

BACKGROUND INFORMATION DOCUMENT **AND INVITATION TO REGISTER**

A component of the Environmental Impact Assessment for the proposed development of Masibambisane Bulk Water Supply Scheme in Ward 3, 4, 5, 6, 9,10 and 11 of Maphumulo Local Municipality in Ilembe District Municipality.

NOVEMBER 2019

TABLE OF CONTENTS

1. PURPOSE OF THIS DOCUMENT
2. BACKGROUND INFORMATION
3. PROJECT SITE DESCRIPTION
4. DEVELOPMENT PROPOSAL
5. ENVIRONMENTAL AUTHORISATION PROCESS
6. KEY IMPACTS
7. INTERESTED AND AFFECTED PARTIES REGISTRATION

1. PURPOSE OF THIS DOCUMENT

Sikone Consulting Engineers (Pty) Ltd have been appointed by Ilembe District Municipality to conduct engineering services for the implementation of Masibambisane Bulk Water Supply Scheme. Magalela and Associates cc has been appointed to undertake the Environmental Impact Assessment and wetland studies for the project. The proposed Masibambisane Bulk Water Supply Scheme project is subject to the provisions of the National Environmental Management Act, 1998 (Act No. 108 of 1998). The purpose of this document is to provide background information on the proposed Masibambisane Bulk Water Supply Scheme in Ward 3, 4, 5, 6, 9, 10 and 11 of Maphumulo Local Municipality within Ilembe District Municipality. The basic information entails a description of the key characteristics of the biophysical and socio-economic environment through which the proposed Masibambisane Water Pipeline would pass. The description of the affected environment is based on relevant information contained in the applicable legislation and policies, scientific literature, and site visits. This document provides Interested and Affected Parties (I&APs) with a brief overview of the scope, nature and location of the proposed development as well the Basic Environmental Impact Assessment (EIA) process being undertaken. Additionally, the purpose of this document is to allow the Interested and Affected Parties (I&APs) an opportunity to register as stakeholders in the public participation process and make initial comments on the proposed development.

2. BACKGROUND INFORMATION

Ilembe District Municipality proposes the construction of the Masibambisane Bulk Water Supply Scheme. The areas that have been taken into consideration for the purpose of this report are Maphumulo Town, Nyambazane, Tshobo and Mngobeni, which constitutes the Masibambisane BWSS. According to StasSA Community Survey (2016) and Integrated Development Plan (IDP, 2017-2022) indicates that the number of households with access to water at an acceptable RDP level, i.e. water inside the dwelling is about 36% (served at the rate of 25l/cap/day within 200m walking distance). Therefore, the provision of water remains to be the biggest infrastructural challenge in the municipal area, noting 12635 people received water from streams, 10706 have no access with only 4323 households receiving water from a "formal" water scheme.

The proposed project will serve the primary aim of the Ilembe District Municipality to deliver basic water services to the community within its jurisdiction. Hence the communities will benefit from having safe portable water for consumption and the provision of water unlocks socio-economic development.

3. PROJECT DESCRIPTION

The project area is located within Ilembe District Municipality and falls under the Maphumulo Local Municipality. The Maphumulo Town was gazetted in September 2012 and it is now a formal town. The Wards that will benefit from this Project are Wards

3,4,5,6,9,10 and 11. The areas that have been taken into consideration are Maphumulo Town, Nyamazane, Tshobho and Mngobeni, which constitutes the Masibambisane BWSS. Currently the Masibambisane BWSS consists of undersized and aging infrastructure that will not be able to supply the entire Maphumulo area. It is therefore important to urgently upgrade, replace and extend the current infrastructure to meet the current and projected demand. It will also reduce the water backlogs. The proposed Masibambisane BWSS will be designed to supply up to 10 Ml/day (116 l/s) to include future growth.

