BACKGROUND INFORMATION DOCUMENT

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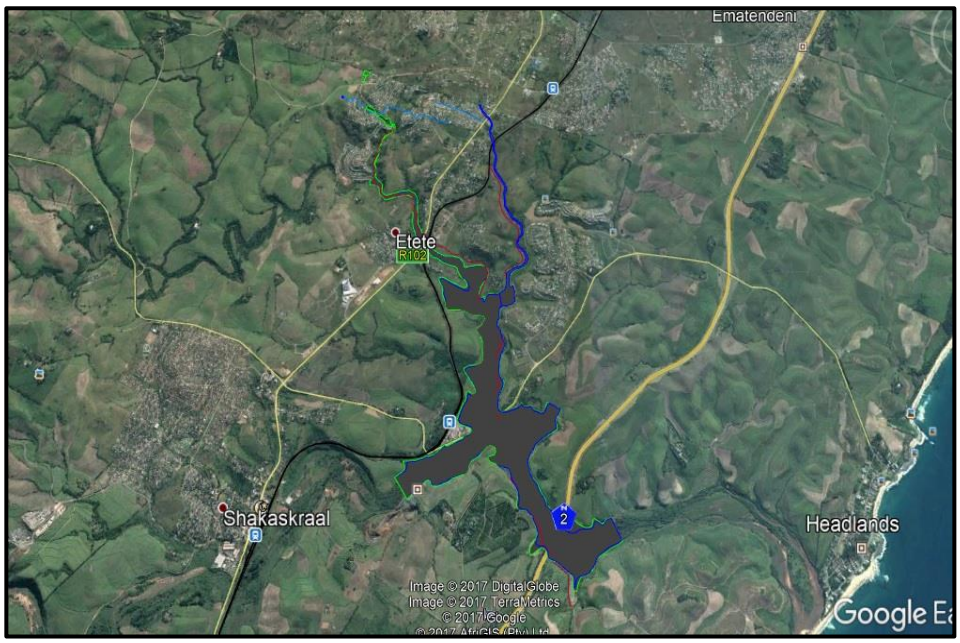
Proposed Construction of the Southern Regional Bulk Water and Sanitation Scheme (SRBWSS) in iLembe District Municipality.

Southern Regional Bulk Water and Sanitation Scheme



06 December 2017

triplo4 sustainable solutions

DOCUMENT DESCRIPTION

Client / Applicant: Escongweni Engineers (on behalf of iLembe District Municipality)

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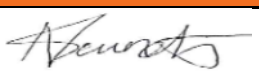
Nerita Sewnath Junior Environmental Consultant	06 December 2017 / Ballito	
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INTRODUCTION

The purpose of this Background Information Document (BID) is to provide information to Interested and Affected Parties (I&APs) regarding the proposed Southern Regional Bulk Water and Sanitation Scheme (SRBWSS) in iLembe District Municipality, KZN.

Triplo4 Sustainable Solutions (hereafter referred to as Triplo4) was appointed as Independent Environmental Assessment Practitioner by Escongweni Engineers (representing iLembe District Municipality) for the Basic Assessment for the Proposed SRBWSS in iLembe District Municipality.

PROJECT BACKGROUND

The proposed project involves the construction of potable and sewage bulk pipelines and associated infrastructure. This comprises of approximately 1.6 km bulk outfall water pipeline as well as an 8.5 km outfall bulk sewer pipeline, 3 ML concrete reservoirs at Etete and Honolulu and a new water and sewer pumping station. The aim of the project is to upgrade existing bulk water and sanitation services of Nkobongo, Shayamoya, Shaka's Head and Etete townships within iLembe region.

