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Department :

Economic Development, Tourism and
Environmental Affairs

PROVINCE OF KWAZULU-NATAL

**VARIATION
OF
WASTE MANAGEMENT LICENCE**

Issued in terms of section 49(1) and 54(1) of the National Environmental
Management: Waste Act, 2008 (Act No. 59 of 2008)

PROJECT TITLE: NEW ENGLAND ROAD LANDFILL SITE

**DISTRICT MUNICIPALITY: UMGUNGUNDLOVU DISTRICT MUNICIPALITY
KWAZULU-NATAL**

Licence reference number:

DC22/WML/0061/2016

Date issued:

03 JULY 2017

Duration of licence:

10 (TEN) years

Licence holder:

Msunduzi Municipality

Location of activity:

Location of activity: Lot 1853 of the Farm
Darvill15036 within Msunduzi
Municipality, uMgungundlovu
District Municipality

1. DECISION

Waste management licence holder details

Name: Msunduzi Municipality
Contact person: Municipal Manager
Alternate: Mr Cyril Naidoo (Landfill Manager)
Telephone no: 033 392 2002
Fax no: 033 392 2397
E-mail address: cyril.aidoo@msunduzi.gov.za
Postal address: Private Bag X321
 Pietermaritzburg
 3200

Location

Name of property: Lot 1853 of the Farm Darvill 15036
Physical address: New England Road, Pietermaritzburg
Local municipality: Msunduzi Local Municipality
District municipality: uMgungundlovu District Municipality

The boundary of the site is represented by the following coordinates:

	Latitude (S)	Longitude (E)
Corner A	29° 36' 22.5	30° 24' 53.0
Corner B	29° 36' 27.2	30° 24' 56.1
Corner C	29° 36' 31.0	30° 25' 03.9
Corner D	29° 36' 30.1	30° 25' 06.1
Corner E	29° 36' 34.1	30° 25' 10.9
Corner F	29° 36' 25.2	30° 25' 24.2
Corner G	29° 36' 22.7	30° 25' 24.5
Corner H	29° 36' 19.3	30° 25' 20.2
Corner I	29° 36' 18.7	30° 25' 16.6
Corner J	29° 36' 11.4	30° 25' 07.3
Corner K	29° 36' 14.9	30° 25' 01.9
Corner L	29° 36' 13.4	30° 24' 59.2
Corner M	29° 36' 14.4	30° 24' 57.3

By virtue of the powers conferred by the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008) and the Environmental Impact Assessment (EIA) Regulations, 2014, the KwaZulu-Natal Department of Economic Development, Tourism and Environmental Affairs (hereinafter referred to as the "Department") hereby grants a revised waste management licence (hereinafter referred to as the "licence") to **Msunduzi Municipality** (hereinafter referred to as the "licence holder") for the **New England Road Landfill Site** (described in section 2 and hereinafter referred to as the "activity") at the abovementioned location (hereinafter referred to as the "site"), subject to the conditions specified herein. The reasons for the decision are described in **Annexure 1** attached to this licence.

2. DESCRIPTION OF ACTIVITY

The New England Road landfill site is an existing facility and is operational. It was authorised under the Permit Number **16/2/7U203/D3/Z1/P64** issued by the Department of Water Affairs dated 22 April 1998. The Msunduzi Municipality has requested that the existing Permit be varied and updated to ensure that it aligns with current legislation and is updated in accordance with the current operational procedures and best practice as outlined in the National Environmental Management: Waste Act, 58 of 2008 and associated Regulations, and Norms and Standards.

The site is owned by Msunduzi Municipality. It is located between Sobantu, Darvill Waste Water Treatment Works, and the Pietermaritzburg Golf Course, approximately 2km south of the N3 highway and is the primary landfill disposal site for the Msunduzi Municipality and greater Pietermaritzburg area.

The site is used for the disposal of general waste only which includes domestic waste; inert waste and garden waste.

The site is fenced with vehicle access control, a weighbridge, site security, site office and ancillary supporting infrastructure.

3. WASTE MANAGEMENT ACTIVITIES LICENSED

The applicant applied for activities listed in terms of Government Notice No. 921 of November 2013 of the National Environmental Management: Waste Act No. 59 of 2008. The licence therefore authorises the following waste management activities:

Activity number	Activity description (as per the list of waste management activities)	Applicable activity with respect to this licence
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 .	The landfill site will have activities which will entail the sorting and bailing of general waste materials.
B (8)	The disposal of general waste to land covering an area in excess of 200m ² and with a total capacity exceeding 25000 tons.	Disposal of municipal and commercial general waste to landfill.

