

**Head Office:** 546 16<sup>th</sup> Road, Constantia Park,  
Midrand, 1685

PO Box 4077, Halfway House, Midrand 1685

Tel: +27 11 312 9765 Fax: +27 11 312 9768/ +27 86  
219 8717

**Eastern Cape:** Office 1, 3 Suffolk Road, Berea,  
East London, 5247

Tel: +27 43 721 0178 Fax: +27 86 558 7022

**Email:** [info@kimopax.com](mailto:info@kimopax.com)

**Website:** [www.kimopax.com](http://www.kimopax.com)

**DRAFT BASIC ASSESSMENT REPORT FOR THE  
CLOSURE OF ST. LUCIA WASTE DISPOSAL SITE  
WASTE LICENCE APPLICATION ON ST. LUCIA LANDS  
FARM NO. 00013702 REMAINDER OF ERF 321.  
DC27/WML/0004/2014:  
KZN/WASTE/0000208/2014**

F.M005.1.3/Rev00

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Directors and Management: ST Netshiozwi, MS Masoga

<b>Project no</b>	<b>Report no</b>	<b>Date</b>	<b>Status</b>
KIMP2014/001	KIM-ENV-0814-029	September 2014	Draft

**DRAFT BASIC ASSESSMENT REPORT FOR THE CLOSURE OF ST. LUCIA WASTE DISPOSAL SITE  
WASTE LICENCE APPLICATION ON ST. LUCIA LANDS FARM NO. 00013702 REMAINDER OF ERF  
321.MTU BATUBA LOCAL MUNICIPALITY,  
KWAZULU-NATAL PROVINCE**

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**September 2014**

**Conducted on behalf of:**

Municipal Infrastructure Service Agent (MISA)

Letaba House, Riverside Office Park, 1303 Heuwel Avenue, Centurion, 0046

**Compiled by:**

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Thabelo Matshisevhe

**Reviewed by:**

---

S.T. Netshiozwi (Pr.Sci Nat) & Charles Chigurah

**Project team:**

Simon Netshiozwi

Charles Chigurah

Thabelo Matshisevhe

Hulisani Luvhengo

Thanzi Ramalivhana

**REPORT DISTRIBUTION LIST**

<b>Name</b>	<b>Institution</b>
Mr A Starkey	Department of Water Affairs
Mr Musa Mntambo	Ezemvelo KZN Wildlife
Lindi M	Amafa
Mr Jeffrey Zikhali	Department of Agriculture, Forestry and Fisheries
Mr Simphiwe S Nkosi	Department of Transport
Mr S. R Ntuli	Mtubatuba Local Municipality
Mr G Ndaba	Umakhanyakude District Municipality

## ABBREVIATIONS

BAR:	Basic Assessment Report
Bsc Hons:	Bachelor of Science Honours
Bsc:	Bachelor of Science
EAP:	Environmental Assessment Practitioner
EIA:	Environmental Impact Assessment
EMF:	Environmental Management Framework
I&APs:	Interested and Affected Parties
IDP:	Integrated Development Plan
IEP:	Integrated Environmental Plan
IWMP:	Integrated Waste Management Plan
Msc:	Master of Science
NEMA:	National Environmental Management Act
PPP:	Public Participation Process
SDF:	Spatial Development Framework
KZN DAEA:	KwaZulu Natal Department of Agriculture and Environmental Affairs

## **EXECUTIVE SUMMARY**

The Municipal Infrastructure Support Agent (MISA) has embarked on a process to license all unauthorised disposal sites for either closure or continued operation in terms of the NEM: Waste Act. St. Lucia Waste Disposal Site (WDS) within Mtubatuba Local Municipality was identified as one of the sites that needed to be licenced for closure and rehabilitated.

Also contained in this document is a brief overview of the activity and site specific information (location, topography, surrounds, vegetation, etc.). The latter part of the document contains an environmental management framework that includes a description of activities on the site, an identification of environmental aspects, EMP for the effective mitigation of identified environmental impacts associated with the activity and closure end-use.

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## agriculture & environmental affairs

Department:  
Agriculture  
& Environmental Affairs  
**PROVINCE OF KWAZULU-NATAL**

(For official use only)

EIA File Reference Number:

DC

NEAS Reference Number:

KZN/EIA/

Waste Management Licence Number:

(if applicable)

Date Received:

### **BASIC ASSESSMENT REPORT**

**Submitted in terms of the Environmental Impact Assessment Regulations, 2010 promulgated in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998)**

**This template may be used for the following applications:**

- **Environmental Authorization** subject to basic assessment for an activity that is listed in Listing Notices 1 or 3, 2010 (Government Notices No. R 544 or No. R 546 dated 18 June 2010);  
or
- **Waste Management Licence** for an activity that is listed in terms of section 20(b) of the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008) for which a basic assessment process as stipulated in the EIA Regulations must be conducted as part of the application (refer to the schedule of waste management activities in Category A of Government Notice No. 718 dated 03 July 2009).



**Kindly note that:**

1. This **basic assessment report** meets the requirements of the EIA Regulations, 2010 and is meant to streamline applications. This report is the format prescribed by the KZN Department of Agriculture & Environmental Affairs. Please make sure that this is the latest version.
2. The report must be typed within the spaces provided in the form. The size of the spaces provided is not indicative of the amount of information to be provided. The report is in the form of a table that can extend itself as each space is filled with text.
3. Where required, place a cross in the box you select.
4. An incomplete report will be returned to the applicant for revision.
5. The use of “not applicable” in the report must be done with circumspection because if it is used in respect of material information that is required by the competent authority for assessing the application, it will result in the rejection of the application as provided for in the regulations.
6. No faxed or e-mailed reports will be accepted.
7. The report must be compiled by an independent environmental assessment practitioner (“EAP”).
8. Unless protected by law, all information in the report will become public information on receipt by the competent authority. Any interested and affected party should be provided with the information contained in this report on request, during any stage of the application process.
9. The KZN Department of Agriculture & Environmental Affairs may require that for specified types of activities in defined situations only parts of this report need to be completed.
10. The EAP must submit this basic assessment report for comment to all relevant State departments that administer a law relating to a matter affecting the environment. This provision is in accordance with Section 24 O (2) of the National Environmental Management Act 1998 (Act 107 of 1998) and such comments must be submitted within 40 days of such a request.
11. **Please note that this report must be handed in or posted to the District Office of the KZN Department of Agriculture & Environmental Affairs to which the application has been allocated (please refer to the details provided in the letter of acknowledgement for this application).**

DEPARTMENTAL REFERENCE NUMBER(S)

File reference number (EIA):	<b>DC27/WML/0004/2014</b>
File reference number (Waste Management Licence):	<b>KZN/WASTE/0000208/2014</b>

**SECTION A: DETAILS OF THE ENVIRONMENTAL ASSESSMENT PRACTITIONER AND SPECIALISTS**

**Name and contact details of Environmental Assessment Practitioner (EAP)**

Name and contact details of the EAP who prepared this report:

Business name of EAP:	<b>Kimopax (Pty) Ltd</b>		
Physical address:	<b>546 Constantia Park, Midrand, Gauteng</b>		
Postal address:	<b>P. O. Box 4077 Halfway House</b>		
Postal code:	<b>1685</b>	Cell:	<b>079 062 6318</b>
Telephone:	<b>011 312 9765</b>	Fax:	<b>086 645 2237</b>
E-mail:	<a href="mailto:charles@ugwa.co.za"><b>charles@ugwa.co.za</b></a>		

## Names and expertise of representatives of the EAP

Names and details of the expertise of each representative of the EAP involved in the preparation of this report:

Name of representative of the EAP	Education qualifications	Professional affiliations	Experience at environmental assessments (years)
<b>Charles Chigurah</b>	<b>BSc Hons Environmental Management; PGD Water Supply and Sanitation)</b>	<b>IAIAsa</b>	<b>8 years</b>
<b>Thabelo Matshisevhe</b>	<b>Bsc Hons Environmental Management</b>		<b>3 Months</b>

## Section B: Activity information

### PROJECT TITLE

Describe the project title as provided on the application form for environmental authorization:

Application for the waste management licence for closure of St. Lucia Waste disposal site.

