream, and therefore this activity is included. A Water Use License will also be completed as Section 21 activities are triggered by the development.</p>		

GN R544	LN 1, Activity 12	The construction of facilities or infrastructure for the off-stream storage of water, including dams and reservoirs with a combined capacity of 50,000m <sup>3</sup> or more, unless such activity falls within the ambit of Activity 19 of Notice 545 of 2010.
<p><b>Reasons for inclusion</b></p> <p>Water will be stored adjacent to the perennial stream where the capacity of the dam might possibly exceed 50,000 m<sup>3</sup>. This activity is included for off-stream storage of water.</p>		
GN R544	LN 1, Activity 18	<p>The infilling or depositing of any material of more than 5 cubic metres into, or the dredging, excavation, removal or moving of soil, sand, shells, shell grit, pebbles or rock from:</p> <ul style="list-style-type: none"> <li>(i) a watercourse;</li> <li>(ii) the sea;</li> <li>(iii) the seashore;</li> <li>(iv) the littoral active zone, an estuary or a distance of 100 metres inland of the high-water mark of the sea or an estuary, whichever distance is the greater:</li> </ul> <p>but excluding where such infilling, depositing, dredging, excavation, removal or moving;</p> <ul style="list-style-type: none"> <li>(i) is for maintenance purposes undertaken in accordance with a management plan agreed to by the relevant environmental authority; or</li> <li>(ii) occurs behind the development setback line.</li> </ul>
<p><b>Reasons for inclusion</b></p> <p>The dam and pipeline will originate next to a perennial stream, and it is possible that some infilling, depositing, dredging, excavation, removal or moving activities might occur within the watercourse, therefore this activity is included.</p> <p>A Water Use License will also be completed as Section 21 activities are triggered by the development.</p>		
<p><b>Listed activities applied for in terms of Notice 3 (R546, 18 June 2010):</b></p> <p>Activity 2 and 16.</p>		
<b>Date and Number of the relevant Notice:</b>	<b>Activity No(s) in terms of the relevant</b>	<b>Describe each listed activity as per the project description</b>



	<b>Notice</b>	
GN R546	LN 3, Activity 2	<p>The construction of reservoirs for bulk water supply with a capacity of more than 250m<sup>3</sup>.</p> <p>iii) Outside urban areas, in:  (aa) National Protected Area Expansion Strategy Focus areas;  ...  (dd) Critical Biodiversity areas as identified in systematic biodiversity plans adopted by the competent authority or in bioregional plans;  ....</p>
<p><b>Reasons for inclusion</b></p> <p>The proposed development is situated perpendicular to the Sand River and some wetlands are located nearby. Therefore this activity is included as the river or wetland might be considered critical in terms of biodiversity/and or ecosystem services.</p>		
GN R546	LN 3, Activity 16	<p>The construction of:  ...  ...  ...  iv. infrastructure covering 10 square metres or more</p> <p>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 a development setback line.</p> <p>ii) Outside urban areas in:  (aa) A protected area identified in terms of NEMPAA, excluding conservancies;  ...  (ff) Critical Biodiversity areas or ecosystem service areas identified in systematic biodiversity plans adopted by the competent authority or in bioregional plans;  ....</p>
<p><b>Reasons for inclusion</b></p> <p>The proposed development is situated perpendicular to the Sand River and some wetlands are located nearby. Therefore this activity is included as the river or wetland might be considered critical in terms of biodiversity/and or ecosystem services.</p>		

**Note:** *The applicable activities will be confirmed in the Final BAR (after we received the required information regarding the design of the development, and specialist reports).*

## 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 Department 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.**

### **Location alternatives**

Water for domestic as well as irrigation purposes are required on the four farms forming part of this application, and therefore the development will only have value if implemented on the farms applied for. Another location for the proposed development is thus not feasible.

### **Source alternatives**

#### *Source alternative 1 – Municipal*

Due to the remote location of the application site it is neither possible nor feasible to supply municipal water services to the development site.

*Source alternative 2 – Groundwater*

There are already two boreholes on the development site, but additional water resources are required to ensure continuous water supply.

**Design and Layout alternatives**

The final design layout will be based on results of specialist studies to be conducted.

**Alternative S1 i.e. development being applied for is thus regarded as the only development option.**

**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, minutes and seconds. The projection that must be used in all cases is the WGS84 spheroid in a national or local projection.

List alternative sites, if applicable.

**Latitude (S):**

**Longitude (E):**

**Alternative:**

Alternative S1<sup>2</sup> (preferred or only site alternative)

Alternative S2 (if any)

Alternative S3 (if any)

°	'	"	°	'	"
°	'	"	°	'	"
°	'	"	°	'	"

**In the case of linear activities:**

**Alternative:**

**Latitude (S):**

**Longitude (E):**

Alternative S1 (preferred or only route alternative)

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

<b>23°</b>	<b>43'</b>	<b>28.34"</b>	<b>29°</b>	<b>32'</b>	<b>46.19"</b>
<b>23°</b>	<b>40'</b>	<b>34.72"</b>	<b>29°</b>	<b>31'</b>	<b>1.07"</b>
<b>23°</b>	<b>38'</b>	<b>12.36"</b>	<b>29°</b>	<b>28'</b>	<b>34.59"</b>

Alternative S2 (if any)

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

°	'	"	°	'	"
°	'	"	°	'	"
°	'	"	°	'	"

Alternative S3 (if any)

<sup>2</sup> "Alternative S.." refer to site alternatives.

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

o		"	o		"
o		"	o		"
o		"	o		"

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 A1<sup>3</sup> (preferred activity alternative)

Alternative A2 (if any)

Alternative A3 (if any)

or,

for linear activities:

**Size of the activity:**

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

**Length of the activity:**

**Alternative:**

Alternative A1 (preferred activity alternative)

Alternative A2 (if any)

Alternative A3 (if any)

<b>12.9 km</b>
m
m

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

**Size of the site/servitude:**

**Alternative:**

Alternative A1 (preferred activity alternative)

Alternative A2 (if any)

Alternative A3 (if any)

<b>38,700 m<sup>2</sup></b>
m <sup>2</sup>
m <sup>2</sup>

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

## 5. SITE ACCESS

Does ready access to the site exist?

YES X	NO
m	

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

Describe the type of access road planned:

Not applicable, as existing farm roads will be utilised to access the construction areas.

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 Department of Water Affairs);
  - ridges;
  - cultural and historical features;
  - areas with indigenous vegetation (even if it is degraded or invested with alien species);
- 6.10 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
- 6.11 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?

**R 2,000,000.00**

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

**Not yet known**

Will the activity contribute to service infrastructure?

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

Is the activity a public amenity?

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

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

**Not yet known**

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

**Not yet known**

What percentage of this will accrue to previously disadvantaged individuals?

**Not yet known**

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

**Not yet known**

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

**Not yet known**

What percentage of this will accrue to previously disadvantaged individuals?

**Not yet known**

**9(b) Need and desirability of the activity**

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

In order to increase food production as well as local contribution to the Gross Geographic Product (GGP) water is required for irrigation of crops. Installation of a water pipeline and dams will increase local food production, and in so doing contribute to the GGP. The construction of the dams and pipeline will provide

temporary (during construction) as well as permanent job opportunities due to increased crop production that requires harvesting and packaging. The proposed storage of water in order to increase crop production is also in line with the Molemole Spatial Development Framework.

<b>NEED:</b>			
i.	Was the relevant municipality involved in the application?	<b>YES X</b>	NO
ii.	Does the proposed land use fall within the municipal Integrated Development Plan?	<b>YES X</b>	NO
iii.	If the answer to questions 1 and / or 2 was NO, please provide further motivation / explanation:		

<b>DESIRABILITY:</b>			
i.	Does the proposed land use / development fit the surrounding area?	<b>YES X</b>	NO
ii.	Does the proposed land use / development conform to the relevant structure plans, Spatial development Framework, Land Use Management Scheme, and planning visions for the area?	<b>YES X</b>	NO
iii.	Will the benefits of the proposed land use / development outweigh the negative impacts of it?	<b>YES X</b>	NO
iv.	If the answer to any of the questions 1-3 was NO, please provide further motivation / explanation:		
v.	Will the proposed land use / development impact on the sense of place?	YES	<b>NO X</b>
vi.	Will the proposed land use / development set a precedent?	YES	<b>NO X</b>
vii.	Will any person's rights be affected by the proposed land use / development?	YES	<b>NO X</b>
viii.	Will the proposed land use / development compromise the "urban edge"?	YES	<b>NO X</b>
ix.	If the answer to any of the question 5-8 was YES, please provide further motivation / explanation.		

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<b>BENEFITS:</b>			
i.	Will the land use / development have any benefits for society in general?	YES	<b>NO</b> <b>X</b>
ii.	Explain: The positive impact will be regional only.		
iii.	Will the land use / development have any benefits for the local communities where it will be located?	<b>YES</b> <b>X</b>	NO
iv.	Explain: <ul style="list-style-type: none"> <li>• The land owners as well as their laborers residing on the study area will benefit from the water infrastructure in the form of domestic water supply i.e. improved access to water.</li> <li>• The proposed development will result in temporary job opportunities for locals during the construction phase of the project, as well as additional permanent job opportunities arising from increased crop production.</li> <li>• Alignment with Molemole Local Municipality Integrated Development Plan objectives;</li> <li>• Increased contribution to the Gross Geographic Product (GGP) of the region.</li> </ul>		

## 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:**

<b>1. National Environmental Management Act, 1998 (Act No.107 of 1998)</b> <b>Environmental Impact Assessment (EIA) Regulations and associated Listing Notices</b>	<b>National Department of Environmental Affairs (DEA) and Provinces</b>	<b>1998</b>  <b>2010</b>
The Environmental Impact Assessment (EIA) process followed is in compliance with the National		

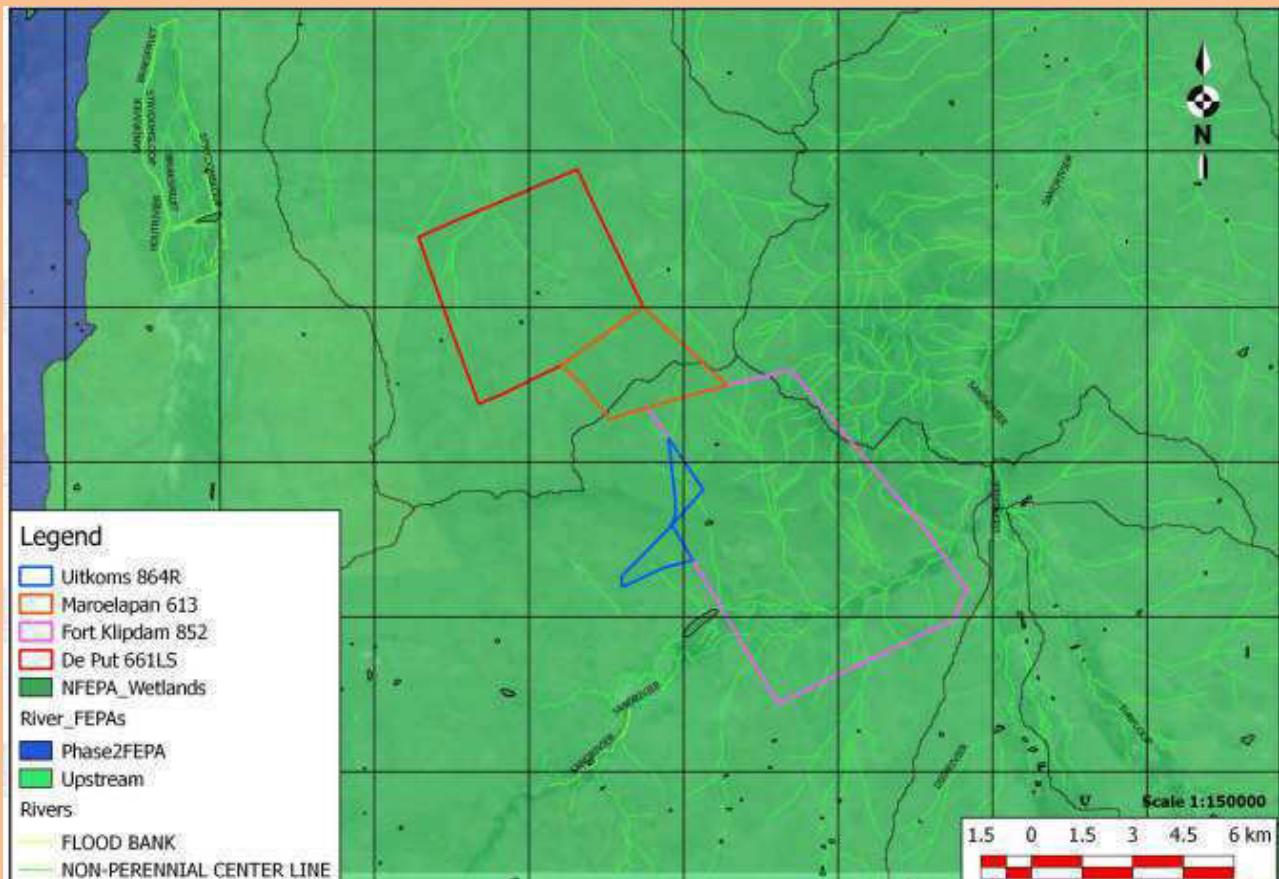


<p>Environmental Management Act: NEMA, 1998 (Act No. 107) of 1998), as amended and the Environmental Impact Assessment Regulations of 2010 (Government Notice No's R544, 545 &amp; 546 of 2010). The proposed development involves 'listed activities', as defined by the NEMA, 1998. Listed activities are activities, which may potentially have detrimental impacts on the environment and therefore require environmental authorisation from the relevant authority, before such activities are implemented.</p>		
<p><b>Implications for proposed development: Significant</b></p> <p>The application for the proposed development relates to activities listed under Notice <b>No. R544 &amp; R546</b>, therefore a Basic Assessment Report is being submitted to the Limpopo Department of Economic Development, Environment and Tourism for consideration.</p>		
<p><b>2. National Environmental Management: Air Quality Act, 2004 (Act No.39 of 2004)</b></p> <p>The Air Quality Act regulates air quality in order to protect the environment. It provides reasonable measures for the prevention of pollution and ecological degradation and for securing ecological sustainable development while promoting justification economic and social development.</p>	<p><b>DEA, Provinces and Municipalities</b></p>	<p><b>2004</b></p>
<p><b>Implications for proposed development: Insignificant</b></p> <p>During the construction phase of the proposed development clearing will be required where the proposed pipeline will be installed for construction of plinths. The expected impact of dust pollution on the environment and surrounding landowners is expected to be very low due to the remote location of the study area, but the potential significance is addressed in the draft EMP.</p>		
<p><b>3. National Environmental Management: Waste Act, 2008 (Act 59 of 2008)</b></p> <p>The purpose of the Act is to regulate waste</p>	<p><b>DEA and Provinces</b></p>	<p><b>2008</b></p>

<p>management in order to protect the health and the environment by providing reasonable measures for the prevention of pollution and ecological degradation and for securing ecologically sustainable development; to provide for institutional arrangements and planning matters; national norms and standards for regulating the management of waste by all spheres of government; to provide for specific waste management measures; to provide for the licensing and control of waste management activities; to provide for the remediation of contaminated land; to provide for the national waste information system; to provide for compliance and enforcement; and to provide for matters connected therewith.</p>		
<p><b>Implications for proposed development: Not Significant</b></p> <p>The construction and operation of the proposed development are not subjected to any activity as listed in Category A, B or C of NEM: WA Listed Activities, 2013.</p>		
<p><b>4. National Environmental Management: Protected Areas Act, 2003 (Act No. 57 of 2003)</b></p> <p>The Act provides for the protection, conservation, and management of ecologically viable areas representative of South Africa's biological diversity and its natural landscapes and seascapes, for the management of those areas in accordance to national norms and standards, as well as for the intergovernmental co-operation and public consultation in matters concerning protected areas. Protected areas are to be conserved for their biodiversity and ecological integrity.</p>	<p><b>DEA</b></p>	<p><b>2003</b></p>

**Implications for proposed development: Significant**

The Sand River from where water is to be abstracted is a National Freshwater Ecological Protected Area (NFEPA). A hydrological study is underway to establish availability of water in the Sand River, and results will be included in the Final BAR.