4. GENERAL INFORMATION

4.1 Compliance with the conditions of this licence

In terms of section 67(1)(h) of the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008), contravening or failing to comply with a condition or requirement of a waste management licence constitutes an offence for which a convicted person may be liable to a fine not exceeding R10 million or to imprisonment for a period not exceeding 10 years, or to both such fine and such imprisonment. The licensing authority may also revoke or suspend this licence in terms of section 56 of the said Act if the licensing authority is of the opinion that the licence holder has contravened a condition of this licence and such contravention may have, or is having a significant effect on health or the environment.

4.2 Amendments to the waste management activities undertaken

Any changes to, or deviations from, the activity as described in section 2 of this licence must be approved, in writing, by the licensing authority before such changes or deviations may be implemented.

4.3 Variation of this licence

The licensing authority may vary this licence, or a condition of this licence, in terms of section 54 of the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008).

4.4 Transfer of this licence

If ownership of the activity is to be transferred, the licence holder must apply to the licensing authority, on a form required by the licensing authority, for permission to transfer the licence to the new owner in terms of section 52 of the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008). The licensing authority must take into account whether the person to whom the licence is to be transferred is a fit and proper person as contemplated in section 59 of the said Act.

4.5 Renewal of this licence

This licence is valid for a certain time period as stipulated in section 5. If the licence holder wishes to continue with the activity, the licence holder must apply for a licence renewal to the relevant licensing authority at least six (6) months prior to the expiry of the licence.

4.6 Contact details of the licence holder

It is the responsibility of the licence holder to ensure that the licensing authority is made aware of any changes to the contact details of the licence holder as soon as is reasonably practicable.

4.7 Contact details for the Department

For the purposes of this licence, any correspondence with the Department must be forwarded to the District Manager: uMgungundlovu at the contact details below. Any correspondence must include the licence reference number. It is the responsibility of the licence holder to ensure the above details are correct at the time of submitting any documentation, and that the documentation reaches the relevant official.

The District Manager: uMgungundlovu

Attention: Pollution and Waste Component

Department of Economic Development, Tourism and Environmental Affairs

Private Bag X07

Cascades

3202

Fax Number: (033) 347 1826

Telephone Number: (033) 347 1820

4.8 Compliance with other legislation

This licence does not negate the licence holder's responsibility to comply with any other statutory requirements that may be applicable to the activity.

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5. CONDITIONS

5.1 GENERAL

Scope of licence

- 5.1.1 The activity which is authorised by this licence may only be carried out at the site indicated in section 1 above, in accordance with the infrastructure plans indicated on Annexures II and III, attached to this licence.
- 5.1.2 The licence holder is responsible for ensuring compliance with the conditions by any person acting on his or her behalf, including but not limited to, an agent, sub-contractor, employee or person rendering a service to the licence holder.
- 5.1.3 A copy of this licence must be kept by the licence holder and made available to any authorised official of the Department on request.

Validity of licence

- 5.1.4 This licence is valid for a period of **ten (10) years** from the date of issue. If the licence holder wishes to continue with the activity, the licence holder must apply for a licence renewal to the relevant licensing authority at least six (6) months prior to the expiry of the licence.

Notification of interested and affected parties

- 5.1.5 The licence holder must notify every registered interested and affected party (including State departments identified during the application) in writing and within **14 (fourteen) days** of the date that this licence was issued.
- 5.1.6 The notification referred to in 5.1.5 must –
- indicate the decision of the Department;
 - specify the date on which the licence was issued;
 - advise the interested and affected party that a copy of the licence, including reasons for the decision, will be provided on request;
 - inform the public where the decision can be accessed; and

- advise the interested and affected party that the prescribed appeal forms can be obtained from the Department, the licence holder, or the Environmental Assessment Practitioner.

5.1.7 The licence holder must publish a notice, within 14 (fourteen) days of the date that this licence was issued, in the newspaper/s which were used for the placing of notices as part of the public participation process.

5.2 CONSTRUCTION

5.2.1 Continued or further development and construction of the landfill site must take place in accordance with the Plan entitled: General Existing Infrastructure Layout Plan: Plan No. 525-2015-003 and the Co-ordinated Infrastructure Layout Plan 525-2015-004 prepared by Envitech Solutions attached as **Annexures II and III**.

5.2.2 Further development at the site must be designed with an appropriate containment barrier or liner as described in the National Norms and Standards for Disposal of Waste to Landfill GNR 636 of 23 August 2013. This requirement is also applicable to the leachate collection dam.

