water & sanitation

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Water and Sanitation
REPUBLIC OF SOUTH AFRICA

Environmental Impact Assessment for the Augmentation of the Lusikisiki Regional Water Supply Scheme: Final Scoping Report

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AUGMENTATION OF THE LUSIKISIKI REGIONAL WATER SUPPLY SCHEME, EASTERN CAPE PROVINCE, SOUTH AFRICA

FINAL ENVIRONMENTAL SCOPING REPORT

DEA REF: 14/12/16/3/3/2/714

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EXECUTIVE SUMMARY

BACKGROUND

EOH Coastal & Environmental Services (CES) has been appointed by the Department of Water and Sanitation (DWS) to undertake the Environmental Impact Assessment (EIA) for the proposed Lusikisiki Regional Water Supply Scheme (LRWSS) and obtain environmental approval in terms of the National Environmental Management Act (1998).

The LRWSS has been under consideration since the 1970's (van Niekerk *et al.,* 2013) when it was recommended that a regional water supply scheme based on a dam on the Xura River and a main bulk supply reservoir close to Lusikisiki would provide potable water supply for the entire region between Lusikisiki and the coast, extending from the Mzimvubu River in the south west to the Msikaba River in the north east. Some areas up to 15 km inland of Lusikisiki would also be supplied. A *White Paper* describing the scheme was tabled by the Transkei Government in 1979. In 1994 the DWS took over responsibility for further development of the scheme. The Directorate: National Water Resource Planning commissioned the *Eastern Pondoland Basin Study* (EPBS) in 1999 to further investigate the water supply situation in the area, with a specific focus on further development in the area originally earmarked for the *Lusikisiki Regional Water Supply Scheme* (LRWSS). This detailed investigation was undertaken for surface and groundwater sources, which re-affirmed that the Zalu Dam was the preferred source of surface water and recommended further investigation of groundwater sources to augment water supply to the entire area or to sub-areas. In 2007, SRK Consulting undertook the *Lusikisiki Groundwater Feasibility Study* to investigate groundwater potential and compare the new data with data produced by earlier studies. This study reported that there is a relatively strong possibility of finding high yielding boreholes, and that a combination of surface water (Zalu Dam) and groundwater would be the most feasible solution for the LRWSS (van Niekerk *et al.,* 2013). This was reiterated in 2013, at the close of the AECOM study: *Feasibility Study for Augmentation of the Lusikisiki Regional Water Supply Scheme*. This EIA process therefore involves the assessment of a combination of surface water from the proposed Zalu Dam on the Xura River and groundwater for augmentation of the existing domestic water supplies through the bulk water distribution infrastructure of the LRWSS to users in the area around Lusikisiki, extending from the Mzimvubu River in the south west to the Msikaba River in the north east. Some areas up to 15 km inland of Lusikisiki would also be supplied.

LEGAL REQUIREMENTS

In accordance with the requirements of the National Environmental Management Act No. 107 of 1998 (NEMA), and relevant Environmental Impact Assessment (EIA) regulations made in terms of this Act (Government Notice No R.543) and promulgated in 2010, the proposed project requires a full Scoping and EIA. The activities triggered by the proposed project in GNR 544, 545, and 546 are listed in Table 1.1 in this report.

A Water Use Licence (Issued by the Department of Water and Sanitation – DWS) in terms of the National Water Act (Act No. 36 of 1998) for water uses a,b,c,d,f,i and j as defined in Section 21 of the Act, will also be applied for.

THE ENVIRONMENTAL IMPACT ASSESSMENT

The EIA process is divided into two key phases – Scoping and Environmental Impact Assessment. This final scoping report presents the outcomes of the first phase of the EIA process. The Scoping Process has been undertaken to identify and describe –

- The nature of the proposed project;
- The legal, policy and planning context for the proposed project;
- Important biophysical and socio-economic characteristics of the affected environment;
- Potential environmental issues or impacts, so they may be addressed in the EIA phase;
- Feasible alternatives that must be assessed in the EIA phase; and

• The Plan of Study (POS) for the EIA phase.

PROJECT DESCRIPTION

The proposed activity consists of the following components:

- The Zalu Dam and inundation area
- Borrow pits for dam construction
- Abstraction weir
- Reticulation of raw water to the existing treatment works
- Reticulation of treated water to various reservoirs
- Possible groundwater abstraction and reticulation

THE AFFECTED ENVIRONMENT

Geology and Soils
The underlying geology of the area comprised of a combination of hard quartzite rock of the Natal Group Sandstones and tillite, shale, mudstone and sandstone of the Karoo Sequence. The Natal Group Sandstone gives rise to sandy, highly leached and relatively shallow soils which are not suitable for intensive agriculture (Nicolson, 1993). Soils associated with the Karoo Supergroup are characterised as being acidic, leached, heavy soils (Mucina and Rutherford, 2006).

V*egetation*
The study area falls within a section of the Pondoland focus area relating to the national Protected Areas Expansion Strategy (NPAES). According to Mucina and Rutherford (2006) vegetation on site consists of Midlands Mistbelt Grassland (EN), Ngonigoni Veld (VU), Pondoland-Natal Sandstone Coastal Sourveld (VU), Transkei Coastal Belt (VU), Scarp Forest (LT) and Eastern Valley Bushveld (LT). Species endemic to the area are described by Mucina and Rutherford (2006) in the South African National Biodiversity Institute (SANBI) map. In addition to the endemic taxa, there are also a number of species expected to be found in the study area, some of which are listed as protected by various conservation bodies. The list is not complete as many species and taxa require additional study. Several species that occur within these vegetation types have been listed – 27 are on the International Union for Conservation of Nature (IUCN) list, 127 are on the SA Red Data list, 5 on the National Environmental Management of Biodiversity Act (NEMBA) list, 228 on the Provincial National Conservational Ordinates (PNCO) list and 16 Protected tree species. The majority of the project area has been transformed by anthropogenic activities such as overgrazing and active clearing/burning for improved pastures. The area is used for communal grazing and the site visit indicates that this area is generally overgrazed by livestock such as cattle, goats and sheep.

Fauna
In terms of Amphibians and reptiles, historical records have shown that 23 species of frog have been documented in the Quarter Degree Squares that the project area falls in. One of these species is listed as Endangered (*Natalobatrachus bonebergi*) and one is listed as Vulnerable (*Afrixalus spiniforns*). Approximately 37 species of reptiles are also likely to occur in the project site. One of these (*Bradypodion caffer* – Pondo Dwarf Chameleon) is classified as Endangered and one is listed as Vulnerable (*Bradypodion melanocephalum* – KwaZulu Dwarf Chameleon) (SARCA 2014). In terms of Birds, historical records indicate three endangered species, eight vulnerable species and eight Near Threatened species likely to occur in the area. Due to the nature of the area, it is unlikely that there are any large mammals remaining in the area. Mammals that still occur in the area are likely to be limited to smaller species (e.g. rodents) and the occasional medium sized animals such as duiker in forest patches.

Socio-economic profile
Rural areas and large tracts of undeveloped arable land cover the Ingquza Hill Local Municipal area. Predominant land use is subsistence agriculture with commercial agriculture activities occurring further inland (Qaukeni Local Municipality SDF, 2005). The proposed development is expected to generate employment both during the construction and operational phases of the project. Furthermore, the proposed development will increase the much needed water supply to the Ingquza Hill Local Municipality.

THE PUBLIC PARTICIPATION PROCESS

At the inception of the project an extensive public participation process (PPP) was undertaken to allow Interested and Affected Parties (I&APs) to voice their concerns and raise issues regarding the proposed project. The key elements of the process included:-

- Development and distribution by hand of a Background Information Document (BID) to all landowners and other relevant stakeholders;
- Informing potential I&APs of the proposed development through newspaper advertisements and site notice boards;
- Holding various focus group meetings; and
- Holding a public meeting

Throughout this process, a register of I&APs was compiled and maintained, together with a record of their comments and responses from the project proponent and the EAP.

ISSUES AND CONCERNS

The comments and response trail for the focus group meetings held on the 7th July 2014 as well as the Public Participation Progress Report are included in Appendix B7. The main issues and concerns arising from I&APS include:

- **Socio-economic Benefits and Expectations**- There are high expectations with regard to the socio-economic benefits that the project will bring especially with regards to he provision of potable water. There are also expectations of business opportunities as a result of the proposed LRWSS.
- **Employment Opportunities** – People expect the project to bring solutions to the unemployment problem. I&APs indicated that there was great concern amongst the communities due to the fact that often non-locals were employed in projects. In general communites agreed that people with certain skills are needed when those skills are not found locally.
- **Land Use Rights** –The communities are aware that they may lose their agricultural areas to provide space for the project. There was not much concern about the loss of land but due to the unceratainty of the exact boundaries of the dam they requested to be informed soon to deal with any challeneges that may resultin the process of negotiations with the affected lad onwers. .
- **Water quantity** – This issue was raised, as it is well known that communities in those areas rely heavily on water from the rivers. A concern is that the project will reduce the amount of water flowing and available from the Xura River especially to communities downstream of the Zalu dam and that the communities will not have sufficient water to carry out their daily activities.
- **Skills Development** – Due to the fact that the communities have very low levels of literacy it was suggested, in almost all meetings, that the project should take this aspect into account. People are requesting that there be a skills development program that goes with the project so that local people can be trained in order to quality for better employment opportunities even after the project has been completed.

- **Use of boreholes** – People raised a concern with regard to the use of boreholes as a source of water especially in the PSJ Municipality area. According to I&APs there are enough rivers in the area to use as water sources rather than the use of boreholes which are not reliable. According to locals they have bad experiences with boreholes as they tend to run dry.

These issues and concerns are taken into consideration and will be adequately addressed during the EIR phase.

THE WAY FORWARD – EIA PHASE

The EIA phase has four key elements, namely:-

- **Specialist Studies:** Specialist studies identified during the Scoping Phase as being necessary, plus any additional studies that may be required by the authorities, are undertaken as the initial phase of the EIA. Appropriately qualified and experienced specialists are appointed to undertake the various assessments. Specialists gather baseline information relevant to the study being undertaken and assess impacts associated with the development. Specialists also make recommendations to mitigate negative impacts and enhance benefits. The resulting information is synthesised into the Environmental Impact Report (EIR), whilst the full reports will be attached to the EIR as appendices. The following specialist studies have been proposed for the EIA Phase:
    - Ecological assessment;
    - Aquatic Impact Assessment;
    - Heritage Assessment;
    - Paleontological Assessment;
    - Estuarine Assessment and
    - Social Impact Assessment

- **Environmental Impact Report (EIR):** The main purpose of this report is to gather and synthesise environmental information and evaluate the overall environmental impacts associated with the development, to consider mitigation measures and alternative options, and make recommendations in choosing the best development alternative. The EIR also identifies mitigation measures and management recommendations to minimise negative impacts and enhance benefits. The EIR and associated specialist reports are made available for public and authority review and comment. The availability of the report is advertised in the local newspaper(s) and the report is also made available for public scrutiny in easily accessible locations.

- **Comments Report:** The comments report provides a detailed record of comments, issues and concerns raised by I&APs and the authorities during the review period, and also provides relevant responses to these comments.

- **Environmental Management Programme (EMPr):** The EMPr provides guidelines to the project proponent and the technical team on how best to implement the mitigation measures and management recommendations outlined in the EIR during the construction and operational phase.

In addition to the above, the **Public Participation Process** commenced during the Scoping Phase is continued, during which I&APs are afforded further opportunities to raise their issues, concerns and comments regarding the proposed project. It is possible that some of the project details may have changed in response to the preliminary findings of the Scoping Report, and as a result of design changes made by the project proponent. I&APs and key stakeholders are given the opportunity to review the Draft EIR before it is submitted to the authorities for consideration. Comments on the Draft EIR received from I&APs are included and addressed in the Final Scoping Report.

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

LIST OF PLATES

LIST OF ACRONYMS

BID:	Background Information Document
CBA:	Critical Biodiversity Areas
CITES:	Committee for International Trade in Endangered Species
DEA:	Department of Environmental Affairs
DWS:	Department of Water and Sanitation
EAP:	Environmental Assessment Practitioner
EIA:	Environmental Impact Assessment
EIR:	Environmental Impact Report
EMPr:	Environmental Management Programme
EOH CES:	EOH Coastal & Environmental Services
GNR:	Government Notice Regulation
ha:	Hectare
I&APs:	Interested and Affected Parties
IDP:	Integrated Development Plan
Ltd:	Limited
NEMA:	National Environmental Management Act 107 of 1998 as amended
PoS:	Plan of Study
PAES	Protected Areas Expansion Strategy
PPP:	Public Participation Process
RDB:	Red Data Book
SSC:	Species of Special Concern
ToR:	Terms of Reference

1. INTRODUCTION

1.1 Background to the study

EOH Coastal & Environmental Services (EOH CES) has been appointed by the Department of Water and Sanitation (DWS) to undertake the Environmental Impact Assessment (EIA) for the proposed Lusikisiki Regional Water Supply Scheme (LRWSS) and obtain environmental approval in terms of the National Environmental Management Act (1998).

The LRWSS has been under consideration since the 1970's (van Niekerk *et al.,* 2013) when it was recommended that a regional water supply scheme based on a dam on the Xura River and a main bulk supply reservoir close to Lusikisiki would provide potable water supply for the entire region between Lusikisiki and the coast, extending from the Mzimvubu River in the south west to the Msikaba River in the north east. Some areas up to 15 km inland of Lusikisiki would also be supplied. A *White Paper* describing the scheme was tabled by the Transkei Government in 1979. In 1994 the DWS took over responsibility for further development of the scheme. The Directorate: National Water Resource Planning commissioned the *Eastern Pondoland Basin Study* (EPBS) in 1999 to further investigate the water supply situation in the area, with a specific focus on further development in the area originally earmarked for the *Lusikisiki Regional Water Supply Scheme* (LRWSS). This detailed investigation was undertaken for surface and groundwater sources, which re-affirmed that the Zalu Dam was the preferred source of surface water and recommended further investigation of groundwater sources to augment water supply to the entire area or to sub-areas. In 2007, SRK Consulting undertook the *Lusikisiki Groundwater Feasibility Study* to investigate groundwater potential and compare the new data with data produced by earlier studies. This study reported that there is a relatively strong possibility of finding high yielding boreholes, and that a combination of surface water (Zalu Dam) and groundwater would be the most feasible solution for the LRWSS (van Niekerk *et al.,* 2013). This EIA process therefore involves the assessment of a combination of surface water from the proposed Zalu Dam on the Xura River and groundwater for augmentation of the existing domestic water supplies through the bulk water distribution infrastructure of the LRWSS to users in the area around Lusikisiki, extending from the Mzimvubu River in the south west to the Msikaba River in the north east. Some areas up to 15 km inland of Lusikisiki would also be supplied.

In accordance with the requirements of the National Environmental Management Act No. 107 of 1998 (NEMA), and relevant Environmental Impact Assessment (EIA) regulations made in terms of this Act (Government Notice No R.543) and promulgated in 2010, the proposed project requires a full Scoping and EIA.

1.2 The Environmental Impact Assessment Process thus far

The EIA process is guided by regulations made in terms of Chapter 5 of NEMA, published as Government Notice No R.543 in Government Gazette No 33306 of 2 August 2010.The regulations set out the procedures and criteria for the submission, processing and consideration of and decisions on applications for the environmental authorisation of activities.

Three lists of activities, published on 21 April 2006 and amended 2 August 2010, as Government Notice Numbers R.544, R.545, and R.546 define the activities that require, respectively, a Basic Assessment (applies to activities with limited environmental impacts), or a Scoping and Environmental Impact Assessment (applies to activities which are significant in extent and duration).

The activities triggered by the proposed development are listed in Table 1-1 below.

Table 1-1: Listed activities triggered by the proposed development.

Number of relevant notice	Activity No(s)	Description of listed activity	
GNR544	(9)	The construction of facilities or infrastructure **exceeding 1000m** in length for the bulk transportation of sewage and **water**, including storm water, in pipelines with - **(i) an internal diameter of 0,36 metres or more; or** **(ii) a peak throughput of 120 litres per second or more.** Excluding where: a) Such facilities or infrastructure are for bulk transportation of water or storm water drainage inside a road reserve; or b) Where such construction will occur within urban areas but further than 32 meters from a watercourse, measured from the edge of the watercourse.	Bulk water reticulation infrastructure will be constructed for the purposes of supplying water to water users. These pipelines will potentially exceed 0.36 m in diameter.
	(11)	The construction of: i. canals; ii. channels; iii. bridges; iv. dams; v. weirs; vi. bulk storm water outlet structures; vii. marinas; viii. jetties exceeding 50 square meters in size; ix. slipways exceeding 50 square meters in size; x. buildings exceeding 50 square meters in size; **xi. infrastructure or structures covering 50 square meters or more** 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 the development setback line.	Pipelines for reticulation of bulk water may cross watercourses.
	(18)	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 or more than 5 cubic metres from: **i. a watercourse;** ii. the sea; iii. the seashore iv. the littoral active zone, an estuary or a distance 100 meters inland of the high-water mark of the sea or an estuary, whichever distance is greater. But excluding where such infilling, depositing, dredging, excavation, removal or moving: a. is for maintenance purposes undertaken in accordance with a management plan agreed to by the relevant environmental authority; or b. occurs behind the development setback line.	The construction of the Zalu Dam will require both excavation and infilling of material into the Zura River.

	(23)	The transformation of undeveloped, vacant or derelict land to – i. Residential, retail, commercial, recreational, industrial or institutional use, inside an urban area, and where the total area to be transformed is 5 hectares or more, but less than 20 hectares, or ii. **Residential, retail, commercial, recreational, industrial or institutional use, outside an urban area and where the total area to be transformed is bigger than 1 hectare but less than 20 hectares** Except where such transformation takes place – i. For linear activities; or ii. For purposes of agriculture or afforestation, in which case Activity 16 of Notice No. R. 545 applies.	An area in excess of 1 hectare outside of an urban area will be transformed from undeveloped land to institutional use; a dam operated by the Department of Water and Sanitation.
GNR 545	(19)	The construction of a dam, where the highest part of the dam wall, as measured from the outside toe of the wall to the highest part of the wall, is 5 meters or higher or where the high water mark of the dam covers an area of 10 hectares or more.	Construction of the Zalu Dam on the Xura River. It is estimated that the highest part of the dam will exceed 5 m.
GNR 546	(2)	The construction of reservoirs for bulk water supply with a capacity of more than 250 cubic meters. (a) In **Eastern Cape**, Free State, KwaZulu-Natal, Limpopo, Mpumalanga and Northern Cape provinces: **i. in an estuary;** **ii. In a protected area identified in terms of NEMPAA, excluding conservancies;** iii. outside urban areas, in: **(aa) National Protected Area Expansion Strategy Focus areas;** (bb) Sensitive areas as identified in an environmental management framework as contemplated in chapter 5 of the Act and as adopted by the competent authority; (cc) Sites or areas identified in terms of an International Convention; **(dd) Critical biodiversity areas as identified in systematic biodiversity plans adopted by the competent authority or in bioregional plans;** (ee) Core areas in biosphere reserves; **(ff) Areas within 10 kilometres from national parks or** **world heritage sites or 5 kilometres from any other protected area identified in terms of NEMPAA or from** **the core areas of a biosphere reserve;** (gg) Areas seaward of the development setback line or within 1 kilometre from the high-water mark of the sea if no such development setback line is determined. iv. In urban areas: (aa) Areas zoned for use as public open space; (bb) Areas designated for conservation use in Spatial Development Frameworks adopted by the competent authority or zoned for a conservation purpose; (cc) Seaward of the development setback line or within urban protected areas.	Reservoirs will be required for water storage.

	(4)	The construction of a road wider than 4 meters with a reserve less than 13.5 meters. (a) In **Eastern Cape**, Free State, KwaZulu-Natal, Limpopo, Mpumalanga and Northern Cape provinces: **i. in an estuary;** ii. outside urban areas, in: **(aa) A protected area identified in terms of NEMPAA,** **excluding conservancies;** **(bb) National Protected Area Expansion Strategy Focus areas;** (cc) Sensitive areas as identified in an environmental management framework as contemplated in chapter 5 of the Act and as adopted by the competent authority; (dd) Sites or areas identified in terms of an International Convention; **(ee) Critical biodiversity areas as identified in systematic biodiversity plans adopted by the competent authority or in bioregional plans;** (ff) Core areas in biosphere reserves; **(gg) Areas within 10 kilometres from national parks or** **world heritage sites or 5 kilometres from any other protected area identified in terms of NEMPAA or from** **the core areas of a biosphere reserve;** (hh) Areas seaward of the development setback line or within 1 kilometre from the high-water mark of the sea if no such development setback line is determined. iii. In urban areas: (aa) Areas zoned for use as public open space; (bb) Areas designated for conservation use in Spatial Development Frameworks adopted by the competent authority or zoned for a conservation purpose; (cc) Seaward of the development setback line or within urban protected areas.	A formal access road to the dam will need to be constructed.

	(13)	The clearance of an area of 1 hectare or more of vegetation where 75% or more of the vegetative cover constitutes indigenous vegetation, except where such removal of vegetation is required for: (1) the undertaking of a process or activity included in the list of waste management activities published in terms of section 19 of the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008) in which case the activity is regarded to be excluded from this list; (2) the undertaking of a linear activity falling below the thresholds in Notice 544 of 2010. (a) Critical Biodiversity areas and ecological support areas as identified in systematic biodiversity plans adopted by the competent authority. (b) National Protected Area Expansion Strategy Focus areas. (c) In **Eastern Cape**, Free State, KwaZulu-Natal, Limpopo, Mpumalanga, Northern Cape and Western Cape provinces: **i. in an estuary;** ii. outside urban areas, in: **(aa) A protected area identified in terms of NEMPAA,** **excluding conservancies;** **(bb) National Protected Area Expansion Strategy Focus areas;** (cc) Sensitive areas as identified in an environmental management framework as contemplated in chapter 5 of the Act and as adopted by the competent authority; (dd) Sites or areas identified in terms of an International Convention; (ee) Core areas in biosphere reserves; **(ff) Areas within 10 kilometres from national parks or** **world heritage sites or 5 kilometres from any other protected area identified in terms of NEMPAA or from** **the core areas of a biosphere reserve;** (gg) Areas seaward of the development setback line or within 1 kilometre from the high-water mark of the sea if no such development setback line is determined. iii. In urban areas: (aa) Areas zoned for use as public open space; (bb) Areas designated for conservation use in Spatial Development Frameworks adopted by the competent authority or zoned for a conservation purpose; (cc) Seaward of the development setback line. **(dd) Areas on the watercourse side of the development setback line or within 100 meters from the edge of a watercourse where no such setback line has been determined.**	The area to be inundated by the proposed dam is identified as a critical biodiversity area in terms of the Eastern Cape Biodiversity Conservation Plan (ECBCP).

	(16)	The construction of: i. jetties exceeding 10 square meters in size; ii. slipways exceeding 10 square meters in size; iii. buildings with a footprint exceeding 10 square meters or more; **iv. infrastructure covering 10 square meters or more.** Where such construction occurs within a watercourse, measured from the edge of a watercourse, excluding where such construction will occur behind the development setback line. (a) In **Eastern Cape**, Free State, KwaZulu-Natal, Limpopo, Mpumalanga and Northern Cape provinces: **i. in an estuary;** ii. outside urban areas, in: **(aa) A protected area identified in terms of NEMPAA,** **excluding conservancies;** **(bb) National Protected Area Expansion Strategy Focus areas**; (cc) World Heritage Sites; (dd) Sensitive areas as identified in an environmental management framework as contemplated in chapter 5 of the Act and as adopted by the competent authority; (ee) Sites or areas identified in terms of an International Convention; **(ff) Critical biodiversity areas as identified in systematic biodiversity plans adopted by the competent authority or in bioregional plans;** (gg) Core areas in biosphere reserves; **(hh) Areas within 10 kilometres from national parks or world heritage sites or 5 kilometres from any other protected area identified in terms of NEMPAA or from the core areas of a biosphere reserve;** (ii) Areas seaward of the development setback line or within 1 kilometre from the high-water mark of the sea if no such development setback line is determined. iii. In urban areas: (aa) Areas zoned for use as public open space; (bb) Areas designated for conservation use in Spatial Development Frameworks adopted by the competent authority or zoned for a conservation purpose; (cc) Areas seaward of the development setback line.	Construction will take place within the Xura River (dam construction). The site is within a critical biodiversity area in terms of the Eastern Cape Biodiversity Conservation Plan (ECBCP).

Because the proposed development triggers a listed activity from GNR.545, it will require a full Scoping and EIA. This process (Figure 1-1) is regulated by Chapter 3, Part 3 of the EIA regulations and described in detail in Appendix A of this report.

The applicants will be applying for a Water Use Licence (Issued by the DWS) in terms of the National Water Act (Act No. 36 of 1998) for the following water uses as defined in Section 21 of the Act:

(a) Taking water from a water resource;
(b) Storing water;
(c) Impeding or diverting the flow of water in a watercourse;
(d) Engaging in a stream flow reduction activity contemplated in section 36;
(f) Discharging waste or water containing waste into a water resource through a pipe, canal, sewer, sea outfall or other conduit;

(i) Altering the bed, banks, course or characteristics of a watercourse;
(j) Removing, discharging or disposing of water found underground if it is necessary for the efficient continuation of an activity or for the safety of people.

It should be noted that Section 27(2) of the National Water Act states that a responsible authority may not issue a licence to itself without the written approval of the Minister.

The competent authority that must consider and decide on the application for authorisation in respect of then GNR 544-546 activities listed in Table 1-1 is DEA, and is the relevant authority which will review the Scoping Report and Environmental Impact Report (EIR) and issue the environmental authorisation.

Figure 1-1: The EIA process under current legislation (NEMA Regulations 2010)

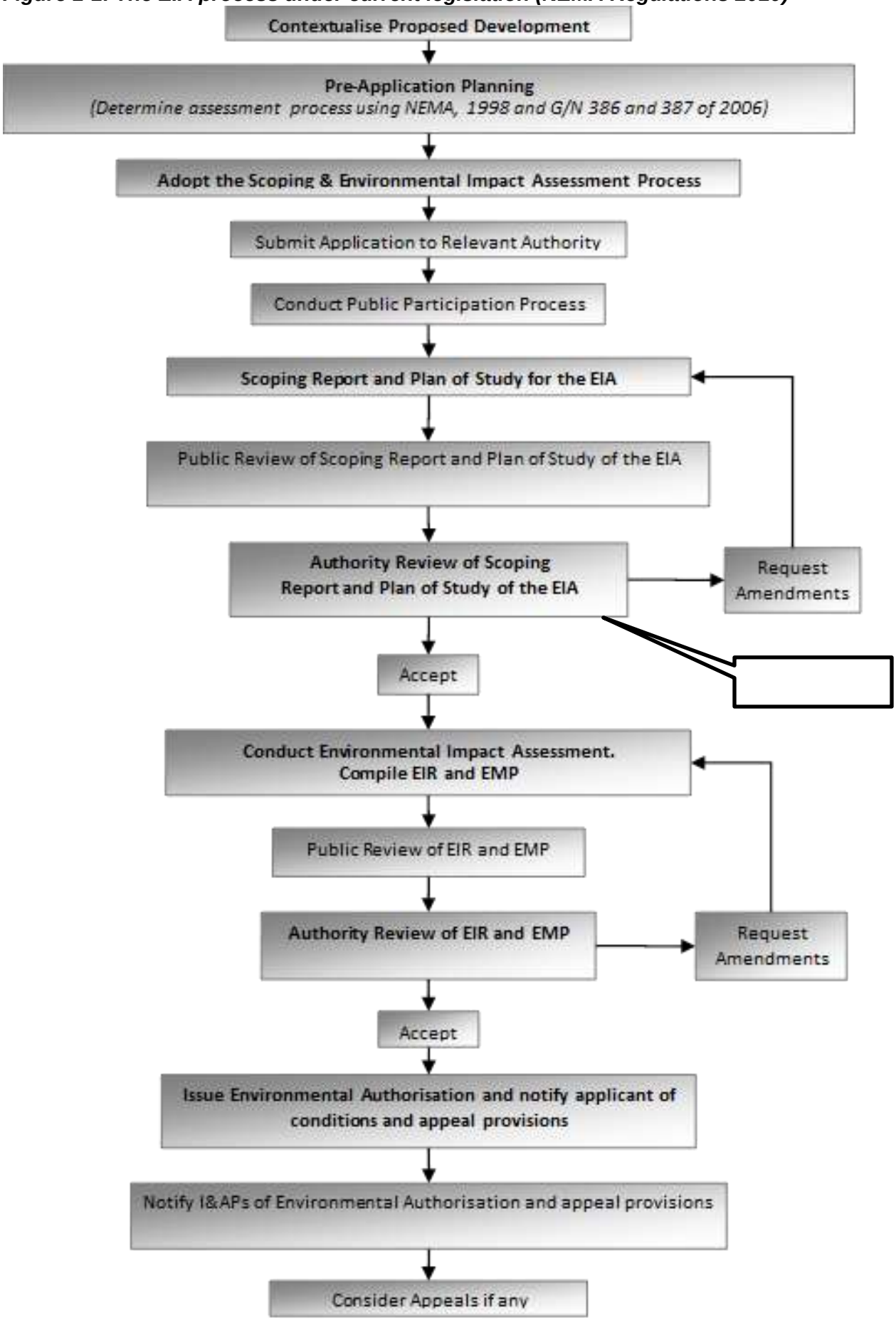


Figure 1-1: The EIA process under current legislation (NEMA Regulations 2010)

1.2.1 Scoping Phase

The proposed project is currently in the Scoping Phase. The principal objectives of the Scoping Phase in accordance with the regulatory requirements are to:

- Describe the nature of the proposed project;
- Enable preliminary identification and assessment of potential environmental issues or impacts to be addressed in the subsequent EIA phase;
- Define the legal, policy and planning context for the proposed project;
- Describe important biophysical and socio-economic characteristics of the affected environment;
- Undertake a public participation process that provides opportunities for all Interested and Affected Parties (I&APs) to be involved;
- Identify feasible alternatives that must be assessed in the EIA phase; and
- Define the Plan of Study (PoS) for the EIA phase.

1.2.2 The Scoping Report

This report is the first of a number of reports that will be produced in the EIA process (see Figure 1-1 above). This scoping report has been produced in accordance with the requirements as stipulated in Section 28 of the EIA regulations (GNR 543), which clearly outlines the content of a scoping report, and Sections 54-57 which cover the activities necessary for a successful Public Participation Process (PPP).

Section 1.2.3 below provides the detailed structure of this scoping report.

1.2.3 The Scoping Report

The structure of the report is as follows -

Chapter 1 - Introduction: Provides background information on the proposed project, a brief description of the EIA process required by NEMA and its associated regulations, and describes the key steps in the EIA process that have been undertaken thus far, and those that will be undertaken in the future. The details and expertise of the Environmental Assessment Practitioner (EAP) who prepared this report are also provided.

Chapter 2 – Project description: Provides a description of the proposed development, the properties on which the development is to be undertaken and the location of the development on the property. The technical details of the project to be undertaken are also provided in this Chapter.

Chapter 3 – Need and Desirability: Provides a description of the need and desirability of the proposed activity, including advantages and disadvantages of the proposed activity.

Chapter 4 - Alternatives: Provides a discussion of the feasible and reasonable alternatives that have been identified and will be considered in the EIA Phase.

Chapter 5 – Relevant Legislation: Identifies all the legislation and guidelines that have been considered in the preparation of this scoping report.

Chapter 6 – Description of the affected environment: Provides a brief overview of the bio-

physical and socio-economic characteristics of the site and its environs that may be affected by the proposed development, compiled largely from published information, but supplemented by information from a site visit.

Chapter 7 – Public Participation Process: Provides details of the public participation process conducted in terms of Regulation 28(h) including:

- The measures undertaken thus far to notify I&APs of the application;
- Proof that notice boards, advertisements and notices notifying potential I&APs of the application have been displayed, placed or given;
- A list of all persons and organisations that were identified and registered in terms of Regulation 55 as I&APs in relation to the application.

Chapter 8 – Issues identified during Scoping: Provides a description of the key issues that have been identified by the project team and through discussions with I&APs thus far in the Scoping Phase, and that will be assessed in the EIA phase.

Chapter 9 - Plan of Study: Sets out the proposed approach to the environmental impact assessment including:

- A description of the scope of work that will be undertaken as part of the EIA phase, including any specialist reports or specialised processes, and the manner in which the described scope of work will be undertaken;
- An indication of the stages at which the competent authority will be consulted;
- A description of the proposed methodology for assessing the environmental issues and alternatives, including the option of not proceeding with the proposed development;
- Particulars of the public participation process that will be conducted during the EIA phase, and;
- Any specific information required by the authority.

1.3 Details and Expertise of the Environmental Assessment Practitioner

According to regulation 17 of the EIA regulations (2010), *An EAP must –*
(a) be independent; and
(b) have expertise in conducting environmental impact assessments, including knowledge of the Act, these Regulations and any guidelines that have relevance to the proposed activity

In fulfilment of the above-mentioned legislative requirement, provided below are the details of the Environmental Assessment Practitioner (EAP) who prepared this Final Scoping Report as well as the expertise of the individual members of the study team.

1.3.1 Details of the EAP

EOH Coastal and Environmental Services (EOH CES)
Physical Address: 16 Tyrell Street, Berea, East London 5241
Postal Address: P.O. Box 8145, Nahoon, East London 5210
Telephone: +27 43 726 7809
Fax: +27 43 726 8352
Website: www.cesnet.co.za
Email: cesel@cesnet.co.za

1.3.2 Expertise of the EAP

EOH Coastal & Environmental Services (Pty) Ltd. (CES)

CES was established in 1990 as a dynamic, rapidly growing specialist environmental consulting company. Recently EOH Group of Companies has acquired the shares in CES. EOH is the largest provider of enterprise applications, technology, outsourcing, cloud and managed services. The group is active in South Africa, Africa and the United Kingdom and has a strong Black Economic Empowerment profile. This integration will allow CES to combine EOH's great reach and reputation with CES's recognised excellence in environmental and social advisory services, thus maximising CES's strengths and comprehensive offerings in the environmental and social fields.
Provided below are short *curriculum vitae* (CVs) of each of the team members involved in the proposed development.

Dr Alan Carter *(Project Leader)*
Alan has extensive training and experience in both financial accounting and environmental science disciplines with international accounting firms in South Africa and the USA. He is a member of the American Institute of Certified Public Accountants and holds a PhD in Plant Sciences. He is also a certified ISO14001 EMS auditor with the American National Standards Institute and the British Standards Institute.

Dr Cherie-Lynn Mack *(Project Manager)*
Cherie-Lynn holds a PhD and MSc (with distinction) degrees in Environmental Biotechnology, with a BSc degree in Microbiology and Biochemistry. She has postgraduate research experience in industrial and domestic wastewater treatment technologies, with particular emphasis on the coal and platinum mining industries. Her interests lie in the water sector, with experience in ecological reserve determination and water quality monitoring and analysis. She has experience in water quality analysis and industrial wastewater treatment research.

Dr Chantel Bezuidenhout *(Report Production)*
Chantel holds MSc and PhD degrees in Botany (estuarine ecology) and a BSc degree in Botany and Geography from NMMU. Chantel's main focus is estuarine ecology and she has done extensive work on 13 systems from the Orange River Mouth in the Northern Cape to the Mngazi Estuary in the Transkei. As a result she has been involved in a number of ecological reserve determination studies including the Kromme, Seekoei and Olifants systems. Chantel has been an Environmental Consultant for approximately 6.5 years and as such has been focused on environmental management and impact assessment. Chantel is well versed in environmental legislation and has been involved in number of environmental impact assessments and management plans in South Africa, Zambia, Mozambique and Madagascar.

Mr Lungisa Bosman (*Public Participation*)
Lungisa holds a Bachelor of Social Science (1993) from UCT, with majors in Public Administration & Sociology, and a Post Graduate Diploma in Organisation and Management. Lungisa has gained considerable experience in social facilitation and community education and has been involved in a number of projects where he has brought his facilitation skills to bear. These include the ADM and Chris Hani State of Environment studies.

Ms Louise Bryson *(Public Participation and Technical Assistance)*
Louise is currently writing up her MSc thesis from the Institute for Water Research at Rhodes University. Her thesis outlines the development of an erosion and sediment delivery model that will have application for the water resource management of semi-arid catchments in South Africa. Her BSc honours degree from the Environmental Sciences Department at Rhodes University introduced her to the complexities of sediment dynamics in semi-arid catchments with a research project considering stream variability in space and time and its relationship with erosion. Preceding this she developed a background in Civil Engineering and holds a BSc in Zoology and Ecology from the University of the Witwatersrand. Although she has a keen interest in fluvial geomorphology, it is the water sector in general that has been the driving force behind her academic and future career.

2. PROJECT DESCRIPTION

According to regulation 28 (1) of the EIA regulations (2010), *A scoping report must include –*
(b) a description of the proposed activity;
(d) a description of the property on which the activity is to be undertaken and the location of the activity on the property, or if it is –
(i) a linear activity, a description of the route of the activity; or
(ii) an ocean-based activity, the coordinates where the activity is to be undertaken

2.1 Proposed Activity

The Study Area comprises the region between Lusikisiki (up to about 15 km inland) and the coast, extending from the Mzimvubu River in the south-west to the Msikaba River in the north-east, as shown on Figure 2.1.

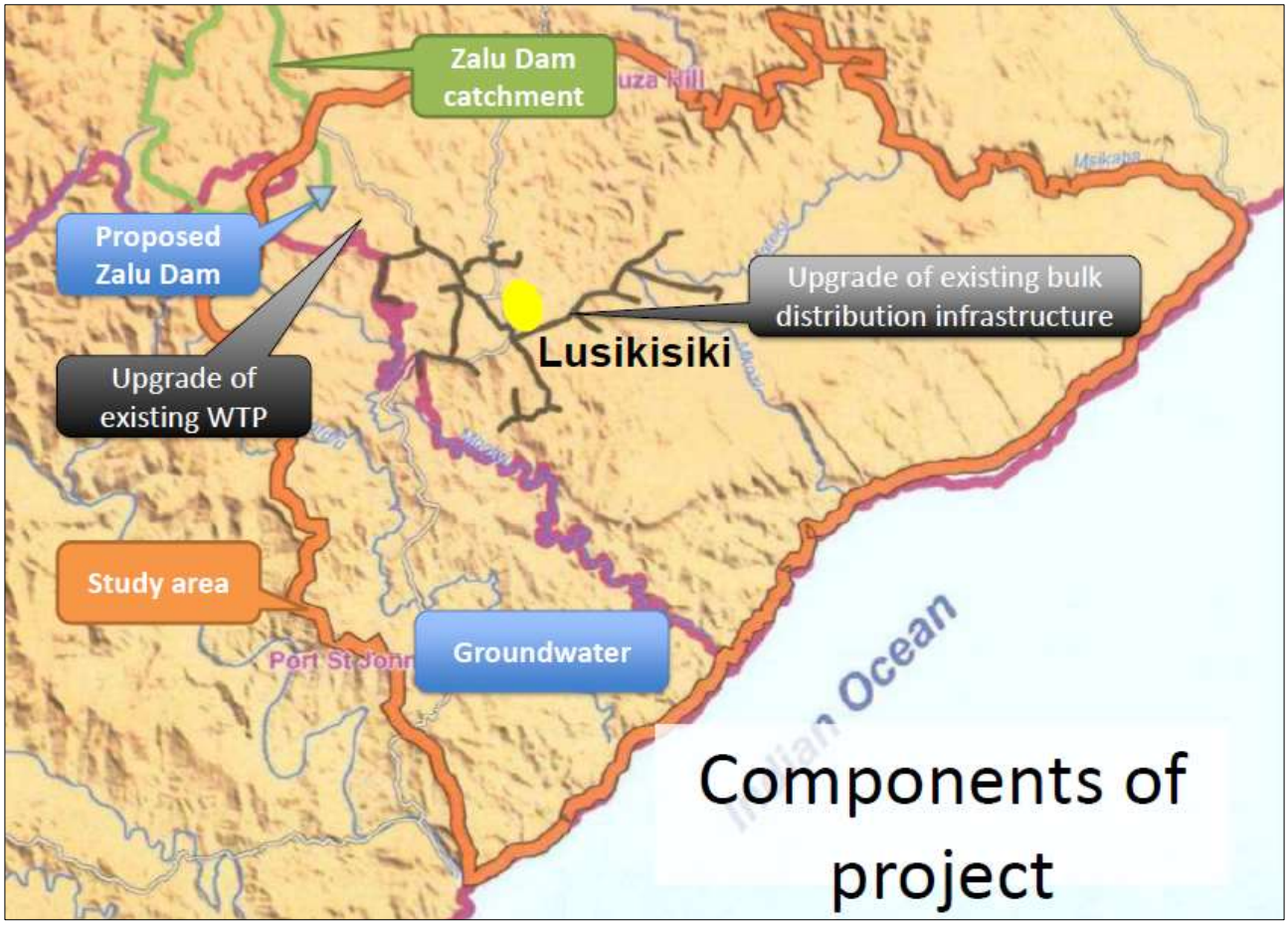


Figure 2.1: Components of the proposed development
(Source: Stakeholder Committee Presentation January 2014)

The proposed activity consists of the following components:

The Zalu Dam and inundation area – The dam will consist of an earth core rockfill dam with a full supply level of 612 masl (approximately 35 m high). It is anticipated that the dam will yield 6.95 million m^3/a at 1:100 year assurance of supply. The domestic requirement is 5.4 million m^3/a in 2040, the irrigation requirements 1.45 million m^3/a (including 10% losses) and the 1:1 year ecological freshet requirement is 8 m^3/s for a period of three days per year. It is anticipated that the release for domestic use will be sufficient for the maintenance of ecological requirements (MJ Trümpelmann, 2014). The area that will be inundated as a result of the proposed Zalu Dam is approximately 143.47 hectares in size. No resettlement will be required.

