



Emvelo Quality and Environmental consultant (PTY) Ltd

38 Jacaranda Street, Arboretum, Richards Bay, 3900.

P.O. Box 101672, Meerensee, 3901

Tel: 035 789 0632 1 8760, Cell: (078) 2849 332 Fax: 086 577 5220,

BACKGROUND INFORMATION

The proposed Construction of Hlabisa Bulk Sewer Pipeline and Wastewater Treatment Works Upgrades, within Big 5 Hlabisa Local Municipality, uMkhanyakude District, KZN

14 OCTOBER 2022

Prepared By:

**Emvelo Quality and Environmental Consultant
(PTY) Ltd**

Prepared For:

DLV Project Managers and Engineers



On behalf of:

uMkhanyakude District Municipality



INTRODUCTION/BACKGROUND

Emvelo Quality and Environmental Consultant (PTY) Ltd has been appointed by DLV Project Managers and Engineers (Pty) Ltd (the Project Principal Agent), on behalf of uMkhanyakude District Municipality (the Applicant), as the independent Environmental Assessment Practitioner (EAP), to facilitate the Basic Assessment Process required in terms of the National Environmental Management Act ,1998 (Act. No. 107 of 1998) (NEMA) for this application.

uMkhanyakude District Municipality (UDM) is the delegated Water and Sanitation Service Authority (WSSA) for all municipalities within the district, which include the Big 5 Hlabisa Local Municipality. The UDM has identified various areas and settlements, within the district, which require sanitation upgrades to a full water-borne sanitation system. Therefore, the district proposes to upgrade the Hlabisa Town sanitation system.

The proposed construction of Hlabisa bulk sewer pipeline and WWTW upgrades will facilitated the formalization of existing settlement and future housing development, as the implementation of Hlabisa Town sanitation system will provide a formalised water borne sanitation for settlement and businesses. In addition, the construction of bulk sewer and reticulation will see the

connection of businesses, schools and households which are currently serviced by a household's septic tanks. Thereby, upgrading to a full waterborne sanitation system that will be connected to this sewer main lines and WWTW.

It is also important to note that the safe disposal of human excreta and greywater is vitally important in the control of infectious and other communicable diseases and the design and construction of appropriate sanitation systems is of paramount importance in contributing to the safe disposal of human excreta (Water Research Commission, 2011).

Apart from improved waterborne sanitation, one of the deliverables for bulk sewer infrastructure projects are jobs creation and stimulation of the local economy. Therefore, the inclusion of local labour during the construction period will create the much-needed temporary employment opportunities and transfer of skills to local community, as well as support local supply chains and businesses.

Consequently, an environmental impact assessment (EIA) has commenced, assisting the uMkhanyakude District Municipality (applicant) in identifying all potential adverse environmental consequences of the project, their extent,

significance and to ensure that the environmental management requirements are adequately implemented.

The purpose of this Background Information Document (BID) is to provide you, as an Interested or Affected Party (I&AP), with a brief description of the EIA process to be undertaken and to obtain comments and contributions from I&AP's with regards to the potential impacts to the environment by the proposed project.

PROJECT DESCRIPTION

The proposed upgrading of Hlabisa Town Sanitation will entail the following:

Construction of Bulk Sewer Pipeline:

- ✚ The Construction of a 3230m (250mmø) uPVC Bulk Sewer Gravity Main from Matshamnyama – Ward 13 to Emabhanoyini;
- ✚ Construction of the Hlabisa Town Intermediate 3294m (200mmø) uPVC Sewer Main;
- ✚ Construction of the Hlabisa Town Collector 5270m (160mmø) uPVC Sewer Main;
- ✚ Construction of the Matshamnyama Intermediate 750m (200mmø) uPVC Sewer Main;

- ✚ Construction of the Matshamnyama Collector 1184m (160mmø) uPVC Sewer Main;
- ✚ Construction of the Emacekeni Intermediate 1220m (200mmø) uPVC Sewer Main;
- ✚ Construction of the Emacekeni Collector 2450m (160mmø) uPVC Sewer Main; Construction of the Emabhanoyini Intermediate 822m (200mmø) uPVC Sewer Main;
- ✚ Construction of the Emabhanoyini Collector 2007m (160mmø) uPVC Sewer Main;
- ✚ Construction of a 1300m (160mmø) uPVC Bulk Sewer Rising Main 1; Construction of a 1200m (160mmø) uPVC Bulk Sewer Rising Main 2 from Emabhanoyini to Hlabisa WWTW.