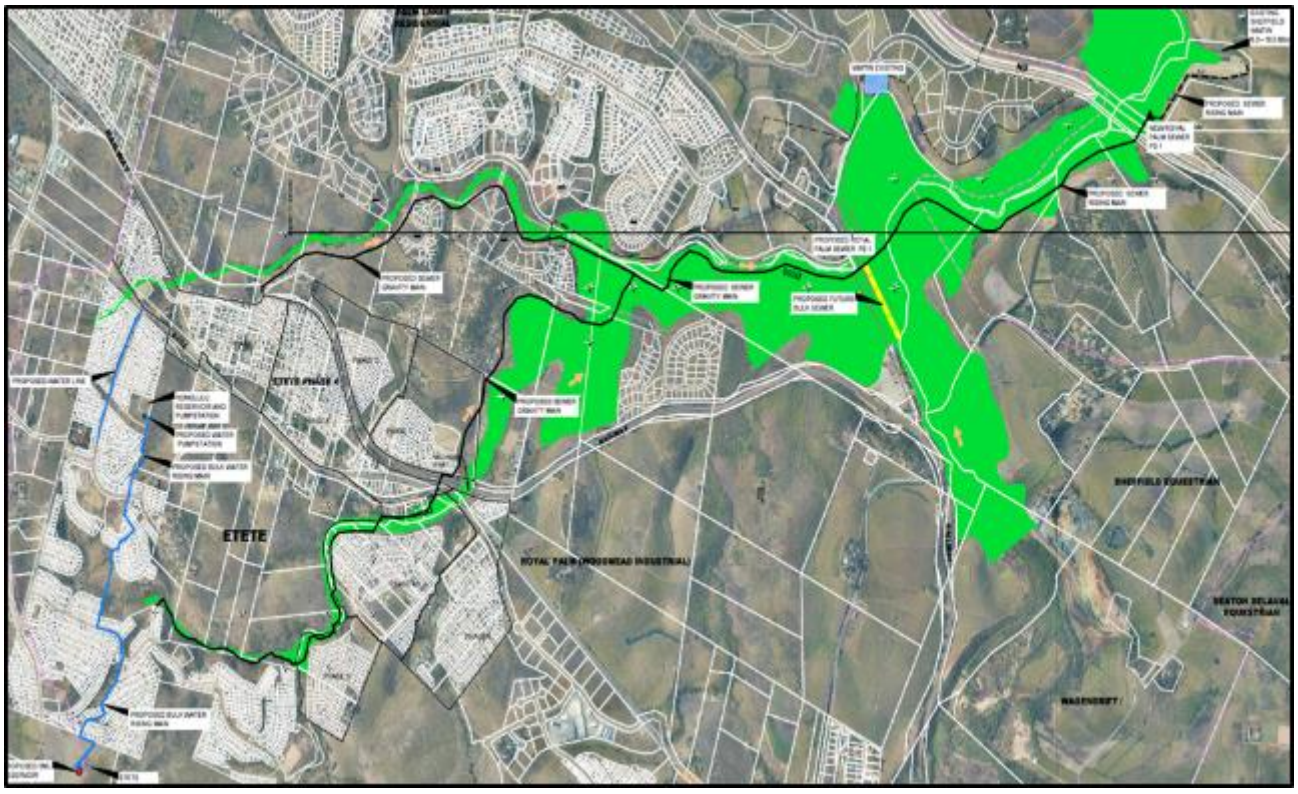


Figure 1: Proposed Potable and Sewer Bulk Pipeline, Infrastructure and Floodline Layout

LOCATION OF PROPOSED PROJECT

The site is located approx. 9,5km south-west of the town Stanger - from the settlement/township of Etete and Honolulu towards the existing Sheffield Waste Water Treatment Plant in the south in Northern KwaZulu-Natal.

Co-ordinates of proposed Southern Regional Bulk Water and Sanitation Scheme.