The scheme will be implemented in a phased approach as far as practically possible to match the growth in water demands within the area of supply, as follows:-

- a) The construction of two (2) 1Ml Reservoirs - One at the existing Masibambisane command Reservoir and the second at the existing Kwanombokojwane reservoir.
- b) The construction of approximately 4,1 km in length 200 mm in diameter uPVC secondary bulk supply pipeline along the D1536 district road.
- c) The construction of approximately 3,1 km in length 200 mm in diameter uPVC secondary bulk supply pipeline along the L1341 local road
- d) The upgrading of approximately 4,5 km in length 200 mm in diameter uPVC secondary bulk supply pipeline spanning along the D1598 and D893 district road as well as P711 provincial road from existing Maphumulo Town Reservoir to existing KwaNyamazane Reservoir
- e) The upgrading of approximately 7,7 km in length 200 mm in diameter uPVC secondary bulk supply pipeline spanning along the P711 joining into P20-1 provincial road from existing KwaNyamazane Reservoir
- f) The upgrading of approximately 3,9 km in length 200 mm in diameter uPVC secondary bulk supply pipeline along P20-1 provincial road turning into D1536 district road from Kwalangeni Reservoir
- g) The upgrading of approximately 4 km in length 200 mm in diameter uPVC secondary bulk supply pipeline offshoot from D1538 district road from Kwalangeni Reservoir
- h) The upgrading of approximately 1 km in length 200 mm in diameter uPVC secondary bulk supply pipeline along the L1341 local road from Kwalangeni Reservoir starting at intersection of D1538 district road.
- i) The upgrading of approximately 2,2km in length 300 mm in diameter uPVC main bulk supply pipeline along the P20-1 provincial road from Kwalangeni Reservoir.
- j) The upgrading of approximately 2,1 km in length 200 mm in diameter uPVC gravity feed supply pipeline along the P20-1 provincial road from Kwalangeni Reservoir to Maphumulo Town Reservoir
- k) The upgrading of approximately 1,2 km in length 150 mm in diameter uPVC gravity feed supply pipeline from Masibambisane Reservoir to Maphumulo Hospital Reservoir
- l) The upgrading of approximately 4 km in length 300 mm in diameter uPVC main bulk supply pipeline along the P20-1 provincial road from Kwanombokojwane Reservoir to Masibambisane Reservoir
- m) The upgrading of approximately 4 km in length 300 mm in diameter uPVC gravity feed supply pipeline along the P20-1 provincial road from Kwanombokojwane Reservoir to Kwalangeni Reservoir
- n) The upgrading of approximately 1,8 km in length 200 mm in diameter uPVC main bulk supply pipeline along the D881 district road from Kwanombokojwane Reservoir to KwaDladla Reservoir