Construction of two sewer pumpstations:

- ✚ The two sewer pumpstation supports the two rising main to WWTW, and will entail the following:
- ✚ The dimensions of the two pumpstations are (5mx5mx3m); The pumpstations will have the capacity of 12l/s for Pumpstation 1 and 5l/s for Pumpstation 2.

The upgrading of existing Hlabisa WWTW

The provision of a formal wastewater treatment facility of capacity of 1.5 Mℓ/day(1500m³/day). This will include the construction of the following:

- ✚ Tie 15.5m X 6.5m equalization tank;
- ✚ 21m X 10.4m anoxic tank and 21m X 14m aeration tank;
- ✚ Three Sludge Maturation Ponds: Pond 1 (30m X 30m X 1.5m); Pond 2 (30m X 30m X 1.5m); Pond 3 (22m X 22m X 1.5m);
- ✚ Two 3.5m X 12mØ (396m³) settling tanks;

During construction, the existing WWTW facility will not be shut down. However, there will be some alteration within the WWT which will include the following processes:

- ✚ One oxidation pond will be converted to an aeration lagoon, which will handle the sewerage for the duration of the construction
- ✚ The wastewater will be pumped into the aeration lagoon and treated.

This will enable the WWTW facility to function while the construction for upgrade is underway.

Existing WWTW Infrastructure

The existing WWTW has been licensed by DWS for a total of 91250m³/year, and a 500m³ (0.5Mℓ/day). Therefore, the WWTW will be upgraded to operate with capacity of 1.5 Mℓ/day (1500m³/day).

The WWTW facility primarily receives water borne sewage services from the Hlabisa Hospital and dwellings in Ward 1 and Ward 2. The flow gravitates from the hospital to the WWTW which consists of a rudimentary inlet works, primary anaerobic retention pond, small treatment works (anaerobic tank, aerator tank and clarifier), and three tertiary anaerobic ponds and chlorination.

The final effluent is discharged into a tributary of the Hluhluwe River which eventually flows into the St. Lucia Estuary system at False Bay.

Existing WWTW Comprises:

- ✚ Inlet works with hand rake screen;
- ✚ 900m³ Primary pond;
- ✚ 50m³ Anaerobic Tank with mechanical mixer;
- ✚ 180m³ Aeration tank with mechanical aerator;
- ✚ 60m³ Secondary sedimentation tank;
- ✚ 550m³ Three tertiary ponds;
- ✚ Chlorine dosing facility with contact tank.

PROJECT LOCATION

The Project will take place within Hlabisa Area, at Hlabisa-Abakwa farm no. 17435, 17435; Hlabisa Reserve No 12 farm 15832 portion 1 and portion 14.

The project area is within Quaternary Catchment W32D and W32E of Pongola-Mtamvuma Catchment Management Area.

The site co-ordinates are as follows:

