

Draft Scoping Report in support of a Waste Management Licence for the Operation of the existing Mbazwana Landfill, uMhlabuyalingana Local Municipality, KwaZulu-Natal



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Executive Summary

BACKGROUND TO THE PROJECT

The Department of Environmental Affairs (DEA) commissioned a study in 2007, completed in 2009, that aimed at identifying and determining the number of waste disposal facilities in South Africa that are not licenced. Of a total of 581 sites that were identified, 431 needed to be licenced. It was evident from the study that Local Municipalities (LMs) did not have adequate training or funding for lodging applications to licence their unlicensed waste disposal facilities or the management thereof. The Minister undertook to begin the process of licencing these sites, with a target that all would be licenced by 2013/2014. Subsequently, the DEA has identified an additional 57 municipal waste disposal facilities which must be licenced during the 2014/15 financial year. The licencing of the Mbazwana landfill falls within the scope of this process.

Sustainable Environmental Solutions (Pty) Ltd (SE Solutions), in association with AECOM SA (Pty) Ltd (AECOM), was appointed by the DEA to conduct the required environmental legislative process to apply for a Waste Management Licence (WML) for the operation of the existing Mbazwana Landfill (the Project), on behalf of the uMhlabuyalingana LM.

PROJECT AREA

The existing Mbazwana Landfill is located 1.28km directly east of the R22. Various pine plantations are located in close proximity, such as the Sibayi Plantation 1.2km to the north-east; the Mbazwana Plantation 2.3km to the south-east; and a third plantation 1.7km to the west. Two hundred metres south of the site lies a community known as Hagaza. The edge of Mbazwana town is approximately 3.3km south of the site. Sodwana Bay, which is a local tourism drawcard, is located 13.4km south-east of the site.

The landfill is located on Reserve No. 14 15834/20 (SG21 Digit code: N0 HV00000001583400020), and is accessed from an unnamed road that branches east off the R22.

PROJECT DESCRIPTION

The existing unlicensed Mbazwana Landfill is operated by the uMhlabuyalingana LM, the applicant for the proposed WML, however the land is tribally owned. Although no record keeping of the influx of waste is being done, it is estimated that the site receives 34 tons of domestic waste per day.

APPLICATION PROCESS

The Project is considered a waste management activity that may have a detrimental effect on the environment and for which authorisation in the form of a WML is required from the KwaZulu-Natal Department of Agriculture, Environmental Affairs and Rural Development (KZN EDTEA) in terms of the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008) (NEMWA). The Project does not comprise activities listed in the National Environmental Management Act, 1998 (Act No. 107 of 1998) (NEMA) 2014 Environmental Impact Assessment (EIA) Regulations.

Due to the current disposal activities at the landfill, a full Scoping and Environmental Impact Reporting (S&EIR) application process is required in order to obtain the WML.

Scoping Phase:

The EIA process is currently in the Scoping Phase and this report documents the outcomes of the Scoping Phase and the Plan of Study for EIA. The draft version of the Scoping Report is presented to the public and registered Interested and Affected Parties (I&APs) for a 30-day review and comment period. The Draft Scoping Report (DSR) with comment sheets were distributed to the following public venues in the project area from **04 December 2015 to 25 January 2016:**

Venue	Address
uMhlabayalingana Local Municipality Offices: Manguzi	R22 Main Road, 01 Manguzi, Manguzi
Mbazwana Library & Depot	Unnamed road 200 metres east of the Sodwana Main Road (a.k.a. A1108 Road) traffic circle

Ms Bongzi Shinga from AECOM can be contacted on bongzi@deawaste2015.co.za or Tel. 012 421 3500 during office hours for any queries and/or to submit comments on the DSR.

EIA Phase:

The landfill will be assessed in terms of the current impact on the environment and the nature of the status of the landfill (application for operations). The impacts assessed will cover operations, closure and decommissioning, as the site already exists. The following specialist studies have been commissioned:

- Wetland Assessment
- Groundwater Assessment
- Ecological Assessment

A Plan of Study for EIA is included in this report.

The site will be classified according to the Waste Classification and Management Regulations promulgated in August 2013, as well as the DWS Minimum Requirements for Waste Disposal by Landfill. This will determine the level of detail required in the lining or capping designs of the various facilities, either during operations or for closure.

When all the necessary information has been gathered, the preliminary design requirements for the landfill will be addressed. The preliminary design will be characterised by some of the following activities, where applicable:

- Determine the landfill footprint, the available airspace and subsequently the expected lifespan of the facility;
- Liner Design – depending on the waste characteristics a suitable liner for the site will be designed either for the capping of the cells or barrier systems at the bottom of the cells or both;
- Preliminary design of stormwater and leachate management system; and,
- Recommendation for site operational procedures.

Decision-making Phase

Once all issues have been addressed by the EAP and presented in an EIA report, the report will be submitted to the KZN EDTEA for decision-making after all registered I&APs have had the opportunity to review and comment on the EIA report. Once the WML (positive or negative) has been issued, all registered I&APs will be notified of the decision and have the opportunity to appeal the decision should they not agree with the authorisation issued or any conditions of authorisation.

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List of Abbreviations

°C	Degrees Celsius
CA	Competent Authority
BID	Background Information Document
CBD	Central Business District
CRR	Comment and Response Report
DEA	Department of Environmental Affairs
DEAT	Department of Environmental Affairs and Tourism
DSR	Draft Scoping Report
DWS	Department of Water & Sanitation
EA	Environmental Authorisation
EAP	Environmental Assessment Practitioner
EIA	Environmental Impact Assessment
EMPr	Environmental Management Programme
EPWP	Extended Public Works Programme
GIS	Geographical Information System
GN R	Government Notice Regulation
Ha	Hectares
HIA	Heritage Impact Assessment
I&AP(s)	Interested and Affected Party (-ies)
IDP	Integrated Development Plan
km	kilometre
KZN EDTEA	KwaZulu-Natal Department of Economic Development, Tourism and Environmental Affairs
m	metre
NEMA	National Environmental Management Act, 1998 (Act No. 107 of 1998)
NEMBA	National Environmental Management: Biodiversity Act, 2004 (Act No. 10 of 2004)
NEMWA	National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008)
NWA	National Water Act, 1998 (Act No. 36 of 1998)
PPP	Public Participation Process
RDL	Red Data Listed
SABAP	South African Bird Atlas Project
SAHRA	South African Heritage Resources Agency
SANBI	South African National Biodiversity Institute
SANS	South African National Standards
SAWS	South African Weather Services

SIA	Social Impact Assessment
WCMR	Waste Classification Management Regulations
WML	Waste Management Licence
WUL	Water Use Licence

1. INTRODUCTION

1.1 Background

The Department of Environmental Affairs (DEA) commissioned a study in 2007, completed in 2009, that aimed at identifying and determining the number of waste disposal facilities in South Africa that are not licensed. Of a total of 581 sites that were identified, 431 needed to be licensed. It was evident from the study that Local Municipalities (LMs) did not have adequate training or funding for lodging applications to licence their unlicensed waste disposal facilities or the management thereof. The Minister undertook to begin the process of licensing these sites, with a target that all would be licensed by 2013/2014. Subsequently, the DEA has identified an additional 57 municipal waste disposal facilities which must be licensed during the 2014/15 financial year. The licensing of the Mbazwana landfill falls within the scope of this process.

1.2 The Proposed Project

Sustainable Environmental Solutions (Pty) Ltd (SE Solutions), in association with AECOM SA (Pty) Ltd (AECOM), was appointed by the DEA to conduct the required environmental legislative process to apply for a Waste Management Licence (WML) for the operation of the existing Mbazwana Landfill (the Project), on behalf of the uMhlabuyalingana LM.

The existing unlicensed Mbazwana Landfill is operated by the uMhlabuyalingana LM, the applicant for the proposed WML. Although no record keeping of the influx of waste is being done, it is estimated that the site receives an estimated amount of 34 tons of general waste per day. It is possible that hazardous waste such as pesticides occasionally enters the landfill.

1.3 The Environmental Impact Assessment Process

The Project is considered a waste management activity that may have a detrimental effect on the environment and for which authorisation in the form of a WML is required from the KwaZulu-Natal Department of Economic Development, Tourism and Environmental Affairs (KZN EDTEA) in terms of the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008) (NEMWA). The Project does not comprise activities listed in the National Environmental Management Act, 1998 (Act No. 107 of 1998) (NEMA). Due to the nature of the proposed development, and the requirement to apply for a WML, a Scoping and Environmental Impact Reporting (S&EIR) application process is required.

This EIA process assists the KZN EDTEA, to make an informed decision on whether the proposed license to operate the existing landfill should be issued or not, and under what conditions an authorisation could be granted. In the EIA process, all potentially significant negative and positive impacts (social, economic and biophysical environments) of the activity are identified and assessed. An S&EIR entails the following main phases:

- Scoping Phase
- Environmental Impact Assessment Phase
- Decision-Making Phase.

1.3.1 Scoping Phase

The WML application process is currently in the Scoping Phase, and its main purpose is to identify and investigate issues related to the proposed development and list potentially significant impacts.