Borrow pits for dam construction - The results from the pre-feasibility study (MJ Trümpelmann, 2014) show that sufficient construction materials are available for a rockfill dam in close proximity to the proposed construction site (Figure 2.2). Residual dolerite clay is available in a borrow area downstream of the dam centreline on the right bank of the river. This material is sufficient for a central earthfill core for a rockfill dam.

Two rockfill quarries with unweathered dolerite, one on the right bank and one on the left bank, 10 km upstream of the centreline of the proposed dam, were identified. These sources are located below the full supply level of the dam. Both sources are covered with moderately to completely weathered shales. The moderately weathered shales can be used in the shells of a rockfill dam.
At the centreline of the dam on the right bank a horizontal layer of unweathered dolerite was encountered at a level of approximately 611 masl. This can be used for an approach channel floor for a side channel spillway. Some of the excavated materials can be used for the shells of the rockfill dam.

An application will be made to the Department of Mineral Resources for authorization of proposed borrow pits.

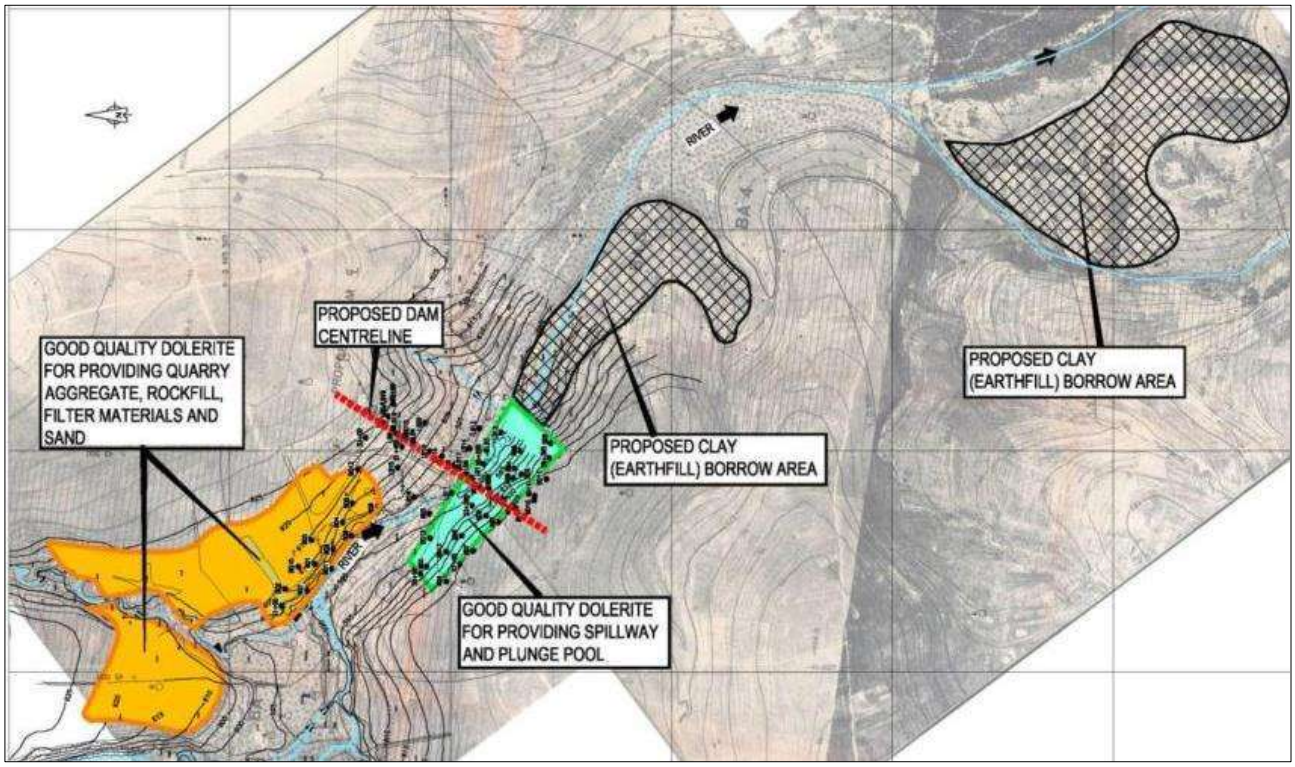


Figure 2.2: Proposed borrow areas
(Source: Stakeholder Committee Presentation January 2014)

Abstraction weir – An abstraction weir will be constructed approximately 5 km downstream from the proposed Zalu Dam.

Reticulation of raw water to the existing treatment works – A pipeline will be constructed from the Zalu Dam to the existing water treatment works on the outskirts of Lusikisiki. The location of this route will be provided in the EIR Phase as it is not finalised at this stage. In addition to this it is anticipated that the water treatment works will be upgraded to cater for the increase in capacity required.

Reticulation of treated water to various reservoirs – Potable water will be transferred from the water treatment works to a number of reservoirs via a combination of existing and new pipelines. Existing pipelines may require upgrading. The location of new pipelines will be provided in the EIR

Phase as it is not finalised at this stage. The location of existing pipelines to be upgraded is shown in dark grey on Figure 2.1 above.

3. NEED AND DESIRABILITY

Potable water is essential for human survival. Access to safe water and proper sanitation is essential to community health and human dignity. The Ingquza Hill Local Municipality (formerly known as the Qaukeni Municipality) that forms part of the O.R. Tambo District Municipality is one of the areas that has been adversely affected by poor infrastructure development, which has resulted in communities in rural areas being forced to rely on natural sources of water such as rivers, streams and dams, and that which can be acquired using boreholes and rain water tanks.

The Ingquza Hill Local Municipality faces a number of infrastructure challenges. These include a lack of waste management; lack of proper sanitation; limited access to electricity and poor road access. One of the main challenges identified is the provision of water not only to this specific municipal area but also to the broader O.R. Tambo District Municipality (Statistics South Africa, 2008).

The O.R. Tambo District Municipality is one of the most densely populated regions within the country with a population of approximately 1.7 million people. The Ingquza Hill Local Municipality houses approximately 280,000 of this population of which approximately 77% is classified as poor (income less than R800 per month) (Statistics South Africa, 2008). In 2007, only 19% of the population was residing in formal housing, while the remainder was living in informal dwellings.

Currently 4 regional water schemes service this municipal area (Qaukeni Local Municipality Spatial Development Framework (SDF), 2005). Specifically the Lusikisiki Regional Water Supply Scheme "*is a run-of-river scheme, which was commissioned in 1989 and serves some 53 000 people residing in the town of Lusikisiki and twenty-one (21) surrounding rural villages, four (4) of which are located within the Port St Johns municipal area. The supply to the scheme has recently been augmented by means of three (3) boreholes. Only five (5) of the twenty-one (21) rural villages have internal reticulation, whilst the balance are served by banks of standpipes located at the respective village reservoirs. There is however a project planned to both upgrade the bulk supply infrastructure and to provide internal reticulation to these villages. It should also be noted that some of the formal and informal settlements in Lusikisiki do not have access to a formal water supply, and there are no immediate projects to address these areas"* (Qaukeni Local Municipality SDF, 2005).

An overview of household access to infrastructure in the Municipality, specifically the Ingquza Hill Local Municipality, has shown that in 2007, approximately 84% of the population had no basic access to water (Business trust and DPLG, 2007). This means that these communities do not have piped water within a distance of 200 m of a dwelling (RDP - Reconstruction and Development Programme - level). As water sources dry up in the region, the number of households with a lack of basic access to water will increase. Between 1996 and 2008, access to piped water above the RDP () level has increased from 15% to 29%, however more than 50% of the households in the area remained in the category of having no access to clean water. In 2008 it was also shown that a mere 2.1% of the households had piped water inside dwellings and only 10% of the municipal area had public taps (Statistics South Africa, 2008). According to the OR Tambo District Municipal Integrated Development Plan (IDP) (2014/2015) households with access to water provision has increased by another 12% from 2009, however approximately 24 000 of the municipal population still depend on natural water sources (IDP, 2014/2015).

Sanitation is another challenge facing the district. A mixture of waterborne sanitation such as septic tanks and Ventilated Improved Pit (VIP) toilets service the town of Lusikisiki (Qaukeni Local Municipality SDF, 2005). Effluent is disposed at two septic tank managed wetland systems with a combined capacity of 560 m^3/day. Different oxidation ponds service the St Elizabeth Hospital (120 m^3/day), the teachers training college (90 m^3/day), the Lusikisiki prison (70 m^3/day) and the Holy Cross Hospital (100 m^3/day). The Bambisana Hospital is serviced by an activated sludge plant. This capacity is inadequate and in poor condition (Qaukeni Local Municipality SDF, 2005). According to Statistics South Africa (2008), the sanitation backlog in this municipality is approximately 262 450 (88%), creating a greater challenge of meeting the national targets. An overview of the households with access to basic sanitation has shown that in 2007, approximately 41% of households use pit latrines, 0.5% use bucket toilets, while 48% has no toilets. Due to a lack of maintenance, repeated electricity outages, water stoppages and frequent sewerage leakages have been experienced within the region.

A number of water resources and area planning studies are planned for this Municipal area and the following important points have been outlined by the Qaukeni Local Municipality SDF (2005):

- *"The groundwater potential of the area is currently being underutilised. However, despite the groundwater generally being of adequate quality, the geology of the area is such that borehole yields are generally low. Therefore the use of groundwater would generally be more suitable for local supply schemes, or to augment supplies to larger supply schemes;*
- *The region has significant surface water development potential, which far exceeds the projected future demands of the region;*
- *The rivers in the area are however considered to be in a relatively pristine state and therefore of significant conservation value. Furthermore, the estuaries are reported to be very sensitive to disturbances which may lead to mouth closures (i.e. reduced fresh water inflow);*
- *Therefore, despite the high run-offs in the area, the riverine and particularly the estuarine flow requirements are such that the ecological water requirements represent a significant portion of the run off"*

This implies that the lack of basic access to potable water and sanitation not only affects the livelihoods of the communities but also increases ecological impacts. The constant abstraction of water from natural water sources will ultimately result in water losses, ecological degradation and negative impacts on the ecological functioning of downstream river reaches and estuaries (Qaukeni Local Municipality SDF, 2005). Ultimately, this would mean that surface water schemes may not be able to be supplied via river-runoff, and that some form of storage may be required.

The Water Resource Assessment report for the Lusikisiki Regional Water Supply Scheme (DWA, 2011) found that based on the "*historic firm yield (HFY) and 1:100 year stochastic yield of a 7.6 million m³ capacity Zalu Dam, and with abstractions of 6.0 million m^3/annum and 6.95 million m^3/annum respectively. This yield will be sufficient to supply the estimated future water requirement at 2040, i.e. 6.9 million m^3/a*" (DWA, 2011). In turn the Zalu dam will be either 612 masl or 622 masl and will supply the entire water yield to the Lusikisiki Regional Water Supply Scheme. This size dam will be able to support approximately 5.4 million m^3/annum 2040 domestic demand plus the 1.45 million m^3/annum irrigation demand, combined with adequate groundwater development of seventeen production boreholes with a yield of 0.93 million m³/annum (DWA, 2011).

The Ingquza Hill Local Municipality is not a water service authority; this impacts the ability of the municipality to directly respond to household water demands and the issues relating to potable water provision and indirectly sanitation. The lack of infrastructure within this municipal area reflects underdevelopment and a dire need for these basic services. The standard of living in this community will either remain the same or decline over time unless the necessary steps are taken to ensure access to water of an acceptable standard.

In 2011, the census undertaken revealed that the population of the Port St Johns Local Municipality was 156 136 (Stats SA, 2011). Of the economically active population, 50% was unemployed. 75% of households in the municipality do not have access to municipal water supply. The following table presents the water sources utilized within the municipality (Stats SA, 2011):

Water Source	Percentage of Population
River / stream	59.8%
Regional / local water scheme	19.6%
Spring	4.9%
Dam / pool / stagnant water	4.5%
Water tanker	3.3%
Rain water tank	3.1%
Borehole	3.0%

54.2% of the population uses pit toilets, and 3% use flush toilets. 32.1% do not have access to toilet facilities at all.

Reasons for this poor state of affairs (Port St Johns Integrated Development Plan: review 2013/2014):

- Negligence in the past;
- Outdated and decaying infrastructure;
- Vandalism and theft: linked to high levels of unemployment;
- Lack of skilled personnel

From the information presented on the Ingquza Hill and Port St Johns Local Municipalities, it is quite obvious that both of these municipalities are lacking much basic infrastructure, and that any properly considered infrastructure development would go a long way towards improving the lives of the occupants of these municipal areas.

4. ALTERNATIVES

According to regulation 28 (1) and (3) of the EIA regulations (2010), *A scoping report must include –*

(j) a description of identified potential alternatives to the proposed activity, including advantages and disadvantages that the proposed activity or alternatives may have on the environment and the community that may be affected by the activity

(3) The EAP managing the application must provide the competent authority with detailed, written proof of an investigation as required by section 24(4)(b)(i) of the Act and motivation if no reasonable or feasible alternatives, as contemplated in sub regulation (1)(c), exist.

One of the objectives of an EIA is to investigate alternatives to the proposed project. There are two types of alternatives - Fundamental Alternatives and Incremental Alternatives.

4.1 Fundamental Alternatives

Fundamental alternatives are developments that are totally different from the proposed project and usually involve a different type of development on the proposed site, or a different location for the proposed development.

4.1.1 Development Alternatives

The proposed development is for the provision of potable water to the Ingquza Hill Local Municipality. Due to the lack of infrastructure within the municipal area (as described above) and thus the dire need of basic service provision, the fundamental alternative of a development other than the proposed water supply scheme is therefore not feasible in this instance. For this reason no activity alternatives will be considered.

4.1.2 Location Alternatives

The LRWSS has been under consideration since the 1970's as a result a number of investigations have been undertaken, these include:

- Hill Kaplan Scott (HKS) (1979) Preliminary geological and soils investigation. This preliminary investigation did not include core drilling or detailed materials investigations.
- Hill Kaplan Scott (HKS) (1979) Design Report Volume II: Accompanying Drawings. This document includes (i) a geological map showing borehole positions on a scale of 1:1 000, (ii) borehole and geological long sections and (iii) a map showing borrow areas, trial hole positions and geology on a scale of 1:5 000.
- Council for Geoscience (CGS) (1999) Eastern Pondoland Basin Study: Zalu, Lusikisiki, Xura, Lower Mzintlava and Tunwane Dam Sites: First engineering geological reconnaissance report by GN Davis. CGS Report No. 1999-0133. This report deals with five alternative dam sites and contains a summary of the geotechnical information contained in the HKS (1979) Design Report.
- SRK Consulting (2009) Lusikisiki Groundwater Feasibility Study Phase II.

In addition to the above, AECOM SA (Pty) Ltd has completed a number of investigations for the Department of Water Affairs (Now DWS) as part of the Feasibility Study for the LRWSS, based on the previous investigations listed above. These reports and the DWS Report numbers are listed below.

Water Resources Assessment	P WMA 12/T60/00/3711
Assessment of Augmentation from Groundwater	P WMA 12/T60/00/3811
Intermediate Reserve Determination	P WMA 12/T60/00/3911
Legal, Institutional and Financial Arrangements	P WMA 12/T60/00/4011

Domestic Water Requirements	P WMA 12/T60/00/4111
Irrigation Potential Assessment	P WMA 12/T60/00/4211
Water Distribution Infrastructure	P WMA 12/T60/00/4311
Materials and Geotechnical Investigations	P WMA 12/T60/00/4411
Zalu Dam Feasibility Design	P WMA 12/T60/00/4511
Regional Economics	P WMA 12/T60/00/4611
Environmental Screening	P WMA 12/T60/00/4711
Record of Implementation Decisions	P WMA 12/T60/00/4811
Main Study Report	P WMA 12/T60/00/4911

Thus in light of the above and the considerable amount of work already undertaken to determine the position of the proposed dam and related infrastructure no location alternatives will be considered.

4.1.3 No Development Alternative

The no development option assumes the site remains in its current state. The no-go alternative will be used as a baseline throughout the assessment process against which potential impacts will be compared in an objective manner and will be fully assessed in the EIR.

4.2 Incremental Alternatives

Incremental alternatives are modifications or variations to the design of a project that provide different options to reduce or minimise environmental impacts. There are several incremental alternatives that can be considered, including:

- The design or layout of the activity (see section 4.2.1 below);
- The technology to be used in the activity(see section 4.2.2 below);

4.2.1 Layout Alternatives

The majority of the proposed development site is currently vacant and unutilized. In the EIA phase, various layouts (for the siting of infrastructure such as pipelines, reservoirs, etc.) will be assessed to determine which will have the least impact on fauna, flora and ecological processes. An ecological specialist, heritage specialist and agricultural specialist (to name but a few) have been appointed to assess the status of the fauna and flora and to determine the conservation status of the proposed development. The following criteria will be considered in determining the final layout: (1) recommendations from the various specialists (2) guidelines from relevant bioregional plans such as the Eastern Cape Biodiversity Conservation Plan (3) comments from I&APs and other stakeholders (4) site visits and (5) scientific publications.

4.2.2 Technology Alternatives

Various technology alternatives (i.e. size of pipelines and reservoirs) will be presented and assessed in the EIR. In addition to this the use of surface water, groundwater or a combination of both will be assessed in the EIR.

5. RELEVANT LEGISLATION

According to regulation 28 (1) and (2) of the EIA regulations (2010), *A scoping report must include –*

1(f) an identification of all legislation and guidelines that have been considered in the preparation of the scoping report

(2) In addition, a scoping report must take into account any guidelines applicable to the kind of activity which is the subject of the application.

In line with the above-mentioned legislative requirement, the development of the proposed project described in Chapter 2 above will be subject to the requirements of a number of laws as follows:

5.1 The Constitution

This is the supreme law of the land. As a result, all laws, including those pertaining to the proposed development, must conform to the Constitution. The Bill of Rights - Chapter 2 of the Constitution, includes an environmental right (Section 24) according to which, everyone has the right:

a) To an environment that is not harmful to their health or well-being; and

b) To have the environment protected for the benefit of present and future generations, through reasonable legislative and other measures that:

(i) Prevent pollution and ecological degradation;

(ii) Promote conservation; and

(iii) Secure ecologically sustainable development and use of natural resources while promoting justifiable economic and social development.

Relevance to the proposed water supply scheme:

- Obligation to ensure that the proposed development will not result in pollution and ecological degradation; and
- Obligation to ensure that the proposed development is ecologically sustainable, while demonstrating economic and social development.

5.2 The National Environmental Management Act (NEMA) (107 of 1998)

The objective of NEMA is: "*To provide for co-operative environmental governance by establishing principles for decision-making on matters affecting the environment, institutions that will promote co-operative governance and procedures for coordinating environmental functions exercised by organs of state; and to provide for matters connected therewith*."

A key aspect of NEMA is that it provides a set of environmental management principles that apply throughout the Republic to the actions of all organs of state that may significantly affect the environment. The proposed development has been assessed in terms of possible conflicts or compliance with these principles. Section 2 of NEMA contains principles (see Box 1) relevant to the proposed project, and likely to be utilised in the process of decision making by DEA.

BOX 1: NEMA ENVIRONMENTAL MANAGEMENT PRINCIPLES

(2)	Environmental management must place people and their needs at the forefront of its concern, and serve their physical, psychological, developmental, cultural and social interests equitably.
(3)	Development must be socially, environmentally and economically sustainable.
(4)(a)	Sustainable development requires the consideration of all relevant factors including the following: i. That the disturbance of ecosystems and loss of biological diversity are avoided, or, where they cannot be altogether avoided, are minimised and remedied; ii. That pollution and degradation of the environment are avoided, or, where they cannot be altogether avoided, are minimised and remedied; iii. That waste is avoided, or where it cannot be altogether avoided, minimised and re-

	used or recycled where possible and otherwise disposed of in a responsible manner.
(4)(e)	Responsibility for the environmental health and safety consequences of a policy, programme, project, product, process, service or activity exists throughout its life cycle.
(4)(i)	The social, economic and environmental impacts of activities, including disadvantages and benefits, must be considered, assessed and evaluated, and decisions must be appropriate in the light of such consideration and assessment.
(4)(j)	The right of workers to refuse work that is harmful to human health or the environment and to be informed of dangers must be respected and protected.
(4)(p)	The costs of remedying pollution, environmental degradation and consequent adverse health effects and of preventing, controlling or minimising further pollution, environmental damage or adverse health effects must be paid for by those responsible for harming the environment.
(4)(r)	Sensitive, vulnerable, highly dynamic or stressed ecosystems, such as coastal shores, estuaries, wetlands, and similar systems require specific attention in management and planning procedures, especially where they are subject to significant human resource usage and development pressure.

As these principles are utilised as a guideline by the competent authority in ensuring the protection of the environment, the proposed development should, where possible, be in accordance with these principles. Where this is not possible, deviation from these principles would have to be very strongly motivated.

NEMA introduces the duty of care concept, which is based on the policy of strict liability. This duty of care extends to the prevention, control and rehabilitation of significant pollution and environmental degradation. It also dictates a duty of care to address emergency incidents of pollution. A failure to perform this duty of care may lead to criminal prosecution, and may lead to the prosecution of managers or directors of companies for the conduct of the legal persons.

In addition NEMA introduced a new framework for environmental impact assessments, the EIA Regulations (2010) discussed previously.

Relevance to the proposed water supply scheme:

- The developer must be mindful of the principles, broad liability and implications associated with NEMA and must eliminate or mitigate any potential impacts.
- The developer must be mindful of the principles, broad liability and implications of causing damage to the environment.

5.3 The National Environment Management: Biodiversity Act (10 of 2004)

This Act provides for the management and conservation of South Africa's biodiversity within the framework of the National Environmental Management Act 107 of 1998 (see Box 2 below). In terms of the Biodiversity Act, the developer has a responsibility for:

- The conservation of endangered ecosystems and restriction of activities according to the categorisation of the area (not just by listed activity as specified in the EIA regulations).
- Application of appropriate environmental management tools in order to ensure integrated environmental management of activities thereby ensuring that all developments within the area are in line with ecological sustainable development and protection of biodiversity.
- Limit further loss of biodiversity and conserve endangered ecosystems.

BOX 2: MANAGEMENT AND CONSERVATION OF SOUTH AFRICA'S BIODIVERSITY WITHIN THE FRAMEWORK OF NEMA

CHAPTER 4	
	Provides for the protection of species that are threatened or in need of national protection to ensure their survival in the wild; o to give effect to the Republic's obligations under international agreements regulating international trade in specimens of endangered species; and o ensure that the commercial utilization of biodiversity is managed in an ecologically sustainable way.
CHAPTER 5 (Part 2)	
Section 73	A person who is the owner of land on which a listed invasive species occurs must: a) notify any relevant competent authority, in writing, of the listed invasive species occurring on that land; b) take steps to control and eradicate the listed invasive species and to prevent it from spreading; and c) take all required steps to prevent or minimise harm to biodiversity.
Section 75	• Control and eradication of a listed invasive species must be carried out by means of methods that are appropriate for the species concerned and the environment in which it occurs. • Any action taken to control and eradicate a listed invasive species must be executed with caution and in a manner that may cause the least possible harm to biodiversity and damage to the environment. • The methods employed to control and eradicate a listed invasive species must also be directed at the offspring, propagating material and re-growth of such invasive species in order to prevent such species from producing offspring, forming seed, regenerating or re-establishing itself in any manner.

The objectives of this Act are to provide, within the framework of the National Environmental Management Act, for:

- The management and conservation of biological diversity within the Republic;
- The use of indigenous biological resources in a sustainable manner.

The Act's permit system is further regulated in the Act's Threatened or Protected Species Regulations, which were promulgated in February 2007.

Relevance to the proposed water supply scheme:

- The proposed development must conserve endangered ecosystems and protect and promote biodiversity;
- Must assess the impacts of the proposed development on endangered ecosystems;
- No protected species may be removed or damaged without a permit;
- The proposed site must be cleared of alien vegetation using appropriate means

5.4 The National Forests Act (84 of 1998)

The objective of this Act is to monitor and manage the sustainable use of forests. In terms of Section 12 (1) (d) of this Act and GN No. 1012 (promulgated under the National Forests Act), no person may, except under licence:

- Cut, disturb, damage or destroy a protected tree; or
- Possess, collect, remove, transport, export, purchase, sell, donate or in any other manner acquire or dispose of any protected tree or any forest product derived from a protected tree.

Relevance to the proposed water supply scheme:

- If any protected trees in terms of this Act occur on site, the developer will require a licence from the DAFF to perform any of the above-listed activities.

5.5 National Heritage Resources Act (25 of 1999)

The protection of archaeological and paleontological resources is the responsibility of a provincial heritage resources authority and all archaeological objects, paleontological material and meteorites are the property of the State. "*Any person who discovers archaeological or paleontological objects or material or a meteorite in the course of development must immediately report the find to the responsible heritage resources authority, or to the nearest local authority offices or museum, which must immediately notify such heritage resources authority*".

Relevance to the proposed water supply scheme:

- An archaeological impact assessment must be undertaken during the detailed EIR phase of the proposed project.
- No person may alter or demolish any structure or part of a structure, which is older than 60 years or disturb any archaeological or paleontological site or grave older than 60 years without a permit issued by the relevant provincial heritage resources authority.
- No person may, without a permit issued by the responsible heritage resources authority destroy, damage, excavate, alter or deface archaeological or historically significant sites.

5.6 National Environmental Management: Air Quality Act (39 of 2004)

The objective of the Air Quality Act is to protect the environment by providing the necessary legislation for the prevention of air pollution.

Relevance to the proposed water supply scheme:

- The "best practicable means" for the abatement of dust during construction if approved have to be taken.
- All appliances used for preventing or reducing to a minimum the escape into the atmosphere of noxious or offensive gases have to be properly operated and maintained and the best practice means for achieving this implemented.

5.7 Occupational Health and Safety Act (85 of 1993)

The objective of this Act is to provide for the health and safety of persons at work (See Box 3 below). In addition, the Act requires that, "*as far as reasonably practicable, employers must ensure that their activities do not expose non-employees to health hazards*" (Glazewski, 2005: 575). The importance of the Act lies in its numerous regulations, many of which will be relevant to the proposed development. These cover, among other issues, noise and lighting.

Relevance to the proposed water supply scheme:

- The developer must be mindful of the principles and broad liability and implications contained in the OHSA and mitigate any potential impacts.

BOX 3: HEALTH AND SAFTY OF PERSONS AT WORK ACCORDING TO THE OCCUPATIONAL HEALTH AND SAFETY ACT

	8: GENERAL DUTIES OF THE EMPLOYERS TO THEIR EMPLOYEES
(1)	Every employer shall provide and maintain, as far as is reasonably practicable, a working environment that is safe and without risk to the health of his employees.
(2)	Without derogating from the generality of an employer's duties under subsection (1), the matters to which those duties refer include in particular- a) The provision and maintenance of systems of work, plant and machinery that, as far as is reasonably practicable, are safe and without risks to health; b) Taking such steps as may be reasonably practicable to eliminate or mitigate any hazard or potential hazard to the safety or health of employees, before resorting to personal protective equipment; d) Establishing, as far as is reasonably practicable, what hazards to the health or safety of persons are attached to any work which is performed, any article or substance which is produced, processed, used, handled, stored or transported and any plant or machinery which is used in his business, and he shall, as far as is reasonably practicable, further establish what precautionary measures should be taken with respect to such work, article, substance, plant or machinery in order to protect the health and safety of persons, and he shall provide the necessary means to apply such precautionary measures; e) Providing such information, instructions, training and supervision as may be necessary to ensure, as far as is reasonably practicable, the health and safety at work of his employees; f) As far as is reasonably practicable, not permitting any employee to do any work or to produce, process, use, handle, store or transport any article or substance or to operate any plant or machinery, unless the precautionary measures contemplated in paragraphs (b) and (d), or any other precautionary measures which may be prescribed, have been taken; g) Taking all necessary measures to ensure that the requirements of this Act are complied with by every person in his employment or on premises under his control where plant or machinery is used; h) Enforcing such measures as may be necessary in the interest of health and safety; i) Ensuring that work is performed and that plant or machinery is used under the general supervision of a person trained to understand the hazards associated with it and who have the authority to ensure that precautionary measures taken by the employer are implemented; and authority as contemplated in Section 37 (1) (b).
	14: GENERAL DUTIES OF EMPLOYEES AT WORK **Every employee shall at work:-**
(a)	Take reasonable care for the health and safety of himself and of other persons who may be affected by his acts or omissions;
(b)	As regards any duty or requirement imposed on his employer or any other person by this Act, cooperate with such employer or person to enable that duty or requirement to be performed or complied with;
(c)	Carry out any lawful order given to him, and obey the health and safety rules and procedures laid down by his employer or by anyone authorized thereto by his employer, in the interest of health or safety;
(d)	If any situation which is unsafe or unhealthy comes to his attention, as soon as practicable report such situation to his employer or to the health and safety representative for his workplace or section thereof, as the case may be, who shall report it to the employer; and
(e)	If he is involved in any incident which may affect his health or which has caused an injury to himself, report such incident to his employer or to anyone authorized thereto by the employer, or to his health and safety representative, as soon as practicable but not later than the end of the particular shift during which the incident occurred, unless the circumstances were such that the reporting of the incident was not possible, in which case he shall report the incident as soon as practicable thereafter.
	15: DUTY NOT TO INTERFERE WITH, DAMAGE OR MISUSE THINGS **[S. 15 substituted by S. 3 of Act No. 181 of 1993.]**
	No person shall intentionally or recklessly interfere with, damage or misuse anything which is provided in the interest of health or safety.

5.8 National Water Act (36 of 1998)

The Act regulates the protection, use, development, conservation, management and control of water resources in South Africa. The principal concerns in terms of the Act are the potential for the proposed development to pollute surface and groundwater resources, and to ensure that water is used as efficiently as possible.

Relevance to the proposed water supply scheme:

The following activities will require an application for a water use licence as stipulated in Section 21 of the Act:
(a) Taking water from a water resource;
(b) Storing water;
(c) Impeding or diverting the flow of water in a watercourse;
(d) Engaging in a stream flow reduction activity contemplated in section 36;
(f) Discharging waste or water containing waste into a water resource through a pipe, canal, sewer, sea outfall or other conduit;
(i) Altering the bed, banks, course or characteristics of a watercourse;
(j) Removing, discharging or disposing of water found underground if it is necessary for the efficient continuation of an activity or for the safety of people.

5.9 Hazardous Substances Act (15 of 1973)

The Act aims to manage hazardous substances. It is the principal national legislation that controls the transportation, and manufacturing, storage, handling, treatment or processing facilities for any substance that is dangerous or hazardous (Groups I-IV). Specific regulations governing the conveyance of hazardous substances, including Group I substances, by road may also be relevant.

Relevance to the proposed water supply scheme:

- Manage the hazardous waste in such a manner that it does not endanger human health or the environment.
- Prevent the waste from being used for an unauthorised purpose.

5.10 The Environment Conservation Act (73 of 1989)

The purpose of this Act is to provide for the effective protection and controlled utilization of the natural environment governed by the following regulations:

Protection of the natural environment:
- An area can be declared by a competent authority to be a protected natural environment.
- Every owner/holder of land situated within a declared protected natural environment shall comply with directions issued by the competent authority.

Control of activities which may have a detrimental effect on the environment
- No person shall undertake an activity or cause an activity which may have a detrimental effect on the environment without written consent from the competent authority
- Such land activities include:
    - Land use and transformation;
    - Water use and disposal;
    - Resource removal, including natural living resources;
    - Resource renewal;
    - Agricultural processes;
    - Industrial processes;
    - Transportation;
    - Energy generation and distribution; and
    - Recreation.

Implications for the proposed water supply scheme:

- The developer must be mindful of the principles, broad liability and implications associated with the ECA and must eliminate or mitigate any potential impacts.
- The developer must be mindful of the principles, broad liability and implications of causing damage to the environment.

5.11 Nature and Environmental Conservation Ordinance (19 of 1974)

The purpose of this ordinance is to consolidate and amend the laws relating to nature and environmental conservation. This ordinance provides a schedule of endangered and protected wild animals and flora.

The competent authority may:

- Establish a provincial nature reserve on any land under his control or management; and
- By agreement or expropriation acquire any land which he considers necessary and suitable for the purpose of establishing a provincial nature reserve thereon.

Responsibility of a private nature reserve owner:

- Manage, control and develop such reserve for the propagation, protection and preservation of fauna and flora

Implications for the water supply scheme:

- If any fauna and/or fauna listed in terms of the Nature and Environmental Conservation Ordinance are found on site the appropriate permits will have to be acquired for the removal thereof.

5.12 National Environmental Management: Protected Areas Act (31 of 2004)

The purpose of this Act is to provide for the protection and conservation of ecologically viable areas representative of South Africa's biological diversity and its natural landscapes and seascapes.

The objectives of this Act are-

- To provide, within the framework of national legislation, including the National Environmental Management Act, for the declaration and management of protected areas;
- To provide for co-operative governance in the declaration and management of protected areas;
- To effect a national system of protected areas in South Africa as part of a strategy to manage and conserve its biodiversity;
- To provide for a representative network of protected areas on state land, private land and communal land;
- To promote sustainable utilisation of protected areas for the benefit of people, in a manner that would preserve the ecological character of such areas;
- To promote participation of local communities in the management of protected areas, where appropriate; and
- To provide for the continued existence of South African National Parks.

Implications for the proposed water supply scheme:

- The study area lies adjacent to the Mkambati Nature Reserve and the Pondoland Marine Protected Area.

5.13 Conservation of Agricultural Resources Act (43 of 1983)

The purpose of this Act is to provide for control over the utilization of the natural agricultural resources in order to promote the conservation of the soil, the water sources and the vegetation and the combating of weeds and invader plants.

This is achieved by

- Maintaining the production potential of the affected land,
- Preventing and combating erosion,
- Preventing and combating weakening or destruction of the water sources, and
- Protecting vegetation and combating of weeds and invader plants.

The Act provides a list of declared weeds and invader plants as well as indicators of bush encroachment.

In terms of weeds and invader plants:

- A land user shall control any category 1 plants that occur on any land or inland water surface.
- No person shall, except in or for purposes of a biological control reserve –
    - Establish, plant, maintain, multiply or propagate weeds and invader plants;
    - Import or sell propagating material of category weeds and invader plants; and
    - Acquire propagating material of weeds and invader plants

Implications for the proposed water supply scheme:

- If any declared weed and/or invader species listed in terms of this Act is present on site, it will have to be removed.

5.14 Municipal by-laws and planning

There will be certain requirements related to the health and safety during construction and approval of method statements, particularly for excavation work. Certain activities related to the proposed development may, in addition to National legislation, be subject to control by municipal by-laws including the Qaukeni Local Municipality Spatial Development Framework (SDF, 2005) and the Ingquza Hill Local Municipality Integrated Development Plan (IDP: 2014/2015).

The proposed Zalu Dam (on the Xura River) will consist of an earth core rockfill dam with a full supply level of 612 masl (approximately 35 m high). It is anticipated that the dam will yield 6.95 million m^3/a at 1:100 year assurance of supply. The domestic requirement is 5,4 million m^3/a in 2040, the irrigation requirements 1,45 million m^3/a (including 10% losses) and the 1:1 year ecological freshet requirement is 8 m^3/s for a period of three days per year.

5.14.1 The Qaukeni Local Municipality SDF (2005)

According to the Qaukeni Local Municipality SDF, the total population of the area is approximately 255 374, with a total number of 50 380 households and 5 occupants per household. According to the DWAF database (2002), a mere 13,4% of the total population currently receive a level of service above the RDP standards while only 2,9 % of the population receive a level of service for sanitation above RDP standards. The aim of the SDF was to meet all the targets of the Government's Strategic Framework for Water Services by December 2010 (Qaukeni Local Municipality SDF, 2005).

A number of water resources and area planning studies are planned for this Municipal area and the following important points have been outlined by the Qaukeni Local Municipality SDF (2005) to be taken into consideration:

- *"The groundwater potential of the area is currently being underutilised. However, despite the groundwater generally being of adequate quality, the geology of the area is such that borehole yields or generally low. Therefore the use of groundwater would generally be more suitable for local supply schemes, or to augment supplies to larger supply schemes;*
- *The region has significant surface water development potential, which far exceeds the projected future demands of the region;*
- *The rivers in the area are however considered to be in a relatively pristine state and therefore of significant conservation value. Furthermore, the estuaries are reported to be very sensitive to disturbances which may lead to mouth closures (i.e. reduced fresh water inflow);*
- *Therefore, despite the high run-offs in the area, the riverine and particularly the estuarine flow requirements are such that the ecological water requirements represent a significant portion of the run off"*

This implies that the lack of basic access to potable water and sanitation not only affects the livelihoods of the communities but also increases ecological impacts. The constant abstraction of water from natural water sources will ultimately result in water losses, ecological degradation and negative impacts on the ecological functioning of downstream river reaches and estuaries (Qaukeni Local Municipality SDF, 2005). Ultimately, this would mean that surface water schemes may not be able to be supplied via river-runoff, and that some form of storage may be required.

5.14.2 The Ingquza Hill Local Municipality IDP (2014/2015)

According to the Ingquza Hill Local Municipality IDP, service delivery and infrastructure development is a key issue in the Municipal area. The IDP recorded 1 472 880 households that benefit from water provision, compared to 1 174 187 in 2009 (12% increase); 1 301 615 households now have access to sanitation services, compared to 920 308 in 2009 (22% increase) and 1 301 615 households are currently benefitting from electricity provision, compared to only 602 961 households in 2009 (38% increase). However despite these improvements a large number of the population (24 000) still depend on water from the surrounding natural water resources.

In terms of water provision the IDP outlines that a programme to rehabilitate 35 dams has been completed, and work is in progress on the country's five large water transfer schemes. The Municipal Infrastructure Grant (MIG) is also available and will be utilized to provide service in an attempt to significantly improve the water provision situation.

5.15 Possible benefits of the development to the local community

The development is expected to supply various municipal areas with potable water. Furthermore, various employment opportunities will be created for local labourers during both the construction and operation phases of the proposed development.

6. DESCRIPTION OF THE AFFECTED ENVIRONMENT

According to regulation 28 (1) of the EIA regulations (2010), *A scoping report must include –*
(e) a description of the environment that may be affected by the activity and the manner in which activity may be affected by the environment

In line with the above-mentioned legislative requirement, this chapter provides a description of the natural and socio-economic environments that could potentially be impacted by the proposed development.

6.1 Climate

The project area occurs within a summer rainfall area and is characterised by a warm, temperate and humid climate. Data taken from Lusikisiki town and Port St Johns indicate that the area receives an average between 950 and 1 250 mm of rainfall per annum (Buhmann *et al.,* 2006) with the highest rainfall occurring in November and March and the lowest rainfall occurring in June (www.saexplorer.co.za). Temperatures range from 27^0 C in February to 15^0 C in July.

6.2 Topography

The project area is characterised by coastal plateaus that are deeply incised by numerous rivers, creating deep gorges. These areas are associated with the underlying Natal Group Sandstones and hard quartzitic rock. Further inland, the project area is characterised by gentle, undulating hills associated with the underlying Dwyka and Ecca groups (Plate 6.1).

Plate 6.1: The general topography characteristic of the study area.

6.3 Geology and Soils

The underlying geology of the area is comprised of a combination of hard quartzite rock of the Natal Group Sandstones and tillite, shale, mudstone and sandstone of the Karoo Sequence. The Natal Group Sandstone gives rise to sandy, highly leached and relatively shallow soils which are not suitable for intensive agriculture (Nicolson, 1993). Soils associated with the Karoo Supergroup are characterised as being acidic, leached, heavy soils (Mucina and Rutherford, 2006).

6.4 Current Land Use

The majority of the project area has been transformed by anthropogenic activities such as overgrazing and active clearing/burning for improved pastures. The area is used for communal grazing and the site visit indicates that this area is generally overgrazed by livestock such as cattle, goats and sheep (Plate 6.2).

There is limited agriculture in the area and what does exist occurs mostly near homesteads.

Plate 6.2: The current land use characteristic of the study area.

6.5 Vegetation of the study area

6.5.1 Regional Vegetation

Mucina and Rutherford

Mucina and Rutherford (2006) have developed the National Vegetation map as part of a South African National Biodiversity Institute (SANBI) funded project: "It was compiled in order to provide floristically based vegetation units of South Africa, Lesotho and Swaziland at a greater level of detail than had been available before." The map was developed using a wealth of data from several contributors and has allowed for the best national vegetation map to date, the last being that of Adcocks developed over 50 years ago. This map forms the base of finer scale bioregional plans such as STEP. This SANBI Vegmap project has two main aims:

- "to determine the variation in and units of southern African vegetation based on the analysis and synthesis of data from vegetation studies throughout the region, and
- to compile a vegetation map. The map was to accurately reflect the distribution and variation on the vegetation and indicate the relationship of the vegetation with the environment. For this reason the collective expertise of vegetation scientists from universities and state departments were harnessed to make this project as comprehensive as possible."

The map and accompanying book describe each vegetation type in detail, along with the most important species including endemic species and those that are biogeographically important. This is the most comprehensive data for vegetation types in South Africa.

Mucina and Rutherford (2006) define the following vegetation types that occur within the project area (Figure 6.1) and from which source these descriptions are derived:

Midlands Mistbelt Grassland
This vegetation type occurs in KwaZulu-Natal and the Easter Cape Provinces. It is characterised by a hilly and rolling landscape mainly associated with discontinuous east-facing scarp formed from dolerite intrusions. This vegetation type is dominated by forb-rich, tall sour *Themeda triandra* grasslands that have been transformed by the invasion of *Aristida junciformis subsp. junciformis.* Only a few patches of the original species-rich grassland remain. This vegetation type is classified as **Endangered** with a conservation target of 23%. Only 0.5% is statutorily conserved.

Ngonigoni Veld
Ngonigoni veld occurs in the KwaZulu-Natal and Eastern Cape Provinces from Melmoth in the north to Libode in the former Transkei. It is characterised as being dense, tall grassland dominated by *Aristida junciformis* and a low species diversity. This vegetation type is classified as **Vulnerable** with a conservation target of 25%. Less than 1% is statutorily conserved in the Opathe and Vernon Crookes Nature Reserves. Approximately 39% has been transformed for cultivation, plantations and urban development.

