


BACKGROUND INFORMATION DOCUMENT
AS PART OF THE
BASIC ASSESSMENT AND
WATER USE LICENCE APPLICATION FOR THE
PROPOSED MANDALAKAZI BULK WATER SUPPLY SCHEME UPSTREAM BULKS,
LOCATED WITHIN THE ZULULAND AND UMKHANYAKUDE DISTRICT
MUNICIPALITY, KWAZULU-NATAL.

Applicant:	Environmental Consultants:
 Zululand District Municipality	 GREENBELT <small>PROJECTS</small>
Private Bag X76, ULUNDI, 3838 Tel: 035 874 5500 Fax: 035 874 5591 / 5589	PO BOX 791, Umhlanga, 4320 Tel: 071 140 8350 admin@greenbeltprojects.co.za www.greenbeltprojects.co.za

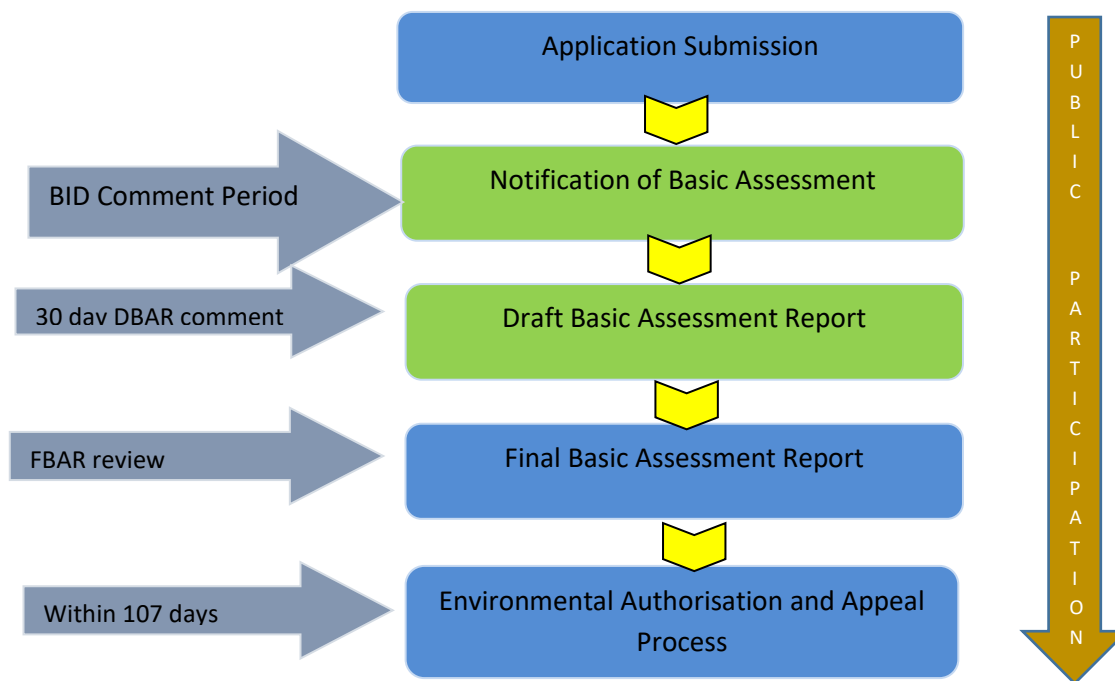
THE PURPOSE OF THIS DOCUMENT

This document aims to provide preliminary project information to enable you as an interested and affected party (IAP), with background information, and an opportunity to comment on the proposed development. This initial project information forms the basis of the Public Participation Process and offers you the opportunity to become actively involved in the project from the outset. Input from I&APs helps to ensure that all potential environmental issues are considered within the context of the proposed sand mining. All issues and comments raised by IAPs during the Application for Environmental Authorisation and Water Use License Application public participation will be documented. This will assist in the identification of environmental issues that could have a negative and/or positive impact on the site and the community as a whole.