Issues and impacts are identified by the project team using theoretical knowledge, experience on similar projects, and consultation with I&APs and other key stakeholders (such as national, regional and local government departments). The Scoping Phase also identifies the most appropriate means by which the potential impacts will be assessed (Section 9.3).

To date, public participation was conducted to identify potential I&APs, inviting I&APs to register as well as to notify I&APs of the BAR application process to obtain a WML for the existing landfill site.

Input from I&APs are considered and integrated into the Final Scoping Report. This Draft Scoping Report is available for public comment over a period of 30 days (excluding public holidays and the period from 15 December to 05 January), from 04 December 2015 to 25 January 2016. The objective of the public comment period is for I&APs to raise issues about the information presented in the report and for them to raise any other issues related to the proposed Project. It also provides an opportunity for I&APs to see if their issues have been captured correctly.

1.3.2 Environmental Impact Assessment Phase

All potential significant environmental issues (social, economic and biophysical) associated with the proposed Project will be investigated. Included in the EIA process is the identification of mitigation measures and how these will be addressed, which informs the Environmental Management Programme (EMPr).

This Draft Scoping Report will be made available for public comment over a period of 30 days (excluding public holidays). The Comment and Response Report will be updated with all comments received during this period.

1.3.3 Decision-Making Phase

The decision-making phase will commence once all of the issues have been addressed by the EAP and presented in an EIA Report that will be submitted to the KZN EDTEA. The report is reviewed by officials and a WML is drafted with conditions that the uMhlabuyalingana LM must adhere to during the operation and decommissioning of the landfill. Should I&APs or uMhlabuyalingana LM disagree with the decision taken, they may enter into an appeal process.

1.4 Objectives of the Draft Scoping Report

The purpose of this Scoping Report is to document the outcomes of the Scoping Phase, for submission to the KZN EDTEA for approval as input into the EIA Phase that will follow. In addition, the Scoping Report provides the following information:

- Description of the property on which the activity is to be undertaken and the location of the property;
- Methodology applied to conduct the Scoping investigations;
- Details of the EAP and her expertise to carry out the Scoping procedures;
- Key legislation and guidelines that have been considered in the preparation of the Scoping Report;
- Details of the current state of the environment;
- Identifies and describes the anticipated environmental and social impacts, including cumulative impacts in respect of the listed activities;
- Need and desirability of the proposed activity, including advantages, disadvantages and alternatives;
- Reasonable land use alternatives, alternative means of carrying out the operations and the consequence of not proceeding with the proposed operation; and,
- Process of engagement with identified I&APs.

Prior to submission of the Final Scoping Report to the KZN EDTEA, I&APs are given an opportunity to review the Draft Scoping Report (DBAR) and comment on the proposed Project.

1.5 Structure of the Report

This report contains the following, in accordance with Appendix 2 of the EIA Regulations (2014):

Chapter	Description
Chapter 1	Introduction
Chapter 2	Project team details
Chapter 3	Overview of the project
Chapter 4	Description of the project alternatives
Chapter 5	Description of the affected environment
Chapter 6	Legislation and guidelines that pertain to the project
Chapter 7	Public Participation Process
Chapter 8	Description of environmental issues and potential impacts
Chapter 10	Conclusion and Recommendations
Chapter 11	References

1.6 Assumptions and Limitations

The following assumptions, limitations and constraints, associated with this Project, have been identified for this EIA process:

- The EIA process is multi-disciplinary, which is informed by the project team. It is thus necessary to assume that the information provided by the project team is accurate and true, at the time.
- Data shown in the maps were supplied by various sources and was used as received. The data was not verified.
- A preliminary site investigation was undertaken by the EAP's project team in consultation with representatives of the Applicant and KwaZulu-Natal Department of Economic Development, Tourism and Environmental Affairs (EDTEA) on 2nd September 2015 to identify activities triggered and studies required to be conducted.
- Public Participation Process: every effort was made to inform all possible stakeholders within the Project area. Information presented by the stakeholders is presumed to be accurate and has been presented timeously in the study.

2. PROJECT TEAM

2.1 The Applicant

The uMhlabuyalingana LM is applying for a WML for the operation of the existing unlicensed Mbazwana Landfill. Details of the Applicant are provided in Table 2-1.

Table 2-1: Details of the Applicant

Applicant	uMhlabuyalingana Local Municipality
Contact Person	Mr Sbusiso Emmanuel Bukhosini
Postal Address	Private Bag X 901, Kwa-Ngwanase, 3973
Telephone	035 592 9628
Fax	035 592 0672
E-mail Address	SbusisoB@mhlabuyalingana.gov.za
Applicant’s Representatives	
Mr Sbusiso Emmanuel Bukhosini	Municipal Manager (uMhlabuyalingana LM) SbusisoB@mhlabuyalingana.gov.za
Mr. MS Mnguni	HOD Community Services (uMhlabuyalingana LM) MduduziM@mhlabuyalingana.gov.za
Mrs NF Mngomezulu	Waste Management Officer (uMhlabuyalingana LM)

2.2 The Landowner

Although the existing Mbazwana is operated by the uMhlabuyalingana LM, it is located on tribal-owned property in KwaZulu-Natal. The details of the landowner are provided in Table 2-2

Table 2-2: Details of the Landowner

Landowner	Ingonyama Trust Trustees
Contact Person	Inkosi KPH Nxumalo Position: Inkosi Organisation: Mabaso Traditional Council
Postal Address	P.O. Box 601, Pietermaritzburg, 3200
Telephone	033 846 9900/1/2/3 / 072 107 4123
Fax	033 386 2528
E-mail Address	info@ingonyamatrust.org.za / khuleznxumalo@gmail.com

2.3 Environmental Assessment Practitioner

SE Solutions, in association with AECOM, were appointed to conduct the required application process for the proposed Project. Details of the Environmental Assessment Practitioner (EAP) are contained in Table 2-3, while her CV can be found in Appendix E1.

Table 2-3: Details of the EAP

Environmental Consultant	Sustainable Environmental Solutions (Pty) Ltd
Environmental Assessment Practitioner	Ms Victoria Napier
Postal Address	Suite 51, Private Bag X108, Centurion, 0046
Telephone	078 278 2898
Fax	086 664 6885

Environmental Consultant	Sustainable Environmental Solutions (Pty) Ltd
E-mail Address	vici@sesolutions.co.za

Vici Napier has more than 7 years’ experience as an EAP Project Manager, with over 9 years as an EAP. She is highly experienced in managing large multi-disciplinary project teams for various types of environmental assessments and authorisations, and has often been described by colleagues and clients as having specialist Project Management skills. In addition, she has experience in training and skills transfer within the Environmental Management field. Vici is a Registered Professional Natural Scientist with SACNASP (400215/09) and a member of the South African Chapter of the International Association of Impact Assessment (IAIA). The full CV of Ms Napier is presented in Appendix E1.

2.4 The EIA Project Team

Details of the Project Team assisting the EAP in conducting the EIA study in support of a WML for the Mbazwana Landfill are indicated Table 2-4 below, while CVs are attached in Appendix E2.

Table 2-4: EIA Project Team

Name	Role on Team	Company
EIA Team		
Mike Howard	Environmental Executive	AECOM
Johan Hayes	Project Manager	AECOM
Soleil Jones	Environmental Management Practitioner	AECOM
Bongi Shinga	Public Participation Practitioner	AECOM
Mamokete Maimane	Public Participation Practitioner	AECOM

3. OVERVIEW OF THE PROJECT

3.1 Project Area

The existing Mbazwana Landfill is located 1.28km directly east of the R22. It is nestled between indigenous shrubland, and in the site surrounds are various pine plantations, such as the Sibayi Plantation 1.2km to the north-east and the Mbazwana Plantation 2.3km to the south-east, as well as a third plantation 1.7km to the west. Two hundred metres south of the site lies a community known as Hagaza (refer to Figure 3-1)). The edge of Mbazwana town is approximately 3.3km south of the site. Sodwana Bay, which is a local tourism drawcard, is located 13.4km south-east of the site.

The landfill is located on Reserve No. 14 15834/20, and is accessed from an unnamed road that branches east off the R22 ((Surveyor-general Cadastral Code 21 digit site N0HV00000001583400020).

3.2 Description of Existing Mbazwana Landfill

The existing Mbazwana Landfill is currently unlicensed. The site (footprint area of approximately 41 930,25 m²) is fenced and fitted with a gate, and there is a guard to ensure access control. There is some windblown and scattered litter around the site, but it is generally contained within the fenced footprint area.

The facility is currently used for the disposal of general waste, garden waste and builders' rubble from the areas surrounding Mbazwana. An estimated 34 tons of domestic waste reports to the site daily. Due to a shortage of equipment within the uMhlabuyalingana LM, no compaction is undertaken at the facility. The only cover material available on the site is sand. No waste covering is practised at the facility. There are two distinct areas of the landfill. The first is the larger, original area, where waste was originally dumped. That area has now mostly been cleared, apart from a number of stockpiles of different types of waste scattered around the site. The newer area has been cleared in the last year, and this is where vehicles and trucks offload their waste and where it is sorted (refer to the site photographs in Appendix C). Interestingly, no unpleasant odours were noted during the site visit, although the weather was cool at the time.