**Figure A1: NFEPA**

**5. National Environmental Management: Biodiversity Act, 2004 (Act No. 10 of 2004)**

**DEA and Provinces**

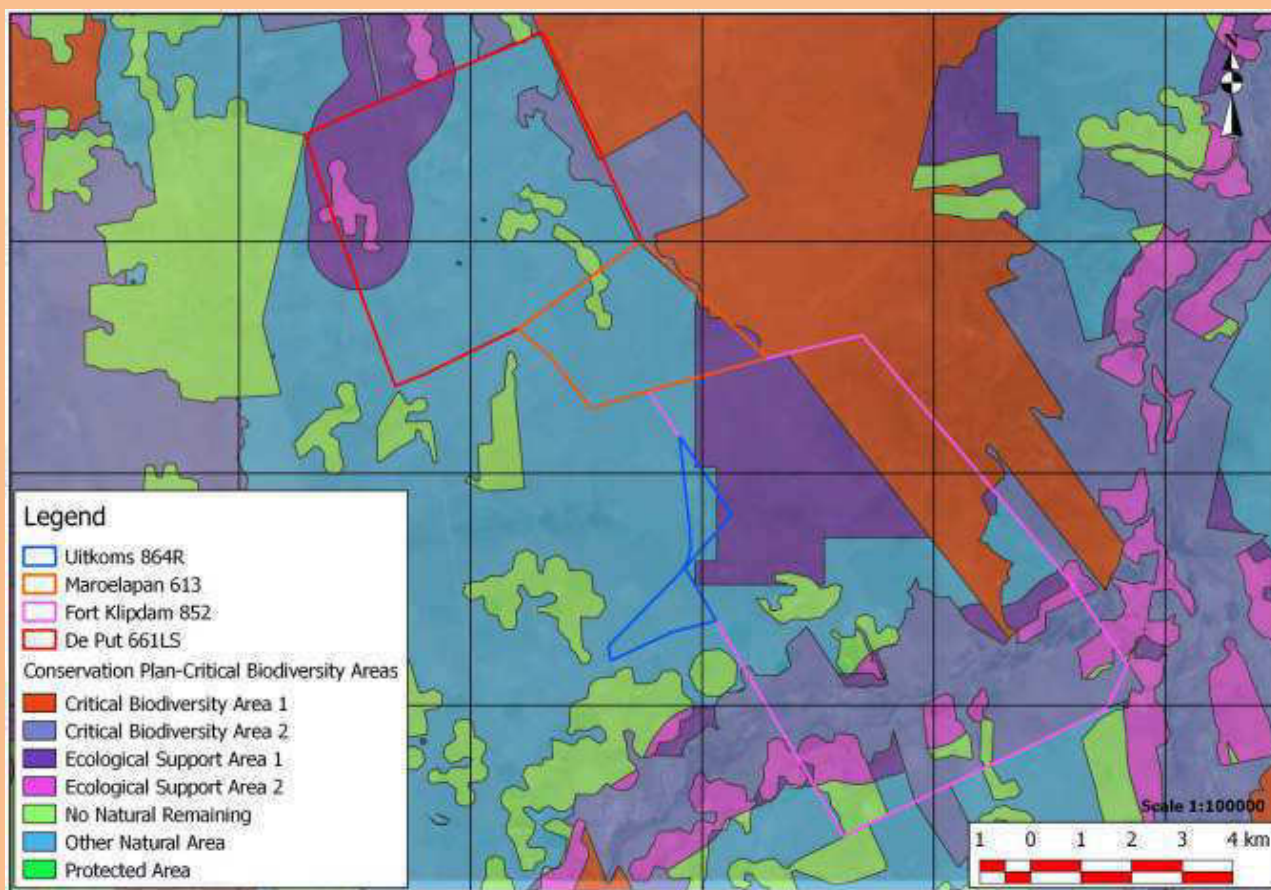
**2004**

The Act provides for the management and conservation of South Africa's biodiversity within the framework of the National Environmental Management Act 10 of 2004; the protection of species and ecosystems that warrant national protection; the sustainable use of indigenous biological resources; the fair and equitable sharing of benefits arising from bio-prospecting involving

indigenous biological resources; the establishment and functions of a South African National Biodiversity Institute; and for matters connected therewith.

**Implications for proposed development: Significant**

According to the Limpopo Conservation Plan Biodiversity Areas, the proposed pipeline will transect an area classified as Ecological Support Area 1. The riparian zone of the Sand River from where water will be abstracted is classified as a Critical Biodiversity Area 2. An ecological assessment is underway and results will be included in the Final BAR.



**Figure A2: Critical Biodiversity Areas**

<p><b>6. The National Water Act, 1998 (Act No.36 of 1998</b></p> <p>The purpose of the Act is to ensure that the nation's water resources are protected, used, developed, conserved, managed and controlled in ways that take into account, amongst other factors, the following Meeting the basic human needs of present and future generations;</p> <ul style="list-style-type: none"> <li>▪ Promoting equitable access to water;</li> <li>▪ Promoting the efficient, sustainable and beneficial use of water in the public interest;</li> <li>▪ Reducing and preventing pollution and degradation of water resources;</li> <li>▪ Facilitating social and economic development; and</li> <li>▪ Providing for the growing demand for water use.</li> </ul>	<p><b>National Department of Water Affairs and Provinces</b></p>	<p><b>1998</b></p>
<p><b>Implications for proposed development: Significant</b></p> <p>The proposed development will entail taking water from the Sand River, and storing water in a dam to be constructed within the 1:100 flood line, thus altering the beds and banks as well as impeding flow of the Sand River. The aforementioned are water uses listed in terms of Section 21 of the National Water Act which requires licensing.</p>		



**Figure A3: Hydrology map**

**7. The National Heritage Resources Act, 1999 (Act 25 of 1999) (NHRA)**

The NHRA requires Heritage Resources Impact Assessments for various categories of development stipulated in Section 38 of the Act. It also provides for the grading of heritage resources and the implementation of a three-tier level of responsibilities and functions for heritage resources to be undertaken by the national and Provincial Authorities, depending on the grade of the heritage resource. The Act defines cultural significance, archaeological and paleontological sites and materials (section 35), historical sites and structures (section 34), and graves and burial sites (section 36) that fall under its jurisdiction. Archaeological sites and material are generally those resources older than a hundred years, including

**National Department of Arts and Culture, and Provinces**

**1999**

<p>gravestones and grave dressing. Procedures for managing graves and burial grounds are set out in Section 36 of the NHRA. Graves older than 100 years are legislated as archaeological sites and must be dealt with accordingly.</p> <p>Section 38 of the NHRA makes provision for application by developers for permits before any heritage resource may be damaged or destroyed.</p>		
<p><b>Implications for proposed development: Significant</b></p> <p>Due to the linear extent of the proposed pipeline exceeding 300m, and the proposed dam exceeding 0.5ha in surface area, the South African Heritage Resources Agency (SAHRA) has to be notified. A historical fort is situated within the study area, from where the farm acquired its name – Fort Klipdam.</p> <p>SAHRA was notified and requested that a Heritage Impact Assessment (HIA) be conducted excluding Palaeontology. A HIA is underway and results will be included in the Final BAR.</p> <p>If any remains/cultural/historical finds are exposed or uncovered during the construction phase, it should immediately be reported to the South African Heritage Resources Agency (SAHRA). Burial remains should not be disturbed or removed until inspected by an archaeologist. Refer to draft EMP.</p>		
<p><b>8. The Conservation of Agricultural Resources Act, 1983 (Act No. 43 of 1983)</b></p> <p>The Act provides for the control over the utilisation of Natural Agricultural resources of South Africa, in order to promote the conservation of soil, water sources and vegetation, as well as combating of weeds and invader plants and for matters connecting therewith.</p>	<p><b>National Department of Agriculture, Forestry and Fisheries, and Provinces</b></p>	<p><b>1983</b></p>
<p><b>Implications for proposed development: Significant</b></p> <p>The study area comprises of arable agricultural land. The current land use (agriculture) will not be altered by the proposed development, but will be augmented by it.</p>		



**Figure A4: Agricultural Potential**

**9. National Veldt and Forest Fire Act, 1998 (Act No. 101 of 1998)**

The purpose of this Act is to prevent and combat veldt, forest, and mountain fires throughout the Republic. The Act provides for a variety of institutions, methods, and practices for achieving the prevention of fires.

**National Department of Agriculture, Forestry and Fisheries, and Provinces**

**1998**

**Implications for proposed development: Significant**

Construction workers might smoke and this poses the risk of a fire to crops.

**10. Restitution of Land Rights Act, 1994 (Act No. 22 of 1994) and Restitution of Land Rights Amendment Act, 2014 (Act No. 15 of 2014)**

The Act provides for the restitution of rights in land to persons or communities dispossessed of such rights after

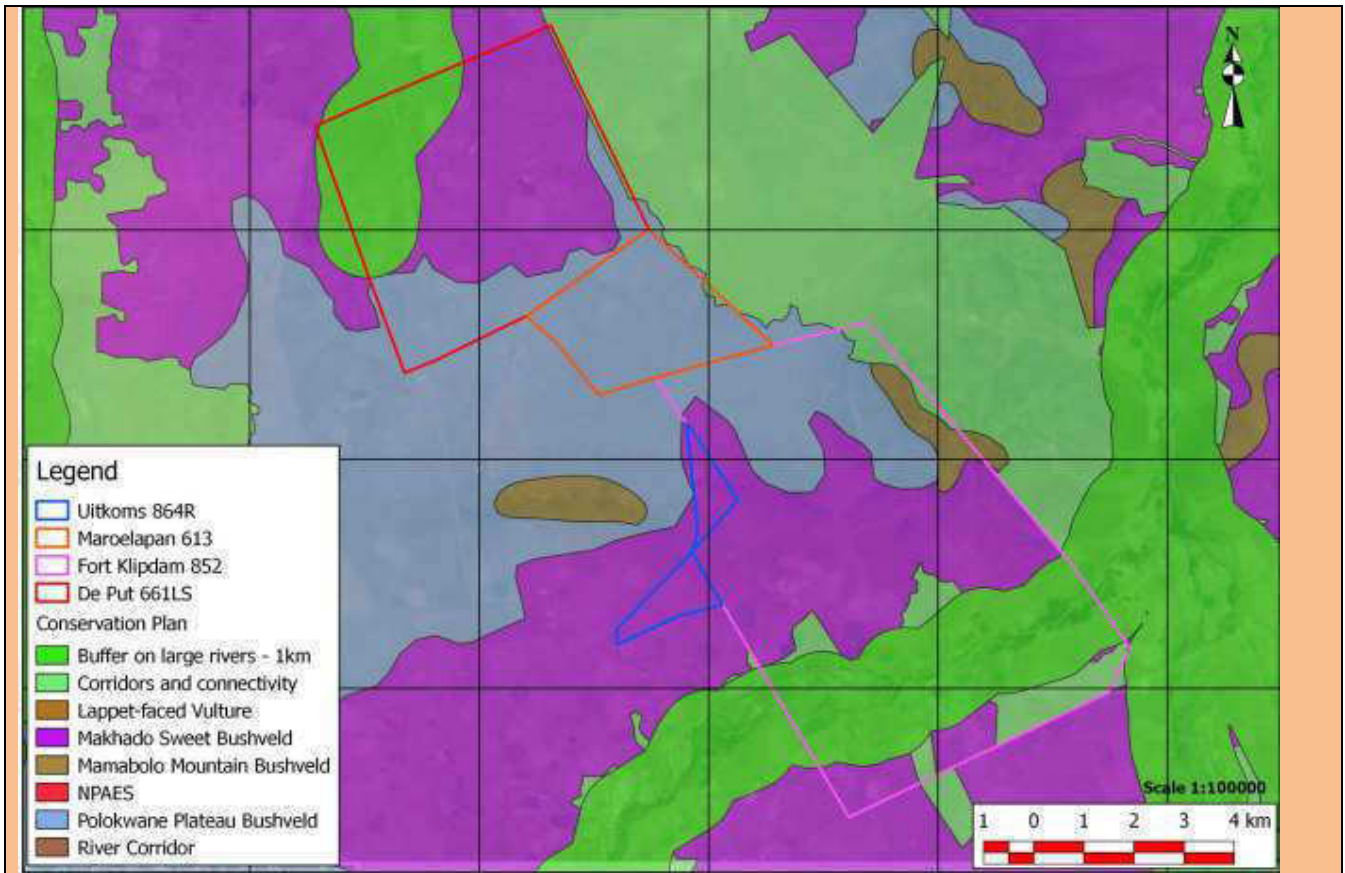
**National Department of Land Affairs, and Provinces**

**1994  
2014**



<p>19 June 1913 as a result of past racially discriminatory laws or practices; to establish a Commission on Restitution of Land Rights and a Land Claims Court; and to provide for matters connected therewith.</p>		
<p><b>Implications for proposed development: Significant</b></p> <p>The developer has notified the regional land claims commissioner of the intended development.</p>		
<p><b>11. National Road Traffic Act, 1996 (Act No. 93 of 1996)</b></p> <p>This Act provides for all road traffic matters, which shall apply uniformly throughout the Republic and for matters connected therewith.</p>	<p><b>Limpopo Department of Transport</b></p>	<p><b>1994  2014</b></p>
<p><b>Implications for proposed development: Not Significant</b></p> <p>The proposed pipeline will cross a farm road called the Bylsteel Road. As the road is not a national, provincial, or district road, permission from SANRAL and provincial roads department is not required. If traffic on the Bylsteel Road will be disrupted due to water infrastructure construction activities, the Local municipality as well as local residents will have to be informed of the planned disruption, well in advance. Refer draft EMP.</p>		
<p><b>12. The Deeds Registries Act, 47 of 1937</b></p> <p>The Act was created to consolidate and amend the laws in force in the Republic relating to the Registration of deeds. The act caters for the registration of servitudes.</p>	<p><b>National &amp; Provincial</b></p>	<p><b>1 September 1937</b></p>
<p><b>Implications for proposed development: Significant</b></p> <p>The applicant might have to register servitude over certain properties for the construction of the pipeline.</p>		
<p><b>13. Municipal Systems Act, 2000 (Act No. 32 of 2000)</b></p> <p>This Act clearly establishes the Integrated Development Plan and Integrated Spatial Development Framework as</p>	<p><b>Local Government</b></p>	<p><b>2000</b></p>

<p>guidelines that inform development and processes in this regard.</p> <p>According to the Molemole Local Municipality Spatial Development Framework (SDF) 2013/2014 access to water, economic development and environmental management are priority focus areas. According to the SDF, the availability of arable land suitable for horticulture, such as vegetables, potatoes, and tomatoes is a <b>strength</b>, however, the lack of sufficient water to expand the agricultural sector is a <b>weakness</b> which can be ameliorated by <b>opportunities</b> such as integrating water harvesting and efficiency methods into agricultural activities e.g. recycling, and <b>building of artificial dams</b>.</p>		
<p><b>Implications for proposed development: Significant</b></p> <p>The proposed development is in line with the Molemole SDF in terms of constructing artificial dams in order to have sufficient water to expand the agricultural sector.</p>		
<p><b>14. Limpopo Conservation Plan Version 2</b></p> <p>The purpose of the Limpopo Conservation Plan version 2 is to develop the spatial component of a bioregional plan (i.e. map of Critical Biodiversity Areas (CBA) and associated land-use guidelines.</p>	<p><b>LDEDET</b></p>	
<p><b>Implications for proposed development: Significant</b></p> <p>According to the Limpopo Conservation Plan, the proposed pipeline will transect a buffer zone for large rivers as well as vegetation units of conservation concern.</p>		



**Figure A5: Limpopo Conservation Plan Areas**

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

### 11(a) Solid waste management

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

<b>YES</b> <b>X</b>	NO
Not available	

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

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

During the construction phase the disposal of solid waste will be the responsibility of the contractor. An area on the application site will be demarcated for the storage of solid waste on site. General waste receptacles will be placed at all work areas and cleaned out at least weekly or more if the need determines. General waste will be stored temporarily at the designated waste storage area. This area must be

situated away from natural or temporary drainage lines, and not pose visual disturbance to the surrounding residents. The demarcated area must be easily accessible for dumping trucks to collect waste. The waste will be carted to registered landfill site, after having obtained approval from the local municipality to do so.