### PROJECT DESCRIPTION

Provide a detailed description of the project:

### **Activity Description**

The waste disposal site is proposed to be closed and rehabilitated due to the following issues that were mentioned in the Notice of Intention to Issue a Compliance Notice in Terms of Section 31L of the NEMA Act issued to the Municipality in 2012, that the Mtubatuba Local Municipality has:

- caused significant pollution and environmental degradation of the vegetation, ecosystem functioning and most likely, the groundwater of iSimangaliso Nature Reserve;
- failed to give effect to the constitutional responsibility of protecting the right of the local inhabitants to an environment that is not harmful to their health or well-being by preventing pollution and ecological degradation.

### **Site Location**

St. Lucia waste disposal site is located on land owned by Mtubatuba Local Municipality. The site is located adjacent to the R618 road. It is located on the Cape Vidal Road in the Greater St. Lucia wetland development and has been declared heritage site on Natal Conservation services land. It is situated on St. Lucia lands farm, number 00013702 Remainder of Erf 321.

### **Zonation of the land**

The Waste disposal site has been zoned as service industrial zone.

### **Land Ownership**

St. Lucia waste disposal site is located on land owned by Mtubatuba Local Municipality.

### **Waste site characteristics and current operations**

The waste disposal site is approximately 2 ha. It is classified as class B, according to the National Environmental Management: Waste Act, 2008 Act 59 of 2008, due to the quantity and quality of waste received. St. Lucia waste disposal site is not licenced nor operated in accordance with accepted waste management norms. The site is not fenced and has poor access control. Apart from the guard room, there is no other infrastructure present.

The volume of waste received is approximately 60 m<sup>3</sup> per day. Waste is disposed on the surface of the soil and is not compacted or covered on a daily basis. Furthermore, no monitoring of ground water and potential landfill gas takes place. Waste is pushed in a U-shaped stockpile and some coverage has taken place in the past. The area where waste was covered with soil is now overgrown with pioneer species.

Uncovered waste and associated wind-blown litter has a negative aesthetic impact on the site and

surroundings. Evidence also suggests that burning of waste takes place at the site. This practice could pose a safety risk to road users passing on Cape Vidal road to Ezemvelo Wildlife and Isimangaliso Nature Reserve.

### **Closure activities**

The waste disposal site needs to be lawfully closed and rehabilitated due to improper management.

The following steps and measures need to be implemented at the time of site closure:

#### **1. Slope and Grading**

- The plateau of the site must be graded to 2- 3% slope and the sides to a minimum of 3:1 slopes; however the final shape must be approved by the regulating authority.

#### **2. Vegetation cover**

- Once all the waste has been removed, the site must be seeded with a mixture of grasses and allowed to propagate to form a health grass community on site.
- The grassing and vegetation should commence immediately after the removal of waste in order to prevent soil erosion.

#### **3. Site Access**

- It is recommended that when the site is to be closed, it should be fenced off and isolated and that no further development or dumping of additional waste of any kind be carried out.
- Signage in at least 3 applicable languages in the region must be placed at the fences and entrance of the site indicating that the site is out of bounds for public, closed and that no disposal or dumping is allowed on this site.

## **ACTIVITY DESCRIPTION**

Describe each listed activity in Listing Notice 1 (GNR 544, 18 June 2010), Listing Notice 3 (GNR 546, 18 June 2010) or Category A of GN 921, 29 November 2013 (Waste Management Activities) which is being applied for as per the project description:

<b>Government Notice</b>	<b>Listed Activity</b>	<b>Description</b>
Government Notice No. GN 921 29 November 2013	(A)13	The expansion of a waste management facility listed in Category A or B of this schedule

		which does not trigger an additional waste management activity in terms of this schedule
--	--	------------------------------------------------------------------------------------------

## FEASIBLE AND REASONABLE ALTERNATIVES

“**Alternatives**”, in relation to a proposed activity, means different of meeting the general purpose and requirements of the activity, which may include alternatives to—

- (a) the property on which or location where it is proposed to undertake the activity;
- (b) the type of activity to be undertaken;
- (c) the design or layout of the activity;
- (d) the technology to be used in the activity;
- (e) the operational aspects of the activity; and
- (f) the option of not implementing the activity.

Describe alternatives that are considered in this report. Alternatives should include a consideration of all possible means by which the purpose and need of the proposed activity could be accomplished in the specific instance taking account of the interest of the applicant in the activity. The no-go alternative must in all cases be included in the assessment phase as the baseline against which the impacts of the other alternatives are assessed. The determination of whether site or activity (including different processes etc.) or both is appropriate needs to be informed by the specific circumstances of the activity and its environment. After receipt of this report the competent authority may also request the applicant to assess additional alternatives that could possibly accomplish the purpose and need of the proposed activity if it is clear that realistic alternatives have not been considered to a reasonable extent.

### **Description of alternatives considered in this application:**

At this stage the ecological risk of the site is not fully known, and it is not possible to provide alternative measures for remediation of the waste disposal site. The waste disposal site needs to be lawfully closed and rehabilitated. The alternatives for remediation of the waste disposal site are as follows:

#### **Preferred Alternative**

1. Removal of the waste from the waste disposal site to Utingulu Landfill Site in Richards Bay
  - Though we have not got any Geohydrological studies that were done on the site, it was assumed that the ground water may be contaminated because the site is very close to water bodies such as estuary and wetland.

#### **Other Alternatives**

1. Cell Construction
  - There must be a design for the optimal position, shape, size and height of the final closed waste dump, where all wastes will be buried.
  - This will not be an option if the groundwater level is high as this will result in the contamination of groundwater.
2. The intermediate operation of the facility, subject to certain conditions, while transferring waste to the transfer station which is built adjacent to Khula village.
  - Conditions must be prescribed for operating the waste disposal site preliminary to the final closure thereof. Minimum requirements must be adhered to for the intermediate operations of the site
3. The no-go alternative

### **ACTIVITY POSITION**

Indicate the position of the activity using the latitude and longitude of the centre point of the site for each alternative site. The co-ordinates should be in degrees, minutes and seconds. List alternative sites were applicable.

**Latitude (S):**

**Longitude (E):**

**Alternative:**

---

Alternative S1<sup>1</sup> (preferred or only site alternative)

28 <sup>0</sup>	21'	51"	32 <sup>0</sup>	24'	57"
28 <sup>0</sup>	21'	56"	32 <sup>0</sup>	24'	54"
28 <sup>0</sup>	21'	54"	32 <sup>0</sup>	24'	52"
28 <sup>0</sup>	21'	47"	32 <sup>0</sup>	24'	50"

Alternative S2 (if any)

Alternative S3 (if any)

Alternative S4 (if any)

**In the case of linear activities:**

**Alternative:**

**Latitude (S):**

**Longitude (E):**

Alternative S1 (preferred or only route alternative)

- Starting point of the activity
- Middle point of the activity
- End point of the activity


Alternative S2 (if any)

- Starting point of the activity
- Middle point of the activity
- End point of the activity


Alternative S3 (if any)

- Starting point of the activity
- Middle point of the activity
- End point of the activity


For route alternatives that are longer than 500m, please provide an addendum with co-ordinates taken every 500m along the route for each alternative alignment.

**Physical size of the activity**

Indicate the physical size of the preferred activity/technology as well as alternative activities/technologies (footprints):

The size of the waste disposal site that requires closure and rehabilitation is approximately 2 ha.

<sup>1</sup> "Alternative S." refer to site alternatives.



**Alternative:**

Alternative A1<sup>2</sup> (preferred activity alternative)

Alternative A2 (if any)

Alternative A3 (if any)

or, for linear activities:

**Alternative:**

Alternative A1 (preferred activity alternative)

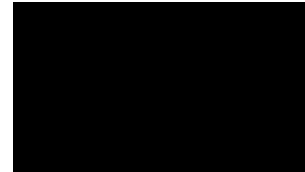
Alternative A2 (if any)

Alternative A3 (if any)

**Size of the activity:**

2 ha
m <sup>2</sup>
m <sup>2</sup>

**Length of the activity:**



Indicate the size of the alternative sites or servitudes (within which the above footprints will occur):

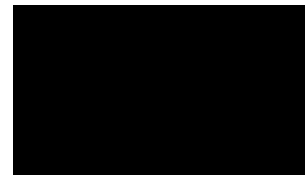
**Alternative:**

Alternative A1 (preferred activity alternative)

Alternative A2 (if any)

Alternative A3 (if any)

**Size of the site/servitude:**



**Site Access**

Does ready access to the site exist?