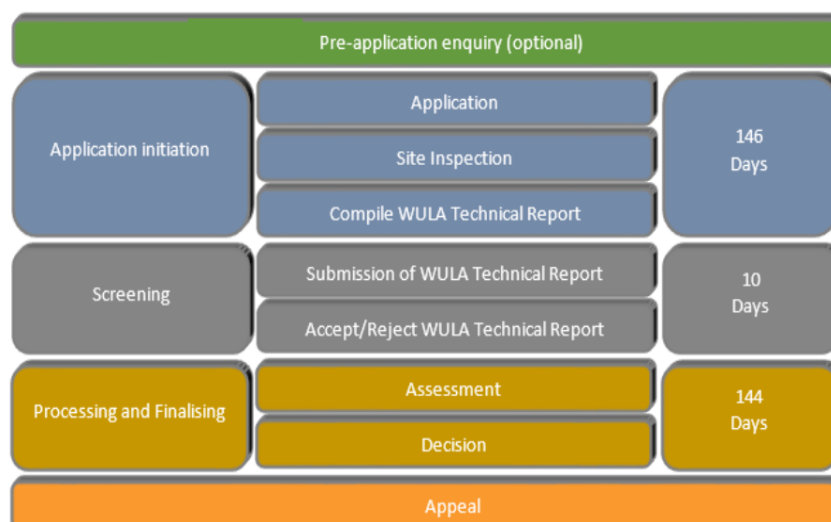
THE PROJECT APPLICATIONS

Greenbelt Projects (Pty)Ltd is submitting an Application for Environmental Authorisation and a Water Use Licence Application, on behalf of the applicant *Zululand District Municipality* for the proposed construction of 30km of the Mandlakazi Bulk Water Supply Scheme Upstream Bulks. The proposed activity will be subject to a Basic Assessment process in terms of the National Environmental Management Act 1998, (Act No. 107 of 1998), associated Environmental Impact Assessment Regulations 2014 (as amended 2017), and a Water Use Licence Application will be submitted to the Department of Water and Sanitation in terms of the National Water Act (No.36 of 1998), Section 21(c) *Impeding or diverting the flow of water in a watercourse*, and, (i) *Altering the bed, banks course or characteristics of a watercourse*. These regulations identify various activities which may have a substantial detrimental effect on the environment. In addition, the Regulations list procedures for assessing potential associated environmental impacts. Scoping forms part of the initial phase of these procedures.

The Basic Assessment can be summarised as follows:



The Water Use License Process is outlined below



THE PROJECT DESCRIPTION

At present the bulk of Mandlakazi Bulk Water Supply Scheme water is sourced from Jozini Dam (Pongolapoort). Water supply is currently abstracted via privately owned infrastructure and pumped to the existing Mandlakazi Water Treatment Works (MWTW). When the Mandlakazi raw water demand exceeds 10 Ml/day the privately owned infrastructure will not have sufficient capacity, and as such, the ZDM will require its own infrastructure to abstract and transfer water from the Pongolapoort Dam to ensure adequate supply to the Mandlakazi WTW. In order to reduce the risks associated with relying on a private entity for water supply to supply raw water for basic human consumption, the Zululand District Municipality (ZDM) has there proposed the development of their own dedicated raw water supply to the Mandlakazi WTW.

The overall aim is to provide rural communities and homesteads of Mandlakazi with a reliable bulk potable water supply as there is currently limited and rudimentary supply infrastructure. The project therefor provides a reliable link for the passage of raw water from Jozini Dam to the Mandlakazi Water Treatment Works. The project involves the installation of 30km of bulk pipeline

from within the Pongola Nature Reserve at 27°30'27.18"S 32° 0'11.64"E and will supply the Mandlakazi Water Treatment Works in the south at end point 27°40'49.86"S 31°54'58.33"E.

The proposed 30km pipeline will comprise a 1000mm PVC-o rising main from the new abstraction works to the Mandlakazi WTW. The upstream bulk pipeline infrastructure will traverse 13 watercourses, 12 of which are non-perennial, and the Mkuze River being the only perennial river. The Mkuze River crossing will comprise the construction of a new stilted pipe bridge over the Mkuze River, and the alignment will be to the west of the existing road bridge. The proposed infrastructure will include scour, air valve and isolation chambers at predetermined locations along the proposed alignment. An interim reservoir and Interim Pump Station is proposed near the midpoint at 27°38'28.95"S 31°59'13.03"E and 27°38'29.26"S 31°59'11.83"E respectively.