Table 1: Pipeline Coordinates

Gravity Main	
Start	28°8'23.87"S, 31°51'39.49"E
1 st bend	28° 8'27.02"S, 31°51'42.06"E
2 nd bend	28° 8'32.30"S, 31°51'41.60"E
3 rd bend	28° 8'34.09"S, 31°51'44.72"E
4 th bend	28° 8'37.96"S, 31°51'46.24"E
5 th bend	28° 8'40.33"S, 31°51'48.41" E
6 th bend	28° 8'48.78"S, 31°52'13.77"E
7 th ben	28° 8'51.39"S, 31°52'14.88"E
8 th bend	28° 8'54.84"S, 31°52'11.23"E
9 th bend	28° 8'57.97"S, 31°52'10.73"E
10 th bend	28° 9'1.17"S, 31°52'8.95"E
11 th bend	28°9'10.45"S, 31°52'9.58"E
12 th bend	28°9'12.82"S, 31°52'8.19"E
13 th bend	28°9'14.94"S, 31°52'7.68"E
14 th bend	28° 9'17.20"S, 31°52'7.87"E
15 th bend	28° 9'24.53"S, 31°52'4.69"E
16 th bend	28° 9'25.87"S, 31°52'5.21"E
17 th bend	28° 9'26.12"S, 31°52'6.18"E
18 th bend	28° 9'17.22"S, 31°52'22.57"E
End	28° 9'25.20"S, 31°52'45.29"E
Rising Main 01	
Start	28° 9'25.20"S, 31°52'45.29"E
End	28° 8'50.20"S, 31°52'46.08"E
Rising Main 02	
Start	28° 8'26.41"S, 31°52'24.31" E
1 st bend	28°8'35.33"S, 31°52'18.70"E
End	28° 8'50.20"S, 31°52'46.08"E

Table 2: wetland Crossings

Wetland Crossings	
Entry point 1	28° 9'6.83"S, 31°52'9.83"E
Exit point 1	28° 9'14.63"S, 31°52'7.65"
Stream Crossings	
1st Crossing	28° 8'59.67"S, 31°52'9.75"E
2nd Crossing	28° 9'25.52"S, 31°52'5.54"E
3rd Crossing	28° 9'24.78"S, 31°52'44.96"E

Table 3: WWTW and Pump station

Hlabisa WWTW Perimeter	
Corner 1	28° 8'46.53"S, 31°52'47.11"E
Corner 2	28° 8'48.43"S, 31°52'44.47"E
Corner 3	28° 8'49.29"S, 31°52'44.32"E
Corner 4	28° 8'52.66"S, 31°52'47.95"E
Corner 5	28° 8'51.87"S, 31°52'49.16"E
Corner 6	28° 8'50.56"S, 31°52'49.02"E
Pump station 1	
Co-ordinates	28° 8'26.33"S, 31°52'24.24"E
Pumpstation 2	
Co-ordinates	28° 9'24.59"S, 31°52'45.03"E

WHAT IS AN ENVIRONMENTAL IMPACT ASSESSMENT?

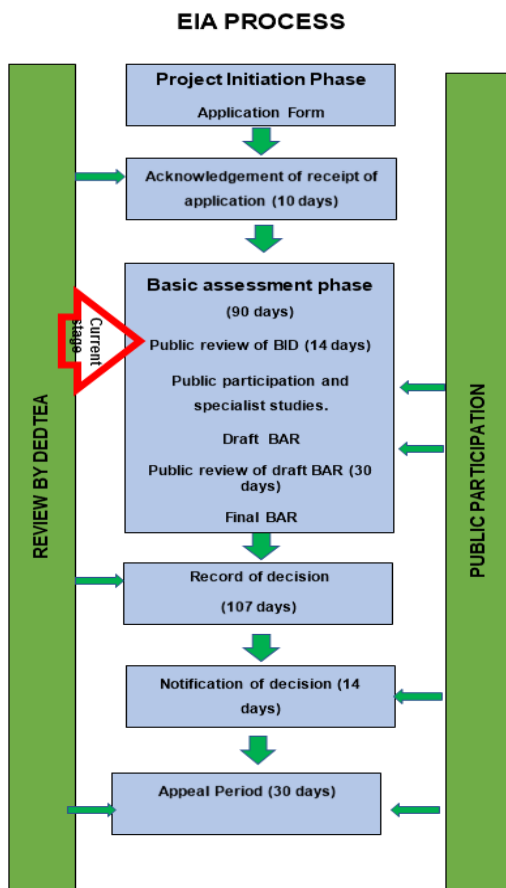
An Environmental Impact Assessment (EIA) is an effective planning and decision-making tool, which allows for the identification of potential adverse environmental consequences of a proposed project, and its management through the planning process.

In terms of the National Environmental Management Act, 1998 (Act No.107 of 1998), as read with the Environmental Impact Assessment (EIA) Regulations of 2014 as amended in 2017, an Environmental Authorization must be obtained from the relevant decision-making authority, the Department of Economic Development,

Tourism and Environmental Affairs (EDTEA) prior to the commencement of any of the listed activities that may result in potential negative impacts on the environment. Thus, an environmental impact assessment is required. A Basic assessment that includes the public participation process will be performed.