YES	

If NO, what is the distance over which a new access road will be built

Describe the type of access road planned:

No new access roads will be constructed.
------------------------------------------

Include the position of the access road on the site plan and required map, as well as an indication of the road in relation to the site.

**SITE OR ROUTE PLAN**

<sup>2</sup> "Alternative A." refers to activity, process, technology or other alternatives.

See Appendix A, Locality map for St. Lucia waste disposal site.

A detailed site or route plan(s) must be prepared for each alternative site or alternative activity. It must be attached as Appendix A to this report.

The site or route plans must indicate the following:

- The scale of the plan which must be at least a scale of 1:500;
- The property boundaries and numbers/ erf/ farm numbers of all adjoining properties of the site;
- The current land use as well as the land use zoning of each of the properties adjoining the site or sites;
- The exact position of each element of the application as well as any other structures on the site;
- The position of services, including electricity supply cables (indicate above or underground), water supply pipelines, boreholes, street lights, sewage pipelines, storm water infrastructure and telecommunication infrastructure;
- Walls and fencing including details of the height and construction material;
- Servitudes indicating the purpose of the servitude;
- Sensitive environmental elements within 100 metres of the site or sites including (but not limited thereto):
  - Rivers, streams, drainage lines or wetlands;
  - the 1:100 year flood line (where available or where it is required by DWA);
  - Ridges;
  - Cultural and historical features;
  - Areas with indigenous vegetation including protected plant species (even if it is degraded or infested with alien species);
- For gentle slopes the 1 metre contour intervals must be indicated on the plan and whenever the slope of the site exceeds 1:10, the 500mm contours must be indicated on the plan; and
- The positions from where photographs of the site were taken.

### **Site Photographs**

See Appendix B.

Colour photographs from the centre of the site must be taken in at least the eight major compass directions with a description of each photograph. Photographs must be attached under Appendix B to this report. It must be supplemented with additional photographs of relevant features on the site, if applicable.

**FACILITY ILLUSTRATION**

NOT APPPLICABLE.

A detailed illustration of the facility must be provided at a scale of 1:200 and attached to this report as Appendix C. The illustrations must be to scale and must represent a realistic image of the planned activity/ies.

**ACTIVITY MOTIVATION**

**Socio-economic value of the activity**

What is the expected capital value of the activity on completion?	To be determined
What is the expected yearly income that will be generated by or as a result of the activity?	To be determined
Will the activity contribute to service infrastructure?	YES
Is the activity a public amenity?	YES
How many new employment opportunities will be created in the development phase of the activity?	To be determined
What is the expected value of the employment opportunities during the development phase?	To be determined
What percentage of this will accrue to previously disadvantaged individuals?	Not determined
How many permanent new employment opportunities will be created during the operational phase of the activity?	To be considered
What is the expected current value of the employment opportunities during the first 10 years?	To be considered

What percentage of this will accrue to previously disadvantaged individuals?

To be considered

### **Need and desirability of the activity**

Motivate and explain the need and desirability of the activity (including demand for the activity):

The need for the project activity is:

- To ensure acceptability of the implementation of the proposed End-Use Plan.
- To rehabilitate the waste disposal site so as to ensure that the site is environmentally and publicly acceptable and suited to the implementation of the proposed End-Use.

The desirability of the project is vested in the need to:

- Manage waste more responsibly and lawfully within Mtubatuba Local Municipality
- Reduce the risks associated with uncontrolled waste disposal at St. Lucia.

Indicate any benefits that the activity will have for society in general:

**Safeguarding the public health**

The health risks associated with illegal dumping are significant. Areas used for open dumping may be easily accessible to people, especially children, who are vulnerable to the physical (protruding nails or sharp edges) and chemical (harmful fluids or dust) hazards posed by risks. Dump sites with scrap tires provide an ideal breeding ground for mosquitoes, which can multiply 100 times faster than normal in the warm stagnant water standing in scrap tire causing several illnesses. The key beneficial impact is the reduction of risk to water quality should the river flood, while the wind-blown litter will be eliminated.

Indicate any benefits that the activity will have for the local communities where the activity will be located:

**Job creation**

There will be few permanent jobs that will be created for the local communities and some temporary jobs by this activity.

**Aesthetic benefits**

A tree cap develops into a forest, whereas traditional waste disposal site develops into a grass-covered butte. The forest ambience created by this system may be beneficial to people who live adjacent to or drive past the waste disposal site. The trees intercept dust, provides a windbreak, create a natural noise barrier, screen the waste disposal site from view and provide a potential recreational area.

**Raw wood production**

Popular wood has a market as wood fibres, biomass fuel, livestock feed, paper pulp, dimensional lumber, furniture lumber and extruded particle wood products. Thus the trees can be harvested on a 6 to 14 year rotation and can be managed to vigorously regrow coppice from the cut stump. Consideration must be given, however to the temporary (2 to 3 years) reduction in transpiration following tree harvest.

**Habitat enhancement**

By interplanting shrubs and trees with hybrid poplars, or letting these plants move in naturally future mixed-species forest ecosystems can be created as habitat for a diverse wild-life community.

**Greenhouse gas reduction**

Atmospheric CO<sub>2</sub> is removed by plants and stored in wood, leaves, soil humus, roots and root exudates, thus creating the potential to receive greenhouse gas credits.

**Land application of urban solids**

Vegetative caps have the capacity to convert land-applied waste products into soil. Bio solids, lime stabilization solids, lawn wastes, organic biomass and street sweepings may be surface applied between tree rows.

**Applicable legislation, policies and/or guidelines**

List all legislation, policies and/or guidelines of any sphere of government that are relevant to the application as contemplated in the EIA regulations, if applicable:

Title of legislation, policy or guideline	Administering authority	Date
South Africa's Constitution, 1996 (Act 108 of 1996), including the Bill of Rights (Chapter 2, Section 24)	The State	1996
National Environmental Management Act, 1998 (No. 107 of 1998) (NEMA), including the NEMA Amendment Act, 2008 (No. 62 of 2008) <sup>1</sup>	National Government, and National Department of Environmental Affairs	1998 <sup>1</sup>
National Environmental	National Department of	2008

Management: Waste Act, 2008 (Act No. 59 of 2008) (NEM:WA)	Environmental Affairs	
KwaZulu-Natal Conservation Management Act, 1997, Section (84)(3)(a)	KwaZulu-Natal Department of Agriculture and Environmental Affairs	1997
List of waste management activities that have, or are likely to have a detrimental effect on the environment (GN. 921), 2013	National Department of Environmental Affairs	2013
National Waste Management Strategy, 2010	National Department of Environmental Affairs	2010
Waste Classification and Waste Management Regulations (GN 634), 2013	National Department of Environmental Affairs	2013
National Norms and Standards for Disposal of Waste to Landfill (GN 636), 2013	National Department of Environmental Affairs	2013
Waste Information Regulations (GN 625), 2012	National Department of Environmental Affairs	2012
Minimum requirements for waste disposal by landfill, 1998	Department of Water Affairs	1998
National Environment Management: Air Quality Act, 2004 (Act No. 39 of 2004) (NEM: AQA)	National Department of Environmental Affairs	2004
National Ambient Air Quality	National Department of	2009

Standards in Terms of Section 9(1)(a) and (b) of the National Environmental Management: Air Quality Act, 2004 (Act No. 39 of 2004) (Government Notice No. 1210, 24 December 2009)	Environmental Affairs	
The National Water Act, 1998 (Act No. 36 of 1998)	Department of Water Affairs	1998
Occupational Health & Safety Act, 1993 (Act No. 85 of 1993)	Department of Labour	1993
National Heritage Resources Act (Act 25 of 1999), Section 1 (c) I, ii, iii, iv, (d) (e).	South African Heritage Resources Agency	1999

**Waste, effluent, emission and noise management**

**Solid waste management**

Will the activity produce solid construction waste during the construction/initiation phase?

	NO
--	----

If yes, what estimated quantity will be produced per month?

How will the construction solid waste be disposed of? (describe)

No construction waste/rubble will be produced since the site will be closed and rehabilitated. The only construction will be to erect a fence and access control to prevent access to site

Where will the construction solid waste be disposed of? (provide details of landfill site)

The only construction will be to erect a fence and access control to prevent access to site

Will the activity produce solid waste during its closure phase?

YES	
-----	--

If yes, what estimated quantity will be produced per month?