At the time of the site visit there were an estimated 10-15 Extended Public Works Programme (EPWP) workers sorting waste on the site into various recyclable materials such as glass, plastic and cardboard. Most of these staff were not wearing protective personal equipment such as gloves and face masks.

The eastern edge of the site has an access road running north-south along it. This track provides access to the rest of the property (tribal-owned land), but sits within the fence boundary. This is problematic as the Minimum Requirements for Waste Disposal by Landfill 1998 do not allow for pedestrian access at a waste disposal facility. The issue is currently under negotiation between the LM and the Nkosi of the tribal authority. It is suggested that the fence line be moved so that the track is located outside of the landfill fence line and footprint.

3.3 Waste Classification of the Landfill Site

The landfill will be assessed in terms of the current impact on the environment and the current operational status of the landfill compared to the minimum requirements (Application for Operation). The impacts assessed will cover operation and decommissioning, as the site already exists and operates.

The WCMR state that all general domestic waste landfills need to, as a minimum, adhere to the lining requirements for a Class B landfill as described in Regulation 636 of the WCMR. If the landfill accepts wastes that are deemed hazardous as per the information in the Annexure to the WCMR, the landfill cell that accepts this waste needs to be lined in accordance with that of a Class A landfill. For closure and capping design purposes the disposal site will be assessed using the principles contained in the 1998 DWS' (then Department of Water Affairs and Forestry) Minimum Requirements for Waste Disposal by Landfill document.

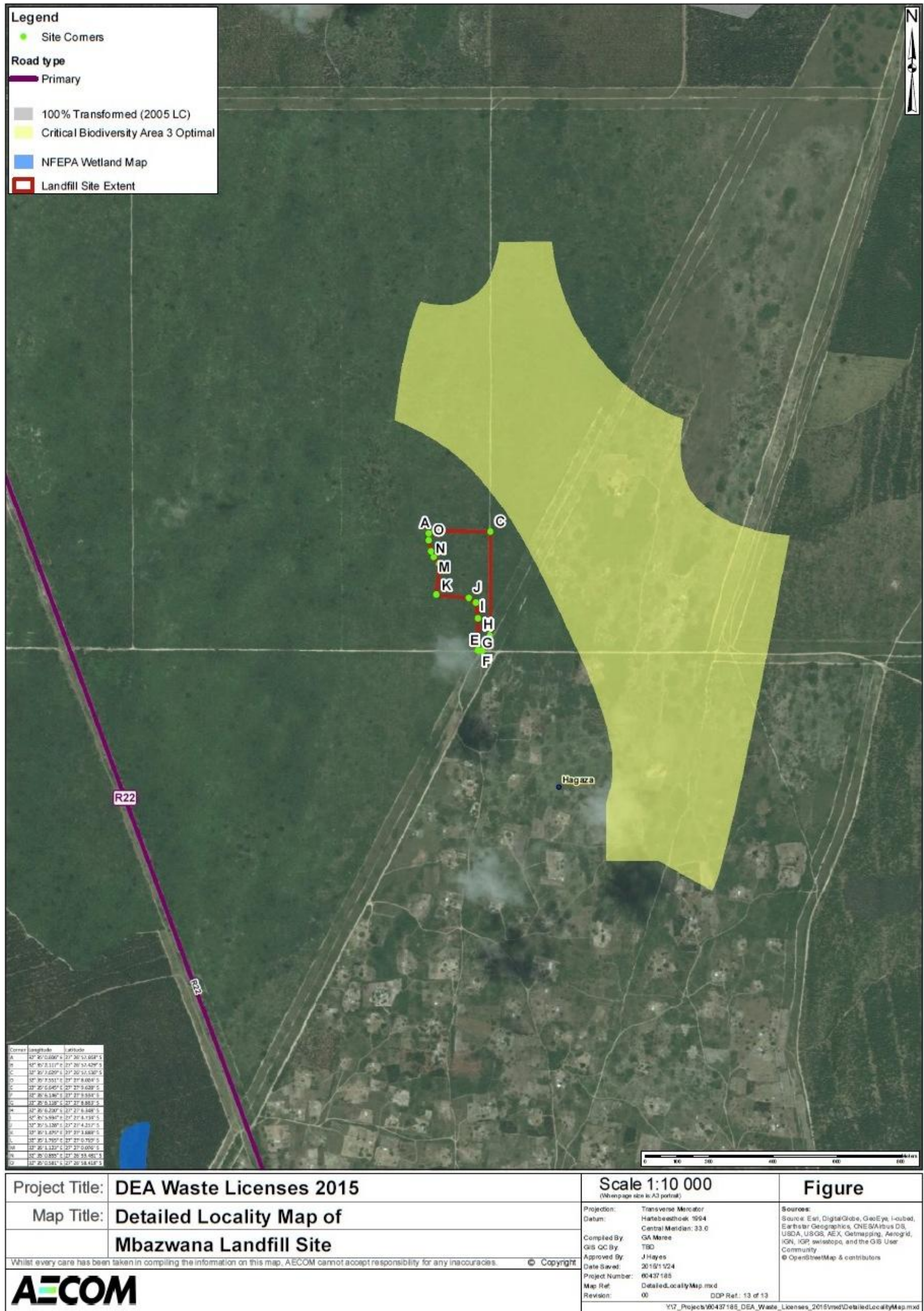


Figure 3-1: Locality of the Mbazwana landfill

3.4 Waste Management of the Licensed Landfill

3.4.1 Design Solution

When all the necessary information has been gathered, the preliminary design requirements for the landfill will be addressed. The preliminary design will be characterised by some of the following activities, where applicable:

- Determine the landfill footprint and the waste volume contained within;
- Liner Design – depending on the waste characteristics a suitable liner for the site will be designed either for the capping of the cells or barrier systems at the bottom of the cells or both;
- Preliminary design of stormwater and leachate management system; and,
- Recommendation for site operation procedures.

3.4.2 Costing of the Proposed Solution

The construction cost for addressing the design requirements will be estimated. This cost estimate can be used by the KZN EDTEA and the LM to plan and budget for the implementation of the requirements of the WML.

3.5 Need and Desirability

Service delivery is an issue of national concern and importance. Thus, the licensing of the illegal Mbazwana landfill is considered part of this programme. This licensing process undertaken in terms of the NEMWA is in accordance with an initiative driven by the DEA to ensure the legal compliance of all municipal landfills, which in turn ensures appropriate and effective environmental management of these sites. In addition, the licensing process is aligned with the uMhlabuyalingana LM Draft Integrated Waste Management Plan (IWMP) of April 2014.

The 2014 uMhlabuyalingana LM IWMP lists the licensing of the Mbazwana waste site and the development of waste drop-off centres (i.e. waste transfer stations) as Critical Action Items (items 8.1.1 and 8.1.13). Mbazwana is defined as an emerging urban centre and Primary Investment Point (Node) of existing and future growth points and centres of population concentration (ULM Draft IWMP, 2014).

A significant environmental challenge relating to waste management currently faced by the uMhlabuyalingana LM is the lack of waste management services to its mostly rural and remotely located communities, resulting in litter problems and illegal dumping.

4. DESCRIPTION OF ALTERNATIVES

“Alternatives are different means of meeting the general purpose and need of a proposed activity. The identification, description, evaluation and comparison of alternatives are important for ensuring the objectivity of the assessment process. In cases where there is no objective and thorough assessment of alternatives, the EIA process usually only confirms a chosen activity and the value of the assessment as an input to decision-making may be compromised” (DEAT Guideline 4, 2006).

4.1 Alternatives Considered

The identification of alternatives is an important component of the EIA process. However, as the Project entails the licensing of an existing landfill, project location / site alternatives are not currently considered in the EIA process.

During the EIA Phase, various design alternatives will be considered to ensure that existing and future waste management activities are aligned to all applicable environmental and waste management legislation.

4.1.1 Do Nothing Alternative

The DEA stresses that the “Do-Nothing” approach should be considered in all cases.

The “Do-Nothing” approach entails that the existing Mbazwana Landfill is not licensed. Should such licensing not take place, poor waste management at this landfill will continue. Furthermore, negative environmental and social impacts associated with the current lack of waste management practices will not be rectified and/or mitigated.

The “Do-Nothing” scenario will be the basis against which the acceptability of the identified environmental issues, and, technically and economically feasible alternatives, will be assessed during a comparative alternatives assessment in the EIA Phase.

5. DESCRIPTION OF AFFECTED ENVIRONMENT

5.1 Study Area Context

5.1.1 Regional Context

According to the uMhlabuyalingana Local Municipality's (ULM's) Integrated Waste Management Plan (IWMP) (2014), the ULM is located in the centre of a biodiversity hotspot. The municipality contains five key environmental assets, namely the Tembe National Elephant Park, Sileza Nature Reserve, Manguzi Forest Reserve, Ndumo Game Reserve, and iSimangaliso Wetland Park. The ULM is also home to four RAMSAR sites, and forms part of two transfrontier conservation areas (TFCAs), namely the Usuthu-Tembe-Futi TFCA (Swaziland/South Africa/Mozambique) and Ponta do Ouro - Kosi Bay TFCA (South Africa/Mozambique) (ULM IWMP, 2014).