5.2.3 The licence holder must notify this Department and the Engineering Section of the Department Water and Sanitation (DWS) in writing, should any further development within the site be proposed. The Department must confirm in writing that it is satisfied that the construction is in accordance with recognised civil engineering practice and requirements, prior to waste disposal commencing in the cell(s).

5.2.4 The site must be constructed in accordance with recognised civil engineering practice with special consideration to stability.

5.2.5 The slopes of the sides of the berms shall be constructed in consultation with a suitably qualified engineer in such a manner to ensure that little or no erosion occurs.

- 5.2.6 The maximum height of the site must not exceed 654 metres above mean sea level.
- 5.2.7 Storm water berms and channels must be constructed to divert clean storm water away from contaminated water emanating from the site and to prevent gully erosion.
- 5.2.8 Works constructed in compliance with condition 5.2.1 must be properly maintained on a continuous basis.
- 5.2.9 The licence holder must construct works to:
- (a) divert and drain all runoff water from the working face of the site, which could be expected as a result of the estimated maximum precipitation during a 24 hour period with an average frequency of once in 100 years (referred to as "estimated maximum precipitation"); and
 - (b) to cater for all expected leachate.
- 5.2.10 Such works must ensure that clean water runoff is prevented from coming into contact with leachate. The works constructed to accommodate the clean water runoff and leachate must each be of such a capacity as to maintain a freeboard of half a metre and must be lined to prevent pollution to groundwater.

5.3 OPERATION

Management

- 5.3.1 The site may be only be used for disposal of general waste as classified according to the applicable waste classification system, excluding those wastes listed in Annexure IV attached to this waste management licence.
- 5.3.2 No organic or inorganic element or compound which may have a definite acute or chronic negative effect on human health and/or the environmental, due to its toxic, physical, chemical or persistent characteristics may be disposed of on site.

- 5.3.3 No medical waste may be disposed of on site.
- 5.3.4 No schedule pharmaceutical products registered in terms of the Medicines and Related Substances Control Act, 1965 (Act 101 of 1965) or associated containers, may be disposed of on the site in accordance with Annexure IV.
- 5.3.5 The licence holder must ensure that personnel operating the landfill are competent in waste disposal and landfill operation.
- 5.3.6 A dedicated accessible area must be established to receive waste during wet weather conditions when an operational cell cannot be accessed.
- 5.3.7 Waste disposed of at the site may be reclaimed. The sorting may take place at a designated area allocated by Landfill Site Management and must not interfere with the daily operation of the site. In this regard the licence holder must take measures to ensure that an appropriate area for reclamation is identified and implemented within **one (1) year** of the date of this licence.
- 5.3.8 The licence holder must keep records of the volume and types of waste materials reclaimed and report this to the licensing authority and into the national waste information system as required by the National Waste Information Regulations.
- 5.3.9 Waste disposed of must be compacted and covered at the end of each working day with a minimum of 150mm of soil or other material approved by the licensing authority.
- 5.3.10 Sufficient cover material, enough for at least **two (2) weeks**, must be stock piled within or in close proximity to the site at all times.
- 5.3.11 The site must be operated in such a manner that the height of the embankment or perimeter wall is at all times maintained at a higher elevation than the level of the operating floor.

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- 5.3.12 The licence holder may only accept waste on the active working area of the site between 07h00 and 16h00 during weekdays and between 07h00 and 15h00 on Saturdays.
- 5.3.13 The licence holder must ensure that all entrance gates are manned during the hours of operation and locked outside the hours of operation.
- 5.3.14 The licence holder must ensure that the site is fully fenced with an installed lockable gate, legible notice board written in at least **two (2)** appropriate languages and must include operation hours; contact and emergency details; types of wastes allowed, and tariffs. Appropriate warning signs must be displayed at the entrance on the notice board.
- 5.3.15 Notices prohibiting unauthorized persons from entering the site, as well as an internationally accepted sign indicating the risks involved in unauthorized entry must be displayed at 100 meter intervals along the boundary of the site.
- 5.3.16 The licence holder must take all reasonable steps to maintain service roads in a condition which ensures unimpeded access to the site for vehicles transporting waste and to keep the roads free of waste.
- 5.3.17 The licence holder must take all reasonable steps to ensure that the site is operated in such a manner that nuisance conditions or health hazards or the creation of nuisance conditions or health hazards including vermin and odour are prevented.
- 5.3.18 No smoking, burning of waste or naked flames are allowed on the site.
- 5.3.19 Litter scattered by wind must be collected on a daily basis and the licence holder must use movable fences to control wind-blown waste where practicable.
- 5.3.20 Sufficient dust control measures to prevent wind-blown dust from causing nuisance conditions or health hazards must be applied.