$\pm 0.0001\text{m}^3$
------------------------

How will the solid waste be disposed of? (provide details of landfill site)

The waste will be combined with the municipal waste stream

Where will the solid waste be disposed if it does not feed into a municipal waste stream (describe)?

NOT APPLICABLE

If the solid waste (construction or operational phases) will not be disposed of in a registered landfill site or be taken up in a municipal waste stream, then the applicant should consult with the competent authority to determine the further requirements of the application.

Can any part of the solid waste be classified as hazardous in terms of the relevant legislation?

	NO
--	----

**If yes, contact the KZN Department of Agriculture & Environmental Affairs to obtain clarity regarding the process requirements for your application.**

Is the activity that is being applied for a solid waste handling or treatment facility?

	NO
--	----

**If yes, contact the KZN Department of Agriculture & Environmental Affairs to obtain clarity regarding the process requirements for your application.**

### Liquid effluent

Will the activity produce effluent, other than normal sewage, that will be disposed of in a municipal sewage system?

	NO
--	----

If yes, what estimated quantity will be produced per month?

--	--

Will the activity produce any effluent that will be treated and/or disposed of onsite?

	NO
--	----

**If yes, contact the KZN Department of Agriculture & Environmental Affairs to obtain clarity regarding the process requirements for your application.**

Will the activity produce effluent that will be treated and/or disposed of at another facility?

	NO
--	----

If yes, provide the particulars of the facility:

Facility name:

Contact

person:

--



Postal  
address:  
Postal code:  
Telephone:  
E-mail:

[Redacted]	
[Redacted]	Cell: [Redacted]
[Redacted]	Fax: [Redacted]

Describe the measures that will be taken to ensure the optimal reuse or recycling of waste water, if any:

There will not be waste water produced during closure and rehabilitation of the waste disposal site.

### Emissions into the atmosphere

Will the activity release emissions into the atmosphere?

YES	<input type="checkbox"/>
<input type="checkbox"/>	NO

If yes, is it controlled by any legislation of any sphere of government?

**If yes, contact the KZN Department of Agriculture & Environmental Affairs to obtain clarity regarding the process requirements for your application.**

If no, describe the emissions in terms of type and concentration:

The following emissions are expected at the waste disposal site:

- Undetermined potential of landfill gas (mainly carbon dioxide) to be generated.
- Dust emissions from the movement, deposition and covering of waste on-site, as well as dust generation from the surface of the waste disposal site due to wind and erosion;
- Vehicle exhausts emissions.

### Generation of noise

Will the activity generate noise?

YES	<input type="checkbox"/>
<input type="checkbox"/>	NO

If yes, is it controlled by any legislation of any sphere of government?

If yes, the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA.

If no, describe the noise in terms of type and level:

Noise may be generated by vehicles and earth-moving activities during the closure and rehabilitation phase of the proposed activity.

## WATER USE

Please indicate the source(s) of water that will be used for the activity by ticking the appropriate box (es):

municipal	<input checked="" type="checkbox"/>
-----------	-------------------------------------

If water is to be extracted from groundwater, river, stream, dam, lake or any other natural feature, please indicate the volume that will be extracted per month:

Does the activity require a water use permit from the Department of Water Affairs?

<input checked="" type="checkbox"/>
NO

If YES, please submit the necessary application to the Department of Water Affairs and attach proof thereof to this report.

## ENERGY EFFICIENCY

Describe the design measures, if any, that have been taken to ensure that the activity is energy efficient:

NOT APPLICABLE
----------------

Describe how alternative energy sources have been taken into account or been built into the design of the activity, if any:

No electricity will be used during the closure and rehabilitation of the site
-------------------------------------------------------------------------------

## SECTION C: SITE/ AREA/ PROPERTY DESCRIPTION

The St. Lucia waste disposal site is located approximately 5km north of St. Lucia town, at the left turn-off on Cape Vidal Road.

The waste disposal site is located on St. Lucia Lands managed by Mtubatuba Local Municipality, portion number 00013702 Remainder of Erf 321. Mtubatuba Local municipality manages the waste disposal site and is responsible for closing it together with the National Department of Environmental Affairs.


The waste disposal site is surrounded by a thicket forest and protected area Ezemvelo Wildlife and Isimangaliso Nature Reserve.

The land is zoned f service industrial zone.

The land belongs to St. Lucia Lands and is managed by Mtubatuba Local Municipality.

**Important notes:**

- For linear activities (pipelines, etc.) as well as activities that cover very large sites, it may be necessary to complete this section for each part of the site that has significantly different environment. In such cases please complete copies of Section C and indicate the area, which is covered by each copy No. on the Site Plan.

Section C Copy No.   
(e.g. A):

- Subsections 1 - 6 below must be completed for each alternative.

**GRADIENT OF THE SITE**

Indicate the general gradient of the site.

**Alternative S1:**

 1:50 – 

1:20

Alternative S2 (if any):

[Redacted]

Alternative S3 (if any):

[Redacted]

**Location in Landscape**

Indicate the landform(s) that best describes the site (Please cross the appropriate box).

Alternative S1 (preferred site):

[Redacted] Plain [Redacted]

Alternative S2 (if any):

[Redacted]

Alternative S3 (if any):

[Redacted]

**Groundwater, Soil and Geological stability of the site**

Has a specialist been consulted for the completion of this section?

[Redacted] NO

If YES, please complete the following:

Name of the specialist:

Qualification(s) of the specialist:

Postal address:

[Redacted]

Postal code:

Telephone:

Cell:

E-mail:

Fax:

Are there any rare or endangered flora or fauna species (including red data species) present on any of the alternative sites?

NO

If YES, specify and explain:

Are there any special or sensitive habitats or other natural features present on any of the alternative sites?

NO

If YES, specify and explain:

Are any further specialist studies recommended by the specialist?

NO

If YES, specify:

If YES, is such a report(s) attached in Appendix D?

NO

Signature of specialist:

Date:

Is the site(s) located on any of the following (cross the appropriate boxes)?

Alternative S1:

Alternative S2 (if any):

Alternative S3 (if any):

Shallow water table (less than 1.5m deep)

YES

Dolomite, sinkhole or doline areas

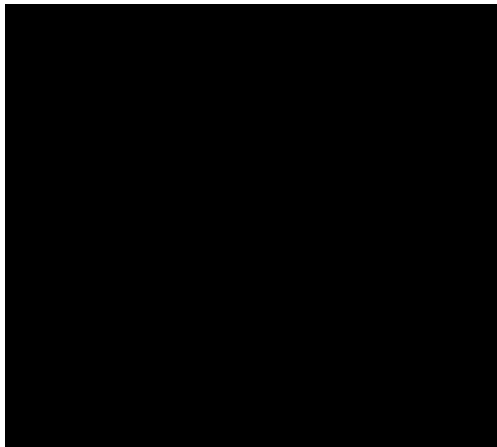
NO

Seasonally wet soils (often close to water bodies)

YES

Unstable rocky slopes or steep slopes with loose soil

NO


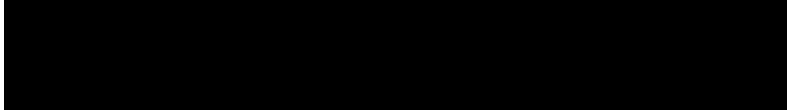
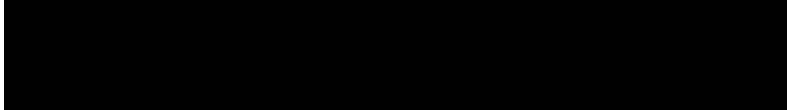
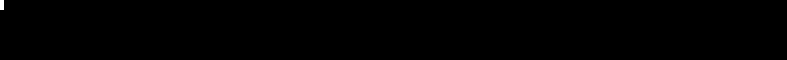
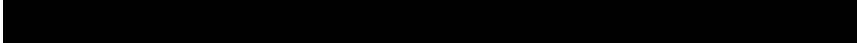
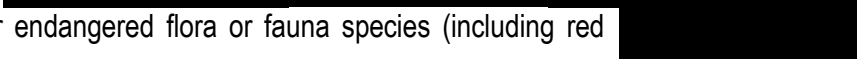
Dispersive soils (soils that dissolve in water)	<input type="checkbox"/>	NO	
Soils with high clay content (clay fraction more than 40%)	<input type="checkbox"/>	NO	
Any other unstable soil or geological feature	<input type="checkbox"/>	NO	
An area sensitive to erosion	<input type="checkbox"/>	YES	

If you are unsure about any of the above or if you are concerned that any of the above aspects may be an issue of concern in the application, an appropriate specialist should be appointed to assist in the completion of this section. (Information in respect of the above will often be available as part of the project information or at the planning sections of local authorities. Where it exists, the 1:50 000 scale Regional Geotechnical Maps prepared by the Council for Geo Science may also be consulted).