In terms of the Environmental Impact Assessment (EIA) regulations, an independent Environmental Assessment Practitioner (EAP) must be appointed to conduct the EIA. Therefore, Emvelo Consultant has been appointed by DLV Engineers on behalf of uMkhanyakude District Municipality.

ENVIRONMENTAL IMPACT ASSESSMENT PROCESS



Emvelo Consultant will identify and assess the potential environmental impacts associated with the proposed activity by conducting an objective and independent EIA in which all the relevant information and opinions of Interested and Affected Parties (I&APs) will be collected and passed on to the Department of Economic Development, Tourism and Environmental Affairs (EDTEA). In this way, an informed decision-making process can take place.

Figure 1: EIA process

LISTED ACTIVITIES TRIGGERED BY THIS PROJECT

The proposed project triggers the following listed activities of the EIA Listing Notices;

Table 4: Listed Activities

Activity No(s):	Provide the relevant Basic Assessment Activity(ies) as set out in Listing Notice 1 of the EIA Regulations, 2014 as amended.	Describe the portion of the proposed project to which the applicable listed activity relates.
12	<p>[The development of—</p> <p>(xii) infrastructure or structures with a physical footprint of 100 square metres or more;]</p> <p>The development of—</p> <p>(ii) infrastructure or structures with a physical footprint of 100 square metres or more;</p> <p>where such development occurs—</p> <p>(a) within a watercourse;</p> <p>(b) in front of a development setback; or</p> <p>(c) if no development setback exists, within 32 metres of a watercourse, measured from the edge of a watercourse;’</p> <p>excluding—</p> <p>(aa) the development of infrastructure or structures within existing ports or harbours that will not increase the development footprint of the port or harbour;</p> <p>(bb) where such development activities are related to the development of a port or harbour, in which case activity 26 in Listing Notice 2 of 2014 applies;</p> <p>(cc) activities listed in activity 14 in Listing Notice 2 of 2014 or activity 14 in Listing Notice 3 of 2014, in which case that activity applies;</p>	<p>Matshamnyama Ward 13 to Emabhanoyini at Hlabisa-Abakwa farm no. 17435, 17435; Hlabisa Reserve No 12 farm 15832 portion 1 and portion 14.</p> <p>Applicability:</p> <p><i>The pipeline construction will results in: Construction corridor of not more than 10m width within the vicinity of stream crossings and wetlands; The 10m length pipeline crossing at Emacekeni (28° 8'59.67"S, 31°52'9.75"E); 11m length pipeline crossing at Emacekeni (28° 9'25.52"S, 31°52'5.54"E); 17m length crossing at Emabhanoyini (28° 9'24.78"S, 31°52'44.96"E).</i></p> <p><i>The Gravity Main between (Entry Point: 28° 9'6.83"S, 31°52'9.83"E) and (Exit Point: 28° 9'14.63"S, 31°52'7.65"E) at Emacekeni traverse within 32m regulated area of the NFEPA Wetland.</i></p> <p><i>Therefore, this will results in clearance of 10m width construction corridor and construction of pipeline infrastructure, including the concrete encase covering the pipeline section at instream</i></p>