- 5.3.21 Indigenous trees must be established on the screening berm around the site to effectively screen the site from nearby roads and residential areas.
- 5.3.22 During the operative life of the site, the licence holder must take all reasonable steps, such as suitable zoning, written agreements with adjacent landowners, buying out land and/or obtaining a servitude to prevent the development of further residential and /or light industrial areas closer to the Site than –165 metres to the north-west, 180 metres to the North, and 800 metres to the east, south and west.
- 5.3.23 The licence holder must implement adequate measures to the satisfaction of the Department to:
- 5.3.23.1 ventilate methane gas generated in the waste area;
 - 5.3.23.2 prevent the build-up of flammable gas inside buildings on the site; and,
 - 5.3.23.3 prevent lateral migration of methane gas;
- and monitor these measures in accordance with condition 5.3.42 in order to prevent the build-up of dangerous concentrations within the site. The licence holder must ensure that there is a contingency plan to be followed when measured levels of flammable gas reach the levels as referred to in condition 5.3.42.
- 5.3.24 The licence holder must maintain all infrastructure works on a continuous basis to prevent all runoff water from the working face coming into contact with the leachate from on the site.
- 5.3.25 Works constructed to accommodate surface runoff and leachate must be continuously monitored to ensure a freeboard of half a metre is maintained.
- 5.3.26 Runoff water must comply with quality requirements of the General and Special Standard prescribed by the Department of Water and Sanitation, as amended from time to time.

5.3.27 Leachate is deemed to be treated when the quality thereof complies with the quality requirements of the General and Special Standard prescribed by the Department of Water and Sanitation, as amended from time to time.

5.3.28 All runoff water (storm water) arising as a result of precipitation-

(i) On land adjacent to the site; and

(ii) On the site;

must be prevented from coming into contact with any substance, whether such substance is a solid, liquid, vapour or gas or a combination thereof which is produced, used, stored, dumped or spilled on the premises, including leachate and must be diverted and drained-

(i) Around the site; and

(ii) From the working face of the site;

by means of works constructed by the licence holder in accordance with condition 5.2.9.

5.3.29 Uncontaminated runoff water as defined in condition 5.3.26 must be diverted away from the site to the Blackburrow Spruit and discharged into this Spruit at a point upstream of the site.

5.3.30 In the event that runoff water referred to in condition 5.3.26 becomes contaminated to the extent of not complying with the water quality requirements as referred to in condition 5.3.26, it must be regarded as untreated leachate and must be dealt with according to condition 5.3.33.

5.3.31 Runoff water arising from operational actions, for example the washing of vehicles and containers, must be regarded as contaminated runoff and must be treated according to condition 5.3.33.

5.3.32 Uncontaminated runoff must under no circumstances be used to dilute waste water resulting from any activities on the site, or actions relating to the operation of the site, or leachate emanating from the site, but must be dealt with according to condition 5.3.29.

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5.3.33 All leachate emanating from the site including contaminated runoff water shall:

- 5.3.33.1 be treated to comply with the aforementioned standard and discharged in a legal manner;
- 5.3.33.2 be evaporated in a lined dam and /or;
- 5.3.33.3 be discharged into a sewer if accepted by the authority in control of that sewer.

Monitoring and auditing

5.3.34 The licence holder must submit a detailed geo-hydrological report for the site to this Department and Department of Water and Sanitation within **one (1) year** from the date of issue of this licence.

5.3.35 The licence holder must establish and maintain the monitoring boreholes and water quality monitoring/sampling points as reflected on the Water Quality Monitoring Plan Ref. 525-2015-001 prepared by Envitech Solutions and attached as Annexure V.

5.3.36 Monitoring boreholes must be equipped with lockable caps. The Department reserves a right to take water samples at any time and to analyse these samples, or to have them taken and analysed.

5.3.37 Monitoring of the ground and surface water quality network must be conducted at the locations identified in the Water Quality Monitoring Plan and must monitor the variables listed in Annexure VI at the frequencies reflected therein.

5.3.38 If, in the opinion of this Department, the water quality variables referred to 5.3.37 and listed in Annexure VI shows an increasing trend, the licence holder shall initiate a monthly monitoring programme.

5.3.39 The licence holder must establish and maintain the landfill gas monitoring points as reflected on the Landfill Gas Monitoring Plan Ref. 525-2015-002 prepared by Envitech Solutions and attached as Annexure VII.