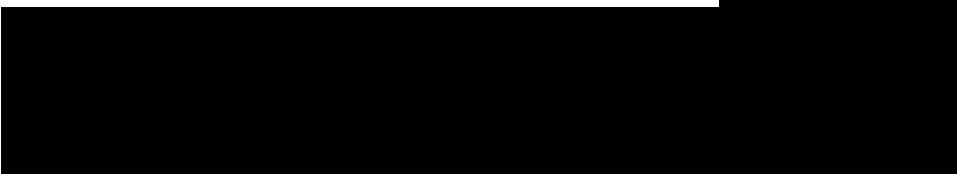
**Groundcover**

Has a specialist been consulted for the completion of this section?  NO

If YES, please complete the following:

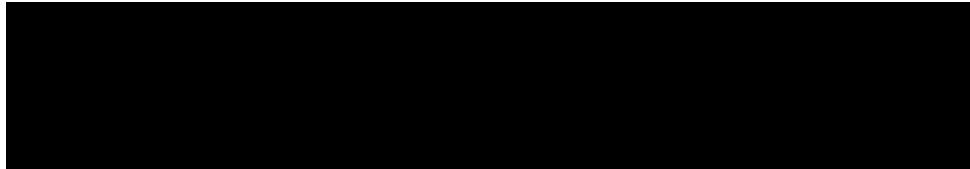
Name of the specialist:   
 Qualification(s) of the specialist:   
 Postal address:   
 Postal code:   
 Telephone:   
 E-mail: 

Are there any rare or endangered flora or fauna species (including red data species) present on any of the alternative sites?

If YES,  specify and explain:

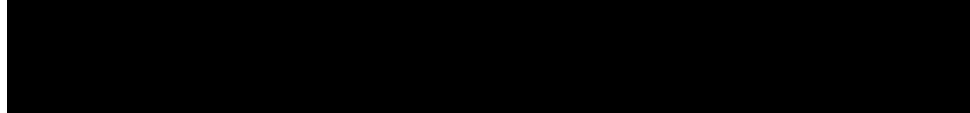
Are there any special or sensitive habitats or other natural features present on any of the alternative sites?

If YES, specify and explain:

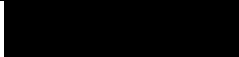


Are any further specialist studies recommended by the specialist?

If YES, specify:



If YES, is such a report(s) attached in Appendix D?



Signature of \_\_\_\_\_ specialist:

Date: \_\_\_\_\_

The location of all identified rare or endangered species or other elements should be accurately indicated on the site plan(s).

Natural veld - good condition



If any of the boxes marked with an "E" is ticked, please consult an appropriate specialist to assist in the completion of this section if the environmental assessment practitioner doesn't have the necessary expertise.

**Land use character of surrounding area**

Cross the land uses and/or prominent features that currently occur within a 500m radius of the site and give a description of how this influences the application or may be impacted upon by the application:

Land use character			Description
Natural area	YES		The site falls within Isimangaliso Nature Reserve
Low density residential	YES		
Medium density residential		NO	
High density residential		NO	
Informal residential		NO	

Retail commercial & warehousing		NO	
Light industrial		NO	
Medium industrial		NO	
Heavy industrial		NO	
Power station		NO	
Office/consulting room		NO	
Military or police base/station/compound		NO	
Spoil heap or slimes dam		NO	
Quarry, sand or borrow pit		NO	
Dam or reservoir		NO	
Hospital/medical centre		NO	
School/ crèche		NO	
Tertiary education facility		NO	
Church		NO	
Old age home		NO	
Sewage treatment plant		NO	
Train station or shunting yard		NO	
Railway line		NO	
Major road (4 lanes or more)		NO	
Airport		NO	
Harbour		NO	
Sport facilities		NO	
Golf course		NO	
Polo fields		NO	
Filling station		NO	
Landfill or waste treatment site		NO	
Plantation		NO	
Agriculture		NO	
River, stream or wetland	YES		The site is next to St Lucia Wetland and a river which joins the Indian ocean (St Lucia Estuary).
Nature conservation area	YES		The site is next to St Lucia Wetland and



			a river which joins the Indian ocean (St Lucia Estuary).
Mountain, hill or ridge		NO	
Museum		NO	
Historical building		NO	
Protected Area	YES		The waste disposal site falls within the UNESCO heritage site and also a protected nature reserve
Graveyard		NO	
Archaeological site		NO	
Other land uses (describe)		NO	

**Cultural/ Historical Features**

Are there any signs of culturally or historically significant elements, as defined in section 2 of the National Heritage Resources Act, 1999, (Act No. 25 of 1999), including archaeological or paleontological sites, on or within 20m of the site?

YES	
-----	--

If YES, contact a specialist recommended by AMAFA to conduct a heritage impact assessment. The heritage impact assessment must be attached as an appendix to this report.

Briefly explain the recommendations of the specialist:

No HIA was done, but the site is within a UNESCO Heritage Site
----------------------------------------------------------------

Will any building or structure older than \

	NO
--	----

60 years be affected in any way?

Is it necessary to apply for a permit in terms of the National Heritage Resources Act, 1999 (Act 25 of 1999)?

YES	
-----	--

If YES, please submit the necessary application to AMAFA and attach proof thereof to this report.

Section D: public participation

## ADVERTISEMENT

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 (of a size at least 60cm by 42cm; and must display the required information in lettering and in a format as may be determined by the competent authority) 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;
  - (ii) the occupiers of the site where the activity is or is to be undertaken or to any alternative site where the activity is to be undertaken;
  - (iii) owners and occupiers of land adjacent to the site where the activity is or is to be undertaken or to any alternative site where the activity is to be undertaken;
  - (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;
  - (v) The local and district municipality which has jurisdiction in the area;
  - (vi) any organ of state having jurisdiction in respect of any aspect of the activity (as identified in the application form for the environmental authorization of this project); and
  - (vii) any other party as required by the competent authority;
- (c) Placing an advertisement in—
  - (i) one local newspaper; or
  - (ii) any official Gazette that is published specifically for the purpose of providing public notice of applications or other submissions made in terms of these Regulations;
- (d) Placing an advertisement in at least one provincial newspaper or national newspaper, if the activity has or may have an impact that extends beyond the boundaries of the metropolitan or district municipality in which it is or will be undertaken: Provided that this paragraph need not be complied with if an advertisement has been placed in an official Gazette referred to in sub regulation 54(c) (ii); and

- (e) Using reasonable alternative methods, as agreed to by the competent authority, in those instances where a person desires of but unable to participate in the process due to—
  - (i) Illiteracy;
  - (ii) Disability; or
  - (iii) Any other disadvantage.

### **Content of advertisements and notices**

A notice board, advertisement or notices must:

- (a) indicate the details of the application which is subjected to public participation; and
- (b) state
  - (i) that an application for environmental authorization has been submitted to the KZN Department of Agriculture & Environmental Affairs in terms of the EIA Regulations, 2010;(ii)
  - (iii) a brief project description that includes the nature and location of the activity to which the application relates;
  - (iv) where further information on the application can be obtained; and
  - (iv) the manner in which and the person to whom representations in respect of the application may be made.

### **Placement of advertisements and notices**

Where the proposed activity may have impacts that extend beyond the municipal area where it is located, a notice must be placed in at least one provincial newspaper or national newspaper, indicating that an application will be submitted to the competent authority in terms of these regulations, the nature and location of the activity, where further information on the proposed activity can be obtained and the manner in which representations in respect of the application can be made, unless a notice has been placed in any Gazette that is published specifically for the purpose of providing notice to the public of applications made in terms of the EIA regulations.

Advertisements and notices must make provision for all alternatives.

### **Determination of appropriate process**

The EAP must ensure that the public participation process is according to that prescribed in regulation 54 of the EIA Regulations, 2010, but may deviate from the requirements of sub regulation 54(2) in the

manner agreed by the KZN Department of Agriculture & Environmental Affairs as appropriate for this application. Special attention should be given to the involvement of local community structures such as Ward Committees, ratepayers associations and traditional authorities where appropriate.