	<p>(dd) where such development occurs within an urban area; [or]</p> <p>(ee) where such development occurs within existing roads, [or] road reserves or railway line reserves; or</p> <p>(ff) <u>the development of temporary infrastructure or structures where such infrastructure or structures will be removed within 6 weeks of the commencement of development and where indigenous vegetation will not be cleared.</u></p>	<p><i>crossings. The infrastructure within watercourse will exceed 100m².</i></p> <p><i>The locality of stream and wetland crossings are along the valley which is outside the Hlabisa Town (urban area), as a result the valley has not been developed.</i></p>
<p>19</p>	<p>The infilling or depositing of any material of more than <u>10 cubic metres</u> into, or the dredging, excavation, removal or moving of soil, sand, shells, shell grit, pebbles or rock of more than <u>10 cubic metres</u> from-</p> <p>(i) A watercourse —</p> <p>but excluding where such infilling, depositing, dredging, excavation, removal or moving—</p> <p>(a) will occur behind a development setback;</p> <p>(b) is for maintenance purposes undertaken in accordance with a maintenance management plan; [or]</p> <p>(c) falls within the ambit of activity 21 in this Notice, in which case that activity applies;</p> <p>(d) occurs within existing ports or harbours that will not increase the development footprint of the port or harbour; or</p> <p>(e) where such development is related to the development of a port or harbour, in which case activity 26 in Listing Notice 2 of 2014 applies.</p>	<p>Matshamnyama Ward 13 to Emabhanoyini at Hlabisa-Abakwa farm no. 17435, 17435; Hlabisa Reserve No 12 farm 15832 portion 1 and portion 14.</p> <p>Applicability:</p> <p><i>The pipeline traverse along the valley, as a result there will be three stream crossings at an un-named stream crossed by gravity sewer main, and immediate sewer lines for the construction of bulk sewer. Approximately 18m³ of soil/spoils will be excavated at each stream crossing and therefore a combined stream crossings will have a total of 54m³ of spoils/soils excavated within watercourse to facilitate pipeline alignment and installation of bulk sewer pipeline. There will be also infilling for pipelaying at stream crossings. These stream crossings will be as follows: 10m length pipeline crossing at Emacekeni (28° 8'59.67"S, 31°52'9.75"E); 11m length</i></p>

		<p><i>pipeline crossing at Emacekeni (28° 9'25.52"S, 31°52'5.54"E); 17m length crossing at Emabhanoyini (28° 9'24.78"S, 31°52'44.96"E).</i></p> <p><i>The locality of stream crossings are along the valley which is outside the Hlabisa Town (urban area), as a result the valley has not been developed.</i></p>
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The NEMA, and the Environmental Impact Assessment (EIA) Regulations (2014) as amended in 2017, govern the process of applying for environmental authorization for certain developments. A provision in the EIA Regulations is made for two forms of assessment: Basic Assessment and Scoping & EIA, depending on the scope of the activity. The EIA regulations specify that: Activities identified in Listing Notice 1 and 3 (GNR 327 and 324 of 2017) requires a Basic Assessment while activities identified in Listing Notice 2 (GNR 325 of 2017) are subject to a Scoping and EIA.

The listed activity associated with the proposed development is: *Listing Notice 1, Activity 12 & 19*. Therefore, this application will follow a **Basic Assessment Process**, as a result mentioned Listing Notice 1 trigger.

WHAT IS PUBLIC PARTICIPATION?

Public participation is the process that promotes information sharing, consultation and active involvement amongst stakeholders, and all interested and affected parties.

During the Public Participation Process, input from the proponent, technical experts, government authorities and the general public will be gathered to result in a better understanding of the project for all involved thus ensuring an informed decision-making throughout the process.

REGISTRATION OF INTERESTED AND AFFECTED PARTIES.

Any person, company, authority or other entity that might be directly or indirectly affected by the proposed activity is invited to register as an I&AP, in order to assist the EAP in identifying possible environmental, economic and social impacts of the proposed development and to make

suggestions for mitigations. These comments will be included as part of the Basic assessment report which will be submitted to the Department of Economic Development, Tourism and Environmental affairs.

Interested and affected parties (I&APs) may forward their written comments along with their contact details within 14 days from receiving the document to; **Phumzile Lembede**.

Postal address: P. O. Box 101672, Meerensee,3901;

Tel: 035 789 0632;

Fax: 086 577 5220,

Email: Info@emveloconsultants.co.za.