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

All construction solid waste will be disposed of at the nearest registered landfill site, following written permission obtained from the Local Municipality. No solid waste will be dumped on surrounding open areas or adjacent properties.

Will the activity produce solid waste during its operational phase?

YES	<b>NO</b> <b>X</b>
-----	-----------------------

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

--

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

--

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

--

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

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

YES	<b>NO</b> <b>X</b>
-----	-----------------------

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

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

YES	<b>NO</b> <b>X</b>
-----	-----------------------

If yes, then the applicant should consult with the Department 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?

YES	<b>NO</b> <b>X</b>
-----	-----------------------

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

m <sup>3</sup>	
----------------	--

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

YES	<b>NO</b> <b>X</b>
-----	-----------------------

If yes, the applicant should consult with the Department 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	<b>NO</b> <b>X</b>
-----	-----------------------

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:

--

### 11(c) Emissions into the atmosphere

Will the activity release emissions into the atmosphere?

YES	<b>NO</b> <b>X</b>
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:

The proposed development will not generate any emissions. Only limited dust generation is expected due to clearing of areas for plinth construction, and dam construction. This will be ameliorated by means of dust suppression if required. Refer to the draft EMP.

### 11(d) Generation of noise

Will the activity generate noise?

YES	<b>NO</b> <b>X</b>
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:

During the construction phase, noise generation due to construction activities might be a factor to surrounding landowners, but due to the remote location of the site in a rural setting it is foreseen to be unlikely. Potential noise pollution will be mitigated accordingly and it will only be a short term impact. Refer to draft

EMP.

## 12. 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	<b>groundwater</b>	<b>river, stream, dam or lake</b>	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:

<b>Volume not known yet</b>	
<b>YES</b> X	NO

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.

A WULA is in the process of being compiled and proof of submission will be included in the Final BAR.

## 13. ENERGY EFFICIENCY

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

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

## SECTION B: SITE/AREA/PROPERTY DESCRIPTION

### Important notes:

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

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

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

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

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

If YES, please complete the form entitled "Details of specialist and declaration of interest" for each specialist thus appointed:

All specialist reports must be contained in **Appendix D**.

Property description/physical address:

**Fort Klipdam Farm, Dendron, Molemole Local Municipality, Capricorn District**

(Farm name, portion etc.) Where a large number of properties are involved (e.g. linear activities), please attach a full list to this application.

**Maroelapan 613 LS,  
De Put 611 LS,  
Fort Klipdam 852 LS, and  
Remainder of Portion 1 of the farm Uitkoms 864 LS.**

In instances where there is more than one town or district involved, please attach a list of towns or districts to this application.

Current land-use zoning:

**Agricultural**

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

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

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

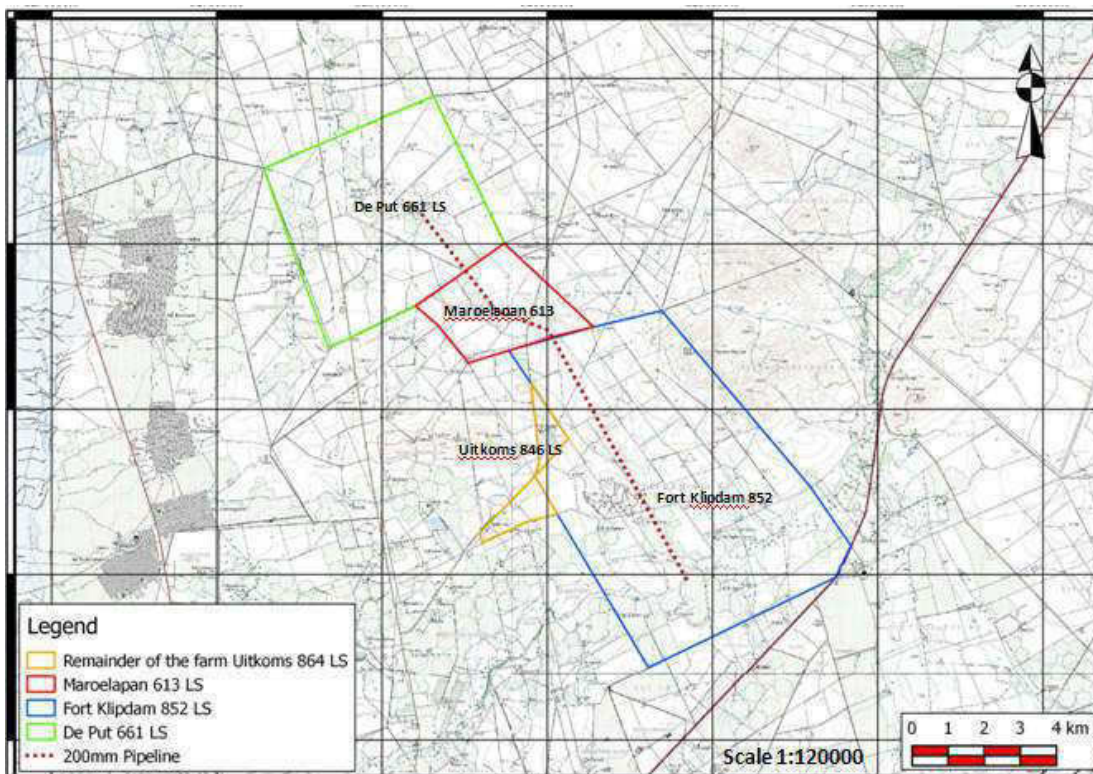
Must a building plan be submitted to the local authority?

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:

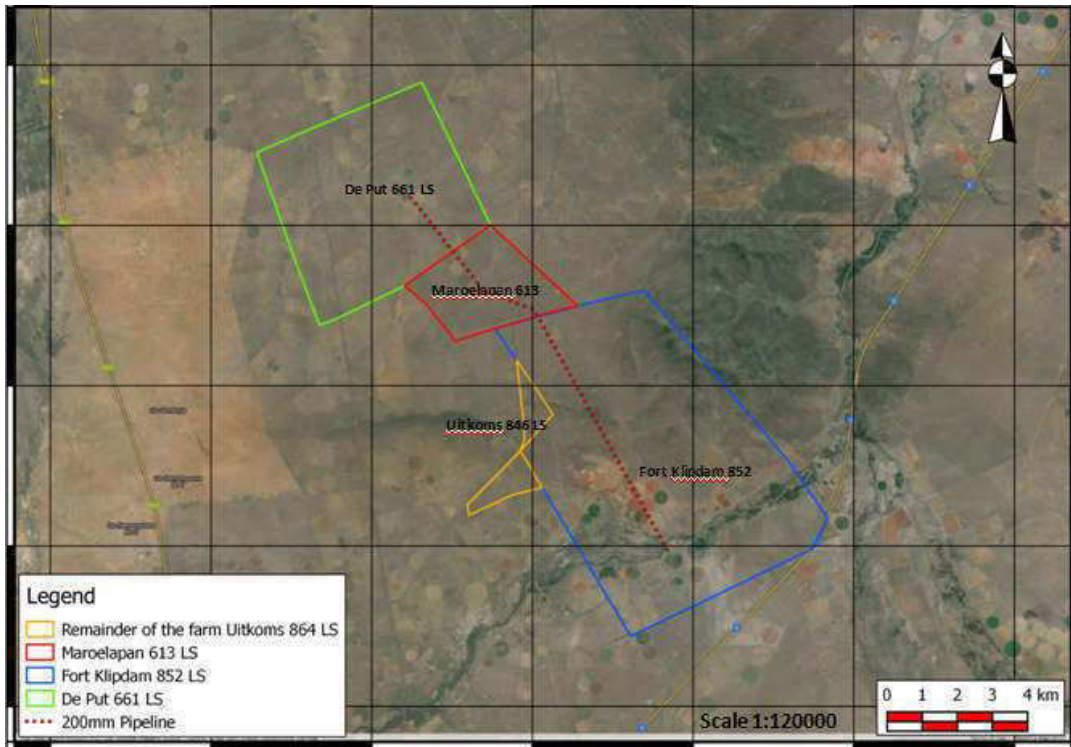
- an indication of the project site position as well as the positions of the alternative sites, if any;
- road access from all major roads in the area;
- road names or numbers of all major roads as well as the roads that provide access to the site(s);
- all roads within a 1km radius of the site or alternative 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, minutes and seconds. The projection that must be used in all cases is the WGS84 spheroid in a national or local projection)

The proposed development is situated in the Molemole Local Municipality which falls within the Capricorn District Municipality approximately 25km north of Polokwane. The Soetdoring Road (D453) runs parallel to the west of the study area before transecting the farm De Put 611 from south to north. The Bylsteel road branches off from the D543 and runs along the western boundary of the farm Uitkoms 864 before transecting the northwest corner of the farm Fort Klipdam 852 and crossing from southwest to northeast through the farm Maroelapan 613. The proposed pipeline will cross the Bylsteel road as well as an Eskom power line. The proposed pipeline runs almost parallel to the R521 situated further west. The proposed pipeline is affected by the 1: 50 or 100 year flood lines of the Sand River. The start point of the pipeline is situated 1140m a.m.s.l. and the end of the pipeline is situated at 1182m a.m.s.l. to the northwest of the start location. The pipeline has an average gradient of 2%.



**Figure A6: Locality map**





**Figure A7: Aerial map**

**1. GRADIENT OF THE SITE**

Indicate the general gradient of the site.

Alternative S1:

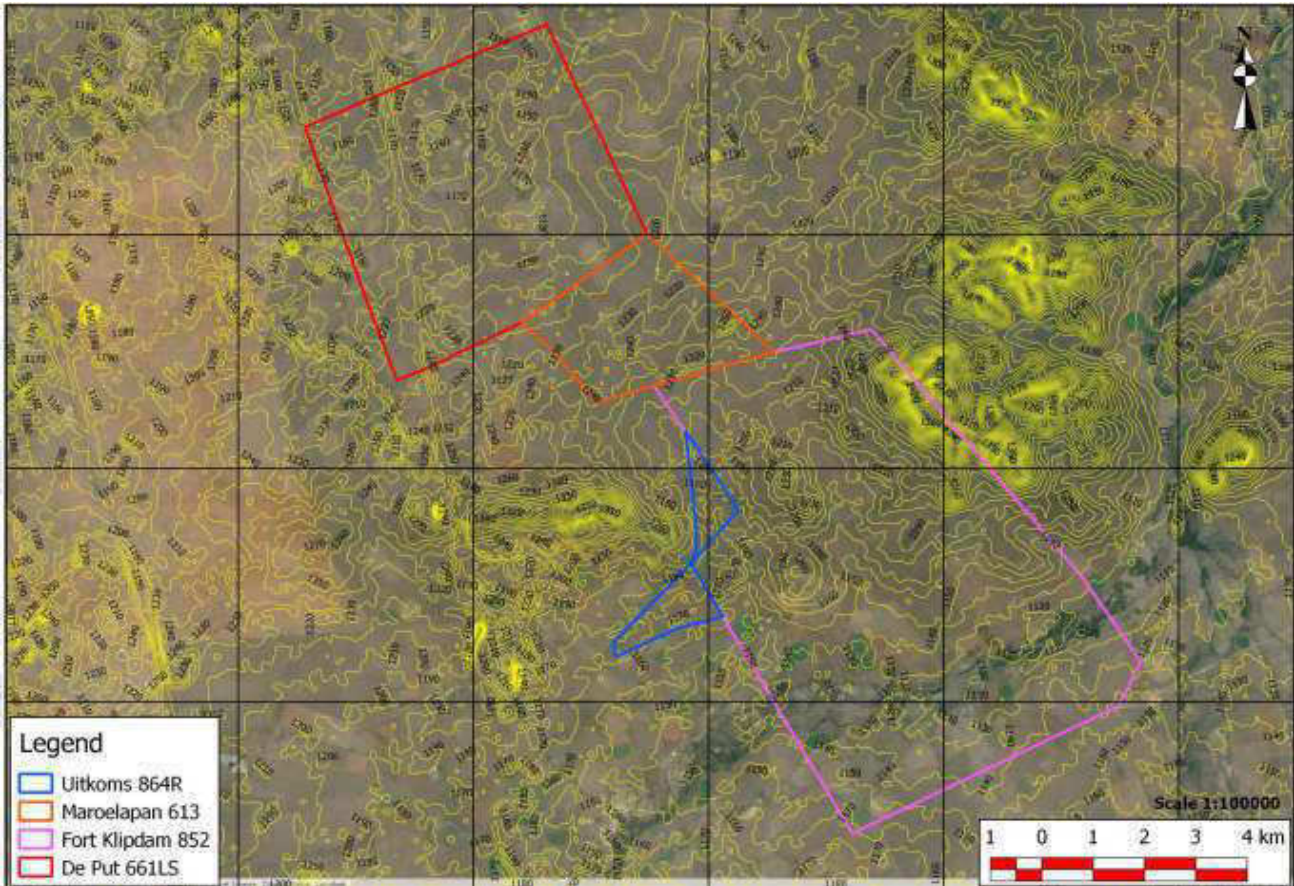
<b>Flat</b>	<b>1:50 – 1:20</b>	1:20 – 1:15	1:15 – 1:10	1:10 – 1:7,5	1:7,5 – 1:5	Steeper than 1:5
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Alternative S2 (if any):

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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**Figure A8: Contours**

## 2. LOCATION IN LANDSCAPE

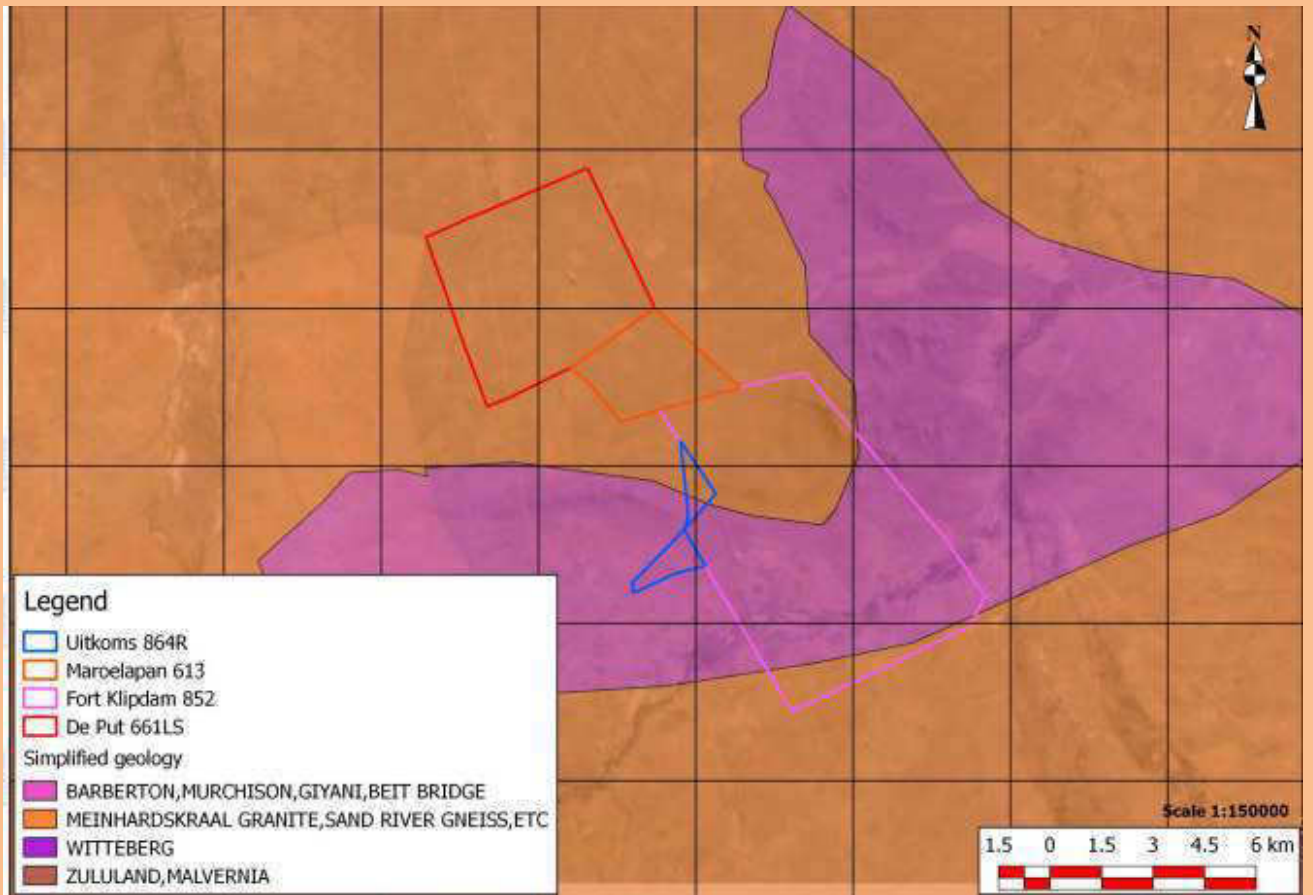
Indicate the landform(s) that best describes the site:

2.1 Ridgeline		2.6 Plain	X
2.2 Plateau		<b>2.7 Undulating plain / low hills</b>	<b>X</b>
2.3 Side slope of hill/mountain		2.8 Dune	
2.4 Closed valley		2.9 Seafront	
2.5 Open valley			

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

According to available data, the surrounding area is underlain by deeply weathered and fractured Archaean granite from which water abstraction for irrigation and domestic supply occurs.