Please note that public concerns that emerge at a later stage that should have been addressed may cause the competent authority to withdraw any authorisation it may have issued if it becomes apparent that the public participation process was inadequate.

### Comments and response report

The practitioner must record all comments and respond to each comment of the public before this application is submitted. The comments and responses must be captured in a comments and response report as prescribed in the EIA regulations (regulation 57 in the EIA Regulations, 2010) and be attached as Appendix E to this report.

### Participation by District, Local and Traditional Authorities

District, local and traditional authorities (where applicable) are all key interested and affected parties in each application and no decision on any application will be made before the relevant local authority is provided with the opportunity to give input. The planning and the environmental sections of the local authority must be informed of this application and provided with an opportunity to comment.

Has any comment been received from the district municipality?  YES  NO

If "YES", briefly describe the feedback below (also attach any correspondence to and from this authority with regard to this application):

No comments were received

Has any comment been received from the local municipality?  YES  NO

If "YES", briefly describe the feedback below (also attach any correspondence to and from this authority with regard to this application):

The municipality greatly supports the initiative.

Has any comment been received from a traditional authority?  YES  NO

If "YES", briefly describe the feedback below (also attach any correspondence to and from this authority with regard to this application):

No comments has been received

**Consultation with Other Stakeholders**

Any stakeholder that has a direct interest in the site or property, such as servitude holders and service providers, should be informed of the application and be provided with the opportunity to comment.

Has any comment been received from stakeholders?

YES ████████

If "YES", briefly describe the feedback below (also attach copies of any correspondence to and from the stakeholders to this application):

They are totally against the closure of the waste disposal site.

**SECTION E: IMPACT ASSESSMENT**

PARAMETERS	DESCRIPTION
Extent	Refers to the physical or geographical size that is affected by the impact. It can be categorised into the following ranges: <ul style="list-style-type: none"> <li>• Onsite – Within specific site boundary (weight value – 1)</li> <li>• Local – Within municipal boundary (weight value – 2)</li> <li>• Regional – Outside municipal boundary (weight value – 3)</li> </ul>
Duration	Time span associated with impact: <ul style="list-style-type: none"> <li>• Short term – 1 Year or less (weight value – 1)</li> <li>• Medium term – 1-5 Years (weight value –2)</li> <li>• Long term – Longer than 5 Years (weight value – 3)</li> </ul>
Intensity and Reversibility	The severity of an impact on the receiving environment: <ul style="list-style-type: none"> <li>• Low – Natural and/or cultural processes continue in a modified way and is reversible (weight value – 1)</li> <li>• Medium – Natural and/or cultural processes stop and is partially reversible (weight value – 2)</li> <li>• High – Natural and/or cultural processes disturbed to an irreversible state (weight value – 3)</li> </ul>
Impact	Adding the extent, duration and intensity together provides the

Significance/Consequence	significance of the impact (High, Medium or Low). <b>Extent + Duration + Intensity = High/Medium/Low Impact</b>
Probability	The likelihood of an impact occurring: <ul style="list-style-type: none"> <li>• Unlikely – 0% - 45% chance of the potential impact occurring (weight value – 1)</li> <li>• Possible – 46% - 75% chance of the potential impact occurring (weight value – 2)</li> <li>• Likely - &gt;75% chance of the potential impact occurring (weight value – 3)</li> </ul>
Environmental Risk Refer to table below	Multiplication of the significance of the impact by the probability of the impact occurring produces a final conclusion of the overall risk that an impact poses to the surrounding environment. <b>High/Medium/Low Impact X Probability = High/Medium/Low Environmental Risk</b>

Significance of Impact		Low Impact (1-5)	Medium Impact (6-8)	High Impact (9)
Probability	Definite/Very Likely (3)	9 - 15 L – M	18 - 24 M - H	27 H
	Possible (2)	6 - 10 L – M	12 – 16 M	18 M - H
	Unlikely (1)	3 - 5 L	6 – 8 L	9 L
ENVIRONMENTAL RISK	Guidelines for Control Strategies			
(H)-High	Proactively reduce risk level, short term response			
(M-H) Medium-High	Proactively reduce risk level, short term response			
(M)-Medium	Management strategies to reduce risk level, short to medium term response			
(L-M) Low-Medium	Management strategies to reduce risk level, short to medium term response, operational control and housekeeping			
(L)-Low	Operational Control			

The assessment of impacts must adhere to the requirements in the EIA Regulations, 2010, and should take applicable official guidelines into account. The issues raised by interested and affected parties should also be addressed in the assessment of impacts.

**Issues raised by interested and affected parties**

List the main issues raised by interested and affected parties.

They are against the idea of closing the site.

Response from the practitioner to the issues raised by the interested and affected parties (A full response must be given in the Comments and Response Report that must be attached as Appendix E to this report):

They are totally against the closure of the landfill site.

**Impacts that may result from the Decommissioning or Closure Phase**

**Site alternatives**

List the potential impacts associated with site alternatives that are likely to occur during the decommissioning or closure phase:

**Alternative S1 (preferred alternative)**

<b>1) Health and Safety</b>	
Potential Impacts:	
<ul style="list-style-type: none"> <li>• Reduced health risk from uncontrolled dumping</li> <li>• Risk of exposure to/explosion of landfill gas</li> </ul>	
<b>Before Mitigation</b>	
Extent of the Impact	1
Duration of the Impact	2
Intensity of the Impact	3
Significance of Impact = Extent of Impact + Duration of Impact + Intensity of Impact	6
Probability	3

Environmental Risk = Significance of Impact X Probability	18
<b>Proposed Mitigation Measures:</b>	
The following points should be observed:	
<ul style="list-style-type: none"> <li>The municipality should have clear signs on display to the public advising that flammable liquids are not permitted on the site. This will be reinforced by advice to customers at the gatehouse and inspection of loads at the tip face.</li> </ul>	
<b>After Mitigation</b>	
Extent of the Impact	1
Duration of the Impact	1
Intensity of the Impact	1
Significance of Impact = Extent of Impact + Duration of Impact + Intensity of Impact	3
Probability	1
Environmental Risk = Significance of Impact X Probability	3

## 2) Noise Impacts

Noise from machinery that will be working on site.	
<b>Before Mitigation</b>	
Extent of the Impact	1
Duration of the Impact	1
Intensity of the Impact	2
Significance of Impact = Extent of Impact + Duration of Impact + Intensity of Impact	4
Probability	3
Environmental Risk = Significance of Impact X Probability	12
<b>Proposed Mitigation Measures:</b>	
The noise generated during the rehabilitation of the waste disposal site should be managed so that the following objectives can be met:	
<ul style="list-style-type: none"> <li>Noise from any single source does not intrude generally above the prevailing background noise level, and</li> <li>The background noise level does not exceed 85dB.</li> </ul>	



<b>After Mitigation</b>	
Extent of the Impact	1
Duration of the Impact	1
Intensity of the Impact	1
Significance of Impact = Extent of Impact + Duration of Impact + Intensity of Impact	3
Probability	2
Environmental Risk = Significance of Impact X Probability	6

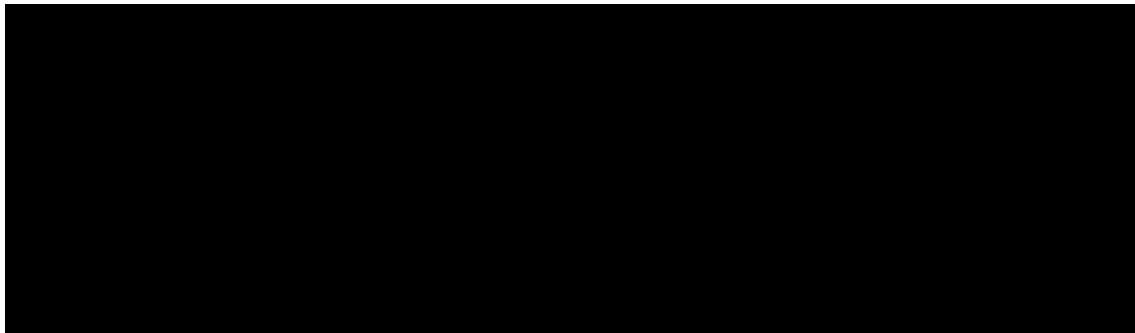
### 3) Windblown Litter

Windblown litter impacts	
<b>Before Mitigation</b>	
Extent of the Impact	1
Duration of the Impact	1
Intensity of the Impact	3
Significance of Impact = Extent of Impact + Duration of Impact + Intensity of Impact	5
Probability	3
Environmental Risk = Significance of Impact X Probability	15
<b>Proposed Mitigation Measures:</b>	
<ul style="list-style-type: none"> <li>• Provide perimeter planting, landscaping, or fences to reduce wind;</li> <li>• Use soil or artificial cover materials so that deposited waste is held in place. More frequent application of cover may be required during high winds or in exposed areas;</li> <li>• Use scaring techniques or natural predators to control scavenging birds;</li> <li>• Entry and exit signs need to advise transport operators that they can be fined for any litter on public roads resulting from their improper transportation of waste.</li> <li>• All litter that leaves the site should be retrieved on a daily basis.</li> </ul>	
<b>After Mitigation</b>	
Extent of the Impact	1
Duration of the Impact	1
Intensity of the Impact	1