APPENDIX A: (LOCALITY MAPS)

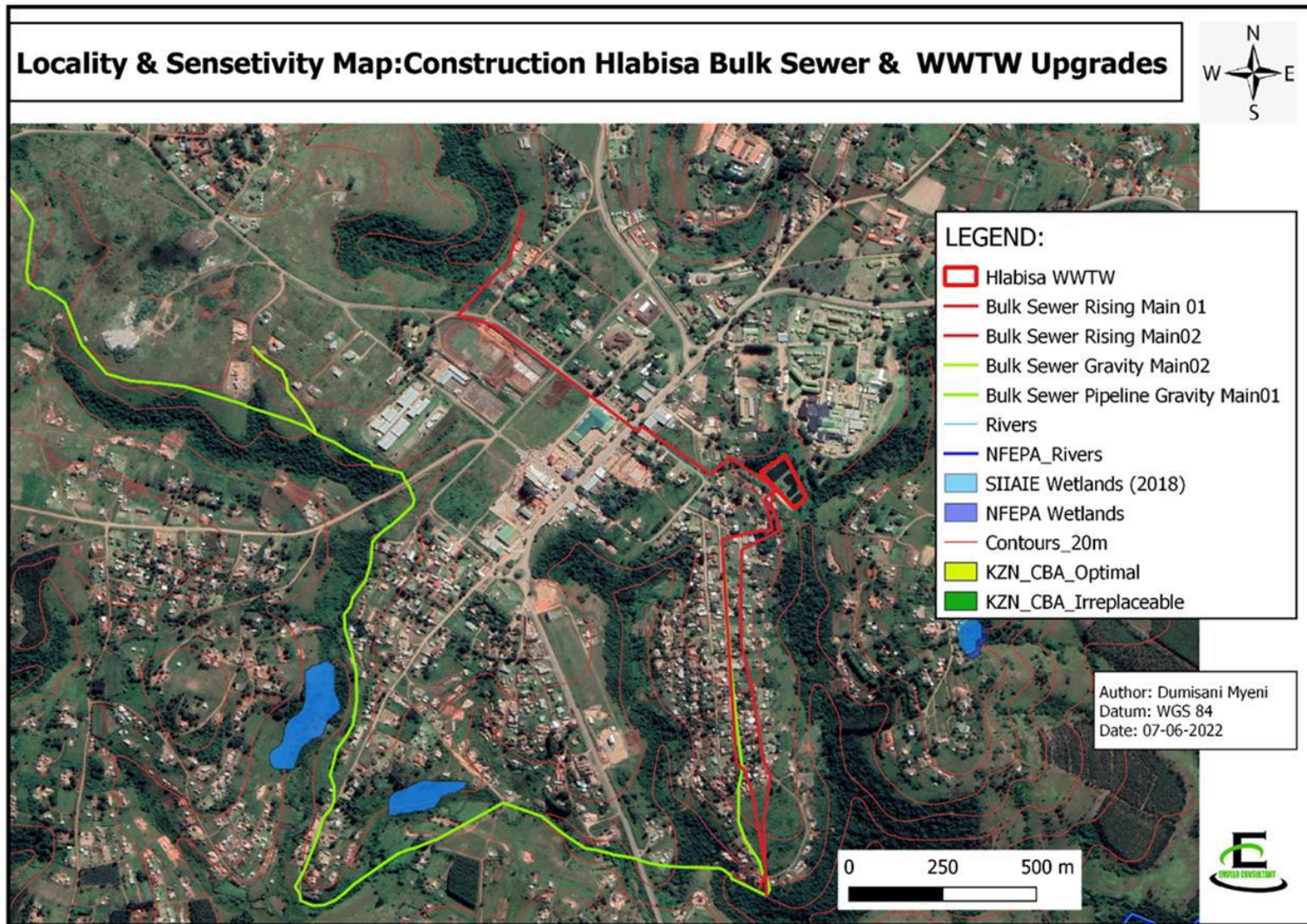


Figure 1: Sensitivity Map Showing Locality of Hlabisa Bulk Sewer Pipeline