5.3.40 Monitoring of flammable gas must be conducted –

(a) Through a network of boreholes or any other monitoring devices approved by the licensing authority, which must be at least one metre deeper than the deepest point of the waste body; and

(b) In the atmosphere inside buildings on the Site;

for the quantitative detection of the volatile materials on the Site:

(i) Carbon Dioxide

(ii) Oxygen; and

(iii) Methane

5.3.41 Quarterly monitoring of the flammable gas variables must take place at the points identified on the Landfill Gas Monitoring Plan Ref. 525-2015-002 prepared by Envitech Solutions and attached as Annexure VII.

5.3.42 The atmospheric levels in the atmosphere of

(a) carbon dioxide must not exceed 0.5%; and

(b) methane must not exceed 1%,

by volume in air at the monitoring locations.

5.3.43 Should the atmospheric levels of flammable gas be between 0.1% and 1%, a higher frequency of monitoring must be instituted. Should levels above 1% be detected in buildings on the site, the buildings must be evacuated and the contingency plan implemented.

5.3.44 Should measurements of the gas monitoring network at any time exceed the limits specified, the licence holder must report this as an incident.

5.3.45 The measurements of flammable gases must be amended for Standard Temperature and Pressure.

5.3.46 The licence holder must within 60 (sixty days) from the date of issue of this licence, submit a proposal for a comprehensive air quality, gas and dust

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monitoring programme for approval by the licensing authority. Once approved the licence holder must implement this monitoring programme.

5.3.47 The licence holder shall carry out all tests in accordance with methods prescribed by and obtainable from the South African Bureau of Standards (SABS), referred to in the Standards Act, 2008 (Act of 2008), to analyse samples taken for monitoring.

5.3.48 The licence holder must submit quarterly environmental audit reports, prepared by the licence holder, to this Department, unless otherwise agreed to in writing by this Department.

5.3.49 This Department or any other state organ reserves the right to audit/or inspect the site at any time, and the licence holder must make any records or documentation regarding the site available upon request.

5.3.50 The licence holder must establish a landfill Monitoring Committee that will meet twice a year and not later than 30 days after the external audit report specified in condition 5.3.53 has been submitted. The monitoring committee must include interested and affected parties, this Department, the licence holder and Department of Water and Sanitation.

5.3.51 The licence holder must ensure that minutes of the Monitoring Committee meetings are kept and must ensure that these minutes are distributed to all members of the Monitoring Committee within **14 days** after a meeting.

5.3.52 The licence holder must appoint an independent, suitably qualified external auditor to audit the annually.

5.3.53 The external audit report referred to in 5.3.52 must include-

- An evaluation of the compliance with the conditions of this licence for the reporting period;
- Actions taken to rectify the non-compliances identified.

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5.3.54 The external audit report referred to in 5.3.52 must be submitted to the Department within 90 (ninety) days of the audit being conducted.

Recording and reporting

5.3.55 The licence holder must, within 24 hours notify this Department of occurrence or detection of any incident on the site which has the potential to cause environmental impact or water pollution.

5.3.56 The licence holder must, within 14 days or shorter time if specified by this Department, from the occurrence or detection of any incident referred to condition 5.3.55, submit to this Department an action plan which must include a detailed time schedule of measures taken to:

5.3.56.1. correct the impact resulting from the incident;

5.3.56.2. prevent the incident from causing any further impacts; and

5.3.56.3. prevent the recurrence of a similar incident.

5.3.57 The licence holder must keep an incident report and complaints register, which must be made available to the external auditor and the licensing authority for purposes of their audits.

5.4 Site closure and decommissioning

5.4.1 The operation of the site must address rehabilitation processes as part of the operation by preventing erosion and the formation of pools due to rain through the re-establishment of vegetation and the final shaped covering of any disused portion of the site.

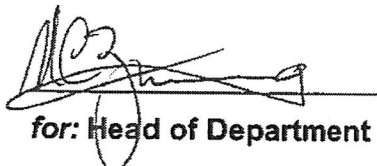
5.4.2 The Licence holder must rehabilitate the site or any portion thereof, in accordance with legislated closure requirements.

5.4.3 In the event of closure of the site, the licence holder must contact the Department for confirmation of relevant requirements.

5.4.4 Water quality monitoring must be maintained for a period of 30 years or for such period, frequency and/or at locations as may be determined in writing with the licencing authority.

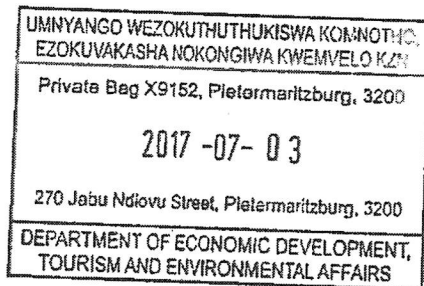
5.4.5 Air quality, gas and dust monitoring must continue for a period until the landfill gas peak concentration of methane and carbon dioxide has been detected, or for any longer period as may be determined in writing with the licencing authority.