Significance of Impact = Extent of Impact + Duration of Impact + Intensity of Impact	3
Probability	1
Environmental Risk = Significance of Impact X Probability	3
<b>4) Vegetation Disturbance</b>	
Nature of Potential Impact <ul style="list-style-type: none"> <li>Potential disturbance of natural vegetation surrounding the proposed site as a result of runaway veld fires caused by workers or contractors.</li> </ul>	
<b>Before Mitigation</b>	
Extent of the Impact	1
Duration of the Impact	2
Intensity of the Impact	3
Significance of Impact = Extent of Impact + Duration of Impact + Intensity of Impact	6
Probability	3
Environmental Risk = Significance of Impact X Probability	18
<b>Proposed Mitigation Measures:</b> <ul style="list-style-type: none"> <li>Basic fire-fighting equipment is to be placed at strategic locations on site (e.g. at the site office, flammable material store and watchman's container).</li> <li>Equipment is to be maintained in good working order to the satisfaction of local fire authorities.</li> <li>No open fires are permitted. A dedicated braai facility may be permitted in an area approved by the ECO.</li> <li>Smoking is prohibited near places where any readily combustible or flammable materials are present. Notices are to be prominently displayed prohibiting smoking in such areas.</li> <li>Fire extinguishers must be readily available.</li> </ul>	
<b>After Mitigation</b>	
Extent of the Impact	1
Duration of the Impact	2
Intensity of the Impact	1
Significance of Impact = Extent of Impact + Duration of Impact	4

+ Intensity of Impact	
Probability	2
Environmental Risk = Significance of Impact X Probability	8

### Alternative S2



### No-go alternative (compulsory)

<b>1) Potential Health and Safety</b>	
Potential Impacts:	
<ul style="list-style-type: none"> <li>• Reduced health risk from uncontrolled dumping</li> <li>• Risk of exposure to/explosion of landfill gas</li> </ul>	
<b>Before Mitigation</b>	
Extent of the Impact	1
Duration of the Impact	3
Intensity of the Impact	3
Significance of Impact = Extent of Impact + Duration of Impact + Intensity of Impact	7
Probability	3
Environmental Risk = Significance of Impact X Probability	21
<b>2) Hydrological Impacts</b>	
Potential Impacts:	
<ul style="list-style-type: none"> <li>• Risk of contamination of water resources from leachate emissions</li> <li>• Increased risk of flooding downstream of site</li> <li>• Contamination of water resources by suspended solids</li> </ul>	

<b>Before Mitigation</b>	
Extent of the Impact	2
Duration of the Impact	3
Intensity of the Impact	3
Significance of Impact = Extent of Impact + Duration of Impact + Intensity of Impact	8
Probability	3
Environmental Risk = Significance of Impact X Probability	24

### 3) Potential Visual, Landscape and Amenity Impacts

Windblown litter impacts	
<b>Before Mitigation</b>	
Extent of the Impact	1
Duration of the Impact	3
Intensity of the Impact	2
Significance of Impact = Extent of Impact + Duration of Impact + Intensity of Impact	6
Probability	3
Environmental Risk = Significance of Impact X Probability	18

### 4) Potential Noise Impacts

Operational noise at nearest sensitive receivers	
<b>Before Mitigation</b>	
Extent of the Impact	1
Duration of the Impact	3
Intensity of the Impact	3
Significance of Impact = Extent of Impact + Duration of Impact + Intensity of Impact	7
Probability	2
Environmental Risk = Significance of Impact X Probability	14

Indicate mitigation measures to manage the potential impacts listed above:

**Alternative S1**

**Alternative S2**

Mitigation measures are discussed above

**Process, technology, layout or other alternatives**

List the impacts associated with process, technology, layout or other alternatives that are likely to occur during the decommissioning or closure phase (please list impacts associated with each alternative separately):

**Alternative A1 (preferred alternative)**

<b>1) Health and Safety</b>	
Potential Impacts:	
<ul style="list-style-type: none"> <li>• Reduced health risk from uncontrolled dumping</li> <li>• Risk of exposure to/explosion of landfill gas</li> </ul>	
<b>Before Mitigation</b>	
Extent of the Impact	1
Duration of the Impact	2
Intensity of the Impact	3
Significance of Impact = Extent of Impact + Duration of Impact + Intensity of Impact	6
Probability	3
Environmental Risk = Significance of Impact X Probability	18
<b>Proposed Mitigation Measures:</b>	
The following points should be observed:	
<ul style="list-style-type: none"> <li>• The municipality should have clear signs on display to the public advising that flammable liquids are not permitted on the site. This will be reinforced by advice to customers at the gatehouse and inspection of loads at the tip face.</li> </ul>	
<b>After Mitigation</b>	
Extent of the Impact	1
Duration of the Impact	1
Intensity of the Impact	1
Significance of Impact = Extent of Impact + Duration of Impact	3

+ Intensity of Impact	
Probability	1
Environmental Risk = Significance of Impact X Probability	3

## 2) Noise Impacts

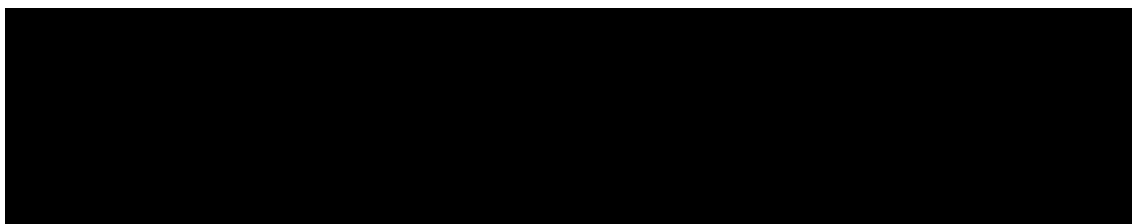
Noise from plant on site	
<b>Before Mitigation</b>	
Extent of the Impact	1
Duration of the Impact	1
Intensity of the Impact	2
Significance of Impact = Extent of Impact + Duration of Impact + Intensity of Impact	4
Probability	3
Environmental Risk = Significance of Impact X Probability	12
Proposed Mitigation Measures: The noise generated during the rehabilitation of the waste disposal site should be managed so that the following objectives can be met:	
<ul style="list-style-type: none"> <li>Noise from any single source does not intrude generally above the prevailing background noise level, and</li> <li>The background noise level does not exceed 85dB.</li> </ul>	
<b>After Mitigation</b>	
Extent of the Impact	1
Duration of the Impact	1
Intensity of the Impact	1
Significance of Impact = Extent of Impact + Duration of Impact + Intensity of Impact	3
Probability	2
Environmental Risk = Significance of Impact X Probability	6

## 3) Vegetation Disturbance

Nature of Potential Impact
----------------------------

<ul style="list-style-type: none"> <li>Potential disturbance of natural vegetation surrounding the proposed site as a result of runaway veld fires caused by workers or contractors.</li> </ul>	
<b>Before Mitigation</b>	
Extent of the Impact	1
Duration of the Impact	2
Intensity of the Impact	3
Significance of Impact = Extent of Impact + Duration of Impact + Intensity of Impact	6
Probability	3
Environmental Risk = Significance of Impact X Probability	18
<b>Proposed Mitigation Measures:</b>	
<ul style="list-style-type: none"> <li>Basic fire-fighting equipment is to be placed at strategic locations on site (e.g. at the site office, flammable material store and watchman's container).</li> <li>Equipment is to be maintained in good working order to the satisfaction of local fire authorities.</li> <li>Smoking is prohibited near places where any readily combustible or flammable materials are present. Notices are to be prominently displayed prohibiting smoking in such areas.</li> <li>Fire extinguishers must be readily available.</li> </ul>	
<b>After Mitigation</b>	
Extent of the Impact	1
Duration of the Impact	2
Intensity of the Impact	1
Significance of Impact = Extent of Impact + Duration of Impact + Intensity of Impact	4
Probability	2
Environmental Risk = Significance of Impact X Probability	8