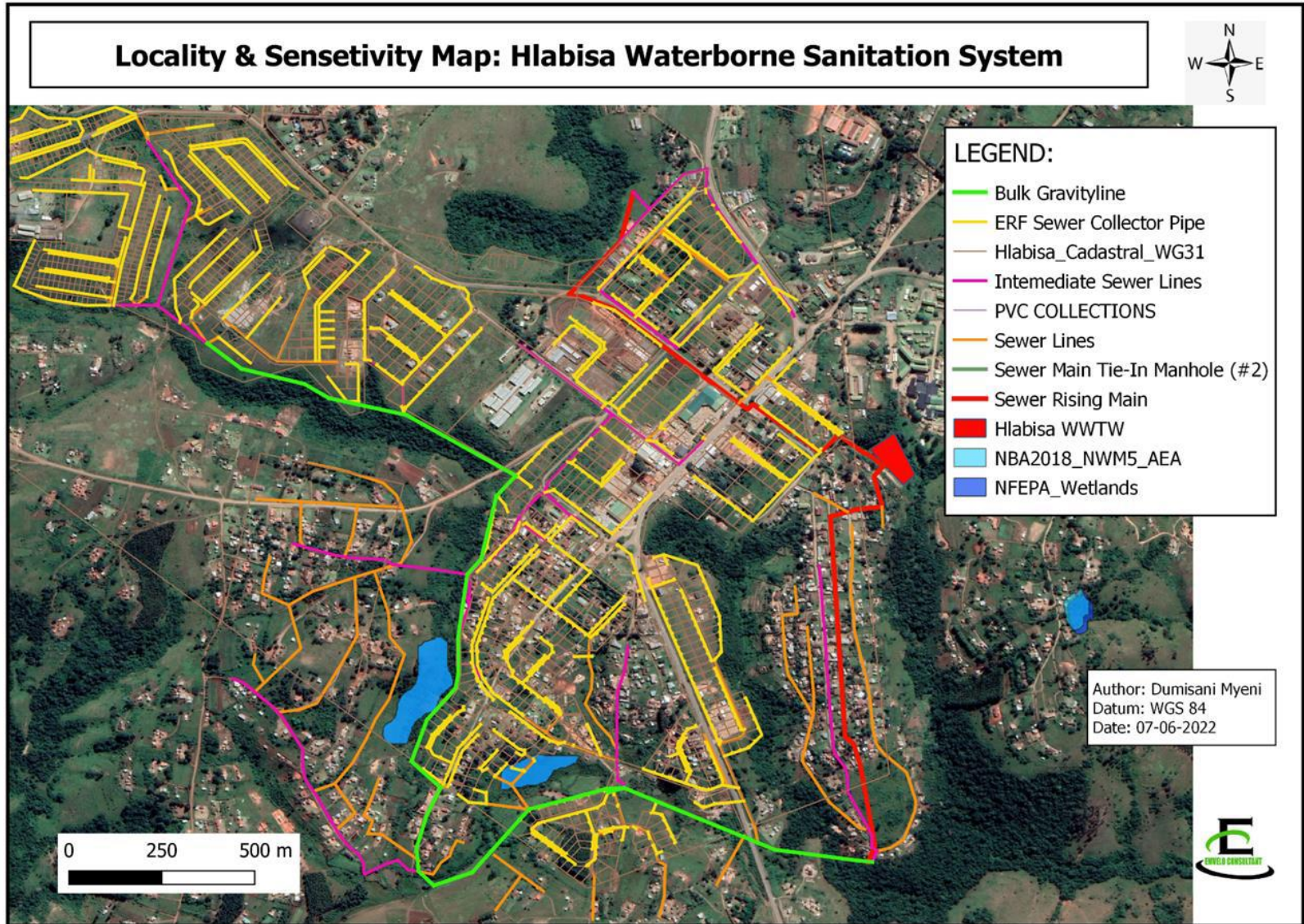


Figure 2: Sensitivity Map Showing the Proposed Hlabisa Waterborne Sanitation System