Date of issue of Waste Management Licence: 03 / 07 / 2017.



for: Head of Department

KZN Department of Economic Development, Tourism and Environmental Affairs



ANNEXURE I: REASONS FOR DECISION

1. Information considered in making the decision

In reaching its decision, the Department took, *inter alia*, the following into consideration -

- a) The application form for variation of a Waste Management Licence in terms of the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008).
- b) The comments received from interested and affected parties and responses as included in the application document prepared by Envitech Solutions dated 01 June 2016.

2. Key factors considered in making the decision

a) Administrative process:

- The application for variation of the Waste Management Licence for licensing the existing waste disposal site for Msunduzi Municipality situated in KwaZulu-Natal was received by this Department on the 06 June 2016.
- Following receipt of the aforementioned documentation, the Department has confirmed that the requirements processes have been met.
- Whilst the Msunduzi Municipality made application for variation to bring the existing Permit in line with correct practices and improvement being undertaken at the site, the licensing authority, in terms of Section 53(1) of the Waste Act has determined that it is appropriate to issue the waste management licence to conform to current terminology and format. The Department consulted with the local authority who agreed that the existing permit be issued in the Waste Management Licence format.

b) Public Participation:

Public participation involved the placement of site notice boards in English and IsiZulu at the main entrance of the New England Road Landfill Site; the emailing of written notices to interested and Affected Parties and various identified and potential stakeholders; the placing of newspaper advertisement in the Edendale

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Eyethu newspaper dated 06 May 2016 and The Witness Newspaper dated 05 May 2016; and, the provision of reports and information to Interested and Affected Parties to satisfy the requirements of Chapter 6 of the NEMA EIA Regulations, 2014.

c) Need and desirability:

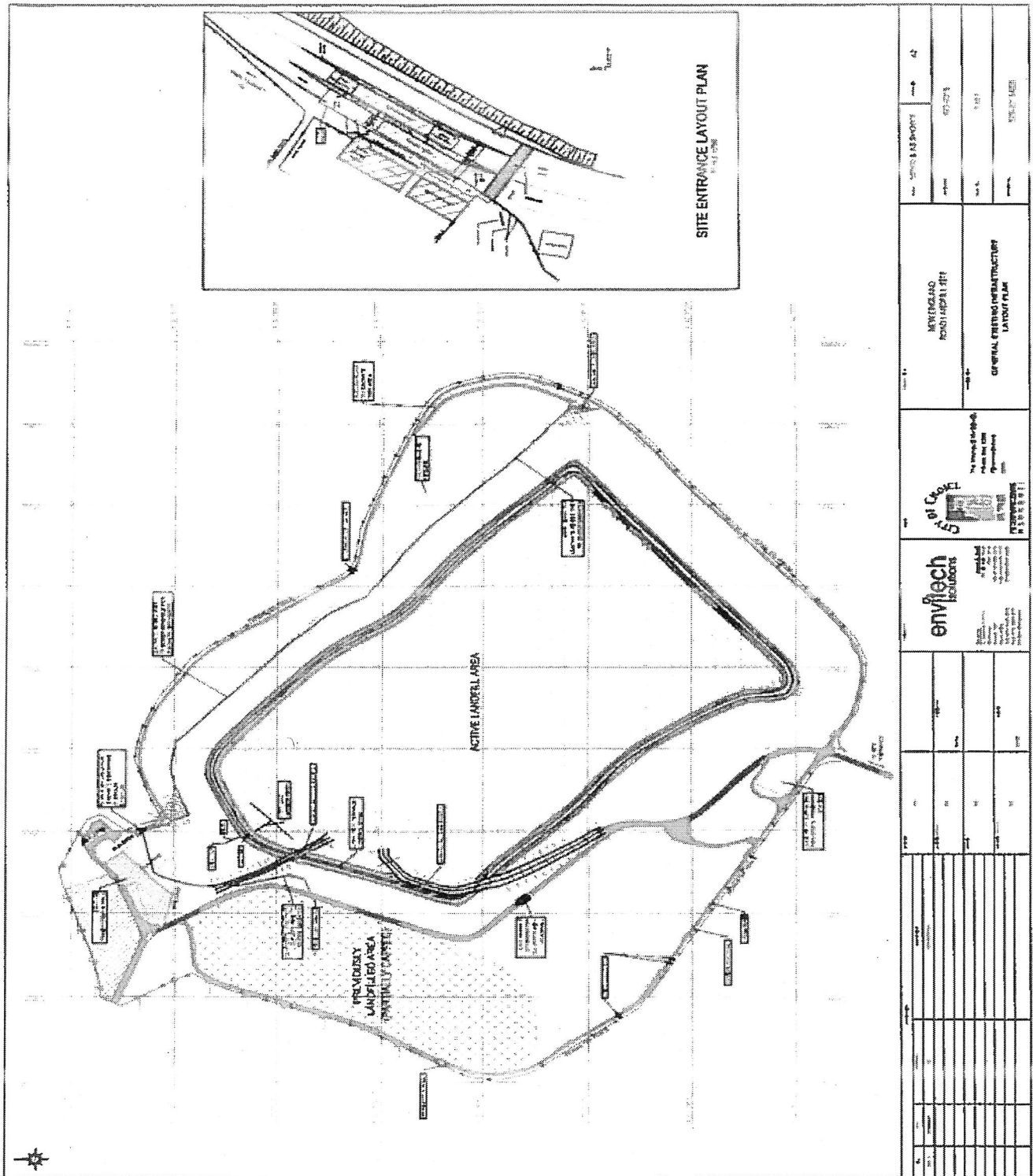
The variation application was initiated to comply with the Waste Act; to update the licensing authority details and to align with best practice in waste management principles and to mitigate negative impacts; to ensure compliance with Duty of Care as outlined in Section 28 of NEMA.