Figure 1. Image looking north showing the proposed alignment of the Mkuze River crossing pipeline bridge.



Figure 2. Image looking south west along the P234 road, showing typical terrain of the study area and the pipeline alignment adjacent the road reserve.

Climate

The study area receives the majority of its rainfall during the summer months, with little rainfall occurring during winter. Frosts are infrequent. The average annual precipitation ranges from 600mm to 1050mm. Mean monthly maximum and minimum temperatures, (measured at Hluhluwe-iMfolozi Park), are 38.5°C and 7.8°C respectively.

Topography and Watercourses

The general terrain consists of mainly low, undulating hills, with some sections of moderately undulating plains. The study area is situated across the hills and valleys of the Mkuze River to the north and the Ubani River tributaries in the south. The proposed pipeline extends into three quaternary catchments namely W44E in the north, W31H in the central region and W31G in the southern region. The general gradient across the study area ranges from gentle to moderate slopes. The elevations of the study area ranges from 162 masl at the start point in the north, to 340 masl in the southern region at the Mandlakazi WTW.

Vegetation

The study area falls within the Savanna Biome, and Mucina and Rutherford (2006) classify the vegetation types and Western Maputuland Clay Bushveld (SVI20) in the northern region, and Zululand Lowveld (SVI23) in the south eastern region. The dominant vegetation type is wooded grasslands with rare dense bushveld thickets of *Dichrostachys cineria* and *Acacia* sp. Tall grassveld types with sparsely scattered solitary trees and shrubs form a mosaic with the typical

savannah thornveld, bushveld and thicket patches. Isolated *Mimusops caffra* trees were noted within the study area, together with *Aloe striata*, *Aloe marlothii* and *Aloe helenae* inter alia.

The proposed pipeline does extend into a Critical Biodiversity Areas in the northern region of the site. The pipeline includes 5.1 km within the Phongola Nature Reserve in the north, then traverses 10,3km of private sugar cane farm, adjacent plantations. The alignment then crosses the National Route 2 via an existing culvert at 27°37'6.07"S 32° 1'20.52"E and continues south for 1km , then crosses the P234 Road and heads west. The pipeline will enter the northern edge of the Zululand Rhino Reserve adjacent the P234 Road and head west for 5,1km. Thereafter it will cross over the P234 Road at the proposed interim pump station and reservoir, and continue along the north side of the P234 for 9km until crossing back to the southern side of the P234 Road before entering the Mandlakazi WTW at the end point.

Geology and Soils

Mucina and Rutherford (2006) describe the SVI22 geology as well-drained with shallow soil forms (Glenrosa and Mispah forms) derived from various lithologies, predominantly, Dywka Group diamictites, shale, siltstone and sandstone from the Madzaringwe and Pietermaritzburg formations, as well as all of the Karoo Supergroup. SVI23 can be described as black-clay soils and duplex soils derived from a variety of clastic sediments of the Dwyka, Ecca, Beaufort and igneous rocks of the Lebombo Groups, also all of the Karoo Supergroup. Soils of the SVI23 are generally well drained, especially on stony slopes.

