

# Draft Standard for Disposal of Waste to Landfill

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The operational divisions that make up Interwaste (Pty) Ltd offer a wide range of environmental products and services. The synergies that exist between these divisions allow the company to present itself as a one-stop environmental services provider.

### LOGISTICS DIVISION

- INDUSTRIAL & COMMERCIAL WASTE MANAGEMENT
- HAZARDOUS WASTE MANAGEMENT
- WASTE FACILITY OPERATION
- GOODS DESTRUCTION & SAFE DISPOSAL
- HAZMAT RESPONSE & CLEAN-UP
- ON-SITE WASTE MANAGEMENT SERVICES
- INDUSTRIAL CLEANING SERVICES
- EFFLUENT TREATMENT
- HAZPAK SERVICES
- TRANSFER STATION MANAGEMENT
- PLANT & EQUIPMENT HIRE
- MATERIALS HANDLING
- DEMOLITION & SITE CLEARING



### LANDFILL DIVISION

- LANDFILL FACILITY CONSTRUCTION, MANAGEMENT AND OPERATION
- SETA ACCREDITED INDUSTRY TRAINING
- WASTE TO ENERGY PROJECTS
- LANDFILL GAS OPERATIONS
- LANDFILL SITE REHABILITATION
- ENVIRONMENTAL AUDITING



### RECOVERY & RECYCLING

- MATERIALS RECOVERY FACILITIES
- eeZeeBin SYSTEM
- METALS RECYCLING
- ELECTRONIC WASTE SERVICES



### ORGANICS DIVISION

- ORGANIC MEDIUM PRODUCTION
- CONTRACT CHIPPING
- REMEDATION & REHABILITATION

### RESEARCH & DEVELOPMENT DIVISION

- WASTE REUTILISATION
- WASTE COMMODITY TRADING
- CONTAMINATED LAND PROJECTS



The waste management industry in South Africa is a dynamic, continually evolving entity. Through prudent government leadership it is being steered toward a situation where it can successfully respond to ever more stringent environmental challenges.

The legislation reprinted here will have far reaching consequences on the waste industry, and by default, on every South African.

But its implementation will not be easy.

It will make demands of all stakeholders, from the waste generator to those in local government tasked with overseeing delivery and compliance.

A task made easier with the right partners.

The operational divisions that make up Interwaste (Pty) Ltd allow the company to present itself as a one-stop holistic environmental services supplier.

From waste collection and treatment to recycling and resource reutilisation.

From landfill facility construction and management to site clearing and the rehabilitation of polluted land.

The fact that Interwaste has been promoting these proposed strategies as the basis of its' operational vision for many years reinforces the companys' claim to being at the forefront of waste management development in South Africa.

This booklet should prove of interest and assistance to every waste generator. Interwaste can assist should you need further information on any general or specific area relating to waste management in southern Africa.



**DRAFT STANDARD FOR DISPOSAL OF  
WASTE TO LANDFILL**

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**GENERAL NOTICE**

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**DEPARTMENT OF ENVIRONMENTAL AFFAIRS**

**NOTICE.....OF 2010**

**NATIONAL ENVIRONMENTAL MANAGEMENT: WASTE ACT, 2008 (ACT  
NO. 59 of 2008)**

**DRAFT STANDARD FOR DISPOSAL OF WASTE TO LANDFILL**

I, Buyelwa Sonjica, Minister of Water and Environmental Affairs, intend setting a Standard for Disposal of Waste to Landfill under Section 7(1)(a) and 7(1)(c) of the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008) as set out in the Schedule hereto.

Any person who wishes to submit written representations or comments in connection with the draft standard are invited to do so within 60 days of the date of this notice. All written representations and comments must be submitted in writing to the Director-General of the Department of Environmental Affairs:

By post to: The Director-General, Attention: Ms. Nomphele Daniel,  
Department of Environmental Affairs, Private Bag X447,  
Pretoria, 0001

Delivered to: The Department of Environmental Affairs, Attention: Ms.  
Nomphele Daniel, Fedsure Forum Building, 315 Pretorius Street,  
Pretoria, 0002

By fax to: (012) 320 .....

By e-mail to: [ndaniel@environment.gov.za](mailto:ndaniel@environment.gov.za)

Comments received after the closing date may not be considered.