The agricultural potential of the site is high due to irrigation infrastructure and good quality soils being present.



**Figure A9: Geology map**

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

	<b>Alternative S1:</b>		<b>Alternative S2 (if any):</b>		<b>Alternative S3 (if any):</b>	
Shallow water table (less than 1.5m deep)	YES	<b>NO</b> X	YES	NO	YES	NO
Dolomite, sinkhole or doline areas	YES	<b>NO</b> X	YES	NO	YES	NO
Seasonally wet soils (often close to water bodies)	<b>YES</b> X	NO	YES	NO	YES	NO
Unstable rocky slopes or steep slopes with loose soil	YES	<b>NO</b> X	YES	NO	YES	NO
Dispersive soils (soils that dissolve in water)	YES	<b>NO</b> X	YES	NO	YES	NO
Soils with high clay content (clay fraction more than 40%)	YES	<b>NO</b> X	YES	NO	YES	NO

Any other unstable soil or geological feature	YES	<b>NO</b> X	YES	NO	YES	NO
An area sensitive to erosion	YES	<b>NO</b> X	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. GROUND COVER

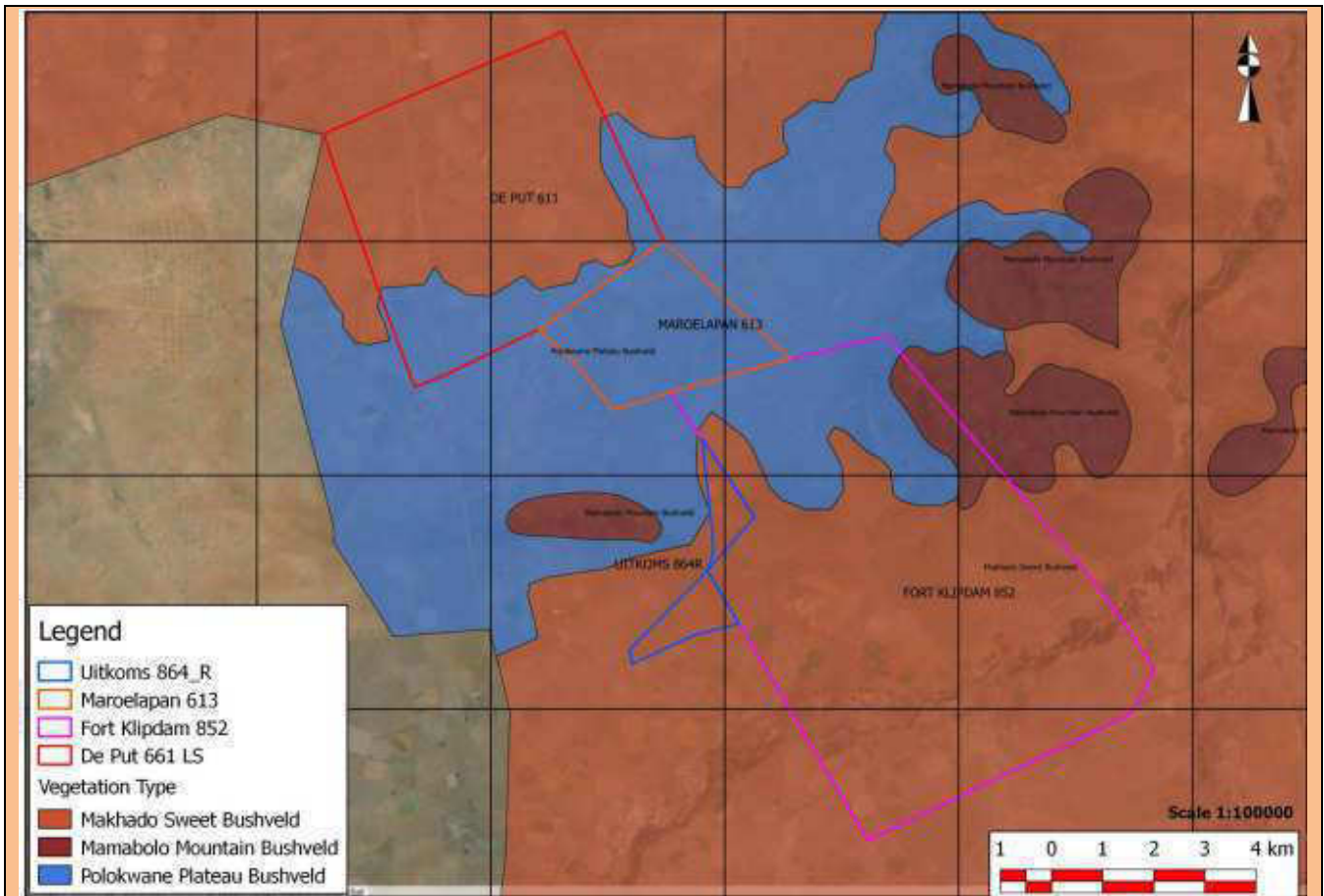
Indicate the types of groundcover present on the site:

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

<b>Natural veld - good condition<sup>E</sup></b>	Natural veld with scattered aliens <sup>E</sup>	Natural veld with heavy alien infestation <sup>E</sup>	Veld dominated by alien species <sup>E</sup>	Gardens
Sport field	<b>Cultivated land</b>	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.

The proposed pipeline occurs in the Bushveld Region within a Savanna Biome and consists of Polokwane Plateau Bushveld and Makhado Sweet Bushveld Vegetation Units. An ecological study is in the process of being conducted, and results will be included in the Final BAR.



**Figure A10: Vegetation map**

**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:

5.1 Natural area	X	5.22 School	
5.2 Low density residential		5.23 Tertiary education facility	
5.3 Medium density residential		5.24 Church	
5.4 High density residential		5.25 Old age home	
5.5 Medium industrial <sup>AN</sup>		5.26 Museum	
5.6 Office/consulting room		5.27 Historical building	
5.7 Military or police base/station/compound		<b>5.28 Protected Area</b>	<b>X</b>
5.8 Spoil heap or slimes dam <sup>A</sup>		5.29 Sewage treatment plant <sup>A</sup>	
5.9 Light industrial		5.30 Train station or shunting yard <sup>N</sup>	

5.10 Heavy industrial <sup>AN</sup>		5.31 Railway line <sup>N</sup>	
5.11 Power station		5.32 Major road (4 lanes or more)	
5.12 Sport facilities		5.33 Airport <sup>N</sup>	
5.13 Golf course		5.34 Harbour	
5.14 Polo fields		5.35 Quarry, sand or borrow pit	
5.15 Filling station <sup>H</sup>		5.36 Hospital/medical centre	
5.16 Landfill or waste treatment site		<b>5.37 River, stream or wetland</b>	<b>X</b>
5.17 Plantation		5.38 Nature conservation area	
<b>5.18 Agriculture</b>	<b>X</b>	<b>5.39 Mountain, koppie or ridge</b>	<b>X</b>
5.19 Archaeological site		5.40 Graveyard	
5.20 Quarry, sand or borrow pit		<b>5.41 River, stream or wetland</b>	<b>X</b>
5.21 Dam or Reservoir		<b>5.42 Other land uses (describe)</b>	<b>X</b>
		<b>Power line</b>	

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

N/A

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:

If NO, specify:

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:

If NO, specify:

**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?

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

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:

An archaeologist has been requested to conduct a Heritage Impact Assessment (HIA) of the proposed pipeline route as well as proposed location of dams, and conclusions and recommendations from the HIA Report will be included in the Final BAR.

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

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

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

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

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.

## SECTION C: PUBLIC PARTICIPATION

The principles of the National Environmental Management Act, 1998 (Act No 107 of 1998) and the Environmental Impact Assessment Regulations, 2010 govern the process of Environmental Impact Assessment, including Public Participation.

Effective public involvement is an essential component of many decision-making structures, and effective community involvement is the only way in which the power given to communities can be used efficiently. The Public Participation Process is designed to provide sufficient and accessible information to interested and affected parties (I&AP's) in an objective manner to assist them to:

- Raise issues of concern and suggestions for enhanced benefits;
- Verify that their issues have been captured;
- Verify that their issues have been considered by the technical investigations; and
- Comment on the findings of the Basic Assessment Report.

Please refer to **Appendix E**.

### 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 department) 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 department;
- (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 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 department, 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.

In terms of the Guideline Document for Environmental Impact Assessment (EIA) Regulations promulgated in terms NEMA, stakeholders (I&AP's) were notified of the Environmental Evaluation Process as follows:

- Site notices were erected (at prominent points on and around the study area) from 8 May 2014;
- Land owners and occupiers were notified via hand delivered notices as well as email communication on 8 May 2014;
- Notices regarding the project were further e-mailed, faxed and sent via registered mail to a list of interested and affected parties that registered for the project;
- A list of all persons, organisations and organs of state that were registered as interested and affected parties in relation to the application are attached as Proof of Advertisement;
- An advertisement was placed in the Polokwane Observer Newspaper on 8 May 2014;
- SAHRA was informed of the proposed water infrastructure development in writing and receipt was acknowledged by SAHRA in a letter dated 13 August 2014;
- The ward councillor was informed of the applicant's intention to submit an application to the competent authority;
- The following institutions and organs of state were also identified as I & AP's and added to the register of the I & AP's:

- o Limpopo Department of Water Affairs (DWA);
- o Eskom;
- o South African Heritage Resources Agency (SAHRA);
- o Capricorn District Municipality;
- o Molemole Local Municipality;
- o Council for Geoscience; and
- o Land Claims Commissioner.

## 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 department 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
  - (v) the manner in which and the person to whom representations in respect of the application may be made.

The Advertisements and notices indicated that an application will be submitted to the competent authority in terms of the EIA 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.

## 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 department 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 these Regulations.

Advertisements and notices must make provision for all alternatives.

Given the localised impact of the proposed activity, a newspaper notice was placed in Polokwane Observer 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.

#### **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 department to withdraw any authorisation it may have issued if it becomes apparent that the public participation process was inadequate.

Considering the limited response to the public notices from I&APs, a Public Participation Meeting was not deemed necessary.

#### **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 these Regulations and be attached to this application. The comments and response report must be attached under Appendix E.

The Draft Basic Assessment Report will be made available for public and local authority review, and will be sent to the Local and District municipalities as well as the Department of Water Affairs (DWA) for review.

Further, the Draft Report will be made available to the Public for review, on our website, [www.bokamoso.biz](http://www.bokamoso.biz) and as a hard copy at the Polokwane Library. The various authorities must still supply comments regarding this Draft Report. The comments of the authorities will be addressed in an Issues and Response report to be included as part of the Final Basic Assessment Report.

A summary of the issues raised by the interested and affected parties, are attached as Comments & Issues Register.

## 6. AUTHORITY PARTICIPATION

Please note that a complete list of all organs of state and or any other applicable authority with their contact details must be appended to the basic assessment report or scoping report, whichever is applicable.

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.

Name of Authority informed:	Comments received (Yes or No)
Molemole Local Municipality	NO
Capricorn District Municipality	NO

## 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 subregulation to the extent and in the manner as may be agreed to by the department.

Proof of any such agreement must be provided, where applicable.

Has any comment been received from stakeholders?

YES	NO
X	

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

Only one comment was received from SAHRA requesting that a HIA be conducted and stating, that since the area is located over geological formations of low paleontological significance, no paleontological impact assessment is requested as part of the Heritage Impact Assessment.

## 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.

### Significance Description Methodology

The significance of Environmental Impacts was assessed in accordance with the following method:

**Significance is the product of probability and severity. Probability describes the likelihood of the impact actually occurring, and is rated as follows:**

Likelihood	Description	Rating
Improbable	Low possibility of impact to occur either because of design or historic experience	2
Probable	Distinct possibility that impact will occur	3
Highly probable	Most likely that impact will occur	4
Definite	Impact will occur, in the case of adverse impacts regardless of any prevention measures	5

The severity factor is calculated from the factors given to “intensity” and “duration”. Intensity and duration factors are awarded to each impact, as described below.

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

Intensity	Description	Rating
Low intensity	Natural and man-made functions not affected.	1
Medium intensity	Environment affected but natural and man-made functions and processes continue.	2
High intensity	Environment affected to the extent that natural or man-made functions are altered to the extent that it will temporarily or permanently cease or become dysfunctional.	4

**Duration is assessed and a factor awarded in accordance with the following:**

Duration	Description	Rating
Short term	<1 to 5 years - Factor 2	2
Medium term	5 to 15 years - Factor 3	3
Long term	Impact will only cease after the operational life of the activity, either because of natural process or by human intervention.	4
Permanent	Mitigation, either by natural process or by human intervention, will not way or in such a time span that the impact can be considered transient.	4

**The severity rating is obtained from calculating a severity factor, and comparing the severity factor to the rating in the table below. For example:**

$$\begin{aligned}
 \text{The Severity factor} &= \text{Intensity factor X Duration factor} \\
 &= 2 \times 3 \\
 &= 6
 \end{aligned}$$

A Severity factor of six (6) equals a Severity Rating of Medium severity (Rating 3) as per table below:

Severity Factor	Severity	Rating
Calculated values 2 to 4	Low Severity	2
Calculated values 5 to 8	Medium Severity	3
Calculated values 9 to 12	High Severity	4
Calculated values 13 to 16	Very High severity	5

A Significance Rating is calculated by multiplying the Severity Rating with the Probability Rating.

Significance	Rating	Influence
Low significance	Rating 4 to 6	Positive impact and negative impacts of low significance should have no influence on the proposed development project.
Medium significance	Rating >6 to 15	Positive impact: Should weigh towards a decision to continue

Significance	Rating	Influence
		Negative impact: Should be mitigated to a level where the impact would be of medium significance before project can be approved.
High significance	Rating 16 and more	Positive impact: Should weigh towards a decision to continue, should be enhanced in final design. Negative impact: Should weigh towards a decision to terminate proposal, or mitigation should be performed to reduce significance to at least medium significance rating.

## 1. ISSUES RAISED BY INTERESTED AND AFFECTED PARTIES

List the main issues raised by interested and affected parties.

No issues were raised by interested and affected parties. SAHRA requested a HIA to be conducted which is underway.

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 as Annexure E):

Refer to the Comments and Response Report attached.