A section of the Pongola River flows through ULM, which is an important catchment system for the region. The Pongola River is an essential source of water for human settlements in the western regions of the municipal area. The municipality also contains the largest freshwater lake in South Africa, Lake Sibayi, which supplies water to a number of urban centres, commercial and subsistence farmers, and rural households (ULM IWMP, 2014).

Fifty-eight percent of the ULM is covered by natural vegetation, particularly between the Pongola River floodplain and the R22. The Mbazwana site is located at the eastern edge of this area. These natural open spaces are important generators of ecosystem services, not only for the municipality, but also for neighbouring municipalities and countries. However, only a small proportion (17%) of this natural vegetation is formally protected within the Tembe National Elephant Park, Sileza Nature Reserve, Manguzi Forest Reserve, Ndumo Game Reserve, and iSimangaliso Wetland Park. There is also the Tshanini Community Conservation Area, which informally protects approximately 3,000 ha of open space (ULM IWMP, 2014).

The remaining natural open space will likely become subject to increased development pressures in the future, particularly on the floodplains of the Pongola River, the Freshwater Wetlands near Manguzi, and in the areas of Northern Coastal Forests. There are 18 different vegetation types in the ULM, and potentially 39 Red Data Book plant and animal species occurring (ULM IWMP, 2014).

The western regions of the ULM have low rainfall. The demand placed on natural resources through harvesting and grazing is exceeding supply in the majority of traditional rural areas, particularly within the Thicket areas, Forest areas, and the floodplains of the Pongola River. The large scale transformation and utilisation of these areas results in environmental degradation and a reduction in the supply of ecosystem goods and services. This demand is driven by a dependence on natural resources base to sustain rural livelihoods (ULM IWMP, 2014).

5.1.2 Local Context

Mbazwana is regarded as a primary rural service centre in the ULM, around which planning will have to be properly undertaken. Mbazwana is home to Sodwana Bay and sits alongside the iSimangaliso Wetland Park, two very significant tourism drawcards in the area. The iSimangaliso Wetland Park is a UNESCO World Heritage site.

Both the Ingonyama Trust and the affected traditional councils have embraced the need for proper planning within Manguzi and Mbazwana and pledged support to the DEA's process of licensing unlicensed municipal landfill sites. Failure to introduce planning will have far reaching implications including degeneration of these areas into expansive rural slums, informal development in environmentally sensitive areas, lack of investment and poor image of the municipality. The Department of Co-operative Governance and Traditional Affairs has provided funding for the formalization of both the towns of Manguzi and Mbazwana. The land in the Mbazwana area is Ingonyama Trust land, managed by the Mabaso traditional council. This has at times made planning and development difficult in the past (ULM IDP, 2014/2015). Refer to Figure 5-1 for the Site Plan.

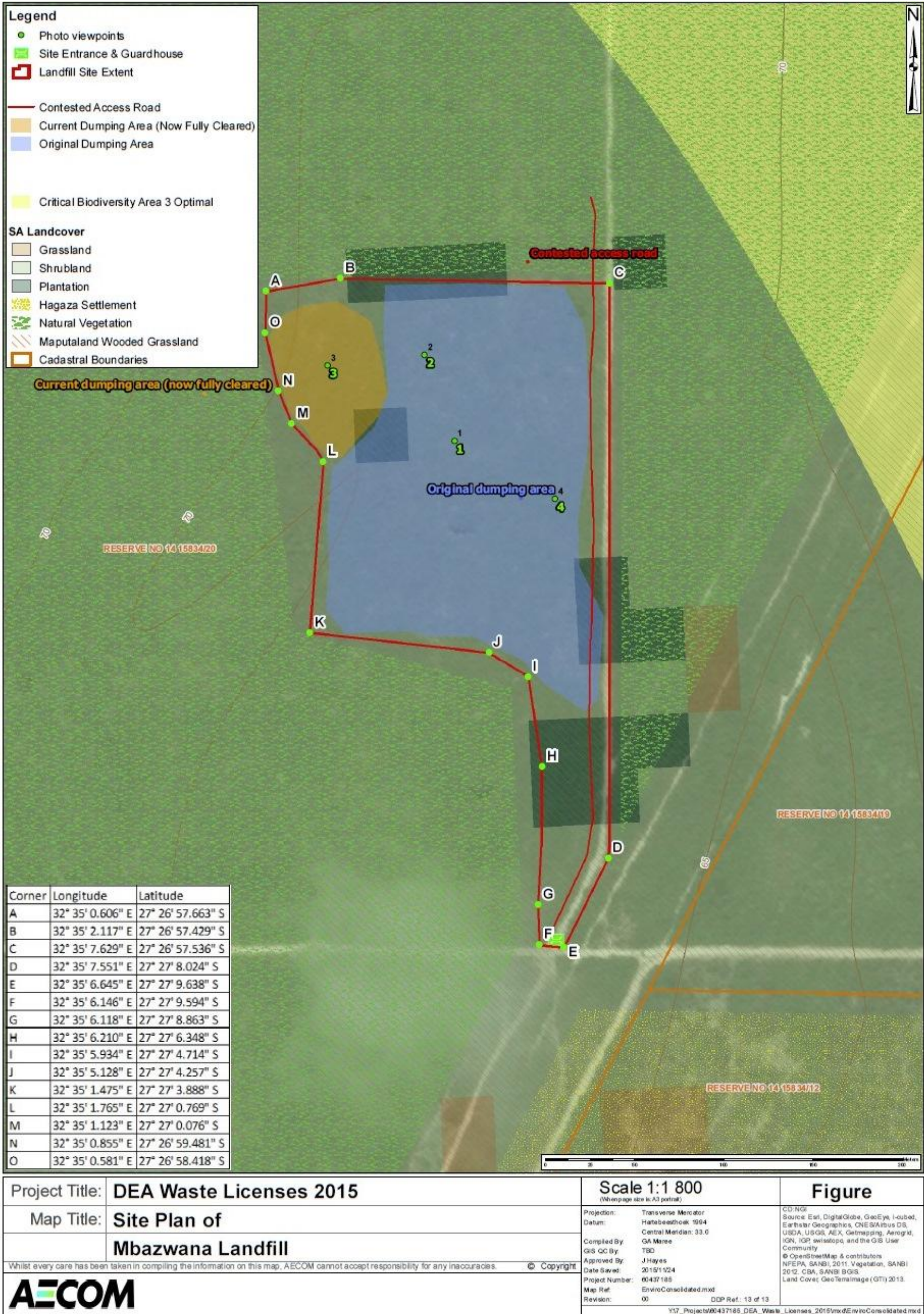


Figure 5-1: Site Plan of the Mbazwana Landfill

5.2 Physical Environment

5.2.1 Climate and Atmospheric Conditions

Climate data for Manguzi town, 55km to north of the site, and a similar distance west of the coast, is used for the Project area. The highest summer temperatures occur during January, with a maximum of 30.9°C, while July experiences the lowest temperatures with a minimum of 12.5°C. The annual average temperature is 25.8°C. Rainfall occurs predominantly during the summer months with 881 mm per annum. Peak rainfall occurs during January, at 137mm, while the winter rainfall low occurs in June, at 28mm (www.Climate-data.org, 2015).

5.2.2 Topography

The topography of the study area is relatively flat. The elevation on site is approximately 70 metres above sea level (masl).

5.2.3 Geology

The underlying geology consists primarily of conglomerate, sandstone, aeolianite, sand, limestone, alluvium (refer to Appendix D for the geology map). The geology of the central part of uMhlabuyalingana comprises sandy Aeolian (wind-blown) deposits that were deposited during the Quaternary Age. This formation generally comprises poorly consolidated yellowish or greyish sands extending to depths in excess of 30 metres below existing ground level and is characterised by the presence of a shallow water table. The uppermost portion of these soils (i.e. +/- 3m below existing ground level) is usually very loose to loose in consistency and becomes progressively medium dense to dense with depth. The most predominant geology feature is Cenozoic sediments which comprises a 1-20km wide band of Cretaceous age rocks and is further subdivided into the Mzinene formation which consists of a siltstone with shelly concretionary layers. These soils are anticipated to extend to depths in excess of approximately 25 metres below existing ground level and is characterized by the presence of a shallow water table. The geology of the area is characterized essentially by glauconitic siltstone which were deposited during the Cretaceous age respectively (ULM IDP, 2014/2015).

5.2.4 Soils

The most predominant soil type in the ULM is sandy soil, indeed this is the soil type that occurs at the Mbazwana site, as can be seen in the photographs (Appendix C). Sandy soils tend to be unstable and susceptible to erosion. The topmost layers of these soils are usually very loose to loose in consistency and becomes progressively medium dense to dense with depth. The sandy Aeolian soils are anticipated to classify as a fair sub grade material (i.e. G9 and poorer in terms of TRH14 classifications) (ULM Draft IDP, 2015/15)

5.2.5 Existing Land Use and Land Cover

The project area is characterised by rural human settlement around the R22. The site area is generally characterised by natural vegetation such as indigenous shrubland, but it is also surrounded by commercial pine plantations. The site's eastern boundary is 8.8 km from the western boundary of the iSimangaliso Wetland Park. Expansive rural settlements occur to the south of the site.