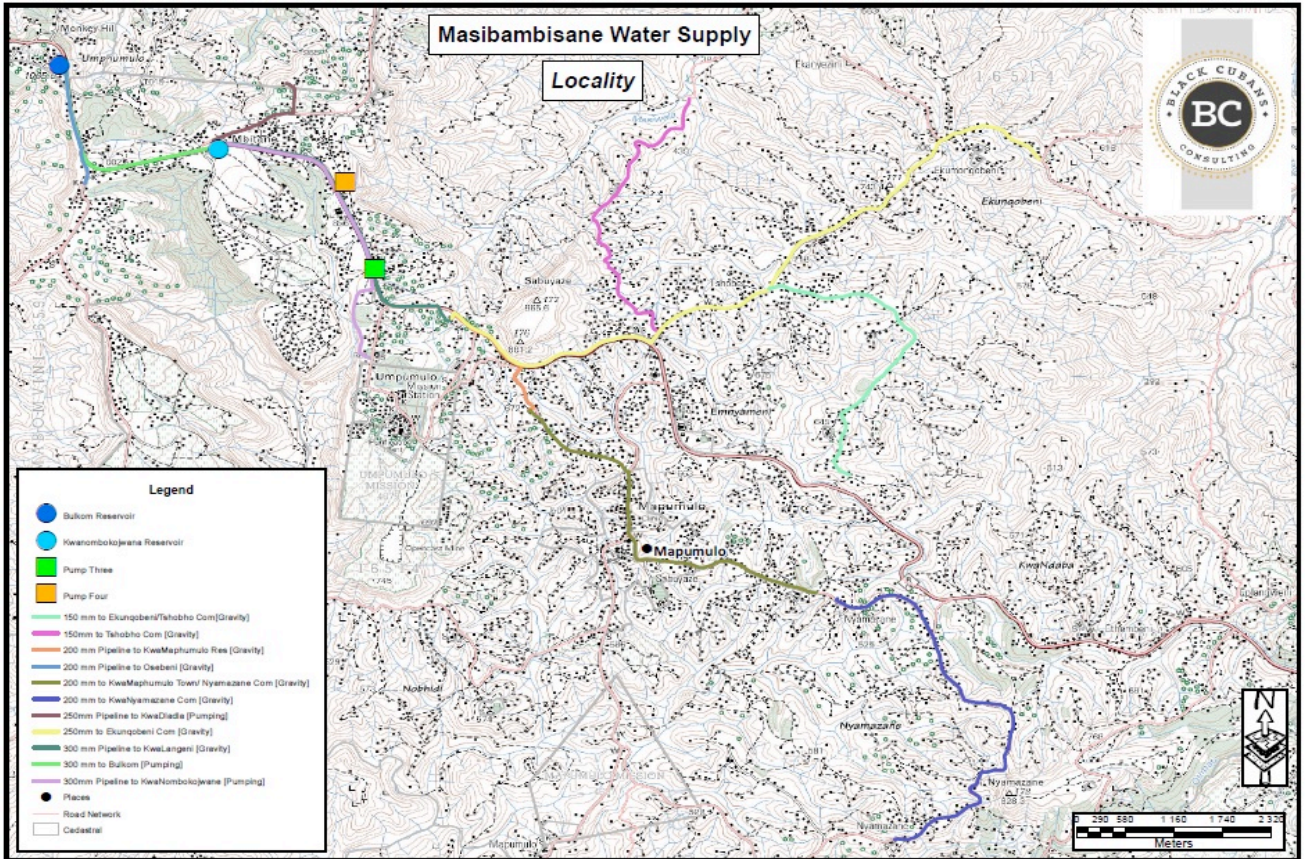
- o) The upgrading of approximately 2,8 km in length 250 mm in diameter uPVC main bulk supply pipeline along the P20-2 provincial road from Kwanombokojwane Reservoir to Bulkom Reservoir
- p) The upgrading of approximately 1.6 km in length 200 mm in diameter uPVC gravity feed supply pipeline along the P20-1 provincial road from Bulkom Reservoir to Ocheni_Osebeni Reservoir