**BUYELWA SONJICA**

**MINISTER OF WATER AND ENVIRONMENTAL AFFAIRS**

**SCHEDULE**

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**PART 1: INTERPRETATION AND PURPOSE**

**1. Definitions**

(1) In this Standards any word or expression to which a meaning has been assigned in the Act has that same meaning, and unless the context requires otherwise—

**“the Act”** means the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008);

**“the Regulations”** means the Waste Classification and Management Regulations (*GN R....., ..... December 2010*);

## 2. Purpose and Application

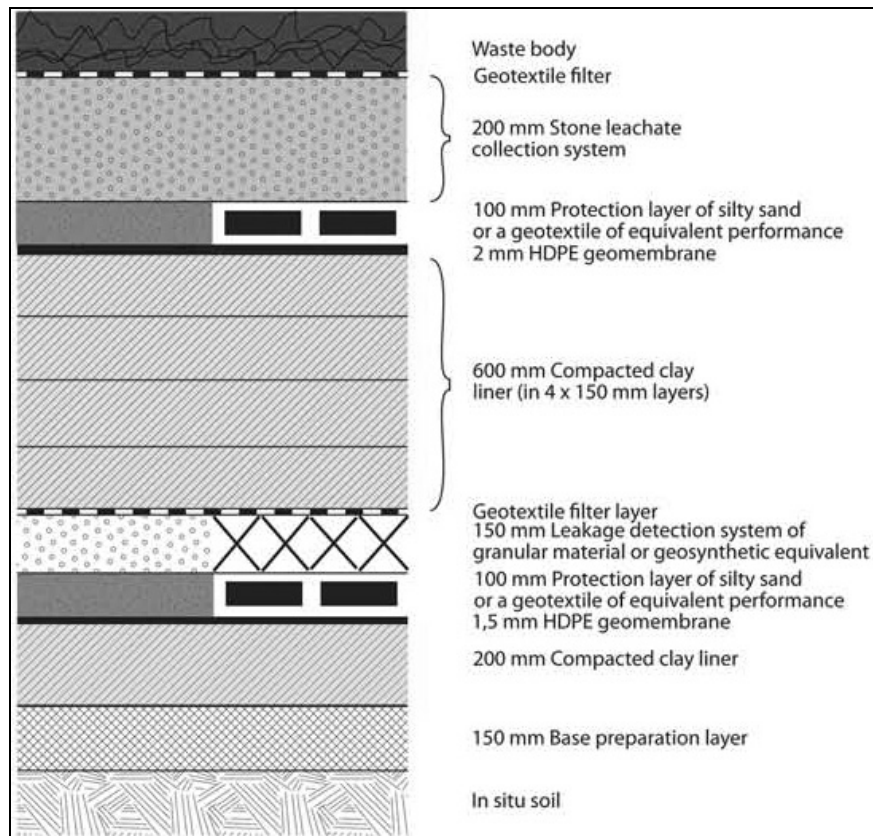
- (1) This Standard prescribes the requirements for the disposal of waste to landfill in terms of Regulation 8(2) and 8(4) of the Regulations.
- (2) This Standard does not apply to waste stored in lagoons.

## **PART 2: STANDARD DESIGN, ACCEPTANCE AND DISPOSAL REQUIREMENTS**

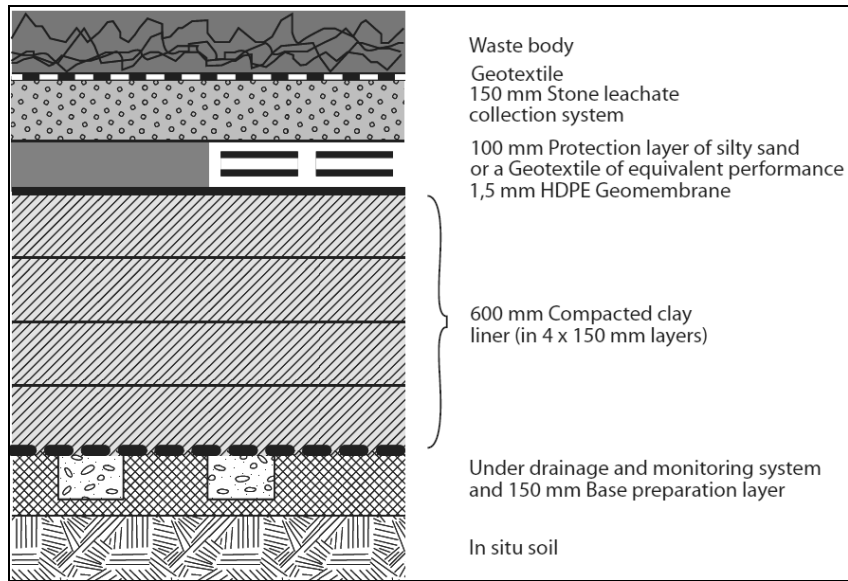
### 3. Landfill Classification and Containment Barrier Design