## 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 (preferred alternative)

POTENTIAL IMPACTS	Direct	Indirect	Cumulative	Positive /Negative	MITIGATION MEASURES	Significance following mitigation					
						Probability rating	Severity rating		Severity Factor	Severity rating	Significance rating
							Intensity	Duration			
<b>PLANNING AND DESIGN PHASE</b>											
<input type="checkbox"/> <b>Land claims</b> Existing land claims could result in development not being allowed by the land claims commissioner.	X			-	➤ Developer to inform Provincial Land Claims Commissioner of intended construction.	2	1	2	2	2	4 = Low
<input type="checkbox"/> <b>Servitudes required</b> Fort Klipdam is not owned by the developer and therefore the developer has to claim servitude over the said property.	X			-	➤ Developer to claim servitudes, if required.	2	1	2	2	2	4 = Low
<input type="checkbox"/> <b>Availability of water in the Sand River</b> It is not yet known whether the Sand River has spare capacity water available for water abstraction. A hydrological study which includes a reserve determination is underway and results will be incorporated in the Final BAR.	X			-	➤ Conduct Hydrological study and reserve determination	3	4	4	16	5	15 =Medium



<input type="checkbox"/> <b>Proposed route could negatively impact on sensitive ecological areas</b> It is not yet known what the exact alignment of the pipeline will be as it is dependent upon the outcome of an ecological assessment of the proposed route, and results will be incorporated in the Final BAR.	X			-	<ul style="list-style-type: none"> <li>➤ Conduct ecological assessment of the proposed route, and design pipeline alignment accordingly.</li> <li>➤ If study identifies sensitive fauna or flora along the proposed pipeline route or dam locations, the pipeline should be realigned and dams relocated to less sensitive areas or Search &amp; Rescue operation should be launched prior construction commencing.</li> </ul>	2	2	4	8	3	6 = Low
<input type="checkbox"/> <b>Proposed route could negatively impact on historical structures and finds</b> It is not yet known what the exact alignment of the pipeline will be as it is dependent upon the outcome of a Heritage Impact Assessment, and results will be incorporated in the Final BAR.	X			-	<ul style="list-style-type: none"> <li>➤ Conduct Heritage Impact Assessment.</li> </ul>	4	2	2	4	2	8 = Medium
<b>CONSTRUCTION PHASE</b>											
<input type="checkbox"/> <b>Alignment with Molemole Local Municipality Spatial Development Framework – Social impact</b> According to the SDF, the availability of arable land suitable for horticulture, such as vegetables, potatoes, and tomatoes is a <b>strength</b> , however, the lack of sufficient water to expand the agricultural sector is a <b>weakness</b> which can be ameliorated by <b>opportunities</b> such as integrating water harvesting and efficiency methods into agricultural activities e.g. recycling, and <b>building of artificial dams</b> . The activities applied for are thus aligned with the SDF.		X		+	<ul style="list-style-type: none"> <li>➤ No mitigation required due to positive impact</li> </ul>	5	1	4	4	2	10 = Medium
<input type="checkbox"/> <b>Creation of Job opportunities</b> The proposed infrastructure construction activities will create job opportunities during the construction phase of the project.	X	X		+	<ul style="list-style-type: none"> <li>➤ No mitigation required due to positive impact</li> </ul>	5	1	4	4	2	10 = Medium
<input type="checkbox"/> <b>Eradication of alien vegetation</b> Alien vegetation shall be removed as part of the construction activities which would add value to the agricultural land while also	X		X	+	<ul style="list-style-type: none"> <li>➤ No mitigation required due to positive impact</li> </ul>	4	2	2	4	2	8 = Medium

promoting the occurrence of indigenous flora and therefore fauna on the site.											
<input type="checkbox"/> <b>Construction activities within the watercourse could affect the watercourse and downstream water users</b> Construction activities associated with the construction of the dam within the Sand River could potentially impact on downstream water users or the ecological reserve.	X	X	X	-	<ul style="list-style-type: none"> <li>➤ The developer (water user) must ensure acceptable construction practices are included in the design to ensure consistent, effective, and sustainable abstraction from the Sand River.</li> <li>➤ Contractor to take measures to ensure: <ul style="list-style-type: none"> <li>• Water abstraction from the Sand River should only take place during high flow conditions;</li> <li>• The stability of the watercourse is not detrimentally affected by impeding or diverting the flow;</li> <li>• scouring, erosion or sedimentation of the watercourse is prevented by installing Reno mattresses or equivalent rehabilitation measures; and</li> <li>• Rehabilitation of the watercourse, including riparian and in-stream habitat, is undertaken after any impedance or diversion of flow.</li> </ul> </li> </ul>	2	2	4	8	3	6 = Low
<input type="checkbox"/> <b>Pollution of environment due to poor general waste management</b> General waste generated by construction workers should be properly managed to prevent pollution of the environment and nuisance to neighbours.	X			-	<ul style="list-style-type: none"> <li>➤ Areas for storage of general waste must be identified and may not be situated within the aquatic buffer zone.</li> <li>➤ Areas for storage of general waste must be clearly marked and locations communicated to construction workers.</li> <li>➤ General waste to be collected and disposed of at a registered landfill site.</li> </ul>	3	2	2	4	2	6 = Low
<input type="checkbox"/> <b>Nuisance to neighbours in terms of noise generation</b> Normal construction works might cause noise pollution, but it is unlikely considering proximity of construction activities in relation to nearest neighbours and location of labour housing.	X			-	<ul style="list-style-type: none"> <li>➤ The construction works should be limited to normal working hours to minimize the construction noise during more sensitive times.</li> <li>➤ Construction should only be allowed to take place between 8h00 and 17h00 during weekdays, and 8h00 and 13h00 on Saturdays.</li> <li>➤ No work should take place on Sundays or national holidays.</li> </ul>	2	1	2	2	2	4 = Low
<input type="checkbox"/> <b>Nuisance to neighbours in terms of dust pollution</b> The construction works might cause a nuisance to neighbours in terms of dust pollution and it will be important to minimize the dust that is generated on site. All areas where construction work is taking place will	X			-	<ul style="list-style-type: none"> <li>➤ Cleared areas should be limited</li> <li>➤ Areas should only be cleared when construction is due to commence.</li> </ul>	2	1	2	2	2	4 = Low

generate dust.											
<input type="checkbox"/> <b>Loss of topsoil</b> Topsoil is regarded as a valuable resource that should be conserved during the construction phase. Topsoil can be damaged through compaction, pollution and erosion.	X			-	<ul style="list-style-type: none"> <li>➤ All areas where construction work will take place (dam construction areas, along pipeline etc.) should be cleared of vegetation, and the topsoil should be stockpiled in designated, already disturbed areas of the site;</li> <li>➤ At Least 150mm of topsoil should be removed;</li> <li>➤ The grass component should be included as part of the topsoil;</li> <li>➤ The stockpiles may not be located close to natural or temporary drainage lines;</li> <li>➤ The stockpiles should be no higher than 2m;</li> <li>➤ The stockpiles should be protected to ensure that heavy construction vehicles and machinery do not compact the soil;</li> <li>➤ Topsoil and excavated subsoil should be stockpiled separately;</li> <li>➤ The subsoil may be used for filling material, but the topsoil may only be used for rehabilitation work and landscaping; and</li> <li>➤ Compacted soil must be ripped to a minimum depth of 300mm before the area can be rehabilitated and landscaped.</li> </ul>	3	1	2	2	2	6 = Low
<input type="checkbox"/> <b>Vehicle maintenance on site might cause pollution</b> Unplanned maintenance may be required for construction vehicles during the construction period. Maintenance activities might pollute soil and water by oil, lubricants, and fuel. Any pollution of the soil and water is undesirable and should be prevented.	X			-	<ul style="list-style-type: none"> <li>➤ Drip trays should be provided for all mobile plant on site for the construction period, while parked;</li> <li>➤ All mobile plant should be equipped with a hydrocarbon spills kit to facilitate cleaning up any spills as a result of a breakdown;</li> <li>➤ An impermeable plastic sheet must be placed underneath the mobile plant to be worked on to prevent ingress of hydrocarbons into soil or water;</li> <li>➤ Any spillages on the impermeable sheet must be cleaned with a spills kit prior to removing the sheet.</li> </ul>	3	1	2	2	2	6 = Low
<input type="checkbox"/> <b>Construction during the rainy season can cause delays and damage to the environment</b> During construction rain spells could cause delays of some construction activities and this could not only have financial implications, but also lengthen the time that soils will be left exposed and subject to		X		-	<ul style="list-style-type: none"> <li>➤ It is recommended that the construction phase be scheduled for the winter months.</li> </ul>	2	1	2	2	2	4 = Low

erosion.												
<input type="checkbox"/> <b>Erosion, siltation and dust generation due to exposed areas</b> Soils will be disturbed and subsoil exposed during the construction phase that may cause the potential for erosion and associated siltation, or dust becoming airborne during dry periods associated with high winds.	X	X		-	<ul style="list-style-type: none"> <li>➤ All exposed areas should be rehabilitated immediately after construction is concluded in a specific area;</li> <li>➤ Topsoil should be returned to the area from which it was removed;</li> <li>➤ This area should then be vegetated by means of hydro seeding using Makhado Sweet Bushveld or Polokwane Plateau Bushveld grass species only.</li> </ul>	2	1	2	2	2	4 = Low	
<input type="checkbox"/> <b>Exotic species could be introduced to the area</b> Exotic and alien invader species can be easily introduced or spread through the vehicles and equipment working on the site.	X			-	<ul style="list-style-type: none"> <li>➤ All exotic invading plants occurring on site especially in areas disturbed during construction, and along the watercourse, should be eradicated during the construction phase of the project</li> </ul>	3	1	2	2	2	6 = Low	
<input type="checkbox"/> <b>Excavation work could expose archaeological finds</b> During excavation work archaeological finds might be encountered requiring protection in terms of the Heritage Resources Act.	X			-	<ul style="list-style-type: none"> <li>➤ If during excavations any archaeological artefact or grave is unearthed, all work must cease;</li> <li>➤ A qualified archaeologist must be requested to investigate the find;</li> <li>➤ Only once the find has been investigated, and recorded, and permission obtained from SAHRA may construction continue.</li> <li>➤ Contractors should cater for possible delays due to Archaeological finds in their cost proposal.</li> </ul>	4	2	2	4	2	8 = Medium	
<input type="checkbox"/> <b>Availability of water for downstream users during construction</b> During the construction of the dam and pipeline for water abstraction from the Sand River it might be necessary to divert water away from the river in order to facilitate civil construction work to be carried out. This might result in water from the Sand River not being available for downstream users during the construction period.	X			-	<ul style="list-style-type: none"> <li>➤ Flow must be diverted around the construction site by installing a buffer wall in the Sand River to ensure availability of water for downstream users.</li> <li>➤ Surrounding landowners and downstream users should be informed of the duration and commencement date of the construction works.</li> </ul>	2	1	2	2	2	4 = Low	
<input type="checkbox"/> <b>Contamination of water resource by temporary abluion</b> Temporary abluion provided for during the construction phase might cause water pollution if not placed and managed properly.	X			-	<ul style="list-style-type: none"> <li>➤ Temporary abluion facilities in the form of chemical toilets must be provided at each work site (1 for every 15 persons)</li> <li>➤ Ablution facilities may not be located within the aquatic buffer zone</li> <li>➤ Ablution facilities must be cleaned out by a registered service provider and disposed of at a</li> </ul>	2	1	2	2	2	4 = Low	

					registered sewage treatment works at least once per week, or more if the need determines.						
<input type="checkbox"/> <b>Construction activities (of pipeline) underneath power line could have impact on workers</b> If construction equipment or personnel were to accidentally come into contact with a power line during construction activities, it could result in injuries.	X			-	<ul style="list-style-type: none"> <li>➤ Work underneath power lines and in close proximity to pylons to comply with Eskom standards in terms of clearance distances;</li> <li>➤ Construction supervisor to be present during work underneath power lines;</li> <li>➤ Mobile plant operators are to be trained in emergency procedure in case mobile plant comes into contact with power line.</li> </ul>	2	4	2	8	3	6 = Low
<input type="checkbox"/> <b>Sensitive ecological areas could be damaged</b> Areas denoted as Critical biodiversity Area 2 and Ecological Support Area 1 could be damaged during construction	X			-	<ul style="list-style-type: none"> <li>➤ Sensitive ecological areas should be demarcated during the construction phase and treated as No-Go areas.</li> </ul>	2	2	2	4	2	4 = Low
<input type="checkbox"/> <b>Traffic on the Bylsteel Road might be interrupted</b> Construction of the pipeline underneath the Bylsteel Road might temporarily interrupt traffic flow	X			-	<ul style="list-style-type: none"> <li>➤ Developer to inform Local Municipality as well as surrounding land owners if traffic on the Bylsteel Road will be interrupted due to construction of the water pipeline.</li> </ul>	2	1	2	2	2	4 = Low

OPERATIONAL PHASE											
<input type="checkbox"/> <b>Alignment with Molemole Local Municipality Spatial Development Framework</b> According to the SDF, the availability of arable land suitable for horticulture, such as vegetables, potatoes, and tomatoes is a <b>strength</b> , however, the lack of sufficient water to expand the agricultural sector is a <b>weakness</b> which can be ameliorated by <b>opportunities</b> such as integrating water harvesting and efficiency methods into agricultural activities e.g. recycling, and <b>building of artificial dams</b> . The upgraded weir and dam constructed thus contributes availability of water for agriculture by creating artificial dams, in line with the Molemole SDF.	X			+	<ul style="list-style-type: none"> <li>➤ No mitigation required due to positive impact</li> </ul>	4	1	4	4	2	8 = Medium
<input type="checkbox"/> <b>Creation of permanent jobs</b> This construction of the pipeline and dams will increase the hectares of arable land under irrigation, thus increasing crop production. The increased production will lead to an increase in permanent employment opportunities (number unknown) for the locals in terms of harvesting crops.		X		+	<ul style="list-style-type: none"> <li>➤ No mitigation required due to positive impact</li> </ul>	3	1	4	4	2	6 = Low
<input type="checkbox"/> <b>Availability of water for downstream users</b> The water abstraction will result in less water being available in the Sand River for downstream users. The developer will have to ensure that needs of the 'Reserve' and downstream users are catered for.	X			-	<ul style="list-style-type: none"> <li>➤ Developer to measure flow in the Sand River</li> <li>➤ Developer to measure volume of water taken from the Sand River</li> <li>➤ Developer to ensure water only abstracted when sufficient water is available for downstream users and for maintaining the Reserve by installing control mechanism at abstraction point.</li> </ul>	3	2	4	8	3	9 = Medium

REHABILITATION & DECOMMISSIONING PHASE											
<input type="checkbox"/> <b>Prevent occurrence and spreading of alien vegetation</b> The removal of alien vegetation during the rehabilitation and decommissioning phase of the project will prevent the occurrence and or spreading of alien vegetation.	X		X	+	<ul style="list-style-type: none"> <li>➤ No mitigation required due to positive impact</li> </ul>	3	1	2	2	2	6 = Low
<input type="checkbox"/> <b>Poor re-establishment of indigenous vegetation</b> Incomplete rehabilitation could result in indigenous vegetation not re-establishing.		X	X	-	<ul style="list-style-type: none"> <li>➤ Rehabilitation to commence immediately following completion of section of pipeline or construction of a dam</li> <li>➤ Only indigenous grass species should be utilised to rehabilitative impacted areas</li> <li>➤ ECO to ensure 80% of vegetation re-established before signing off on rehabilitation</li> </ul>	2	1	4	4	2	4 = Low
<input type="checkbox"/> <b>Scouring of Sand River due to poor rehabilitation</b> If riparian zone of Sand River is not sufficiently rehabilitated it could result in scouring of the river bed and bank.		X	X	-	<ul style="list-style-type: none"> <li>➤ Rehabilitation of the riparian zone should commence immediately upon completion of abstraction dam</li> <li>➤ Rehabilitation should be in accordance with design specifications</li> <li>➤ ECO to ensure rehabilitation in accordance with design specifications and sufficient prior to signing off.</li> </ul>	2	2	4	8	3	6 = Low

### Alternative S2

N/A

### Alternative S3

N/A

## No-go Alternative

The "No-Go" option entails that the proposed development of water infrastructure does not take place. If no development takes place, the agricultural activities practiced on site will continue as normal.