Bulk Water Scheme			
Starting Point			
Latitude /Longitude	**Degrees**	**Minutes**	**Seconds**
South	29	24	42.61
East	31	14	25.54
End Point			
Latitude /Longitude	**Degrees**	**Minutes**	**Seconds**
South	29	24	42.61
East	31	14	25.54

Sanitation Scheme			
Starting Point			
Latitude /Longitude	**Degrees**	**Minutes**	**Seconds**
South	29	24	45.03
East	31	13	59.34
End Points			
Latitude /Longitude	**Degrees**	**Minutes**	**Seconds**
South	29	25	00.63
East	31	14	42.34
South	29	27	27.46
East	31	15	13.60

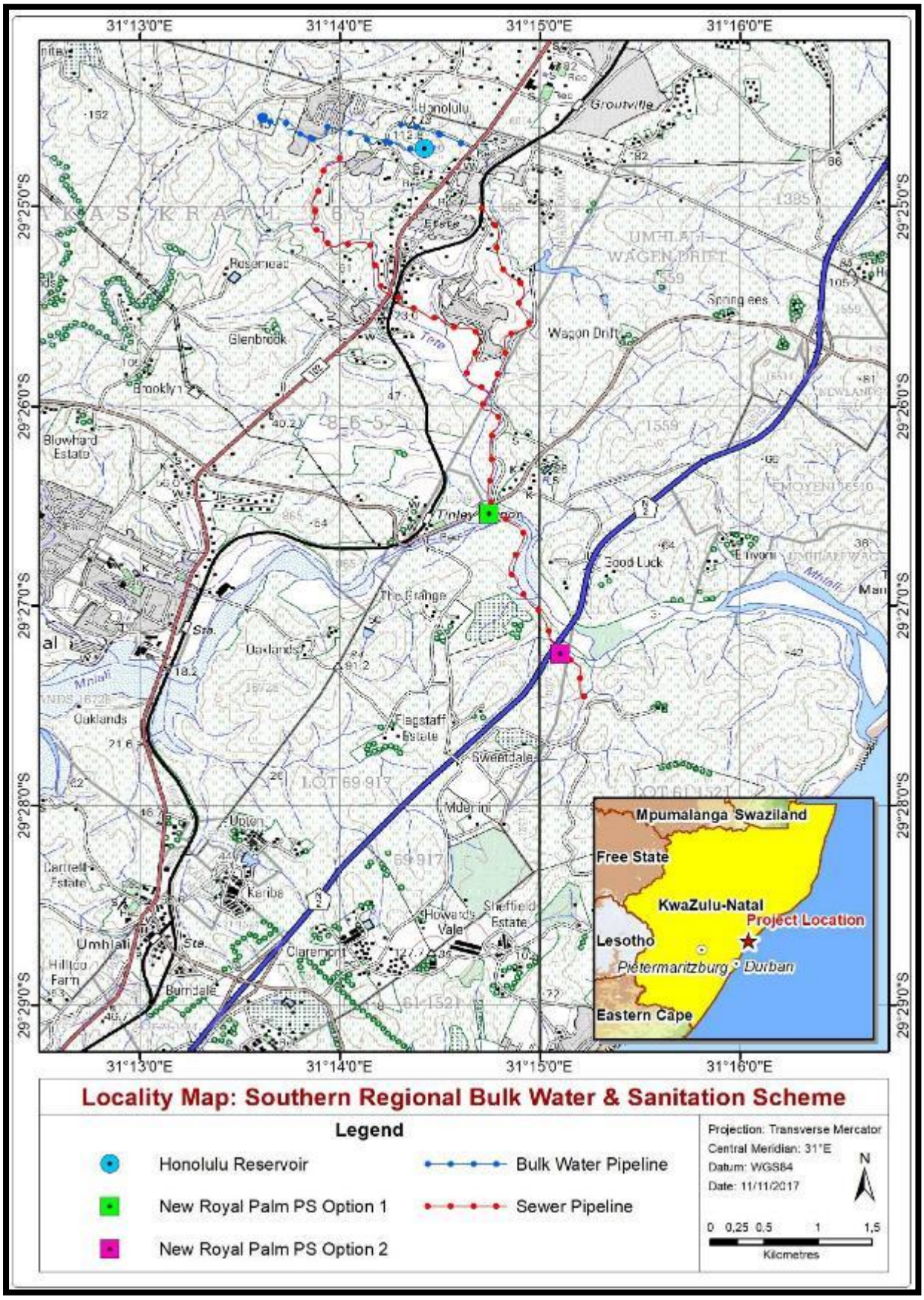


Figure 2: Locality Map showing the Proposed SRBWSS site.