5.2.6 Hydrology

As can be seen in Figure 5-1, no natural water bodies occur within close proximity to the existing Mbazwana Landfill. The surface water specialist assessment (wetland delineation) will be conducted during the EIA Phase.

5.3 Biophysical Environment

5.3.1 Flora

Two vegetation types of conservation importance are indicated as possibly occurring on site in the KZN C-Plan database, Maputaland Wooded Grassland and Maputaland Coastal Grassland. The area has however been used for plantation forestry in the past and the remaining vegetation does not resemble either of these vegetation types. The remaining vegetation around the landfill is a dense thicket with several alien and invasive species present. The thicket is dominated by dense short tree and shrub species, with few grass and forb species present.

Several plants are also present in the landfill area, mostly weedy species, but several common garden and vegetable species are also present. This is common on landfill sites that receive garden and kitchen refuse. None of the observed species are of conservation importance, but several of the species are alien and/or pioneer species.

5.3.2 Fauna

As the site consists of an existing landfill, it is not anticipated that significant faunal communities exist. Several mammal species have been recorded in the area in the past. However, no mammal species were observed on site during the site visit, and the likelihood of these species being present on site is however limited due to the activity on site. More detailed information will be provided on this aspect during the EIA Phase, once the Ecological specialist Report has been completed.

5.4 Social Environment

5.4.1 Population

The local population of the uMhlabuyalingana LM in 2001 was estimated to be 142,565 and increased to 156,736 in the 2011 census (Stats SA, Census 2011). This population increase has led to the number of households increasing by 60 181 households to a total of 33,857 households in 2011 (Stats SA, Census 2011). There is no population data for Mbazwana specifically.

The majority of the population within the municipal area falls within the Black African ethnic group, at 99.3%. 95.1% of people speak isiZulu as their first language. The majority of the residents within the municipality are below the age of 20 (Stats SA, Census 2011).

5.4.2 Employment

The number of employed people in the uMhlabuyalingana LM has increased slightly over the past 10 years. However, approximately 16 250 people between the ages of 15 – 65 are not economically active, and are currently dependent on a small economically active group. A significant characteristic of the uMhlabuyalingana population is the youth unemployment rate, which stands at 56.5% (Stats SA, Census 2011). The economy of uMhlabuyalingana is based on agriculture, community development, retail, private household and informal sectors. These five sectors alone provide jobs to 11 160 people within the municipal area. This accounts for 65% of employment within uMhlabuyalingana.

5.4.3 Education

There are no tertiary education facilities found in the uMhlabuyalingana LM. Educational attainment is 81%. 236 245 of youngsters aged between 5 and 24 years are attending school. About 22 274 (30.5%) of aged 20 and above have had no schooling, while 4.5% have attained tertiary education, while only 22.2% have attained matric. More males have attended higher education, although males also make up the highest proportion of those who have had no schooling at all (Stats SA, Census 2011).

5.4.4 Service Delivery

5.4.4.1 Health Services

UMhlabuyalingana Municipality is served by two hospitals and 17 clinics. The hospitals are located in Mseleni and KwaNgwanase, while the clinics are strategically placed in areas with greater population densities. If a minimum radius of 10km for access to a clinics and 50km for a hospital is applied, it appears that 91.6% of municipal households have access to health facilities (ULM Draft IDP, 2015/16).

5.4.4.2 Electricity

Eskom is the electricity service provider in the ULM. Eskom is in the process of implementing an electrification project in the municipal area. The ULM has informed Eskom of all planned housing developments (ULM Draft IDP, 2015/16).

5.4.4.3 Waste Management and recycling

The uMhlabuyalingana LM removes refuse for 1.4% of the households on a weekly basis. The licensing of the Skhemelele and Mbazwana landfill sites has been listed as a Critical Action Item in the ULM's IWMP (ULM IWMP, 2014).

5.4.4.4 Water and Sanitation

5.3% of households receive piped water within their dwelling. The main sources of water are boreholes (just under 14 000 households), or natural springs (approx. 10 000 households), and water vendors (just over 4 000 households) (ULM Draft IDP, 2015).

2,8% of households within the municipality are fitted with a flush toilet connected to sewage (Stats SA, Census 2011). The highest proportion of households make use of a pit latrine (Stats SA, Census 2011).

5.4.4.5 Housing

The ULM has at times been described as having a lot of informal settlements; however it should be noted that the ULM is rural in character and as such 99% of the area is classified as rural. This is evident throughout the municipal area, with the housing typology such as it is and the dispersed rural settlements with poor road infrastructure interlinking them. Dwellings made of traditional materials are still prevalent. The municipality does not consider these to be "informal settlements", generally because these communities often have some form of land tenure rights to settle where they are. The culture within the municipality, however, is such that residents do not seek Council approval of their structures before building, in addition to which residents often do not give consideration to the optimal placement of their dwellings in terms of the surrounding environment (ULM Draft IDP, 2015).

The ULM spans an area of approximately 3621 km². In terms of land tenure, an estimated 60% of the municipal area falls under Ingonyama Trust ownership with four tribal councils who are the custodians of the land, with the remaining 40% consisting of commercial farms and conservation areas (Stats SA, Census 2011). The ULM was established under the Municipal Systems Act; however by that time most of the unplanned rural towns and villages had already established, and as such the system of identifying suitable land for housing purposes was not practised. The ULM is currently drafting a Spatial Development Framework (SDF), as well as scheme(s) for Manguzi and Mbazwana towns, respectively. This is a twofold exercise that will involve a high level land identification and designation wherein feasible land for future housing expansions will be identified and other subsequent specialist investigations will have to be undertaken for each specific land parcel. Parallel to this the uMkhanyakude District municipality's district-wide Environmental Management Framework which will also serve to better support decision-making in the future (ULM Draft IDP, 2015).

5.4.5 Economy

Agriculture is the main economic activity in the Municipality. The main agricultural sectors are poultry farming (44.9%), vegetable (23.1%), and livestock (16.9%). The vast majority of agricultural activity is subsistence. Most employed people work either in the government sector while others work in the informal sector. Tourism also makes a substantial contribution to the local economy by providing job opportunities for local people (Stats SA, Census 2011).

6. LEGISLATIVE FRAMEWORK

6.1 Introduction

The overarching legal framework pertinent to the licensing of the Mbazwana landfill site is NEMA and the associated Specific Environmental Management Acts (SEMA). This section provides an overview of the policy and legislative context including the identification of all legislation, policies, plans, guidelines, spatial tools, municipal development frameworks and instruments applicable to the activity and which are to be considered in the EIA process.

6.2 Relevant National Legislation

6.2.1 The National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008)

6.2.1.1 Overview

NEMWA regulates waste management in order to protect human health and the environment, by providing reasonable measures for the prevention of pollution and ecological degradation, and for securing ecologically sustainable development. It also provides for national norms and standards for regulating the management of waste by all spheres of government, providing for specific waste management measures for licensing and the control of waste management and remediation activities associated with contaminated land.

6.2.1.2 National Standards for Disposal of Waste to Landfill

The DEA promulgated Regulations and Standards under NEMWA to regulate various aspects of waste management, including the design and classification of landfills. In addition to the existing Minimum Requirements, the following Regulations will also be applicable:

- Government Notice R.634 – Waste Classification and Management Regulations;
- Government Notice R.635 – National norms and standards for the assessment of waste for landfill disposal; and
- Government Notice R.636 – National norms and standards for disposal of waste to landfill.

As a result of the above, the design and classification of the Mbazwana Landfill will take these new Regulations on Norms and Standards into account.

6.2.1.3 Activities applicable to NEMWA

The operation of the Mbazwana Landfill includes activities listed in Categories A of Government Notice (GN) 37083 of November 2013, published in terms of Section 19(1) of NEMWA, as waste management activities that may have a detrimental effect on the environment and for which authorisation is required in the form of a Waste Management Licence. The relevant listed activities are provided in Table 6-1, for which authorisation by means of a BAR application process must be obtained.

Table 6-1: Listed Activities in Terms of Category A and B of GN 37083 of November 2013

No. and Date of the Relevant Notice	Category A or B	Activity Number	Description of the Listed Activity
GNR 37083 of 29 November 2013 in terms of Section 19(1) of NEMWA	A	2	The sorting, shredding, grinding, crushing, screening or bailing of general waste at a facility that has an operational area in excess of 1000m ² .
GNR 37083 of 29 November 2013 in terms	B	8	The disposal of general waste to land covering an area in excess of 200m ² and with a total capacity exceeding 25 000 tons.

No. and Date of the Relevant Notice	Category A or B	Activity Number	Description of the Listed Activity
of Section 19(1) of NEMWA		10	The construction of a facility for a waste management activity listed in Category B of this Schedule (not in isolation to associated waste management activity).