- (1) The containment barriers of landfills for the disposal of waste in terms of Section 4 of this Standard must comply with the following engineering design requirements—

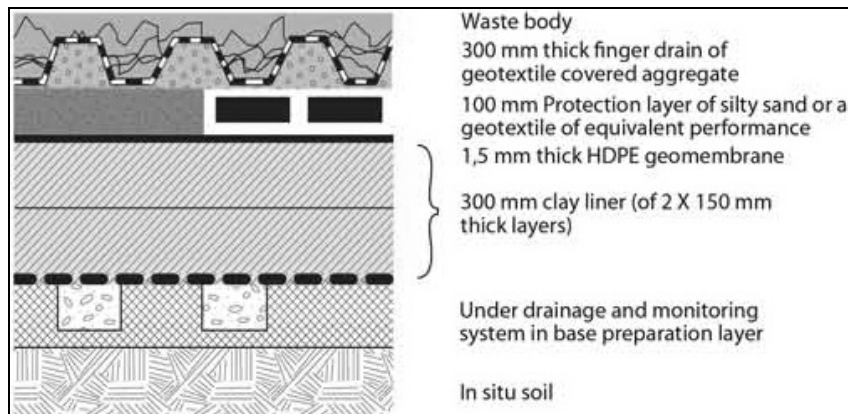
#### (a) Class A Landfill:



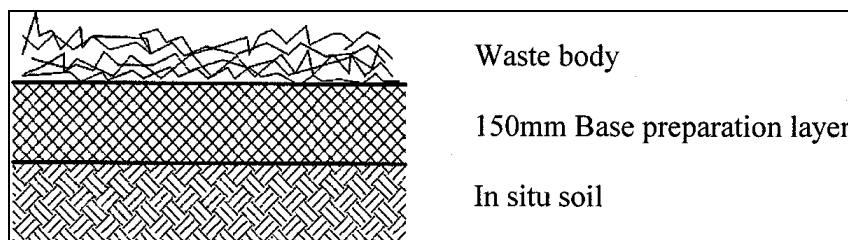
(b) Class B Landfill:



(c) Class C Landfill:



(c) Class D – Inert Landfill:



(2) The following requirements must be complied with during the design and installation process of landfill containment barriers—

- (a) Design reports and drawings shall be signed off by a registered professional engineer prior to submission to the Regional Director;

- (b) Service life considerations shall be quantified recognising temperature effects on containment barriers;
- (c) Total solute shall be assessed (inorganic and organic) in determining acceptable leakage rates and action leakage rates;
- (d) Alternative elements of approved equivalent performance may be considered; such as the replacement of —
  - (i) granular filters or drains with geosynthetic filters or drains;
  - (ii) protective soil layers with geotextiles; or
  - (iii) clay components with geomembranes or geosynthetic clay liners.
- (e) All drainage layers shall contain drainage pipes of adequate size, spacing and strength to ensure atmospheric pressure within the drainage application for the service life of the landfill;
- (f) Alternative design layouts for slopes exceeding 1:4 (vertical:horizontal) may be considered provided equivalent performance is demonstrated;
- (g) Construction Quality Assurance (CQA) is required on site;
- (h) Geosynthetic materials shall comply with relevant South African National Standards (SANS) specifications, or accepted best practice; and
- (i) Chemical compatibility testing of proposed clay components with wastes containing salt is required.

(3) The landfill classification and containment barrier design requirements in Section 3(1) and 3(2) supersede the liner design requirements for landfills contained in the Minimum Requirements for Waste Disposal by Landfill (2<sup>nd</sup> Edition, 1998; Department of Water Affairs and Forestry).