PROJECT DETAIL

The proposed development will comprise the construction of potable and sewage bulk pipelines and associated infrastructure, which will include:

Phase 1a

- Construction of a 1.6km long clear water rising main from the Honolulu Reservoir to the Etete Reservoir;
- Replacement of an existing water reticulation pipeline (600m in length);
- Construction of a Clear Water Pumpstation and
- Construction of a 3ML Concrete Reservoir at Etete.

Phase 1b

- Construction of an 8.5km long sewer gravity trunk main;
- Construction of a 0.6km long sewer rising main and
- Construction of a Sewer Pumpstation.

Please note that certain project scope activities may not require environmental authorisation. The applicability of these activities will be confirmed upon further investigation during the basic assessment process.

PROJECT MOTIVATION

Southern Regional Bulk Water and Sanitation Scheme (SRBWSS)

There is a growing need and urgency to provide adequate potable water and sanitation to many communities that do not have access to the life sustaining resource particularly in rural areas. The aim of the project is to upgrade existing bulk water and sanitation services of Nkobongo, Shayamoya, Shaka's Head and Etete townships within iLembe region.

The construction of the Southern Sanitation Regional Bulk meets the objectives of addressing the challenges of inadequate water and sanitation service provision. The project also brings about socio-economic benefits as it promotes healthier and uplifted communities as the number of people that have access to clean water and sanitation will increase and the risk associated with use of untreated water will be reduced significantly.

SPECIALIST EVALUATION

An Ecological, Wetland Delineation and Functionality Assessment and Heritage Impact Assessment have been conducted by the Specialists and findings and recommendations have been summarised below.

Ecological Assessment

An Ecological Assessment Report was completed by Mr. Clayton Cook in November 2017.

The majority of the Southern Regional Water & Sanitation project and associated outfall bulk water and sewer pipelines are situated within fallow sugarcane lands dominated by moist secondary succession *Imperata cylindrica-Aristida junciformis* grasslands and on the edges of current sugarcane plantations and informal access roads. The bulk sewer pipeline bisects the moist coastal woodland in the valley

above the non-perennial drainage line, a large section of transformed and degraded floodplain wetlands, the Tete River and The Umhlali River.

The bulk outfall water pipeline is situated within transformed formal and informal settlements and road reserves. The road reserve is dominated by alien invasive and pioneer and weedy plant species. The pipeline servitude bisects completely transformed vegetation units and habitats with little or no indigenous vegetation present. The water pipeline bisects three heavily degraded non-perennial drainage lines. The pipeline will not result in the destruction of any large indigenous riparian tree species or patches of hygrophilous (wetland) vegetation.

The sewer pipeline bisects natural riparian areas as well as a 'protected' Swamp Fig (*Ficus trichopoda*). The pipeline bisects the road reserves of several informal access roads adjacent to the lower-lying drainage lines. The bulk sewer pipeline bisects the moist coastal woodland in the valley above the non-perennial drainage line, a large section of transformed and degraded floodplain wetlands, the Etete River and The Umhlali River.

Two types of protected tree species were recorded growing naturally within the moist closed woodland riparian zones along the perennial rivers namely several Swamp Figs (*Ficus trichopoda*) and Powder-Puff Trees (*Barringtonia racemosa*). The proposed bulk outfall sewer alignment bisects three Swamp Figs (*Ficus trichopoda*) as well as being within 20 m of several Powder-Puff Trees (*Barringtonia racemosa*). The Department of Agriculture, Forestry and Fisheries (DAFF) will have to be approached to obtain the required permits for the removal of any protected tree species. A few planted or naturalized Raphia Palms (Raphia australis) were observed around the adjacent artificially created dams to the south of the sewer alignment.