POTENTIAL IMPACTS	Direct	Indirect	Cumulative	Positive /	Negative
<b>CONSTRUCTION PHASE</b>					
<input type="checkbox"/> No alignment with Molemole Local Municipality SDF in terms of artificial storage capacity to increase food production	X				-
<input type="checkbox"/> No additional jobs opportunities	X				-
<input type="checkbox"/> Watercourse and downstream water users not affected	X				+
<input type="checkbox"/> No potential to pollute environment due to poor general waste management	X				+
<input type="checkbox"/> No nuisance to neighbours in terms of potential noise generation	X				+
<input type="checkbox"/> No nuisance to neighbours in terms of potential dust generation	X				+
<input type="checkbox"/> No loss of topsoil	X				+
<input type="checkbox"/> No potential pollution due to vehicle maintenance on site	X				+
<input type="checkbox"/> No damage to the environment due to construction during wet conditions	X				+
<input type="checkbox"/> No erosion, siltation and dust generation due to construction activities	X				+
<input type="checkbox"/> No introduction of exotic plant species	X				+
<input type="checkbox"/> No potential damage to archaeological finds	X				+
<input type="checkbox"/> Availability of water for downstream users	X				+
<input type="checkbox"/> No potential for contamination of water resource by temporary ablution	X				+
<input type="checkbox"/> No potential for harm to construction workers	X				+
<b>OPERATIONAL PHASE</b>					
<input type="checkbox"/> No alignment with Molemole Local Municipality SDF in terms of artificial storage capacity to increase food production.	X				-
<input type="checkbox"/> No additional jobs opportunities	X				-
<input type="checkbox"/> No reduction in available water for downstream users	X				+



### 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.

#### **Alternative A (preferred alternative)**

The report has detailed all the major impacts, their significance and the mitigation measures required. The assessment demonstrates the associated negative impacts of the development are within the lower limit and acceptable. Further, the assessment shows that there are various positive impacts that will contribute to enhance the local economy.

It is therefore evident that, based on the biophysical and socio-economical characteristics, the site is suitable for the proposed development (only if the project is planned and managed in accordance with an approved Environmental Management Plan). The development will be compatible with the surrounding area and create temporary as well as permanent job opportunities during the construction and operational phases.

#### **The Physical and Biological Environment:**

##### **Construction Phase**

- The natural environment will be affected by construction related activities such as site clearance, bulk earthworks etc. Considering the study area is situated in an agricultural zone, the linear structure of the proposed pipeline, as well as the proposed mitigation measures, it is foreseen that the proposed project will have a low negative impact on the physical or biological environments.
- Considering construction activities will occur within the 1:100 flood line of the Sand River, the possibility exists of negatively impacting the bed, banks and riparian zone of the Sand River, however if mitigation measures are implemented as recommended, the likelihood of the proposed construction having a negative impact of the environment, is low.
- It is at this point not yet known whether sufficient water is available within the

sand River for the proposed project and therefore a Hydrological assessment of the Sand River is required.

### **Operational Phase**

- The operational phase of the proposed water infrastructure project is foreseen to have a limited negative impact on the physical and biological environment, with only the availability of water in the Sand River for downstream users potentially having a medium negative effect.

### **The Socio-economic Environment:**

#### **Construction Phase**

- The proposed development will have a positive impact on the economy of the area due to providing temporary job opportunities to local labor during the construction phase.
- The negative impacts on society e.g. noise, dust generation, and availability of water for downstream users during the construction phase will be negligible if proposed mitigation measures are implemented.
- The potential for discovering Cultural/Historical finds is highly likely and therefore a Heritage Impact Assessment of the proposed construction locations is required.

#### **Operational Phase**

- The proposed development will have a positive impact on the economy of the area during the operational phase due to increased agricultural produce, and in so doing increasing the GGP of the area.

### **Finding**

The only potential "fatal flaw" identified is the availability or non-availability of excess water in the Sand River for abstraction. The actual impact will only be known once the Hydrological study and reserve determination has been concluded, and the Design Report for the water infrastructure development is available.

Bokamoso is of the opinion that the proposed development if planned, implemented and managed correctly, will have a limited adverse impact on the environment associated mainly to the construction phase, and in the long term have a positive impact on the social and economic environments (on a local, regional and

provincial scale).

It is therefore requested that the development be allowed to proceed, so long as the mitigation measures contained in this report and in the draft Environmental Management Plan are implemented, so as to achieve maximum advantage from beneficial impacts, and sufficient mitigation of adverse impacts.

**No-go alternative (compulsory)**

The no-go option entails that the development site remains in its current state, with current activities not being affected.

The site is currently used for agricultural activities and has ecologically sensitive features such as ridges, wetlands, and habitats occurring where development is proposed.

If the project is not approved to proceed then the status quo will be maintained in terms of the bio-physical environment, however the potential positive contribution to the social and economic environment will not be attained.

**Alternative B**

**N/A**

**Alternative C**

**N/A**

**For more alternatives please continue as alternative D, E, etc.**

## 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)?

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

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):

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 department in respect of the application:

As a result of the above mentioned information, Bokamoso request that the above development be approved as long as the following are followed:

- Mitigation measures as contained in the draft Environmental Management Plan must become part of the Environmental Authorisation for implementation by and adherence to by all parties involved with the water infrastructure development.

Is an EMPr attached?

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

The EMPr must be attached as **Appendix F**.

## **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 (Public Participation)

Appendix F: Environmental Management Programme (EMPr)

Appendix G: Other information

## SECTION G: DECLARATION BY THE ENVIRONMENTAL ASSESSMENT PRACTITIONER

I, Lizelle Gregory declare that I –

- (a) act as the independent environmental practitioner in this application;
- (b) do not have and will not have any financial interest in the undertaking of the activity, other than remuneration for work performed in terms of the Environmental Impact Assessment Regulations, 2010;
- (c) do not have and will not have a vested interest in the proposed activity proceeding;
- (d) have no, and will not engage in, conflicting interests in the undertaking of the activity;
- (e) undertake to disclose, to the competent authority, any material information that has or may have the potential to influence the decision of the competent authority or the objectivity of any report, plan or document required in terms of the Environmental Impact Assessment Regulations, 2006;
- (f) will ensure that information containing all relevant facts in respect of the application is distributed or made available to interested and affected parties and the public and that participation by interested and affected parties is facilitated in such a manner that all interested and affected parties will be provided with a reasonable opportunity to participate and to provide comments on documents that are produced to support the application;
- (g) will ensure that the comments of all interested and affected parties are considered and recorded in reports that are submitted to the Department in respect of the application, provided that comments that are made by interested and affected parties in respect of a final report that will be submitted to the Department may be attached to the report without further amendment to the report;
- (h) will keep a register of all interested and affected parties that participated in a public participation process; and
- (i) will provide the Department with access to all information at my disposal regarding the application, whether such information is favourable to the applicant or not.

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**Signature of the Environmental Assessment Practitioner:**