(4) Notwithstanding Section 3(3), waste may be disposed of in terms of Section 4 of this Standard at landfills with the liner design requirements for landfills contained in the Minimum Requirements for Waste Disposal by Landfill (2<sup>nd</sup> Edition, 1998; Department of Water Affairs and Forestry), subject to the following—

- (a) The working cell at the landfill was in operation before the date of publication of this Notice; or
- (b) The next working cell at the landfill was legally authorised before the date of publication of this Notice.

(5) Subject to Section 4, the classification and containment barrier design of all new landfills, as well as new working cells at existing landfills, must be implemented in accordance with Section 3(1) and 3(2) of this Standard.

#### 4. Waste Acceptance Criteria for Disposal to Landfill

(1) Waste may only be accepted and disposed of at appropriately designed and operated landfills as stipulated below—

Waste Risk Level	Landfill Disposal Requirements
<b>Type 0:</b> <b>Very High Risk</b>	The disposal of Type 1 waste to landfill is <b>not allowed</b> . The waste must be treated and re-assessed in terms of the <i>Standard for Assessment of Waste for Landfill Disposal</i> to determine the level of risk associated with disposing the waste to landfill.
<b>Type 1:</b> <b>High Risk</b>	Type 2 waste may only be disposed of at a <b>Class A</b> landfill designed in accordance with Section 3(1) and 3(2), or, subject to Section 3(4), may be disposed of at a landfill site designed and operated in accordance with the requirements for a <b>Hh / HH landfill</b> as specified in the Minimum Requirements for Waste Disposal by Landfill (2 <sup>nd</sup> Ed., DWAF, 1998).
<b>Type 2:</b> <b>Moderate Risk</b>	Type 3 waste may only be disposed of at a <b>Class B</b> landfill designed in accordance with Section 3(1) and 3(2), or, subject to Section 3(4), may be disposed of at a landfill site designed and operated in accordance with the requirements for a <b>GLB+ landfill</b> as specified in the Minimum Requirements for Waste Disposal by Landfill (2 <sup>nd</sup> Ed., DWAF, 1998).
<b>Type 3:</b> <b>Low Risk</b>	Type 4 waste may only be disposed of at a <b>Class C</b> landfill designed in accordance with Section 3(1) and 3(2), or, subject to Section 3(4), may be disposed of at a landfill site designed and operated in accordance with the requirements for a <b>GLB+ landfill</b> as specified in the Minimum Requirements for Waste Disposal by Landfill (2 <sup>nd</sup> Ed., DWAF, 1998).
<b>Type 4:</b> <b>Inert Waste</b>	Disposal allowed at a landfill with a <b>Class D</b> landfill designed in accordance with Section 3(1) and 3(2), or, subject to Section 3(4), may be disposed of at a landfill site designed and operated in accordance with the requirements for a <b>GSB- landfill</b> as specified in the Minimum Requirements for Waste Disposal by Landfill (2 <sup>nd</sup> Ed., DWAF, 1998).
<b>Non-hazardous Waste</b> <b>(Pre-classified in the Regulations)</b>	Disposal only allowed at a <b>Class B</b> landfill designed in accordance with Section 3(1) and 3(2), or, subject to Section 3(4), at a landfill site designed and operated in accordance with the requirements for a general waste site, <b>G S/M/L B-/B+</b> as specified in the Minimum Requirements for Waste Disposal by Landfill (2 <sup>nd</sup> Ed., DWAF, 1998).

(2) Waste that was classified in terms of the Minimum Requirements for the Handling, Classification and Disposal of Hazardous Waste (2<sup>nd</sup> Edition, 1998; Department of Water Affairs and Forestry) prior to the Regulations taking effect, may be accepted and disposed of at appropriately designed and operated landfills as stipulated below for a period not exceeding eighteen (18) months after the effective date of the Regulations—