No sensitive or endangered mammals were recorded within the study area. It is highly unlikely that the proposed water and sewer pipeline alignments, new reservoir and pumping station sites constitutes significant habitat for any threatened mammal species.

Wetland Delineation and Functionality Assessment

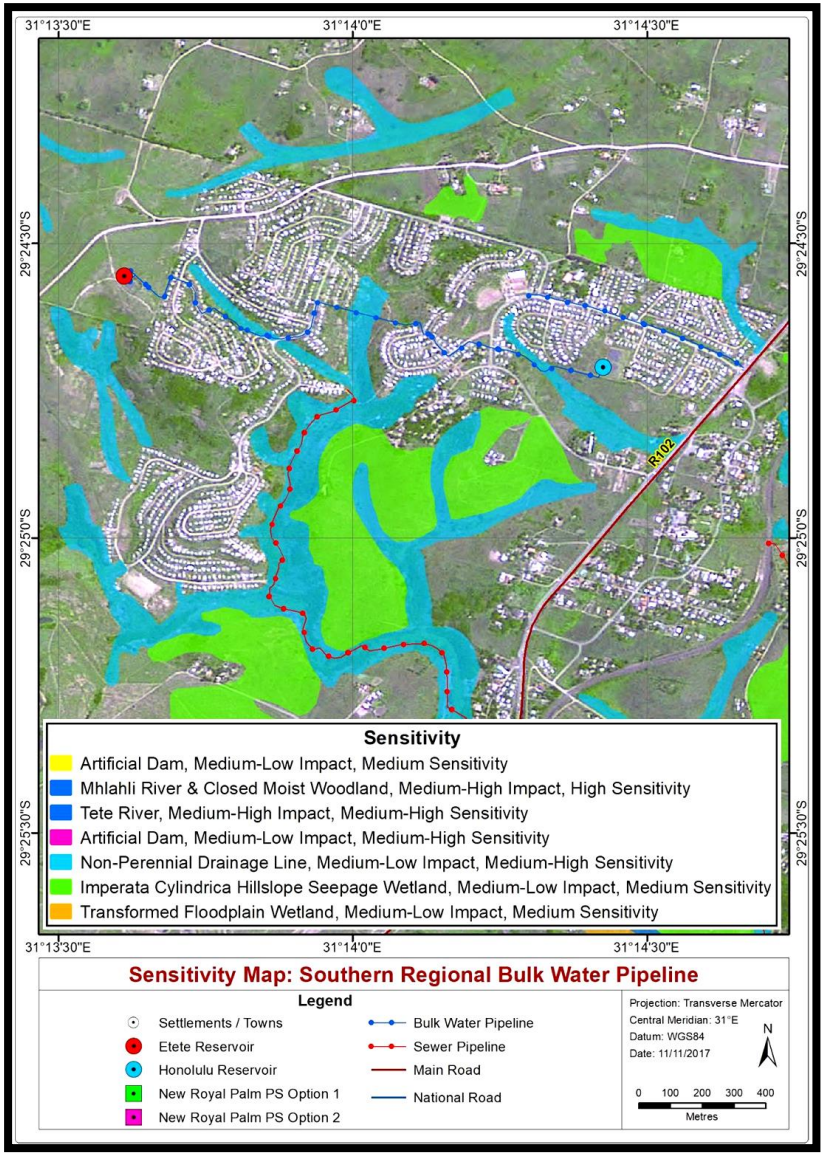
A Wetland Delineation and Functionality Assessment was completed by Mr. Clayton Cook in December 2017.