d) Objectives of integrated environmental management:

The Department is satisfied that, subject to compliance with the conditions contained in this variation Waste Management Licence, the general objectives of integrated environmental management in Chapter 5 of the National Environmental Management Act, 1998 (Act No. 107 of 1998) and the National Environmental Management: Waste Act, 58 of 2008 and associated Regulations, and Norms and Standards, will be met.

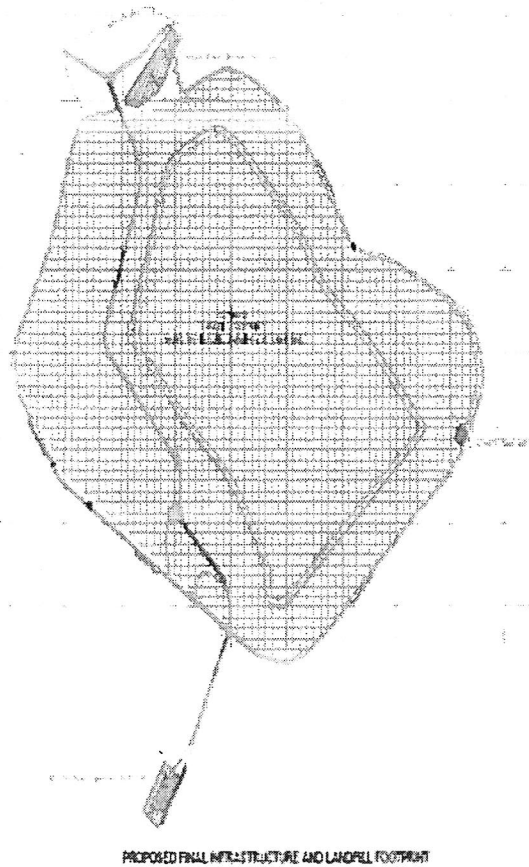
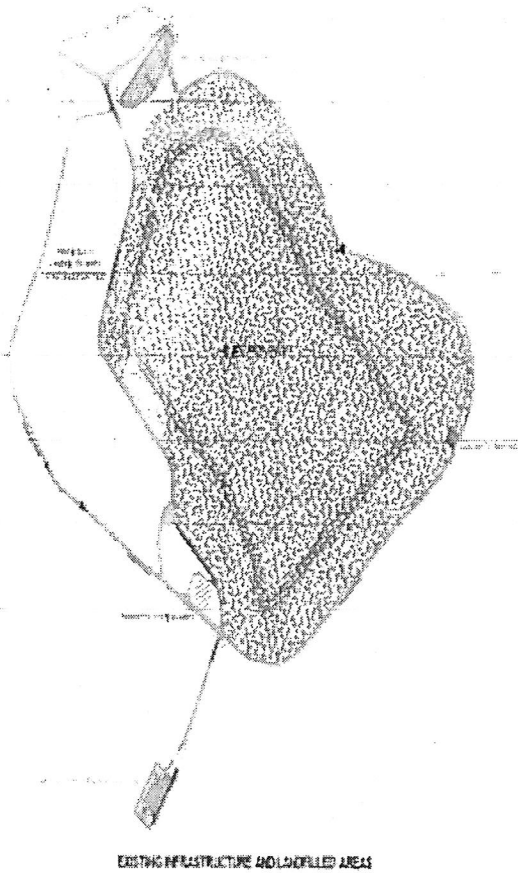
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ANNEXURE II: GENERAL EXISTING INFRASTRUCTURE PLAN