**BOKAMOSO LANDSCAPE ARCHITECTS AND ENVIRONMENTAL CONSULTANTS CC**

**Name of company:**

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**Date:**

**ANNEXURE A:  
SITE PLANS**



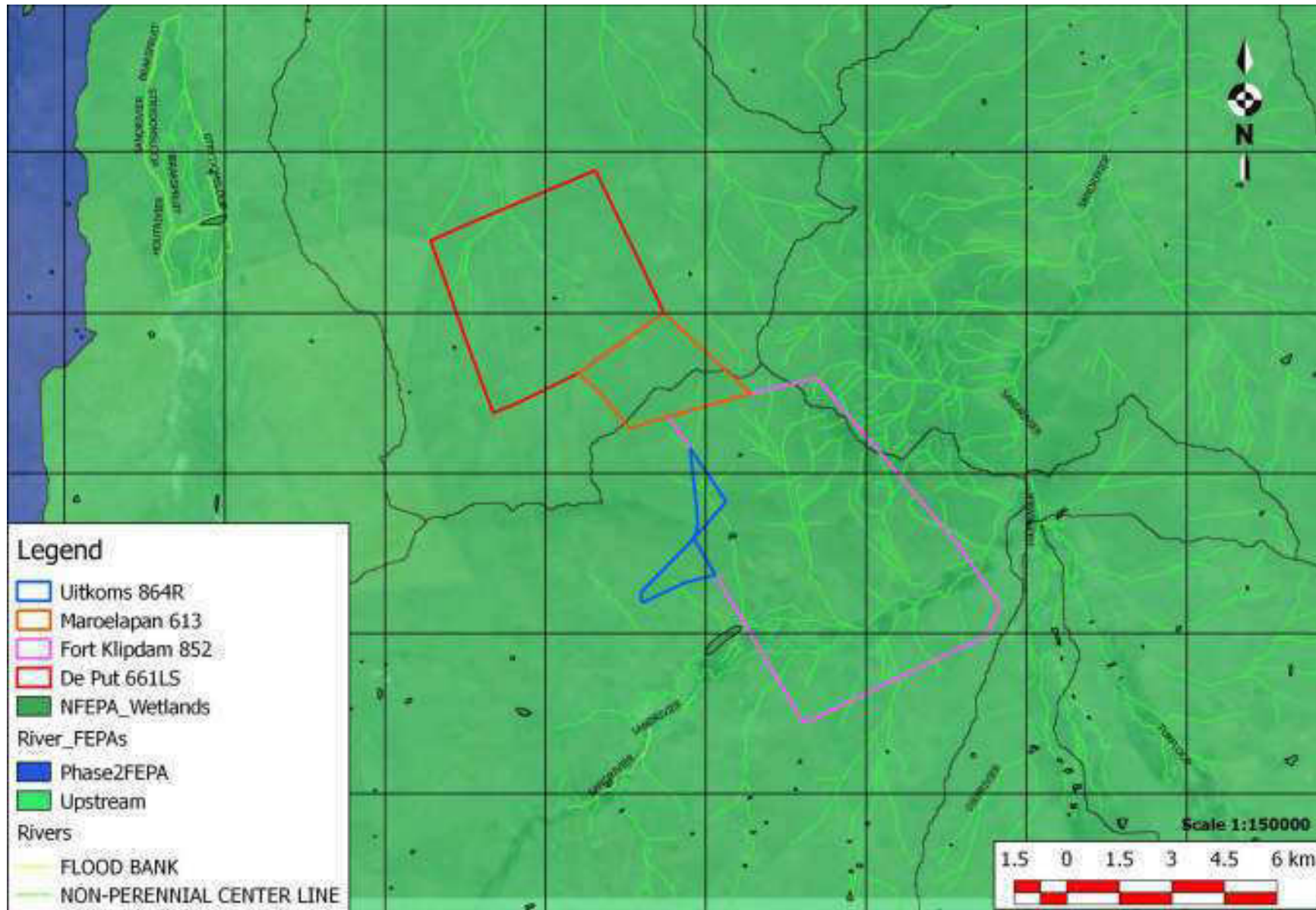


Figure A1: NFEPA



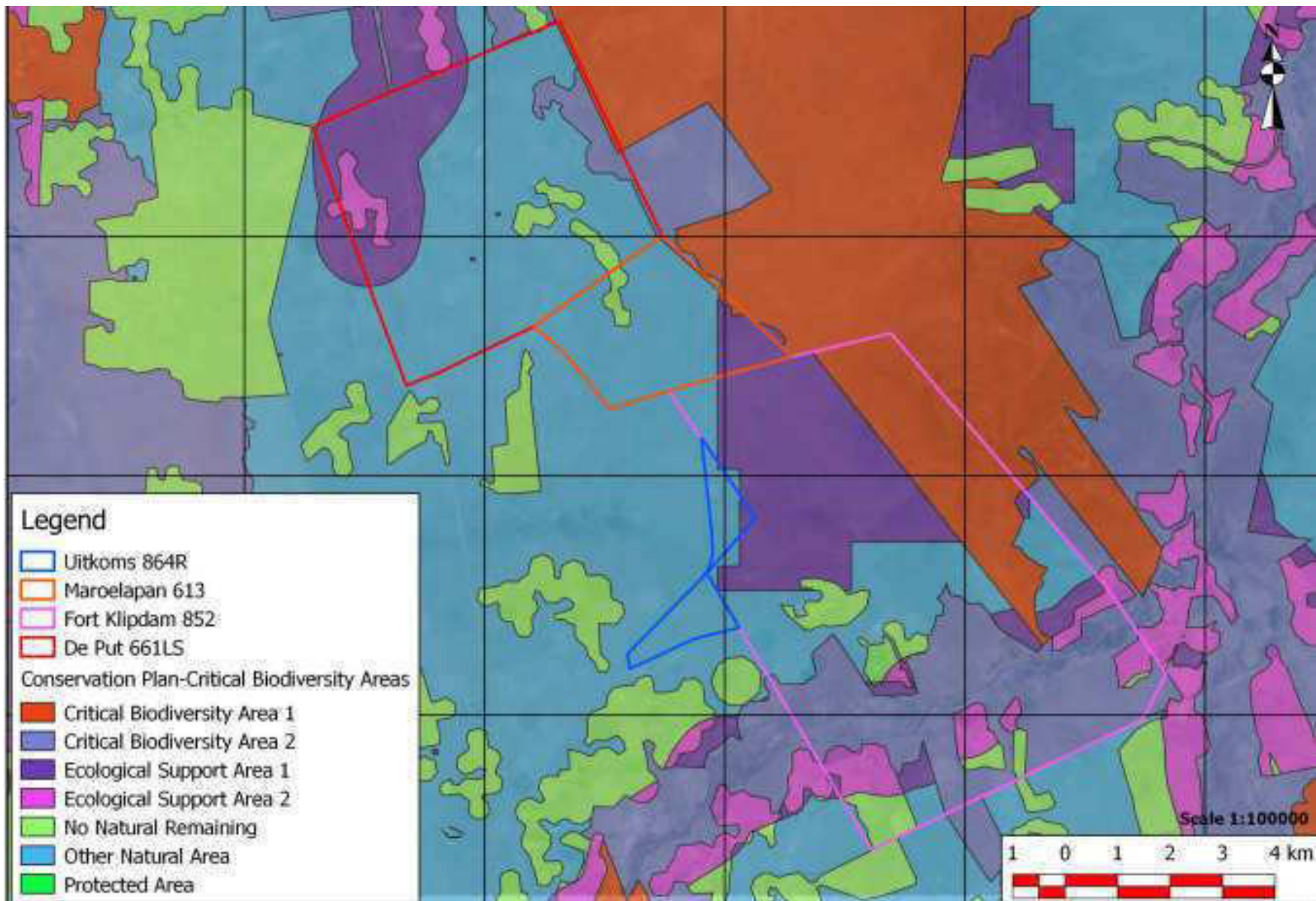


Figure A2: Critical Biodiversity Areas

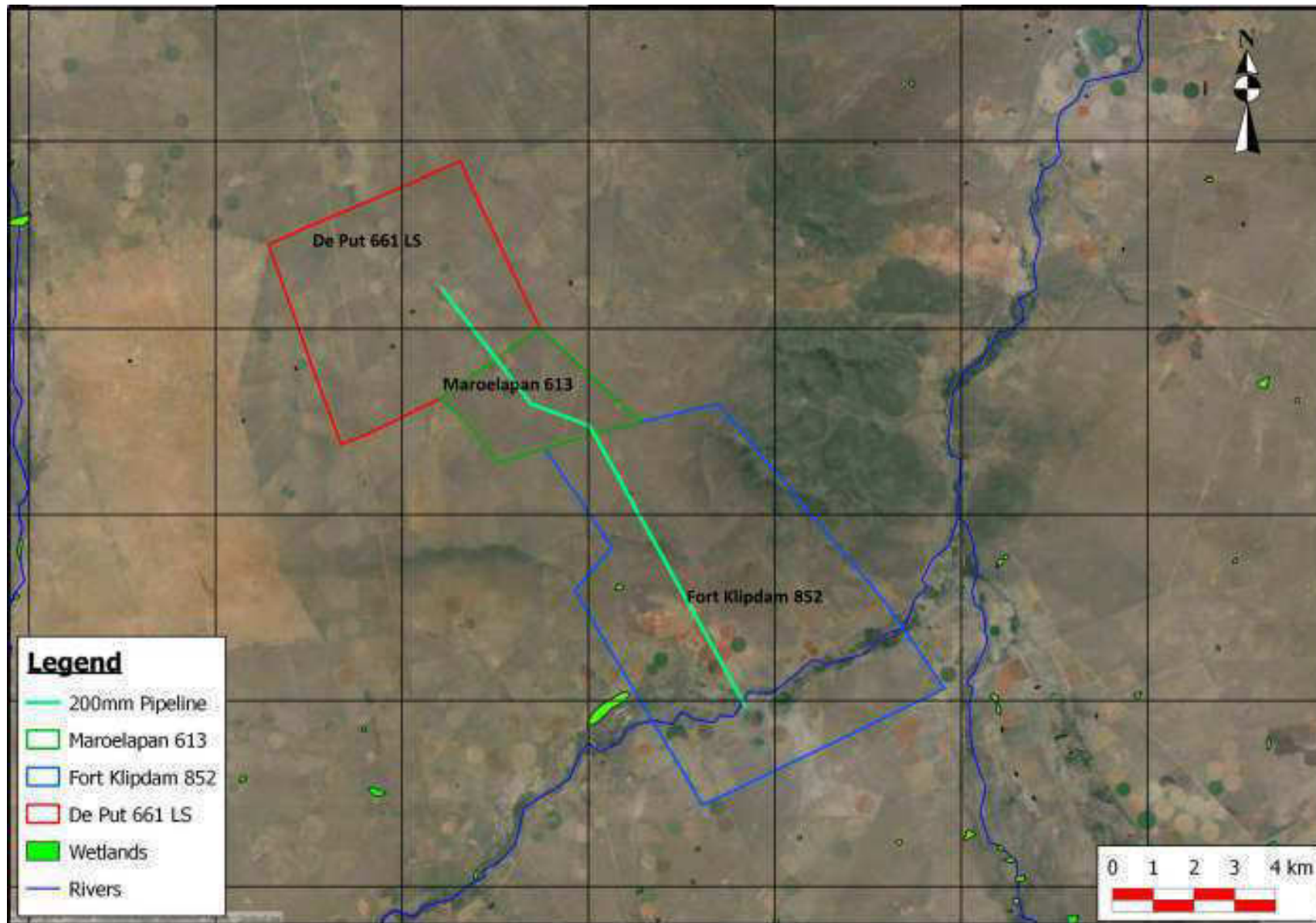


Figure A3: Hydrology map

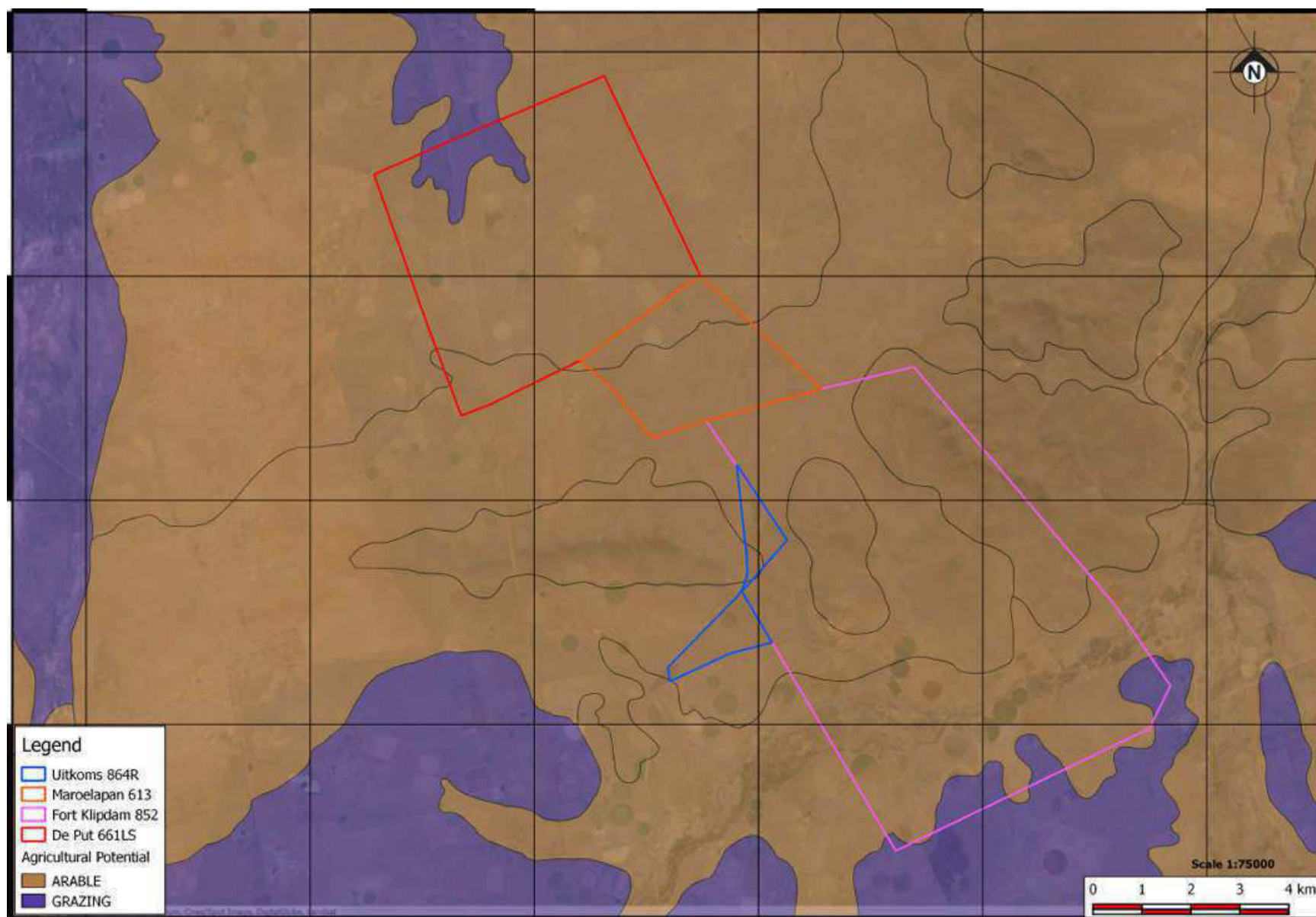


Figure A4: Agricultural Potential

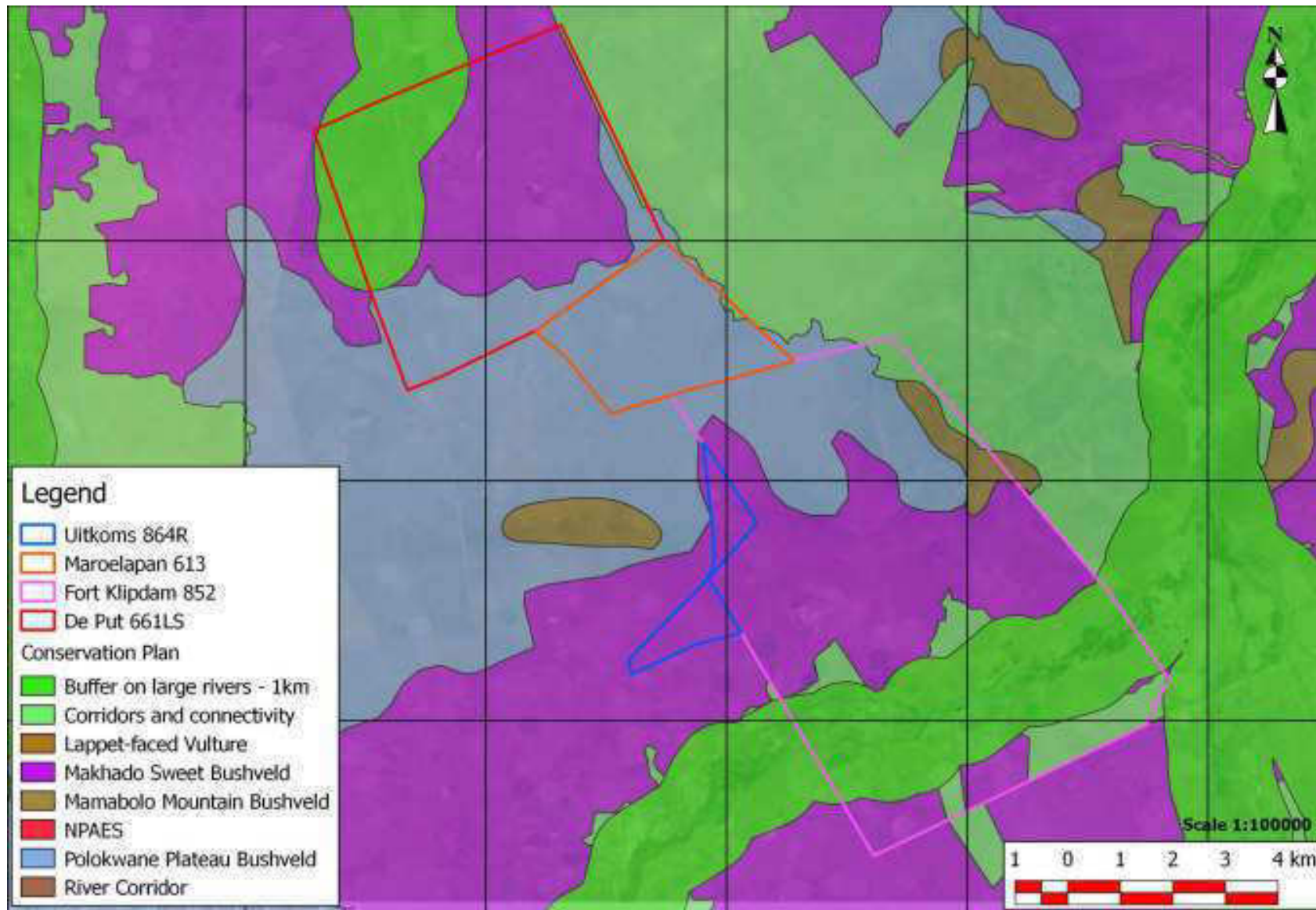


Figure A5: Limpopo Conservation Plan Areas

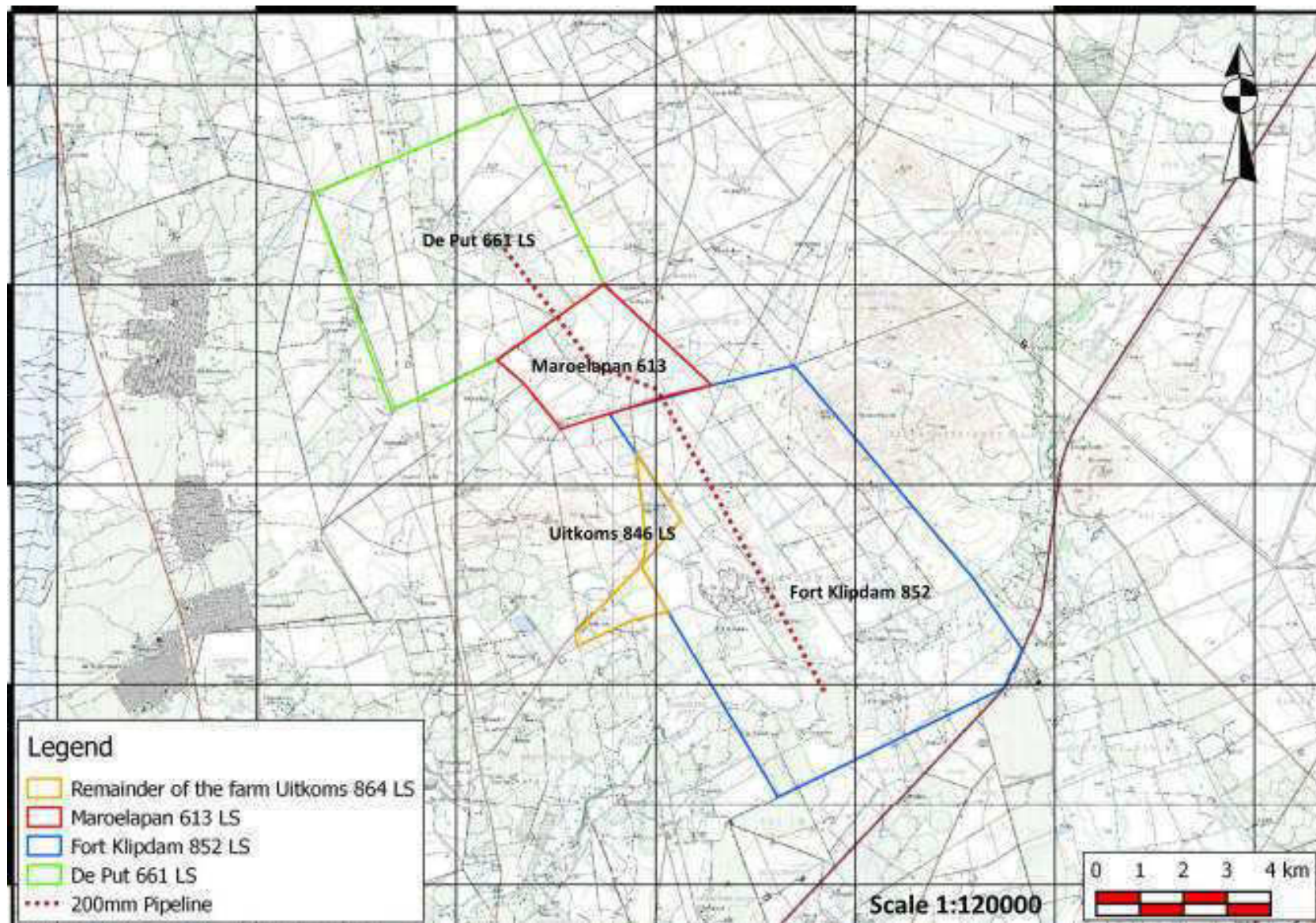


Figure A6: Locality map

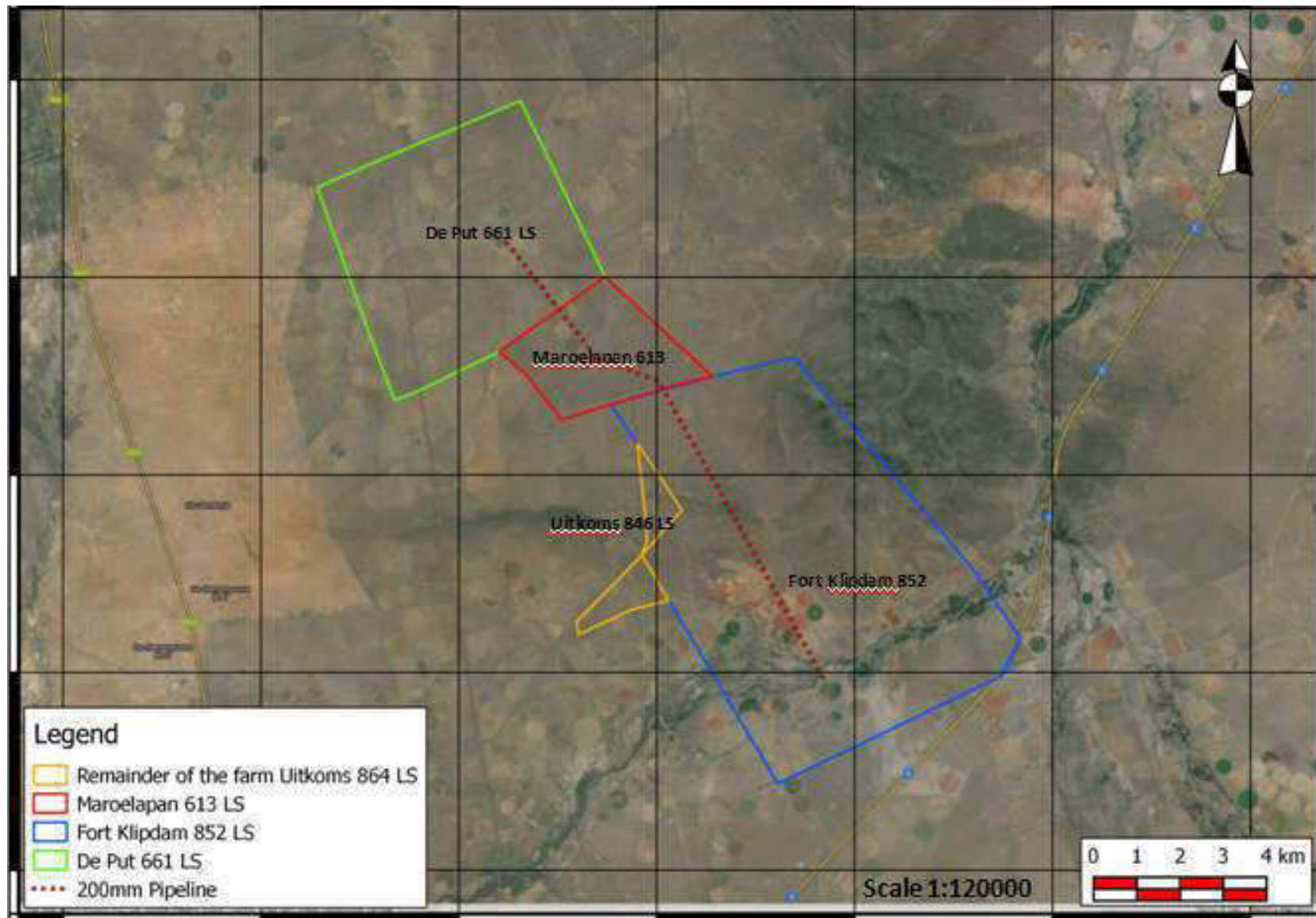


Figure A7: Aerial map

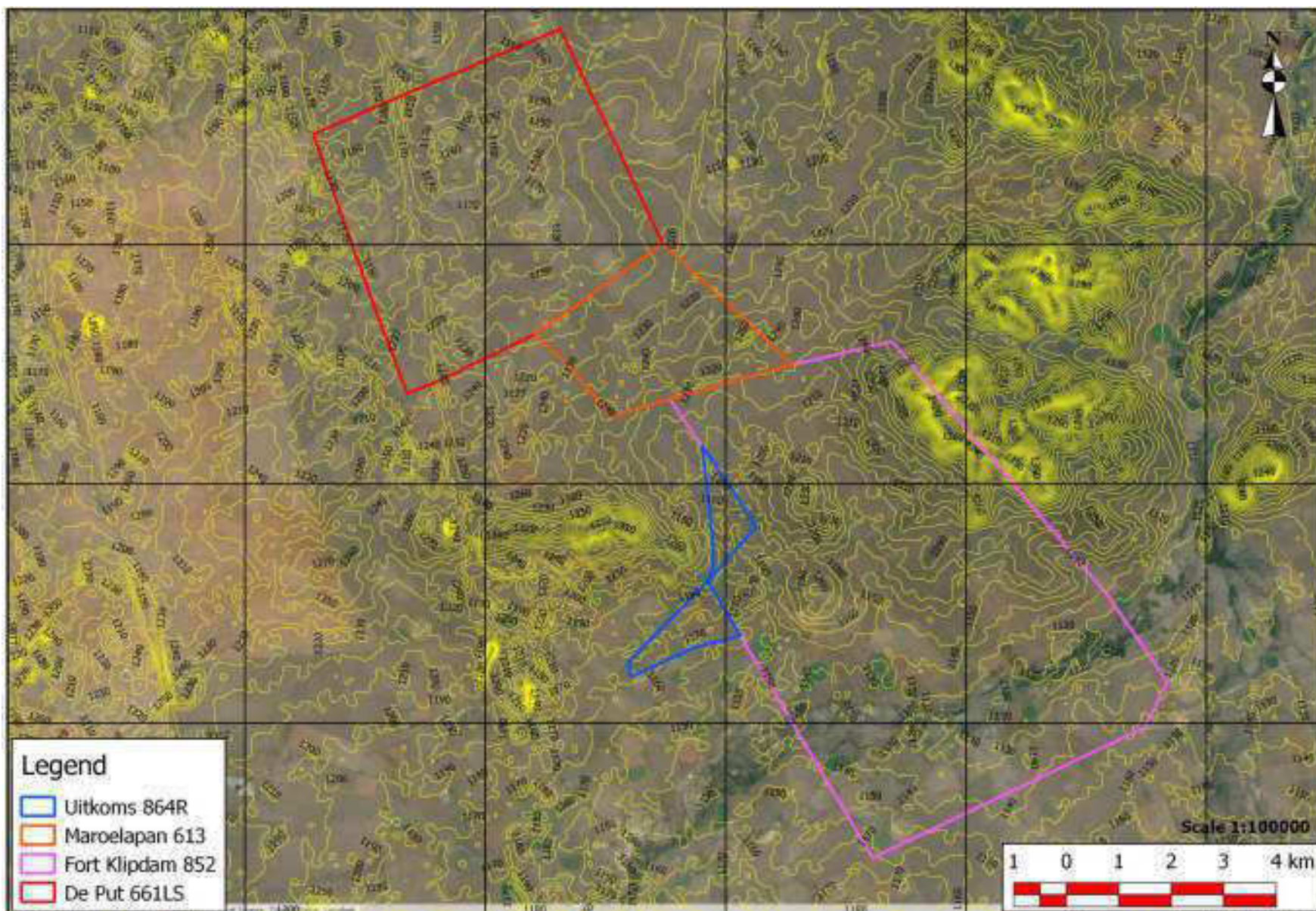


Figure A8: Contours

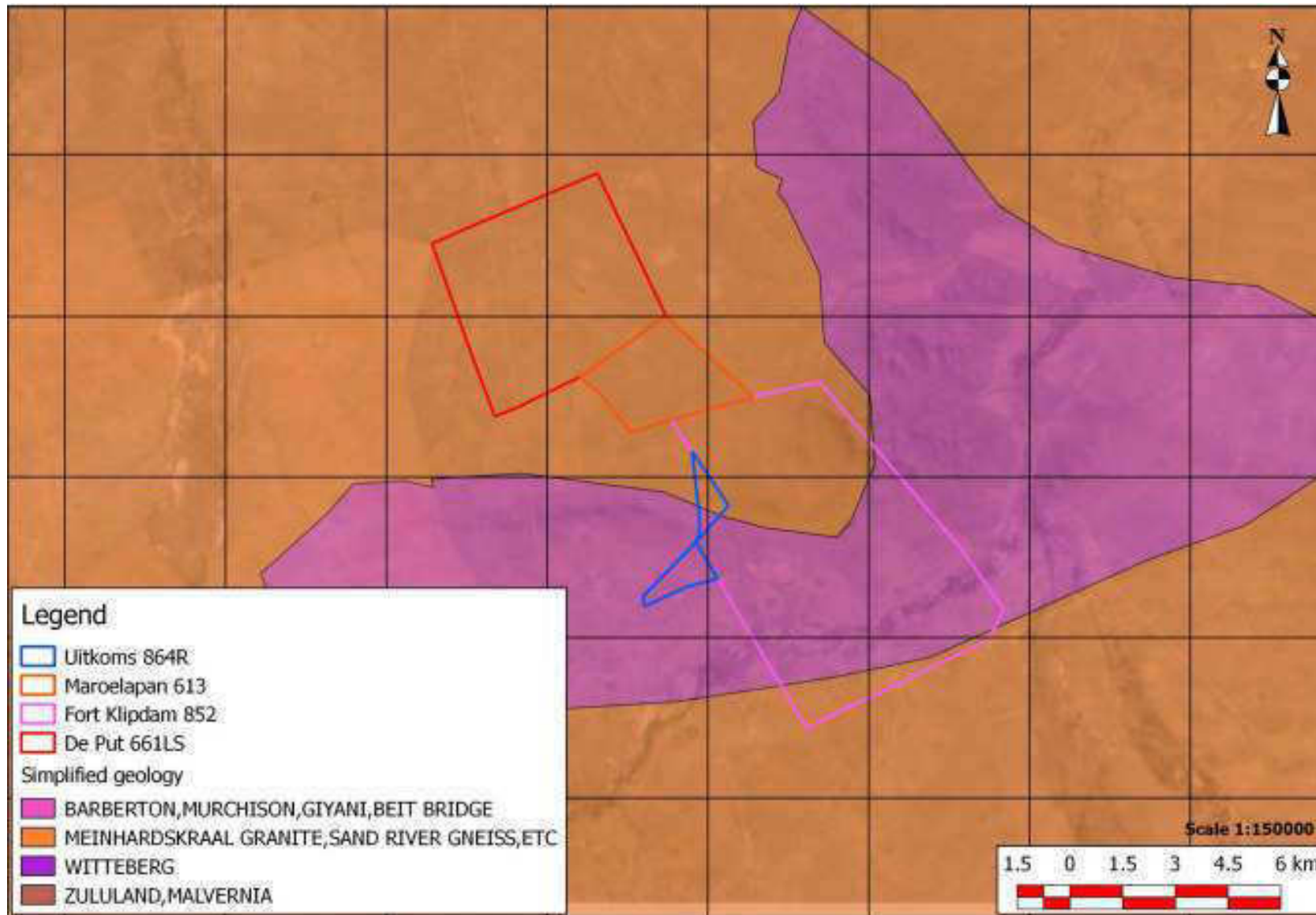


Figure A9: Geology map



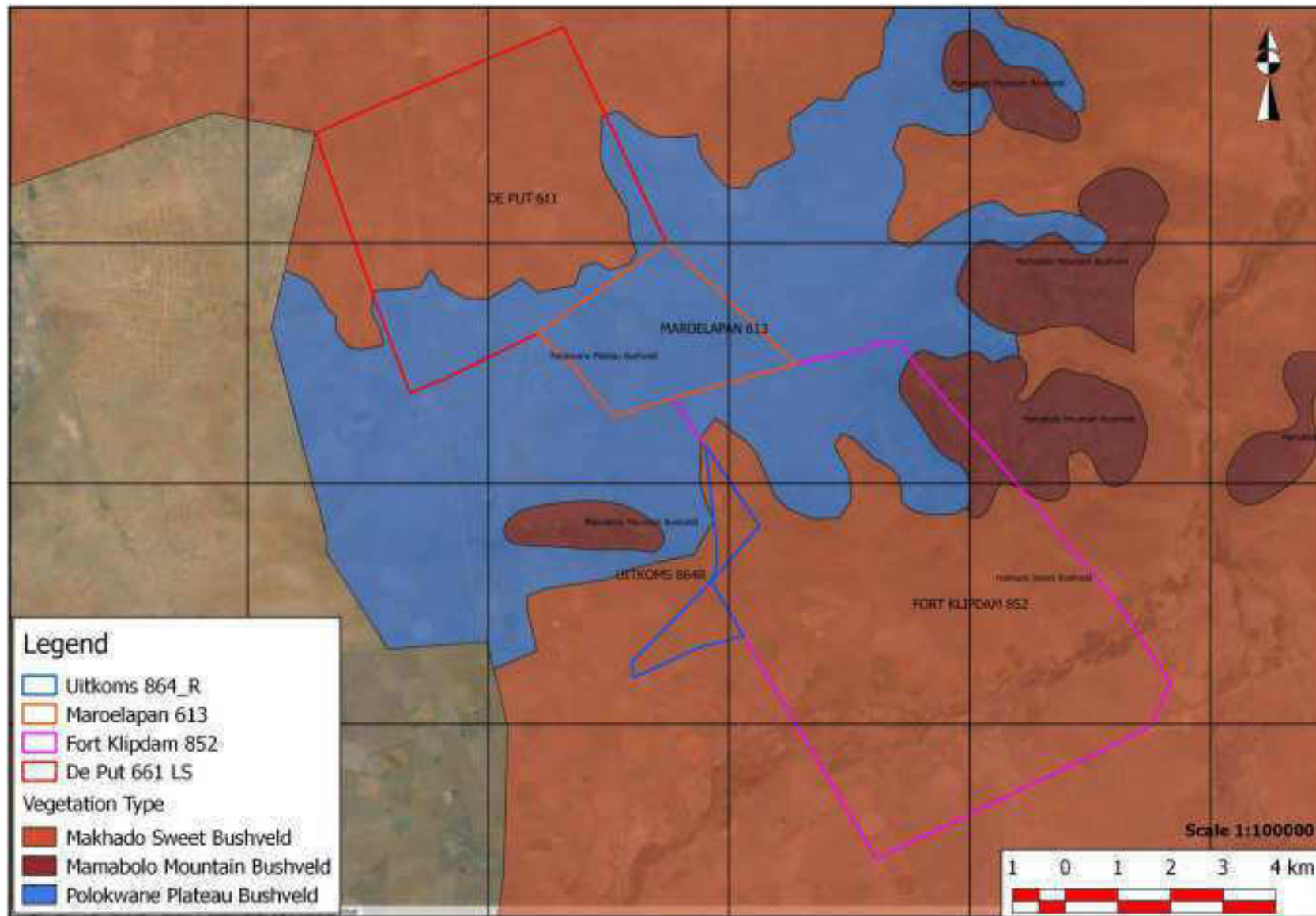


Figure A10: Vegetation map

# ANNEXURE B: PHOTOGRAPHS

Not yet available



**ANNEXURE C:**  
FACILITY ILLUSTRATION/  
DESIGN DRAWINGS

Not yet available



# ANNEXURE D: SPECIALIST REPORTS

Not yet available



**ANNEXURE E:  
PUBLIC PARTICIPATION**



Appendix E1:  
Proof of Site Notice

# NOTICE OF BASIC ASSESSMENT PROCESS

Notice is given of an application for a **Basic Assessment Process** that was submitted to the Limpopo Department of Economic Development, Environment & Tourism, in terms of Regulation No. R543 published in the Government Notice No. 33306 of 18 June 2010 of the National Environment Management Act, 1998 (Act No. 107 of 1998) governing **Basic Assessment Procedures (Listing Notice: 1 and 3 – Government Notice R544 & R546)** for the following activity:

**Reference No:** 12/1/9/1-C83

**NEAS Reference No:** LIM/EIA/0000814/2014

**Project Name:** Water infrastructure development for agricultural and domestic purposes on the Farms Maroelapan 613 LS, De Put 611 LS, Fort Klipdam 852 LS and the Remainder of Portion 1 of the Farm Uitkoms 864 LS.

**Property Description:** The site is situated on the Farms Maroelapan 613 LS, De Put 611 LS, Fort Klipdam 852 LS and the Remainder of Portion 1 of the Farm Uitkoms 864 LS.