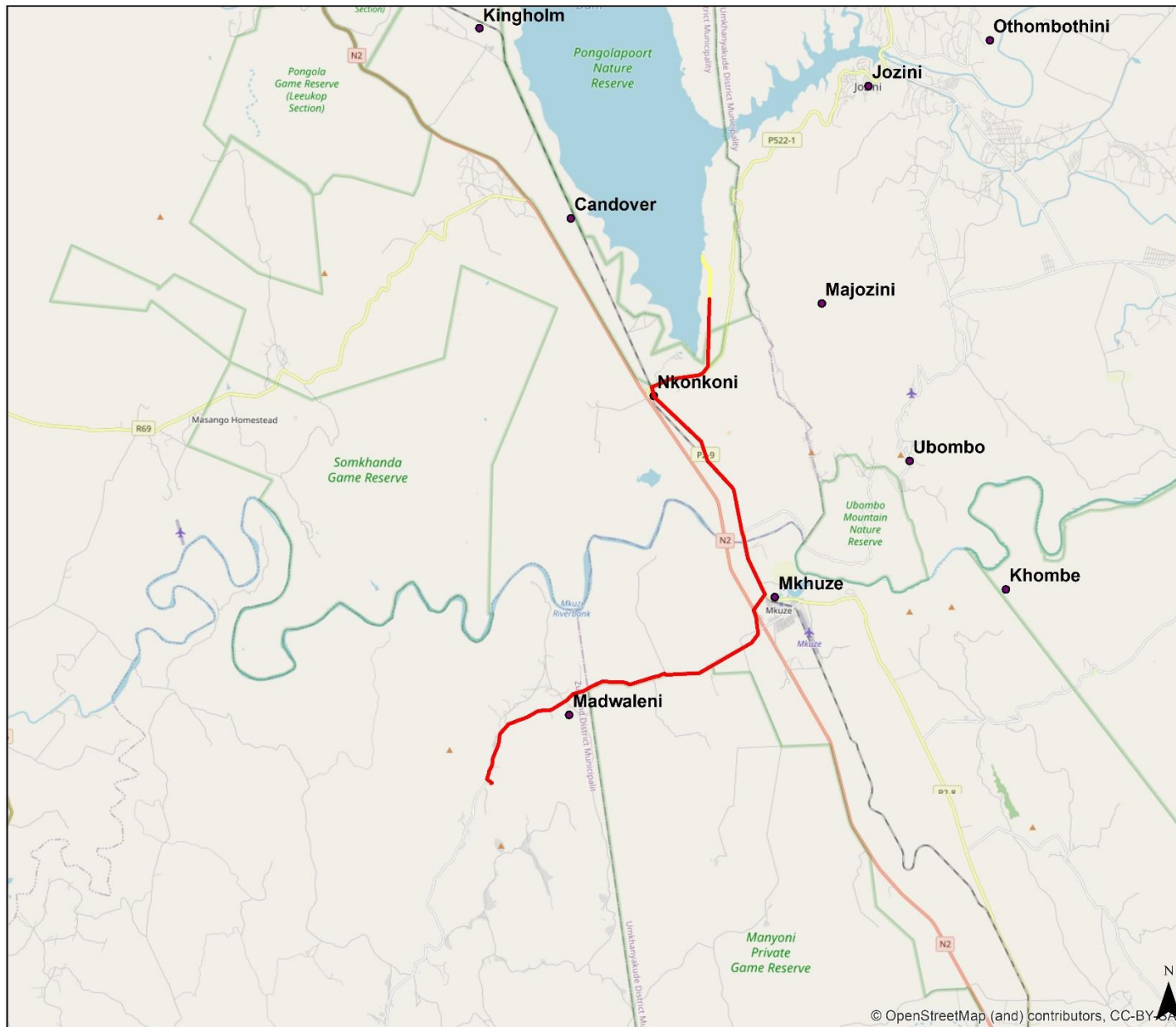
The geology of the project area comprises sedimentary rocks of the Karoo Supergroup, post-Karoo intrusive rocks and recent surficial deposits. The geological units present across the project area are described below in order from oldest to youngest. The pipeline routes and appurtenant infrastructure are underlain by sedimentary rocks of the Vryheid Formation and dolerite.

Services

The study area is primarily accessed via the P234 Road in the south west (Nongoma), and the N2 and P522 in the north east. Various provincial and district roads extend through the proposed project area. Powerlines and telecommunication networks were noted across some portions of the study area but do not extend throughout. All identified service providers will be notified as part of the Public Participation Process.

Register as an Interested and/or Affected Party

Members of the public have the right to be consulted during the Public Participation Process. If you would like to be part of this process, or wish to comment or make contributions regarding specific guidelines, legislation or regulations that are specific to your interest or organisation, please register with the Enviroedge environmental consultant using the contact details provided on page 8.