4. SITE DESCRIPTION

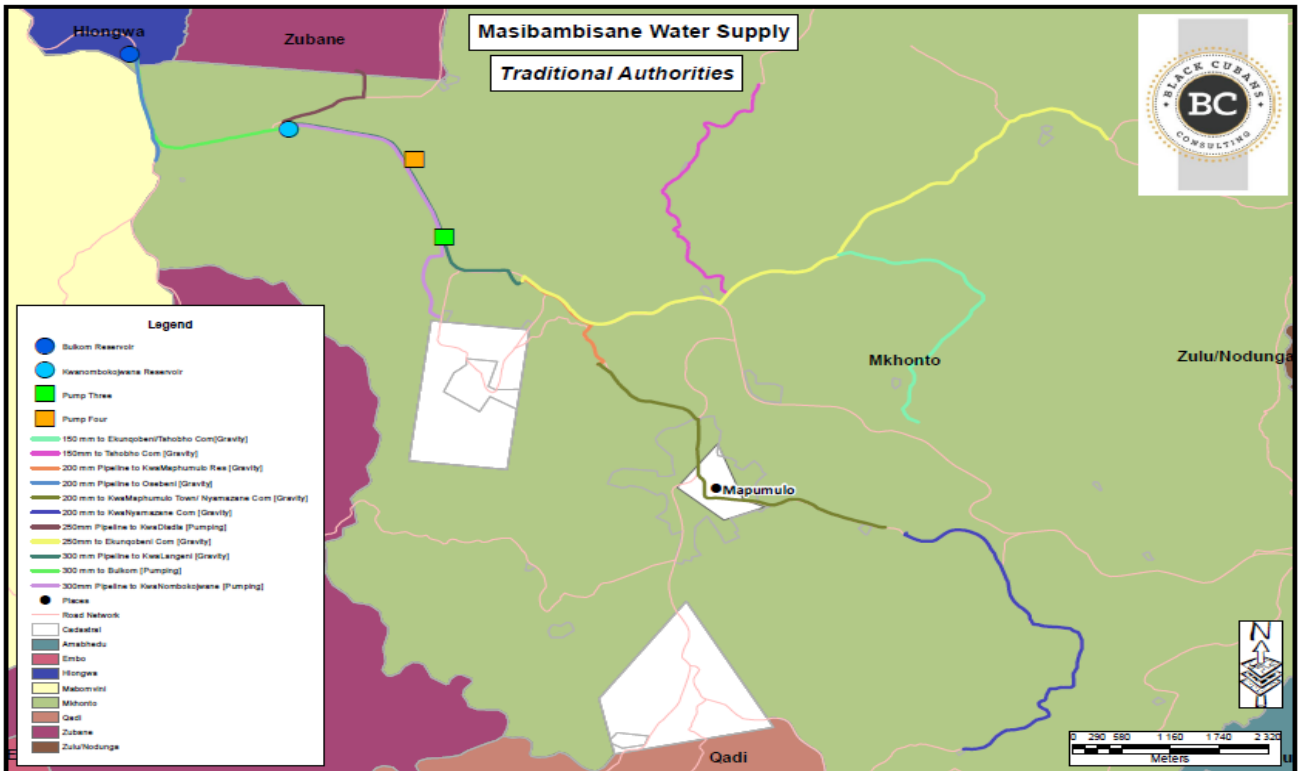
Location and Land Use

The project area is located within iLembe District Municipality and falls under the Maphumulo Local Municipality. The Maphumulo Town was gazetted in September 2012 and it is now a formal town. The Maphumulo Local Municipality comprises of mostly rural areas governed by Traditional Authorities. Tenure in the municipality is under the Ingonyama Trust and a very small percentage is directly under the control of the municipality. There are approximately 1,533 households in Masibambisane with about 12,264 people that stand to benefit from this project.

Figure 1& 2: Location of Proposed Development and Land Ownership



Source: Black Cubans Consulting (2018)



Source: Black Cubans Consulting (2018)

Table1: Site Coordinates

Area	Coordinates
Maphumulo Town	29 6' 27.866"S 5' 49.214E

Nyamazane	29 6' 44.417"S 31 6' 5.211E
Tshobho	29 7' 4.260"S 31 5' 39.173"E
Mnqobeni	29 7' 1.467"S 31 6' 42.873"E
	29 6' 14.763"S 31 0' 20.685"E
	29 6' 21.831"S 31 1' 47.507"E
	29 6' 48.839S 31 1' 21.962"E
	29 7' 11.937"S 31 0' 35.615"E
	29 8' 14.429"S 31 2' 20.271"E
	29 8' 39.908"S 31 2' 25.719"E
	29 9' 51.797"S 31 5' 0.788"E
	29 8' 44.999"S 31 1' 9.304E
	29 10' 14.541"S 31 0' 44.934"E

Table 2: Farm Names of propose Development

Farm Name	ERF	Portion
Hohoza	16514	0
Hlongwa	16595	0
Umvoti Location	4667	0
Mabomvini	16594	0
Umphumulo	4679	0
Umpamula	8308	0

At present, the site of the development is predominantly rural residential use with some subsistence farming and cultivated communal land.

Vegetation

The site contains the Moist Coast Hinterland Grassland, KwaZulu-Natal Sandstone Sourveld, KwaZulu-Natal Hinterland Thornveld and Eastern Valley Bushveld.