**Project Description:** The proposed project is for the construction of dams and pipelines on the farms Maroelapan 613 LS, De Put 611 LS, Fort Klipdam 852 LS and the Remainder of Portion 1 of the Farm Uitkoms 864 LS. It is furthermore also the intention of the applicant to withdraw water from boreholes for purposes of irrigation and domestic use. Water will be extracted from Maroelapan 613 LS and be transported via the pipeline across the Farm Maroelapan 613 LS to be used for domestic purposes on the Farm De Put 611 LS and irrigation on the other farms. The pipeline will in total cover a length of approximately 12.9km. A Water Use License Application is also in the process of being applied for.

## Listing Activities Applied for:

GNR 544 (Listing Notice 1), 18 June 2010	Activity 9
GNR 544 (Listing Notice 1), 18 June 2010	Activity 11
GNR 544 (Listing Notice 1), 18 June 2010	Activity 12
GNR 544 (Listing Notice 1), 18 June 2010	Activity 18
GNR 546 (Listing Notice 3), 18 June 2010	Activity 2
GNR 546 (Listing Notice 3), 18 June 2010	Activity 16

**Proponent Name:** Ramaliane Trust

**Location:** The study area is situated north of the N1 between Polokwane and Louis Trichardt, approximately 20 km north-east of Polokwane. The water infrastructure will be aligned in a north-western direction originating at the Sand River.

**Date of Notice:** 8 May 2014 – 17 June 2014

**Queries regarding this matter should be referred to:**

**Bokamoso Landscape Architects and Environmental Consultants CC**

Public Participation registration and inquiries: **Juanita De Beer**

Project Inquiries: **Mary-Lee van Zyl**

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E-mail: [izelleg@mweb.co.za](mailto:izelleg@mweb.co.za)

In order to ensure that you are identified as an Interested and/or Affected Party (I&AP) please submit your name, contact information and interest in the matter, in writing, to the contact person given above **within 40 days of this Notice.**