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ANNEXURE III: CO-ORDINATED INFRASTRUCTURE LAYOUT PLAN



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ANNEXURE IV: HAZARDOUS OR TOXIC MATERIALS WHICH MAY NOT BE DISPOSED OF ON A GENERAL LANDFILL SITE

1. Waste where specific control has been established in terms of the Nuclear Energy Act, 1993 (Act 131 of 1993).
2. Waste types controlled in terms of the Minerals Act, 1991 (Act 50 of 1991) and the Electricity Act, 1987 (Act 41 of 1987), unless written permission has been obtained from the Responsible Authority.
3. Waste as described in the Minimum Requirements for the Handling, Classification and Disposal of Hazardous Waste (Second Edition 1998) as published by the Department of Water Affairs and Forestry and as amended from time to time (Minimum Requirements), as an extreme hazard or Hazard Group 1 (HG1); high hazard or Hazard Group 2 (HG2); moderate hazard or Hazard Group 3 (HG3) and low hazard or Hazard Group 4 (HG4).
4. Flammable wastes, with a closed cup flash point less than 61°C.
5. Corrosive substances, as described in the Minimum Requirements as Class 8 (1998 edition: page 6-8, Diagram III).
6. Oxidising substances and organic peroxides, as described in the Minimum Requirements as Class 5 (1998 edition: page 6-8, Diagram III).
7. Any waste with a substance which is a Group A and/or Group B carcinogen/mutagen. Group A carcinogens/mutagens have been proven in humans, both clinical and epidemiological. Group B carcinogens/mutagens have been proven without doubt in laboratory animals.
8. Any waste with a substance at a concentration greater than 1% where the substance is a Group C and/or Group D carcinogen/mutagen. Group C carcinogens/mutagens have shown limited evidence in animals. Group D carcinogen/mutagen - the available data is inadequate and doubtful.
9. Any infectious waste. Infectious waste is waste which is generated during the diagnosis, treatment or immunisation of humans or animals; in the research pertaining to this; in the manufacturing or testing of biological agents including blood, blood products and contaminated blood products, cultures, pathological wastes, sharps, human and animal anatomical wastes and isolation wastes that contain or may contain infectious substances.
10. All materials which falls in Class 1 (explosives), Class 2 (compressed gases) and Class 7 (radioactive materials), as described in the Minimum Requirements.
11. Any waste with a pH less than 6 or greater than 12.
12. Any waste which is difficult to analyse and classify.
13. Any complexes of heavy metal cations, paint and paint sludge, or laboratory chemicals.
14. Organic or inorganic materials which may have a definite acute or chronic negative effect on human health and/or the environment, due to its toxic, physical, chemical or persistent characteristics and which corresponds with the UNEP definition of hazardous waste.
15. Scheduled pharmaceutical products registered in terms of the Medicines and Related Substances Control Act, 1965 (Act 101 of 1965) or associated containers.

N.C



**ANNEXURE VI: WATER QUALITY VARIABLES REQUIRED FOR
DETECTION MONITORING AT BI-ANNUAL INTERVALS**

Monitor for:

Alkalinity (P.Alk)
Ammonia (NH₃-N)
Calcium (Ca)
Chemical Oxygen Demand (COD)
Chlorides (Cl)
Electrical Conductivity (EC)
Fluoride (F)
Iron (Fe)
Magnesium (Mg)
Nitrate (NO₃-N)
pH
Potassium (K)
Sodium (Na)
Sulphate (SO₄)
Total Dissolved Solids (TDS)

**WATER QUALITY VARIABLES REQUIRED FOR DETECTION
MONITORING ANNUALLY**

Monitor for:

Arsenic (As)
Cadmium (Cd)
Chromium (hexavalent and total)
Cyanide (free) (CN)
Dissolved organic carbon (DOC)
E. Coli (counts per 100ml)
Lead (Pb)
Manganese (Mn)
Mercury (Hg)
Poly Aromatic Hydrocarbon (PAH)
Poly Chlorinated Hydrocarbon (PCH)
Soluble orthophosphate (PO₄-P)
Total organic carbon (TOC)
Total phenol (Phen)
Uranium (U)
Vanadium (V)

N.C

ANNEXURE VII: LANDFILL GAS MONITORING PLAN