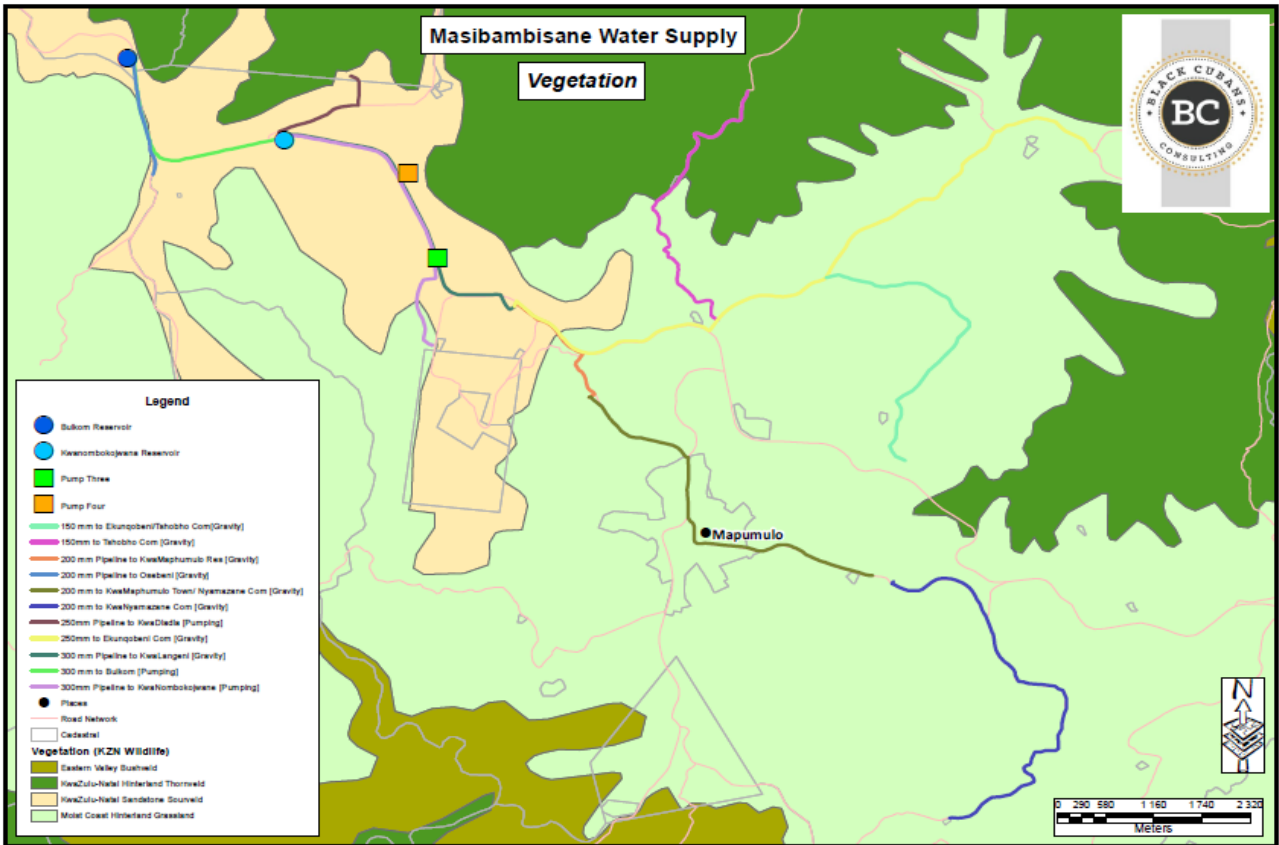
- Moist Coast Hinterland Grasslands is found in KwaZulu-Natal and Eastern Cape Provinces, generally occurring below Midlands Mistbelt Grassland in a rolling and hilly landscape. The vegetation consists of dense tall sour grassland dominated by unpalatable Ngongoni grass (*Aristida junciformis*), with this mono-dominance associated with low species diversity. In good condition, it is dominated *Themeda triandra* and *Tristachya leucothrix*. The conservation status of Moist Coast Hinterland Grassland is Endangered. It is 63.4 % transformed and only 0.2 % conserved in Vernon Crookes and Entumeni Nature Reserves. The conservation target is 25 %.