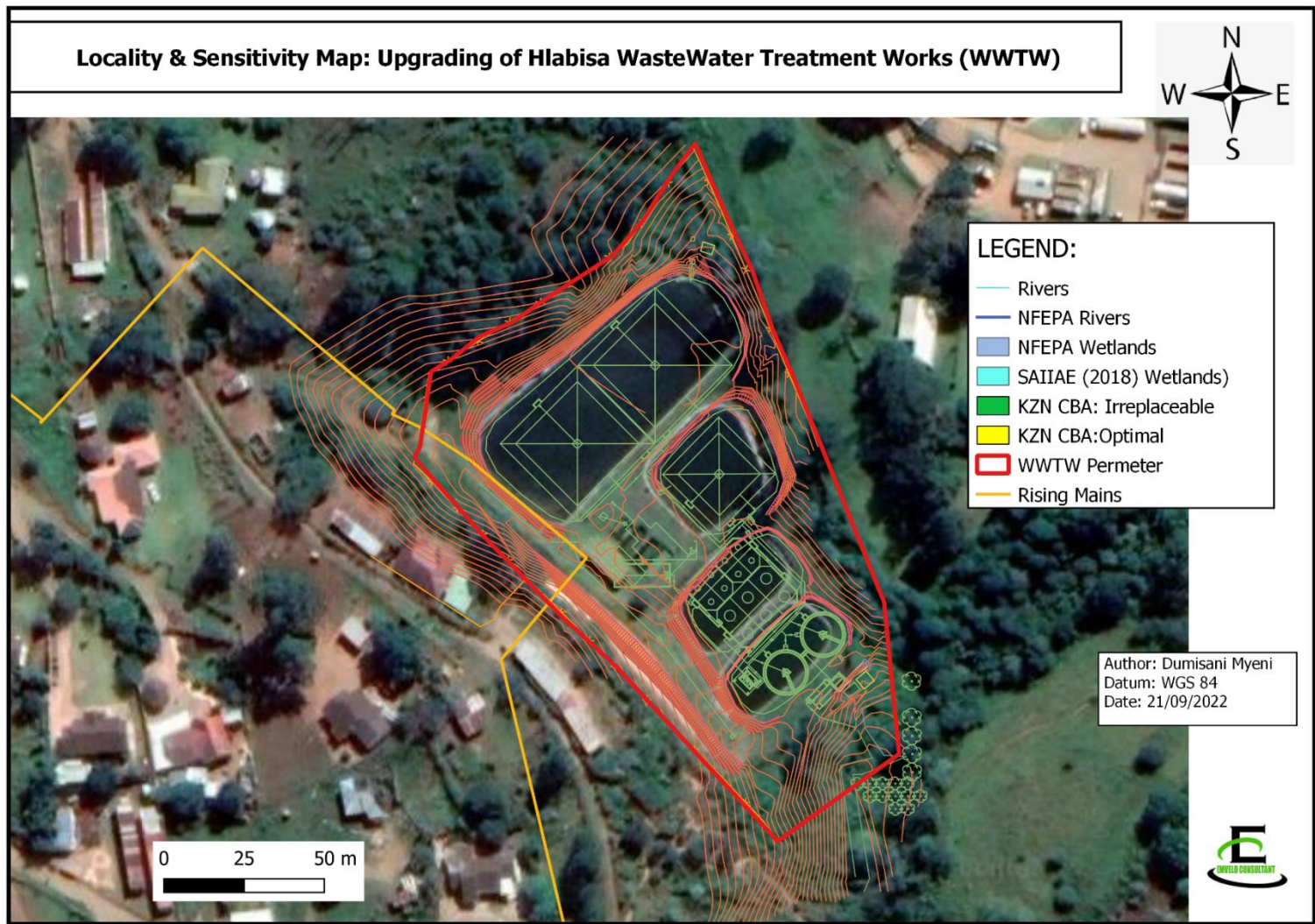


Figure 3: Sensitivity Map Showing the Locality of Hlabisa Wastewater Treatment Works



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P.O. Box 101672, Meerensee, 3901

Info@emveloconsultants.co.za

REGISTRATION AND COMMENT FORM

The proposed Construction of Hlabisa Bulk Sewer Pipeline and Wastewater Treatment Works Upgrades, within Big 5 Hlabisa Local Municipality, uMkhanyakude District , KZN

I wish to register as an interested and affected party and / or bring to the attention of Emvelo Consultant the following information.

<u>Personal Information</u>	
Name and Surname	
Company /organization	
Physical Address	
Postal address	
Telephone:	Cell:
Email:	
We would like you to inform us on a preferred and effective means of receiving documents and communication from us. <u>Method:</u> <u>Address:</u>	
<u>Comments</u>	

Signature

Date