6.2.2 National Environmental Management Act, 1998 (Act No. 107 of 1998) as amended

NEMA provides a framework for cooperative environmental governance between the various spheres of government, by establishing principles for decision-making on matters relating to the environment. Furthermore, NEMA promotes Integrated Environmental Management (IEM) to ensure sustainable resource utilisation and development and requires that the DEA be the lead agent in ensuring effective custodianship of the environment. It also provides that 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 subjected to significant human resource usage and development pressure. The NEMA principles, contained in Section 2, clearly emphasize the need to protect threatened ecosystems and are binding on all organs of state including the local authorities. Furthermore, the principles essentially guide the interpretation, administration and implementation of the Act and any other law concerned with the protection of the environment. An overarching emphasis is the principle that development must be environmentally, socially and economically sustainable.

Section 23 of NEMA further determines that IEM should be employed when any policies, programmes, plans or projects are drawn up to minimise the impact on the environment. The duty of officials to prevent pollution and ecological degradation, to promote conservation and secure ecologically sustainable development and use of natural resources, originates from the Constitution and NEMA.

For a range of listed activities and depending on the scope of the activity, the responsibility to ensure compliance with NEMA and its suite of SEMAs has been devolved to the nine provincial departments.

Sections 24 and 44 of NEMA make provision for the promulgation of regulations that identify activities which may not commence without an Environmental Authorisation (EA). Thus, the EA application process and activities were detailed within the 2014 Environmental Impact Assessment (EIA) Regulations listed in Government Gazette No. 10328 of 4 December 2014 (GN 982, 983, 984 and 985). All activities listed in the abovementioned regulations shall be subject to an EIA process (i.e. Basic Assessment (BA) or Scoping and Environmental Impact Reporting (S&EIR) application processes) and will require EA from the relevant Competent Authority (CA). Section 24F of the NEMA prohibits the undertaking of identified listed activities except by virtue of being undertaken under the control of an EA from the relevant CA.

At this stage, no applicable NEMA activities have been identified as having been triggered by the application. The scope of this project is to license the operation of the existing landfill.

6.2.3 National Water Act, 2008 (Act No. 36 of 2008)

The National Water Act, 1998 (Act No. 36 of 1998) (NWA) provides a framework to protect, develop, conserve and manage the nation’s water resources. Water use is defined broadly in terms of NWA, and includes taking and storing water, activities which reduce stream flow, waste discharges and disposals, controlled activities (activities which impact detrimentally on a water resource), altering a watercourse, removing water found underground for certain purposes, and recreation. In general a water use must be licensed (in terms of Section 21) unless it is listed in Schedule 1, is an existing lawful use, is permissible under a general authorisation, or if a responsible authority waives the need for a licence. Section 21 of the NWA lists the water uses for which authorisation under the Act is required.

In terms of Section 19 of the NWA “An owner of land, a person in control of land or a person who occupies or uses the land on which ... any activity or process is or was performed or undertaken; or ... any other situation exists, which causes, has caused or is likely to cause pollution of a water resource must take all reasonable

measures to prevent any such pollution from occurring, continuing or recurring”. These measures may include, but are not limited to:

- Measures to cease, modify, or control any act or process causing the pollution.
- Compliance with any prescribed waste standard or management practice.
- Containment or prevention of the movement of pollutants.
- Remediation of the effects of the pollution.
- Remediation of the effects of any disturbance to the bed and banks of a watercourse.

The NWA also provides for pollution prevention measures, with particular emphasis on water resource pollution. In accordance, the licensee shall ensure that activities impacting upon water resources and effluent releases are monitored for compliance with the applicable regulations. Emergency incidents involving water resources are included in the Act, requiring the polluter to remediate and mitigate the impacts of such an emergency incident.

The DWS will provide a Record of Recommendation in terms of the NWA and any other associated policies, plans, programmes, guidelines and regulations to the CA as part of the WML application process.

6.3 Additional Applicable Legislation

Additional legislation applicable to the Project is listed in Table 6-2.

Table 6-2: Summary of Applicable Legislation

Relevant Legislation	Sections	Applicability to the Project
Constitution of South Africa, 1996 (Act No. 108 of 1996)	Chapter 2	Bill of Rights.
	Section 24	Environmental rights.
	Section 25	Rights in property.
	Section 32	Administrative justice.
	Section 33	Access to information.
National Environmental Management: Biodiversity Act, 2004 (Act No. 10 of 2004)	Sections 56 and 57	Protection of threatened or protected species.
	Sections 65 -73	The control of alien species, invasive species and genetically modified organisms.
Conservation of Agricultural Resources Act, 1983 (Act No. 43 of 1983) and regulations	Section 5, 6	Implementation of control measures for alien and invasive plant species, especially in urban areas.
National Environmental Management: Air Quality Act, 2004 (Act No. 39 of 2004)	Section 32	Control of dust.
	Section 34	Control of noise.
	Section 35	Control of offensive odours.
Occupational Health and Safety Act, 1993 (Act No. 85 of 1993) and regulations	General Administration Regulations GN R929 of June 2003	Material Safety Data Sheets must be made available at the request of any Interested and Affected Party (I&AP).
	Section 8	General duties of employers to their employees.
	Section 9	General duties of employers and self-employed persons to persons other than their employees.
Hazardous Substances Act, 1973 (Act No. 15 of 1973) and regulations	As Type 2, 3 and 4 waste may be disposed of at the existing Mbazwana Landfill, the controls of the Hazardous Substances Act must thus be complied with.	
Fertilisers, Farm Feeds, Agricultural Remedies and Stock Remedies Act, 1947 (Act No. 36 of 1947) and regulations	Sections 3 to 10	Control of the use of registered pesticides, herbicides (weed killers) and fertilisers. Special precautions must be taken to prevent workers from being exposed to chemical substances

Relevant Legislation	Sections	Applicability to the Project
		during alien vegetation control programmes.
National Veld and Forest Fire Act, 1998 (Act No. 101 of 1998)	Chapter 4, 5	Fire prevention, management and control measures to be implemented.
National Building Regulations and Building Standards Act, 1977 (Act No. 103 of 1977)	Section 4	Local Authority approval of plans to erect buildings like weighbridges, admin buildings, etc.

6.4 Local Legislation and Policy Framework

The EIA process must consider the planning policies that govern the study area to ensure that the scale, density and nature of activities/developments are harmonious and in keeping with the sense of place and character of the area.

The district municipality and EDTEA are currently developing a district-wide Environmental Management Framework (ULM IWMP, 2014). The municipal-scale draft Spatial Development Framework (SDF) and a Land Use Management System (LUMS) for Mbazwana and Manguzi are still underway. Enforcement of both these land use management tools and a municipal wide scheme to be planned for, will assist to meet the prerequisites of the KZN Planning and Development Act. The municipality is to provide the framework to guide the overall spatial distribution of current and desirable (future) land uses within the municipality (ULM IDP, 2014/2015).

6.4.1 KwaZulu-Natal Provincial Spatial Development Framework (SDF), 2011/2012

The KZN Provincial Spatial Development Strategy sets out to:

- Be the spatial expression of the Provincial Growth and Development Strategy (PGDS) and provide spatial context for proposed strategic interventions;
- Provides a set of normative principles or departure points that guide the Province’s approach to dealing with socio-economic issues that are manifested spatially;
- Provide a basis for informed consensus on the province’s spatial priorities by providing a map giving guidance for the future spatial development of the Province based on Broad Provincial Spatial Planning Categories (BPSPCs) and a series of other relevant features;
- Assist to prioritise and align where government directs its investment and development initiatives to ensure sustainable and maximum impact;
- Capitalise on complementarities and facilitate consistent and focused decision making;
- Guide municipal integrated development plans (IDPs), spatial development frameworks (SDFs) and provincial and municipal framework plans (i.e. sub-SDF spatial plans); with normative principles, approach and content;
- Provide clear intent to the private sector about desired development directions; and,
- Increase predictability in the development environment.

The KZN Provincial SDF has identified the uMhlabuyalingana LM as a local municipality with a notably high dependency ratio, thus requiring special assistance and attention.

In promoting growth and development within the uMkhanyakude District Municipality as well as supporting the proposed spatial structure and areas in need of intervention, a number of provincial catalytic projects are envisaged within the district which are applicable to the Mbazwana site:

- Nature Based Tourism;
- iSimangaliso Wetland Park;
- Small Town Regeneration;
- Rural Service Centres; and,

- School Greening.

6.4.2 UMhlabuyalingana Local Municipality Draft IWMP, 2014

The uMhlabuyalingana LM commissioned an Integrated Waste Management Plan (IWMP), the Draft of which was published in April 2014. The overall objective of the IWMP is to integrate waste management of the ULM where possible with the services offered in adjacent LMs. The main aims for the project are:

- Compile a local level IWMP, taking into account existing systems and practices in effect within the LMs;
- Draw attention to existing practices which impact on pollution avoidance, prevention and minimization at source within the LM;
- Make appropriate recommendations to manage the impact of pollution and waste on the receiving environment in the LM;
- Assess whether waste management takes place in a holistic, integrated and comprehensive manner throughout the wastes' life cycle;
- Identify, with the assistance of LM, areas of opportunity / need in previously un-serviced rural communities that will need to be considered for possible implementation of waste service delivery; and,
- Align the Local IWMP with the Local IDP process.

The IWMP listed the licensing of the Skhemelele and Mbazwana waste sites, as well as the development of waste drop-off centres (i.e. waste transfer stations) as Critical Action Items (items 8.1.1 and 8.1.13).