The functions of wetland ecosystems have been severely compromised and have lost the natural connectivity due to current and historic agricultural practices. Thus the transformed hillslope seepage wetlands surrounding the pipeline alignment have extremely limited hydrological functioning as the water is directed into artificially created drainage lines. The majority of the hillslope seepage wetland surrounding the site is completely transformed and the natural hydrological patterns totally disrupted. Due to the nature of the transformation, there is little or no chance that these areas will be able to be returned to a natural state, and would likely remain permanently modified.

The proposed water pipeline bisects the completely transformed (old vegetable crops) sections of 3 degraded non-perennial drainage lines. The pipeline will not result in the destruction of any indigenous hygrophilous (wetland) or riparian vegetation.

The proposed sewer pipeline bisects the moist closed woodland as well as riparian zones of the non-perennial and perennial drainage lines. Certain sections are transformed and colonised by woody alien

invasive vegetation whilst others display a more natural species composition (*Syzygium cordatum, Bridelia micrantha, Ficus sur, Trichilia dregeana, Erythrina lysistemon, Vachellia robusta, Vachellia nilotica*). The sewer-pipeline bisects a large protected Swamp Fig (*Ficus trichopoda*) above the confluence of the Tete River and the Umhlali River. An aquatic resource was delineated as a perennial drainage line or the Tete River which the proposed bulk water pipeline alignment bisects four times for approximately 62m-20m. The pipeline alignment runs within the degraded and alien invaded margins of the closed coastal woodland riparian zone for approximately 1.1 km.