- KwaZulu-Natal Sandstone Sourveld is a short, specie-rich grassland with scattered low shrubs and geoxylic suffrutices. Proteaceae trees and shrubs (*Protea*, *Leucospermum*, *Faurea*) can be locally common. The dominating landscape features are flat (or rolling) plateau tops and steep slopes commonly forming "table-mountains". This vegetation type is classified as endangered. Only very small parts are statutorily conserved in Ngoye, Mbumbazi and Vernon Crookes Nature Reserves. About 50% has been transformed for cultivation, by urban sprawl and for road-building. Aliens include *Chromolaena odorata*, *Lantana camara*, *Melia azedarach* and *Solanum mauritianum*. (Mucina & Rutherford, 2006).
- KwaZulu-Natal Hinterland Thornveld consists of a series of several patches in the central and northern regions of KwaZulu-Natal, where it occurs in both dry valleys and moist upland. The landscape in which this vegetation type is found is hilly and undulating with broad valleys. It supports tall tussock grassland with occasional savannoid woodlands with scattered *Vachellia* (*Acacia*) *sieberiana* var *woodii* and, in small pockets, also with *V. (A.) karroo* and *V. (A.) nilotica*. The conservation status of KwaZulu-Natal Highland Thornveld is Least Threatened, with 37.3 % transformed to cultivation, urban sprawl and dams, but probably the greatest threat to this unit is bush encroachment. The conservation target is 23 % in KwaZulu-Natal, but only about 2 % is statutorily conserved in the province.
- Eastern Valley Bushveld also known as Valley Thicket is described by Mucina & Rutherford (2006) sited in Cook (2012) as being semi- deciduous savanna woodlands with pockets of thickets in a mosaic pattern, often succulent and dominated by *Euphorbia* and *Aloes*. It occurs in KwaZulu-Natal and Eastern Cape Provinces, in deeply incised valleys of rivers including the lower reaches of the Thukela, Mvoti, Mgeni, Mlazi, Mkhomazi, Mzimkulu, Mzimkulwana, Mtamvuna, Mtentu, Msikaba, Mzimvubu (and its several tributaries), Mthatha, Mbhashe, Shixini, Qhorha and Great Kei.