Waste	Disposal Requirement
<b>Hazardous Waste – Hazard Rating 1 or 2</b>	Disposal only allowed at a <b>Class A</b> landfill designed in accordance with Section 3(1) and 3(2), or, subject to Section 3(4), at a landfill site designed and operated in accordance with the requirements for a <b>HH landfill</b> as specified in the Minimum Requirements for Waste Disposal by Landfill (2 <sup>nd</sup> Ed., DWAF, 1998).
<b>Hazardous Waste – Hazard Rating 3 or 4</b>	Disposal only allowed at a <b>Class A</b> landfill designed in accordance with Section 3(1) and 3(2), or, subject to Section 3(4), at a landfill site designed and operated in accordance with the requirements for a <b>Hh landfill</b> as specified in the Minimum Requirements for Waste Disposal by Landfill (2 <sup>nd</sup> Ed., DWAF, 1998).
<b>Hazardous Waste - Delisted</b>	Disposal only allowed at a <b>Class B</b> landfill designed in accordance with Section 3(1) and 3(2), or, subject to Section 3(4), at a landfill site designed and operated in accordance with the requirements for a <b>GLB+ landfill</b> as specified in the Minimum Requirements for Waste Disposal by Landfill (2 <sup>nd</sup> Ed., DWAF, 1998).
<b>General Waste</b>	Disposal only allowed at a <b>Class B</b> landfill designed in accordance with Section 3(1) and 3(2), or, subject to Section 3(4), at a landfill site designed and operated in accordance with the requirements for a general waste site, <b>G S/M/L B-/B+</b> as specified in the Minimum Requirements for Waste Disposal by Landfill (2 <sup>nd</sup> Ed., DWAF, 1998).

(3) Notwithstanding the requirements of Sections 4(1) and 4(2), waste may be disposed of at landfills with a higher level of containment design than specified, subject to the restriction in Section 5(2)(a)(ii).

## 5. Waste Disposal Restrictions

(1) The following prohibitions and restrictions on the disposal of waste to landfill comes into effect after the timeframes as indicated for each waste from the date of publication of this Notice—

<b>Waste Prohibited or Restricted in terms of Disposal</b>	<b>Compliance Timeframe</b>
(a) Waste which, in the conditions of a landfill, is explosive, corrosive, oxidizing, or flammable (according to SANS 10234).	Immediate
(b) Waste with a pH value of <6 or >12.	Immediate
(c) Reactive waste that may react with water, air, acids or components of the waste, or that could generate unacceptable amounts of toxic gases within the landfill.	Immediate
(d) Waste compressed gases (according to SANS 10234).	Immediate
(e) Untreated Healthcare Risk Waste (HCRW).	Immediate
(f) (i) POPs pesticides listed under the Stockholm Convention. (ii) Residue pesticides and pesticide containers.	Five (5) years Three (3) years
(g) Lead acid batteries.	Immediate
(h) Other batteries	Eight (8) years
(i) Reclaimable or recyclable used oil, as well as oil filters, but excluding other oil containing wastes.	Four (4) years
(j) Reclaimable or recyclable used or spent solvents.	Five (5) years
(k) PCB wastes (>50 mg/kg or 50 ppm).	Five (5) years
(l) Waste Electric and Electronic Equipment (WEEE) – Lights.	Three (3) years
(m) Waste Electric and Electronic Equipment (WEEE) – Other.	Eight (8) years
(n) Waste tyres: Whole.	Immediate
(o) Waste tyres: Quartered.	Five (5) years
(p) Liquid waste– (i) Waste which has an angle of repose of less than 5 degrees, or becomes free-flowing at or below 60 °C or when it is transported, or is not generally capable of being picked up by a spade or shovel; or (ii) Waste with a moisture content of >40% or that liberates moisture under pressure in landfill conditions, and which has not been stabilised by treatment.	Five (5) years
(q) Hazardous waste with a calorific value of: (i) > 25 MJ/kg. (ii) > 20 MJ/kg. (iii) > 10 MJ/kg. (iv) > 6% TOC.	Four (4) years Six (6) years Eight (8) years Ten (10) years
(r) Brine or waste with a high salt content (TDS > 5%), and an LC concentration for TDS of more than the LCT2 value prescribed for TDS.	Eight (8) years
(s) Disposal of garden waste: (i) 25% diversion from baseline. (ii) 50% diversion from baseline.	Five (5) years Ten (10) years
(t) Infectious animal carcasses and animal waste.	Immediate

(2) The following prohibitions and restrictions on activities related to the disposal of waste to landfill comes into effect after the timeframes as indicated for each activity from the date of publication of this Notice—

<b>Prohibited or Restricted Waste Disposal Activities</b>	<b>Timeframe</b>
(a) Disposal of— (i) Type 0: Very High Risk waste that has been treated with Pre-classified non-hazardous waste; and (ii) Pre-classified non-hazardous waste with hazardous waste.	Five (5) years
(b) Macro encapsulation of waste.	Eight (8) years



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