6.4.3 uMhlabuyalingana Draft Integrated Development Plan (IDP), (2015-16)

The IDP seeks to integrate and balance the economic, ecological and social pillars of sustainability to ensure effective participatory and responsible service delivery. The 3rd revision IDP mostly focuses on assessing and reporting the 5 year plan. The LM IDP was compiled to be aligned with a range of National and Provincial policy documents. In terms of the Service Delivery Agreement (Outcome 9), the first priority of relates to ensuring that "municipalities meet the basic service needs of communities". This agreement specifically aims to improving access to basic services.

A lot of work needs to be done to ensure that proper waste management within uMhlabuyalingana Municipality is carried out. The LM has opted to use a Service Provider to assist with waste service delivery and to reach the most remote areas of the LM. uMhlabuyalingana LM is currently looking at projects that will enhance its revenue and promote job creation from the very waste management service it provides. One focus for the municipal area is economic development through tourism. In order to achieve this, sufficient waste management infrastructure must be in place.

7. PUBLIC PARTICIPATION PROCESS (PPP)

The Public Participation Process (PPP) is an integral part of the EIA process. The objectives of PPP in an environmental process are to provide sufficient and accessible information to stakeholders in an objective manner to assist them to:

- Raise issues of concern and suggestions for enhanced benefits;
- Verify that their issues have been recorded and considered in the environmental investigations;
- Assist in commenting on feasible alternatives;
- Contribute relevant local information and knowledge to the environmental assessment; and,
- Comment on the findings of the environmental assessment.

The approach towards any PPP is dependent on the details of the project. Each project has a particular geographic and technical nature, and hence the PPP should be structured accordingly. Where possible, and within the required statutory frameworks, it is also desirable to structure such a process to address the process needs of I&APs.

7.1 Identification and Registration of I&APs

At the time of compiling this report, the database contained 50 stakeholders across a range of sectors and spheres of government, including:

- National Government;
- Provincial Government;
- Local Government;
- Landowners;
- Agriculture;
- Business and Industry (mining and commercial); and
- Environmental groups.

AECOM made an effort to ensure that individuals and/or organisations were identified from an institutional as well as a geographical point of view. Note that the I&AP database reflects all stakeholders for the project as a whole (i.e. for all allocated landfills to be licensed) within KwaZulu-Natal province. Refer to **Appendix A** for the I&AP Register.

7.2 Announcement of the Proposed Project

Various mechanisms were used to create public awareness of the proposed WML application for the existing Mbazwana landfill. An opportunity to participate in the EIA process and to register as an I&AP was announced as indicated below:

7.2.1 Media

Newspaper advertisements notifying the public about the environmental application and opportunities to participate in the EIA process for the proposed WML application for the existing Mbazwana landfill were placed in the following newspapers:

Table 7-1: Project Announcement Newspaper advertisements

Newspaper	Distribution	Language	Date
Zululand Observer	Local	English	11 September 2015
The Mercury	Regional	English	11 September 2015

Copies of the Newspaper Advertisements are included in **Appendix A**.

7.2.2 Notification Letter

A notification letter, including an invitation to participate, has been distributed via email to identified I&APs announcing the project and the opportunities for participation, as well as the availability of the DSR for review by the public. A copy of the notification letter is provided in **Appendix A**. Proof of notification will be provided with the FSR.

7.2.3 On-site Notices

Two (2) A2-sized site notices were erected at various public places in the project area on the 2nd September 2015. The site notices were written in English and were placed at the following places around the affected area:

Table 7-2: Site Notice Locations

Site Notice No	Location
1	Mbazwana Landfill Entrance Fence
2	uMhlabuyalingana Local Municipality Offices, Manguzi

Copies and photographs of the site notices are provided in **Appendix A**.

7.3 Dissemination of Information

Information was disseminated to registered I&APs primarily by means of a Background Information Document (BID) and Notification letters. Issues raised and comments received from I&APs were integrated into the DBAR.

7.3.1 Background Information Document

The BID has been useful in providing background information to the public on the proposed waste licence application for the existing Mbazwana landfill. Furthermore, it provided information on the processes that have been followed and the contact details of the PPP Consultant. The BID was distributed to all registered I&APs. A copy of the BID is provided in **Appendix A**.

7.3.2 Draft Scoping Report Review Period

The DSR will be available for a thirty (30) calendar day review period to registered I&APs from 04 December 2015 to 25 January 2016 (excluding public holidays and the period from 15 December to 05 January). The DSR will be available at the following venues:

Table 7-3: Venues for Draft Scoping Report

Venue	Address
uMhlabuyalingana Local Municipality Offices: Manguzi	R22 Main Road, 01 Manguzi, Manguzi
Mbazwana Library & Depot	Unnamed road 200 metres east of the Sodwana Main Road (a.k.a. A1108 Road) traffic circle

Electronic copies of the DSR can be downloaded from www.deawaste2015.co.za.

7.4 Comment and Response Report

All issues and concerns raised by I&APs during the EIA process, will be recorded and responded too in the Comments and Responses Report (CRR) which will form part of the FSR. No comments have been received to date.

7.5 Final Scoping Report

Once the review period on the DSR has concluded, the report will be updated to a FSR together with the CRR. The FSR will then be submitted to the KZN EDTEA for their approval.

8. DESCRIPTION OF POTENTIAL ENVIRONMENTAL IMPACTS

8.1 General

The purpose of this section is to provide a description of the environmental issues and anticipated impacts as required by Appendix 2 of the EIA Regulations (2014). This enables the EIA Report to be clearly focused. It also provides a framework for the impact assessment that the landfill will have during operation. The following environmental impacts have been identified and will be investigated during the EIA phase of the process.

8.1.1 Planning, Design and Construction Phase

As this application is for the operation of the existing illegal Mbazwana landfill site no impacts are associated with the planning, design and construction phase.

8.1.2 Operational Phase

The impacts anticipated during the operation of the existing Mbazwana Landfill are indicated in Table 8-1.

Table 8-1: Anticipated impacts during operation

Potential Negative Impacts	Potential Positive Impact
<ul style="list-style-type: none"> • Increased traffic • Increased emissions from vehicles • Increased noise on site • Health and safety risks on site • Night-time and / or weekend fly tipping • Landfill gas generation 	<ul style="list-style-type: none"> • Increase in long term employment opportunities • Increase in local business - direct i.e. contractors • Increase in local businesses - indirect i.e. vehicle repairs • Increased local supplier income from materials and services required once the landfill is licensed. • Decrease in wind-blown litter • Decrease in soil and water contamination due to liner and stormwater management implementation. • Decrease in nuisance impacts (dust, odour)

8.1.3 Decommissioning and Closure Phase

The capacity of the landfill (within the existing fenced area) will be determined during the EIA Phase. This represents the spatial limit of the landfill. Within the boundaries of the site, any area that requires closure (such as a consolidated waste stockpile), will be assessed during the EIA Phase.

Should the municipality consider expanding the existing footprint, then the municipality will need to conduct a separate feasibility study to determine future disposal needs of the municipality and the suitability of the site for expansion or whether the better option will be to close the site and establish a new facility at a new site.

9. PLAN OF STUDY FOR EIA

9.1 Introduction to the EIA Phase

A Plan of Study for the EIA has been prepared according to the process described in the EIA Regulations (2014) promulgated in terms of Section 24(5) of the NEMA, to provide the CA with adequate information to obtain authorisation, and proceed with the proposed activity.

The Plan of Study for EIA includes a description of the environmental issues that have been identified during the Scoping phase and which will require further investigation and assessment.

9.2 EIA Phase

During the EIA phase, the site will be classified according to the Waste Classification and Management Regulations promulgated in August 2013, as well as the DWS Minimum Requirements for Waste Disposal by Landfill. This will determine the level of detail required in the lining or capping designs of the various facilities, either during operations or for closure.

The landfill will be assessed in terms of the current impact on the environment and the nature of the status of the landfill (application for operations). The impacts assessed will cover operations, closure and decommissioning, as the site already exists. At present, it is not anticipated that specialist studies are required to be conducted in support of the EIA Process. The main reasons being that:

- The project entails the licensing of an existing operational landfill site;
- The licensing process would not entail extending the existing landfill beyond its existing footprint;
- The location of the existing landfill in relation to the nearest human settlement / town;
- The location of the landfill within a non-endangered environment; and,
- The semi-arid to arid conditions of the geographical location of the existing landfill.

During the EIA phase, a Draft EIA report will be compiled, containing the following information:

- A description of the EAP that prepared the report;
- A detailed description of the proposed activity;
- A description of the need and desirability of the project and details of the alternatives that were investigated;
- A description of the environment that may be affected;
- A description of the PPP that was undertaken;
- Findings, recommendations and copies of specialist studies, if applicable;
- An indication of the method used to identify impact significance;
- An assessment of specific information required by the competent authority;
- A comparative assessment of all alternatives, where applicable;
- An assessment of each potentially significant impact;
- A description of any assumptions, uncertainties and gaps in knowledge;
- An opinion on whether the activity should be authorised or not and, if it should be authorised, under what conditions;
- An Environmental Impact Statement; and,
- A draft Environmental Management Programme (EMPr) for the full lifecycle of the Project.