Pondoland-Natal Sandstone Coastal Sourveld
This vegetation type occurs in both KwaZulu-Natal and the Eastern Cape from Port St. Johns to Port Shepstone. It is characterised by coastal peneplains and gentle undulating hills with flat table-lands and very steep river gorges. This vegetation type is usually rich in grassland species diversity and is punctuated with scattered low shrubs and small trees. The conservation status of thus vegetation type is **Vulnerable** with a conservation target of 25%. Only 7% is statutorily conserved in the Mkambati Wildlife Reserve and Marine Sanctuary and Umtamvuna, Mbumbazi and Oribi Gorge Nature Reserves.

Transkei Coastal Belt
This vegetation type occurs as a narrow strip along the Wild Coast of the former Transkei in the Eastern Cape. It is characterised as being highly dissected and hilly with alternating steep slopes of low-reach river valleys and coastal ridges. It is comprised of a mosaic of grassland on the higher lying areas such as the hill tops and upper slopes and alternates with bush clumps and small forests. This vegetation type is classified as **Vulnerable** with a conservation target of 25%. Only 1 % is statutorily conserved and 20% has been transformed for cultivation.

Scarp Forest
Scarp Forest is found from the Eastern Cape to KwaZulu Natal, Mpumulanga and Swaziland. This vegetation type occurs as scattered patches of forest often associated with krantzes, scarps and coastal platforms. This vegetation type is usually found at low altitudes of between 50 and 600 m. Scarp Forests generally have a high biodiversity and are structurally diverse, multi-layered forests with well-developed canopy and understory tree layers but a poorly developed herb layer. This vegetation type is classified as **Least Threatened** in protected areas but vulnerable to over exploitation elsewhere. The conservation target is 40% and 20% is statutorily conserved in various reserves.

Eastern Valley Bushveld
This vegetation type occurs in KwaZulu-Natal and the Eastern Cape Provinces and occurs in deeply incised valleys of rivers. It is characterised as being a mosaic of semi deciduous savannah woodlands and thickets dominated by succulent species such as *Euphorbia* and *Aloe* species. Eastern Valley Bushveld is classified as **Least Threatened** with a conservation target of 25%. Only 0.8% is statutorily conserved in the Luchaba Wildlife reserve and the Oribi Gorge Nature reserve. 15% has been transformed by cultivation.

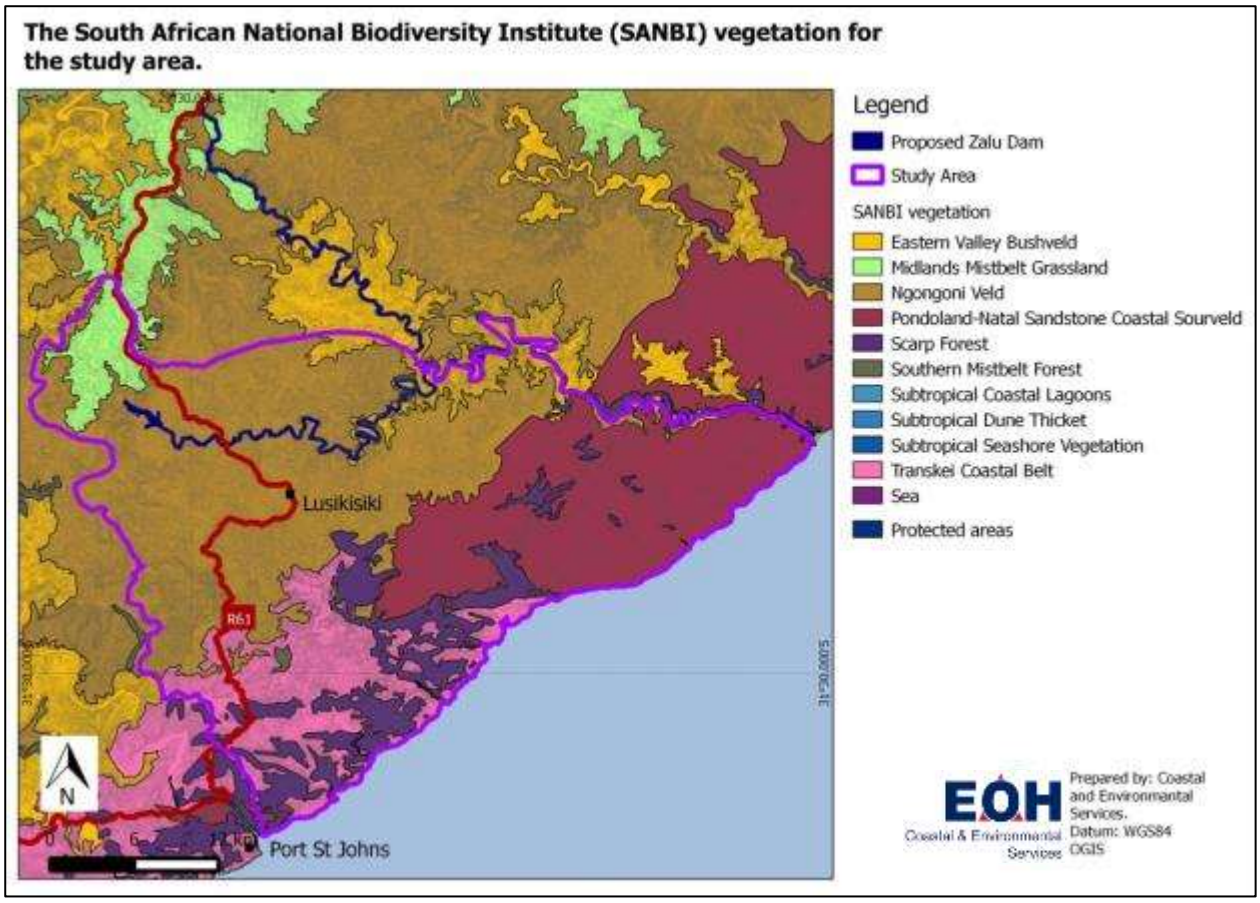


Figure 6.1: National Vegetation Map (Mucina and Rutherford, 2006) of the study area

6.6 Floristics

Flora refers to the particular plants that occur in an area, with reference to species which it contains, but also the genera or families. Plants are not evenly distributed, as they are confined to defined geographical ranges, and botanists classify the different ranges of species into regions, referred to as phytogeographic regions, where phyto means plants. These are very often associated with other features such as geology, climate, etc. In this way the world has been divided into phytogeographical regions, each with its own distinct complement of species (Good, 1974). Thus the Cape Flora is referred to, due to the species (or more specifically the taxa, i.e. families, genera, species etc.) that are typically found in that region of the Cape.

Plants endemic[1] to the Cape region are thus those that form the natural characteristics of the Cape flora and are confined to this region. Endemism is relative to scale, and it usually refers to the distributional range of these species, with the distribution being affected by historical, ecological or physiological reasons. Consequently, plants are referred to as being endemic to a particular region, e.g. the Cape, Transkei, Pondoland, etc. Plants occurring within that region are the endemics, and those which occur in the region and perhaps in a few isolated cases outside the region, are referred to as “near-endemics” (van Wyk and Smith, 2001).

[1] Endemic means restricted to a particular geographic region.

White (1983) defined regional centres of endemism as geographical regions with a particular combination of endemic plant species. He divided Africa into different phytogeographical regions (called phytochoria), and in this way identified regional centres of endemism, where each phytogeographical region (or phytochorion) had more than 50% of its species confined to that centre, and a total of more than 1 000 endemic species. He also identified regional transitional zones and regional mosaics, and floristically assigned the whole of Africa into phytogeographical regions or phytochoria. Centres of Endemism are therefore determined by the high concentration of plant species with a very restricted distribution (endemics). White's regions (1983) of particular concern in this study are the Maputuland-Pondoland region, stretching down the coast of south-east Africa and the Afromontane region, which extends down the mountainous areas of Africa into southern Africa.

In addition to this regional classification of floras, a focus on the main centres of endemism has been introduced by Myers (1988, 1990), who identified 18 major endemic centres on a global scale. Each of these is referred to as a "biodiversity hot spot", but they must have at least 1 500 endemic plant species and have lost 75% or more of their original vegetation. In other words, these diverse areas are under threat of destruction. Cowling and Hilton-Taylor (1994) carried this approach further for southern Africa, and identified various hot spots throughout our region. The Pondoland hot spot was one such area, and is therefore of particular concern for this study.

Species endemic to the area are described by Mucina and Rutherford (2006). In addition to the endemic taxa, there are also a number of species expected to be found in the study area, some of which are listed as protected by various conservation bodies. The list is not complete as many species and taxa require additional study. The taxa with many data deficient species include specifically the Mesembryanthemaceae family, as well as members of the Amaryllidaceae (Amaryllids), Iridaceae (Irises), Orchidaceae (Orchids) and Apocynaceae (Lianas), as well as members of the genus Aloe.

Potential Species of Conservation Concern (SCC) include all those plants listed in terms of the International Union for Conservation of Nature (IUCN), Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) and both national and provincial legislation that may occur in the area of study. The list of potential SSC includes an estimated 450 species which are listed individually by the IUCN red data list, the South African National Biodiversity Institute (SANBI) and the Forests Act. Table 6.1 is a summary of the number of potential SCC that could occur in the area based on historical records for the region (SIBIS, 2013). A full list of species of conservation concern is included in Appendix A.

Table 6.1: A summary of the number of plant species that occur on the various conservation bodies lists

Conservation Body	IUCN	Number of Species
International Union for Conservation of Nature (IUCN)	Vulnerable	15
	Endangered	3
	LR/cd	2
	LR/lc	2
	LR/nt	3
	Data Deficient	2
SA Red Data List	Critically Rare	4
	Endangered	15
	Vulnerable	43
	Near Threatened	29
	Rare	12
	Declining	17
	Data Deficient	7
National Environmental Management of Biodiversity Act (NEMBA)	Critically Endangered	1
	Endangered	1
	Protected	2
	Vulnerable	1
Provincial National Conservational Ordinates (PNCO)	Schedule 3	2
	Schedule 4	226
Protected Trees		16

6.7 Fauna

6.7.1 Amphibians and Reptiles

Amphibians and reptiles are well represented in sub-Saharan Africa. However, distribution patterns in southern Africa are uneven both in terms of species distribution and in population numbers (du Preez and Carruthers, 2009). Climate, centres of origin and range restrictions are the three main factors that determine species distribution. The eastern coast of South Africa has the highest amphibian diversity and endemicity while reptile diversity is generally highest in the north eastern extremes of South Africa and declines to the south and west (Alexander and Marais, 2010).

Amphibians

Amphibians are important in wetland systems, particularly where fish are excluded or of minor importance. In these habitats, frogs are dominant predators of invertebrates. Reports of declining amphibian populations continue to increase globally, even in pristine protected areas (Phillips 1994). These declines are not simple cyclic events; for example, frogs have been identified as bio-indicator species that reflect the wellbeing of aquatic ecosystems (Poynton and Broadley 1991). Frog abundance and diversity is a poignant reflection of the general health and well-being of aquatic ecosystems. According to historical records, 23 species of frog have been documented in the Quarter Degree Squares that the project area falls in. One of these species is listed as Endangered (*Natalobatrachus bonebergi*) and one is listed as Vulnerable (*Afrixalus spiniforns*).

Reptiles

South Africa has 350 species of reptiles, comprising 213 lizards, 9 worm lizards, 105 snakes, 13 terrestrial tortoises, 5 freshwater terrapins, 2 breeding species of sea turtle and 1 crocodile (Branch, 1998). Of those 350 reptile species, the Eastern Cape is home to 133 which include 21 snakes, 27 lizards and eight chelonians (tortoises and turtles). The majority of these are found in Mesic Succulent Thicket and riverine habitats. Consultation of the Animal Demography Unit historical records indicates that 37 species of reptiles are likely to occur in the project site. One of these (*Bradypodion caffer* – Pondo Dwarf Chameleon) is classified as Endangered and one is listed as Vulnerable (*Bradypodion melanocephalum* – KwaZulu Dwarf Chameleon) (Southern African Reptile Conservation Assessment (SARCA), 2014)

6.7.2 Birds

Nine bird species are endemic to South Africa, but there are no Eastern Cape endemics. However, there are 62 threatened species within the Eastern Cape Province (Barnes, 2000). Most of these species occur in grasslands or are associated with wetlands, indicating a need to conserve what is left of these ecosystems (Barnes, 2000). Historical records indicate that there are three **Endangered** species, eight **Vulnerable** species and eight **Near Threatened** species likely to occur in the area (Table 6.2).

Table 6.2: Threatened bird species that are likely to occur in the project area (BirdlifeSA, 2012).

Scientific Name	Common name	Red List status
Balearica regulorum	Grey Crowned Crane	Endangered
Spheniscus demersus	African Penguin	Endangered
Zoothera guttata	Natal Thrush	Endangered
Campethera notata	Knysna Woodpecker	Near Threatened
Neotis denhami	Denham's Bustard	Near Threatened
Polemaetus bellicosus	Martial Eagle	Near Threatened
Coracias garrulus	European Roller	Near Threatened
Haematopus moquini	African Black Oystercatcher	Near Threatened
Phalacrocorax capensis	Cape Cormorant	Near Threatened
Puffinus griseus	Sooty Shearwater	Near Threatened
Stephanoaetus coronatus	Crowned Eagle	Near Threatened
Bradypterus sylvaticus	Knysna Scrub-Warbler	Near Threatened
Bucorvus leadbeateri	Southern Ground-hornbill	Near Threatened
Geronticus calvus	Southern Bald Ibis	Near Threatened
Gyps coprotheres	Cape Vulture	Near Threatened
Morus capensis	Cape Gannet	Near Threatened
Procellaria aequinoctialis	White-chinned Petrel	Near Threatened
Circus maurus	Black Harrier	Vulnerable
Sagittarius serpentarius	Secretary Bird	Vulnerable

6.7.3 Mammals

Large game makes up less than 15% of the mammal species in South Africa and a much smaller percentage in numbers and biomass. In developed and farming areas, this percentage is greatly reduced, with the vast majority of mammals present being small or medium-sized. The conservation status of South African mammals has recently been re-assessed and a number of species have been downgraded, for example, the African wild cat, Aardvark, Blue duiker, and Honey badger are no longer considered threatened.

It is unlikely that there are any large mammals remaining in the area. Mammals that still occur in the area are likely to be limited to small (e.g. rodents) and the occasional medium sized animals such as duiker in forest patches.

6.8 Conservation and Spatial Planning Tools

Several conservation planning tools are available for the area. These tools allow for the determination of any sensitive and important areas from a vegetation and faunal perspective at the early stage of a development. They allow for the fine-tuning of plans and infrastructure layouts with a view to reducing potential environmental impacts at the planning stage of the development.

The tools used are outlined in Table 6.3 below.

Table 6.3: Conservation and planning tools considered for the proposed Lusikisiki Regional Water Supply Scheme

Tool	Motivation	Relevancy	Implications
NATIONAL			
Protected Areas	Protected areas are areas that are already conserved. Areas in close proximity to the proposed development may be affected by the development and thus must be taken into account.	***Relevant.*** The study site lies adjacent to the Mkambati Nature Reserve and the Pondoland Marine Protected Area (Figure 6.2).	Since the study area is less than 10 km from a national protected area the activity will trigger activities on Listing notice 3 of GNR 546 EIA regulations dated 18 June 2010. Identified activities that will be triggered are reproduced in Table 1.1. See section 6.8.1 for further details. An ecological assessment will be conducted during the EIA phase.
National Protected Areas Expansion Strategy (NPAES)	The objective of the NPAES is to form an overarching strategic framework for a protected area network that 'conserves a comprehensive, representative and adequate sample of biodiversity and maintains key ecological processes across the landscape and seascape.' The areas earmarked by this study should be protected.	**Relevant.** The study site falls within the Pondoland NPAES focus area (Figure 6.2).	Since this development occurs in areas designated as part of the Protected Areas Expansion Strategy it will trigger activities on Listing notice 3 of GNR 546 EIA regulations dated 18 June 2010. Identified activities that will be triggered are reproduced in Table 1.1. See section 6.8.2 for further details. PAES and their relevance will be discussed in further detail in the ecological specialist study.
National Wetlands Inventory	Wetlands are very important aspects of the ecosystem as they are process areas. Not only do they form habitat for both flora and fauna, they also perform vital ecosystem functions. It is for this reason that wetlands are always rated with a high sensitivity and should be conserved.	**Relevant.** The proposed dam will impact the Xura River catchment area and access roads are likely to cross at least one water course (Figure 6.3).	Listing Notice 1 of GNR 544 EIA regulations dated 18 June 2010 and Listing Notice 3 of R546 EIA Regulations dated 18 June 2010 will be triggered by this development. The project will involve the construction of roads which are likely to cross drainage lines. This will be discussed in further detail during the EIA phase.

Tool	Motivation	Relevancy	Implications
National List of Ecosystems that are Threatened and in need of Protection. (NEMBA, Act 10 of 2004)	The National Environmental Management: Biodiversity Act provides a list of threatened terrestrial ecosystems. This has been established as little attention has historically been paid to the protection of ecosystems outside of protected areas. The purpose of listing threatened ecosystems is primarily to reduce the rate of ecosystem and species extinction. This includes preventing further degradation and loss of structure, function and composition of threatened ecosystems.	**Relevant**. Threatened ecosystems occur within the project site (Figure 6.4).	Further details are discussed in section 6.8.3.
Provincial			
The Eastern Cape Biodiversity Conservation Plan (ECBCP)	The Eastern Cape Biodiversity Conservation Plan (ECBCP) is responsible for mapping areas that are priorities for conservation in the province, as well as assigning land use categories to the existing land depending on the state that it is in (Berliner et al. 2007). Critical Biodiversity Areas (CBAs) are defined as "terrestrial and aquatic features in the landscape that are critical for conserving biodiversity and maintaining ecoystem functioning".	**Relevant.** The proposed project site occurs in areas classified as Critical Biodiversity Areas (CBA) 1 and 2 (Figure 6.5 and 6.6).	Since this development occurs in areas classified as CBA's it will trigger activities on Listing notice 3 of GNR 546 EIA regulations dated 18 June 2010. Identified activities that will be triggered are reproduced in Table 1.1. See section 6.8.4 for further details. CBA's and their relevance to the project will be further discussed during the EIA phase.

6.8.1 Protected Areas

The study area lies adjacent to the Mkambati Nature Reserve and the Pondoland Marine Protected Area. According to the National Environmental Management: Protected Areas (Act No 57 of 2003) the declaration of protected areas is:

- *"to protect ecologically viable areas representative of South Africa's biological diversity and its natural landscapes and seascapes in a system of protected area;*
- *to preserve the ecological integrity of these areas;*
- *to conserve biodiversity in these areas;*
- *to protect areas representative of all ecosystems, habitats and species naturally occurring in South Africa;*
- *to protect South Africa's threatened or rare species;*
- *to protect an area which is vulnerable or ecologically sensitive;*
- *to assist in ensuring the sustained supply of environmental goods and services*
- *to provide for the sustainable use of natural or biological resources;*
- *to create or augment destinations for nature based tourism;*
- *to manage the inter-relationship between natural environment biodiversity, human settlement and economic development;*
- *generally to contribute to human, social, cultural, spiritual and economic development;*
- *to rehabilitate and restore degraded ecosystems and promote the recovery of endangered and vulnerable species"*

6.8.2 Protected Areas Expansion Strategy

A National Spatial Biodiversity Assessment was conducted in 2004, revealing a lack of protection for a representative sample of the country's biodiversity, nor conserving adequate process areas. The Protected Areas Expansion Strategy allows for increased conservation of these aspects of the country in order to meet national biodiversity targets. The strategy outlines two methods of expanding the current National Protected Areas:

- For public land, the declaration of available, under-utilised and strategic parcels of public land in concordance with the relevant legal requirements for disposal of such land;
- For private land, contractual agreements with the affected landowners.

An area is considered important for expansion if it contributes to meeting biodiversity thresholds, maintaining ecological processes or climate change resilience. Forty-two focus areas for land-based protected area expansion have been identified and are composed of large, intact and fragmented areas suitable for the creation or expansion of large protected areas. The study area falls within a section of the Pondoland focus area.

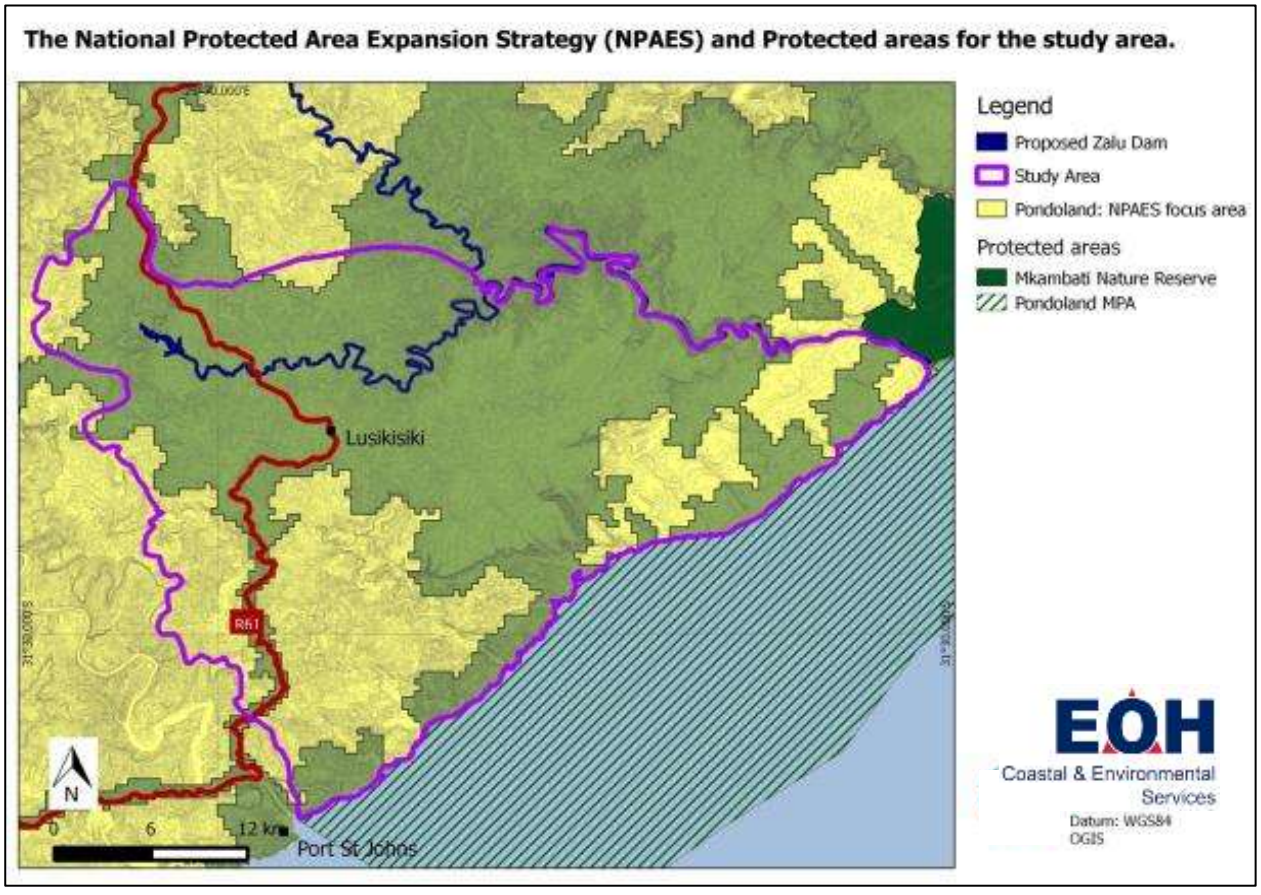


Figure 6.2: Terrestrial Protected Areas, Marine Protected Areas (MPA) and Expansion Strategy Areas that occur within and near the project study area.

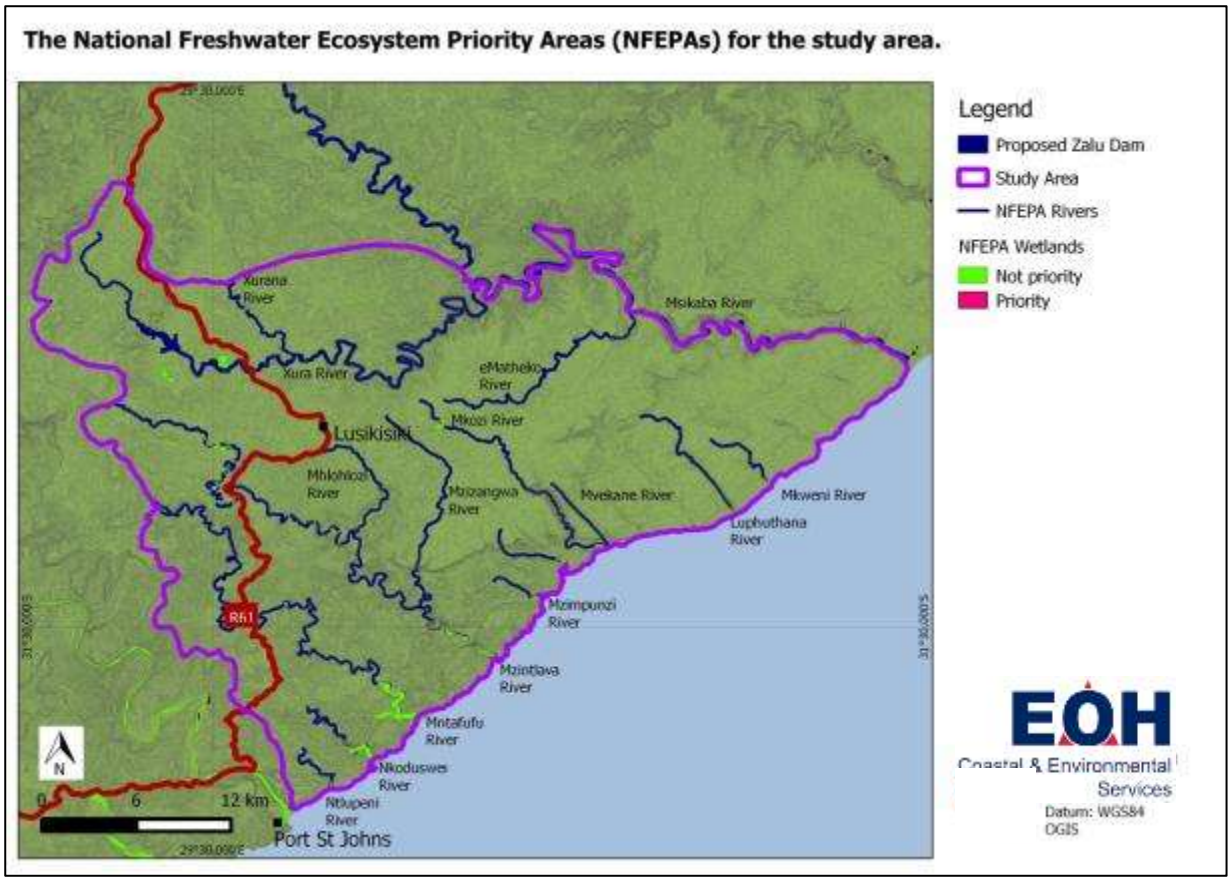


Figure 6.3: Threatened Ecosystems and the National Freshwater Ecosystems Priority Rivers relative to the study area

6.8.3 National List of Ecosystems that are threatened and in need of Protection (NEMBA, Act 10 of 2004)

The National Environmental Management: Biodiversity Act provides a list of threatened terrestrial ecosystems. This was established as little attention has historically been paid to the protection of ecosystems outside of protected areas. The purpose of listing threatened ecosystems is primarily to reduce the rate of ecosystem and species extinction. This includes preventing further degradation and loss of structure, function and composition of threatened ecosystems.

There are a number of patches of vegetation classified as threatened that fall within the project area (Figure 6.4).

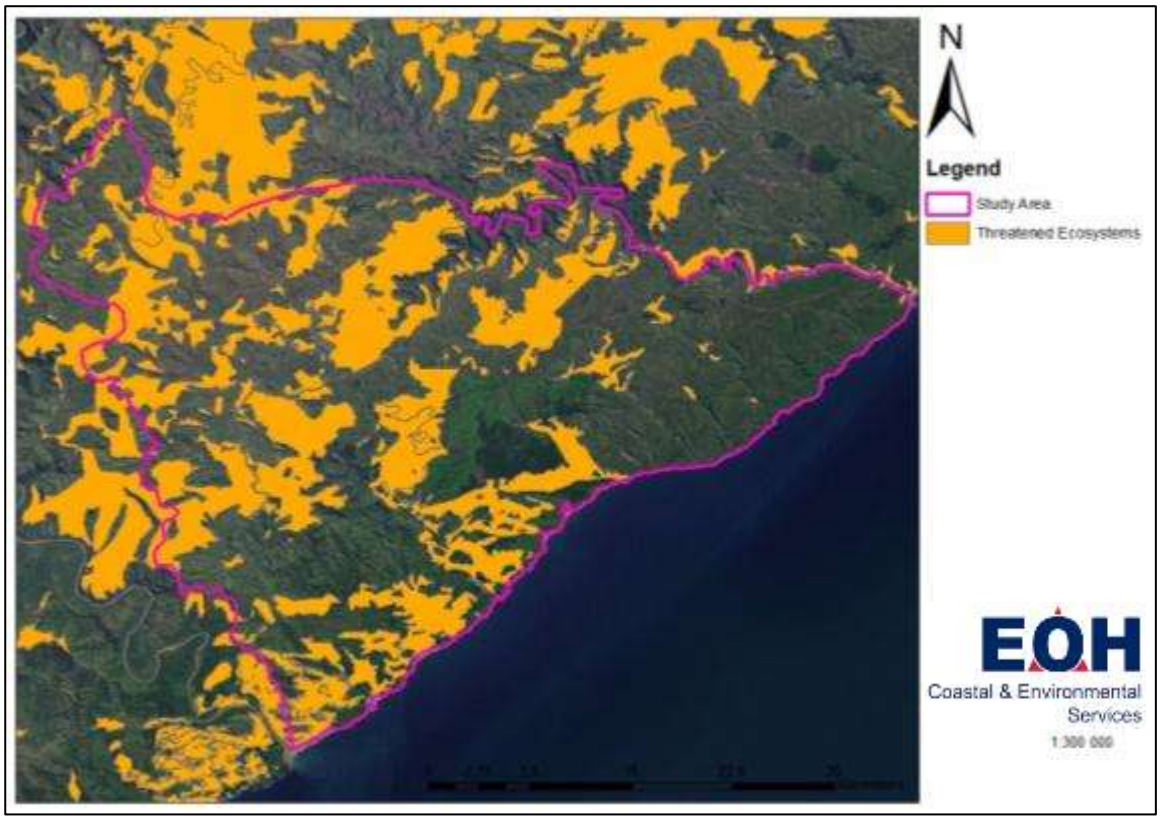


Figure 6.4: Threatened ecosystems found within the study area.

6.8.4 The Eastern Cape Biodiversity Conservation Plan

The Eastern Cape Biodiversity Conservation Plan (ECBCP) is responsible for mapping areas that are priorities for conservation in the province, as well as assigning land use categories to the existing land depending on the state that it is in (Berliner et al. 2007).

Critical Biodiversity Areas (CBAs) are defined by Berliner et al. (2007) as: *"CBAs are terrestrial and aquatic features in the landscape that are critical for conserving biodiversity and maintaining ecosystem functioning".* These areas are classified as natural to near-natural landscapes. In addition to the CBA's the ECBCP also defines Other Natural Areas (ONA) as well as Transformed Areas.

Biodiversity Land Management Classes (BLMCs) are also used in the plan: "Each BLMC sets out the desired ecological state that an area should be kept in to ensure biodiversity persistence. For example, BLMC 1 refers to areas which are critical for biodiversity persistence and ecosystem functioning, and which should be kept in as natural a condition as possible". Table 6.4 shows how the BLMCs relate to the CBAs.

Table 6.4: Terrestrial Critical biodiversity Areas and Biodiversity Land Management Classes as described by the Eastern Cape Biodiversity Conservation Plan.

CBA map category	Code	BLMC		Recommended land use objective
Protected areas	PA1	BLMC 1	Natural landscapes	Maintain biodiversity in as natural state as possible. Manage for no biodiversity loss.
	PA2			
Terrestrial CBA 1 (not degraded)	T1			
Terrestrial CBA 1 (degraded)	T1	BLMC 2	Near-natural landscapes	Maintain biodiversity in near natural state with minimal loss of ecosystem integrity. No transformation of natural habitat should be permitted.
Terrestrial CBA 2	T2			
	C1			
	C2			
Other natural areas	ONA T3	BLMC 3	Functional landscapes	Manage for sustainable development, keeping natural habitat intact in wetlands (including wetland buffers) and riparian zones. Environmental authorisations should support ecosystem integrity.
	ONA			
Transformed areas	TF	BLMC 4	Transformed landscapes	Manage for sustainable development.

The study site falls within terrestrial areas classified as CBA 1 and CBA 2 (Figure 4-5) as well as an estuarine CBA 2 area (Figure 4-6). ECBCP, although mapped at a finer scale than the National Spatial Biodiversity Assessment (Driver *et al*., 2005) is still, for the large part, inaccurate and "course". Therefore it is imperative that the status of the environment, for any proposed development MUST first be verified before the management recommendations associated with the ECBCP are considered (Berliner and Desmet, 2007). This will be done in the EIA phase by the ecological specialist.

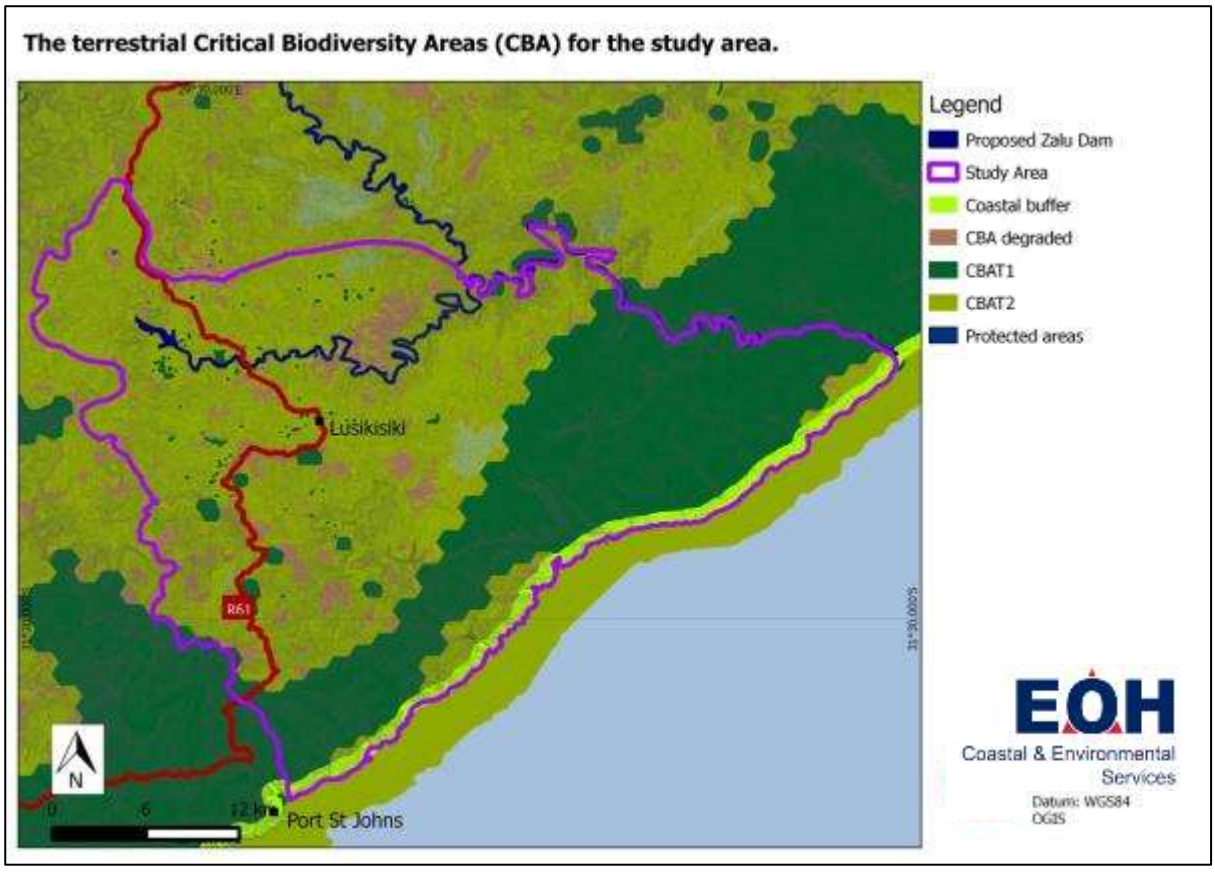


Figure 6.5: Terrestrial Critical Biodiversity Areas (CBAT) found within the project area.

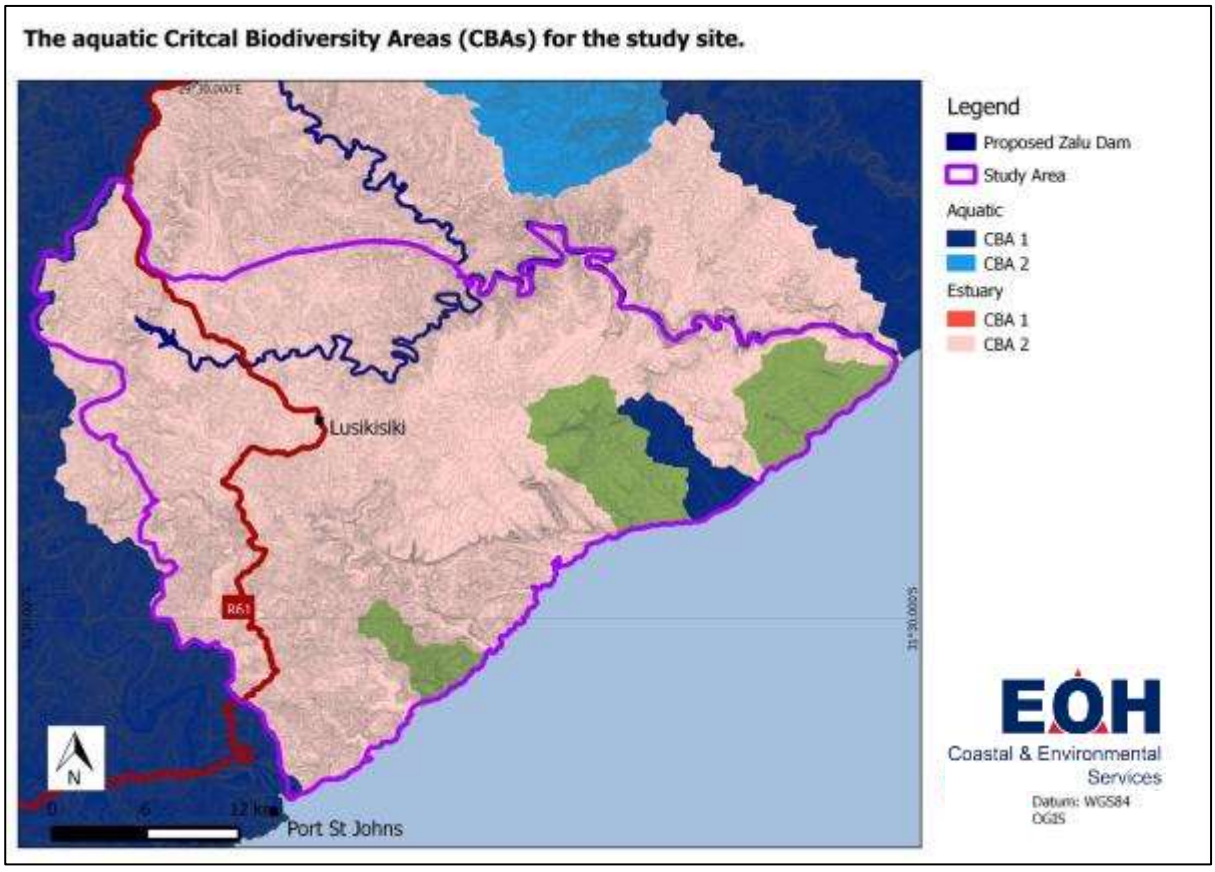


Figure 6.6: Aquatic Critical Biodiversity Areas (CBA) found within the project area. The green shaded area is not classified according to this data set.

6.9 Socio-economic Environment

Most of the data presented in this section was extracted from Census data for 2008/2011, The Qaukeni Local Municipality Spatial Development Framework (2005), The Eastern Cape, Socio-economic review and outlook (DEDEAT, 2013) and The Ingquza Hill Local Municipality Integrated Development Plan (2014/2015).

6.9.1 Introduction

The O.R. Tambo Region is one of the most densely populated regions within the country with a population of approximately 1.7 million people. The O.R Tambo district covers a geographical area of approximately 96 340 km^2 and is mainly rural (http://www.ortambodm.org.za/index.html). The Ingquza Hill Local Municipality (formally known as the Qaukeni Local Municipality) is one of seven municipalities within the O.R Tambo District Municipality. This municipality comprises of 25 wards and approximately 50 councillors. The Ingquza Hill Local Municipality covers an area of approximately 2 575 km^2 and is situated along the South-African coast in the Eastern Cape. The two main urban centres are the towns of Flagstaff and Lusikisiki. This municipality is a Category B municipality bound by Mbizana Local Municipality to the north, Port St Johns Local Municipality to the south, Ntabankulu Local Municipality to the West, King Sabata Dalindyebo Local Municipality to the south west and the Indian Ocean to the east (Qaukeni Local Municipality SDF, 2005). The R61 serves as the main road between Port St. Johns, Mbizana and Kokstad within this district (Qaukeni Local Municipality SDF, 2005).