Legend

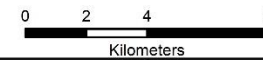
- Proposed Pipeline
- Approved Abstraction Infrastructure

Project:
Mandlakazi BWSS
Upstream Bulks

Title:

Locality Plan

Scale: 1:200 000



Rev: 01



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Figure 3. Locality Plan

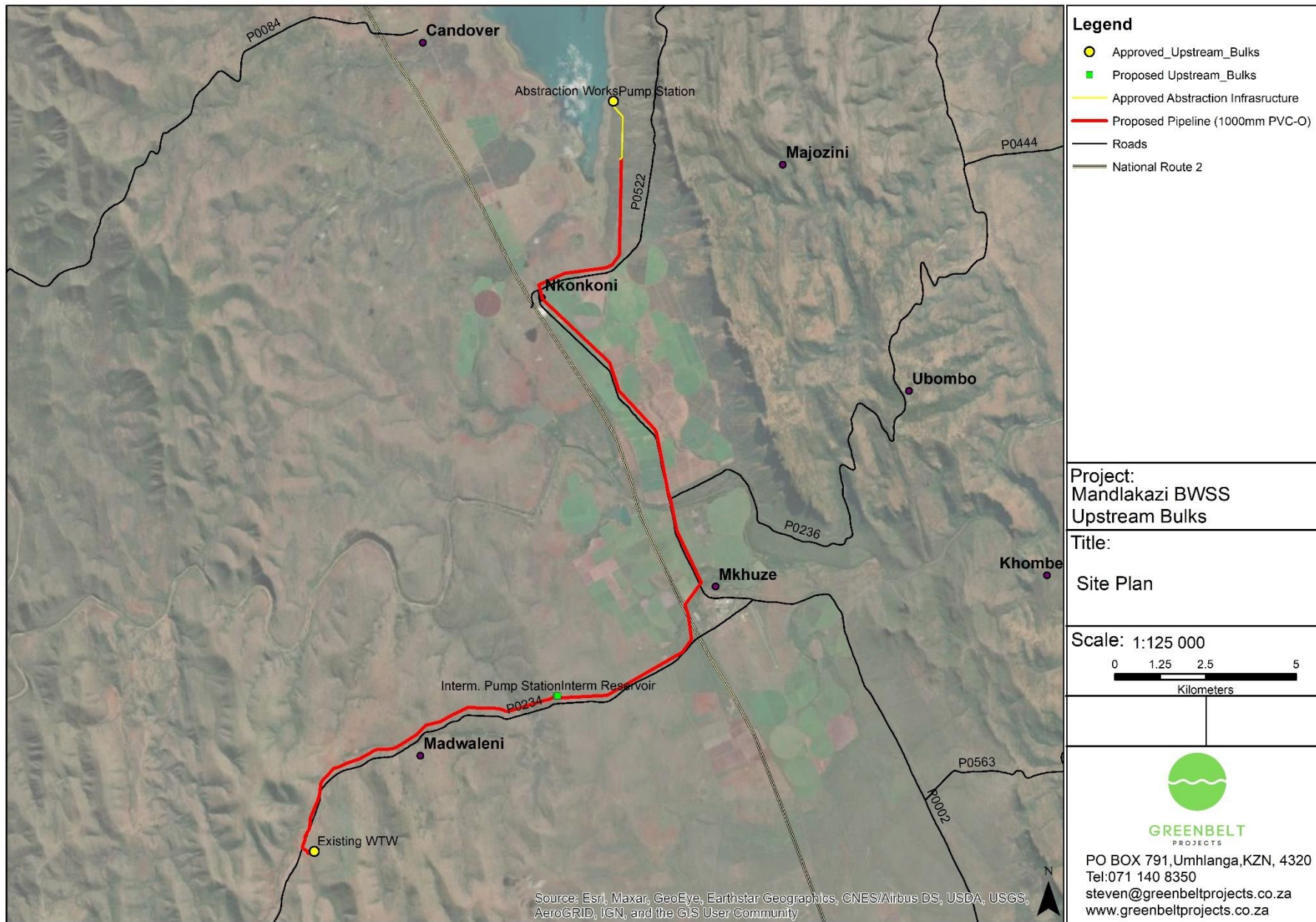


Figure 4. Site Plan

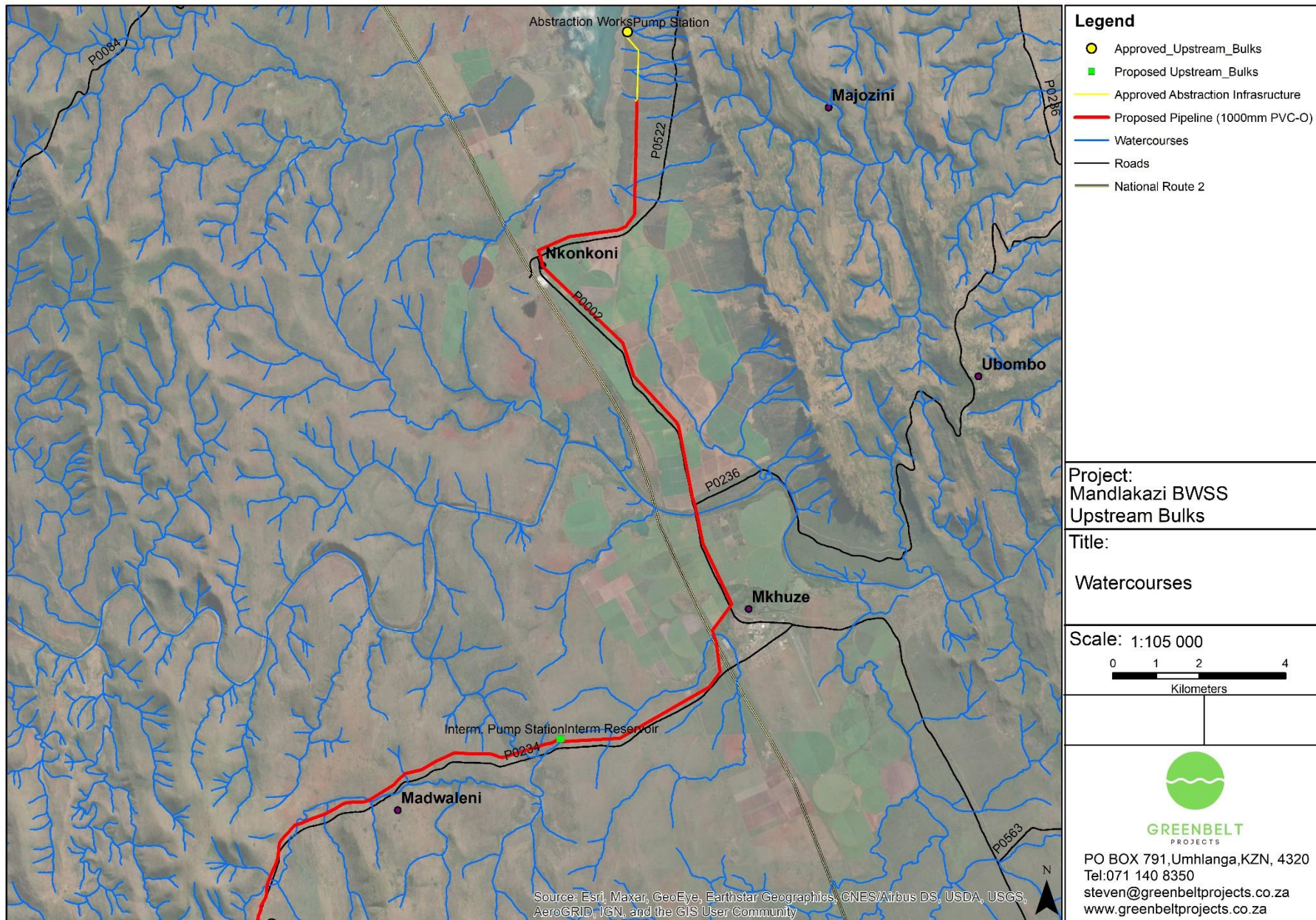


Figure 5. Watercourses

**Proposed Mandlakazi Bulk Water Supply Scheme Upstream Bulks
Basic Assessment and Water Use Licence Application
Registration and Comment Form**

KINDLY COMPLETE THIS FORM AND RETURN IT TO:



GREENBELT
PROJECTS

PO BOX 791, Umhlanga, KZN, 4320

Tel: 071 140 8350

admin@greenbeltprojects.co.za

Title	
First Name	
Surname	
Email	
Telephone	
Fax	
Organisation	
Capacity	
Physical Address	
Postal Address	
1. What is your main interest with regards to the proposed project?	
2. Do you have any issues or points of concern or support regarding the proposed project?	
3. Are there any additional stakeholders who you feel should be consulted with regards to the proposed project?	