**Alternative A2**



**No-go alternative (compulsory)**

**5) Potential Health and Safety**

Potential Impacts:

- Reduced health risk from uncontrolled dumping
- Risk of exposure to/explosion of landfill gas

**Before Mitigation**

Extent of the Impact	1
Duration of the Impact	3
Intensity of the Impact	3
Significance of Impact = Extent of Impact + Duration of Impact + Intensity of Impact	7
Probability	3
Environmental Risk = Significance of Impact X Probability	21

**6) Hydrological Impacts**

Potential Impacts:

- Risk of contamination of water resources from leachate emissions
- Increased risk of flooding downstream of site
- Contamination of water resources by suspended solids

**Before Mitigation**

Extent of the Impact	2
Duration of the Impact	3
Intensity of the Impact	3
Significance of Impact = Extent of Impact + Duration of Impact + Intensity of Impact	8
Probability	3
Environmental Risk = Significance of Impact X Probability	24

**7) Potential Visual, Landscape and Amenity Impacts**

Windblown litter impacts



<b>Before Mitigation</b>	
Extent of the Impact	1
Duration of the Impact	3
Intensity of the Impact	2
Significance of Impact = Extent of Impact + Duration of Impact + Intensity of Impact	6
Probability	3
Environmental Risk = Significance of Impact X Probability	18
<b>8) Potential Noise Impacts</b>	
Operational noise at nearest sensitive receivers	
<b>Before Mitigation</b>	
Extent of the Impact	1
Duration of the Impact	3
Intensity of the Impact	3
Significance of Impact = Extent of Impact + Duration of Impact + Intensity of Impact	7
Probability	2
Environmental Risk = Significance of Impact X Probability	14

Indicate mitigation measures to manage the potential impacts listed above:

**Alternative A1**

**Alternative A2**

Mitigation measures are discussed above

**Proposed Monitoring and auditing**

For each phase of the project and for each alternative, please indicate how identified impacts and mitigation will be monitored and/or audited.

**Alternative S1 (preferred site)**

Activity	Measures
Monitoring	<ul style="list-style-type: none"> <li>The ECO must visit the site for monitoring purposes on a</li> </ul>

	<p>regular basis, as agreed with the Municipality, and record details of each monitoring visit in the on-site logbook.</p> <ul style="list-style-type: none"> <li>• During the rehabilitation process, it is recommended that the ECO as a minimum visit the site three times per week for the first week and then once every week thereafter, up until work is complete or as required, depending on the performance of the contractor.</li> <li>• A brief summary of the findings and any recommendations made by the ECO per visit should be emailed to all parties including the Municipality and Contractor. This report should also include photographs for additional information.</li> </ul>
Auditing of the rehabilitation process and reporting to the licensing authority	<ul style="list-style-type: none"> <li>• The ECO will audit the implementation of the EMP during the site rehabilitation phase at a frequency agreed between the ECO and Municipality, in line with the waste licence conditions and Municipality requirements.</li> </ul>

<b>Alternative A1 (preferred alternative)</b>	
<b>Activity</b>	<b>Measures</b>
Monitoring	<ul style="list-style-type: none"> <li>• The ECO must visit the site for monitoring purposes on a regular basis, as agreed with the Municipality, and record details of each monitoring visit in the on-site logbook.</li> <li>• During the rehabilitation process, it is recommended that the ECO as a minimum visit the site three times per week for the first week and then once every week thereafter, up until rehabilitation work is complete or as required, depending on the performance</li> </ul>

	<p>of the contractor.</p> <ul style="list-style-type: none"> <li>• A brief summary of the findings and any recommendations made by the ECO per visit should be emailed to all parties including the Municipality and Contractor. This report should also include photographs for additional information.</li> </ul>
<p>Auditing of the rehabilitation process and reporting to the licensing authority</p>	<ul style="list-style-type: none"> <li>• The ECO will audit the implementation of the EMP during the site rehabilitation phase at a frequency agreed between the ECO and Municipality, in line with the waste licence conditions and Municipality requirements.</li> </ul>

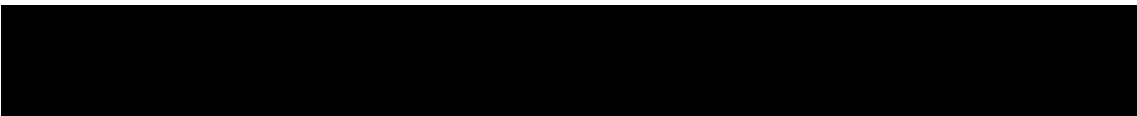
**Environmental impact statement**

Taking the assessment of potential impacts into account, please provide an environmental impact statement that summarises the impact that the proposed activity and its alternatives may have on the environment after the management and mitigation of impacts have been taken into account, with specific reference to types of impact, duration of impacts, likelihood of potential impacts actually occurring and the significance of impacts.

**Alternative S1 (preferred site)**

Benefits of the project outweigh the potential negative environmental and social impacts, which can be mitigated to within acceptable levels. Based on the outcomes of the risk assessments conducted as part of the EIA, coupled with the recommendations made by the EAP, the overall negative impact of the project is of Low - Medium significance, which can be reduced to Low significance through the implementation of simple, effective mitigation measures.

**Alternative S2**



**Alternative A1 (preferred alternative)**

Benefits of the project outweigh the potential negative environmental and social impacts, which can be mitigated to within acceptable levels. Based on the outcomes of the risk assessments conducted as part of the EIA, coupled with the recommendations made by the EAP, the overall negative impact of the project is of Low - Medium significance, which can be reduced to Low significance through the implementation of simple, effective mitigation measures.

The following recommendations are thus made:-

- 1) The project should be approved and allowed to proceed.
- 2) The Mitigation measures proposed above, which has been incorporated into the EMP in more detail, must be implemented during the rehabilitation phases.
- 3) A communications pathway must be established that would allow the designated ECO to accept and deal with stakeholder complaints.
- 4) Mitigation measures proposed above should be incorporated as far as possible into the operational plan for the development.
- 5) Strict monitoring and enforcement of requirements of the EMP must be undertaken to ensure that contractors and operators adhere to these requirements.

**Alternative A2**



**No-go alternative (compulsory)**

There will continue to be fatal flows on the natural environment and there will be a huge health risk on the lives of the local community if the site is not licensed.

**SECTION F. RECOMMENDATION OF EAP**

Is the information contained in this report and the documentation attached hereto in the view of the EAP sufficient to make a decision in respect of this report?

If "NO", please contact the KZN Department of Agriculture & Environmental Affairs regarding the further requirements for your report.

YES	
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If "YES", please attach the draft EMPr as Appendix F to this report and list any recommended conditions, including mitigation measures that should be considered for inclusion in any authorisation that may be granted by the competent authority in respect of the application:



## REFERENCES

Minimum Requirements for Waste Disposal by Landfill, 2005, Department of Water Affairs and Forestry  
Republic of South Africa. Draft Third Edition. PRETORIA

National Environmental Management: Waste Act, 2008, Act No. 59 of 2008. Waste Classification and  
Management Regulations, 2003. PRETORIA.

## **SECTION G: APPENDIXES**

The following appendixes must be attached as appropriate:

**Appendix A: Site plan(s)**

**Appendix B: Photographs**

**Appendix C: Environmental Maps**

**Appendix D: Facility illustration(s)**

**Appendix E: Specialist reports**

**Appendix F: Public Participation report**

**Appendix G: Draft Environmental Management Programme (EMPr)**

**Appendix H: Closure and End-Use Plan**

**Appendix I: Other information**

## Appendix A: Site plan(s)



## Appendix B: Photographs

## Appendix C: Environmental Maps

## Appendix D: Facility illustration(s)

## Appendix E: Specialist reports

# Appendix F: Public Participation Report

# Appendix G: Environmental Management Programme (EMPr)

## Appendix H: Closure and End-Use Plan

## Appendix I: Other information