9.3 Impact Assessment Methodology

The impacts identified and described in Chapter 8, will be assessed using the methodology described below.

9.3.1 Impact Assessment Criteria

The criteria used for the assessment of potential impacts are described in **Table 9-1**.

Table 9-1: Impact Assessment Criteria

Criteria	Description
Nature	Includes a description of what causes the effect, what will be affected and how it will be affected.
Extent	Physical and spatial scale of the impact.
Duration	Lifetime of the impact is measured in relation to the lifetime of the landfill.
Intensity	Examining whether the impact is destructive or benign, whether it destroys the impacted environment, alters its functioning, or slightly alters the environment.
Probability	This describes the likelihood of the impacts actually occurring. The impact may occur for any length of time during the lifecycle of the activity, and not at any given time.
Status	Description of the impact as positive, negative or neutral, and direct or indirect.
Significance	Synthesis of the characteristics described above and assessed as low, medium or high. Distinction will be made for the significance rating without the implementation of mitigation measures and with the implementation of mitigation measures.

Extent

The physical and spatial scale of the impact is classified below.

Table 9-2: Description of Extent Criteria

Description	Explanation	Scoring
Footprint	Impacted area extends only as far as the activity, such as footprint occurring within the total site area.	1
Site	Impact could affect the whole, or a significant portion of the site.	2
Regional	Impact could affect the area around the site including neighbouring farms, transport routes and adjoining towns.	3
National	Impact could have an effect that expands throughout the country (South Africa).	4
International	Impact has international ramifications that go beyond the boundaries of South Africa	5

Duration

The lifetime of the impact is measured in relation to the lifetime of the proposed operation of the existing Mbazwana landfill.

Table 9-3: Description of Duration Criteria

Description	Explanation	Scoring
Short term	Impact will either disappear with mitigation or will be mitigated through a natural process in a period shorter than any of the development phases.	1
Short to medium term	Impact will be relevant through to the end of the construction phase.	2
Medium term	Impact will last up to the end of the development phases, where after it will be entirely negated.	3
Long term	Impact will continue or last for the entire lifetime of the development, but will be mitigated by direct human action or by natural processes thereafter.	4
Permanent	The only impact class that is non-transitory. Mitigation by man or natural process will not occur in such a way or time span that the impact can be considered transient.	5

Intensity

The assessment of the intensity of the impact will be measured using the criteria listed in the following table.

Table 9-4: Description of Intensity Criteria

Description	Explanation	Scoring
Low	Impact alters the affected environment in such a way that the natural processes or functions are not affected.	2
Low-Medium	Impact alters the affected environment in such a way that the natural processes or functions are slightly affected.	4
Medium	Affected environment is altered, but functions and processes continue, albeit in a modified way.	6
Medium-High	Affected environment is altered, and the functions and processes are modified immensely.	8
High	Function or process of the affected environment is disturbed to the extent where the function or process temporarily or permanently ceases.	10

Probability

Probability describes the likelihood of the impact(s) occurring for any length of time during the lifecycle of the activity, and not at any given time. The following table shows the classes.

Table 9-5: Description of Probability Criteria

Description	Explanation	Scoring
Improbable	Possibility of the impact occurring is none, due either to the circumstances, design or experience. The chance of this impact occurring is thus zero (0%).	1
Possible	Possibility of the impact occurring is very low, either due to the circumstances, design or experience. The chances of this impact occurring is defined as 25%.	2
Likely	There is a possibility that the impact will occur to the extent that provisions must therefore be made. The chances of this impact occurring is defined as 50%.	3
Highly likely	It is most likely that the impacts will occur at some stage of the Development. Plans must be drawn up before carrying out the activity. The chances of this impact occurring is defined as 75%.	4
Definite	Impact will take place regardless of any prevention plans, and only mitigation actions or contingency plans to contain the effect can be relied upon. The chance of this impact occurring is defined as 100%.	5

Confidence

The level of knowledge or information that the EAP or a specialist had in their judgement is rated as shown in the following table. Note that this criterion is not given a numerical value.

Table 9-6: Description of Confidence Criteria

Description	Explanation
Low	Judgement is based on intuition and not on knowledge or information.
Medium	Judgement is based on common sense and general knowledge.
High	Judgement is based on scientific and/or proven information.

Reversibility

Reversibility is the ability of the affected environment to recover from the impact, with or without mitigation. Note that this criterion is not given a numerical value.

Table 9-7: Description of Reversibility Criteria

Description	Explanation
Yes	The affected environment will be able to recover from the impact.
No	The affected environment will be unable to recover from the impact that is permanently modified.

Replaceability

Replaceability is an indication of the scarcity of the specific set of parameters that make up the affected environment. That is, if lost can the affected environment be (a) recreated, or (b) is it a common set of characteristics and thus if lost is not considered a significant loss. Note that this criterion is not given a numerical value.

Table 9-8: Description of Replaceability Criteria

Description	Explanation
Yes	Affected environment is replaceable, that is, an irreplaceable resource is not damaged, or the resource is not irreplaceable (not scarce).
No	Affected environment is irreplaceable.

Level of Significance

Based on the above criteria, the significance of issues will be determined using the following formula:

$\text{Significance} = (\text{Extent} + \text{Duration} + \text{Intensity}) \times \text{Probability}$
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This is the importance of the impact in terms of physical extent and time scale, and is rated as follows:

Table 9-9: Impact Assessment Significant Rating

Significance	Description	Scoring
No Impact	There is no impact	0 – 10
Low	Impacts are less important. Some mitigation is required to reduce the negative impacts.	11 – 30
Medium	Impacts are important and require attention. Mitigation is required to reduce the negative impacts.	31 – 60
High	Impacts are of high importance. Mitigation is essential to reduce the negative impacts.	61 – 89
Fatal Flaw	Impacts present a fatal flaw, and alternatives must be considered	90 – 100

9.4 Environmental Management Programme

A Draft EMPr will be included as part of the draft EIA report which will be made available for public review; after which, it will be finalised and submitted as part of the final EIA Report to the KZN EDTEA. The EMPr outlines the impacts and mitigation measures for the operation and maintenance; and decommissioning phases of the Project. The EMPr will comprise:

- Summary of Impacts: The predicted negative environmental impacts for which mitigation is required, and positive impacts requiring enhancement.
- Description of mitigation measures: The EMPr identifies feasible and cost-effective mitigation measures to reduce significant negative environmental impacts to acceptable and legal levels. Mitigation measures are described in detail and will be accompanied by designs, equipment descriptions, and operating

procedures, where appropriate, as well as descriptions of technical aspects of implementing the mitigation measures.

- Description of monitoring programme: The monitoring programme indicates the linkages between impacts, indicators to be measured, measurement methods and definition of thresholds that will signal the need for corrective actions.
- Emergency Action Plan: The identification of possible accidents during the construction and operation phase of the project, with measures on how they will be prevented and/or managed.
- Institutional arrangements depict and define the responsibilities for mitigation and monitoring actions.
- Legal enforceability: The key legal considerations with respect to the EMP are:
 - Legal framework for environmental protection.
 - Legal basis for mitigation.
 - Implementation schedule and reporting procedures that specify the timing, frequency and duration of the mitigation measures.
 - Description of requirements for record keeping, reporting, review, auditing and updating the EMP.
 - Description of the on-going PPP process to be undertaken during the operation of the Mbazwana landfill by means of a Landfill Monitoring Committee.

9.5 Draft EIR Availability and Public Review

Subsequent to the approval of the FSR, a notification letter will be distributed to all registered I&APs informing them of the approval of the FSR and the availability of the draft EIR. The draft EIR and EMP are made available to the public for comment. All registered I&APs will be notified of the availability of the report for review and comment for a period of 30 days (as per 2014 EIA regulations).

The draft EIR will be made available at the same public venues used during the Scoping Phase. Electronic copies can be downloaded from www.deawaste2015.co.za.

9.6 Final Environmental Impact Report

Following the review period, the draft EIR will be updated with comments received from the public to produce a final EIR. The final EIR will be submitted to the KZN EDTEA for consideration and decision-making.

9.7 Decision-making Phase

Once the WML (positive or negative) has been issued, all I&APs will be notified of the decision and have the opportunity to appeal the decision should they not agree with the authorisation issued or any conditions of authorisation.

10. CONCLUSION

The licensing of the unlicensed Mbazwana landfill is in accordance with an initiative driven by the DEA to ensure the legal compliance of all municipal landfills, which in turn ensures appropriate and effective environmental management of these sites. The S&EIR application process is currently in the Scoping Phase, and its main purpose is to identify and investigate issues related to the proposed Project and list potentially significant impacts that require further assessment in the EIA Phase.

This DSR contains issues and impacts identified by the project team and during consultation with I&APs and other key stakeholders. The plan of study for the remainder of the EIA process is also indicated in this DSR. This DSR is currently available for public comment over a period of 30 days to provide I&APs with an opportunity to raise issues about the information presented in the report and for them to raise any other issues related to the proposed Project.

Comments received during the public review period will be incorporated into a Final Scoping Report, to be submitted to the KZN EDTEA for their approval, after which the EIA Phase of the S&EIR will commence.

11. REFERENCES

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