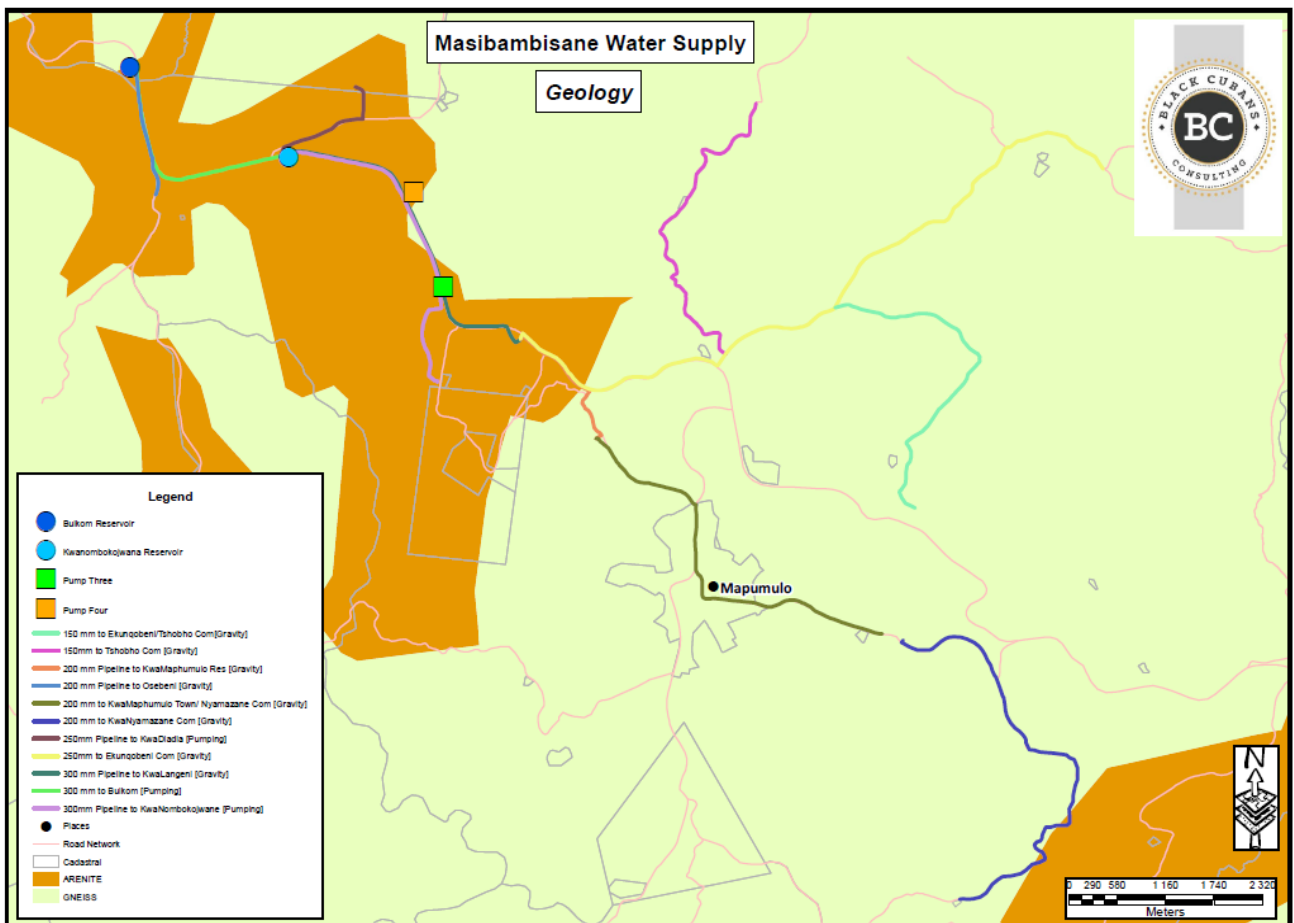
Topography and Geology

The topography of the site is largely gentle with a steeper slope on the southern edge of the development area. Geology underlying the site area is arenite as well as gneiss. Arenite is a sedimentary clastic rock with sand grain between 0.0625 mm and 2 mm size. Gneiss is a rock formed during regional metamorphism. It is generally a coarse-grained granular textured rock which can develop from a wide variety of igneous and sedimentary material.

Figure 3 & 4: Site Vegetation & Site Geology



Source: Black Cubans Consulting (2018)



Source: Black Cubans Consulting (2018)

5. DEVELOPMENT PROPOSAL

The proposed development is primarily that of the construction of a bulk water pipeline which will include water tanks/reservoirs and other related infrastructure.

The following informants were considered upon formulation of the development proposal: aerial photographs; topographical, hydrological and geotechnical opportunities and constraints (slope); existing infrastructure; and adjacent development.

6. ENVIRONMENTAL AUTHORISATION PROCESS

In terms of the National Environmental Management Act, 1998 (No.107 of 1998) [NEMA] and associated EIA Regulations published on 07 April 2017, an Environmental Authorisation must be obtained from the relevant authority which is the KZN Department of Economic Development, Tourism and Environmental Affairs (EDTEA) prior to the commencement of certain listed activities that may result in potential negative impacts on the environment. The proposed project involves, inter alia, the following listed activity, as per Government Notice No. 983 of listing notice 3 of NEMA. The activity to be undertaken in terms of the 983 Notice is:

Relevant Notice	Activity No.	Description
No. 327, 07 April 2017	9	The development of facilities or infrastructure exceeding 1000m in length for the bulk transportation of water, sewage to storm water (i) with an internal diameter of 0.36m or more; or (ii) with a peak throughput of 120 litres per second or more; excluding where – (a) such infrastructure is for bulk transportation of water or storm water drainage inside a road reserve; or (b) where such development will occur within an urban area. Pipelines will be 150mm, 250mm and maximum 300mm and therefore this Activity is not triggered.
No. 327, 07 April 2017	12	The development of infrastructure or structures with a physical footprint of 100 square meters or more; where such development occurs within a watercourse. The largest reservoir (2ML) is 140 square meters.
No. 327, 07 April 2017	13	The development of facilities or infrastructure for the off-stream storage of water, including dams and reservoirs, with a combined capacity of 50 000 cubic meters or more. The combined storage for reservoirs is 4 600 cu.m and therefore this Activity is not triggered.
No. 327, 07 April 2017	19	The infilling or depositing of any material of more than 5 cubic meters into, or the dredging, excavation, removal or moving of soil, sand, shells, shell grit, pebbles or rock of more than 5 cubic metres from a watercourse. There are 14 water crossings, of which 3 are proposed to be on the bridges side, and 11 are using pipe plinths. Plinths will involve removing ½ Cubic meter of soil. There are approximately 12 – 16 plinths per crossing meaning 88 cu.m of soils will be moved.
No. 327, 07 April 2017	22	The decommissioning of any activity... The decommissioning is not anticipated unless communities are moved to a different area. Further the activity is not in terms of PMRDA or mining related. The Activity is not triggered.