The eastern and north-eastern boundaries of the Port St Johns Local Municipality are roughly formed by the Mzintlava River and Ingquza Hill Local Municipality. On the south and south-eastern side, the Indian Ocean is the boundary. The Mnenu River and the Nyandeni Local Municipality make up the western boundary. It has one town, located at the mouth of the Umzimvubu River, Port St Johns. The municipal area is broken up into 20 wards.

6.9.2 Land use

Rural areas and large tracts of undeveloped arable land cover the Ingquza Hill Local Municipal area. Predominant land use is subsistence agriculture with commercial agriculture activities occurring further inland (Qaukeni Local Municipality SDF, 2005). The majority of the land used by local communities for agriculture and forestry is communal land. The municipality also has no land use planning policy. This creates issues in terms of land invasion, resulting in the municipality being unable to prevent land invasion (Qaukeni Local Municipality SDF, 2005).

The Port St Johns Local Municipality is characterised by a predominantly scattered rural settlement pattern. In addition to the town of Port St Johns, the municipality comprises approximately 130 communities / villages distributed over a municipal area of 1 301 km^2. Nearly 90% of the dwellings in the municipality are located in traditional tribal settlements. Agriculture makes only a small contribution to the economy. Subsistence farming predominates.

6.9.3 Demographic profile (Age and gender)

Provincial

"*Demographic statistics are crucial to direct policies that affect socio-economic conditions of the province*" (DEDEAT, 2013). In 2011, the South African census data recorded 6.7 million people within the Eastern Cape Province, revealing an approximate growth of 4.5 % since 2001 (DEDEAT, 2013). This amounts to 12.8% of the national population making the Eastern Cape the third most populated province in the country. The Eastern Cape is comprised of a relatively young population with approximately 57% of the population made up of people under the age of 30. In terms of gender, the male population outnumbers the female population in the age groups below 20 years, while the older population (above 20 years) mainly consist of females (DEDEAT, 2013). The Eastern Cape is also ranked as the poorest Province in South Africa. The fertility rate for the Eastern Cape (3.4 children per woman) recorded in 2008, was the highest rate calculated for

South Africa and was found to be significantly higher than the national average. In the 2011 census, the fertility rate however declined, to approximately 2.8 children per woman. The majority of the mortality in the Eastern Cape, according to the 2011 census, was caused by Tuberculosis resulting in 15% of the death rate in the Eastern Cape, while other natural causes resulted in 50% of the mortalities in this Province.

Local

The Eastern Cape houses two Metropolitans and six District Municipalities. The Ingquza Hill Local Municipality (formerly known as the Qaukeni Local Municipality) is one of seven municipalities within the O.R Tambo District Municipal Area (DEDEAT, 2013). The majority of the population within the O.R. Tambo District comprises of females, outnumbering males by 4.5 % (DEDEAT, 2013). The Ingquza Hill Local Municipality IDP (2014/2015), ranks females at 55% of the total population and males 45%.

According to the Ingquza Hill Local Municipality IDP (2014/2015), approximately 46% of the total population are 15 years or younger, 48% are between the ages of 15 and 64 years and 6% of the population are 65 years and older (IDP, 2014/2015). This ultimately means that the population aged between 15 and 64 years have to support the remainder of the population. It was also recorded that most males tend to migrate to areas where employment and education is more abundant resulting in a population drop from 279 796 to 278 481 (IDP, 2014/2015).

In the census undertaken in 2011, the Port St Johns Local Municipality was found to have a population of 156,136. Of this total, 42.5% are between the age of 0 and 14; 51.8% between the age of 15 and 64; and the elderly (65+) make up 5.6%. Males make up 45.8% of the population.

6.9.4 Racial composition

The racial diversity of the Ingquza Hill Local Municipality is considered low with approximately 99% of the population being African (IDP, 2014/2015). The remainder of the population is comprised of coloured, white and Indian racial groups with 5.4% of the total population having some form of disability (IDP, 2014/2015). According to the IDP (2014/2015) approximately 8% of the population were found to have a combination of more than one disability, while overall numbers revealed that physical disabilities were found to be the highest, followed by visual impairments, hearing impairments and emotional and intellectual impairments. Ultimately disabled members of the community face discrimination in terms of employment leading to reduced skill levels and increased levels of poverty.

6.9.5 Housing

Housing is a basic human need not only impacting on the welfare and dignity of people but also greatly impacting on health, social and economic attributes of a community as well as productivity of a community. In order to address the issues of housing basic infrastructure such as sanitation, water, electricity, refuse removal and elimination of informal dwellings need attention.

It is estimated that the Ingquza Hill Local Municipality had a total number of 44 848 households in 2001. Approximately 11 672 of these households resides in formal dwellings, 282 in informal dwellings and 32 894 in traditional dwellings (Qaukeni Local Municipality SDF, 2005). According to Statistics South Africa, 2008, the number of households in the area increased to an estimated 48 701 by 2007, with approximately 19% of the population residing in formal housing, while the remainder of the population was living in informal dwellings. The average household size was estimated at 6 persons per household in 2008. Based on the estimated housing numbers in terms of each of the above categories, a backlog of approximately 33 502 households was estimated that requires adequate housing (Qaukeni Local Municipality SDF, 2005). Approximately 35 281 households has no basic access to water, 36 810 has no proper sanitation, 38 865 has no refuse removal and 31 193 has no access to electricity (Statistics South Africa, 2008). Census 2011 recorded 58% of the population having no access to water, 53% having no access to proper sanitation and 83 % having no refuse removal (DEDEAT, 2013).

There are 31 715 households in the Port St Johns Local Municipality. Each household consists of 4.5 people on average. 99.3 % of the population lives in traditional tribal style of settlement, 0.7% of the population in the urban centre of Port St Johns. 1.9% of the population have flush toilets connected to a sewerage system, 1.1% have flush toilets connected to septic tanks. The majority of the population use pit toilets or have none (80.5%). 3.1% of the population has it's refuse removed by the municipality or a private company. The majority of the population have their own refuse dump (64.4%) or none (28.6%).

6.9.6 Education

The Ingquza Hill Local municipality face a shortage of education and health facilities in the area, thus resulting in community members having to travel long distances in order to have access to these facilities. Where these facilities are readily accessible there are insufficient staff and supplies (Qaukeni Local Municipality SDF, 2005).

The Ingquza Hill Local Municipality houses a large number of people with no form of education (32 000) while approximately 18 000 inhabitants have not gone pass matric/grade 12 (IDP, 2014/2015). According to the IDP (2014/2015) this municipal area is also characterized by poor literacy levels and low educational levels, with a mere 2.4% of the population having a matric and only 1.4% of the population having a post matric qualification (IDP, 2014/2015). Ultimately the lack of formal education has resulted in low functional literacy for the areas estimated at approximately 48% which is also the average for the district (IDP, 2014/2015).

In the Port St Johns Local Municipality, 56.8% of the population has some primary school education; 27.3% of the population has some secondary education; 7.1% has completed primary school; 5% has completed secondary school; 3.4% has no schooling; and 0.3% of the population has some form of higher education.

6.9.7 Local Economy

The local economy of the Ingquza Hill Local municipality is not adequately stimulated and is likely to face further decline (Qaukeni Local Municipality SDF, 2005). This municipality has a fairly narrow economic base, situated far from major economic nodes, that has resulted in the high levels of unemployment and poverty (IDP, 2014/2015). Government and the provision of community services such as infrastructure is the largest contributor to the local economy (56% of the GGP), while trade, finance and agriculture are the second largest contributors (between 78% and 87%). The only sectors to have shown sustained growth in employment, is Agriculture and Forestry (IDP, 2014/2015).

Gross value added by the construction sector grew by 71% since 2001, while finance has grown by 46%. Agriculture (16%), mining (20%) and electricity (27%) have experienced negative growth in the past (IDP, 2014/2015). Several implications for the local community are faced indicating that this municipal area does not produce what is consumed and thus almost entirely depends on imports (IDP, 2014/2015). In turn the lack of economic growth results in an increase in unemployment and poverty as well as service delivery (IDP, 2014/2015).

Of the economically active population of the Port St Johns Municipality, 68% is not economically active; 12% are discouraged work seekers; 10% are unemployed; and 10% are employed. 25.6% of households have an income of between R9 600 and R19 600 per month; 20.4% of households have an income of R19 600 and R38 200; 19.6% of households have no income. Major contributors to the economy are Community Services, making up 66.6% of the GGP, and Trade. Tourism plays a minor role but is difficult to quantify.

6.9.8 Employment

One of the major social issues in the Eastern Cape and specifically in the O.R. Tambo District and the Ingquza Hill Local Municipality is unemployment. Due to the high rate of unemployment that is a result of a lack of skill and education in the region, many communities rely on state pensions and grants for income.

In 2001, it was estimated that approximately 66% of the population in the Ingquza Hill Local Municipality is unemployed, with approximately 80% of the town of Lusikisiki being unemployed (Qaukeni Local Municipality SDF, 2005). According to the Qaukeni Local Municipality SDF (2005), Agriculture, forestry and fishing account for 8% of employment whilst domestic and self-employment (including informal) sectors jointly contribute about 44% of the employment rate. Approximately 55 % of the population in this Local Municipality are Government Employees, while the informal sector creates approximately 14 000 employment opportunities.

6.9.9 Poverty

One of the major social issues in the Eastern Cape and specifically in the O.R. Tambo District, the Ingquza Hill Local Municipality, and the Port St Johns Local Municipality is poverty. According to the Qaukeni Local Municipality SDF (2005) approximately 97% of the population is considered to be living below the minimum living level of R800 per month i.e. being poor, while Statistics South Africa (2008) recorded approximately 77% of the population to be classified as poor. Household income levels in the area are generally low with less than 1.4% of households earning above R76 000 per annum or R6 333 per month. More than 97% of households in this municipality have to live on an income of less than R800 per month while 63% of households are headed by women and 37% by men (Statistics South Africa, 2008). This municipality is classified as the second poorest municipality nationally. Food insecurity for this municipality is estimated to be 81% ranking it the second most insecure in the District (IDP, 2014/2015).

6.9.10 Service delivery

Service delivery is an important aspect impacting the wellbeing of communities. The O.R. Tambo District and the Ingquza Hill Local Municipality still face challenges in terms of service delivery. This area has poor accessibility to infrastructure which has significantly affected the economic growth and production of the district (Qaukeni Local Municipality SDF, 2005). These infrastructure challenges include a lack of waste management; lack of proper sanitation; limited access to electricity and poor road access in the Pondoland region.

There are a total of 76 Primary Schools, 19 High Schools and 118 combined schools; 2 Hospitals and 15 Clinics; 3 Post Offices and 4 Police Stations within this municipal area (Qaukeni Local Municipality SDF, 2005).

Approximately 35 281 households have no basic access to water, 36 810 have no proper sanitation, 38 865 have no refuse removal and 31 193 have no access to electricity (Statistics South Africa, 2008). Census 2011 recorded 58% of the population having no access to water, 53% having no access to proper sanitation and 83% having no refuse removal (DEDEAT, 2013). According to the Municipal IDP (2014/2015) households with access to water provision has increased by another 12% from 2009, however approximately 24 000 of the municipal population still depend on natural water sources (IDP, 2014/2015).

Sanitation is another challenge facing the district. A mixture of waterborne sanitation such as septic tanks and VIP's services the town of Lusikisiki (Qaukeni Local Municipality SDF, 2005). According to Statistics South Africa (2008), the sanitation backlog in this municipality is approximately 262 450 (88%), creating a greater challenge of meeting the national targets. An overview of the households with access to basic sanitation has shown that in 2007, approximately 41% of households use Pit latrines, 0.5% use bucket toilets, while 48% have no toilets.

The increase in electricity connections is the biggest infrastructure achievement in the municipality increasing from 9% in 1996 to 48% in 2008 (Statistics South Africa, 2008). The access to formal refuse use has slightly increased with 1% by 2008; while personal refuse removal increased by 10% (Statistics South Africa, 2008). According to DEDEAT (2013) backlogs in terms of service delivery has been marginally improved, however this area still requires significant attention to these.

Basic services such as water, sanitation and refuse collection are absent in most sections of the Port St Johns Local Municipality (Port St Johns IDP review 2013/14). Some villages do not have access to electricity. Port St Johns Local Municipality has a low Functional Literacy Rate of 37.9%. The Functional Literacy Rate is the average number of adults in a population, 20 years or above in age, who have the ability to read, write and spell equivalent to a Grade 7 learner. High schools are scarce and transport distances negatively affect the ability of students to acquire an education. The Department of Education has taken some small steps to relieve these problems. Port St Johns Local Municipality has the following health facilities:

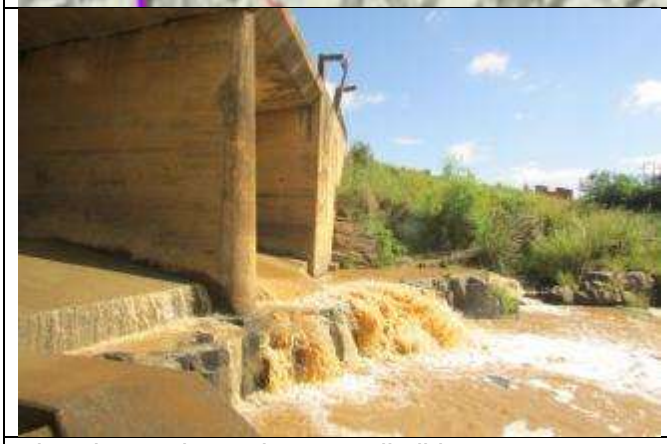
- 2 hospitals in Isilimela and Bambisana
- 2 health centres in Port St Johns and Tombo
- 1 community based service in Bambisana
- 19 clinics

Mobile clinics would be helpful but the poor condition of the roads is a hindrance.

6.10 Scoping Phase Site Assessment

A scoping phase site visit was conducted on the 17th to 19th of March 2014 by six members of the EAP team. The following provides a photographic snapshot of the area, and highlights some initial site-specific issues.

Existing Infrastructure



The abstraction point at Lusiksiki town.

The pipe conveying abstracted water to the existing treatment works.

The settling ponds at the existing water treatment works.

The deflocculation ponds at the existing water treatment works.

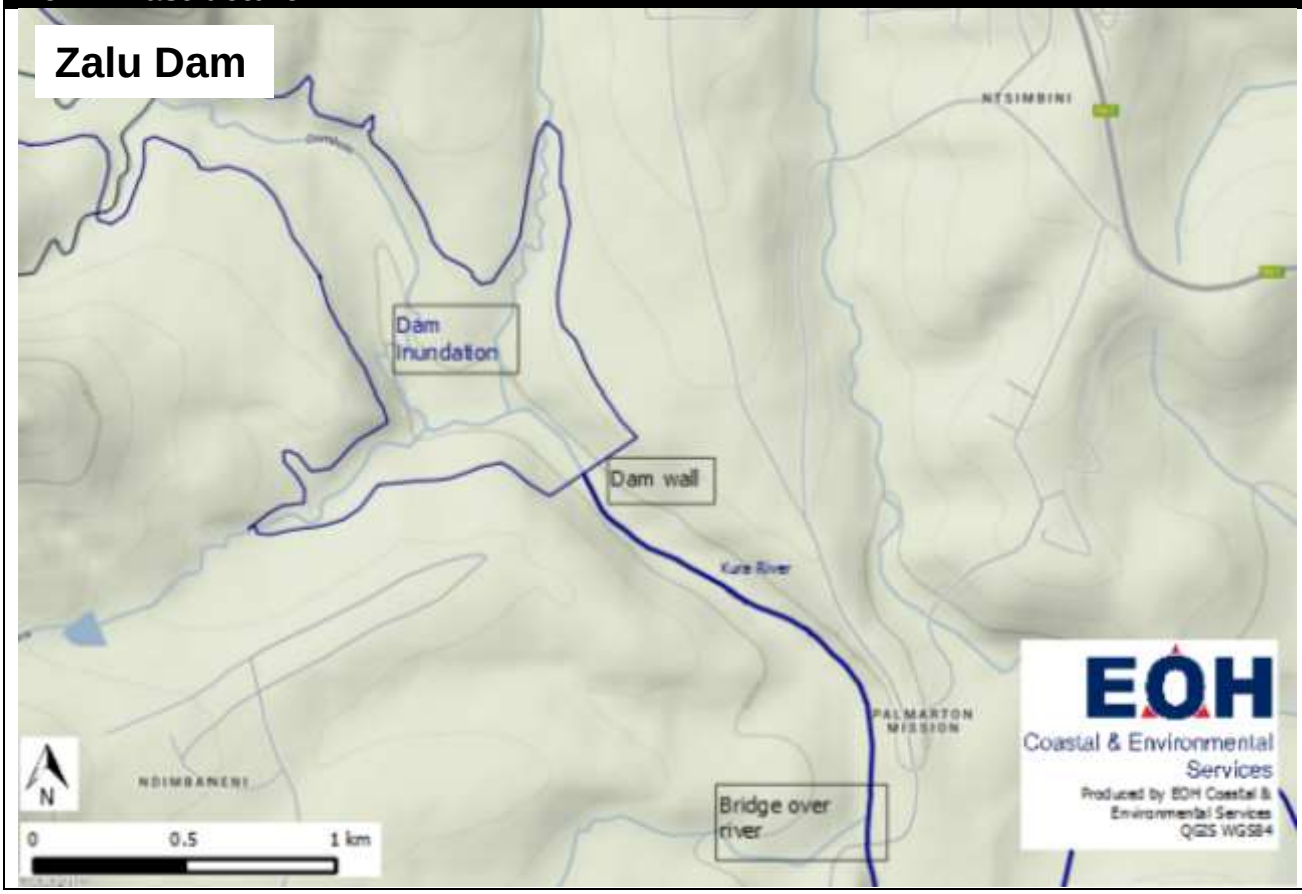
A wetland filters settled sludge from the deflocculation ponds.

Main reservoirs are near settlements.

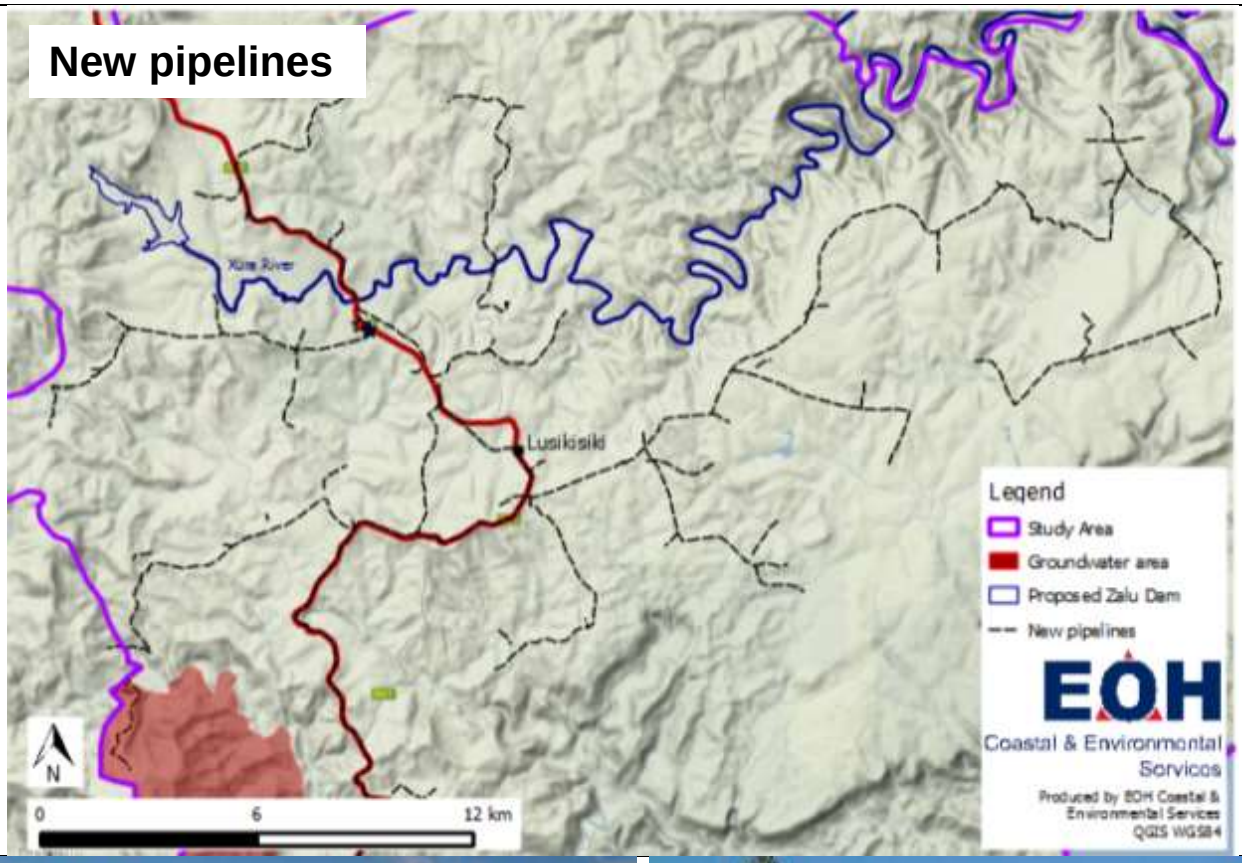
Certain reservoirs are apparently empty most of the time.

Reservoirs are usually on hilltops.

New infrastructure



	
The area that will be inundated between Ndimbaneni and Ntsimbini settlements.	Xura River within the dam inundation area.
	
The site for Zalu dam wall.	The peg on the right bank of the Xura River identifying the site for Zalu dam wall.
	
The peg on the left bank of the Xura River identifying the site for Zalu dam wall.	The mining site for dam wall materials. The site seems to be an existing quarry.



	
The pipeline will only reach the targeted community after extending over a large area which does not have many surrounding communities.	The communities that the pipelines extend to occur at the end of a largely vacant area.

Potential Impacts

Communities on either side of the dam will not be able to have direct access to each other when Zalu Dam is built. These communities would also like to see the benefits of the water scheme, directly, as it would be on their doorstep.

There are possible grave sites within the inundation area. The cultural heritage that may be lost once the dam area is inundated will need to be investigated.

The rolling hills of the surrounding area will require significant infrastructure to transport water to scattered communities.

The existing bridges near Palmerton Mission School will need to be upgraded in order to address safety concerns.

7. PUBLIC PARTICIPATION PROCESS

According to regulation 28 (1) of the EIA regulations (2010), *A scoping report must include –*

(h) details of the public participation process conducted in terms of regulation 27(a) including –

(i) the steps that were taken to notify potentially interested and affected parties of the application;

(ii) proof that notice boards, advertisements and notices notifying potentially interested and affected parties of the application have been displayed, placed or given;

(iii) a list of all persons or organisations that were identified and registered in terms of regulation 55 as interested and affected parties in relation to the application; and

(iv) a summary of the issues raised by interested and affected parties, the date of receipt of and the response of the EAP to those issues.

THIS SECTION WILL BE COMPLETED AFTER THE PUBLIC REVIEW PERIOD

In line with the above-mentioned legislative requirement, this Chapter of the Report provides the details of the Public Participation Process (PPP) followed during the Scoping Phase of the EIA. The Scoping Phase of the EIA provides for the involvement of Interested and Affected Parties (I&APs), in forums that allow them to voice their opinions and concerns, at an early stage of the proposed project. Such engagement is critical in the EIA, as it contributes to a better understanding of the proposed project among I&APs, and raises important issues that need to be assessed in the EIA process.

There are four key steps within the overall public participation process. These include -

- Notifying I&APs of the EIA;
- Holding public meetings;
- Making provision for I&APs to review and comment on all reports before they are finalised and submitted to the competent authority; and
- Making a record of responses to comments and concerns available to I&APs.

The DraftScoping Report has been placed at the Library and Information Centre in Lusikisiki and well as the library in Port St. Johns and has also been made available on the EAP's website (www.cesnet.co.za – use the Public Documents link) for public review. All documents were made available for a 40 day period, after which all comments by registered I&APs and responses by the EAP were incorporated into the Final Scoping Report.

7.1 Notifying Interested and Affected Parties of the EIA

7.1.1 Background Information Document

A Background Information Document (BID) was prepared that provided basic information on the proposed project, the EIA process and contact details for registration as an I&AP. The BID was sent to all persons and organisations identified as I&APs as well as surrounding land owners. The BID is reproduced in Appendix B1.

7.1.2 Written Notices

Initial Notification of the Lusikisiki Water Supply Scheme

Background information documents were sent to landowners as well as the owners and/or occupants of land adjacent to the proposed development site. BIDs were also sent to the Ingquza Hill Local Municipality and the O.R. Tambo District Municipality (Municipal Managers), and to other key stakeholders such as the Department of Agriculture and Department of Water and Sanitation. Copies of the BID and contact details of stakeholders and neighbours to whom BIDs were distributed are included in Appendix B2 and B3.

Advertisements

An advertisement was placed in the Daily Dispatch newspaper on the 10th of July 2014 in order to:

- Advise readers of the intention to undertake an EIA for the proposed development; and
- Invite them to register as I&APs.

A copy of the advertisement(s) is included in Appendix B4.

Site Notices

The NEMA regulations require the erection of "*a notice board at a place conspicuous to the public at the boundary or on the fence of the site where the activity to which the application relates is or is to be undertaken; and any alternative site mentioned in the application*".

Therefore in accordance with this requirement, one 800 X 600 mm single sided corex notice board was placed at various areas around the project site.

The text of the site notice and photographs of the fixed notices are provided in Appendices B5 and B6.

7.1.3 Public Meetings

A public meeting was held on the 7th of July 2014. All potential I&APs from surrounding villages were notified. The attendance register and minutes from the meeting is available in Appendix B7.

7.1.4 Registration of Interested and Affected Parties and Comments Database

A register of I&APs has been compiled, containing all available contact details of those who responded to the advertisement(s), or registered as I&APs (Appendix B8).

8. ISSUES IDENTIFIED DURING THE SCOPING PHASE

According to regulation 28 (1) of the EIA regulations (2010), *A scoping report must include –*
1(g) a description of the environmental issues and potential impacts, including cumulative impacts that have been identified

In line with the above-mentioned legislative requirement, this chapter provides a summary of the issues and concerns identified during the Scoping Phase prior to the preparation of the Final Scoping Report (FSR).

8.1 Impacts during the Design Phase

Issue 1: Compliance with relevant environmental legislation and policy

Improper planning and permitting for the LRWSS prior to construction may result in non-compliance with relevant environmental legislation and policy. This could lead to delays in construction and implementation of the project.

Issue 2: Impacts of proposed layout on sensitive environments

There is the potential for unnecessary impacts on areas of high environmental or social sensitivity due to the creation of infrastructure layouts that do not take cognisance of these areas.

8.2 Impacts that may result from the Construction phase

Issue 1: Impacts on topography

The construction of the Water Supply Scheme will require excavations, which in turn will impact on the topography of the area. Depending on the geology of the dam and the various pipeline routes some blasting may be required, which may then impact on the topography of the area.

Issue 2: Removal of topsoil

The construction of the Water Supply Scheme will require clearing of vegetation which will result in exposed soil surfaces. This will increase the possibility of soil erosion during run-off producing rainfall events, especially from steep slopes. This may be of considerable concern in areas adjacent to wetlands and/or drainage areas.

Issue 3: Surface- and groundwater pollution

Various substances may result in the pollution of surface- and groundwater sources. Construction activities may lead to sediment being deposited into wetlands and/or drainage areas. Pollution may occur from poor vehicle maintenance and improper storage of hazardous materials such as fuel and other hydrocarbons.

Issue 4: Flora

During the construction phase there may be impacts on natural vegetation, including destruction of or damage to indigenous and riparian vegetation, the removal of intact communities, species of special concern and/or trees protected in terms of the Forest Act, and introduction of alien species.

Issue 5: Fauna

Impacts on fauna may primarily be due to habitat disturbance and/or restriction of migration corridors.

Issue 6: Wetlands

During the construction phase there may be impacts on wetlands in terms of vegetation clearing (intact communities, species of special concern, etc.) and pollution (such as sediment, solid waste and hydrocarbons). All wetlands are protected in terms of the National Water Act and should be avoided where possible.

Issue 7: Traffic Impacts

During the construction phase heavy construction vehicles will be utilising the existing road network. This may result in impeding traffic flow and damage to the existing road infrastructure.

Issue 8: Access

Access to other site of the valley, i.e. footpaths as well as to the river itself may be impeded upon during the construction phase.

Issue 9: Health and safety to immediate communities

Health and safety aspects will mostly relate to activities defined under the Occupational Health and Safety Act. However, risks to communities are possible, such as injuries to children from construction activities. Of particular concern is the danger to small children posed by a deep trench left open.

Issue 10: Air Quality

Impacts on air quality will primarily be as a result of increased dust levels associated with the excavation, vegetation clearing, grading and other construction activities that produce fugitive dust.

Issue 11: Noise

It is anticipated that there will be an increase in noise levels during the construction phase of the development, which will be associated with the operation of construction vehicles and equipment.

Issue 12: Agriculture

There may be temporary loss of crops and grazing during construction along the servitude and small areas may be lost permanently after rehabilitation.

Issue 13: Visual Impacts

The change in land use and construction activities may result in visual impacts.

Issue 14: Impacts on archaeological, paleontological and historical sites

It is possible that sites of archaeological, paleontological and/or cultural significance are present on or near the proposed development & associated infrastructure.

Issue 15: Impacts on the Msikaba River and Estuary

The river may have to be temporarily diverted during the construction phase, resulting in various environmental issues like sedimentation.

8.3 Impacts that may result from the Operational Phase

Issue 1: Access

Access to other site of the valley, i.e. footpaths as well as to the river itself may be impeded upon during the operational phase.

Issue 2: Visual intrusion and landscape quality

It is possible that infrastructure such as the dam as well as air and scour valve structures along the pipelines could be visually intrusive.

Issue 3: Impacts on the Msikaba River and Estuary

The reduction in mean annual run-off due to the construction of the Zalu Dam may have impacts on the river and estuary downstream of the dam. This includes changes in water quality.

9. PLAN OF STUDY FOR EIA PHASE

According to regulation 28 (1) of the EIA regulations (2010), *A scoping report must include –*

(n) a plan of study for environmental impact assessment which sets out the proposed approach to the environmental impact assessment of the application, which must include –

(i) a description of the tasks that will be undertaken as part of the environmental impact assessment process, including any specialist reports or specialised processes, and the manner in which such tasks will be undertaken;

(ii) an indication of the stages at which the competent authority will be consulted;

(iii) a description of the proposed method of assessing the environmental issues and alternatives, including the option of not proceeding with the activity; and

(iv) particulars of the public participation process that will be conducted during the environmental impact assessment process;

(o) any specific information required by the competent authority; and

(p) any other matters required in terms of sections 24(4}(a) and (b) of the Act.

In line with the above-mentioned legislative requirement, this Chapter sets out the Plan of Study (PoS) for the EIA phase of the assessment. Consultation with DEA will be on going throughout this EIA. However, it is anticipated that DEA will provide relevant comment with respect to the adequacy of this Plan of Study for the EIA, as it informs the content of the EIR and sufficiency thereof.

9.1 Scope and Intent of the EIA Phase

This phase includes the following steps:

1. **Specialist Studies** which include the specialist assessments identified in the Scoping Report and any additional studies required by the authorities. This requires the appointment of specialists to gather baseline information in their fields of expertise, and to assess the impacts and make recommendations to mitigate negative impacts and optimise benefits. The resulting information is synthesised into the Environmental Impact Report (EIR).
2. **Environmental Impact Report**. The main purpose of this report is to gather and evaluate environmental information, so as to provide sufficient supporting arguments to evaluate overall impacts, consider mitigation measures and alternative options, and make a valued judgement in choosing the best development alternative. The EIR is made available for public and authority review. The availability of the report is advertised in the local newspaper and is situated at an easily accessible location.
3. **Issues and Response Trail** which compiles comments, issues and concerns raised by I&APs and the authorities and the relevant responses to these comments.
4. **Environmental Management Programme** informs the client and the technical team of the guidelines which will need to be followed during construction to ensure that there are no lasting or cumulative negative impacts of the construction process on the environment.
    - The standards and guidelines that must be achieved in terms of environmental legislation.
    - Mitigation measures and environmental specifications which must be implemented for all phases of the project in order to minimise the extent of environmental impacts, to manage environmental impacts and where possible to improve the condition of the environment.
    - Provide guidance through method statements that are required to be implemented to achieve the environmental specifications.
    - Define corrective action that must be taken in the event of non-compliance with the specifications of the EMPr.
    - Prevent long-term or permanent environmental degradation.

    In addition to this, the Public Participation Process is continued. As for the Scoping Phase, opportunity is provided for I&APs to voice concerns and issues regarding the project. At

this stage the project details may have changed in response to the preliminary findings of the Final Scoping Report. I&APs and key stakeholders are also given the opportunity to review the Environmental Impact Report before it is submitted to the authorities.

5. **Record of Decision of Environmental Authorisation and Appeals Process.** Upon thorough examination of the EIR, the authority will either issue an authorisation, which either authorises the project or rejects it, or require further details to clarify certain issues. Should authorisation be granted, it usually carries Conditions of Approval. The proponent is obliged to adhere to these conditions. Once the authorisation has been issued, it is publicised and the public are given 20 calendar days from the issuing of the authorisation to lodge an appeal with the authorities. An appeal must be submitted within 30 days after the lapsing of the 20 day notice of intention to appeal

9.2 The Public Participation Process

9.2.1 Public Review Of The Draft Scoping Report (DSR)

All I&APs on the Register of I&APs will be notified in writing of the availability of the DSR for public review. The notification letter will provide details of the 60-day public comment period, the venues and websites where the report could be viewed, the contact details of the PPP consultant and how written comments on the DSR should be submitted, and details of the public meeting to present the DSR.

9.2.2 Public Review Of The Draft Environmental Impact Report (DEIR)

All I&APs on the Register of I&APs will be notified in writing of the availability of the DEIR for public review. The notification letter will provide details of the 40-day public comment period, the venues and websites where the report can be viewed, the contact details of the PPP consultant and how written comments on the DEIR should be submitted, and details of the public meeting to present the DEIR.

9.2.3 Notification Of Environmental Authorisation (EA)

Advertisements announcing the Environmental Authorisation will be placed in the same regional, local and community newspapers used to announce the project and the EIA. The adverts will inform I&APs of the decision and where the decision can be accessed and will draw their attention to their right to appeal the decision and set out the appeal procedures.

9.3 Environmental Impact Report (EIR)

The Specialist Studies described below will inform the EIR. In addition, the EIR will gather any comments received from I&APs and determine whether it is necessary to increase the scope of work or amend the Terms of Reference for the specialists. The EIR will examine the 'No Go' alternative along with the proposed development, as required in the EIA regulations.

9.3.1 Structure of the EIA Report

In broad terms, the Environmental Impact Report (EIR) will have the following Table of Contents:

EXECUTIVE SUMMARY AND ENVIRONMENTAL IMPACT STATEMENT

PART ONE: INTRODUCTION AND DESCRIPTION OF ENVIRONMENTAL IMPACT ASSESSMENT PROCESS

1 Brief Description of The Proposed Project
2 Environmental Impact Assessment Process
    Activities triggering the EIA process
    The environmental study team

The environmental assessment process followed
Structure of the Report

PART TWO: THE PROPOSED WATER SUPPLY SCHEME

1 Project Overview
2 Alternatives
3 Technical Description of Preferred Options

PART THREE: DESCRIPTION OF THE AFFECTED ENVIRONMENT

1. The Natural Environment
2. Socio-Economic Environment
3. The Policy, Legal And Administrative Environment

PART FOUR: ASSESSMENT OF THE ENVIRONMENTAL IMPACTS ASSOCIATED WITH THE WATER SUPPLY SCHEME

1. Impacts Associated with the Water Supply Scheme
2. Impacts Associated With The No Go Option
3. Conclusion

PART FIVE: ENVIRONMENTAL MANAGEMENT PLAN AND OVERALL RECOMMENDATIONS AND CONCLUSIONS

9.4 Specialist Studies

9.4.1 Ecological Assessment (Dr Greer Hawley)

The Ecological Impact Assessment will include the following main tasks:

- Record the plant species that occur within the study area, based on field surveys;
- Identify, and locate where possible, any plant Species of Conservation Concern, namely Threatened, Near Threatened, rare (species with conservation status or which are) and endemic species (to the area);
- All SCC's will be discussed in detail ;
- Compile a broad-scale vegetation or habitat map of the area. This vegetation map should indicate the extent that project activities would affect each vegetation or habitat type.
- Work in consultation with other specialists to ensure that the linkages between the various systems are understood;
- Provide a sensitivity map of the study areas in order for the proponent to better place the layout of the project's infrastructure;
- Once a sensitivity map has been created, the consultant must suggest ecological corridors around or adjacent to the suggested project area, especially through sensitive sites or vegetation;
- Ensure that the study deals with the issues raised during the scoping phase;
- Identify and assess the environmental significance of the identified botanical impacts using the methodology prescribed by CES, as this methodology is compliant with international best practice in EIA;
- To provide practical and realistic recommendations to mitigate the identified botanical impacts.

9.4.2 Aquatic Impact Assessment (Dr Cherie-Lynn Mack)

An Aquatic Impact Assessment will be required for the dam site, infrastructure located within 32 metres of any watercourse, and any reticulation crossings of rivers, etc.

The study aquatic studies will include:

- A Background review (desktop) of the affected quaternary catchment and the affected water resources (Xura River), with regard to benthic macro-invertebrates;
- Derivation of a reference condition for the Xura River in terms of macro-invertebrates
- Field survey of the invertebrates of the Xura River at the site of relevance, following methods in standard use by DWS and the SA River Health Programme.
- Habitat assessment at the same site;
- Assessment of the various activities involved in the construction of the pipeline crossing of the river, and their potential impacts on the riverine system;
- Derivation of the Present Ecological State (PES) of the river at the site;
- Derivation of the Ecological Importance and Sensitivity (EIS) of the Xura River at the site;
- Development of a set of mitigation measures to address the potential impacts of any road crossings to the Xura River.

9.4.3 Heritage Assessment (Gavin Anderson)

As part of the Environmental Impact Assessment for the proposed development, it is necessary to undertake a Phase 1 archaeological and historical survey to fulfil SAHRAs requirements in accordance with the National Heritage Resources Act (25 of 1999). The National Heritage Resources Act requires that "…any development or other activity which will change the character of a site exceeding 5 000 m², or the rezoning or change of land use of a site exceeding 10 000 m², requires an archaeological impact assessment"

A heritage impact assessment will therefore be conducted, the primary objective of which is to determine whether there are any indications that the proposed site is of heritage significance. This assessment will be a Phase 1 assessment and will be largely desk-top although a site visit will be required to afford the specialist an opportunity to look for significant artefacts on the surface of the site. It is not expected that a more detailed Phase 2 assessment will be required but this remains to be confirmed.

The terms of reference for the Phase 1 heritage study will be to:

- Provide a summary of the relevant legislation;
- Conduct a site inspection as required by national legislation;
- Determine the likelihood of archaeological remains of significance in the proposed site;
- Identify and map (where applicable) the location of any significant archaeological remains;
- Assess the sensitivity and significance of archaeological remains in the site;
- Assess the significance of direct and cumulative impacts of the proposed development and viable alternatives on archaeological and heritage resources;
- Identify mitigatory measures to protect and maintain any valuable archaeological sites and remains that may exist within the proposed site; and
- Prepare and submit any permit applications to the South African Heritage Resources Authority (SAHRA) and the Eastern Cape Provincial Heritage Resources Authority (ECPHRA).

9.4.4 Paleontological Assessment (Rosemary Prevec)

Initial desktop studies will be undertaken of the study areas during which the potential fossiliferous rock units represented within the study area are determined from geological maps. The known fossil heritage within each rock unit is inventoried from the published scientific literature and previous paleontological impact studies in the same region. The likely impact of the proposed development on local fossil heritage is determined on the basis of the paleontological sensitivity of the rock units concerned and the nature and scale of the development itself, most notably the extent of fresh bedrock excavation envisaged. Based on the outcome of the desktop study, a recommendation will be made as to whether or not a Phase 1 is required.

A Phase 1 Paleontological Impact Assessments involves an assessment of the site to groundtruth the results of the desktop studies and to determine the actual extent of fossiliferous outcrops within the study area. All routes and areas where development is expected to take place are studied and exposed fossils observed within these areas are documented. A Phase 1 report includes recommendations for the mitigation of fossil resources during construction. A Phase 2 Paleontological Impact Assessment and subsequent site visits to rescue fossils threatened by the development process will need to be included in the next phase of the project.

9.4.5 Estuarine Assessment (Susan Taljaard & Lara van Niekerk)

A scoping level Estuarine Assessment will be conducted for the dam site which will adopt the following Terms of Reference:

- A desktop analysis of the Msikaba Estuary based on the available information
- Providing yield modelling and running-estuary specific operational analysis
- Provide a desktop assessment of the Estuarine ecological consequences for operational scenarios
- Design and cost and Estuary monitoring programme
- Produce the Msikaba Estuarine Scoping report

9.4.6 Social Impact Assessment (Anton Hough)

The social and socio-economic impact assessments (SIA) will be consolidated into a single specialist report. Based on our understanding of the tender document, the proposed scope of work is as follows:

- Source existing secondary socio-economic data for the study area, and establish a social and socio-economic profile at the ward level.
- Undertake a field reconnaissance of development sites and linear infrastructure routes; and identify key social and socio-economic opportunities and constraints.
- Using existing cadastral data and aerial imagery to map affected private properties, communities and households within a direct and indirect impact area of the proposed infrastructure.
- Provide a general profile of downstream water users and water demand, using existing information up to the confluence of the Xura River.
- Form part of the Public Participation Process (PPP), and profile key stakeholder concerns related to the Project,

The SIA will include the following:

- A common socio-economic profile of the OR Tambo Municipality and the Ingquza Hill Local Municipality
- An impact assessment of each major Project component using a CES defined impact assessment methodology.
- Recommendations and mitigations measures.