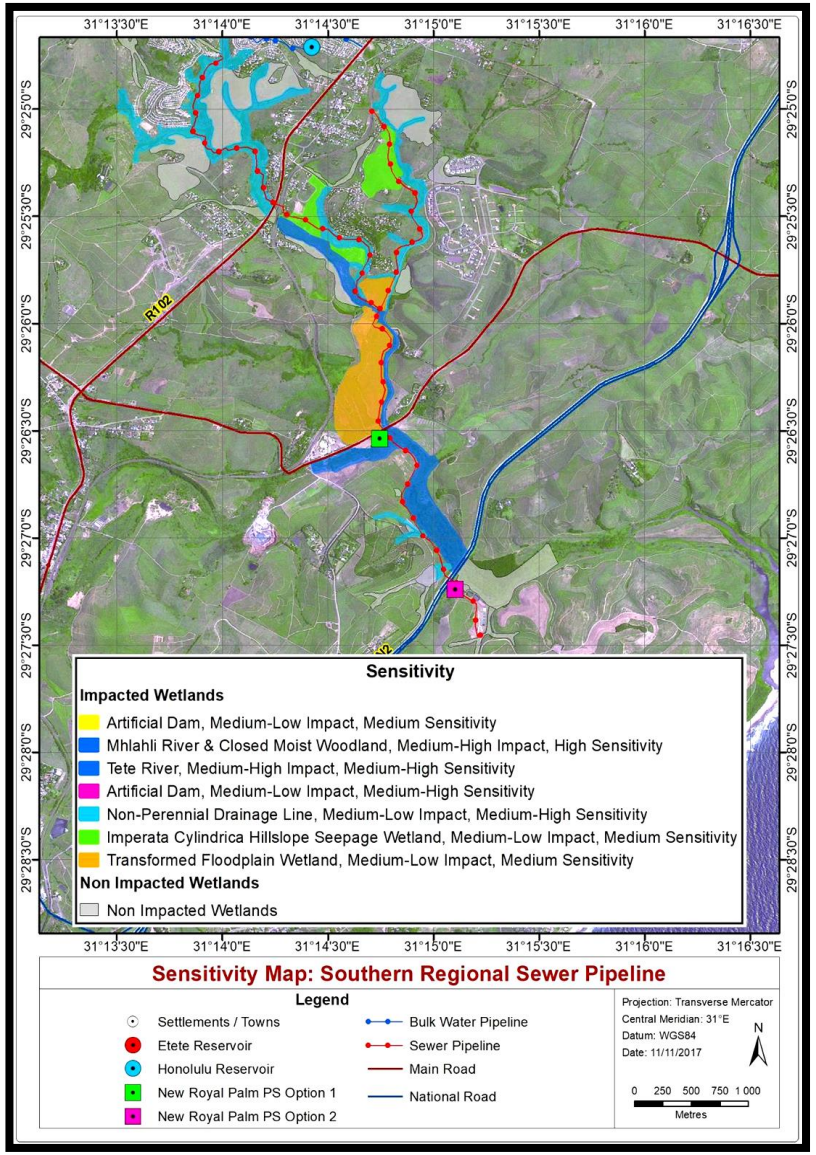


Figure 4: Sensitivity Maps for the Southern Regional Bulk Water and Sanitation Scheme.

Heritage Assessment

A Heritage Impact Assessment was conducted Active Heritage cc in November 2017.

No heritage sites or features were identified along the proposed SRBWSS route. The area is also not part of any known cultural landscape. According to the specialists there is no archaeological reason why the proposed development may not proceed as planned.

Geotechnical Assessment

A geotechnical investigation was conducted by Syncline Geotechnical Engineering (Pty) Ltd.

The proposed sites for the reservoir and pumpstations are considered to be stable and suitable for development provided that the specialist recommendations are adhered to.

The pipeline route is generally stable and suitable for development provided that the recommendations specified in the Geotechnical report are adhered to. It is, however, important to consider that the sandy fill and alluvial soils occurring on the site are highly collapsible and considered susceptible to erosion by stormwater.

ENVIRONMENTAL PROCESSES

Relevant Environmental Legislation

This development triggers the requirement for a Basic Assessment as per The National Environmental Management Act (NEMA). The below mentioned environmental activities are potentially triggered by the proposed development therefore requiring an Environmental Authorisation from KZN EDTEA:

LISTED ACTIVITIES	
Listing Notice 1 (GNR 327, 2017)	
Activity No.	**Listed Activity Description and Applicability**
Activity 10	The development and related operation of infrastructure exceeding 1 000 metres in length for the bulk transportation of sewage, effluent, process water, waste water with an internal diameter of 0,36 metres or more; or with a peak throughput of 120 litres per second or more. **The length of the Sewer Gravity Main pipeline is 8 500km.** **The internal diameter of portions of the Sewer Gravity Main pipeline is 0,384m, 0,480m, 0,585m and 0,788m.**
Activity 12	The development of infrastructure or structures with a physical footprint of 100 square metres where such development occurs within a watercourse and if no development setback exists, within 32 metres of a watercourse, measured from the edge of a watercourse.

	The proposed pipeline bisects several watercourse crossings. The location of these crossings will be further discussed in the Basic Assessment Report.
Activity 19	The infilling or depositing of any material of more than 10 cubic metres into, or the dredging, excavation, removal or moving of soil, sand, shells, shell grit, pebbles or rock of more than 10 cubic metres from a watercourse. **It is anticipated that more than 10 cubic meters (approximately 300m^3 overall) of soil, sand or rock will be infilled or deposited or excavated or moved during the construction of the pipeline from several watercourse crossings.**

Please note that certain project scope activities may not require environmental authorisation. The applicability of these activities will be confirmed upon further investigation during the basic assessment process.

A water use license application is required for the proposed pipeline and associated infrastructure. A water use license (WUL) is a legal process governed by 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 (c) and (i) water uses. The NWA defines a Section 21 (c) and (i) water uses as: Section 21 (c) – Impeding and diverting the flow of water in a watercourse, Section 21 (i) – Altering the bed, bank, course or characteristics of a watercourse. The WULA process is currently being undertaken by Triplo4 Sustainable Solutions (Pty) Ltd.