No.327, 07 April 2017	31	The decommissioning of existing facilities, structures or infrastructure. The old existing pipelines are on different route and are not the subject of this Project. The Activity is not triggered.
No.327, 07 April 2017	48	The expansion of infrastructure or structures where the physical footprint is expanded by 100 square meters or more; Existing reservoirs may be demolished and replaced with larger reservoirs subject to a Civil Engineering Study. Replacement structures have a maximum 140 sq.m footprint.
No. 324, 07 April 2017	12	The clearance of an area of 300square meters or more of indigenous vegetation except where such clearance of indigenous vegetation is required for maintenance purposes undertaken in accordance with a maintenance management plan. 45 800m (45,8km) of the pipeline will be installed and 5m servitude is reserved for the pipeline. Therefore 229 000 sqm of vegetation will be affected with 24% of it being indigenous.

Legal Requirements

National Water Act (Act No. 36 of 1998)

This development triggers activity 9 and 19 of Listing Notice 19 of the EIA Regulations and Black Cubans Consulting will conduct a Scoping and Environmental Impact Assessment (S/EIA) process as per The National Environmental Management Act (NEMA) EIA Regulations, 2017. A Water Use Authorisation is required for the proposed development of Masibambisane Bulk Water pipeline. A Water Use Authorisation is a legal process governed by the Department of Water & Sanitation (DWS) requiring the authorisation of all water uses defined in section 21 of the National Water Act (Act No 36 of 1998) [NWA]. The above-mentioned project requires Section 21 (a), (b) and (c) water uses. The NWA defines a Section 21 (c) and (i)water uses as: Section 21 (a)- taking water from a water resource; Section 21 (b)- Storing water and Section 21 (c) – Impeding and diverting the flow of water in a watercourse.

National Forest Act

In terms of section 7(1) of the NFA, no person may:

- (a) Cut, disturb, damage or destroy any indigenous tree in a natural forest, except in terms of:
 - (i) a license issued under the NFA: or
 - (ii) an exemption from the provisions of this subsection published by the Minister in the Gazette on the advice of the Council.

Therefore, with the prevalence of KwaZulu-Natal Sandstone Sourveld vegetation within the site of the development, a licence must be obtained. Also, prior to disturbing any of these trees on site, it must be ensured that a licence is obtained.

7. KEY IMPACTS

Potential Biophysical Issues:

- a. Possible topsoil removal during construction
- b. Some of the natural vegetation may be disturbed during construction of the pipeline
- c. Disturbance of stream flow direction, surface water sources or discharge areas
- d. Atmospheric environment: Air quality can be affected by dust during construction and by air contaminants emitted by the combustion of fossil fuels used for construction equipment and pumping stations.
- e. Geology and terrain: Possible alterations of geology and terrain due to cut and fill to accommodate pipeline.

Potential Construction related impacts:



- a. Noise will be increased relative to background noise by construction activities and the operation of pumping stations.
- b. Visual & Aesthetic due to removal, infilling and depositing of material.
- c. Impacts on the social environment: the construction and operation of the pipeline and water tower may result in some local job opportunities, skills transfer and capacity building, thus increasing job creation potential.
- d. Vibrations.

8. INTERESTED AND AFFECTED PARTIES REGISTRATION

The following have been identified as interested and affected parties:

- a. Masibambisane Community (Wards Ward 3, 4, 5, 6, 9,10 and 11 of Maphumulo Local Municipality
- b. Maphumulo Local Municipality
- c. Ilembe District Municipality
- d. Department of Water Affairs and Sanitation
- e. Department of Agriculture and Rural Development
- f. Department of Transport
- g. Amafa AkwaZulu-Natal

Should you wish to register as an Interested and Affected Party, or simply to receive any future reports and correspondence, please do not hesitate to contact the Environmental Consultants, Magalela and Associates cc or Ilembe District Municipality at the contact details below.

<p>Consultants: Black Cubans Consulting (PTY) Ltd</p> <p>Dan Mkhwanazi 1st Floor, Liberty Building 21 Aurora Drive Umhlanga, 4301 Tel: 031 535 7094 / 0741414 157 E-mail: info@magalelas.co.za</p> 	<p>Developer: Ilembe District Municipality</p> <p>Mr G Khumalo Acting Municipal Manager P.O. Box 1788 KwaDukuza Durban, KwaZulu-Natal, 4450 Tel: 032 437 9300, Fax:032 437 9585 http://www.ilembe.gov.za</p> 
---	---