The scope of work explicitly excludes any form of socio-economic surveys and or asset surveys related to land acquisition. No stakeholder meetings or focus group meetings are proposed, other than those included as part of the EIA Public Participation Process. The site reconnaissance is envisioned to extend over no more than two days.

9.5 Methodology for assessing the significance of impacts

Specialists are required to provide the reports in a specific layout and structure, so that a uniform specialist report volume can be produced. To ensure a direct comparison between various specialist studies, standard rating scales have been defined for assessing and quantifying the identified impacts. This is necessary since impacts have a number of parameters that need to be assessed.

Five factors need to be considered when assessing the significance of impacts, namely:

1. Relationship of the impact to **temporal** scales - the temporal scale defines the significance of the impact at various time scales, as an indication of the duration of the impact.
2. Relationship of the impact to **spatial** scales - the spatial scale defines the physical extent of the impact.
3. The severity of the impact- the **severity/beneficial** scale is used in order to scientifically evaluate how severe negative impacts would be, or how beneficial positive impacts would be on a particular affected system (for ecological impacts) or a particular affected party. The severity of impacts can be evaluated with and without mitigation in order to demonstrate how serious the impact is when nothing is done about it. The word 'mitigation' means not just 'compensation', but also the ideas of containment and remedy. For beneficial impacts, optimization means anything that can enhance the benefits. However, mitigation or optimization must be practical, technically feasible and economically viable.
4. The **likelihood** of the impact occurring - the likelihood of impacts taking place as a result of project actions differs between potential impacts. There is no doubt that some impacts would occur (e.g. loss of vegetation), but other impacts are not as likely to occur (e.g. vehicle accident), and may or may not result from the proposed development. Although some impacts may have a severe effect, the likelihood of them occurring may affect their overall significance.

Each criterion is ranked with scores assigned as presented in Table 9.1 to determine the overall **significance** of an activity. The criterion is then considered in two categories, viz. effect of the activity and the likelihood of the impact. The total scores recorded for the effect and likelihood are then read off the matrix presented in Table 9.2, to determine the overall significance of the impact. The overall significance is either negative or positive.

Table 9.1: Ranking of Evaluation Criteria

EFFECT	**Temporal scale**			**Score**
	Short term	Less than 5 years		**1**
	Medium term	Between 5 and 20 years		**2**
	Long term	Between 20 and 40 years (a generation) and from a human perspective almost permanent		**3**
	Permanent	Over 40 years and resulting in a permanent and lasting change that will always be there		**4**
	Spatial Scale			
	Localised	At localised scale and a few hectares in extent		**1**
	Study area	The proposed site and its immediate environs		**2**
	Regional	District and Provincial level		**3**
	National	Country		**3**
	International	Internationally		**4**
	*	**Severity**	**Benefit**	
	Slight / Slight Beneficial	Slight impacts on the affected system(s) or party(ies).	Slightly beneficial to the affected system(s) or party(ies).	**1**
	Moderate / Moderate Beneficial	Moderate impacts on the affected system(s) or party (ies).	An impact of real benefit to the affected system(s) or party(ies).	**2**
	Severe / Beneficial	Severe impacts on the affected system(s) or party(ies).	A substantial benefit to the affected system(s) or party(ies).	**4**
	Very Severe / Very Beneficial	Very severe change to the affected system(s) or party (ies).	A very substantial benefit to the affected system(s) or party(ies).	**8**
LIKELIHOOD	**Likelihood**			

	Unlikely	The likelihood of these impacts occurring is slight	**1**
	May Occur	The likelihood of these impacts occurring is possible	**2**
	Probable	The likelihood of these impacts occurring is probable	**3**
	Definite	The likelihood is that this impact will definitely occur	**4**

* *In certain cases it may not be possible to determine the severity of an impact thus it may be determined: Don't know/Can't know*

		EFFECT													
LEKELIHOOD		**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**
	1	4	5	6	7	8	9	10	11	12	13	14	15	16	17
	2	5	6	7	8	9	10	11	12	13	14	15	16	17	18
	3	6	7	8	9	10	11	12	13	14	15	16	17	18	19
	4	7	8	9	10	11	12	13	14	15	16	17	18	19	20

Table 9.2: Ranking matrix to provide an Environmental Significance

Environmental Significance		
LOW	An acceptable impact which for which mitigation is desirable but not essential; The impact by itself is insufficient even in combination with other low impacts to prevent the development. These impacts will result in either positive or negative medium to short term effects on the social and/or natural environment.	**4-7**
MODERATE	An important impact which requires mitigation. The impact is insufficient by itself to prevent the implementation of the project but which in conjunction with other impacts may prevent its implementation. These impacts will usually result in either positive or negative medium to long term effects on the social and/or natural environment.	**8-11**
HIGH	A serious impact which, if not mitigated, may prevent the implementation of the project. These impacts would be considered by society as constituting a major and usually long term change to the (natural and/or social) environment and result in severe effects or beneficial effects.	**12-15**
VERY HIGH	A very serious impact which may be sufficient by itself to prevent the implementation of the project. The impact may result in permanent change. Very often these impacts are unmitigable and usually result in very severe effects, or very beneficial effects.	**16 - 20**

The ***environmental significance*** scale is an attempt to evaluate the importance of a particular impact. This evaluation needs to be undertaken in the relevant context, as an impact can either be ecological or social, or both. The evaluation of the significance of an impact relies heavily on the values of the person making the judgment. For this reason, impacts of especially a social nature need to reflect the values of the affected society.

Cumulative Impacts

Cumulative Impacts affect the significance ranking of an impact because it considers the impact in terms of both on-site and off-site sources. For example, the noise generated by an activity (on-site) may result in a value which is within the World Bank Noise Standards for residential areas. Activities in the surrounding area may also create noise, resulting in levels also within the World Bank Standards. If both on-site and off-site activities take place simultaneously, the total noise level at the specified receptor may exceed the World Bank Standards. For this reason it is important to consider impacts in terms of their cumulative nature.

Seasonality
Although seasonality is not considered in the ranking of the significance, it may influence the evaluation during various times of year. As seasonality will only influence certain impacts, it will only be considered for these, with management measures being imposed accordingly (i.e. dust suppression measures being implemented during the dry season).

Prioritising
The evaluation of the impacts, as described above is used to prioritise which impacts require mitigation measures. Negative impacts that are ranked as being of "**VERY HIGH**" and "**HIGH**" significance will be investigated further to determine how the impact can be minimised or what alternative activities or mitigation measures can be implemented. These impacts may also assist decision makers i.e. lots of **HIGH** negative impacts may bring about a negative decision. For impacts identified as having a negative impact of "**MODERATE**" significance, it is standard practice to investigate alternate activities and/or mitigation measures. The most effective and practical mitigations measures will then be proposed. For impacts ranked as "**LOW**" significance, no investigations or alternatives will be considered. Possible management measures will be investigated to ensure that the impacts remain of low significance.

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APPENDIX A - THE EIA PROCESS

The Environmental Impact Assessment process comprises two key phases – the Scoping Phase and the Environmental Impact Assessment Phase. These phases are described in detail below.

A1. THE SCOPING PHASE

Scoping is the first step in the EIA process. It allows for all role players – stakeholders and Interested and Affected Parties (I&APs) - to gain a greater understanding of the project by means of a public participation process. Scoping is also critical in as much as it facilitates the early identification of important natural and social issues that will need to be considered later in the process.

The principal objectives of the Scoping Phase are:-

- Describe the nature of the proposed project;
- Preliminary identification and assessment of potential environmental issues or impacts to be addressed in the subsequent EIA phase;
- Define the legal, policy and planning context for the proposed project;
- Describe important biophysical and socio-economic characteristics of the affected environment;
- Undertake a public participation process that provides opportunities for all I&APs to be involved;
- Identify feasible alternatives that must be assessed in the EIA phase; and
- Define the Plan of Study (PoS) for the EIA phase.

Each of the steps involved in the scoping phase is discussed in detail below.

A1.1. Project description

A description of the components of the proposed project is provided.

A1.2. Preliminary assessment of the project

Baseline data and information on the proposed development is collected, primarily from the project proponent, but also from preliminary site surveys and published literature, and from legislation, guidelines and other regulatory instruments, in order to determine the activities for which approval must be sought from the competent environmental authority.

Information sourced from the project proponent includes the proposed location and layout of the development, and the technology to be adopted. A preliminary assessment of this data and information, in the context of legal requirements and an understanding of the receiving environment, is by way of a preliminary risk assessment or fatal flaw analysis. It enables major risks to the project or to the receiving environment to be identified at an early stage in the EIA process, and informs subsequent decisions about aspects of the development identified as being potentially problematic.

A1.3. Legal context

The legislation relevant to the proposed Project is identified and reviewed.

A1.4. Identification of key bio-physical and socio-economic issues

The key biophysical and socio-economic issues related to the project are identified during the Scoping Phase. Relevant information is drawn from as wide a range of sources as possible, including local authorities, local communities, and specialists.

A1.5.Public Participation Process

A public participation process is an explicit requirement of the NEMA EIA regulations, and must take place throughout the EIA process. The approach to public consultation depends largely on the location of the proposed development, the nature of the project, the sensitivity of the receiving environment, the previous level of exposure of the public to the EIA process, and the level of education of those who will be affected by the proposed development. Among other things, involvement of the public in the EIA process is an opportunity to gather local knowledge from individuals, communities and organisations.

Key stakeholders are identified and notified of the proposed development and the ways in which they can be involved. These stakeholders include:-

- Local and regional authorities
- Ratepayers associations
- Ward councillors and representatives
- Non-governmental Organisations (NGOs) and Community Based Organisations (CBOs)
- Landowners adjacent and close to the site of the proposed development.

Stakeholders and I&APs are informed of the proposed development by means of:-

- Advertisements in newspapers
- A background information document (BID)
- Letters to key stakeholders and neighbouring landowners/occupiers
- Notice boards placed at the site

All of the above must include name(s) and contact details - telephone and fax numbers, and e-mail address(es) to which stakeholders and I&APs can direct written or verbal comments.

Advertisements are placed in a minimum of one local and one regional newspaper, depending on the nature and extent of the proposed development. Stakeholders and I&APs are encouraged to register by sending their names and contact details to the EAP, whereupon they are sent a copy of the BID, and are thereafter kept informed of and involved in all subsequent stages of the EIA process. The BID is a brief document that provides information on the nature and location of the proposed development, and details of how the EIA process will be undertaken. However, it is unlikely that the final design specifications of some proposed developments are known at this stage, and there may be changes to the information presented in the BID as the project progresses.

A1.6. Identification of alternatives

Possible alternatives to the proposed development must be identified during the Scoping Phase. These may include fundamental alternatives, such as maintaining the current land use, or proposing a development of a different nature to the one proposed by the project proponent. Design alternatives are intended to modify certain design aspects of the proposed project, such as alternative technologies, timing of activities, or the location of infrastructure, so as to minimise negative impacts on the environment. The identification of alternatives must be reasonable and practical.

A1.7. Plan of Study for the EIA Phase

The information and comments received and recorded during the Scoping Phase inform the larger and more comprehensive EIA Phase. This is usually achieved by the development of the Plan of Study (PoS) for the EIA. The PoS defines the actions, steps, and studies that must be undertaken in the EIA Phase.

A1.8. Scoping Report

The data collected during the baseline data collection and public participation processes must be synthesised in a Scoping Report. In line with NEMA regulations, registered I&APs are entitled to comment, in writing, on all written submissions made to the competent authority by the applicant or the EAP managing an application. Accordingly a Draft Scoping Report is made available for public comment for a minimum period of 40 days. All comments on the draft report must be considered, and necessary changes made to the Draft before it is submitted for review to the competent authority as the final Scoping Report. This report includes the PoS discussed in A1.7 above.

A2. ENVIRONMENTAL IMPACT ASSESSMENT PHASE

The Environmental Impact Assessment (EIA) is a comprehensive evaluation and study phase that addresses all the issues raised in the Scoping Phase. It is a substantial phase that has seven key objectives:-

- Describe the biophysical and socio-economic environment that is likely to be affected by the proposed development.
- Undertake specialist studies to address the key biophysical and socio-economic issues.
- Assess the significance of impacts that may occur from the proposed development.
- Assess the alternatives proposed during the Scoping Phase.
- Provide details of mitigation measures and management recommendations to reduce the significance of impacts.
- Provide a framework for the development of Environmental Management Plans.
- Continue with the public participation process.

A2.1. Specialist Studies

Specialist studies are undertaken to provide a detailed and thorough examination of key issues and environmental impacts. Specialists gather relevant data to identify and assess environmental impacts that might occur on the specific component of the environment that they are studying (for instance waste management, air quality, noise, vegetation, water quality, pollution, waste management). Once completed, these studies are synthesised in, and presented in full as appendices to the Environmental Impact Report (EIR).

A2.2. Public Participation Process

The public participation process (PPP) initiated at the beginning of the Scoping Phase continues into the EIA Phase. Once again the PPP provides a platform from which all I&APs are able to voice their concerns and raise issues regarding the project.

A2.3. Assessment of the Significance of Impacts

It is necessary to determine the significance, or seriousness, of any impacts on the natural or social environment. It is common practice in the EIA Phase to use a significance rating scale that determines the spatial and temporal extent, and the severity and certainty of any impact occurring, including impacts relating to any project alternatives. This allows the overall significance of an impact or benefit to be determined.

The overall intent of undertaking a significance assessment is to provide the competent authority with information on the potential environmental impacts and benefits, thus allowing them to make an informed, balanced and fair decision.

A2.4. Mitigation Measures and Recommendations

Critical to any EIA is the recommendation of practical and reasonable mitigation measures and

recommendations. These recommendations relate to the actions that are needed in order to avoid, minimise or offset any negative impacts from the development.

A3.5. Planning Input

An effective EIA process should actively engage and contribute to the project planning process so as to mitigate environmental impacts through improved design and layout.

A3.6. Environmental Impact Report

The above-mentioned tasks are synthesised in an Environmental Impact Report (EIR). This will allow the assessment of the relationship of environmental impacts to project actions, as well as to assess the overall significance of these impacts. The EIR will also provide sufficient information to allow the competent authority to make an informed decision.

A summary report covering key findings is prepared in a manner that is easy to read and understand. Text will be kept short and technical detail to a minimum, while information will be presented in the form of photographs and figures wherever possible.

A4. ENVIRONMENTAL MANAGEMENT PLANS

Environmental management and action plans based on the findings and recommendations set out in the EIR are prepared. Environmental Management Plans (EMPs) and, where necessary, Social Management Plans (SMPs) consist of a set of practical and actionable mitigation, monitoring and institutional measures to be taken into account during construction and operation of the proposed development. The aim is to eliminate adverse environmental and social impacts, offset them, or reduce them to acceptable levels. These plans include: -

- The standards and guidelines that must be achieved in terms of environmental legislation.
- Mitigation measures and environmental specifications that must be implemented at 'ground level', that is, during construction and operation.
- Provide guidance through method statements to achieve the environmental specifications.
- Define corrective action that must be taken in the event of non-compliance with the specifications of the EMPs and SMPs.
- Prevent long-term or permanent environmental degradation.

A5. ENVIRONMENTAL AUTHORISATION AND APPEALS PROCESS

On thorough examination of the EIR, the competent authority will issue an Environmental Authorisation or reject the application. Should authorisation be granted, it will carry Conditions of Approval. The proponent is obliged to adhere to these conditions.

I&APs are notified of the decision and have 20 days in which to lodge a notice of intention to appeal the decision, and a further 30 days in which to submit the appeal.

APPENDIX B - PUBLIC PARTICIPATION PROCESS

APPENDIX B-1: Background Information Document

ENVIRONMENTAL IMPACT ASSESSMENT

LUSIKISIKI REGIONAL WATER SUPPLY SCHEME

Proposed by:

Department of Water Affairs

water affairs
Department:
Water Affairs
REPUBLIC OF SOUTH AFRICA

Return address for comments:

Environmental Consultant:

EOH Coastal & Environmental Services
Nande Suka / Lungisa Bosman
16 Tyrell Road
Berea, 5210
P.O Box 8145
Nahoon, 5210
Tel: (043) 726 7809
Fax: (043) 726 8352
Email: n.suka@cesnet.co.za / l.bosman@cesnet.co.za

EOH
Coastal & Environmental Services

COASTAL & ENVIRONMENTAL SERVICES LRWSS BID May 2014

AIM OF THIS DOCUMENT

In terms of the National Environmental Management Act, certain listed activities require environmental approval and require that an **Environmental Impact Assessment (EIA)** be conducted. The purpose of this document is to ensure that people interested in or affected by the proposed **Lusikisiki Regional Water Supply Scheme (LRWSS)** are provided with information about the proposal, the process being followed, and an opportunity to be involved in the EIA process.

Registering as an **Interested and/or Affected Party (I&AP)** allows individuals or groups the opportunity to contribute ideas, issues, and concerns regarding the project. I&APs also have an opportunity to review all reports and submit comments on those reports. All comments received are included in the reports submitted to the Competent Authority that will decide whether or not to issue an Environmental Authorisation.

PROJECT DESCRIPTION

Project History

The LRWSS was originally planned in 1978 as a regional scheme to utilize a dam on the Xura River. Only phase 1 of the originally planned larger scheme has been implemented to date, and the dam has never been built. This phase was commissioned in July 1989 and currently supplies the town of Lusikisiki (11 000 people) and 23 surrounding villages (41 000 people). The town of Lusikisiki is provided with full water services, including house connections and water borne sanitation, but the level of services for the villages is limited to bulk water supply to village reservoirs.

Current Status

Currently the capacity of the bulk water supply infrastructure is 2 760 m^3/day. Water is pumped from a weir on the Xura River and conveyed by gravity to the pump station which is located near the weir (Figure 1.a). The water is then pumped to the existing Water Treatment Works (WTW) (Figure 1.b). After treatment the potable water is conveyed to bulk storage reservoirs (Figure 1.c) at various points in the area, which in turn feed 24 service reservoirs that supply rural villages.

The current scheme is not able to meet the water requirements in the area and water shortages are experienced frequently. This low assurance of water supply can be attributed to the following reasons:

- Inadequate capacity of existing infrastructure;
- The poor condition of existing infrastructure;
- Significant housing development in the area, which has significantly increased water use requirements in the area.

Figure 1: The existing LRWSS which transfers water from a weir on the Xura River (a) to the water treatment works (b) and then storage reservoirs (c).

The Current Proposal

The Department of Water Affairs (DWA) appointed AECOM (Pty) Ltd. in 2010, to undertake a **Feasibility Study for Augmentation of the Lusikisiki Regional Water Supply Scheme**. This study reported that a combination of surface water (Zalu Dam) and groundwater would be the most feasible solution for the long-term water supply for the LRWSS. The Zalu Dam was found to be the most feasible surface storage option for the areas around Lusikisiki, with the south-western part of the study area requiring supplies from groundwater (Figure 3).

The DWA proposes to begin the second phase of the scheme to augment the existing water supply in the area from Lusikisiki to Port St Johns (Ingquza Hill and Port St John's Local Municipalities). This will involve two water resources:

- The **construction of the Zalu Dam** on the Xura River to the west of Lusikisiki, which will also involve the **upgrading of the Lusikisiki water treatment works** and the **expansion of the potable water reticulation** in the Lusikisiki area; and
- A **groundwater abstraction scheme** in the south, which will augment water supplies to Port St Johns and the surrounding areas.

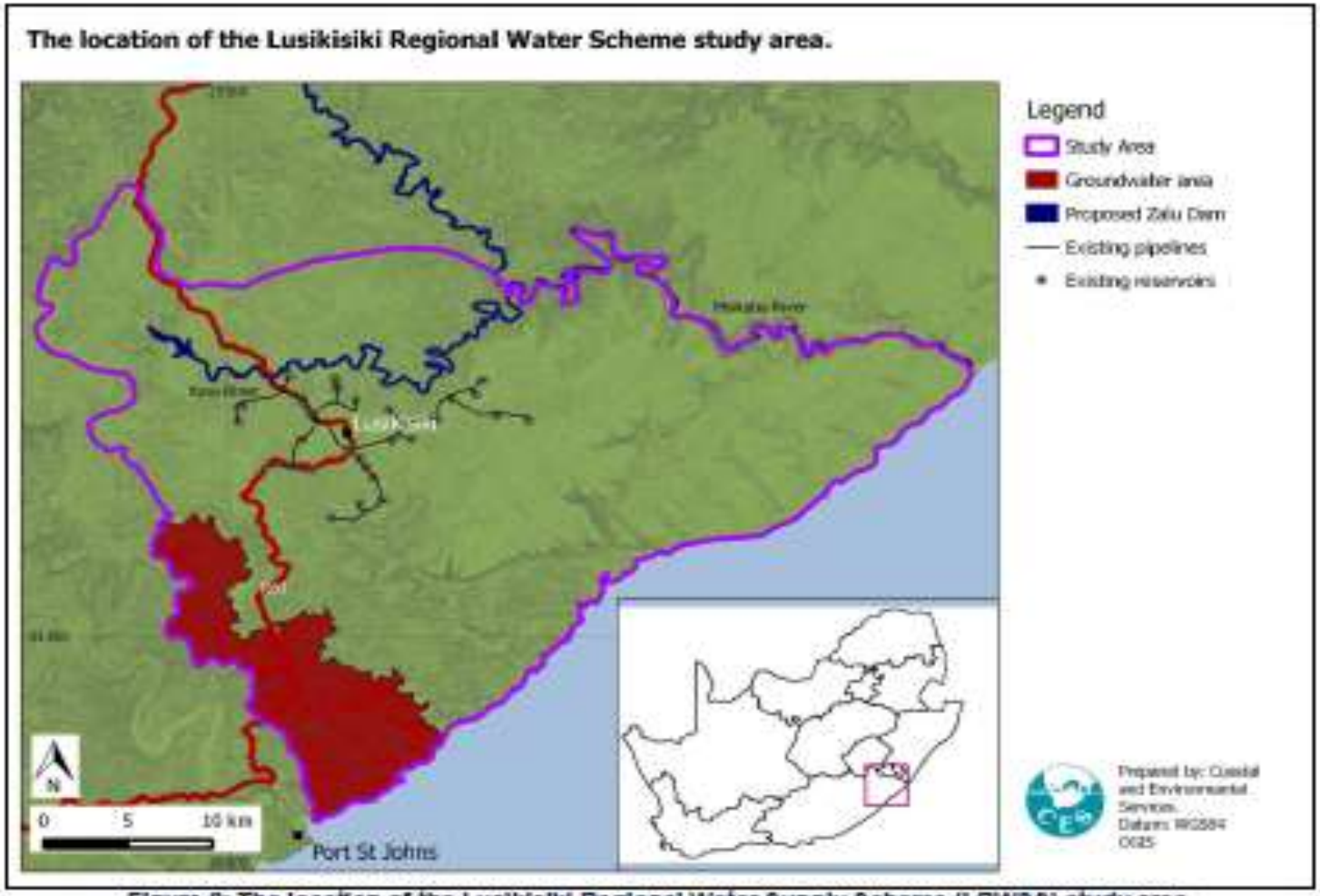


Figure 2: The location of the Lusikisiki Regional Water Supply Scheme (LRWSS) study area.

Figure 3: The proposed location of the Zalu Dam a) basin and b) wall.

DESCRIPTION OF THE PROJECT AREA

The Ingquza Hill and Port St Johns Local Municipalities are located within the OR Tambo District Municipality in the Eastern Cape, will directly benefit from the infrastructure proposed in LRWSS. The Zalu Dam aspect of the scheme will fall predominantly within the Ingquza Hill LM, with a small portion falling in the Port St John's LM. The groundwater scheme will be located in the Port St John's LM.

The study area for the EIA comprises the entire region between Lusikisiki (up to about 15 km inland) and the coast, extending from the Mzimvubu River in the south-west to the Msikaba River in the north-east (Figure 2). This area includes the Zalu Dam site and its catchment along the Xura River, conveyance routes between the dam and control reservoirs, as well as borehole sites that could be developed for augmentation of water supplies from groundwater and the routes of the main pipelines from the boreholes to the control reservoirs.

POTENTIAL IMPACTS AND BENEFITS

Site-specific assessments will be undertaken as part of the EIA process in order to confirm the feasibility of the proposed LRWSS in terms of the environmental impacts, and to delineate any areas of environmental sensitivity within the study area.

In line with the anticipated impacts, Table 1 below indicates the proposed specialist impact assessments that will form part of the EIA process. Table 2 highlights some of the benefits that the scheme will provide to the population of the area.

Table 1. Potential Impacts of the LRWSS will be:

- Potential impacts on South African heritage, archaeological and palaeontological features.
  - **Heritage/Archaeological Impact Assessment**
- Potential impacts of the floral and faunal biodiversity of the area.
  - **Ecological Impact Assessment**
- Potential impacts on paleontological features.
  - **Paleontological Impact Assessment**
- Potential impacts and benefits on the socio-economic aspects will be assessed.
  - **Socio-economic Impact Assessment**
- Potential impacts on wetland and riparian habitats.
  - **Aquatic Impact Assessment**

Table 2. Potential Benefits of the LRWSS will be:

- **Increased water availability and security of supply**
  - The main purpose behind the LRWSS is to meet the water requirements of the region and to ensure, via new and upgrading of existing infrastructure, greater security of supply to water users in the area.
- **The availability of alternative water resources**
  - The groundwater abstraction scheme will provide for a water resource in an area where pumping water from the Zalu Dam would be too expensive.
- **Socio-economic benefits**
  - Supply scheme for domestic and industrial water requirements;
  - The creation of temporary and permanent jobs;
  - Spin-off benefits
  - Irrigated agriculture.

THE PROPONENT

The proponent for this project is the national **DEPARTMENT of WATER AFFAIRS** (DWA). The DWA is the custodian of South Africa's water resources. It is primarily responsible for the formulation and implementation of policy governing this sector. It also has an overriding responsibility for water services provided by local government.

THE ENVIRONMENTAL ASSESSMENT PRACTITIONER

EOH COASTAL & ENVIRONMENTAL SERVICES (CES) specialises in impact assessments and environmental management. CES was established in 1990, and provides a wide variety of environmental advisory services to public and private-sector clients.

THE ENVIRONMENTAL IMPACT ASSESSMENT PROCESS

Coastal & Environmental Services (CES) has been appointed by the Department of Water Affairs (DWA) to undertake the necessary environmental investigations for the LRBWSS, and to apply for approval from the Competent Authority (Department of Environmental Affairs (DEA)), for the construction LRWSS infrastructure, as required by South Africa's environmental legislation.

RELEVANT LEGISLATION

The Environmental Impact Assessment Regulations (2010), promulgated in terms of section 24(5) of Chapter 5 of the National Environmental Management Act (NEMA)(Act No 107 of 1998, as amended) identify activities which may not commence without an authorisation from the competent authority (DEA). In order to apply for authorisation for the activity, the assessment and communication of potential impacts of the activities must follow the procedure as described in regulations 26 to 35 of Government Notice No. R 543 of the EIA Regulations.

The LRWSS is subject to a full Scoping and Environmental Impact Assessment in terms of the following listed activities:

ACTIVITY		DESCRIPTION
GN R 544 (June 2010)	9	Bulk water reticulation infrastructure will be constructed for the purposes of supplying water to water users. These pipelines will potentially exceed 0.36 m in diameter.
	11	Pipelines for reticulation of bulk water may cross watercourses.
	18	The construction of the Zalu Dam will require both excavation and infilling of material into the Xura River. Pipelines will also cross rivers and streams and will require excavation and/or infilling.l
	23	An area in excess of 1 hectare outside of an urban area will be transformed from undeveloped land to institutional use.
GN R 545	15	An area in excess of 20 hectares will be transformed from undeveloped land to institutional use.
	19	Construction of the Zalu Dam on the Xura River. It is estimated that the highest part of the dam will exceed 5 m.
GN R 546	2	Reservoirs along the pipeline routes will be constructed. Some of these will fall within critical biodiversity areas in terms of the Eastern Cape Biodiversity Conservation Plan (ECBCP).
	4	A formal access road to the dam will need to be constructed.
	13	The area to be inundated by the proposed dam is identified as a critical biodiversity area in terms of the Eastern Cape Biodiversity Conservation Plan (ECBCP).
	16	Construction will take place within the Xura River (dam construction). The site is within a critical biodiversity area in terms of the Eastern Cape Biodiversity Conservation Plan (ECBCP).

APPROACH TO THIS SCOPING AND EIA REPORT

The EIA for the proposed project is presently in the SCOPING phase. This phase serves primarily to inform the public and relevant authorities about the proposed project and to determine any impacts. These impacts will then be extensively addressed by specialists in the field during the environmental impact assessment (EIA) phase. Only after the full EIA report has been submitted will a decision be made by relevant authorities.

Scoping Process

The Environmental Impact Assessment phase

The **Environmental Impact Assessment** phase is more complex and more detailed than the Scoping phase, because it focuses on undertaking a number of specialist studies that have been identified during the Scoping phase. These studies provide expert input into the EIA process based on scientific information. I&APs will be consulted again during this phase, and will be given an opportunity to comment on the Draft Environmental Impact Report (EIR) that will contain the specialist reports. During this phase an Environmental Management Programme must also be prepared for the project.

The final EIR is submitted to the national Department of Environment Affairs (DEA) who, after considering the report, will make a decision on whether or not to authorise the development. The authorisation of a development carries a number of legally binding conditions, which will be contained in the Environmental Authorisation document. This document will be circulated to all registered I&APs within two weeks of receipt from the DEA.

Other activities that will require approval include:

Mining Licences:

The earth-fill dam will require rock, clay and sand which will be excavated from the surrounding area. Rock and sand will be excavated from the dam basin and clay will be excavated from two borrow pits below the dam wall. In terms of the Mineral and Petroleum Resources Development Amendment Act (MRPDA), 2008 (Act No. 49 of 2008) and associated regulations, R527 of 23 April 2004 a mining license must be obtained from the **Department of Mineral Resources** (DMR). The **Department of Water Affairs** (DWA), as an organ of state, holds a **general mining licence** per site for borrow areas. However, DWA is required to compile EMPs for approval in terms of the provisions of section 39 (5) of the MRPDA.

Water Use Licence:

The project triggers listed activities in section 21 of the National Water Act (NWA) Act No. 36 of 1998; (a) taking water from a watercourse; (b) storing water; (c) impeding or diverting the flow of water in a watercourse; (i) altering the bed, banks, course or characteristics of a watercourse. The proposed water treatment plant will also trigger (f) discharging waste or water containing waste into a water resource through a pipe, canal, sewer, sea outfall or other conduit. Each triggering activity will require a **Water Use Licence Application** (WULA).

HOW CAN YOU BE INVOLVED?

A **Public Participation Process** (PPP) is being conducted as part of the EIA. The aim of the PPP is to allow everyone who is interested in, or likely to be affected by, the proposed development to provide input into the process.

The Public Participation Process will include:

- Advertisements in the Daily Dispatch;
- Notice Boards on site;
- Circulation of the BID (this document) to all I&APs and stakeholders
- Community and focus group meetings;
- Review of all reports by registered I&APs and stakeholders.

If you consider yourself an interested and/or affected person/party, it is important that you become and remain involved in the PPP. In order to do so please follow the steps below in order to ensure that you are continually informed of the project developments and will ensure your opportunity to raise issues and concerns pertaining to the project.

STEP 1: Please **register** by responding to our notification and invitation, with your name and contact details (details provided on cover page and below). As a registered I&AP you will be informed of all meetings, report reviews and project developments throughout the EIA process.

STEP 2: Register by returning the slip at the back of this document to CES

STEP 3: Attend meetings that will be held throughout the EIA process. As a registered I&AP, you will be invited to these meetings.

CES is required to engage with all private and public parties that may be interested and/or affected by the LRWSS, in order to distribute information for review and comment in a transparent manner.

In the same light, it is important for I&APs to note the following:

1. In order for CES to continue engaging with you, please **ENSURE** that you register on our database by contacting the person below
2. As the EIA process is regulated by specific review and comment timeframes, it is your responsibility to submit your comments within these timeframes.

Who to contact for enquiries and/comments:

Nande Suka/Lungisa Bosman
16 Tyrell Road
Berea
East London 5241
P.O Box 8145
Nahoon, 5210
Tel: (043) 726 7809/8313
Fax: (043) 726 8352
Email: n.suka@cesnet.co.za / l.bosman@cesnet.co.za

I hereby wish to register as an Interested and Affected Party (I&AP) for the Lusikisiki Regional Water Supply Scheme EIA process

Name:

_____

Organization:

_____

Postal address:

_____

Email:

_____

Phone #: _____ Fax #: _____

My initial comments, issues or concerns are:

_____

_____

_____

_____

_____

_____

_____

Other individuals, stakeholders, organisations or entities that should be registered are:

Name:

_____

Organization:

_____

Postal address:

_____

Email:

_____

Phone #: _____ Fax #: _____

Please return details to: **Nande Suka:** P.O. Box 8145, Nahoon, 5210

Telephone: (043) 726 7809 Fax: (043) 726 8352 Email: n.suka@ceasnet.co.za

APPENDIX B-2: Letter of Notification Accompanying the BID

HEAD OFFICE CENTURION
ILISO House,
203 Witch-Hazel Avenue,
Highveld Techno Park, Centurion 0157
P.O. Box 68735, Highveld, 0169
T +27 (0) 12 665 0900 F +27 (0) 12 665 1886
www.iliso.com

ILISO consulting
PEOPLE - INTEGRITY - EXCELLENCE

2014-04-23

ILISO Reference: 1300113

DEA References:
Dam infrastructure: 14/12/16/3/3/2/677
Electricity generation 14/12/16/3/3/2/678
Road upgrades 14/12/16/3/3/1/1169

Notice of an Environmental Impact Assessment (EIA) for the Mzimvubu Water Project, Eastern Cape

Dear Stakeholder,

Notice is hereby given in terms of the National Environmental Management Act (NEMA), 1998 (Act no 107 of 1998), and the National Water Act (NWA), 1998 (Act No. 36 of 1998), that Environmental Authorisation and a Water Use Licence will be required for the activities described below. In this regard, applications have been submitted to the Department of Environmental Affairs (DEA) and will be submitted the Department of Water Affairs (DWA). Given the nature of this project, both scoping and environmental impact assessment procedures will be followed.

The Mzimvubu Water Project covers the district municipalities of OR Tambo, Alfred Nzo and Joe Gqabi, Eastern Cape. This project consists of a proposed dam, known as Ntabelanga Dam, located on the Tsitsa River, a tributary of the Mzimvubu River, which falls 12 km north-east of the midway point of the Tsolo and Maclear road. The closest villages are Ngqongweni, Cekwayo and Siqungweni. On the same Tsitsa River, downstream of Ntabelanga Dam site, another dam known as Laleni Dam, located upstream of the Tsitsa Falls, will be developed for hydropower generation. Both dams are to be operated as one integrated scheme. Environmental authorisation will be required for the infrastructure components for the following activities:

- Dams;
- Flow Gauging Weirs;
- Road re-alignment and upgrading;
- Domestic water supply pipelines and reservoirs;
- Raw water pipelines and reservoirs;
- Pumping Stations;
- Water Treatment Works;
- Waste Water Treatment Works;
- Hydropower generation;
- Power lines; and
- Access roads to construction sites.

A Water Use Licence (WUL) is required for the following water uses that will be triggered by the project:

- Section 21(a) taking water from a watercourse;
- Section 21(b) storing water;
- Section 21(c) impeding or diverting the flow of water in a watercourse;
- Section 21(i) altering the bed, banks, course or characteristics of a watercourse;
- Section 21(f) discharging waste or water containing waste into a water resource through a pipe, canal, sewer, sea outfall or other conduit; and
- Section 21 (g) disposing of waste in a manner which may detrimentally impact on a water resource.

In terms of the Mineral and Petroleum Resources Development Act, 2002 (Act No. 28 of 2002) (MPRDA), as amended, and the Mineral and Petroleum Resources Development Regulations in GNR 527 of 23 April 2004, the Department of Water Affairs (DWA) has been exempted by virtue of GNR . 762 of 25 June 2004 from the application procedures and the approval of rights and permits in terms of sections 16, 20, 22, and 27 of the MPRDA. However, in accordance with section 106(2) of the MPRDA, the DWA is required to compile an Environmental Management Programme (EMP) for approval in terms of the provisions of section 39 (4) of the Act.

ILISO Consulting (Pty) Ltd has been appointed by the DWA to undertake the EIA and associated public participation process. Stakeholders requiring more information on the project can register as an interested and affected party (I&AP) by contacting Kim Dalhuijsen by post, telephone, fax or email on the below details within 14 days of this notice.

Kim Dalhuijsen
ILISO Consulting (Pty) Ltd
PO Box 68735
Highveld, 0169

Email: Kim.d@iliso.com
Tel: (012) 685 0900
Fax: (012) 665 1886

Kind Regards,

T. Calmeyer
for ILISO Consulting

APPENDIX B-3: Register of Interested and Affected Parties

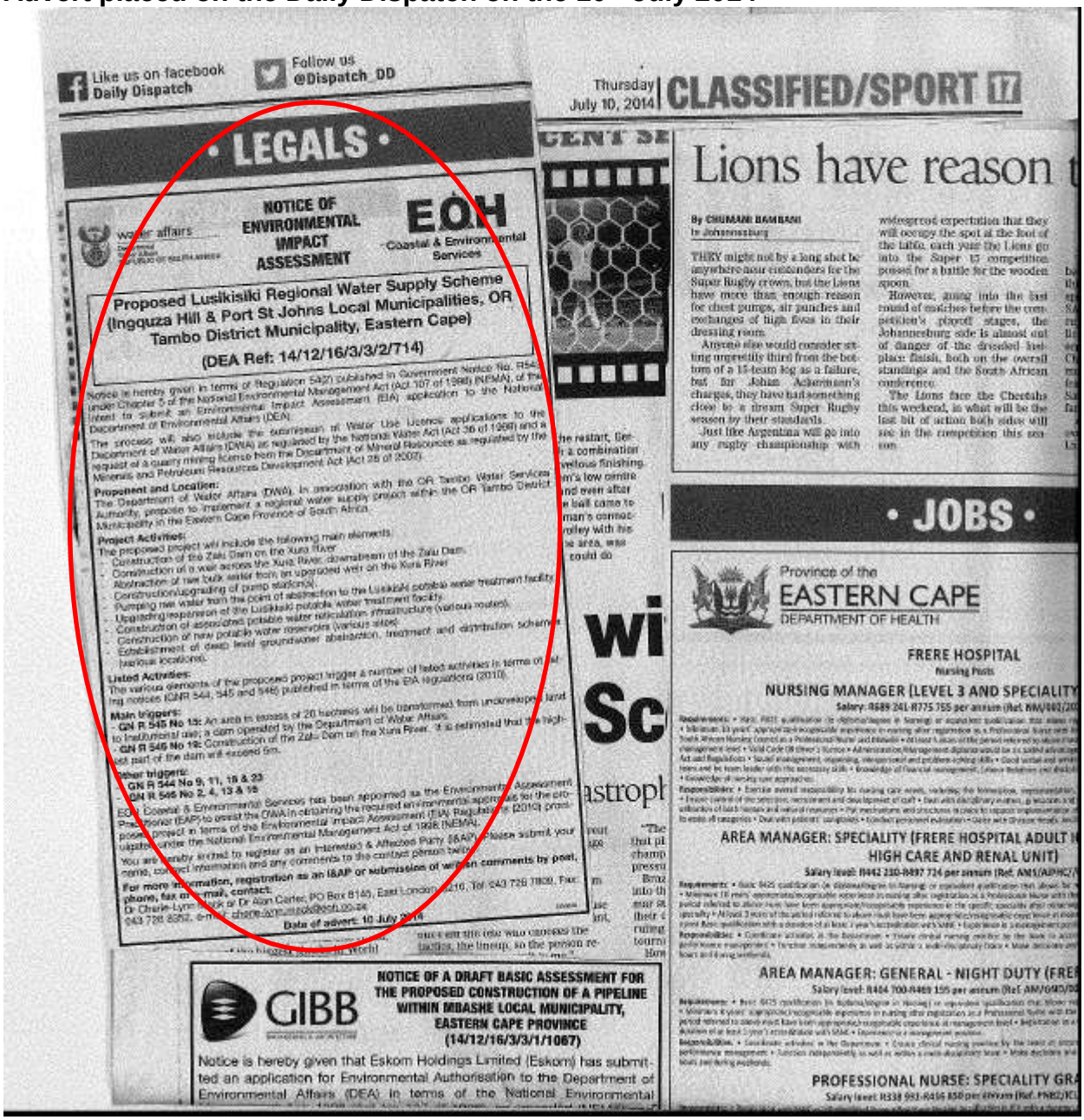
Organisation	Name	E-mail	Tel	fax	Postal address
Stakeholders					
SAHRA	M Galimberti	mgalimberti@sahra.org.za			
ECPHRA	Mr Mzikayise L. Zote	mlzote@ecphra.org.za	(043) 642 2811 or (076) 836 5467	(043) 642 2812	No 74 Alexandra Road, King Williams Town, 5600
ECPHRA	Mr S Mokhanya	smokhanya@ecphra.org.za			
DEDEA (OR Tambo)	Qondile Paliso	Qondile.Paliso@deaet.ecape.gov.za	(047) 531 1191	Private Bag X5029 Mthatha 5099	
I & AP register					
Ben van dr Merwe	Urban-econ	ben@urban-econ.com			
Mluleki Fihlani	Ingquza Hill LM	nmdiya@ihlm.gov.za	039 253 1568/ 039 253 1096	039 252 0131	
Mr N Pakde (Acting Municipal Manager)	PSJ LM	mshiywa.feziwe@gmail.com	047 564 1208		
Kabane Siyabonga	Eskom	kabanes@eskom.co,za			
Kumbula Charles	OR Tambo	charles@yahoo.com			
Mafumbata Ntosh	Eskom	mafumba@eskom.co.za			
Mase Sithembele	ECDC	smase@ecdc.co.za			
V Fihla	Eskom	fihlav@eskom.co.za			
Mjindi LM	Eskom	mjindilm@eskom.co.za			
Wana Xolani	Eskom	wanaxs@eskom.co.za			
Mdoda N	Eskom	mdoadan@eskom.co.za			
Sifiso Khoza	OR Tambo	sifisok@ortambodm.gov.za			
Mzayiya Eric	OR Tambo	mzayiyae@ortambodm.gov.za			
Mr Notho	OR Tambo DM	Singwa@gmail.com		Confirmed availabililty	
O Sopela	Ingquza Hill	osopela@psjmunicipality			

	LM	.co.za			
Pieterse H	AECOM	hermienp@bks.co.za			
Nyawose Mthokozi	Amatola Water	cthompson@amatolawater.co.za			
Ndzungu C	DWS	ndzunguc@dwa.gov.za			
Van Jaarsveld S	DWS	vanjaarsvelds@dwa.gov.za			
Fourie F	DWS	fourief@dwa.gov.za			
Geldenehuys T	DWS	geldenhuyst@dwa.gov.za			
Vena (Ward 10)	PSJ LM	mthuthuzelivena@gmail.com	073 477 7569	Confirmed availabililty	
Novangeli Town Hall	PSJ LM		073 415 4731		
Fono M (Ward 9)	PSJ LM	fonokm@gmail.com	082 634 6725	Confirmed availabililty	
Daniso B (Ward 11)	PSJ LM		072 564 1712		
Mtiki Z (Ward 12)	PSJ LM		073 394 6089	Confirmed availabililty	
Zweni M (Ward 13)	PSJ LM		082 564 0212		
Cuba Z (Ward 14)	PSJ LM		082 564 2979	Confirmed availabililty	
Tshoto G (Ward 15)	PSJ LM		072 256 2463/ 079 896 1111	Confirmed availabililty	
Mzaza S (Ward 19)	PSJ LM	siyamthanda.mzaza@yahoo.com	082 564 5298	Confirmed availabililty	
Mbotshwa N (Ward 20)	PSJ LM	ntsebz@gmail.com	073 035 3219 or 079 691 1451	Confirmed availabililty	
IHLM Reception			039 253 1563/ 039 253 1096		
MS Nkayitshana (Ward 12)	Ingquza Hill LM		071 865 3068		
Mr Ntshobo (Ward 13)			071 865 3029		
Mr Malulwana (Ward 14)			082 843 3887		
Mr Thambodala (Ward 15)			083 562 3717		
Ms Jotile (Ward 16)			083 462 3892		
Mr Mpofana (Ward 17)			071 865 3038		

Mr Zati (Ward 18)			073 782 1459		
Mr Mtsosto (Ward 19)			074 865 3591		
Mr Ngxamile (Ward 20)			071 865 3089		
Ms Daniso (Ward 21)			083 668 5540		
Mr Tshwatshuka (Ward 22)			083 668 4480		
Ms Daliwe (Ward 23)			083 623 6921		
Mr Nkungu (Ward 24)			083 623 9025		
Owethu Pantshwa	IHLM	opantshwa@ihlm.gov.za	039 252 0131	registered I&AP	
Lwandiso Pani	IHLM	lpani@ihlm.gov.za	039 252 0131	registered I&AP	
Agnes Mzobotshi	T/A Mzintlava Quarry	mzintlavaquarry@gmail.com	071 059 7177		

APPENDIX B-4: Copy of Newspaper Advertisement

Advert placed on the Daily Dispatch on the 10th July 2014



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Follow us @Dispatch_DD
Thursday July 10, 2014 CLASSIFIED/SPORT 17

• LEGALS •

water affairs

NOTICE OF ENVIRONMENTAL IMPACT ASSESSMENT

EOH Coastal & Environmental Services

Proposed Lusikisiki Regional Water Supply Scheme (Ingquza Hill & Port St Johns Local Municipalities, OR Tambo District Municipality, Eastern Cape)

(DEA Ref: 14/12/16/3/3/2/714)

Notice is hereby given in terms of Regulation 54(2) published in Government Notice No. R543 under Chapter 5 of the National Environmental Management Act (Act 107 of 1998) (NEMA), of the intent to submit an Environmental Impact Assessment (EIA) application to the National Department of Environmental Affairs (DEA).

The process will also include the submission of Water Use Licence applications to the Department of Water Affairs (DWA) as regulated by the National Water Act (Act 36 of 1998) and a request of a quarry mining license from the Department of Mineral Resources as regulated by the Minerals and Petroleum Resources Development Act (Act 28 of 2002).

Proponent and Location:
The Department of Water Affairs (DWA), in association with the OR Tambo Water Services Authority, propose to implement a regional water supply project within the OR Tambo District Municipality in the Eastern Cape Province of South Africa.

Project Activities:
The proposed project will include the following main elements:
- Construction of the Zalu Dam on the Xura River
- Construction of a weir across the Xura River downstream of the Zalu Dam
- Abstraction of raw bulk water from an upgraded weir on the Xura River
- Construction/upgrading of pump station(s)
- Pumping raw water from the point of abstraction to the Lusikisiki potable water treatment facility
- Upgrading/expansion of the Lusikisiki potable water treatment facility
- Construction of associated potable water reticulation infrastructure (various routes).
- Construction of new potable water reservoirs (various sites)
- Establishment of deep level groundwater abstraction, treatment and distribution schemes (various locations).

Listed Activities:
The various elements of the proposed project trigger a number of listed activities in terms of the following notices (GNR 544, 545 and 546) published in terms of the EIA regulations (2010):

Main triggers:
- **GN R 545 No 15:** An area in excess of 20 hectares will be transformed from undeveloped land to institutional use; a dam operated by the Department of Water Affairs
- **GN R 545 No 19:** Construction of the Zalu Dam on the Xura River. It is estimated that the height of part of the dam will exceed 5m.

Other triggers:
- **GN R 544 No 9, 11, 18 & 23**
- **GN R 546 No 2, 4, 13 & 15**

EOH Coastal & Environmental Services has been appointed as the Environmental Assessment Practitioner (EAP) to assist the DWA in obtaining the required environmental approvals for the proposed project in terms of the Environmental Impact Assessment (EIA) Regulations (2010) promulgated under the National Environmental Management Act of 1998 (NEMA).

You are hereby invited to register as an Interested & Affected Party (I&AP), please submit your name, contact information and any comments to the contact person below.

For more information, registration as an I&AP or submission of written comments by post, phone, fax or e-mail, contact:
Dr Charlie-Lynn Schoeman or Dr Alan Carter, PO Box 8145, East London, 5216, Tel: 043 726 7809, Fax: 043 726 8252, e-mail: charlie-lynn.schoeman@eoh.co.za

Date of advert: 10 July 2014

Lions have reason t

By CHUMANI BAMBANI
In Johannesburg

THEY might not by a long shot be anywhere near contenders for the Super Rugby crown, but the Lions have more than enough reason for chest pumps, air punches and exchanges of high fives in their dressing room.

Anyone who would consider sitting unpretty third from the bottom of a 15-team log as a failure, but for Johan Ackermann's charges, they have had something close to a dream Super Rugby season by their standards.

Just like Argentina will go into any rugby championship with widespread expectation that they will occupy the spot at the foot of the table, each year the Lions go into the Super 15 competition poised for a battle for the wooden spoon.

However, going into the last round of matches before the competition's playoff stages, the Johannesburg side is almost out of danger of the dreaded last-place finish, both on the overall standings and the South African conference.

The Lions face the Cheetahs this weekend, in what will be the last bit of action both sides will see in the competition this season.

• JOBS •

Province of the EASTERN CAPE DEPARTMENT OF HEALTH

FRERE HOSPITAL
Nursing Posts

NURSING MANAGER (LEVEL 3 AND SPECIALITY
Salary: R689 241-R775 755 per annum (Ref. NM/FH/20

AREA MANAGER: SPECIALITY (FRERE HOSPITAL ADULT I
HIGH CARE AND RENAL UNIT)
Salary level: R442 230-R497 724 per annum (Ref. AM1/AD/HC/

AREA MANAGER: GENERAL - NIGHT DUTY (FRE
Salary level: R404 700-R469 155 per annum (Ref. AM/GND/20

PROFESSIONAL NURSE: SPECIALITY GR
Salary level: R338 991-R416 850 per annum (Ref. PN02/IC

GIBB

NOTICE OF A DRAFT BASIC ASSESSMENT FOR THE PROPOSED CONSTRUCTION OF A PIPELINE WITHIN MBASHE LOCAL MUNICIPALITY, EASTERN CAPE PROVINCE (14/12/16/3/3/1/1067)

Notice is hereby given that Eskom Holdings Limited (Eskom) has submitted an application for Environmental Authorisation to the Department of Environmental Affairs (DEA) in terms of the National Environmental

APPENDIX B-5: Text of the Site Notice

water affairs
Department:
Water Affairs
REPUBLIC OF SOUTH AFRICA

NOTICE OF ENVIRONMENTAL IMPACT ASSESSMENT

EOH
Coastal & Environmental Services

Proposed Lusikisiki Regional Water Supply Scheme (Ingquza Hill & Port St Johns Local Municipalities, OR Tambo District Municipality, Eastern Cape)

(DEA Ref: 14/12/16/3/3/2/714)

Notice is hereby given in terms of Regulation 54(2) published in Government Notice No. R543 under Chapter 5 of the National Environmental Management Act (Act 107 of 1998) (NEMA), of the intent to submit an Environmental Impact Assessment (EIA) application to the National Department of Environmental Affairs (DEA).

The process will also include the submission of Water Use License applications to the Department of Water and Sanitation (DWS) as regulated by the National Water Act (Act 36 of 1998) and a request of a quarry mining license from the Department of Mineral Resources as regulated by the Minerals and Petroleum Resources Development Act (Act 28 of 2002).

Proponent and Location:
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Project Activities:
The proposed project will include the following main elements:

- Construction of the Zalu Dam on the Xura River
- Construction of a weir across the Xura River, downstream of the Zalu Dam.
- Abstraction of raw bulk water from an upgraded weir on the Xura River
- Construction/upgrading of pump station(s).
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- Upgrading/expansion of the Lusikisiki potable water treatment facility.
- Construction of associated potable water reticulation infrastructure (various routes).
- Construction of new potable water reservoirs (various sites)
- Establishment of deep level groundwater abstraction, treatment and distribution schemes (various locations).

Listed Activities:
The various elements of the proposed project trigger a number of listed activities in terms of listing notices (GNR 544, 545 and 546) published in terms of the EIA regulations (2010).

Main triggers:

- **GN R 545 No 15**: An area in excess of 20 hectares will be transformed from undeveloped land to institutional use; a dam operated by the Department of Water Affairs.
- **GN R 545 No 19:** Construction of the Zalu Dam on the Xura River. It is estimated that the highest part of the dam will exceed 5 m.

Other triggers:

1. **GN R 544 No 9, 11, 18 & 23**
2. **GN R 546 No 2, 4, 13 & 16**

EOH Coastal & Environmental Services has been appointed as the Environmental Assessment Practitioner (EAP) to assist the DWA in obtaining the required environmental approvals for the proposed project in terms of the Environmental Impact Assessment (EIA) Regulations (2010) promulgated under the National Environmental Management Act of 1998

(NEMA).

You are hereby invited to register as an Interested & Affected Party (I&AP). Please submit your name, contact information and any comments to the contact person below.

For more information, registration as an I&AP or submission of written comments by post, phone, fax or e-mail, contact:
Dr Cherie-Lynn Mack or Dr Alan Carter, PO Box 8145, East London, 5210, Tel: 043 726 7809, Fax: 043 726 8352, e-mail: cherie-lynn.mack@eoh.co.za

Date of advert:

APPENDIX B-6: Photographs of the Fixed Site Notice

Signs placed at various areas around the project area.

APPENDIX B-7: Meetings Attendance Register

DWA Lusikisiki Regional Water Supply Scheme – Public & Stakeholder Engagement

Attendance Register

7th – 11th July 2014 (8th July 2014 – Ingquza Hill LM Ward councillors) Stakeholders

Name	Organisation/Community	Email	Tel no.
M/M Mlanjwa	Ward 19 Committee	N/A ~~0834444289~~	~~0834444289~~
N. Bhala	Ward 16 Committee	N/A ~~0834985310~~	~~0834985310~~ N/Bhala
N. Nkwakhwa	Ward 24 Committee	N/A	0603805946
M.S. Thilanga	ward 24 Committee	—	~~0834480351~~
N. Zikizela	Ward 24 committee	—	083 446 9036 X
Z. Tshemese	WARD 17 committee		0834483823
S. M. Matwasa	ward 17 committee		0786701128
N. C. Mkomse	WARD 17 committee	N/A	083 444 5600

Name	Organisation/Community	Email	Tel no.
Z. Basho	Ward 17 Committee	N/A	083 4198256
Tama	W/ Committee		0836493567
M. Honyeza	W/Committee		083mm0976
N.F. Ako	W/Committee 18	N/A	0835914708
N Nyengiso	Ward Committee 17	N/A	0834671990
B. Mfihla	W/committee 21	N/A	0834440933
N.F. Dwabanyo	Ward Committee 21	N/A	0765876262
N. Msikwa	Ward Committee 21	N/A	0834450593
N. Daniso	Ward 21 Councillor	N/A	083 666 5540
M. Temyame	Ward 17 Councillor	N/A	0733743422

Name	Organisation/Community	Email	Tel no.
B NGOTANA	17. S. K MATWASA	–	0833409583
M.D MVUHSWA	13 M.D MVUHSWA	–	0834452496
SE MALUKWANA	14 W/CLLR	–	0828423887
M. MABEKA	14 W/COMMITEE	–	0834416504
A. Vangaye	14 W/ Comitee	–	0732204592
T. Sonqushu	14-19 Comm	–	0736655772
M MFolozi	13 Ward Committee	–	0834441194
F MDutshane	13 Ward Committee	–	0834403459
Luvuyo-Dumani	14 - W/Comm	–	08209347
N Ndondo	14 W/Comm	–	0834460225
S. Mngc	19 C/Comm	–	0735557913
E. Gwilika	14 Ward member	–	–

DWA Lusikisiki Regional Water Supply Scheme – Public & Stakeholder Engagement

Attendance Register

7th – 11th July 2014 (Community engagement Tracor Centre) Ntsimbini Village

Name	Organisation/Community	Email	Tel no.
MP NTSHOBO	Ward 13	pntshobo@[illegible].gov	073758283[illegible]
T. NGWANE	Ward 17	Themosile[illegible]@gmail	078 6544972
B. BAMBWANA	Ward 17	Bongeko 76@gmail	0780262170
A Mbona	Ward 17		0738065470
N. MPAMBANISO	Ward 13		078 5291242
N TENYANE	Ward 17		0781367989
S. DOMO	Ward 14		0796089103
M. SIKO	Ward 17	N.Siko@Gmail.com	073 3906243

Name	Organisation/Community	Email	Tel no.
N Mngoma	ward 17		0719438596
M. Nguwane	ward 13		0787548784
D.L. Mhlola	ward 13		0736605604
M. Dlomo	ward 17		0733211638
S MATWASA	ward 13		0787414790
M MAFANYA	ward 13		0834248945
S. Dlomo	ward 17		0836224396
S. MBOENBANA	ward 13		0739005574
M. Siko	ward 17		0837706499
m mthembo	ward 8		0785015948

Name	Organisation/Community	Email	Tel no.
B. NGOTANA	WARD 17	—	0833409583
L.R NGOTANA	WARD 17	-	0843738858
S MBUENA	WARD 17	—	0715160502
K.A DUNTSULA	WARD 17	—	0733485430
M MBENA	WARD 17	—	0726023888
MBENA SILINGISA	WARD 17	—	—
M. Mbenge	Ward 13	—	0780756997

DWA Lusikisiki Regional Water Supply Scheme – Public & Stakeholder Engagement

Attendance Register

7th – 11th July 2014

Name	Organisation/Community	Email	Tel no.
Velisw[illegible] Peter	Ward 23 W. Committee	N/A	0834475066
Nothemba Jisiwa	Ward 17. Ward Commi		0735590100
Mampinge M. Diko	W/Committee (18) ward	–	0834316762
Michael Sigweta	W/Committee 14	–	0834408277
Mfungiso Jali	W/Committee 18		083485011 5
Alicia Mbhalo	W/Committee 21		0834432703
P Tshicila	W/committ 21		0834433214
T.A Muge	W/committe 21		0834447774

Name	Organisation/Community	Email	Tel no.
N. Mkenjwa	W/ Committe	N/A	0834452229
N. Linganiso	W/ comette	N/A	083 [illegible] 69
XW. Sopilazi	W/ Com 16	N/A	083 448 3303
M mkhwenkwe	w/com 16	n/a	0785 [illegible] 996
M. MALI	WARD 14 W/ Comette	N/A	0834422457
N.C. CAINE	W/Committe 16	N/A	0834199499
L. Mgwaza	W/committee 13	N/A	0834443153
P. MBALENI	W/Committe	WARD 18	0731884465
N. MKUMBUZI	W/Committee	WARD 14	0733476531
Y Khoisile	W/committee	WARD 18	0834416355

DWA Lusikisiki Regional Water Supply Scheme – Public & Stakeholder Engagement

Attendance Register

7th – 11th July 2014 (9th/07/14 – PSJ LM Stakeholder & Cllrs engagements)

Name	Organisation/Community	Email	Tel no.
S. Mzaza	PSJLM Cllr 052564 5298-19	Siyanthanda.mzaza@yahoo.com	[signature] 0525645295
X. Moni	PSJLM Cllr Lusitaya ward 18	xolile.moni@gmail.com	[signature]
K. M. Fono	PSJLM ward 09	fonokm@gmail.com	[signature]
D. M. Mangqo	PSJLM MAYOR	dmangqo@psjmuni.co.za	[signature]
M. Vie	PSJ Cllr. Ward 10	0738777564 mthutuzelvien@gmail...	[signature]
R. M. Zweni	Ward Councillor (ward 13)	rmzweni@gmail.com	[signature] 0826[illegible]
MN Sophotela	CllR WARD 11		0719980097 [signature]
N. Mbotshwa	Cllr WARD 20	ntsebz@gmail.com	[signature] 0730353219

Name	Organisation/Community	Email	Tel no.
Tshotho Y	Ward Cllr 15	Tshotho[illegible]	0722562462
Diki N	Ward 11 Sec	nyiki@gmail.com	0833472805
MTIKI Z	WARD CLLR 12	ZETMTIKI@gmail.com	0827990135
Sotshangaye S,	Ward 17	Silas Sotshangaye @gmail, Com	073345674/

APPENDIX B-8: Proof of Public Review of Draft Scoping Report

Copy of Notification Letter

EOH
Coastal & Environmental Services

16 July 2014

Dear Stakeholders/Interested & Affected parties:

RE: NOTIFICATION OF AVAILABILITY OF THE DRAFT SCOPING REPORT FOR THE PROPOSED LUSIKISIKI WATER SUPPLY SCHEME, EASTERN CAPE PROVINCE OF SOUTH AFRICA.

The Draft Scoping Report for the proposed Lusikisiki Water Supply Scheme is now available for public review.

The report can be downloaded from the CES website (www.cesnet.co.za) on the public documents page. Hard copies will also be available at the Lusikisiki and Port St Johns public libraries. All comments should be submitted in writing via the methods indicated below. The report will be available for review from **Thursday 17 July 2014 to Tuesday 26 August 2014.**

For more information, registration as an Interested and Affected Party (I&AP), or submission of written comments, please contact by phone, fax, post or email the person below:

EOH Coastal & Environmental Services
Attention: Dr Cherie-Lynn Mack
P O Box 6145
East London
Tel: 043 726 7809/043 726 8313
Fax: 043 726 8352
E-mail: c.mack@cesnet.co.za

We would like to emphasise that should you consider yourself an interested and/or affected party, we request that you register by simply contacting our office at the details given above. This will ensure that all correspondence and progress with regards to the Environmental Impact Assessment are made available to you in a timeous and transparent manner.

We look forward to hearing from you.

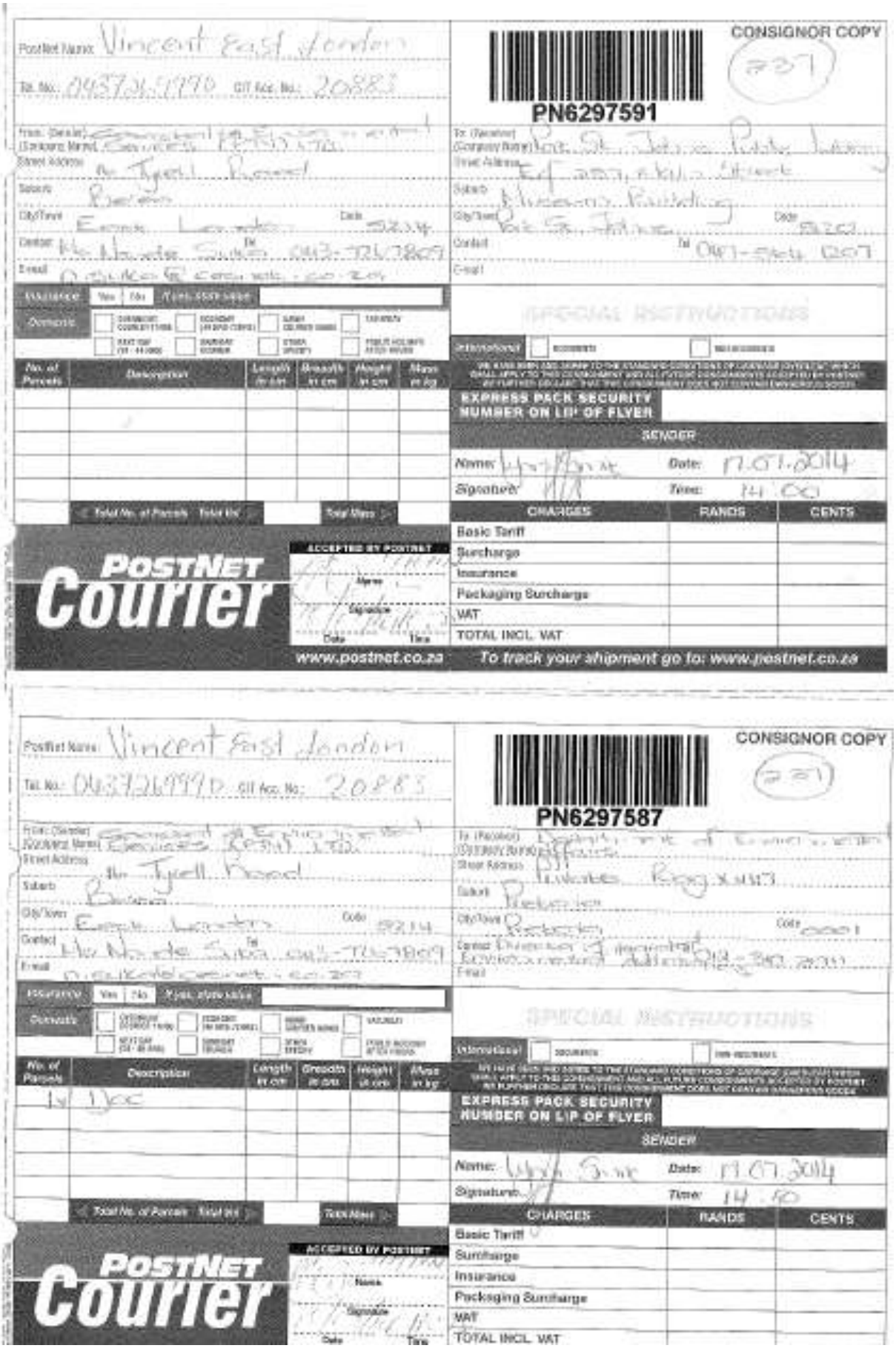
Kind Regards

Cherie-Lynn Mack
Principle Environmental Consultant
EOH Coastal & Environmental Services

Consulting | Technology | Outsourcing
Directors: AM Ayle (MD), A Bellout and JW Ring

Coastal and Environmental Services (Pty) Ltd
tel: +27 43 726 7809 | Fax: +27 43 726 8352
16 Tyrell Street Berea, East London 5214
PO Box 6145, East London 5210, South Africa
www.eoh.co.za | www.cesnet.co.za
reg no: 2012/151672/07

Proof of registered mail delivery of Notification Letter



POSTNET Courier

CONSIGNOR COPY

PN6297589

EXPRESS PACK SECURITY NUMBER ON LIP OF FLYER

SENDER

CHARGES	RANDS	CENTS
Basic Tariff		
Surcharge		
Insurance		
Packaging Surcharge		
VAT		
TOTAL INCL. VAT		

www.postnet.co.za To track your shipment go to: www.postnet.co.za

POSTNET Courier

CONSIGNOR COPY

PN6297593

EXPRESS PACK SECURITY NUMBER ON LIP OF FLYER

SENDER

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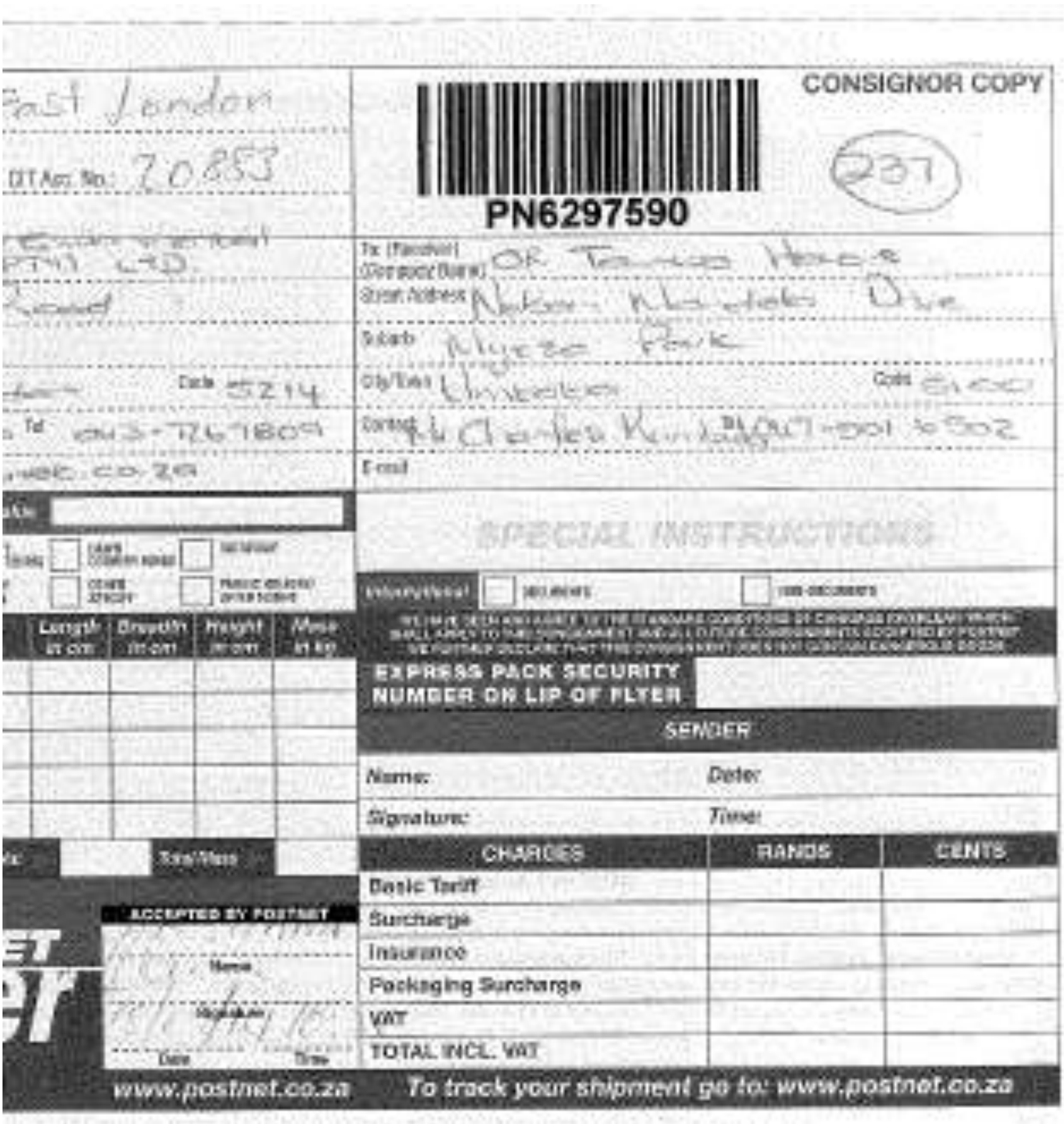
Surcharge		
Insurance		
Packaging Surcharge		



CONSIGNOR COPY

PN6297590

East London

DT Acc. No.: 70853

To: (Receiver) (Company Name): DR Tamas Hose

Street Address: Nelson Mandela Drive

Suburb: Myezo Park

City/Town: Umtata

Code: 5100

Contact: Charles K...

E-mail:

Tel: 043-7267809

SPECIAL INSTRUCTIONS

Length in cm	Breadth in cm	Height in cm	Mass in kg

Total Mass

EXPRESS PACK SECURITY NUMBER ON LIP OF FLYER

SENDER

Name: Date:

Signature: Time:

CHARGES	RANDS	CENTS
Basic Tariff		
Surcharge		
Insurance		
Packaging Surcharge		
VAT		
TOTAL INCL. VAT		

ACCEPTED BY POSTNET

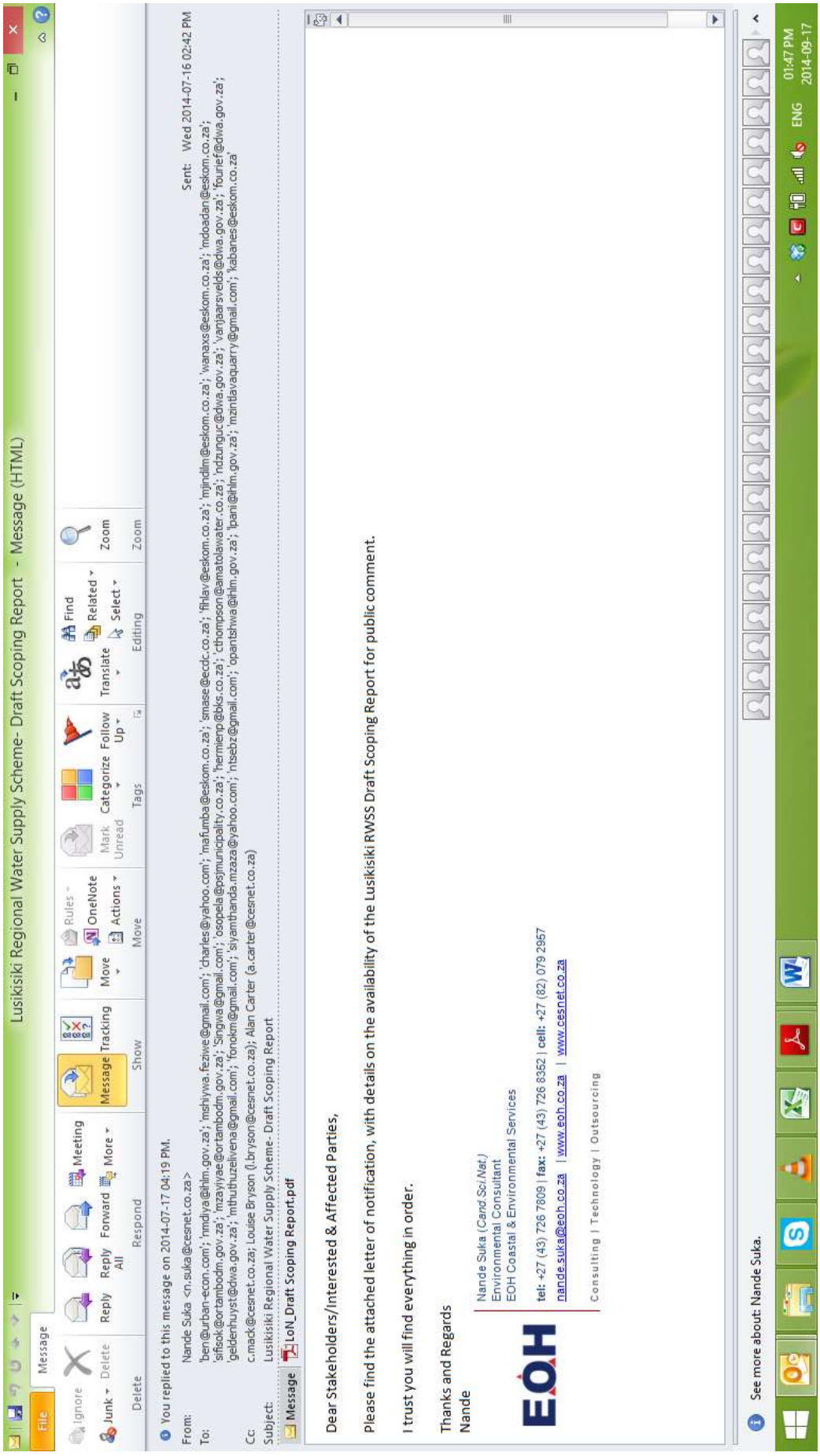
Name

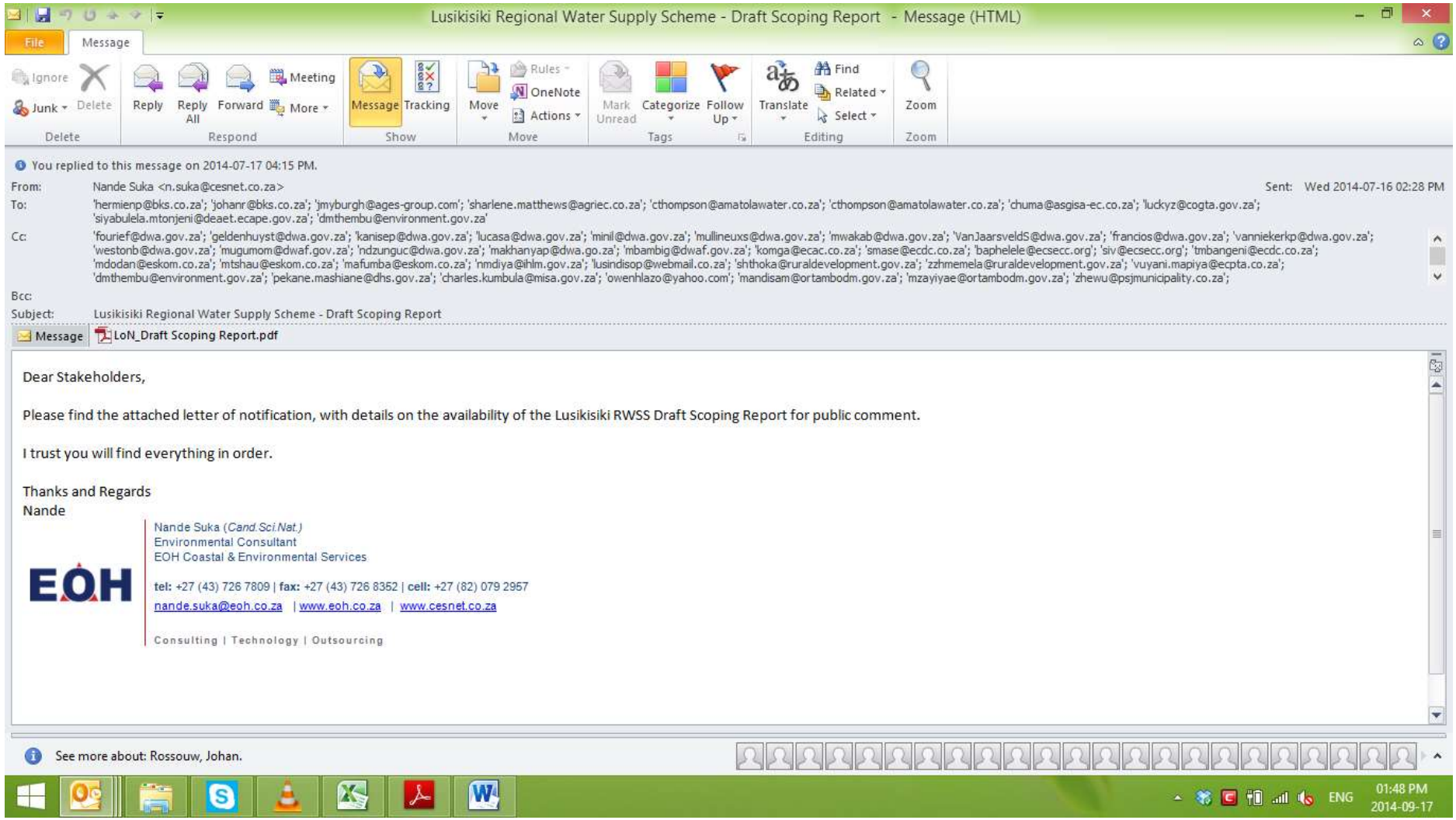
Signature

Date Time

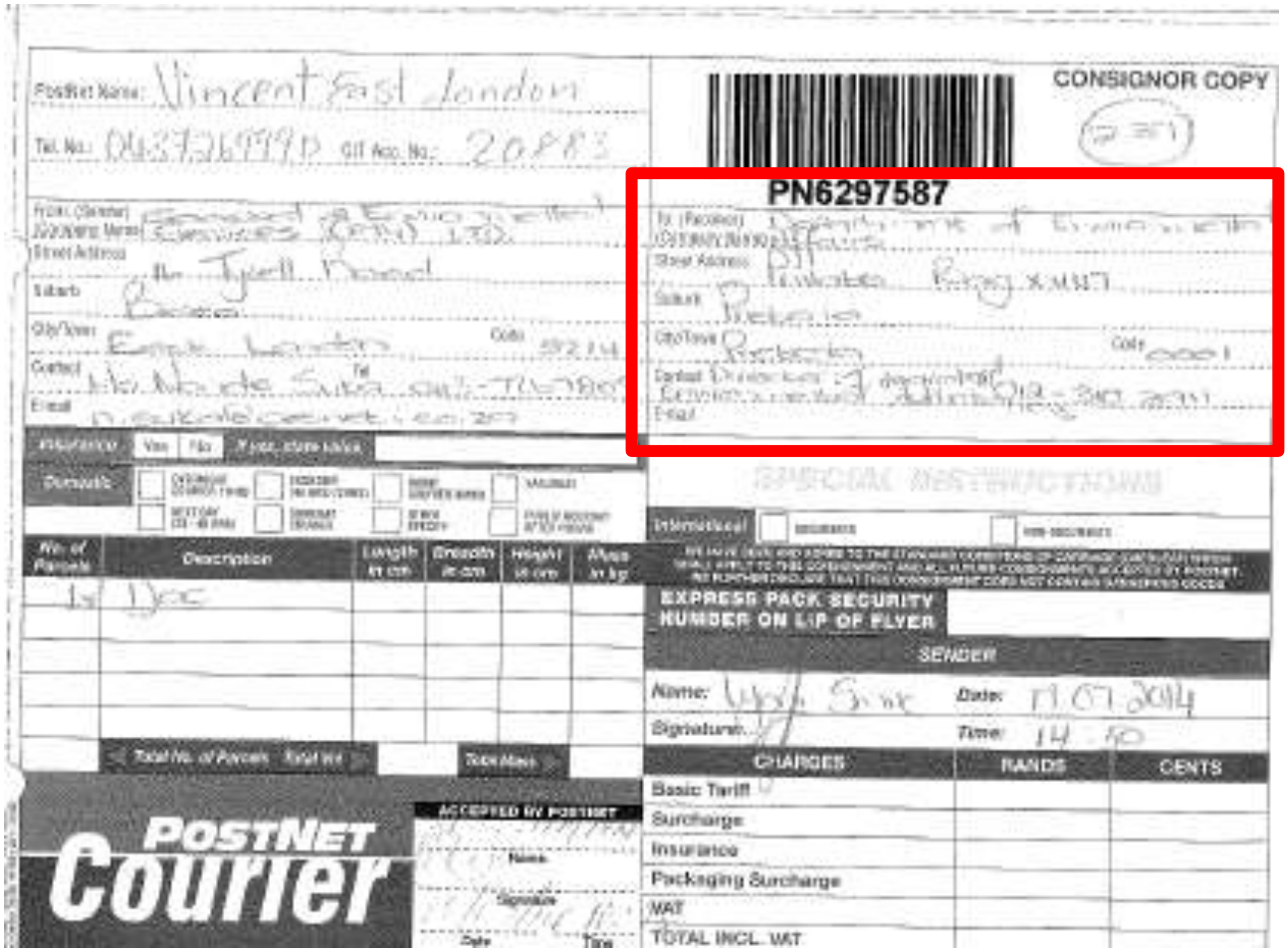
www.postnet.co.za To track your shipment go to: www.postnet.co.za

Proof of e-mail notifications




Lusikisiki Regional Water Supply Scheme - Draft Scoping Report - Message (HTML)
File
Message
Ignore
Junk
Delete
Reply
Reply All
Forward
Meeting
More
Message
Tracking
Move
Rules
OneNote
Actions
Mark Unread
Categorize
Follow Up
Translate
Find
Related
Select
Zoom
Delete
Respond
Show
Move
Tags
Editing
Zoom
You replied to this message on 2014-07-17 04:15 PM.
From: Nande Suka <n.suka@cesnet.co.za>
Sent: Wed 2014-07-16 02:28 PM
To: 'hermienp@bks.co.za'; 'johanr@bks.co.za'; 'jmyburgh@ages-group.com'; 'sharlene.matthews@agriec.co.za'; 'cthompson@amatolawater.co.za'; 'cthompson@amatolawater.co.za'; 'chuma@asgisa-ec.co.za'; 'luckyz@cogta.gov.za'; 'siyabulela.mtonjeni@deaet.ecape.gov.za'; 'dmthembu@environment.gov.za'
Cc: 'fourief@dwa.gov.za'; 'geldenhuyst@dwa.gov.za'; 'kanisep@dwa.gov.za'; 'lucasa@dwa.gov.za'; 'minil@dwa.gov.za'; 'mullineuxs@dwa.gov.za'; 'mwakab@dwa.gov.za'; 'VanJaarsveldS@dwa.gov.za'; 'francios@dwa.gov.za'; 'vanniekerkp@dwa.gov.za'; 'westonb@dwa.gov.za'; 'mugumom@dwaf.gov.za'; 'ndzunguc@dwa.gov.za'; 'makhanyap@dwa.go.za'; 'mbambig@dwaf.gov.za'; 'komga@ecac.co.za'; 'smase@ecdc.co.za'; 'baphelele@ecsecc.org'; 'siv@ecsecc.org'; 'tmbangeni@ecdc.co.za'; 'mdodan@eskom.co.za'; 'mtshau@eskom.co.za'; 'mafumba@eskom.co.za'; 'nmdiya@ihlm.gov.za'; 'lusindisop@webmail.co.za'; 'shthoka@ruraldevelopment.gov.za'; 'zzhmemela@ruraldevelopment.gov.za'; 'vuyani.mapiya@ecpta.co.za'; 'dmthembu@environment.gov.za'; 'pekane.mashiane@dhs.gov.za'; 'charles.kumbula@misa.gov.za'; 'owenhlazo@yahoo.com'; 'mandisam@ortambodm.gov.za'; 'mzayiyae@ortambodm.gov.za'; 'zhewu@psjmunicipality.co.za';
Bcc:
Subject: Lusikisiki Regional Water Supply Scheme - Draft Scoping Report
Message
LoN_Draft Scoping Report.pdf
Dear Stakeholders,
Please find the attached letter of notification, with details on the availability of the Lusikisiki RWSS Draft Scoping Report for public comment.
I trust you will find everything in order.
Thanks and Regards
Nande
Nande Suka (Cand.Sci.Nat.)
Environmental Consultant
EOH Coastal & Environmental Services
tel: +27 (43) 726 7809 | fax: +27 (43) 726 8352 | cell: +27 (82) 079 2957
nande.suka@eoh.co.za | www.eoh.co.za | www.cesnet.co.za
Consulting | Technology | Outsourcing
See more about: Rossouw, Johan.
ENG
01:48 PM
2014-09-17

Proof that 2 hard copies and 2 electronic copies of the Draft Scoping Report were submitted to DEA



APPENDIX B-9: Issues and Response Trail

LUSIKISIKI REGIONAL WATER SUPPLY SCHEME

O R TAMBO DISTRICT MUNICIPALITY, EASTERN CAPE PROVINCE SOUTH AFRICA

REPORT ON THE PUBLIC PARTICIPATION PROCESS

Prepared for:

Department of Water and Sanitation

water & sanitation
Department:
Water and Sanitation
REPUBLIC OF SOUTH AFRICA

EOH Coastal & Environmental Services
16 Tyrell Road
Berea, 5210
P.O Box 8145
Nahoon, 5210
East London

EOH
Coastal & Environmental Services

FINAL REPORT

AUGUST 2014

This report should be cited as: EOH Coastal & Environmental Services August 2014, *Lusikisiki Regional Water Suplly Scheme (LRWSS), Report on the Public Participation Process*, CES, East London, South Africa .

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

LIST OF PLATES

1. INTRODUCTION

The current report describes the outcomes of the Public Participation Process (PPP) and the engagement with Interested and Affected Parties (I&APs) as part of the Environmental Impact Assessment (EIA) process required in teerms of the National Environmental Management Act (NEMA) for the purposes of obtaining Environmental Authorization (EA) for the proposed Lusikisiki Regional Water Supply Scheme (LRWSS) (hereinafter referred to as the project).

The objectives of the PPP are to:

- Ensure an open and transparent EIA process as well as a process of consultation during the initial inception phase of the project design;
- Identify and involve all I&APs as well as provide information on the details of the project and the associated EIA process;
- Acquire an understanding of the issues and concerns raised by the I&APs with regard to the project, as well as their inputs towards identifying and assessing the impacts of the project.
- Keep a register of the issues, concerns and problems raised by I&Aps during the PPP; and
- Set out and manage the issues raised by all I&APs.

This process includes organising public and stakeholder consultation meetings, to which all I&APs and other stakeholders are invited, and where they have an opportunity to express their concerns, expectations and comments with regard to the proposed project and the environmental approval process.

All meetings that were held during the initial stakeholder engagement and during the scoping phase of this EIA are detailed in this report. This report will be updated once the public meetings to be held during the EIR phase are finalised, so as to become one single document pertaining to the entire PPP process of the LRWSS project. The final PPP document, including all the minutes of the meetings, will be included as part of the final EIR report to be submitted to DEA for decision making

1.1 Consultant

The appointed Environmental Assessmwnt Practioner (EAP) for the LRWSS project is:
EOH Coastal & Environmental Services
16 Tyrell Road, Berea, 5210
P.O Box 8145, Nahoon, 5210
East London, South Arica

1.2 PPP Team

Mr Lungisa Bosman – *Public Participation Process and Liaison with the I&APs, Compilation of Reports*
Mr Bosman holds a Bachelor of Social Science (1993) from University of Cape Town, with majors in Public Administration & Sociology, and a Post Graduate Diploma in Organisation and Management. Lungisa has twelve years of consulting experience specifically involved in public participation and community engagement. He is currently a senior consultant at EOH Coastal & Environmental Services with a lot of experience in EIAs especially Social Impact Assessments and Public Consultation. He has been involved in a number of projects in South Africa and other Africans countries like Malawi and Mozambique. Some of the projects where he has brought his social facilitation skills to bear include the Malawi Monazite Mine, Chibuto CSL mine project, Kynsna N2 Highway, Wildcoast N2 Toll Road and a number of wind farm projects and smaller basic assessments

2. PROJECT AND LOCATION

The Study Area comprises the region between Lusikisiki (up to about 15 km inland) and the coast, extending from the Mzimvubu River in the south-west to the Msikaba River in the north-east, as shown on Figure 2.1 and 2.2 below.

The proposed activity consists of the following main elements:

The Zalu Dam and inundation area – The dam will consist of an earth core rockfill dam with a full supply level of 612 masl (approximately 35 m high). It is anticipated that the dam will yield 6.95 million m_3/a at 1:100 year assurance of supply. The domestic requirement is 5.4 million m_3/a in 2040, the irrigation requirements 1.45 million m^3/a (including 10% losses) and the 1:1 year ecological freshet requirement is 8 m_3/s for a period of three days per year. It is anticipated that the release for domestic use will be sufficient for the maintenance of ecological requirements (MJ Trümpelmann, 2014). The area that will be inundated as a result of the proposed Zalu Dam is approximately 143.47 hectares in size. No resettlement will be required.

Reticulation of raw water to the existing treatment works – A pipeline will be constructed from the Zalu Dam to the existing water treatment works on the outskirts of Lusikisiki. The final location of this route will be provided in the EIR Phase as it is not finalised at this stage. In addition to this it is anticipated that the water treatment works will be upgraded to cater for the increase in capacity required.

Reticulation of treated water to various reservoirs – Potable water will be transferred from the water treatment works to a number of reservoirs via a combination of existing and new pipelines. Existing pipelines may require upgrading. The location of new pipelines is shown as dotted line in Figure 2,2, above. The final layout of these pipelines will be provided in the EIR phase.

Borrow pits for dam construction – The process of dam construcition will require rock material and from the pre-feasibility study (MJ Trümpelmann, 2014) it shows that sufficient construction materials are available for a rockfill dam in close proximity to the proposed construction site. Residual dolerite clay is available in a borrow area downstream of the dam centreline on the right bank of the river. This material is sufficient for a central earthfill core for a rockfill dam.
Two rockfill quarries with unweathered dolerite, one on the right bank and one on the left bank, 10 km upstream of the centreline of the proposed dam, were identified. These sources are located below the full supply level of the dam. Both sources are covered with moderately to completely weathered shales. The moderately weathered shales can be used in the shells of a rockfill dam.

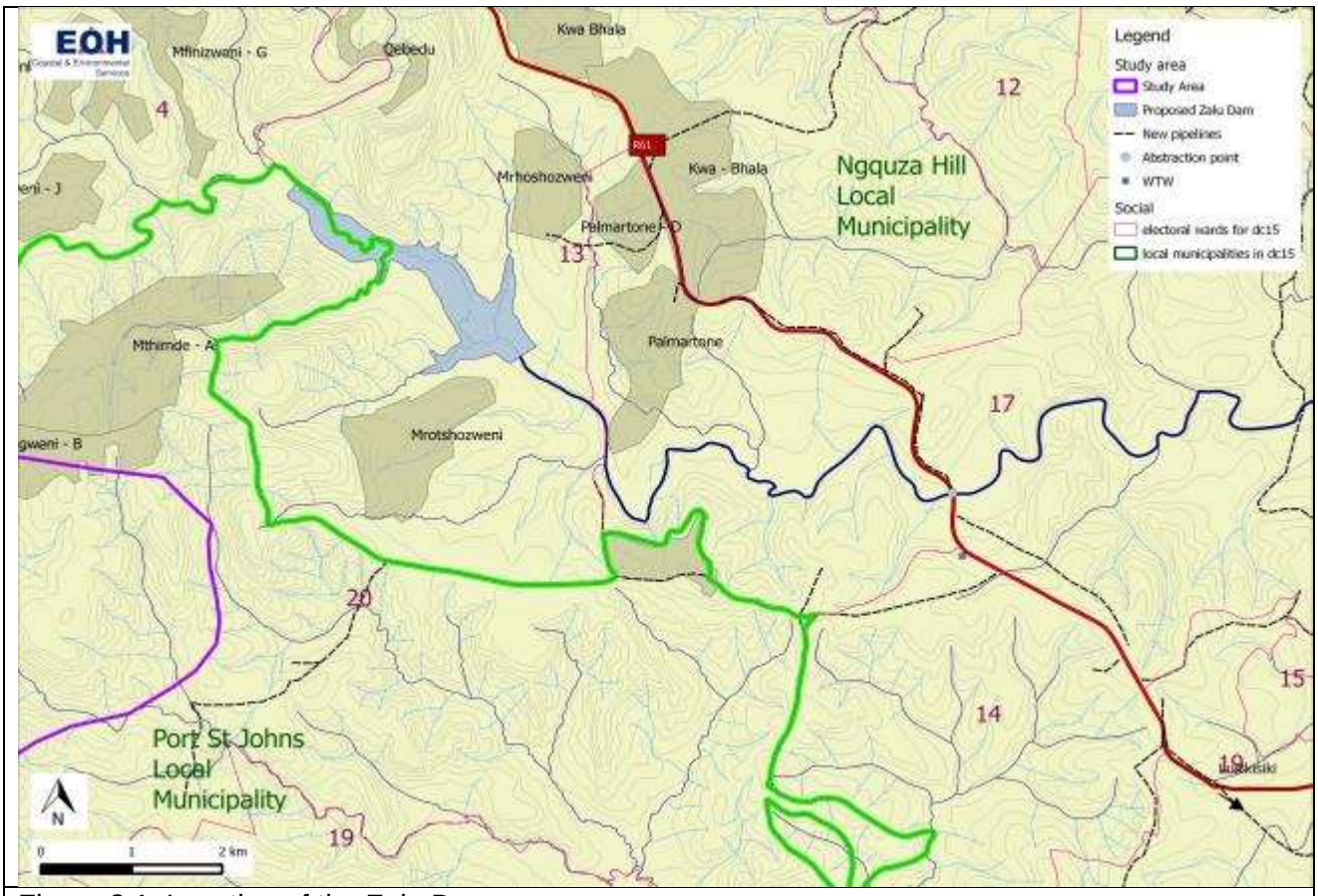


Figure 2.1: Location of the Zalu Dam

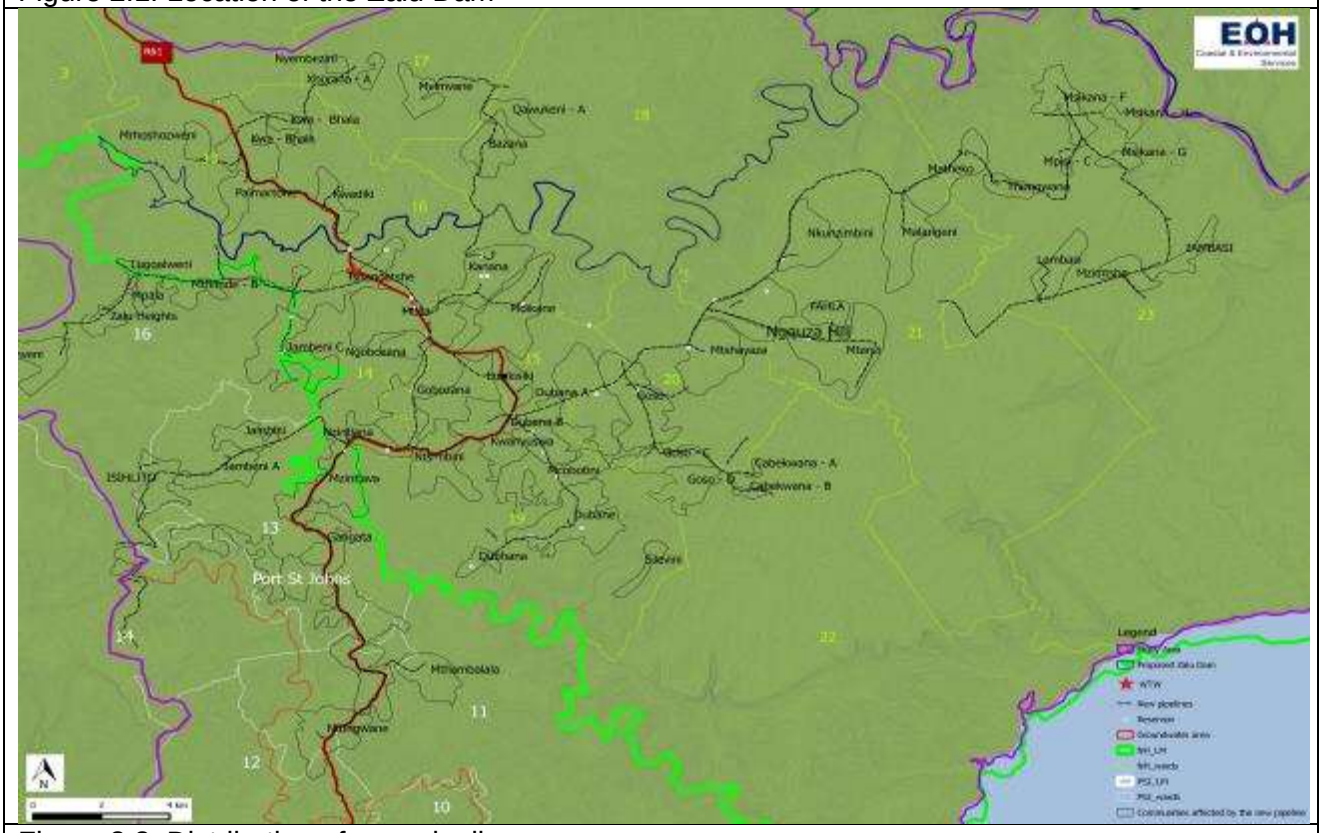


Figure 2.2: Distribution of new pipelines

3. LEGISLATION GUIDING PUBLIC PARTICIPATION

The Public Participation Process or PPP (which in this report is used as a synonym for Stakeholder Engagement) of the EIA aims to:

- Identify the I&APs;
- Disseminate information to them;
- Manage a dialogue with the proponent of the activity; and
- Assimilate and take into account public comments received and feedback on the outcomes of the dialogue and inputs so as to demonstrate how these have been taken into account in the design of the project.

PPP is an integral part of the EIA process and must not end with the issuing of the EA, but must continue during the construction and operational phases of the planned activity. The process of stakeholder engagement means the process of listening to the opinions expressed by the various sectors of civil society, including corporate entities or individuals, directly or indirectly, or potentially affected by the proposed activity. PPP must be carried out in compliance with directives issued by DEA under NEMA.

According to the NEMA Regulations (2010) the process of public participation should involve:

3.1 Public participation process

54. (1) This regulation only applies in instances where adherence to the provisions of this regulation is specifically required.

(2) 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 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; for this project letters were givne to traditional leaders of the affected areas.
  (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; Ward councillors and municipal officials wer invitied to the pbulic meetings and were given information regarding the project.
  (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 competent authority;

(c) placing an advertisement in— adverts were place din Dailyi Dispatch

(e) using reasonable alternative methods, as agreed to by the competent authority, 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. – that is why CES is having public meetings in communities to help prsent the nformation in mother langauage for those illeterate IAPs and so that the distance travelled to get inforametion on the project is rduced.

(7) When complying with this regulation, the person conducting the public participation process must ensure that—

(a) information containing all relevant facts in respect of the application is made available to potential interested and affected parties; and

(b) participation by potential interested and affected parties is facilitated in such a manner that all potential interested and affected parties are provided with a reasonable opportunity to comment on the application.

3.2 Comments of interested and affected parties to be recorded in reports submitted to competent authority

57. (1) The EAP managing an application for environmental authorisation must ensure that the comments of interested and affected parties are recorded in reports and that such written comments, including records of meetings, are attached to the report, submitted to the competent authority in terms of these Regulations.

According to the National Environmental Ammendment Act 8 of 2004 principle the

(f) The participation of all interested and affected parties in environmental governance must be promoted, and all people must have the opportunity to develop the understanding, skills and capacity necessary for achieving equitable and effective participation, and participation by vulnerable and disadvantaged persons must be ensured.

(g) Decisions must take into account the interests, needs and values of all interested and affected parties, and this includes recognising all forms of knowledge, including traditional and ordinary knowledge.

(h) Community wellbeing and empowerment must be promoted through environmental education, the raising of environmental awareness, the sharing of knowledge and experience and other appropriate means.

4. INITIAL PUBLIC PARTICIPATION PROCESS

PPP for the L RWSS project was divided into two distinct phases. The first phase, considered as the preliminary phase, comprised meetings with focus groups, which included community representatives, governmental representatives. The purpose of this initial phase of engagement was to introduce the project and the EIA process currently being conducted to potential I&APS in the area. It was also aimed at establishing contacts and also identifying the relevant community leaders in the project affected areas. This phase was condutected in March 2014 and a focus group meeting was held with leaders in the area of the dam. EOH also visited the municipal offices of the two affected municipalities to obtain contact details of relevant people within the municipality that will be involved in the process.

Period	Action	Objective	Status
Initial stakeholder involvement	Stakeholder public meetings	Presentation of the project to the I&APs	Concluded
Mr Nomgindzi (Ingquza Hill Municpality)	18 July 2014	Met with Mr Nomgindzi and visited reservoirs in the municipality.	Successuful
PSJ Municipality	18 March 2014	Not succeful	Successuful
Ntsimbini Community (Focus Group meeting	17 March 2014	Met with the Ntsimbini Community	Successuful

5. SCOPING PUBLIC PARTICIPATION PROCESS

The second phase of the PPP consisted of presenting ghe results of the scloping phase of the project to I&Aps and other stakeholders. This was intended to facilitate the I&AP and stakeholder review of the Scoping Report as people in rural areas would otherwise have difficulty in sourcing documents or other information to review and provide input.

During this phase, six meetings were organised in different locations within the project area. The meetings were organised with councillors of the affected wards and their rrespective committees. Meetings were also organised with communities surrounding the dam site.

The principal objective of the public consultation meetings was to inform I&APs about the main findings resulting from the visits carried out earlier in the year as part of the scoping phase, and to present the potential impacts identified during the Environmental Pre-feasibility Scoping Study and terms of reference (ToR) for the EIA, as well as inform them of the next steps of the process.

A presentation of the Scoping Report was presented in all meetings where this was possible. In areas where meetings were not possible, copies of the Background Information Document (BID) were given out to community leaders for distribution.

Period	Action	Objective	Status
Initial stakeholder involvement	Stakeholder public meetings	Presentation of the project to the I&APs	Concluded
Scoping phase	Stakeholder public meetings	Presentation of the Scoping Report	Concluded
Umthatha Town Hall	07 July 2014	No stakeholders were present whle some of them confirmed via email correspondence and telephone conversations.	Not successful
Ingquza Hill Municpality	08 July 2014	Councillors and ward committees from the affected wards were present	Successuful
PSJ Municipality	09 July 2014	Councillors from the affected wards and other municipal officas were present	Successuful
Ntsimbini Community	10 July 2014		Successuful
Mfinizweni Community	10 July 2014	There was protest march in the area and therefore the meeting could not be held.	Not successful
Mthimde Community	11 July 2014	Councillor did not communicate the meeting with the community. EOH visited the village and contact details of community leaders were taken so that they can be directly contacted for the next meeting.	Not successful

5.1 Site Notices

A number of site notices were placed in different areas within the project area and in the town of Lusikisiki and Port St John's (See plate 4.1. below). Due to the fact that most of the areas affected by the project most site notices were placed in Lusikisiki town and it's surrounding villages. It

should be noted though that in some places notices were removed within three days of being placed especially in open public places such as shopping malls.

Plate 4.1: Site Notices placed in the project area

5.2 Adverts and email correspondence

An initial advert was plaed in Daily Dispatch inforrming I&APs about the EIA process being undertaken and also inviting the public to register as I&APs in the project (Copy of the advert attached as Appendix 2).

Since the proponent had prior engagements with key stakeholders in the area and some of them had been inovled in previous meetings, a list of these stakeholders was provided to EOH by DWS. All these I&APs were contact either telephonically or via email about the EIA process and the availability of the draft scoping report.

The I&APS were also invited to a stakeholder meeting that was going to be held in Umtata Town Hall on the 7th July 2014. Some of these I&APs responded confirming receiving the invitation and some apologised due to prior arrangements. Those with no email addresses were called and informed about he meetings and the availability of the draft scoping report for public review.

5.3 Open Public Meetings

A number of open public meeting were held in the Lusikisiki area from the week of the 7-10 July 2014. Due to the large number of villages affected by the project, meetings were organised at municipal level where ward councillors and ward committees from the affected areas were invited to meetings.

Meetings were also held in villages surrounding the dam and those within the inundation area of the dam. See Table 3.1 below for the list meetings.

Prior to the meetings all I&APs with email addresses were sent copies of the draft Scoping Report to review prior to the meetings. The report was also placed on the EOH website (www.cesnet.co.za).

Minutes of all the meetings are attached as Appendix 6 while attendance registers from the meetings are attached as Appendix 7.

From the attendance registers a list of stakeholders was compiled as part of the PPP, which will be updated on a regular basis (see Appendix 3).

A brief discussion of the meetings is provided in the section below and a complete list if issues raised and responses provided is attached at Appendix 5

5.3.1 *Public Consultation Meeting held in Luskisiki College*

The public consultation meeting in Lusikisiki took place on the 8th of July 2014 at 11h00, in the lecture hall at Lusikisiki College (Plate 4.2). There were about 30 attendees at this meeting.

The meeting was conducted in isiXhosa and presented by the CES consultant. After the presentation there was a discussion session, when the attendees presented their main concerns and comments, and raised concerns as I&APs. The questions were answered by the consultant. The consultant informed the meeting that sme of the issues raised will be dealt with in the specialitsts studies.

Plate 4.2: Public Participation Meeting in Lusikisiki College

After the discussion, the EOH consultant thanked everyone for attending the meeting. The representatives were informed that another round of meetings will be held during the EIR phase and allthose registered at the meeting will be informed via SMS of when the next meeting will take place. EOH also committed to invite the client (DWS) to the next meetings as issues regarding the time frames of the project can be dealt with by the proponent.

5.3.2 *Public Consultation Meeting with PSJ Municipality*

The public consultation meeting with the PSJ Municipality took place on the 9th July 2014 at 12h00, at PSJ Municipality Boardroom. (Plate 4.3) The meeting was attended by the councillors and officials of PSJ Municipality and th attendance register for the meeting is attached at Appendix 7 b.

Councillor Mzaza welcomed everyone to the meeting including the mayor and the council speaker. He briefly mentioned the importance of this project to the PSJ Municipality as there are a lot of villages without water. EOH was given an opportunity to do a presentation on the EIA processs and proposed project.


Plate 4.3: Public Participation Meeting with the PSJ Municipal Officials

The presentation was given by the EOH consultant who showed illustrative laminated posters such as maps indicating the locality of the project in relation to the communities, the legal procedures of the EIA process, as well as the main socio-economic and biophysical issues of the project.

This was followed by a question and answer session, where the opportunity was given to the attendees to present their issues, comments, inputs and concerns about the project as a whole. The issues were answered by the consultant. The EOH consultant mentioned that some of the issues will be addressed in the specialist studies. The consultants also promised to invite DWS to the next meetings as issues relating to timeframes for the project could not be answered. The PSJ representatives were also concerned about the use of boreholes in their area and wanted to know why use boreholes instead of rivers in the municipality. This issue could not be answered by the consultant and thus it was decided that DWS should be present in the next meeting.

5.3.3 *Public Consultation Meeting Tracoe Centre*

The public consultation meeting with the Ntsimbini Community at Tracoe Centre took place on the 10th of July 2014 at 10h30.) (See plate 4.4). The meeting was attended by the memebers of the Ntsimbini and Mrhotshozweni community and their community leaders. The ward councillors and his committee memebrs were laso present at the meeting. See Appendix 7 c for the attendance register.

Mr Matwasa opened the meeting and welcomed everyone to the meeting including the ward councillor. He briefly mentioned the importance of this project to the local communities as there are a lot of villages without water. CES was given an opportunity to do a presentation on the EIA processs and proposed project.

Plate 4.4: Meeting at Ntsimibni Community Hall

The EOH presentation was followed by a question and answer session, where the opportunity was given to the communities to present their issues, comments, inputs and concerns about the project as a whole. The issues were answered by the consultant. The EOH consultant mentioned again that some of the issues would be addressed in the specialists studies. The consultants also promised to invite DWS to the next meetings as issues relating to timeframes for the project could not be answered.

The community representatives were also concerned about the fact that boundaries for the dam have not be clearly marked in their area and wanted to know when this will be done. This issue could not be answered by the consultant and thus it was decided that DWS should be present in the next meeting.

6. MAIN ISSUES RAISED DURING THESE MEETINGS

During the scoping process various key issues were identified. The process of identification was guided by the involvement of the stakeholders at various levels. Below is a summary of the main issues raised during the meetings:

- Socio-economic Benefits and Expectations- There are high expectations with regard to the socio-economic benefits that the project will bring especially with regards to he provision of potable water. There are also expectations of business opportunities as a result of the proposed LRWSS.
- Employment Opportunities – People expect the project to bring solutions to the unemployment problem. I&APs indicated that there was great concern amongst the communities due to the fact that often non-locals were employed in projects. In general communites agreed that people with certain skills are needed when those skills are not found locally.
- Land Use Rights –The communities are aware that they may lose their agricultural areas to provide space for the project. There was not much concern about the loss of land but due to the unceratainty of the exact boundaries of the dam they requested to be informed soon to deal with any challeneges that may resultin the process of negotiations with the affected lad onwers. .
- Water quantity – This issue was raised, as it is well known that communities in those areas rely heavily on water from the rivers. A concern is that the project will reduce the amount of water flowing and available from the Xura River especially to communities downstream of the Zalu dam and that the communities will not have sufficient water to carry out their daily activities.
- Skills Development – Due to the fact that the communities have very low levels of literacy it was suggested, in almost all meetings, that the project should take this aspect into account. People are requesting that there be a skills development program that goes with the project so that local people can be trained in order to quality for better employment opportunities even after the project has been completed.
- Use of boreholes – People raised a concern with regard to the use of boreholes as a sources of water especislly in the PSJ Municipality area. According to I&APs there are enough rivers in the area to use as water sources rather than the use of boreholes which are not reliable. According to locals they have bad experiences with boreholes as they tend to run dry.

7. CONCLUSIONS AND WAY FORWARD

In general it can be concluded that all the objectives of the meetings were met while some of the meetings never materialised as a result of different reasons. The I&APs were informed about the proposed project and also had the opportunity to find out about the environmental assessment process. At all meetings, they were given contact details so that the I&APs can contact the project team whenever they consider it necessary.

The I&APs were informed of the activities planned within the project and the concerns and opinions of those who participated in the meetings, with regard to the whole process, were registered. The I&APs had the opportunity of clarifying any doubts with regard to the project, and at the same time make suggestions for improvements, namely the specialist studies that will be undertaken as part of the EIR.

7.1 Future stakeholder engagement activities

Furthe interactions with the stakeholder groups in the project area will take place during the disclosure of the Environmental Impact Report (EIR) phase, to discuss the initial findings of the EIA phase of the project and the findings of the specialist studies and to obtain feedback from the stakeholders. The report will be updated in accordance with the comments received and a final report will be submitted to DEA. Table 6.1 outlines the anticipated stakeholder engagement activities.

Table 6.1: Planned activities for the next phase of stakeholder engagement.

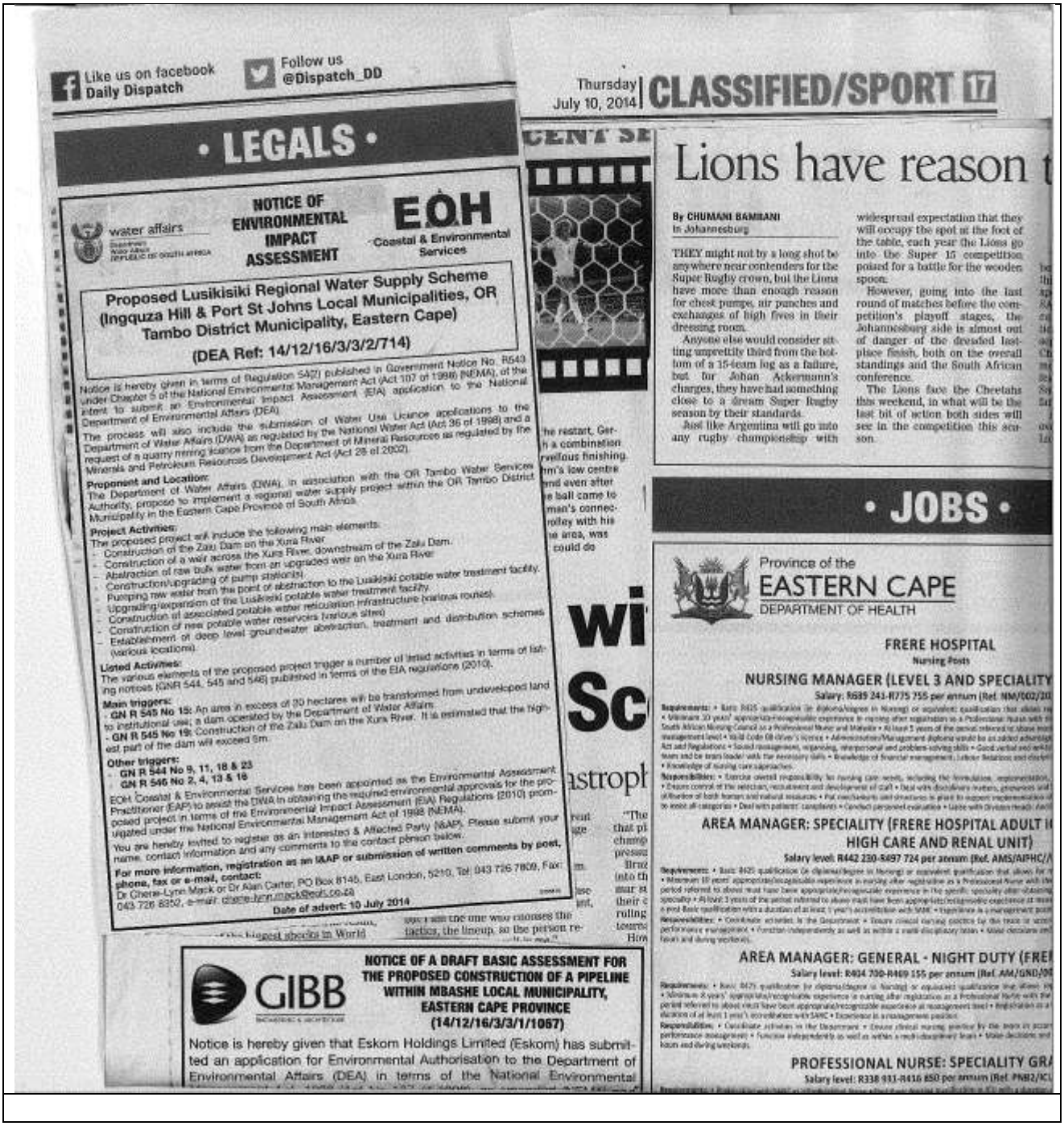
Period	Action	Objective	Status
Initial stakeholder involvement	Stakeholder public meetings	Presentation of the project to the I&APs	Concluded
Scoping phase	Stakeholder public meetings	Presentation of the Scoping Report	Concluded
EIR phase	Stakeholder public meetings	Presentation of the draft EIR and discussion of the positive and negative impacts.	To be concluded
PSJ Municipality			To be concluded
Ingquza Hill Municpality			To be concluded
Mrhotshozweni Community			To be concluded
Mthimde Community			To be concluded
Mfinizweni Community			To be concluded
Umthatha Town Hall			To be concluded

The issues and response trail will be updated following each round of meetings associated with the EIR phase.

APPENDIX 1 – COPY OF SITE NOTICES

Plate 7: Photo of site notices placed at different places in Lusikisiki Town

APPENDIX 2 – COPY OF ADVERTISEMENT – DAILY DISPATCH 10TH JULY 2014



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Thursday July 10, 2014 CLASSIFIED/SPORT 17

• LEGALS •

water affairs

NOTICE OF ENVIRONMENTAL IMPACT ASSESSMENT

EOH Coastal & Environmental Services

Proposed Lusikisiki Regional Water Supply Scheme (Ingquza Hill & Port St Johns Local Municipalities, OR Tambo District Municipality, Eastern Cape)

(DEA Ref: 14/12/16/3/3/2/714)

Notice is hereby given in terms of Regulation 54(2) published in Government Notice No. R543 under Chapter 5 of the National Environmental Management Act (Act 107 of 1998) (NEMA), of the intent to submit an Environmental Impact Assessment (EIA) application to the National Department of Environmental Affairs (DEA).

The process will also include the submission of Water Use Licence applications to the Department of Water Affairs (DWA) as regulated by the National Water Act (Act 36 of 1998) and a request of a quarry mining licence from the Department of Mineral Resources as regulated by the Minerals and Petroleum Resources Development Act (Act 28 of 2002).

Proponent and Location:
The Department of Water Affairs (DWA), in association with the OR Tambo Water Services Authority, propose to implement a regional water supply project within the OR Tambo District Municipality in the Eastern Cape Province of South Africa.

Project Activities:
The proposed project will include the following main elements:
- Construction of the Zalu Dam on the Xura River
- Construction of a weir across the Xura River downstream of the Zalu Dam.
- Abstraction of raw bulk water from an upgraded weir on the Xura River
- Construction/upgrading of pump station(s).
- Pumping raw water from the point of abstraction to the Lusikisiki potable water treatment facility.
- Upgrading/expansion of the Lusikisiki potable water treatment facility.
- Construction of associated potable water reservoirs (various sites)
- Construction of new potable water reticulation infrastructure (various routes).
- Construction of new potable water abstraction, treatment and distribution schemes
- Establishment of deep level groundwater abstraction (various locations).

Listed Activities:
The various elements of the proposed project trigger a number of listed activities in terms of listing notices (GNR 544, 545 and 546) published in terms of the EIA regulations (2010).

Main triggers:
- **GN R 545 No 15:** An area in excess of 20 hectares will be transformed from undeveloped land to institutional use; a dam operated by the Department of Water Affairs.
- **GN R 545 No 19:** Construction of the Zalu Dam on the Xura River. It is estimated that the highest part of the dam will exceed 5m.

Other triggers:
- **GN R 544 No 9, 11, 18 & 23**
- **GN R 546 No 2, 4, 13 & 18**

EOH Coastal & Environmental Services has been appointed as the Environmental Assessment Practitioner (EAP) to assist the DWA in obtaining the required environmental approvals for the proposed project in terms of the Environmental Management Act of 1998 (NEMA).

You are hereby invited to register as an Interested & Affected Party (I&AP). Please submit your name, contact information and any comments to the contact person below.

For more information, registration as an I&AP or submission of written comments by post, phone, fax or e-mail, contact:
Dr Cherie-Lynn Mack or Dr Alan Carter, PO Box 8145, East London, 5210, Tel: 043 726 7809, Fax: 043 726 6352, e-mail: cherie-lynn.mack@eoh.co.za

Date of advert: 10 July 2014

Lions have reason t

By CHUMANI BAMBANI in Johannesburg

THEY might not by a long shot be anywhere near contenders for the Super Rugby crown, but the Lions have more than enough reason for chest pumps, air punches and exchanges of high fives in their dressing room.

Anyone else would consider sitting unpretitly third from the bottom of a 15-team log as a failure, but for Johan Ackermann's charges, they have had something close to a dream Super Rugby season by their standards.

Just like Argentina will go into any rugby championship with widespread expectation that they will occupy the spot at the foot of the table, each year the Lions go into the Super 15 competition poised for a battle for the wooden spoon.

However, going into the last round of matches before the competition's playoff stages, the Johannesburg side is almost out of danger of the dreaded last-place finish, both on the overall standings and the South African conference.

The Lions face the Cheetahs this weekend, in what will be the last bit of action both sides will see in the competition this season.

• JOBS •

Province of the EASTERN CAPE DEPARTMENT OF HEALTH

FRERE HOSPITAL
Nursing Posts

NURSING MANAGER (LEVEL 3 AND SPECIALITY
Salary: R689 241-R775 755 per annum (Ref. NM/002/20

AREA MANAGER: SPECIALITY (FRERE HOSPITAL ADULT I HIGH CARE AND RENAL UNIT)
Salary level: R442 230-R497 724 per annum (Ref. AMS/AIPHC/

AREA MANAGER: GENERAL - NIGHT DUTY (FRE
Salary level: R404 700-R469 155 per annum (Ref. AM/GND/0

PROFESSIONAL NURSE: SPECIALITY GR
Salary level: R338 931-R416 850 per annum (Ref. PN82/IC

GIBB

NOTICE OF A DRAFT BASIC ASSESSMENT FOR THE PROPOSED CONSTRUCTION OF A PIPELINE WITHIN MBASHE LOCAL MUNICIPALITY, EASTERN CAPE PROVINCE (14/12/16/3/3/1/1067)

Notice is hereby given that Eskom Holdings Limited (Eskom) has submitted an application for Environmental Authorisation to the Department of Environmental Affairs (DEA) in terms of the National Environmental

APPENDIX 3 – LIST OF I&APS & REFERENCES

Organisation	Name	E-mail	Tel	fax	Postal address
Stakeholders					
SAHRA	M Galimberti	mgalimberti@sahra.org.za			
ECPHRA	Mr Mzikayise L. Zote	mlzote@ecphra.org.za	(043) 642 2811 or (076) 836 5467	(043) 642 2812	No 74 Alexandra Road, King Williams Town, 5600
Department of Water and Sanitation					P O Box 7019, East London, 5200
Zimkhitha /Lungiswa	Mthatha Town Hall	lungiswab@ksd.gov.za	047 5014081	0866929701	
I & AP register					
Ben van dr Merwe	Urban-econ	ben@urban-econ.com			
Mluleki Fihlani	Ingquza Hill LM	nmdiya@ihlm.gov.za	039 253 1568/ 039 253 1096	039 252 0131	
Nomvuyo (Speaker's office)	PSJ LM		047 564 1208		
Mr N Pakde (Acting MM)	PSJ LM	mshiywa.feziwe@gmail.com	047 564 1208		
Kabane Siyabonga	Eskom	kabanes@eskom.co,za			
Kumbula Charles	OR Tambo	charles@yahoo.com			
Mafumbata Ntosh	Eskom	mafumba@eskom.co.za			
Mase Sithembele	ECDC	smase@ecdc.co.za			
V Fihla	Eskom	fihlav@eskom.co.za			
Mjindi LM	Eskom	mjindilm@eskom.co.za			
Wana Xolani	Eskom	wanaxs@eskom.co.za			
Mdoda N	Eskom	mdoadan@eskom.co.za			

Sifiso Khoza	OR Tambo	sifisok@ortambodm.gov.za			
Mzayiya Eric	OR Tambo	mzayiyae@ortambodm.gov.za			
Mr Notho	OR Tambo DM	Singwa@gmail.com		Confirmed availabililty	
O Sopela	Ingquza Hill LM	osopela@psjmunicipality.co.za			
Nyawose Mthokozi	Amatola Water	cthompson@amatolawater.co.za			
Ndzungu C	DWS	ndzunguc@dwa.gov.za			
Van Jaarsveld S	DWS	vanjaarsvelds@dwa.gov.za			
Fourie F	DWS	fourief@dwa.gov.za			
Geldenehuys T	DWS	geldenhuyst@dwa.gov.za			
DM Mangqo (Mayor)	PSJ LM	dmangqo@psjmuni.co.za			
S Sotshongaye (Ward 17)	PSJ LM	silassotshongaye@gmail.com			
N Diki (Ward 11)	PSJ LM	ngdiki@gmail.com			
M Vena (Ward 10)	PSJ LM	mthuthuzelivena@gmail.com	073 477 7569	Confirmed availabililty	
Novangeli Town Hall	PSJ LM		073 415 4731		
Fono M (Ward 9)	PSJ LM	fonokm@gmail.com	082 634 6725	Confirmed availabililty	
Daniso B (Ward 11)	PSJ LM		072 564 1712	Not available all times	
Mtiki Z (Ward 12)	PSJ LM	zemtiki@gmail.com	073 394 6089	Confirmed availabililty	
Zweni M (Ward 13)	PSJ LM	rmzweni@gmail.com	082 564 0212	Confirmed availabililty	
Cuba Z (Ward 14)	PSJ LM		082 564 2979	Confirmed availabililty	
Tshoto G (Ward 15)	PSJ LM	tshoto@webmail.co.za	072 256 2463/ 079 896 1111	Confirmed availabililty	
Mzaza S (Ward 19)	PSJ LM	siyamthanda.mzaza@yahoo.com	082 564 5298	Confirmed availabililty	
Ms Mbotshwa N (Ward 20)	PSJ LM	ntsebz@gmail.com	073 035 3219 or 079 691 1451	Confirmed availabililty	
Cllr X Moni (Ward 18)	PSJ LM	xolilemoni@gmail.com			

IHLM Reception			039 253 1563/ 039 253 1096		
Ms Nkayitshana (Ward 12)	Ingquza Hill LM		071 865 3068	Confirmed availabililty	
Mr Ntshobo (Ward 13)	Ingquza Hill LM		071 865 3029	Confirmed availabililty	
Mr Malulwana (Ward 14)	Ingquza Hill LM		082 843 3887	Confirmed availabililty	
Mr Thambodala (Ward 15)	Ingquza Hill LM		083 562 3717		
Ms Jotile (Ward 16)	Ingquza Hill LM		083 462 3892	Confirmed availabililty	
Mr Mpofana (Ward 17)	Ingquza Hill LM		071 865 3038	Confirmed availabililty	
Mr Zati (Ward 18)	Ingquza Hill LM		073 782 1459	Confirmed availabililty	
Mr Mtsosto (Ward 19)	Ingquza Hill LM	mndenyane@ihlm.gov.za	074 865 3591	Confirmed availabililty	
Mr Ngxamile (Ward 20)	Ingquza Hill LM	pngxamile@ihlm.gov.za	071 865 3089	Confirmed availabililty	
Ms Daniso (Ward 21)	Ingquza Hill LM		083 668 5540	Confirmed availabililty	
Mr Tshwatshuka (Ward 22)	Ingquza Hill LM		083 668 4480	Confirmed availabililty	
Ms Daliwe (Ward 23)	Ingquza Hill LM		083 623 6921		
Mr Nkungu (Ward 24)	Ingquza Hill LM	minkungu@yahoo.com	083 623 9025	Confirmed availabililty	
Nolwazi N	PSJ LM	nolwazin2000@yohaoo.com	082 774 4288		
Mr Mgwili (Ward 4)	Ingquza Hill LM		083 455 3286		
Neliswa IHLM		n92vato@gmail.com			
IAP Scoping Phase					
B Ngotana			083 340 9583		
MD Mvinjwa			083 445 2496		
SE Malulwana			082 843 3887		

H Mabetla			083 441 6564		
A Vungaye			073 230 5592		
T Songunzu			073 665 5772		
M Mfolozi			083 444 1194		
F Mdutshane			083 440 3459		
L Dumani			082 209 3471		
N Ndondo			083 446 0225		
S Mnge			073 555 7913		
Z Bashe			083 419 8256		
M Tana			083 448 2567		
NF Diko			083 591 4708		
N Nyenyiso			083 447 1990		
B Mfitizo			083 444 0933		
NF Dwabayo			076 587 6282		
N Msikwa			083 445 0593		
W Mhanywa			083 444 4289		
N Bhala			083 419 8550		
N kwakhwa			060 380 5946		
M Sithilanga			082 448		

			0351		
N Zikizela			083 446 9036		
Z Tshemese			083 448 3823		
M Matwasa			078 670 1128		
NC Mkombe			083 444 5600		
N Mtenjwa			083 445 2229		
N Linganiso			083 441 5869		
XW Sopilase			083 448 3303		
M Mkwenkwe			078 514 4996		
M Mali			083 442 2457		
NC Cawe			083 419 9499		
L Mgwaza			083 444 3153		
P Mbaleni			073 188 4465		
N Mkumbuzi			073 347 6531		
Y Kholisile			083 441 4355		
Veliswa Peter			083 447 5064		
Nothemba Jijimba			073 559 0100		
Mampinge M Diko			083 41 6762		
Michael Gqweta			083 440 8277		

Mfundiso Jazi			083 485 0115		
Alicia Mbalo			083 443 2703		
P Tshicila			083 443 3214		
TA Muge			083 444 7774		
Nomalizo Manciya (Chieftainess)			083 532 8191		
Hamilton Mgwici			083 455 3286		
T Gwane		thembisile2@gmail.com	078 654 4972		
B Bantwana		bongeka2@gmail.com	078 026 2170		
A Mbena			073 806 5470		
N Mpambaniso			078 529 1242		
N Tenyane			078 136 7929		
S Dlomo			079 628 9203		
N Siko		n.siko@gmail.com	073 390 6243		
N Mngoma			071 943 8596		
M Mngwane			078 754 8704		
DL Mbola			073 660 5004		
M Dlomo			073 321 1638		
S Matwasa			078 741 4790		
M Mafanya			083 424		

			8945		
S Dlomo			083 622 4396		
S Mbendana			073 900 5574		
M Siko			083 770 6499		
M Mthemba			078 501 5948		
L H Ngotana			078 773 8858		
S Mbena			071 816 0502		
K A Duntsula			073 348 5430		
M Mbena			072 662 3883		
B Mbena					
M Mtsenge			078 078 6997		

ENVIRONMENTAL IMPACT ASSESSMENT

LUSIKISIKI REGIONAL BULK WATER SUPPLY SCHEME

BACKGROUND INFORMATION DOCUMENT
&
INVITATION TO COMMENT:

Proposed by:

Department of Water Affairs

water affairs
Department:
Water Affairs
REPUBLIC OF SOUTH AFRICA

Return address for comments:

Environmental Consultant:

EOH Coastal & Environmental Services

Nande Suka / Lungisa Bosman
16 Tyrell Road
Berea, 5210
P.O Box 8145
Nahoon, 5210
Tel: (043) 726 7809
Fax: (043) 726 8352
Email: n.suka@cesnet.co.za / l.bosman@cesnet.co.za

EOH
Coastal & Environmental Services

AIM OF THIS DOCUMENT

In terms of the National Environmental Management Act, certain listed activities require environmental approval and require that an **Environmental Impact Assessment (EIA)** be conducted. The purpose of this document is to ensure that people interested in or affected by the proposed **Lusikisiki Regional Bulk Water Supply Scheme (LRBWSS)** are provided with information about the proposal, the process being followed, and an opportunity to be involved in the EIA process.

Registering as an **Interested and/or Affected Party (I&AP)** allows individuals or groups the opportunity to contribute ideas, issues, and concerns regarding the project. I&APs also have an opportunity to review all reports and submit comments on those reports. All comments received are included in the reports submitted to the Competent Authority that will decide whether or not to issue an Environmental Authorisation.

PROJECT DESCRIPTION

Project History

The LRBWSS was originally planned in 1978 as a regional scheme to utilize a dam on the Xura River. Only phase 1 of the originally planned larger scheme has been implemented to date, and the dam has never been built. This phase was commissioned in July 1989 and currently supplies the town of Lusikisiki (11 000 people) and 23 surrounding villages (41 000 people). The town of Lusikisiki is provided with full water services, including house connections and water borne sanitation, but the level of services for the villages is limited to bulk water supply to village reservoirs.

Current Status

Currently the capacity of the bulk water supply infrastructure is 2 760 m^3/day. Water is pumped from a weir on the Xura River and conveyed by gravity to the pump station which is located near the weir (Figure 1.a). The water is then pumped to the existing Water Treatment Works (WTW) (Figure 1.b). After treatment the potable water is conveyed to bulk storage reservoirs (Figure 1.c) at various points in the area, which in turn feed 24 service reservoirs that supply rural villages.

The current scheme is not able to meet the water requirements in the area and water shortages are experienced frequently. This low assurance of water supply can be attributed to the following reasons:

- Inadequate capacity of existing infrastructure;
- The poor condition of existing infrastructure;
- Significant housing development in the area, which has significantly increased water use requirements in the area.

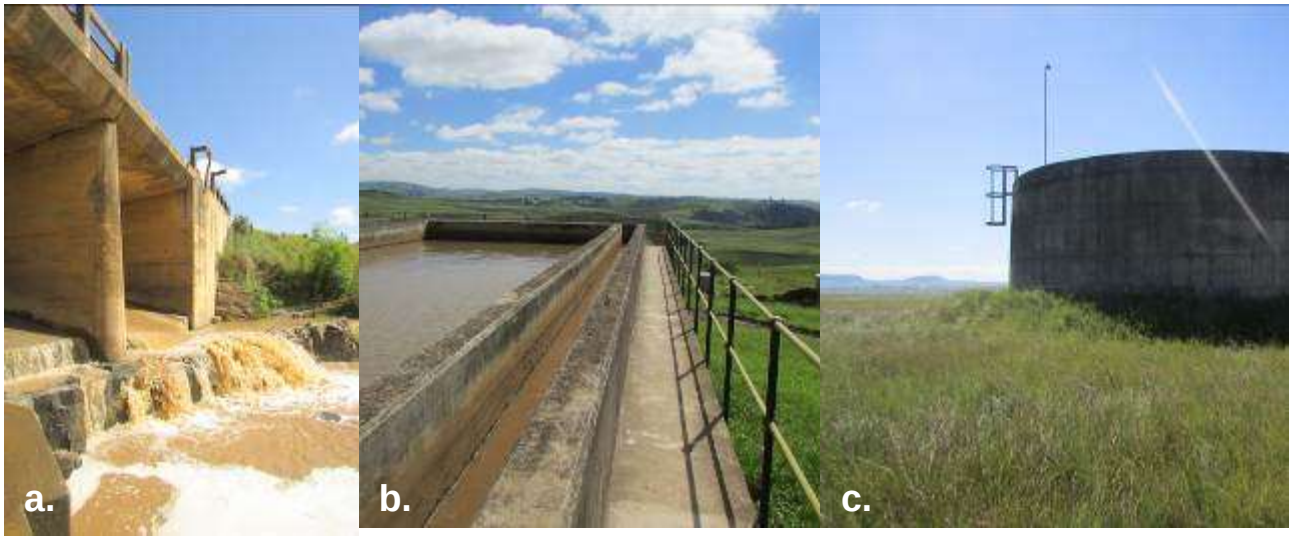

Figure 1: The existing LRBWSS which transfers water from a weir on the Xura River (a) to the water treatment works (b) and then storage reservoirs (c).

The Current Proposal

The Department of Water and Sanitation (DWS) appointed AECOM (Pty) Ltd**.** in 2010, in association with four sub-consultants, to undertake a **Feasibility Study for Augmentation of the Lusikisiki Regional Bulk Water Supply Scheme**. This study reported that a combination of surface water (Zalu Dam) and groundwater would be the most feasible solution for the long-term water supply for the LRBWSS. The Zalu Dam was found to be the most feasible surface storage option for the areas around Lusikisiki, with the south-western part of the study area requiring supplies from groundwater (Figure 3).

The DWS proposes to begin the second phase of the scheme to augment the existing water supply in the area from Lusikisiki to Port St Johns (Ingquza Hill and Port St John's Local Municipalities). This will involve two water resources:

- The **construction of the Zalu Dam** on the Xura River to the west of Lusikisiki, which will also involve the **upgrading of the Lusikisiki water treatment works** and the **expansion of the potable water reticulation** in the Lusikisiki area; and
- A **groundwater abstraction scheme** in the south, which will augment water supplies to Port St Johns and the surrounding areas.

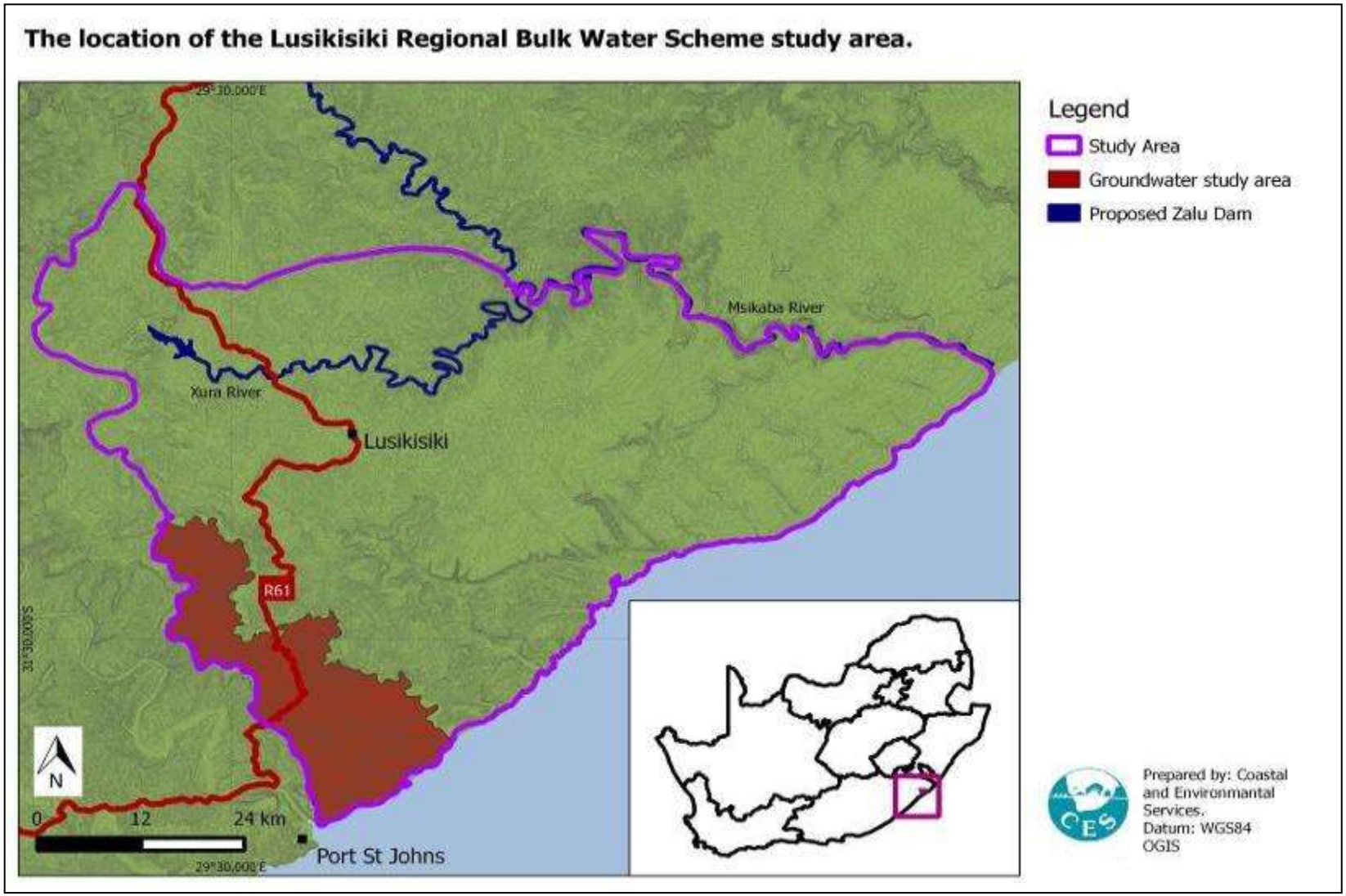

Figure 2: The location of the Lusikisiki Regional Bulk Water Supply Scheme (LRBWSS) study area.

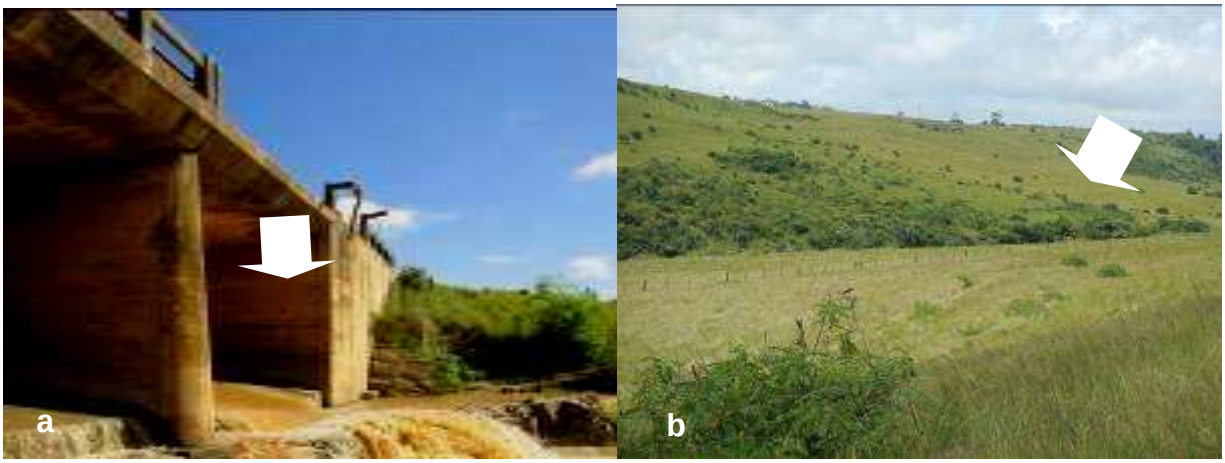

Figure 3: The proposed location of the Zalu Dam a) basin and b) wall.

DESCRIPTION OF THE PRoject Area

The Ingquza Hill and Port St Johns Local Municipalities are located within the OR Tambo District Municipality in the Eastern Cape, will directly benefit from the infrastructure proposed in LRBWSS. The Zalu Dam aspect of the scheme will fall predominantly within the Ingquza Hill LM, with a small portion falling in the Port St John's LM. The groundwater scheme will be located in the Port St John's LM.

The study area for the EIA comprises the entire region between Lusikisiki (up to about 15 km inland) and the coast, extending from the Mzimvubu River in the south-west to the Msikaba River in the north-east (Figure 2). This area includes the Zalu Dam site and its catchment along the Xura River, conveyance routes between the dam and control reservoirs, as well as borehole sites that could be developed for augmentation of water supplies from groundwater and the routes of the main pipelines from the boreholes to the control reservoirs.

POTENTIAL IMPACTS AND BENEFITS

Site-specific assessments will be undertaken as part of the EIA process in order to confirm the feasibility of the proposed LRBWSS in terms of the environmental impacts, and to delineate any areas of environmental sensitivity within the study area.

In line with the anticipated impacts, Table 1 below indicates the proposed specialist impact assessments that will form part of the EIA process. Table 2 highlights some of the benefits that the scheme will provide to the population of the area.

Table 1. Potential Impacts of the LRBWSS will be:

- Potential impacts on South African heritage, archaeological and palaeontological features.
  - **Heritage/Archaeological Impact Assessment**
- Potential impacts of the floral and faunal biodiversity of the area.
  - **Ecological Impact Assessment**
- Potential impacts on paleontological features.
  - **Paleontological Impact Assessment**
- Potential impacts and benefits on the socio-economic aspects will be assessed.
  - **Socio-economic Impact Assessment**
- Potential impacts on wetland and riparian habitats.
  - **Aquatic Impact Assessment**

Table 2. Potential Benefits of the LRBWSS will be:

- **Increased water availability and security of supply**
  - The main purpose behind the LRWSS is to meet the water requirements of the region and to ensure, via new and upgrading of existing infrastructure, greater security of supply to water users in the area.
- The **availability of alternative water resources**
  - The groundwater abstraction scheme will provide for a water resource in an area where pumping water from the Zalu Dam would be too expensive.
- **Socio-economic benefits**
  - Supply scheme for domestic and industrial water requirements;
  - The creation of temporary and permanent jobs;
  - Spin-off benefits
  - Irrigated agriculture.

THE PROPONENT

The proponent for this project is the national **DEPARTMENT of WATER & SANITATION** (DWS). The DWS is the custodian of South Africa's water resources. It is primarily responsible for the formulation and implementation of policy governing this sector. It also has an overriding responsibility for water services provided by local government.

THE ENVIRONMENTAL ASSESSMENT PRACTITIONER

EOH COASTAL & ENVIRONMENTAL SERVICES (EOH) specialises in impact assessments and environmental management. EOH was established in 1990, and provides a wide variety of environmental advisory services to public and private-sector clients.

THE ENVIRONMENTAL IMPACT ASSESSMENT PROCESS

EOH Coastal & Environmental Services (EOH) has been appointed by the DWS to undertake the necessary environmental investigations for the LRBWSS, and to apply for approval from the Competent Authority (Department of Environmental Affairs (DEA)), for the construction LRWSS infrastructure, as required by South Africa's environmental legislation.

RELEVANT LEGISLATION

The Environmental Impact Assessment Regulations (2010), promulgated in terms of section 24(5) of Chapter 5 of the National Environmental Management Act (NEMA)(Act No 107 of 1998, as amended) identify activities which may not commence without an authorisation from the competent authority (DEA). In order to apply for authorisation for the activity, the assessment and communication of potential impacts of the activities must follow the procedure as described in regulations 26 to 35 of Government Notice No. R 543 of the EIA Regulations.

The LRBWSS is subject to a full **Scoping** and **Environmental Impact Assessment** in terms of the following listed activities:

ACTIVITY		DESCRIPTION
GN R 544 (June 2010)	9	Bulk water reticulation infrastructure will be constructed for the purposes of supplying water to water users. These pipelines will potentially exceed 0.36 m in diameter.
	11	Pipelines for reticulation of bulk water may cross watercourses.
	18	The construction of the Zalu Dam will require both excavation and infilling of material into the Xura River. Pipelines will also cross rivers and streams and will require excavation and/or infilling.l
	23	An area in excess of 1 hectare outside of an urban area will be transformed from undeveloped land to institutional use; a dam operated by the Department of Water and Sanitation.
GN R 545	15	An area in excess of 20 hectares will be transformed from undeveloped land to institutional use; a dam operated by the Department of Water and Sanitation.
	19	Construction of the Zalu Dam on the Xura River. It is estimated that the highest part of the dam will exceed 5 m.
GN R 546	2	Reservoirs along the pipeline routes will be constructed. Some of these will fall within critical biodiversity areas in terms of the Eastern Cape Biodiversity Conservation Plan (ECBCP).
	4	A formal access road to the dam will need to be constructed.
	13	The area to be inundated by the proposed dam is identified as a critical biodiversity area in terms of the Eastern Cape Biodiversity Conservation Plan (ECBCP).
	16	Construction will take place within the Xura River (dam construction). The site is within a critical biodiversity area in terms of the Eastern Cape

		Biodiversity Conservation Plan (ECBCP).

APPROACH TO THIS SCOPING AND EIA REPORT

The EIA for the proposed project is presently in the **SCOPING** phase. This phase serves primarily to inform the public and relevant authorities about the proposed project and to determine any impacts. These impacts will then be extensively addressed by specialists in the field during the environmental impact assessment (EIA) phase. Only after the full EIA report has been submitted will a decision be made by relevant authorities.

Scoping Process

We are

Advertisement & Registration of I&APs

↓

Distribution of BID Document to I&APs for comment

↓

Compilation of I&AP comments

↓

Review of Draft Scoping Report by I&APs

↓

Public Meeting

↓

Submission of Scoping Report to DEA

↓

Acceptance of Scoping Report by DEA & Instruction to proceed to EIA Phase

The Environmental Impact Assessment phase

The **Environmental Impact Assessment** phase is more complex and more detailed than the Scoping phase, because it focuses on undertaking a number of specialist studies that have been identified during the Scoping phase. These studies provide expert input into the EIA process based on scientific information. I&APs will be consulted again during this phase, and will be given an opportunity to comment on the Draft Environmental Impact Report (EIR) that will contain the specialist reports. During this phase an Environmental Management Programme must also be prepared for the project.

The final EIR is submitted to the national Department of Environment Affairs (DEA) who, after considering the report, will make a decision on whether or not to authorise the development. The authorisation of a development carries a number of legally binding conditions, which will be contained in the Environmental Authorisation document. This document will be circulated to all registered I&APs within two weeks of receipt from the DEA.

Other activities that will require approval include:

***Mining Licences**:*

The earth-fill dam will require rock, clay and sand which will be excavated from the surrounding area. Rock and sand will be excavated from the dam basin and clay will be excavated from t**wo borrow pits** below the dam wall. In terms of the Mineral and

Petroleum Resources Development Amendment Act (MRPDA), 2008 (Act No. 49 of 2008) and associated regulations, R527 of 23 April 2004 a mining license must be obtained from the **Department of Mineral Resources** (DMR). The **Department of Water and Sanitation** (DWS), as an organ of state, holds a **general mining licence** per site for borrow areas. However, DWS is required to compile EMPs for approval in terms of the provisions of section 39 (5) of the MRPDA.

***Water Use Licence**:*

The project triggers listed activities in section 21 of the National Water Act (NWA) Act No. 36 of 1998; (a) taking water from a watercourse; (b) storing water; (c) impeding or diverting the flow of water in a watercourse; (i) altering the bed, banks, course or characteristics of a watercourse. The proposed water treatment plant will also trigger (f) discharging waster or water containing waste into a water resource through a pipe, canal, sewer, sea outfall or other conduit. Each triggering activity will require a **Water Use Licence Application** (WULA).

HOW CAN YOU BE INVOLVED?

A **Public Participation Process** (PPP) is being conducted as part of the EIA. The aim of the PPP is to allow everyone who is interested in, or likely to be affected by, the proposed development to provide input into the process.

The Public Participation Process will include:

- Advertisements in the Daily Dispatch;
- Notice Boards on site;
- Circulation of the BID (this document) to all I&APs and stakeholders
- Community and focus group meetings;
- Review of all reports by registered I&APs and stakeholders.

If you consider yourself an interested and/or affected person/party, it is important that you become and remain involved in the PPP. In order to do so please follow the steps below in order to ensure that you are continually informed of the project developments and will ensure your opportunity to raise issues and concerns pertaining to the project.

STEP 1: Please **register** by responding to our notification and invitation, with your name and contact details (details provided on cover page and below). As a registered I&AP you will be informed of all meetings, report reviews and project developments throughout the EIA process.

STEP 2: Register by returning the slip at the back of this document to CES

STEP 3: Attend meetings that will be held throughout the EIA process. As a registered I&AP, you will be invited to these meetings.

CES is required to engage with all private and public parties that may be interested and/or affected by the LRBWSS, in order to distribute information for review and comment in a transparent manner.

In the same light, it is important for I&APs to note the following:

1. In order for CES to continue engaging with you, please **ENSURE** that you register on our database by contacting the person below
2. As the EIA process is regulated by specific review and comment timeframes, it is your responsibility to submit your comments within these timeframes.

Who to contact for enquiries and/comments:

Nande Suka/Lungisa Bosman
16 Tyrell Road
Berea
East London 5241
P.O Box 8145
Nahoon, 5210
Tel: (043) 726 7809/8313
Fax: (043) 726 8352
Email: n.suka@cesnet.co.za / l.bosman@cesnet.co.za

I hereby wish to register as an Interested and Affected Party (I&AP) for the Lusikisiki Regional Bulk Water Supply Scheme EIA process

Name:

_____

_____

Organization:

_____

_____

Postal address:

_____

_____

Email:

_____

_____

Phone #: _____ Fax #:_____

My initial comments, issues or concerns are:

_____

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APPENDIX 5: ISSUES AND RESPONSE TRAIL

Raised by	Event & Day	Issue / Concern / Comment	Reply /Action
Cllr Tenyane:		This project was mentioned a long time ago. Feasibility study after feasibility has been conducted and a long process of consultation has been going on. Now its 2014 but still you are doing studies. When is the project actually going to start? It seems you don't understand the problem of water in the areas. It becomes worse when its winter as rain water tanks are dry and people have to use natural sources and walk long distances.	We cannot say exactly when the project is going to start. This depends on a number of issues but we can estimate when the EIA process is going to be complete as shown in the timeframes.
Cllr Tenyane:		Is it possible that DWS, OR Tambo and other role players in this project to come to Ingquza Municipality? OR Tambo District Municipality is responsible for water supply and they are the ones who have built infrastructure in these areas. The Zalu Dam has been part of O R Tambo Municipality for a long time.	Yes we will communicate this with DWS and OR Tambo and a meeting can be arranged between the different parties.
Cllr Daniso:		I thought we were going to be told the project is starting. In ward 20 & 21 people were trained on how to treat groundwater by a private company employed by O R Tambo DM. What happened to that project?	We do not know about the project mentioned by the councillor but a suggested here people will get opportunity to ask these questions to O R Tambo officials once the meeting is organised. It is also possible for councillors to direct these questions to OR Tambo as each municipality is represented in the district municipality.
Cllr Daniso:		Are all villages going to benefit from employment?	Yes there will be employment opportunities for local people. While there will be more jobs during the construction phase and less work during operational phase of the project.
Mr Vungaye:		There is a dam between ward 16 & 20 close to Hombe. Can we not get temporary arrangements to get water from the dam? Maybe a generator can be installed and water pumped to the close villages. I also support Cllr Denyane that we need the project proponents here.	This cannot happen as part of this project but maybe the communities can talk to the district municipality for a generator. The problem with is that water from might not be suitable for drinking and may need purification.
Mr Mditshane:		Water supply can help a lot we are struggling in the villages without water.	Noted this is the reason for the project to improve water supply in these areas.
Mr Mfoloisi:		Some infrastructure has been installed in our area but there is no water.	Noted the proposed project will result in the improvement of infrastructure and water supply. There will be more water available to supply all affected areas.
Mr Mali:		A reservoir and trenches were built in ward 14 but only the clinic and the school got water.	This might be caused by shortage of water supply and this project is aimed at improving the current situation.

Mr Magwala:		We as community leaders we are afraid to talk to people about water as this is a sensitive issue. People have waiting for water for a long time for water. In our area there was a borehole drilled but its not working.	As mentioned the proposed project is aimed at improving water supply in the affected areas.
Cllr Sotshongaye:		You do not mention ward 17 while it is between ward 16 and 20. There are also villages close to Mrotshozweni and Mthimde such as Lutshaya, Kwanyali. Are these villages going to get water supply?	We are not sure which villages will be getting water supply at this stage the villages mentioned on the list will be affected by infrastructure.
Cllr Sotshongaye:		When is the project going to start?	We are not sure about the start date of the project as this depends on a number of things such as funding, etc.
Cllr Sotshongaye:		In our municipality you are talking about boreholes while we have rivers. Why not get water from Mzimvubu?	The idea of boreholes is as a result of a feasibility done by the engineers which recommended boreholes in this area.
Cllr Moon:		This project is too far as you mention that the EIA will be completed in June 2015. When DWS representative visited this area they mentioned that Lutshaya is under this scheme and it's not on the list of villages.	There might be changes that resulted from the feasibility study that was done. We will check if this village is not affected.
Cllr Moon:		Mthimde and surrounding villages also need water. Are these villages going to get water supply?	At this stage it is not clear which villages are going to get water supply the villages on the map will be affected by infrastructure.
Cllr Moon:		You mentioned inundation area is this area going down or expanding wider?	The area will expand both wider and downstream.
Cllr Moon:		Why use boreholes while there are rivers in this municipality?	This was a result of feasibility study that was done which recommended use of boreholes in this area.
Cllr Fono:		Are you doing assessment only on the affected wards?	Yes we are doing an assessment of the project area that is the affected areas only.
Cllr Fono:		In ward 9 a dam was proposed at Telityema and this dam was going to supply the whole of PSJ municipality. What happened to this proposal?	We do know about this project but if DWS was involved you will get a proper response when they review the documents.
Cllr Fono:		Ward 17 & 18 are close to ward 20 but they were not invited or included in the list, why?	Unfortunately we cannot say why some areas are not included we are using a lsit of areas and maps we received from DWS.
Mayor:		After listening to the questions raised by the councillors the mayor suggested the municipality look at the list and make a consolidated list of villages that still need water supply especially those not appearing on the list.	Noted this will be much appreciated. This can be a single document prepared by the municipality with all issues relating to the project.

Cllr Zweni:		Mzimvubu and Mzimtlava rivers are much bigger than Xura where the dam is built. Why not use these rivers to build a dam that will supply water to PSJ rather than use boreholes that run dry? We are against the use of boreholes as we have seen in some areas that they run dry and people are left without water.	According to the proposal boreholes are most suitable for this area due to terrain.
Cllr Mbotsha:		I am not sure about the list of villages listed here. I think some of these areas are Administrative Areas (AA) rather than villages. For example Zalu Heights is an AA consisting of a number of villages but no village called Zalu Heights. For example Lutshaya village is along the Xura bridge which is going to be upgraded but is not listed here.	We will confirm this with DWS as we were given this as a list of villages that are going to be affected either by infrastructure or water supply.
Cllr Tshoto:		You need to consider the use of local rivers as we do not want boreholes.	Noted but this cannot be part of this project. It may be a separate project on it's own.
Cllr Tshoto:		In the next meeting can you invite DWS so that we can ask questions directly to them?	Yes we will try and invite DWS in the next meeting.
Cllr Ntshobo		Every winter season there is a serious problem of water in all villages. We are happy with the project and we want CES to complete the EIA report soon so that we can get to the next step in the process. We want to know the exact site of the dam so that we can know whose land is affected. We need to start with the process of negotiation as there might be problems which can delay the project.	At this stage we cannot show you the exact location or boundaries of the dam. But DWS officials will visit and show the community the boundaries of the dam once the EIA is complete.
Mr Khwalo:		There are graves to close to the site you mentioned and that is why we need to know the exact boundaries of the dam so that we can see if the graves will be affected or not.	This will be done once the EIA is approved.
		Mr. Mahambule: Is the dam not going to affect the amount of water downstream?	Yes this can happen but the specialists' studies will do a more details assessment of the impacts of the dam on river flow downstream.
		Mr Mafanya: We want the dam other things will be discussed later.	Noted
		Mr Kwalo: you need to have contact details of other people within the community so that meetings can be properly advertised.	We will keep the register of all people who attended this meeting and any other people who may register independently. As the process moves forward we will inform all those registered about the next meetings and public review opportunities. We can also take names of other community leaders we need to contact for the next meetings.

APPENDIX 6: ATTENDANCE REGISTERS OF MEETINGS HELD DURING THE SCOPING PHASE

APPENDIX 6 A: LIST OF ATTENDEES AT THE MEETING HELD LUSIKISIKI COLLEGE

DWA Lusikisiki Regional Water Supply Scheme – Public & Stakeholder Engagement

Attendance Register

7th – 11th July 2014 (8th July 2014 – Ingquza Hill LM Ward councillors Stakeholders)

Name	Organisation/Community	Email	Tel no.
W.M. Hlangwa	Ward 19 Committ	N/A ~~0834444289~~	0834444289
N. Bhalo	Ward 16 Committee	N/A ~~0834198550~~	0834198550
V. Nkwakhwe	Ward 24 Committ	N/A	0603805946
M. Sithilanga	ward 24 Commit	—	0824480351
N. Zikizela	Ward 24 committee	—	083 446 9036 X
Z. [illegible]	WARD 17 Committee		0834483823
S. M. Matwasa	ward 17 committee		0786701128
N.C. Mkomae	WARD 17 committee	N/A	083 444 5600

Name	Organisation/Community	Email	Tel no.
Z. Bashe	Ward Committee 17	N/A	083 4198256
M Tana	W/Committee		0834493567 M-Tana
M. Honyoza	W/Committee		083 4440976 [signature]
N.F. Jiko	W/Committee 18	N/A	0835914708 [signature]
N Nyenyiso	Ward Committee 17	N/A	0834471990 N Nyenyiso
B. Mfitizo	W/Committee 21	N/A	083440933 B.L [signature]
N.F. Dwabayo	Ward Committee 21	N/A	0765876280 [signature]
N. Msikwa	Ward Committee 21	N/A	0834450593
N. Daniso	Ward Councillor 21	N/A	083 668 5540
M. Temyane	Ward Councillor 17	N/A	073374 3422

Name	Organisation/Community	Email	Tel no.
B. NGETANA	17. S. XMATWASA	–	0833469583
M.D MVIMJOA	13. M.D MVIMTWA	–	0834452496
SE MALULWANA	14 W/CLLR	–	0828433887
M. MABEYO	14 W/ COMMITEE	–	0834416504
A. Vangaye	16 C/ Comte:	–	0732305597
T. Songunzu	16 19 Comt	–	0736655772
M MFokozi	13 Ward Committee	–	0834441194
F MDutshane	13 Ward Committee	–	0834403459
Luvuyo-Dumani	14 - W/Comm	–	0820983471
N Ngondo	14 W/Comm	–	0834460225
S. Mngi	19 C/mom	–	0735557913
E. Gwilika	14 Ward member	–	–

DWA Lusikisiki Regional Water Supply Scheme – Public & Stakeholder Engagement
Attendance Register
7th – 11th July 2014

Name	Organisation/Community	Email	Tel no.
Nelisiwe Peter	Ward 23 W. Committee	N/A	0834475066
Ncitemba Jijimba	WARD 17. Ward Commi		0735590100
Nlampinge M. Diko	W/Committee (18) ward	—	0834316762
Michael Gqweta	W/Committee 14	—	0834403277
Mfundiso Jazi	W/Committee 18		083485015
Alicia Mbhalo	W/Committee 21		0834432703
P Tshicila	W/committ 21		0834433214
T.A Muge	W/committe 21		0834447774

APPENDIX 6 B: LIST OF ATTENDEES AT THE MEETING HELD PSJ MUNICIPALITY

DWA Lusikisiki Regional Water Supply Scheme – Public & Stakeholder Engagement

Attendance Register

7th – 11th July 2014 (9th/07/14 – PSJ LM Stakeholder & cllrs engagements)

Name	Organisation/Community	Email	Tel no.
S. Mzaza	PSJLM Cllr 0825645298 - 19	Siyanothando.mzaza @yahoo.com	0825645295
X. Moni	PSJLM Cllr Lutshaya Ward 18	Xolile.moni@gmail.com	
K. M. Fono	PSJLM Ward 09	fonokm@gmail.com	
D.M Mangqo	PSJ LM Mayor	dmangqo@PSJmuni.co.za	
M. Ve.	PSJ Cllr. Ward 10 0738777564	mthuthuzeliven@gmail.com	
R.M. Zweni	Ward Councillor (Ward 13)	rmzweni@gmail.com	0828…
MN Sophotela	Cllr Ward 11		0719980097
N. Mbotshwa	Cllr Ward 20	ntsebz@gmail.com	0730353219

Name	Organisation/Community	Email	Tel no.
TSHOTHO Y	Ward cllr 15	Tshotho@webmail.co	0722562463
DIKI N	Ward 11 Sec	ngdiki@gmail.com	0835472335
MTIKI Z	WARD CLLR 12	ZEITMTIK@gmail.com	0827990135
SOTSHWAYE S.	Ward 17	SILAS Sotshwaye @Gmail.com	0733456741

APPENDIX 6 C: LIST OF ATTENDEES AT THE MEETING HELD AT TRACOE CENTRE (NTSIMBINI)

DWA Lusikisiki Regional Water Supply Scheme – Public & Stakeholder Engagement
Attendance Register
7th – 11th July 2014 (Community Engagement Tracor Centre) Ntsimbini Village

Name	Organisation/Community	Email	Tel no.
Mr Ntshobo	Ward 13	[illegible]	0737583831
T. Ngwane	Ward 17	Themobile20@gmail	0786544972
B. Bantwana	Ward 17	Bongeko 26@gmail	0780262870
A. Mbana	Ward 17		0738065470
N. Mpambaniso	Ward 13		0785291242
N. Tenyane	Ward 17		0781367939
S. Domo	Ward 17		0796589103
M. Siko	Ward 17	N.Siko@Gmail.com	0733906243

Name	Organisation/Community	Email	Tel no.
N Mngoma	ward 17		0719638596
M. ngwane	ward 13		0757548704
D.L. Mkhize	ward 13		0736605604
M. Dlomo	ward 17		0733211638
S MATWASA	ward 13		0787WK790
M. MAFANYA	ward 13		0834248945
S. Dlomo	ward 17		0836224396
S MBENJANA	ward 13		0739005576
M. Siko	ward 17		0837706499
m mthembo	ward 18		0783501594

Name	Organisation/Community	Email	Tel no.
B. NGOTANA	WARD 17	—	0833409583
L.H NGOTANA	WARD 17	-	0787738858
S MBUENA	Ward 17	—	0718160502
K.A DUNTSULA	WARD 17	—	0733485430
M MBENA	WARD 17	—	0726023888
MBENA [illegible]	Word 17	—	—
M. Mbenge	Word 13	—	0780786897

APPENDIX 7: LETTERS CONFIRMING DELIVERY OF BID TO COMMMUNITY LEADER

I hereby wish to register as an Interested and Affected Party (I&AP) for the Lusikisiki Regional Water Supply Scheme EIA process

Name:
N Hamilton Mgwili

Organization:
W/cllr 04

Postal address: Xurana A/A Box 171 Lusikisiki

Email:

Phone #: 083 455 3286 Fax #:

My initial comments, issues or concerns are:
Ward Councillor of Mfinizweni was given BIDs & copies of the presentation to distribute around the village, because we could not host a public meeting due to a community strike.

Other individuals, stakeholders, organisations or entities that should be registered are:

Name:

Organization:

Postal address:

Email:

Phone #: Fax #:

Please return details to: **Nande Suka**: P.O. Box 8145, Nahoon, 5210

Telephone: (043) 726 7809 Fax: (043) 726 8352 Email: n.suka@cesnet.co.za

Ndinqwenela ukubhalisa njengomntu onomdla nochaphazelekayo kuphuhliso i-Lusikisiki Regional Water Supply Scheme (LRWSS)

Igama:
NOMALIZO MANCIYA

Umbutho wakho:
MTHIMDE VILLAGE (LEADER)

Idilesi yeposi:
P.O. BOX 1099, LUSIKISIKI 4820

Imeyili:

Ifowuni #: 0835328191 Ifeksi #:

Izinto onqwenela ukuziveza okanye izimvo nengxaki zakho ngolu phuhliso :

Mthimde Village Meetings are hosted on Tuesdays, therefore the EIA team could not be met on a Friday. However, the village chieftainess was visited. BIDS and presentation copies were provided, and she committed to distributing these to the rest of the village, and also spread the word during the next village meeting.

N V Manciya

Abanye abantu nemibutho ocinga kufuneka ibhaliswe:

Igama:

Umbutho:

Idilesi yeposi:

Idilesi ye imeyili:

Ifowuni #: Ifeksi #:

Thumela ku: **Nande Suka:** P.O. Box 8145, Nahoon, 5210

Ifowuni: (043) 726 7809 Ifeksi: (043) 726 8352 Idilesi ye imeyili: n.suka@cesnet.co.za