BASIC ASSESSMENT PROCESS

The basic assessment process being followed comprises of the following:

- Public participation Process:
    - Submission of a Background Information Document (this document) to identified stakeholders **(06 December 2017)**;
    - An advertisement in the local newspaper **(The Stanger Weekly- 06 December 2017)**;
    - Placement of a site notification at the site notifying I&AP's of the proposed activity and inviting them to register; and;
    - Relevant I&AP's consultation to address issues and concerns raised;
- Submission of an Application for Authorisation to EDTEA;
- Compilation of the Basic Assessment Report for I&AP's review and comments, which will be available for review and comment at Velani Community Hall for a period of 30 days from **15 January – 13 February 2018**
- Submission of a Final Basic Assessment Report and details of I&AP consultation to the EDTEA, for a decision;
- Communication to I&AP's regarding the Environmental Authorisation.

PUBLIC PARTICIPATION PROCESS

The public participation process and time frames are summarized as follows:

Announcing the opportunity to participate and register, 06 December 2017 – 12 January 2018

- Distribution of the Background Information Document to all identified stakeholders to announce the project and inviting stakeholders to register as an Interested and Affected Party (I&AP) and participate in the public participation process;
- Posting of the site notice at the site;
- Advertisement in the "Stanger Weekly".

Obtaining initial comment,

- Providing this BID and comment sheets to stakeholders; and
- Capturing all comments in a Comment and Response Report / Issues Trial.

Basic Assessment Report, 15 January 2018 to 13 February 2018

- Availability of the Basic Assessment report at Velani Community Hall in Etete and Triplo4 office (address: Suite 5, The Circle; Douglas Crowe Drive, Ballito) and Triplo4 website (www.triplo4.com), which will contain a full project description, alternatives considered, and relevant information.
- Capturing all comments in a Comment and Response Report / Issues Trial.

In terms of the NEMA EIA Regulations 2014 (as amended) you are invited to formally register as an I&AP. Please note that in terms of Regulation 56 (c), I&AP's need to disclose any direct business, financial, personal or other interest which they may have in the approval or refusal of the application. **Please register by 12 January 2018** by completing the enclosed registration and comment sheet and please declare the interest with regard to the project with your comments.

Your contributions are important

You can get involved in the process:

1. By responding (by phone, fax or e-mail) to our invitation for your involvement in the process;

2. By completing the attached comment form and e-mailing, posting or faxing it to Triplo 4 Sustainable Solutions;

3. In writing contacting or telephoning consultants if you have a query, comment or require further project information; and

4. By reviewing and commenting on the Basic Assessment Report within the allowed 30-day review period.

In terms of the NEMA EIA Regulations 2014 (as amended) you are invited to formally register as an I&AP.

Please note that in terms of Regulation 56 (c), I&AP's need to disclose any direct business, financial, personal or other interest which they may have in the approval or refusal of the application.

Please register **12 January 2018** by completing the enclosed registration and comment sheet and please declare the interest with regard to the project with your comments.

REGISTRATION FORM:
Proposed Southern Regional Bulk Water and Sanitation Scheme, iLembe District Municipality, KZN

ATTENTION: MELISSA PADAYACHEE/ NERITA SEWNATH ***OFFICE NO: 032 946 3213***
E-MAIL: melissa@triplo4.com / nerita@triplo4.com ***FAX: 032 946 0826***

Title (Mr/Mrs/Ms)		**Phone**	
Name		**Fax**	
Organisation / Interes		**E-Mail**	
Signature			

Please tick the appropriate circle and confirm your contact details above:
Registration

◯	**I would like to register as an interested and affected party for the ba process for this project**
◯	**Non stakeholder: i would like you to take me off your distribution sheet for the proposed development. I would not like to receive any further information regarding this process.**

OTHER
If you know of any other individual or organisation that would be interested in registering as an interested and affected party please provide their contact details:

Title (Mr/Mrs/Ms)		**Phone**	
Name		**Fax**	
Organisation / Interest		**E-Mail**	
Signature			

I have the following queries/comments: