



Headquarters  
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Ireland

WASTE LICENCE  
RECOMMENDED DECISION  
LANDFILL FOR NON-HAZARDOUS WASTE

<b>Waste Licence Register Number:</b>	W0191-02
<b>Licensee:</b>	Wexford County Council
<b>Location of Facility:</b>	Within the townlands of Holmestown Great, Glenduff, Bolgerstown, Muchwood, Ballyeaton, County Wexford.

# INTRODUCTION

This introduction is not part of the licence and does not purport to be a legal interpretation of the licence.

The facility is an integrated waste management facility comprising the following: recycling infrastructure including a Civic Waste Facility for use by member of the public for the recycling of household waste; a Materials Recovery Facility or MRF, a composting facility and a landfill for the disposal of non-hazardous household and commercial waste up to a maximum quantity of 55,000 tonnes per annum.

The licence sets out in detail the conditions under which Wexford County Council will operate and manage this facility.

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# DECISION & REASONS FOR THE DECISION

## *Reasons for the Decision*

The Environmental Protection Agency is satisfied, on the basis of the information available, that subject to compliance with the conditions of this licence, any emissions from the activity will comply with and will not contravene any of the requirements of Section 40 (4) of the Waste Management Acts 1996 to 2008.

In reaching this decision the Environmental Protection Agency has considered documentation received from the licensee, including a submission, and the report of its inspector

## INTERPRETATION

All terms in this licence should be interpreted in accordance with the definitions in the Waste Management Acts, 1996 to 2008, (the Act), unless otherwise defined in this section.

<b>Aerosol</b>	A suspension of solid or liquid particles in a gaseous medium.
<b>Adequate lighting</b>	20 lux measured at ground level.
<b>Agreement</b>	Agreement in writing.
<b>Annually</b>	At approximately twelve monthly intervals.
<b>Attachment</b>	Any reference to Attachments in this licence refers to attachments submitted as part of the waste licence application.
<b>Application</b>	The application by the licensee for this waste licence.
<b>Appropriate facility</b>	A waste management facility, duly authorised under relevant law and technically suitable.
<b>BAT</b>	Best Available Techniques as defined in Article 2(11) of Council Directive 96/61/EC concerning integrated pollution prevention and control.
<b>Biodegradable waste</b>	Waste that is capable of undergoing anaerobic or aerobic decomposition, such as food and garden waste and paper and cardboard.
<b>Biodegradable municipal waste (BMW)</b>	The biodegradable component of municipal waste, not including bio-stabilised residual waste. Biodegradable municipal waste is typically composed of food and garden waste, wood, paper, cardboard and textiles.
<b>Bio-stabilised residual waste</b>	Residual biodegradable municipal waste that has been treated to achieve an EPA-approved biodegradability stability standard (as defined in this licence) prior to landfilling or alternative use agreed.
<b>CEN</b>	Comité Européen De Normalisation – European Committee for Standardisation
<b>Characterisation of waste</b>	The sampling and analysis of waste to determine, amongst other things, its nature and composition, including the proportions of biodegradable, recyclable and other materials in the waste.

<b>Classification of waste</b>	The classification of waste as inert, non-hazardous or hazardous for the purpose of article 4 of Council Directive (1999/31/EC) on the landfill of waste.
<b>Coding of waste</b>	The allocation of a European Waste Catalogue/Hazardous Waste List code and a concise/standardised description of the waste, including information on the source of the waste, e.g. municipal, industrial, construction and demolition etc.
<b>Condition</b>	A condition of this licence.
<b>Construction and Demolition Waste</b>	All wastes which arise from construction, renovation and demolition activities.
<b>Containment boom</b>	A boom which can contain spillages and prevent them from entering drains or watercourses.
<b>Cover material</b>	Bricks, crushed concrete, tarmac, earth, soil, sub-soil, stone, rock or other similar natural materials; or  other cover material the use of which has been agreed by the Agency.
<b>Daily Cover</b>	Is the term used to describe material spread (about 150mm if soil cover is used) over deposited waste at the end of each day. Synthetic materials may also be used. Its objective is to minimise odour, the amount of litter generated and to control flies and access to the waste by birds and vermin. Where soils are used for daily cover, it is recommended that they be removed at the start of the day and subsequently reused as much as possible.
<b>Daytime</b>	0800 hrs to 2200 hrs.
<b>Documentation</b>	Any report, record, result, data, drawing, proposal, interpretation or other document in written or electronic form which is required by this licence.
<b>Drawing</b>	Any reference to a drawing or drawing number means a drawing or drawing number contained in the application, unless otherwise specified in this licence.
<b>Emergency</b>	Those occurrences defined in Condition 9.4.
<b>Emission Limits</b>	Those limits, including concentration limits and deposition levels established in <i>Schedule C: Emission Limits</i> , of this licence.
<b>European Waste Catalogue (EWC)</b>	A harmonised, non-exhaustive list of wastes drawn up by the European Commission and published as Commission Decision 94/3/EC and any subsequent amendment published in the Official Journal of the European Community.
<b>Green waste</b>	Waste wood (excluding timber), plant matter such as grass cuttings, and other vegetation.
<b>Hours of Operation</b>	The hours during which the facility is authorised to be operational. The hours of operation of a facility are usually longer than the hours of waste acceptance to facilitate preparatory and completion works, such as the removal and laying of daily cover. Different activities within the facility, such as the landfill and the civic waste facility, may have different hours of waste acceptance.
<b>Hours of Waste Acceptance</b>	The hours during which the facility is authorised to accept waste. Different activities within the facility, such as the landfill and the civic waste facility, may have different hours of waste acceptance.
<b>Incident</b>	The following shall constitute an incident for the purposes of this licence:

- a) an emergency;
- b) any emission which does not comply with the requirements of this licence;
- c) any exceedance of the daily duty capacity of the waste handling equipment;
- d) any trigger level specified in this licence which is attained or exceeded; and,
- e) any indication that environmental pollution has, or may have, taken place.

<b>Inert waste</b>	Waste that does not undergo any significant physical, chemical or biological transformations. Inert waste will not dissolve, burn or otherwise physically or chemically react, biodegrade or adversely affect other matter with which it comes into contact in a way likely to give rise to environmental pollution or harm human health. The total leachability and pollutant content of the waste and the ecotoxicity of the leachate must be insignificant, and in particular not endanger the quality of surface water and/or groundwater.
<b>Intermediate Cover</b>	Refers to placement of material (minimum 300mm if soil is used) for a period of time prior to restoration or prior to further disposal of waste.
<b>Landfill</b>	Refers to the area of the facility where the waste is disposed of by placement on the ground or on other waste.
<b>Landfill Gas</b>	Gases generated from the landfilled waste.
<b>LEL (Lower Explosive Limit)</b>	The lowest percentage concentration by volume of a mixture of flammable gas with air which will propagate a flame at 25°C and atmospheric pressure.
<b>Licence</b>	A waste licence issued in accordance with the Act.
<b>Licensee</b>	Wexford County Council.
<b>List I/II Organics</b>	Substances classified pursuant to EC Directives 76/464/EEC and 80/68/EEC.
<b>Liquid Waste</b>	Any waste in liquid form and containing less than 2% dry matter. Any waste tankered to the facility.
<b>Maintain</b>	Keep in a fit state, including such regular inspection, servicing and repair as may be necessary to adequately perform its function.
<b>Mobile Plant</b>	Self-propelled machinery used for the emplacement of wastes or for the construction of specified engineering works.
<b>Monthly</b>	A minimum of 12 times per year, at approximately monthly intervals.
<b>Municipal solid waste (MSW)</b>	Household waste as well as commercial and other waste which, because of its nature or composition, is similar to household waste. Excluding municipal sludges and effluents.
<b>Night-time</b>	2200 hrs to 0800 hrs.
<b>Noise Sensitive Location</b>	Any dwelling house, hotel or hostel, health building, educational establishment, place of worship or entertainment, or any other facility or area of high amenity which for its proper enjoyment requires the absence of noise at nuisance levels.
<b>Non-hazardous Asbestos Waste</b>	Includes bonded asbestos, such as tiles, which are not classified as hazardous waste and which are authorised for disposal at the facility.

<b>Recyclable Materials</b>	Those waste types, such as cardboard, batteries, gas cylinders, etc which may be recycled.
<b>Residual waste</b>	The fraction of collected waste remaining after a treatment or diversion step, which generally requires further treatment or disposal.
<b>Quarterly</b>	At approximately three monthly intervals.
<b>Sample(s)</b>	Unless the context of this licence indicates to the contrary, samples shall include measurements by electronic instruments.
<b>SCADA system</b>	Supervisory Control and Data Acquisition system.
<b>Sludge</b>	The accumulation of solids resulting from chemical coagulation, flocculation and/or sedimentation after water or wastewater treatment with > 2% dry matter.
<b>SOP</b>	Standard Operating Procedure.
<b>Specified Emissions</b>	Those emissions listed in <i>Schedule C: Emission Limits</i> , of this licence.
<b>Specified Engineering Works</b>	Those engineering works listed in <i>Schedule B: Specified Engineering Works</i> , of this licence.
<b>TOC</b>	Total Organic Carbon.
<b>Treated Sludge</b>	Sludge which has undergone biological, chemical or heat treatment, long-term storage or any other appropriate process so as significantly to reduce its fermentability and the health hazards resulting from its use.
<b>Treatment/pre-treatment</b>	In relation to waste, any manual, thermal, physical, chemical or biological processes that change the characteristics of waste in order to reduce its volume or hazardous nature or facilitate its handling, disposal or recovery.
<b>Trigger Level</b>	A parameter value specified in the licence, the achievement or exceedance of which requires certain actions to be taken by the licensee.
<b>Wastewater</b>	Contaminated water including water that has been used for washing and/or flushing (including sanitary effluent).
<b>White Goods</b>	Refrigerators, cookers, ovens and other similar appliances.
<b>EPA Working Day</b>	Refers to the following hours: 0900 hrs to 1730 hrs Monday to Friday inclusive.
<b>Working Face</b>	The area of the site in which waste other than cover material or material for the purposes of the construction of specified engineering works is being deposited.

## ***Part I: Schedule of Activities Licensed***

In pursuance of the powers conferred on it by the Waste Management Acts 1996 to 2008, the Environmental Protection Agency (the Agency) proposes, under Section 46(8) of the said Acts to grant this waste licence to Wexford County Council, County Hall, Spawell Road, Wexford, County Wexford to carry on the waste activities listed below at a waste facility located within the townlands of Holmestown Great, Glenduff, Bolgerstown, Muchwood, Ballyeaton, County Wexford, subject to conditions, with the reasons therefor and associated schedules attached thereto set out in the licence.

For the purpose of Article 48 of the Waste Management (Licensing) Regulations 2004 (S.I. No. 395) this facility is classed as a non-hazardous waste landfill.

### *Licensed Waste Disposal Activities, in accordance with the Third Schedule of the Waste Management Acts, 1996 to 2008*

<b>Class 1</b>	<b>Deposit on, in or under land (including landfill):</b>  This activity is limited to the landfilling of non-hazardous household and commercial wastes.
<b>Class 4</b>	<b>Surface impoundment, including placement of liquid or sludge discards into pits, ponds or lagoons:</b>  This activity is limited to the temporary storage of leachate in a lagoon, prior to its removal offsite for treatment.
<b>Class 5</b>	<b>Specially engineered landfill, including placement into lined discrete cells which are capped and isolated from one another and the environment:</b>  This activity is limited to the landfilling of non-hazardous household and commercial wastes.
<b>Class 6</b>	<b>Biological treatment not referred to elsewhere in this Schedule which results in final compounds or mixtures which are disposed of by means of any activity referred to in paragraphs 1 to 10 of this Schedule:</b>  This activity is limited to the disposal of material which is composted on-site, which fails to comply with the standards set out in <i>Schedule G: Compost Quality</i> of this licence.
<b>Class 7</b>	<b>Physico-chemical treatment not referred to elsewhere in this Schedule (including evaporation, drying and calcination) which results in final compounds or mixtures which are disposed of by means of any activity referred to in paragraphs 1 to 10 of this Schedule:</b>  This activity is limited to the pre-treatment of leachate on-site prior to its removal offsite for treatment and disposal.
<b>Class 11</b>	<b>Blending or mixture prior to submission to any activity referred to in a preceding paragraph of this Schedule:</b>  This activity is limited to the mixing of non-hazardous waste at the Civic Waste Facility, Materials Recovery Facility and composting facility prior to disposal at the landfill.
<b>Class 12</b>	<b>Repackaging prior to submission to any activity referred to in a preceding paragraph of this Schedule:</b>  This activity is limited to the mixing or compaction of waste and the reloading of waste tipped for inspection into a container prior to landfilling or disposal offsite.
<b>Class 13</b>	<b>Storage prior to submission to any activity referred to in a preceding paragraph of this Schedule, other than temporary storage, pending collection, on the premises where the waste concerned is produced:</b>  This activity is limited to the temporary storage of waste in the Civic Waste facility prior to disposal at the landfill.



*Licensed Waste Recovery Activities, in accordance with the  
Fourth Schedule of the Waste Management Acts, 1996 to 2008*

<b>Class 2</b>	<b>Recycling or reclamation of organic substances which are not used as solvents (including composting and other biological transformation processes):</b>  This activity is limited to the collection of organic wastes at the Civic Waste Facility and the composting or recovery of organic waste.
<b>Class 3</b>	<b>Recycling or reclamation of metals and metal compounds:</b>  This activity is limited to the collection of metal at the Civic Waste Facility e.g. scrap metal, white goods, cans, batteries and the removal of metals from other waste in the Civic Waste Facility and Materials Recovery Facility.
<b>Class 4</b>	<b>Recycling or reclamation of other inorganic materials:</b>  This activity is limited to the collection inorganic recyclables such as glass, textiles and clothing, batteries, fluorescent tubes and construction and demolition wastes in the Civic Waste Facility. It also refers to the use of construction and demolition wastes in restoration and engineering projects.
<b>Class 10</b>	<b>The treatment of any waste on land with a consequential benefit for an agricultural activity or ecological system:</b>  This activity is limited to the possible future spreading of composts or treated sludges on the landfill as part of its restoration.
<b>Class 11</b>	<b>Use of waste obtained from any activity referred to in a preceding paragraph of this Schedule:</b>  This activity is limited to the use of composted waste and construction and demolition waste in recovery or restoration projects at the landfill.
<b>Class 12</b>	<b>Exchange of waste for submission to any activity referred to in a preceding paragraph of this Schedule:</b>  This activity is limited to the exchange of waste at the Civic Waste Facility.
<b>Class 13</b>	<b>Storage of waste intended for submission to any activity referred to in a preceding paragraph of this Schedule, other than temporary storage, pending collection, on the premises where such waste is produced:</b>  This activity is limited to the storage of waste on-site prior to recycling or reclamation activities.

## ***PART II CONDITIONS***

### **CONDITION 1 SCOPE OF THE LICENCE**

- 1.1. Waste activities at the facility shall be restricted to those listed and described in Part I: Activities Licensed and authorised by this licence.
- 1.2. For the purposes of this licence, the facility is the area of land outlined in red on Figure B.2.2 of the application. Any reference in this licence to "facility" shall mean the area thus outlined in red.
- 1.3. This licence is for the purposes of waste licensing under the Waste Management Acts, 1996 to 2008 only and nothing in this licence shall be construed as negating the licensee's statutory obligations or requirements under any other enactments or regulations.
- 1.4. Municipal Waste, Commercial Waste and Industrial Waste may be recovered and disposed of at the facility subject to the maximum quantities and other constraints listed in *Schedule A: Waste Acceptance*, of this licence. In relation to composting, only the wastes as outlined in *Schedule A: Waste Acceptance* of this licence and as listed under Annex 1 of the EC Working Document 'Biological Treatment of Biowaste' (2<sup>nd</sup> draft) or subsequent amendments shall be accepted at the facility for the production of compost. Waste types outlined in *Schedule A: Waste Acceptance* of this licence and not listed under Annex 1 of the EC Working Document 'Biological Treatment of Biowaste' (2<sup>nd</sup> draft) shall be disposed of unless otherwise agreed by the Agency. Hazardous wastes shall not be accepted for composting at the facility.
- 1.5. Waste Acceptance Hours and Hours of Operation
  - 1.5.1. Landfill
    - 1.5.1.1. Waste may be accepted at the facility for disposal or recovery at the landfill only between the hours of 08.30 and 16.30 Monday to Saturday.
    - 1.5.1.2. The facility may be operated only during the hours of 08.00 and 17.00.
    - 1.5.1.3. Waste shall not be accepted at the landfill on Bank Holidays.
  - 1.5.2. Civic Waste Facility and Materials Recovery Facility
    - 1.5.2.1. Waste shall be accepted at the Civic Waste Facility and Materials Recovery Facility only between the hours of 08.30 and 16.30 Monday to Saturday.
- 1.6. Every plan, programme or proposal submitted to the Agency for its agreement pursuant to any condition of this licence shall include a proposed timescale for its implementation. The Agency may modify or alter any such plan, programme or proposal in so far as it considers such modification or alteration to be necessary and shall notify the licensee in writing of any such modification or alteration. Every such plan, programme or proposal shall be carried out within the timescale fixed by the Agency but shall not be undertaken without the agreement of the Agency. Every such plan, programme or proposal agreed by the Agency shall be covered by the conditions of this licence.
- 1.7. Notwithstanding the requirements of any other condition of this licence the licensee may accept waste electrical and electronic equipment at the civic waste facility delivered to the facility from commercial retail premises.

- 1.8 This licence is being granted in substitution for the waste licence granted to the licensee on 10th December 2004 bearing Waste Licence Register No: W0191-01. The previous waste licence (Register No: W0191-01) is superseded by this licence.

*REASON: To clarify the scope of this licence.*

## **CONDITION 2 MANAGEMENT OF THE FACILITY**

### **2.1 Facility Management**

- 2.1.1 The licensee shall employ a suitably qualified and experienced facility manager who shall be designated as the person in charge. The facility manager or a nominated, suitably qualified and experienced, deputy shall be present on the facility at all times during its operation.
- 2.1.2 The Civic Waste Facility shall be supervised by an appropriately qualified and competent person at all times while waste may be accepted.
- 2.1.3 Both the facility manager and deputy, and any replacement manager or deputy, shall successfully complete both the FAS Waste Management Training Programme (or equivalent agreed by the Agency) and associated on site assessment appraisal within twelve months of appointment.
- 2.1.4 The licensee shall ensure that personnel performing specifically assigned tasks shall be qualified on the basis of appropriate education, training and experience, as required and shall be aware of the requirements of this licence.

### **2.2 Management Structure**

- 2.2.1 The licensee shall maintain written details of the management structure of the facility. Any proposed replacement in the management structure shall be notified in advance in writing to the Agency. Written details of the management structure shall include the following information:-
- a) The names of all persons who are to provide the management and supervision of the waste activities authorised by the licence, in particular the name of the facility manager and any nominated deputies;
  - b) Details of the responsibilities for each individual named under a) above; and
  - c) Details of the relevant education, training and experience held by each of the persons nominated under a) above.

### **2.3 Environmental Management System (EMS)**

- 2.3.1 The licensee shall establish and maintain an EMS. The EMS shall be updated on an annual basis with amendments being submitted to the Agency for its agreement as part of the AER.
- 2.3.2 The EMS shall include as a minimum the following elements.

#### **2.3.2.1 Schedule of Environmental Objectives and Targets**

The licensee shall prepare and maintain a Schedule of Environmental Objectives and Targets. The schedule shall, as a minimum, provide for a review of all operations and processes, including an evaluation of practicable options, for energy and resource efficiency, the use of cleaner technology

(including emissions prevention/reduction), and the beneficial recovery/recycling of waste in subsequent landfill engineering operations. The schedule shall include time frames for the achievement of set targets and shall address a five-year period as a minimum. The schedule shall be reviewed annually and amendments thereto notified to the Agency for agreement as part of the Annual Environmental Report (AER).

The licensee shall ensure insofar as practicable that environmental objectives and targets are met according to the stated schedule.

#### 2.3.2.2 Environmental Management Plan (EMP)

The EMP shall include, as a minimum, the following: -

- a) The items specified to be contained in an Environmental Management Plan in the Landfill Operational Practices Manual published by the Agency;
- b) Methods by which the objectives and targets will be achieved and the identification of those responsible for achieving those objectives and targets; and
- c) Any other items required by written guidance issued by the Agency.

#### 2.3.2.3 Landfill Environmental Management Plan (LEMP)

Notwithstanding the provisions of Condition 2.3.2.2, the licensee shall prepare, operate and maintain a Landfill Environmental Management Plan (LEMP), covering aspects not already covered in the EMP. This Plan shall have regard to the guidance set out in EPA publications. The LEMP shall be regularly reviewed (at least annually) in light of operational experiences at the facility, the stage of development of the facility (active, closure, aftercare), evolving legislative and BAT requirements, as well as any Agency instructions that may issue.

#### 2.3.2.4 Corrective Action Procedures

The Corrective Action Procedures shall detail the corrective actions to be taken should any of the procedures detailed in the EMS not be followed.

#### 2.3.2.5 Awareness and Training Programme

The Awareness and Training Programme shall identify training needs, for personnel who work in or have responsibility for the licensed facility.

### 2.4 Communications Programme

- 2.4.1 The licensee shall establish and maintain a Communications Programme to ensure that members of the public can obtain information at the facility, at all reasonable times, concerning the environmental performance of the facility.

*REASON: To make provision for the proper management of the activity on a planned basis having regard to the desirability of ongoing assessment, recording and reporting of matters affecting the environment.*

## CONDITION 3 FACILITY INFRASTRUCTURE

3.1 The licensee shall establish all infrastructure referred to in this licence prior to the commencement of the licensed activities or as required by the conditions of this licence.

### 3.2 Specified Engineering Works

3.2.1 The licensee shall submit proposals for all Specified Engineering Works, as defined in *Schedule B: Specified Engineering Works*, of this licence, to the Agency for its agreement at least two months prior to the intended date of commencement of any such works. No such works shall be carried out without the prior agreement of the Agency.

3.2.2 All specified engineering works shall be supervised by a competent person(s) and that person, or persons, shall be present at all times during which relevant works are being undertaken.

3.2.3 Following the completion of all specified engineering works, the licensee shall complete a construction quality assurance validation. The validation report shall be made available to the Agency on request. The report shall include the following information:-

- a) A description of the works;
- b) As-built drawings of the works;
- c) Records and results of all tests carried out (including failures);
- d) Drawings and sections showing the location of all samples and tests carried out;
- e) Daily record sheets/diary;
- f) Name(s) of contractor(s)/individual(s) responsible for undertaking the specified engineering works;
- g) Name(s) of individual(s) responsible for supervision of works and for quality assurance validation of works;
- h) Records of any problems and the remedial works carried out to resolve those problems; and
- i) Any other information requested in writing by the Agency.

### 3.3 Facility Notice Board

3.3.1 The licensee shall provide and maintain a Facility Notice Board on the facility so that it is legible to persons outside the main entrance to the facility. The minimum dimensions of the board shall be 1200 mm by 750 mm.

3.3.2 The board shall clearly show:-

- a) The name and telephone number of the facility;
- b) The normal hours of opening;
- c) The name of the licence holder;
- d) An emergency out of hours contact telephone number;
- e) The licence reference number; and
- f) Where environmental information relating to the facility can be obtained.

### 3.4 Facility Security

- 3.4.1 Security and stockproof fencing and gates shall be installed and maintained as described in Section 5.3 of the EIS Addendum. The base of the fencing shall be set in the ground. Subject to the implementation of the restoration and aftercare plan and to the agreement of the Agency, the requirement for such site security may be removed.
- 3.4.2 The licensee shall remedy any defect in the gates and/or fencing as follows:-
- a) A temporary repair shall be made by the end of the working day; and
  - b) A repair to the standard of the original gates and/or fencing shall be undertaken within three working days.
- 3.5 Facility Roads and Hardstanding
- 3.5.1 Effective site roads shall be provided and maintained to ensure the safe movement of vehicles within the facility.
- 3.5.2 The facility entrance area, the access road to the Civic Waste Facility, the Civic Waste Facility itself and the Materials Recovery Facility Area shall be paved and maintained as described in Section 5.38 of the EIS Addendum.
- 3.6 Facility Office
- 3.6.1 The licensee shall provide and maintain an office at the facility. The office shall be constructed and maintained in a manner suitable for the processing and storing of documentation.
- 3.6.2 The licensee shall provide and maintain a working telephone and a method for electronic transfer of information at the facility.
- 3.7 Waste Inspection and Quarantine Areas
- 3.7.1 A Waste Inspection Area and a Waste Quarantine Area shall be provided and maintained at the facility.
- 3.7.2 These areas shall be constructed and maintained in a manner suitable, and be of a size appropriate, for the inspection of waste and subsequent quarantine if required. The waste inspection area and the waste quarantine area shall be clearly identified and segregated from each other.
- 3.7.3 Drainage from these areas shall be directed to the on-site leachate treatment plant.
- 3.8 Weighbridge and Wheel Cleaner
- 3.8.1 The licensee shall provide and maintain a weighbridge and a wheel cleaner at the facility.
- 3.8.2 The wheel cleaner shall be used by all vehicles leaving the facility as required to ensure that no process water or waste is carried off-site. All water from the wheel cleaning area shall be directed to the waste water interceptor.
- 3.9 Waste Water Treatment Plant
- 3.9.1 The licensee shall provide and maintain a Wastewater Treatment plant at the facility for the treatment of sanitary effluent arising on-site. Any percolation area shall satisfy the criteria set out in the *Wastewater Treatment Manual, Treatment Systems for Single Houses*, published by the Environmental Protection Agency.

### 3.10 Tank and Drum Storage Areas

- 3.10.1 All tank and drum storage areas shall be rendered impervious to the materials stored therein.
- 3.10.2 All tank and drum storage areas shall, as a minimum, be bunded, either locally or remotely, to a volume not less than the greater of the following:-
- (a) 110% of the capacity of the largest tank or drum within the bunded area; or
  - (b) 25% of the total volume of substance which could be stored within the bunded area.
- 3.10.3 All drainage from bunded areas shall be diverted for collection and safe disposal.
- 3.10.4 All inlets, outlets, vent pipes, valves and gauges must be within the bunded area.
- 3.10.5 Bunds shall be designed having regard to Agency guidelines '*Storage and Transfer of Materials for scheduled Activities*' (2004). The integrity and water tightness of all the bunds and their resistance to penetration by water or other materials stored therein shall be confirmed by the licensee and shall be reported to the Agency following their installation and prior to their use as storage areas. This confirmation shall be repeated at least once every three years thereafter and reported to the Agency on each occasion.
- 3.10.6 The licensee shall install and maintain silt traps and oil interceptors at the facility to ensure that all surface water discharges from the facility pass through a silt trap and oil interceptor prior to discharge. The interceptors shall be Class I full retention interceptors and the silt traps and interceptors shall be in accordance with European Standard prEN 858 (installations for the separation of light liquids).
- 3.10.7 All wastewater gullies, drainage grids and manhole covers shall be painted with red squares whilst all surface water discharge gullies, drainage grids and manhole covers shall be painted with blue triangles. These colour codes shall be maintained so as to be visible at all times during facility operation, and any identification designated in this licence (e.g. SW1) shall be inscribed on these manholes.
- 3.10.8 The drainage system, bunds, silt traps and oil separators shall be inspected weekly, desludged as necessary and properly maintained at all times. All sludge and drainage from these operations shall be collected for safe disposal. A written record shall be kept of the inspections, desludging, cleaning, disposal of associated waste products, maintenance and performance of the interceptors, bunds and drains.

### 3.11 Landfill Lining

- 3.11.1 Unless otherwise agreed in writing the landfill liner shall comprise:-
- a) A composite liner consisting of a 1m layer of compacted soil with a hydraulic conductivity of less than or equal to  $1 \times 10^{-9}$  m/s, (or equivalent to be agreed by the Agency) overlain by a 2mm thick high density polyethylene (HDPE) layer;
  - b) A geotextile protection layer placed over the HDPE layer;
  - c) A 500mm thick drainage layer placed over the geotextile layer with a minimum hydraulic conductivity of  $1 \times 10^{-3}$  m/s, of pre-washed, uncrushed, granular, rounded stone (16 - 32mm grain size) incorporating leachate collection drains; and
  - d) The side walls shall be designed and constructed to achieve an equivalent protection.

3.11.2 The liner detailed design and its construction shall be in accordance with the guidelines provided in the Agency's *Landfill Manual, Landfill Site Design*.

3.11.3 A screen of tree planting shall also be provided at either side of the site access road, outside the acoustic barriers within the facility boundary as shown on Figure B.2.2 of the application. The trees to be planted shall have a minimum age of three years.

### 3.12 Buffer Zone/Tree Planting

3.12.1 In so far as practically possible, forestry stands shall be provided and maintained within the facility boundary. Clear-felled areas shall be reinstated without delay to enhance screening of the facility.

3.12.2 A Buffer Zone, in which no waste shall be landfilled and which shall be used for the planting of forestry, shall be provided and maintained within the facility, with the exception of the site access road. The Buffer Zone shall have a minimum width of 50m.

3.12.3 A screen of tree planting shall also be provided at either side of the site access road, outside the acoustic barriers within the facility boundary as shown on Figure B.2.2 of the application. The trees to be planted shall be a minimum of 1.5m height.

### 3.13 Leachate Management Infrastructure

3.13.1 Leachate management infrastructure shall be provided and maintained at the facility as described in Sections 5.39 - 5.46 of the EIS Addendum.

3.13.2 All structures for the storage and/or treatment of leachate shall be fully enclosed except for inlet and outlet piping.

### 3.14 Landfill Gas Management

3.14.1 Landfill gas management infrastructure shall be provided and maintained at the facility as described in Sections 5.49 – 5.54 of the EIS. The flare shall be of an enclosed type design.

3.14.2 All buildings constructed on the facility shall have regard to the guidance given in the Department of Environment 1994 publication "Protection of New Buildings and Occupants from Landfill Gas" and any subsequent revisions.

3.14.3 Landfill Gas Combustion Plant

The licensee shall install continuous carbon monoxide monitors on the outlets of the gas engine(s).

### 3.15 Surface Water Management

3.15.1 Effective surface water management infrastructure shall be provided and maintained at the facility during construction, operation, restoration and aftercare of the facility. As a minimum, the infrastructure shall be capable of the following:-

a) The prevention of contaminated water and leachate discharges into surface water drains and courses.

b) The containment of surface water discharge during peak flows via a system of weirs, drains and retention ponds, as described in Section 9.62 of the EIS Addendum and Section C.3(b) of the Article 12 response received by the Agency on 06/05/04.



- c) The collection/diversion of run off arising from capped and restored areas.
- d) The diversion of runoff from the waste handling, inspection, quarantine and storage areas of the Civic Waste Facility, Materials Recovery Facility and Composting facility to the leachate treatment plant.
- e) The diversion of runoff other than runoff from the waste handling and storage areas of the Civic Waste Facility, Materials Recovery Facility and Composting facility to a soakaway via a grit trap and a Class 1 oil interceptor.

### 3.16 Groundwater Management

3.16.1 Effective groundwater management infrastructure shall be provided and maintained at the facility during construction, operation, restoration and aftercare of the facility. As a minimum, the infrastructure shall be capable of the following:-

- a) the protection of the groundwater resources from pollution by the waste activities; and
- b) The protection of other infrastructure, such as the liner, from any adverse effects caused by the groundwater.

### 3.17 Noise Abatement Infrastructure

3.17.1 Effective infrastructure shall be provided for the abatement of noise emissions from the facility. This infrastructure shall as a minimum include the following:

- a) permanent acoustic barriers to be erected along either side of the access road extending from the junction with the N25 to the entrance area.
- b) Temporary acoustic screens and/or bunds to be erected along the perimeter of phases 1, 2, 3, and 4 at the north and north-east of the site. They are to be constructed and maintained throughout the development, operation and restoration of these phases.
- c) Acoustic screens or bunds to provide noise attenuation along the southern and south-western perimeter of the proposed site.
- d) Any other noise abatement infrastructure deemed necessary.

### 3.18 Construction and Demolition Waste Recovery Area

3.18.1 The licensee shall provide and maintain a construction and demolition waste recovery area. This infrastructure shall at a minimum comprise the following:-

- a) An impermeable concrete slab; and
- b) Collection and disposal infrastructure for all run-off.

### 3.19 Civic Waste Facility

3.19.1 The licensee shall establish and maintain the Civic Waste Facility infrastructure referred to in Section 5.103 – 5.105 of the EIS Addendum.

3.19.2 The licensee shall provide and maintain the receptacles at the Civic Waste Facility as shown in Drawing No. 5.7a (Rev A) of the EIS Addendum unless otherwise agreed by the Agency.

### 3.20 Compost facility

- 3.20.1 Appropriate infrastructure for the composting of waste shall be established and maintained at the facility prior to any waste being composted. This infrastructure shall be as described in Section 5.107 – 5.117 of the EIS Addendum.
- 3.20.2 Biofilters shall be used to control odours from the air extracted from the in-vessel composting containers.
- 3.20.3 Provision of 100% duty capacity and 50% stand by capacity, back ups and spares shall be provided for the air handling, ventilation and abatement plant.

### 3.21 Materials Recovery Facility (MRF)

- 3.21.1 The licensee shall establish and maintain the Materials Recovery Facility infrastructure described to in Section 5.106 of the EIS Addendum and as shown in Drawing No. 5.7a (Rev A) of the EIS Addendum unless otherwise agreed by the Agency.

### 3.22 Telemetry

- 3.22.1 A telemetry system shall be installed and maintained at the facility. This system shall include for:-
  - a) Recording of leachate levels in the lined cells and lagoon;
  - b) Recording of levels in the surface water retention ponds and flows to the perimeter streams;
  - c) Quality of the surface water at the inlet to the surface water lagoons and being discharged to the perimeter streams; and
  - d) Permanent gas monitoring system to be installed in the site office and any other enclosed structures at the facility.

### 3.23 Monitoring Infrastructure

#### 3.23.1 Landfill Gas

- a) The licensee shall provide and maintain the monitoring points listed in Table D.1.1 *Schedule D: Monitoring*, of this licence ; and
- b) The licensee shall install and maintain an effective permanent gas monitoring system in the site office and any other enclosed structures at the facility.

#### 3.23.2 Groundwater

- a) The licensee shall provide and maintain the monitoring points listed in Table D.1.1 *Schedule D: Monitoring*, of this licence to allow for the sampling and analyses of groundwater.

#### 3.23.3 Leachate

- a) Prior to commencement of waste for disposal in each cell/area, the licensee shall install the monitoring points listed in Table D.1.1, *Schedule D: Monitoring*, of this licence to allow for the sampling and analyses of leachate.

#### 3.23.4 Replacement of Infrastructure

- a) Monitoring infrastructure which is damaged or proves to be unsuitable for its purpose shall be replaced within three months of it being damaged or recognised as being unsuitable.

### 3.24 Wildlife

3.24.1 The licensee shall ensure that the following works are carried out in consultation with the National Parks and Wildlife Service staff of the Department of the Environment, Heritage and Local Government:

- a) an artificial badger set shall be constructed within the site where trees are to be retained;
- b) 30 bat boxes are to be erected in trees to be retained around the site;
- c) 20 hole nesting and 20 open fronted bird boxes are to be erected within the site.

*REASON: To provide appropriate infrastructure for the protection of the environment.*

## CONDITION 4 RESTORATION AND AFTERCARE

- 4.1. The licensee shall restore the landfill facility on a phased basis. The clear-felling of any of phases 1-10 as shown on Figure 5.4 Rev A of the EIS Addendum shall not take place until such time as the previous phase is operational. The Restoration and Aftercare Plans for the facility shall be as shown in Figure 5.8 (Rev A) of the EIS Addendum and shall include the plan submitted in Sections 5.61 – 5.81 of the EIS.
- 4.2. The final (pre-settlement) contours of the facility shall be as shown in Drawing No. 2.8 Rev A of the EIS Addendum (mOD Malin).
- 4.3. Final Capping
  - 4.3.1. Unless otherwise agreed in writing the final capping shall consist of the following:-
    - a) Top soil (150 -300mm);
    - b) Subsoils, such that total thickness of top soil and subsoils is at least 1m;
    - c) Drainage layer of 0.5m thickness having a minimum hydraulic conductivity of  $1 \times 10^{-4}$  m/s;
    - d) Compacted mineral layer of a minimum 0.6m thickness with a permeability of less than  $1 \times 10^{-9}$  m/s or a geosynthetic material (e.g. GCL) or similar that provides equivalent protection; and
    - e) Gas collection layer of natural material (minimum 0.3m) or a geosynthetic layer.
- 4.4. No material or object that is incompatible with the proposed restoration of the facility shall be present within one metre of the final soil surface levels.
- 4.5. Where tree planting is to be carried out above waste-filled areas, a synthetic barrier shall be used to augment the clay cap. Combined topsoil and subsoil depths shall be a minimum of 1m.
- 4.6. Soil Storage
  - 4.6.1. All soils shall be stored to preserve the soil structure for future use.

*REASON: To provide for the restoration of the facility.*

## CONDITION 5 FACILITY OPERATION AND WASTE MANAGEMENT

- 5.1 Wastes shall not be deposited in any cell or part of the landfill without the prior agreement of the Agency.
- 5.2 Waste Acceptance and Characterisation Procedures
- 5.2.1 Within one month of the date of grant of this licence, the licensee shall submit to the Agency for its agreement updated written procedures for the acceptance and handling of all wastes. These procedures shall include details of the treatment of all waste to be carried out in advance of acceptance at the facility and shall also include methods for the characterisation, classification and coding of waste. The procedures shall have regard to the Council Decision (2003/33/EC) establishing criteria and procedures for the acceptance of waste at landfills pursuant to Article 16 of and Annex II to Directive 1999/31/EC on the landfill of waste.
- 5.2.2 Waste shall be accepted at the facility, only from customers who are holders of a waste permit, unless exempted, under the Waste Management (Collection Permit) Regulations 2007 to 2008 or from other licensed/permitted facilities.
- 5.2.3 Whole used tyres (other than bicycle tyres and tyres with an outside diameter greater than 1400mm) shall not be disposed of at the facility. Shredded tyres shall not be disposed of at the facility.
- 5.2.4 No hazardous wastes or liquid wastes shall be disposed of at the facility.
- 5.2.5 The licensee shall ensure that inert waste accepted at the facility is subject to treatment where technically feasible.
- 5.2.6 No waste which in the conditions of the landfill, is explosive, corrosive, oxidising, highly flammable or flammable as defined in EU Council Directive 91/689/EEC shall be accepted at the landfill.
- 5.2.7 Gypsum wastes shall not be placed in any landfill cell accepting biodegradable waste.
- 5.2.8 The dilution or mixture of waste solely in order to fulfil relevant waste acceptance criteria established under Condition 5.2.1 is prohibited.
- 5.2.9 The licensee shall, in writing, notify the Agency without delay of any waste that arrived at the facility that does not meet the waste acceptance criteria.
- 5.2.10 The licensee shall ensure that any waste acceptance testing and analysis required by this licence shall be carried out by competent laboratories in accordance with CEN-standards. If CEN standards are not available, ISO, national or international standards that will ensure the provision of data of an equivalent scientific quality shall apply.
- 5.3 All wastes shall be checked at the working face. Any waste deemed unsuitable for acceptance at the facility and/or in contravention of this licence shall be immediately separated and removed from the facility at the earliest possible time. Temporary storage of such wastes shall be in a designated Waste Quarantine Area. Waste shall be stored under appropriate conditions in the quarantine area to avoid putrefaction, odour generation, the attraction of vermin and any other nuisance or objectionable condition.
- 5.4 Working Face

- 5.4.1 Unless the prior agreement of the Agency is given, the following shall apply at the landfill:-
- a) Only one working face shall exist at the landfill at any one time for the deposit of waste other than cover or restoration materials; and
  - b) The working face of the landfill shall be no more than 2.5 metres in height after compaction, no more than 25 metres wide and have a slope no greater than 1 in 3.
- 5.4.2 All waste deposited at the working face shall be compacted, using a steel wheeled compactor, and covered as soon as is practicable and at any rate prior to the end of the working day.
- 5.4.3 The working face, or faces, shall each day at the end of the day, be covered with suitable material.
- 5.5 Daily and Intermediate Cover
- 5.5.1 Any cover material at any location within the facility which is eroded, washed off or otherwise removed shall be replaced by the end of the working day.
- 5.5.2 Appropriate cover material shall be placed across the whole landfill so that no waste, other than the following is exposed:-
- a) Waste suitable for specified engineering works; and
  - b) Waste on the working face during the operational hours of the facility.
- 5.5.3 Bio-stabilised residual waste shall only be used as landfill cover where it has been stabilised in accordance with Condition 5.19.4, complies with any requirements of the Department of Agriculture, Fisheries and Food relating to the management of animal by-products and has been agreed in advance with the Agency.
- 5.6 Landscaping
- 5.6.1 The existing hedgerow network within the facility shall, where possible be retained and reinforced if necessary by the licensee.
- 5.7 Operational Controls
- Landfill
- 5.7.1 The landfill shall be filled in accordance with the 10 phase sequence outlined in Figure 5.4 Rev A of the EIS Addendum.
- 5.7.2 All large hollow objects and other large articles deposited at the facility shall be crushed, broken up, flattened or otherwise treated.
- 5.7.3 Wastes once deposited and covered shall not be excavated, disturbed or otherwise picked over unless with the prior agreement from the Agency.
- 5.7.4 Completed areas of the landfill shall be profiled so that no depressions exist in which water may accumulate. Any depressions arising after profiling shall be rectified by the emplacement of suitable capping or restoration materials.
- 5.7.5 Filled cells shall be permanently capped within twenty four months of the cells having been filled to the required level.
- 5.7.6 Scavenging shall not be permitted at the facility.
- 5.7.7 Gates shall be locked shut when the facility is unsupervised.

- 5.7.8 The licensee shall provide and use adequate lighting during the operation of the facility in hours of darkness.
- 5.7.9 Fuels shall be stored only at appropriately banded locations on the facility.
- 5.7.10 All tanks and drums shall be labelled to clearly indicate their contents.

#### Composting

- 5.7.11 All waste accepted into the biowaste composting building (apart from bulking agents/green waste) shall be transferred to a composting vessel within 60 hours of receipt unless otherwise agreed in advance with the Agency.
- 5.7.12 All entry and exit doors to the biowaste and sludge reception buildings shall be on automatic open/close switches in order to minimise the time spent open.
- 5.7.13 The floor of the composting building shall be cleaned of waste on a daily basis.
- 5.7.14 No waste shall be stored overnight at the facility in other than designated storage areas in the biowaste reception buildings.
- 5.7.15 Apart from compost at the in-vessel stage of treatment, all waste processing and storage shall occur inside an appropriate building, unless otherwise agreed by the Agency.
- 5.7.16 Only source separated and separately collected commercial and municipal biowaste may be accepted at the facility.
- 5.7.17 Unless otherwise agreed by the Agency one in twenty loads shall be tipped into the waste inspection area and examined and recorded.

#### Materials Recovery Facility

- 5.7.18 Unless otherwise agreed by the Agency all waste processing and storage shall occur inside an appropriate building.

### 5.8 Waste Handling

#### 5.8.1 Sludges

- 5.8.1.1 Treated industrial and treated sewage sludges shall be accepted at the facility only between the hours of 0830 hrs and 14.00 hrs Monday to Friday inclusive. All sludges shall be covered immediately with other waste.
- 5.8.1.2 In addition to the characterisation required under the Waste Acceptance Procedures, the licensee shall carry out analyses on a minimum of two samples per annum for all industrial sludges being accepted at the facility. The results of these analyses shall be presented in the Annual Environmental Report (AER).

#### 5.8.2 Compost

- 5.8.2.1 In order not to be considered a waste, compost produced by the facility shall comply with the quality established in *Schedule G: Compost Quality*, of this licence. Analysis of the compost shall be in accordance with the requirements of that Schedule.

#### 5.8.3 Inert Waste

- 5.8.3.1 Inert waste accepted at the facility shall comply with the standards established in EC Council Decision 2003/33/EC.

#### 5.8.4 Non-hazardous Asbestos Waste

- 5.8.4.1 Only non-hazardous asbestos waste shall be disposed of at the facility.
- 5.8.4.2 Non-hazardous asbestos based construction and demolition waste must be double wrapped in heavy gauge plastic, which is clearly labelled to indicate the presence of asbestos.

- 5.8.4.3 Disposal of non-hazardous asbestos waste shall be into prepared bays or trenches of at least 2 metres in depth.
- 5.8.4.4 Deposited non-hazardous asbestos waste shall be covered immediately with at least 250mm of suitable material. At the end of the day, the waste shall be covered with a minimum of 500mm of suitable material.
- 5.8.4.5 No non-hazardous asbestos waste shall be present within 2.5 metres of the final surface levels.

#### 5.9 Off-site Disposal and Recovery

- 5.9.1 Waste sent off-site for recovery or disposal shall be conveyed only by a waste contractor agreed by the Agency.
- 5.9.2 All waste transferred from the facility shall be transferred only to an appropriate facility agreed by the Agency.
- 5.9.3 All wastes removed off-site for recovery or disposal shall be transported from the facility to the consignee in a manner which will not adversely affect the environment.

#### 5.10 Civic Waste Facility

- 5.10.1 The Civic Waste Facility shall be used only by private vehicles. The facility shall not be used as a transfer station for disposal of waste by commercial waste disposal contractors or local authority waste collection vehicles.
- 5.10.2 All waste deposited in the Civic Waste Facility shall be either:-
  - a) Into a skip;
  - b) Into the hopper of the compactor for disposal;
  - c) Into a receptacle for recovery; and
  - d) In the case where inspection is required, into a designated inspection area.
- 5.10.3 The licensee shall assign and clearly label each container at the Civic Waste Facility to indicate their contents.
- 5.10.4 At the end of the working day the floor of the Civic Waste Facility shall be cleared of waste.

#### 5.11 Construction and Demolition Waste Recovery Area

- 5.11.1 Only Construction and Demolition waste shall be accepted at this Area. Wastes which are capable of being recovered shall be separated and shall be stored temporarily in this area prior to being subjected to other recovery activities at the facility or transport off the facility.
- 5.11.2 All stockpiles shall be maintained so as to minimise dust generation.

#### 5.12 Leachate Management

- 5.12.1 Leachate treatment shall be as specified in Sections 5.4.4 – 5.4.6 of the EIS Addendum.
- 5.12.2 Leachate levels in the waste shall not exceed a level of 1.0m over the top of the liner at the base of the landfill.
- 5.12.3 The frequency of leachate removal/discharge from the leachate lagoon shall be such that a minimum freeboard of 0.75m shall be maintained in the leachate lagoon at all times.

- 5.12.4 Unless treated on the facility, leachate stored in the leachate storage lagoon shall be disposed of by tankering off-site in fully enclosed road tankers.
- 5.12.5 Recirculation of leachate or other contaminated water shall not be undertaken without the prior agreement of the Agency and, in any case, shall be undertaken only within cells which have been lined to the satisfaction of the Agency.
- 5.13 Maintenance
- 5.13.1 All treatment/abatement and emission control equipment shall be calibrated and maintained, in accordance with the instructions issued by the manufacturer/supplier or installer. Written records of the calibrations and maintenance shall be made and kept by the licensee.
- 5.13.2 All lagoon structures on the facility shall be inspected and certified fit for purpose every three years by an independent and appropriately qualified chartered engineer.
- 5.13.3 The licensee shall maintain and clearly label and name all sampling and monitoring locations.
- 5.13.4 The wheel-wash shall be inspected on a daily basis and drained as required. Silt, stones and other accumulated material shall be removed as required from the wheel-wash and disposed of at the working face or to a skip.
- 5.14 Written procedures for the acceptance and handling of animal by-product waste shall include the following requirements (unless otherwise agreed by the Agency):
- 5.14.1 Vehicles delivering animal by-product waste to the facility shall be leak-proof and adequately covered.
- 5.14.2 Containers and vehicles used for transporting untreated animal by-product waste shall be cleaned and disinfected prior to leaving the facility. They shall be cleaned and disinfected in a designated area designed to prevent contamination of treated products.
- 5.14.3 All composting residues including process wastewater shall be handled in such a way as to prevent recontamination from untreated products.
- 5.14.4 Composting bays/containers shall be designated and labelled so as to ensure that animal by-product waste is treated in the same designated vessels, in so far as is practicable.
- 5.14.5 These procedures shall be updated prior to the acceptance of new waste types (when necessary), as required to reflect changes in National or EU Legislation or as agreed by the Agency.
- 5.15 Compost Process Management and validation
- 5.15.1 All composting shall be executed in line with the treatment regimes outlined in *Schedule E: Compost Process Management* of this licence, unless otherwise instructed by the Agency.
- 5.15.2 All Category 3 animal by-product waste accepted at the facility for treatment shall be treated in accordance with the requirements of the EU regulation 1774/2002, laying down health rules concerning animal by-products not intended for human consumption and associated National Legislation.
- 5.15.3 All landspreading of compost containing Category 2 or 3 animal by-products as a constituent shall be carried out in accordance with the 'European Parliament and Council Regulation No 1774/2002 laying down health rules concerning animal by-products not intended for human consumption' or other National Regulations.



5.15.4 An indicator organism shall be used to validate the compost sanitation steps. This shall be carried out as outlined in *Schedule E: Compost Process Management* of this licence.

#### 5.16 Compost Use

5.16.1 In order to be considered a product, compost shall comply with the Quality Standards as outlined in *Schedule G: Compost Quality* of this licence, unless otherwise agreed by the Agency. Compost not complying with Class 1 or Class 2 of these Quality Standards shall, as with Stabilised Biowaste be considered a waste and shall be disposed/recovered to an authorised outlet, as agreed by the Agency and the details recorded as per Condition 10.6.

5.16.2 Compost of Class 1 Standard shall be considered a product. All landspreading of compost of Class 1 Standard shall be in accordance with best agronomic practice:

5.16.3 Compost of Class 2 Standard shall be considered a product and shall be used in accordance with best agronomic practice. Unless otherwise agreed by the Agency it shall be used in a quantity not exceeding 30 tonnes dry matter per hectare (on a three year average).

5.16.4 The recovery or disposal of compost not reaching the standards designated Class 1 or Class 2, shall be recorded as required under Condition 10.6.

#### 5.17 Waste Treatment

Only waste that has been subject to treatment shall be accepted for disposal at the landfill facility.

(i) Treatment shall reflect published EPA technical guidance as set out in *Municipal Solid Waste – Pre-treatment and Residuals Management*, EPA, 2009.

(ii) With the agreement of the Agency, this condition shall not apply to:

- inert wastes for which treatment is not technically feasible;
- other waste for which such treatment does not contribute to the objectives of the Landfill Directive as set out in Article 1 of the Directive by reducing the quantity of the waste or the hazards to human health or the environment.

#### 5.18 Limit on acceptance of biodegradable municipal waste

5.18.1 Unless otherwise as may be specified by the Agency, the following limits shall apply:

(i) For the calendar years 2010, 2011 and 2012, a maximum of 40% by weight of municipal solid waste (MSW) accepted for disposal to the body of the landfill shall comprise biodegradable municipal waste (BMW),

(ii) For the calendar years 2013, 2014 and 2015, a maximum of 24% by weight of MSW accepted for disposal to the body of the landfill shall comprise BMW, and

(iii) For the calendar year 2016 and thereafter, a maximum of 15% by weight of MSW accepted for disposal to the body of the landfill shall comprise BMW,

unless an alternative has been agreed in writing by the Agency in accordance with Condition 5.18.2

5.18.2 Two or more licensed landfills may seek the agreement of the Agency that collectively they will arrange to comply with Condition 5.18.1. Any agreements entered into become part of this licence. In seeking agreement the following factors, as a minimum, shall be addressed in any proposal submitted to the Agency:

- BAT;
- age, intake rate and life expectancy of facility;
- waste intake characterisation;
- potential for odour generation;
- proximity to sensitive receptors;
- capacity of landfill gas and leachate infrastructure; and
- consideration of any potential environmental impact or change to operational practices.

5.19 Determination of biodegradable municipal waste content of municipal waste

5.19.1 The licensee shall determine the biodegradable municipal waste content of MSW accepted for disposal to the body of the landfill. Waste that has been bio-stabilised in accordance with Condition 5.19.4 shall not be considered BMW.

5.19.2 Bio-stabilised residual wastes meeting the requirements of Condition 5.19.4 received at the landfill facility may be included in the determination of MSW quantities accepted at the facility for the purposes of Condition 5.18.1

5.19.3 In determining BMW content, the licensee shall use approved calculation factors for BMW content of municipal waste streams published by the EPA. With the agreement of the EPA, alternative factors can be used if they have been determined following waste characterisation carried out in accordance with EPA-approved characterisation protocols including, where appropriate, the use of EPA-approved contractors.

5.19.4 In the case of bio-stabilised residual wastes, stabilisation means the reduction of the decomposition properties of the waste to such an extent that offensive odours are minimised and that the respiration activity after four days ( $AT_4$ ) is  $<10\text{mg O}_2/\text{g DM}$  until 1 January 2016 and  $<7\text{mg O}_2/\text{g DM}$  thereafter.

5.19.5 Bio-stabilised residual wastes shall be monitored in accordance with Schedule D.11

5.19.6 Waste that was accepted to the body of the landfill as stabilised but subsequently is found not to meet the stabilisation standard set out in Condition 5.19.4 shall be notified to the Agency and included in the calculation of BMW accepted to the body of the landfill when assessing compliance with Condition 5.18.1. In the event of failure to meet the stabilisation standard, each and every load of bio-stabilised residual waste accepted from the failed source following receipt of the failed test result shall be tested, notwithstanding the testing frequency set out in Schedule D.11 until otherwise agreed with the Agency.

5.19.7 The licensee is required to maintain on-site as part of their waste acceptance procedures and associated documentation, evidence to demonstrate compliance with Condition 5.18.1 which shall be available for inspection by Agency personnel.

5.20 The waste acceptance procedures established under Condition 5.2.1 shall provide:-

- (i) For the checking of waste documentation on receipt of waste in the waste reception area;
  - (ii) For non pre-cleared customers, the visual inspection and testing of waste in the waste inspection area pending acceptance/rejection;
  - (iii) For the visual inspection of waste when deposited at the working face;
  - (iv) For the keeping for two months of any samples associated with on-site verification sampling of waste accepted at the facility.
- 5.21 The licensee shall provide a written acknowledgement (to carrier/waste contractor) of receipt of each delivery of waste to the facility (for disposal in the landfill).

*REASON: To provide for appropriate operation of the facility to ensure protection of the environment.*

## CONDITION 6 EMISSIONS

- 6.1. No specified emission from the facility shall exceed the emission limit values set out in *Schedule C: Emission Limits*, of this licence. There shall be no other emissions of environmental significance.
- 6.2. The licensee shall ensure that the activities shall be carried out in a manner such that emissions do not result in significant impairment of, or significant interference with the environment beyond the facility boundary.
- 6.3. Landfill Gas
- 6.3.1. The following are the trigger levels for landfill gas emissions from the facility measured in any service duct or manhole on, at or immediately adjacent to the facility and/or at any other point located outside the body of the waste:-
- a) Methane, greater than or equal to 1.0% v/v; or
  - b) Carbon dioxide, greater than or equal to 1.5% v/v.
- 6.3.2. The concentration limits for emissions to atmosphere specified in this licence shall be achieved without the introduction of dilution air and shall be based on gas volumes under standard conditions of :-
- a) In the case of landfill gas flare:  
Temperature 273 K, pressure 101.3 kPa, dry gas at 3% oxygen; and
  - b) In the case of landfill gas combustion plant:  
Temperature 273 K, pressure 101.3 kPa, dry gas; 5% oxygen.
- 6.3.3. Emission limits for emissions from landfill gas flare/combustion plant to atmosphere in this licence shall be interpreted in the following way.
- 6.3.3.1. Continuous monitoring
- a) No 24 hour mean value shall exceed the emission limit value;
  - b) 97% of all 30 minute mean values taken continuously over an annual period shall not exceed 1.2 times the emission limit value; and
  - c) No 30 minute mean value shall exceed twice the emission limit value.

#### 6.3.3.2 Non-Continuous Monitoring

- a) For any parameter where, due to sampling/analytical limitations, a 30 minute samples is inappropriate, a suitable sampling period should be employed and the value obtained therein shall not exceed the emission limit value;
- b) For all other parameters, no 30 minute mean value shall exceed the emission limit value; and
- c) For flow, no hourly or daily mean value shall exceed the emission limit value.

#### 6.4. Groundwater

6.4.1 There shall be no direct emissions to groundwater.

6.4.2 Groundwater monitoring trigger levels shall be agreed by the Agency and shall be in accordance with the requirements of Directive 1999/31/EC.

#### 6.5. Emissions to Surface Water

6.5.1. No raw leachate, treated leachate or potentially contaminated water shall be discharged to surface water.

6.5.2. No substance shall be discharged in a manner, or at a concentration which, following initial dilution causes tainting of fish or shellfish.

6.5.3. The licensee shall continuously monitor water in the surface water retention ponds. The licensee shall establish criteria/trigger levels which will determine when the outlet from these ponds shall be closed. Such continuous monitoring shall, as a minimum, include conductivity, pH and TOC and shall be carried out on the inlet to the storm water retention pond.

#### Compost

6.5.4. Any surface runoff or process waste water collected in storage tanks shall be pumped/directed back into the process, unless otherwise agreed by the Agency. In the case of Category 3 waste material, unsanitised process waste water shall not be added to the process after the compost sanitisation phase.

#### 6.6 Noise Emissions

6.6.1 Activities at the facility shall not cause a significant impairment of, or significant interference with, the environment beyond the facility boundary and at noise sensitive locations 1-9.

6.6.2 Speed restrictions and traffic calming measures within the facility boundary shall be adopted in consultation with Wexford County Council's roads department.

6.6.3 In addition the licensee shall ensure the following:

- a) That low sound level plant is used on-site.
- b) That all heavy machinery used on-site is fitted with acoustic panels in the engine bays and acoustic mufflers (exhaust silencers).

#### 6.7. Disposal of Leachate

6.7.1. Unless otherwise approved in writing no treated leachate shall be discharged to surface water.

6.8 Trigger Level for PM<sub>10</sub>

6.8.1 The trigger level for PM<sub>10</sub> from the facility measured at any location on the boundary of the facility is:-

a) PM<sub>10</sub> greater than 50µg/m<sup>3</sup> for a daily sample.

6.8.2 Emission limit values for emissions to sewer/waters in this licence shall be interpreted in the following way:-

a) Continuous monitoring.

No flow value shall exceed the specified limit.

b) Non-Continuous monitoring.

Eight out of ten consecutive results, calculated as daily mean concentration or mass emission values on the basis of flow proportional composite sampling shall not exceed 1.2 times the emission limit value.

c) No grab sample shall exceed 1.2 times the emission limit value.

6.9 Odour Control & Monitoring

6.9.1 The licensee shall submit to the Agency for agreement, an Odour Management Plan (OMP) for the facility.

6.9.2 The OMP referred to in 6.9.1 shall include measures to control potential sources of odour nuisance, including inter alia, provisions regarding:

(i) Requirements of relevant conditions of this licence;

(ii) Adequate resources and training on-site to provide for the maintenance, monitoring and operation of the landfill gas extraction system;

(iii) Acceptance and management of odorous waste deliveries;

(iv) Following completion of waste acceptance in any cell /sub-cell, the licensee shall on a bi-annual basis arrange to the carrying out of an independent assessment and report on surface VOC emissions at the facility;

(v) Use of sacrificial gas extraction systems; phased capping of the waste body; and an interim capping system at inter-cell boundaries;

(vi) Working face/active cell sizing and covering;

(vii) Landfill gas collection:- locations of infrastructure including access/haul roads, well design and density, monitoring, condensate management, field balancing, flare/combustion plant operation;

(viii) Identification of fugitive sources of landfill gas emissions (e.g. from leachate management infrastructure);

(ix) Monitoring:- VOC surface emissions from capped areas, odour checks off- and on-site, receipt and evaluation/verification of odour complaints received.

6.9.3 To meet the requirements of the OMP, the licensee shall carry out a monthly review of control measures in place at the facility and maintain findings in a monthly report. This review shall include:

- (i) Consideration of odour complaints received during period (including details and nature of complaints, times and weather conditions, any unusual circumstances, problems, etc.);
- (ii) Review of any monitoring, including ambient odour monitoring in accordance with Schedule D.12, carried out (including investigation of complaints and actions taken where relevant);
- (iii) An update on the existing landfill gas control infrastructure (including operational status, number of wells & vents connected and unconnected to the landfill gas collection system, quantity of gas collected and flared/utilised, estimated quantity of landfill gas being produced, details of any problems with equipment during period);
- (iv) Details of any remedial/corrective actions taken, where relevant, including actions taken on foot of recommendations from previous report; and
- (v) Recommendations.

The licensee shall maintain these reports on site and forward them to the Agency on request.

6.9.4 The OMP shall be reviewed annually and any updates/amendments submitted to the Agency as part of the Annual Environmental Report.

6.9.5 In relation to surface emissions from the waste body and identified features, the following shall constitute a trigger level:

- (i) VOC greater than or equal to 50ppmv average over capped area; or
- (ii) VOC greater than or equal to 100ppmv instantaneous reading on open surfaces within the landfill footprint; or
- (iii) VOC greater than or equal to 500ppmv around all identified features.

6.9.6 Leachate holding tanks/lagoons shall be covered, and head gases vented to treatment as may be required by the Agency.

6.9.7 All odorous or odour-forming wastes shall be covered as soon as practicable and in any case at the end of the working day.

6.9.8 Where it is proposed to take biological sludges at the facility, these must be subject to appropriate pre-treatment in advance of acceptance at the facility.

6.9.9 When siting and operating landfill gas infrastructure, regard shall be had to the potential for, and mitigation of, odour nuisance.

*REASON: To control emissions from the facility and provide for the protection of the environment.*

## CONDITION 7 NUISANCE CONTROL

- 7.1 The licensee shall ensure that vermin, birds, flies, mud, dust, litter and odours do not give rise to nuisance at the facility or in the immediate area of the facility. Any method used by the licensee to control any such nuisance shall not cause environmental pollution.
- 7.2 The road network in the vicinity of the facility shall be kept free from any debris caused by vehicles entering or leaving the facility. Any such debris or deposited materials shall be removed without delay.
- 7.3 Litter Control
- 7.3.1 Litter fencing shall be installed and maintained around the perimeter of the active tipping area prior to the disposal of any waste in any cell.
- 7.3.2 All litter control infrastructure shall be inspected on a daily basis. The licensee shall remedy any defect in the litter netting as follows:-
- a) A temporary repair shall be made by the end of the working day; and
  - b) A repair to the standard of the original netting shall be undertaken within three working days.
- 7.3.3 All loose litter or other waste, placed on or in the vicinity of the facility, other than in accordance with the requirements of this licences, shall be removed, subject to the agreement of the landowners, immediately and in any event by 10.00am of the next working day after such waste is discovered.
- 7.3.4 The licensee shall ensure that all vehicles delivering waste to and removing waste and materials from the facility are appropriately covered.
- 7.4 Dust Control
- 7.4.1 In dry weather, site roads and any other areas used by vehicles shall be sprayed with water as and when required to minimise airborne dust nuisance.
- 7.5 Prior to exiting the facility, all waste vehicles shall use the wheelwash.
- 7.6 Bird Control
- 7.6.1 Birds shall be prevented from gathering on and feeding at the facility by the use of birds of prey and/or other bird scaring techniques. The birds of prey and/or other techniques shall be in place on the facility at least two weeks prior to any waste being disposed of and shall maintain their presence every day, from before dawn to after dark, until the waste activities cease and all the waste is capped to the written satisfaction of the Agency. The use of gas operated bird scaring devices is prohibited at the facility.
- 7.7 Visual Intrusion
- 7.7.1 The licensee shall ensure that acoustic barriers and bunds assist in the mitigation of visual intrusion of the landfill and do not contribute to visual intrusion.

*REASON: To provide for the control of nuisances.*

## CONDITION 8 MONITORING

- 8.1 The licensee shall carry out such monitoring and at such locations and frequencies as set out in *Schedule D: Monitoring*, of this licence and as specified in this licence. Unless otherwise specified by this licence, all environmental monitoring shall commence no later than two months after the date of grant of this licence.
- 8.2 The licensee shall amend the frequency, locations, methods and scope of monitoring as required by this licence only upon the written instruction of the Agency and shall provide such information concerning such amendments as may be requested in writing by the Agency. Such alterations shall be carried out within any timescale nominated by the Agency.
- 8.3 Monitoring and analysis equipment shall be operated and maintained in accordance with the manufacturers' instructions (if any) so that all monitoring results accurately reflect any emission, discharge or environmental parameter.
- 8.4 The licensee shall provide safe and permanent access to all on-site sampling and monitoring points and to off-site points as required by the Agency.
- 8.5 The licensee shall provide and maintain a permanent gas monitoring system in the site office and any other enclosed structures at the facility. All landfill gas monitoring equipment, other than permanent monitoring systems within buildings, shall be certified as being intrinsically safe.
- 8.6 The licensee shall submit any revisions to the following to the Agency for agreement: the names, qualifications and a summary of the relevant experience of all persons that will carry out all sampling and monitoring as required by this licence and who carry out the interpretation of the results of such sampling and monitoring.
- 8.7 All monitoring locations shall be as stipulated in this licence or as agreed by the Agency. Following any alteration or addition to monitoring locations stipulated herein, as may be agreed by the Agency, the licensee shall submit to the Agency for its agreement an updated appropriately scaled drawing showing all the monitoring locations. The drawing shall include the twelve figure National Grid Reference for the various monitoring points.
- 8.8 Groundwater Monitoring
- 8.8.1 Subject to the agreement of the well owners, all private wells within 250m of the facility shall be included in the monitoring programme set out in *Schedule D: Monitoring*, of this licence.
- 8.8.2 Prior to the excavation of ground for the installation of the landfill lining system, groundwater levels within the landfill footprint area should be monitored, at least monthly, throughout a period spanning the months September to March.
- 8.9 Surface Water Inspection
- 8.9.1 The licensee shall ensure that
- (i) the surface water weirs and drainpipes and sediment debris screens and;
  - (ii) the surface water channels both in the vicinity of the facility and downstream
- are checked for clogging with debris and if necessary cleared on a weekly basis at a minimum.
- 8.10 Meteorological Monitoring



- 8.10.1 The licensee shall provide and maintain a meteorological station at the facility, which shall be known by the point reference number MET1, capable of monitoring the parameters listed in *Schedule D.6: Meteorological Monitoring*, of this licence.
- 8.11 Biological Assessment
- 8.11.1 A biological assessment of the adjacent surface water streams shall be undertaken annually. This assessment shall use appropriate biological methods such as the EPA Q-rating system for the assessment of rivers and streams. The location of monitoring points shall be as agreed by the Agency.
- 8.12 Leachate Monitoring
- 8.12.1 The licensee shall monitor dissolved methane in accordance with a methodology agreed by the Agency prior to discharge to pipeline/sewer.
- 8.13 Archaeological Assessment
- 8.13.1 Prior to the development of any undisturbed area, the advice of the Heritage Section of the Department of the Environment, Heritage and Local Government (formerly Dúchas) shall be sought. On completion of such development a report of the results of any archaeological monitoring shall be submitted to The Development Applications Section and to the Agency.
- 8.14 Stability Assessment
- 8.14.1 Upon commencement of waste activities, and annually thereafter, the licensee shall carry out a stability assessment of the side slopes of the facility.
- 8.15 Nuisance Monitoring
- 8.15.1 The licensee shall, at a minimum of one-week intervals, inspect the facility and its immediate surrounds for nuisances caused by litter, vermin, birds, flies, mud, dust and odours.
- 8.15.2 The licensee shall carry out odour monitoring at the facility as agreed by the Agency and in accordance with *Schedule D: Monitoring*, of this licence.
- 8.16 The licensee shall establish and maintain a Data Management System for collation, archiving, assessing and graphically presenting the environmental monitoring data generated as a result of this licence.
- 8.17 Compost quality monitoring
- 8.17.1 Compost quality shall be monitored at the frequencies set out in *Schedule G: Compost Quality* of this licence, unless otherwise agreed by the Agency.
- 8.18 The sampling protocol and methods of analyses for composting operations shall be as agreed by the Agency. Any alterations to the protocol or methodology shall be agreed by the Agency prior to implementation.

*REASON: To ensure compliance with the conditions of this licence by provision of a satisfactory system of monitoring of emissions.*

## **CONDITION 9 CONTINGENCY ARRANGEMENTS**

- 9.1. In the event of an incident the licensee shall immediately:-

- a) Identify the date, time and place of the incident;
- b) Carry out an immediate investigation to identify the nature, source and cause of the incident and any emission arising therefrom;
- c) Isolate the source of any such emission;
- d) Evaluate the environmental pollution, if any, caused by the incident;
- e) Identify and execute measures to minimise the emissions/malfunction and the effects thereof; and
- f) Provide a proposal to the Agency for its agreement within one month of the incident occurring to:-
  - i) Identify and put in place measures to avoid reoccurrence of the incident;
  - ii) Identify and put in place any other appropriate remedial action.

9.2. The licensee shall maintain, review annually and amend as necessary an Emergency Response Procedure (ERP) which shall be agreed by the Agency. The ERP shall address any emergency situations which may originate on the facility and shall include provision for minimising the effects of any emergency on the environment. This shall include a risk assessment to determine the requirements at the facility for fire fighting and fire water retention facilities. The Fire Authority shall be consulted by the licensee during this assessment.

9.3. The licensee shall have in storage an adequate supply of containment booms and/or suitable absorbent material to contain and absorb any spillage at the facility. Once used the absorbent material shall be disposed of at an appropriate facility.

#### 9.4. Emergencies

9.4.1. All significant spillages occurring at the facility shall be treated as an emergency and immediately cleaned up and dealt with so as to alleviate their effects.

9.4.2. No waste shall be burnt within the boundaries of the facility. A fire at the facility shall be treated as an emergency and immediate action shall be taken to extinguish it and notify the appropriate authorities.

9.4.3. In the event that monitoring of local wells indicates that the facility is having a significant adverse effect on the quantity and/or quality of the water supply this shall be treated as an emergency and the licensee shall provide an alternative supply of water to those affected.

9.4.4. In the event that monitoring of the slide slopes of the facility indicate that there may be a risk of slope failure this will be treated as an emergency.

#### 9.5 Tree Felling

9.5.1 Any tree felling to be carried out within the facility shall be carried out during the period September to February.

#### 9.6 Badgers

9.6.1 Works required to exclude/ live trap badgers from within the facility shall be carried out and this work shall be carried out in consultation with the National Parks and Wildlife Service staff of the Department of Environment, Heritage and Local Government.

- 9.7 The licensee shall provide and maintain a storage tank for the temporary storage of liquid runoff/ liquid waste from the composting process.

*REASON: To ensure compliance with the conditions of this licence by provision of a satisfactory system of monitoring of emissions.*

## **CONDITION 10 RECORDS**

- 10.1 The licensee shall keep the following documents at the facility office:-
- a) The current waste licence relating to the facility;
  - b) The current EMS for the facility;
  - c) The previous year's AER for the facility; and
  - d) All written procedures produced by the licensee which relate to the licensed activities.
- 10.2 The licensee shall maintain a record for each load of waste arriving at the facility, excluding those arriving at the Civic Waste facility. The licensee shall record the following:-
- (i) the date and time;
  - (ii) the name of the carrier (including if appropriate, the waste carrier registration details);
  - (iii) the vehicle registration number;
  - (iv) the trailer, skip or other container unique identification number (where relevant);
  - (v) the name of the producer(s)/collector(s) of the waste as appropriate;
  - (vi) the name of the waste facility (if appropriate) from which the load originated including the waste licence or waste permit register number;
  - (vii) a description of the waste including the associated EWC/HWL codes;
  - (viii) the quantity of the waste, recorded in tonnes;
  - (ix) details of the treatment(s) to which the waste has been subjected;
  - (x) the classification and coding of the waste, including whether MSW or otherwise;
  - (xi) whether the waste is for disposal or recovery and if recovery for what purpose;
  - (xii) the name of the person checking the load; and
  - (xiii) where loads or wastes are removed or rejected, details of the date of occurrence, the types of waste and the facility to which they were removed.
- 10.3 Written Records
- The following written records shall be maintained by the licensee:-
- a) The types and quantities of waste recovered and disposed of at the facility each year. These records shall include the relevant EWC Codes and animal by-product designation Waste Category (as appropriate);
  - b) All training undertaken by facility staff;
  - c) Results from all integrity tests of bunds and other structures and any maintenance or remedial work arising from them;
  - d) Details of all nuisance and surface water inspections, daily odour and biofilter inspections;
  - e) The names and qualifications of all persons who carry out all sampling and monitoring as required by this licence and who carry out the interpretation of the results of such sampling and monitoring; and
  - f) Records of waste inspections carried out in accordance with Condition 5.7.17.
- 10.4 The licensee shall maintain a written record of all complaints relating to the operation of the facility. Each such record shall give details of the following:-
- a) Date and time of the complaint;

- b) The name of the complainant;
  - c) Details of the nature of the complaint;
  - d) Actions taken on foot of the complaint and the results of such actions; and
  - e) The response made to each complainant.
- 10.5 A written record shall be kept of the quantities of leachate removed from the facility/discharged to sewer. The record shall include the following:-
- a) The name of the carrier;
  - b) The date and time of removal of leachate from the facility;
  - c) The volume of leachate, in cubic metres, removed/discharged from the facility on each occasion;
  - d) The name and address of the Waste Water Treatment Plant to which the leachate was transported/ discharged; and
  - e) Any incidents or spillages of leachate during its removal/discharge or transportation.
- 10.6 A written record shall be kept for each load of waste departing from the Civic Waste Facility, composting facility and Materials Recovery Facility. The following shall be recorded:-
- a) The name of the carrier;
  - b) The vehicle registration number;
  - c) The destination of the waste (facility name and waste licence/permit number as appropriate);
  - d) A description of the waste (if recovered or rejected waste, the specific nature of the waste);
  - e) The quantity of waste, recorded in tonnes;
  - f) The name of the person checking the load; and
  - g) The time and date of departure.
- 10.7 A written record shall be kept at the facility of the programme for the control and eradication of vermin and fly infestations at the facility. These records shall include as a minimum the following:-
- a) The date and time during which spraying of insecticide is carried out;
  - b) Contractor details;
  - c) Contractor logs and site inspection reports;
  - d) Details of the rodenticide(s) and insecticide(s) used;
  - e) Operator training details;
  - f) Details of any infestations;
  - g) Mode, frequency, location and quantity of application; and
  - h) Measures to contain sprays within the facility boundary.
- 10.8 The licensee shall assign and clearly label a unique reference code to each composting vessel at the facility. In addition, the following shall be recorded:
- a) the time at which composting of the container contents commenced;
  - b) the time at which composting of the container contents ceased; and
  - c) the presence or absence of Animal by-product Category 3 waste as an ingredient of the container.

*REASON: To provide for the keeping of proper records of the operation of the facility.*

## **CONDITION 11 REPORTS AND NOTIFICATIONS**

11.1 Unless otherwise agreed by the Agency, all reports and notifications submitted to the Agency shall:-

- a) Be sent to the Agency's Headquarters;
- b) Comprise one original and two copies unless additional copies are required;
- c) Be formatted in accordance with any written instruction or guidance issued by the Agency;
- d) Include whatever information as is specified in writing by the Agency;
- e) Be identified by a unique code, indicate any modification or amendment, and be correctly dated to reflect any such modification or amendment;
- f) Be submitted in accordance to the relevant reporting frequencies specified by this licence, such as in *Schedule F: Recording and Reporting to the Agency*, of this licence;
- g) Be accompanied by a written interpretation setting out their significance in the case of all monitoring data; and
- h) Be transferred electronically to the Agency's computer system if required by the Agency.

11.2 In the event of an incident occurring on the facility, the licensee shall:-

- a) Notify the Agency as soon as practicable and in any case not later than 1000 hrs the following working day after the occurrence of any incident;
- b) Submit a written record of the incident, including all aspects described in Condition 9.1(a-e), to the Agency as soon as practicable and in any case within five working days after the occurrence of any incident;
- c) In the event of any incident which relates to discharges to surface water/sewer, notify the Eastern Regional Fisheries Board/ wastewater treatment plant operators as soon as practicable and in any case not later than 1000 hrs on the following working day after such an incident; and
- d) Should any further actions be taken as a result of an incident occurring, the licensee shall forward a written report of those actions to the Agency as soon as practicable and no later than ten days after the initiation of those actions.

11.3 Waste Recovery Reports

The licensee shall as part of the Annual Environmental Report for the site submit a report on the contribution by this facility to the achievement of the waste recovery objectives stated in Condition 2.3.2.1 and as otherwise may be stated in National and European Union waste policies and shall, as a minimum, include tonnages of the following:

- (i) the recovery of Construction and Demolition Waste;
- (ii) the recovery of other waste in landfill operations, including restoration;
- (iii) the recovery of energy through landfill gas combustion.

11.4 Reports relating to Facility Operations

11.4.1. Leachate Handling Procedures

11.4.1.1 Leachate Handling Procedures shall be maintained and updated where necessary by the Licensee. The procedures shall cover the handling of leachate on the facility, during removal from the lagoon and subsequent discharge to sewer. Any changes to the Leachate Handling Procedures shall be agreed in advance by the Agency.

11.4.2. Operation in Adverse Wind Conditions

11.4.2.1 The licensee shall maintain written procedures for the operation of the facility in adverse wind conditions. Such procedures shall be agreed by the Agency.

11.5 Vermin and Flies

11.5.1 The licensee shall maintain written procedures, as agreed by the Agency, for the control and eradication of vermin and fly infestations at the facility. These procedures should include as a minimum, operator training, details on the rodenticide(s) and insecticide(s) to be used, mode and frequency of application and measures to contain sprays within the facility boundary.

11.6 Monitoring Locations

11.6.1 The licensee shall maintain and update as necessary an appropriately scaled drawing(s) showing all the monitoring locations that are stipulated in this licence. The drawing(s) shall include the reference code of each monitoring point.

11.6 Annual Environmental Report

11.6.1 The licensee shall submit to the Agency for its agreement, by 31<sup>st</sup> March of each year thereafter, an Annual Environmental Report (AER).

11.6.2 The AER shall include as a minimum the information specified in *Schedule H: Content of Annual Environmental Report*, of this licence and shall be prepared in accordance with any relevant written guidance issued by the Agency.

11.7 Reporting to demonstrate compliance with diversion targets

The Licensee shall report to the Agency such data and records, and at such frequency, as may be specified by the Agency in order to demonstrate compliance with the requirements of Condition 5.18.1. From 1 January 2010, and unless otherwise advised by the Agency, the licensee shall submit quarterly summary reports to the Agency within one week of the end of each quarter on the quantity of MSW and BMW accepted at the landfill during the preceding quarter and on a cumulative basis for the calendar year to date. The report shall detail the tonnage of MSW and BMW accepted and the basis (including all calculation factors) on which the figures have been calculated.

*REASON: To provide for proper reports to and notifications to the Agency.*

## **CONDITION 12 CHARGES AND FINANCIAL PROVISIONS**

### **12.1 Agency Charges**

12.1.1 The licensee shall pay to the Agency an annual contribution of €26,230, or such sum as the Agency from time to time determines, having regard to variations in the extent of reporting, auditing, inspection, sampling and analysis or other functions carried out by the Agency, towards the cost of monitoring the activity as the Agency considers necessary for the performance of its functions under the Waste Management Acts 1996 to 2008. The first payment shall be a pro-rata amount for the period from the date of grant of this licence to the 31<sup>st</sup> day of December, and shall be paid to the Agency within one month from the date of grant of the licence. In subsequent years the licensee shall pay to the Agency such revised annual contribution as the Agency shall from time to time consider necessary to enable performance by the Agency of its relevant functions under the Waste Management Acts 1996 to 2008, and all such payments shall be made within one month of the date upon which demanded by the Agency.

12.1.2 In the event that the frequency or extent of monitoring or other functions carried out by the Agency needs to be increased, the licensee shall contribute such sums as determined by the Agency to defray its costs in regard to items not covered by the said annual contribution.

### **12.2 Environmental Liabilities**

12.2.1 The licensee shall as part of the AER, provide an annual statement as to the measures taken or adopted at the site in relation to the prevention of environmental damage, and the financial provisions in place in relation to the underwriting of costs for remedial actions following anticipated events (including closure) or accidents/incidents, as may be associated with the carrying on of the activity.

12.2.2 The licensee shall arrange for the completion, by an independent and appropriate qualified consultant, of a comprehensive and fully costed Environmental Liabilities Risk Assessment (ELRA) to address the liabilities from past and present activities. A report on this assessment shall be submitted to the Agency for agreement within twelve months of date of grant of this licence. The ELRA shall be reviewed as necessary to reflect any significant change on site, and in any case every three years following initial agreement. The results of the review shall be notified as part of the AER.

12.2.3 As part of the measures identified in Condition 12.2.1, the licensee shall, to the satisfaction of the Agency, make financial provision to cover any liabilities associated with operation, including closure and aftercare, of the facility not covered by condition 12.3. The amount of indemnity held shall be reviewed and revised as necessary, but at least annually. Proof of renewal or revision of such financial indemnity shall be included in the annual 'Statement of Measures' report identified in Condition 12.2.1.

### **12.3 Financial Provision for Closure, Restoration and Aftercare**

12.3.1 The licensee shall prior to the commencement of waste disposal activities establish and maintain a fund, or provide a written guarantee, that is adequate to assure the Agency

that the licensee is at all times financially capable of implementing the Restoration and Aftercare Plan required by Condition 4. The type of fund established and means of its release/recovery shall be agreed by the Agency prior to its establishment.

- 12.3.2 Any fund established shall be maintained in an amount always sufficient to underwrite the current Restoration and Aftercare Plan.
- 12.3.3 The licensee shall revise the cost of restoration and aftercare annually and any details of the necessary adjustments to the fund or guarantee must, within two weeks of the revision, be forwarded to the Agency for its agreement. Any adjustment agreed by the Agency shall be effected within four weeks of said written agreement.
- 12.3.4 Unless otherwise agreed any revision to the fund shall be computed using the following formula:-

$$\text{Cost} = (\text{ECOST} \times \text{WPI}) + \text{CiCC}$$

Where:-

Cost = Revised restoration and aftercare cost

ECOST = Existing restoration and aftercare cost

WPI = Appropriate Wholesale Price Index [Capital Goods, Building & Construction (i.e. Materials & Wages) Index], as published by the Central Statistics Office, for the year since last closure calculation/revision.

CiCC = Change in compliance costs as a result of change in site conditions, changes in law, regulations, regulatory authority charges, or other significant changes.

#### 12.4 Cost of landfill of waste

In accordance with the provisions of Section 53A of the Waste Management Acts 1996 to 2008, the licensee shall ensure the costs involved in the setting up and operation of the facility, as well as the costs of closure and after-care (including cost of provision of financial security) for a period of at least 30 years (post closure) shall be covered by the price to be charged for the disposal of waste at the facility. The statement required under Section 53A(5) of said Acts is to be included as part of the AER.

#### 12.5 Community Support and Development Scheme

The licensee shall each year pay €0.50 (Index Linked) for every tonne of waste accepted for disposal in the landfill in the previous calendar year, into a ring-fenced community support and development fund. Prior to the commencement of waste disposal activities the licensee shall establish a community managed charitable trust (or equivalent) to manage and discharge this fund for the benefit of the social and physical environment of the local community

*REASON: To provide for adequate financing for monitoring and financial provisions for measures to protect the environment.*



## SCHEDULE A : Waste Acceptance

### A.1 Waste Acceptance

**Table A.1 Waste Categories and Quantities**

Waste Type	Maximum (Tonnes Per Annum) Note 1
Non-hazardous household and commercial waste	55,000
Waste for composting	5,000
Construction and Demolition Waste for recovery	8,000
Household and commercial waste accepted for recovery at the Civic Waste Facility and Materials Recovery Facility	12,000
<b>TOTAL</b>	<b>80,000</b>

Note 1: Individual tonnages may be varied if agreed in advance by the Agency, subject to the maximum tonnage.

### A.2 Total Permitted Landfill Capacity

Total quantity of waste permitted to be placed at the landfill facility (over authorised life of facility)	1,406,250 m <sup>3</sup>
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## SCHEDULE B : Specified Engineering Works

Specified Engineering Works
Development of the facility including preparatory works and lining.
Final capping.
Installation of Compost Facility.
Installation of the Materials Recovery Facility.
Installation of the Civic Waste Facility.
Installation of Landfill Gas Management Infrastructure.
Installation of Leachate Management Infrastructure.
Installation of Groundwater Control Infrastructure.
Installation of Surface Water Management Infrastructure.
Any other works notified in writing by the Agency.

## SCHEDULE C : Emission Limits

### C.1 Noise Emissions:

(Measured at the noise sensitive locations indicated in *Table D.1.1*).

Day Db(A) L <sub>Aeq</sub> (15 minutes)	Night dB(A) L <sub>Aeq</sub> (15 minutes)
55	45

### C.2 Landfill Gas Concentration Limits:

(Measured in any building on or adjacent to the facility).

Methane	Carbon Dioxide
20 % LEL (1% v/v)	1.5 % v/v

### C.3 Dust Deposition Limits:

(Measured at the monitoring points indicated in *Table D.1.1*).

Level (mg/m <sup>2</sup> /day) <sup>Note 1</sup>
350

Note 1: 30 day composite sample with the results expressed as mg/m<sup>2</sup>/day.

### C.4 Surface Water Discharge Limits:

Measured at the outlet from the surface water lagoons/ponds.

Level (Suspended Solids mg/l)
25

### C.5 Air Emission Limits:

#### C.5.1 Emission Limits Values for Biofilters

Emission Point reference no: Biofilter 1

Parameter	Emission Limit Value
Ammonia	50 mg/m <sup>3</sup>
Hydrogen sulphide	5 mg/m <sup>3</sup>
Mercaptans	5 mg/m <sup>3</sup>

#### C.6 Emission Limits Values for Landfill Gas Plant

Emission Point Reference numbers: GF1 and GF2<sup>Note 3</sup>

Volume to be emitted: 3000m<sup>3</sup>/hr (unless results from modelling suggests otherwise)

Minimum discharge height: 5m (unless results from modelling suggests otherwise)

Parameter	Flare (enclosed) Emission Limit Value <sup>Note 1</sup>	Utilisation Plant Emission Limit Value <sup>Note 1</sup>
Nitrogen oxides (NO <sub>x</sub> )	150 mg/m <sup>3</sup>	500 mg/m <sup>3</sup>
CO	50 mg/m <sup>3</sup>	50 mg/m <sup>3</sup>
Particulates	Not applicable	130 mg/m <sup>3</sup>

<b>Total organic carbon (TOC)</b>	10 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>
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**Note 1:** Dry gas referenced to 5% oxygen by volume for utilisation plants and 3% oxygen by volume for flares.

**C.7 Emission Limits for Leachate Being Discharged to Sewer/ from on-site leachate treatment plant**

Emission Point Reference No. LTP3, location to be agreed by the Agency.

Volume to be emitted: Maximum in any one day: **80 m<sup>3</sup>**

Parameter	Emission Limit Value
	Daily Mean Concentration (mg/l)
<b>BOD</b>	200
<b>COD</b>	750
<b>Ammoniacal Nitrogen (NH<sub>4</sub>-N)</b>	10
<b>Nitrate Nitrogen</b>	1500
<b>Alkalinity</b>	1000
<b>Dissolved methane</b>	0.2

# SCHEDULE D : Monitoring

## D.1 Monitoring Locations

Monitoring locations shall be those as set out in Table D.1.1, Attachment F of the application and Figure 5.12 of the EIS Addendum.

**Table D.1.1** Monitoring Locations

Landfill Gas within Waste and Boundary Locations	Landfill Gas Flare/Utilisation Plant <sup>Note 2</sup>	Dust PM <sub>10</sub> Deposition / Odour/ Bioaerosols	Noise	Surface Water <sup>Note 5</sup>	Ground Water	Leachate
Stations		Stations	Stations	Stations	Stations	Stations
In waste: to be agreed	GF1, GF2 etc. Location to be agreed	D.1, D.2, D.3, D.4, D.5, D.6, D.7, D.8, D.9, D.10.	Noise sensitive locations: N1, N2, N3, N4, N5, N6, N7, N8, N9.	SW1, SW2, SW2A, SW3, SW3a, SW4, SW5, SW6, SW7, SW8, SW9	BH1, BH2, BH3, BH6, BH7, BH8, BH9.	LTP-1, LTP-2, LTP-3 Exact locations to be agreed <sup>Note 3/4</sup>
Boundary locations: GS1, GS2, GS3, GS4, GS5, GS6, GS7, GS8, GS9, GS10, GS11, GS12, GS13, GS14, GS15, GS16, GS17, GS18, GS19, GS20, GS21, GS22, GS23		Odour: to be agreed including 3 fixed locations and 2 locations to be chosen on the day (upwind/downwind)		Surface water pond: SWP1 (inlet), SWP2 (outlet)	Private wells <sup>Note 1</sup> : PW1, PW2, PW2a, PW3, PW4, PW5, PW6, PW7, PW8, PW9, PW10, PW11.	Within Cells: LW1, LW2, LW3, LW4, LW5, LW6, LW7, LW8, LW9, LW10 <sup>Note 4</sup>
		Biofilter 1		Biological monitoring points: to be agreed		

**Note 1:** Subject to the agreement of the well owners.

**Note 2:** GF1 and GF2 refer to the emissions points from the flare and utilisation plant respectively. Any additional points to be agreed in advance by the Agency.

**Note 3:** LTP-1 refers to the raw leachate at the influent point. LTP-2 refers to the monitoring point in the sequencing batch reactor. LTP-3 refers to treated leachate at the effluent point.

**Note 4:** Leachate monitoring locations LTP-1, LTP-2, LTP-3, LW1, LW5 and LW10 should be analysed for leachate composition. All other locations should be monitored for levels.

**Note 5:** SW3 should be located further north of the position as shown on Figure 5.12 of the EIS Addendum, just downstream of the confluence of the three streams shown. An additional monitoring point SW3a should be located on the eastern stream, adjacent to dust monitoring point D3. SWP1 and SWP2 are monitoring points at the inlet and outlet points of the final (i.e. furthest downstream) surface water pond.

## D.2 Landfill Gas

**Table D.2.1** Landfill Gas Monitoring Parameters, Frequency and Technique

Parameter	Monitoring Frequency		Analysis Method <sup>Note1</sup> /Technique <sup>Note2</sup>
	Gas Boreholes/ Vents/Wells	Site Office	
Methane (CH <sub>4</sub> ) % v/v	Monthly	Weekly	Infrared analyser/flame ionisation detector
Carbon dioxide (CO <sub>2</sub> ) % v/v	Monthly	Weekly	Infrared analyser/ flame ionisation detector
Oxygen(O <sub>2</sub> ) % v/v	Monthly	Weekly	Electrochemical cell
Atmospheric Pressure	Monthly	Weekly	Standard
Temperature	Monthly	Weekly	Standard

**Note 1:** All monitoring equipment used should be intrinsically safe.

**Note 2:** Or other methods agreed in advance by the Agency.

## D.3 Dust/Odour/PM10 Monitoring

**Table D.3.1** Dust Monitoring Frequency and Technique

Parameter (mg/m <sup>2</sup> /day)	Monitoring Frequency	Analysis Method/Technique
Dust	Three times a year <sup>Note 2</sup>	Standard Method <sup>Note 1</sup>
Odour	Quarterly	See Note 3
PM <sub>10</sub> ( µg/m <sup>3</sup> )	Annually	See Note 4
<i>Aspergillus fumigatus</i>	Annually	Grab sample <sup>Note 5</sup>
Mesophilic bacteria	Annually	Grab sample <sup>Note 5</sup>

**Note 1:** Standard method VDI2119 (Measurement of Dustfall, Determination of Dustfall using Bergerhoff Instrument (Standard Method) German Engineering Institute). Any modifications to eliminate interference due to algae growth in the gauge should be reported to the Agency.

**Note 2:** Twice during the period May to September.

**Note 3:** To be agreed by the Agency.

**Note 4:** As described in prEN12341 "Air Quality - field test procedure to demonstrate reference equivalence of sampling methods for PM10 fraction of particulate matter" or an alternative agreed in writing by the Agency.

**Note 5:** Enumeration of colonies to be carried out as described in 'Standardised Protocol for the Sampling and Enumeration of Airborne Micro-organisms at composting Facilities' the UK Composting Association 1999.

## D.4 Noise

**Table D.4.1** Noise Monitoring Frequency and Technique

Parameter	Monitoring Frequency	Analysis Method/Technique
L(A) <sub>EQ</sub> [30 minutes]	Quarterly	Standard <sup>Note 1</sup>
L(A) <sub>10</sub> [30 minutes]	Quarterly	Standard <sup>Note 1</sup>
L(A) <sub>90</sub> [30 minutes]	Quarterly	Standard <sup>Note 1</sup>
Frequency Analysis (1/3 Octave band analysis)	Quarterly	Standard <sup>Note 1</sup>

**Note 1:** "International Standards Organisation. ISO 1996. Acoustics - description and Measurement of Environmental noise. Parts 1, 2 and 3."

## D.5 Surface Water, Groundwater and Leachate

Table D.5.1 Water and Leachate - Parameters / Frequency

PARAMETER <sup>Note 1</sup>	SURFACE WATER <sup>Note 2</sup> Monitoring Frequency	GROUNDWATER Monitoring Frequency	LEACHATE Monitoring Frequency
Visual Inspection/Odour <sup>Note 2</sup>	Weekly	Quarterly	Quarterly
Groundwater Level	Not Applicable	Monthly	Not Applicable
Leachate Level	Not Applicable	Not Applicable	Continuous
Ammoniacal Nitrogen	Quarterly	Quarterly	Annually
BOD	Quarterly	Not Applicable	Annually
COD	Quarterly	Not Applicable	Annually
Chloride	Quarterly	Quarterly	Annually
Dissolved Oxygen	Quarterly	Quarterly	Not Applicable
Dissolved Methane	Not Applicable	Not Applicable	To be agreed
Electrical Conductivity	Quarterly	Quarterly	Annually
Ph	Quarterly	Quarterly	Annually
Total Suspended Solids	Quarterly	Not Applicable	Not Applicable
Temperature	Quarterly	Quarterly	Quarterly
Metals / non metals <sup>Note 3</sup>	Annually	Annually	Annually
Cyanide (Total)	Not Applicable	Annually	Annually
Fluoride	Not Applicable	Annually	Annually
List I/II organic substances <sup>Note 4</sup>	Once off <sup>Note 5</sup>	Annually <sup>Note 5</sup>	Once off <sup>Note 5</sup>
Mercury	Annually	Annually	Annually
Sulphate	Annually	Annually	Annually
Total Alkalinity	Annually	Annually	Not applicable
Total P/orthophosphate	Annually	Annually	Annually
Total Oxidised Nitrogen	Annually	Annually	Annually
Total Organic Carbon	Not Applicable	Quarterly	Not Applicable
Residue on evaporation	Not Applicable	Annually	Not Applicable
Biological Assessment	Annually <sup>Note 6</sup>	Not Applicable	Not Applicable

**Note 1:** All the analysis shall be carried out by a competent laboratory using standard and internationally accepted procedures.

**Note 2:** Where there is evident gross contamination of leachate, additional samples should be analysed.

**Note 3:** Metals and elements to be analysed by AA/ICP should include as a minimum: boron, cadmium, calcium, chromium (total), copper, iron, lead, magnesium, manganese, nickel, potassium, sodium and zinc.

**Note 4:** Samples screened for the presence of organic compounds using Gas Chromatography / Mass Spectrometry (GC/MS) or other appropriate techniques and using the list I/II Substances from EU Directive 76/464/EEC and 80/68/EEC as a guideline. Recommended analytical techniques include: volatiles (US Environmental Protection Agency method 524 or equivalent), semi-volatiles (USEPA method 525 or equivalent, and pesticides (USEPA method 608 or equivalent).

**Note 5:** 2 surface water locations, 3 groundwater locations and 2 leachate locations to be agreed by the Agency for these parameters.

**Note 6:** Appropriate biological methods (such as EPA Q-Rating System) to be used for the assessment of rivers and streams.

## D.6 Meteorological Monitoring

**Table D.6.1** Meteorological Monitoring: at a location on the facility.

Parameter	Monitoring Frequency	Analysis Method/Technique
Precipitation Volume	Daily	Standard
Temperature (min/max.)	Daily	Standard
Wind Force and Direction	Daily	Standard
Evaporation	Daily	Standard
Evapotranspiration <sup>Note 1</sup>	Daily	Standard
Humidity	Daily	Standard
Atmospheric Pressure <sup>Note 1</sup>	Daily	Standard

**Note 1:** Monitoring frequency for these parameters may be decreased with the agreement of the Agency.

## D.7 Landfill Gas Combustion Plant/Enclosed Flare

Location: Utilisation plant and enclosed flare

**Table D.7.1** Landfill Gas Utilisation Plant/Enclosed Flare Parameters and Monitoring Frequency

Parameter	Flare (enclosed)	Utilisation Plant	Analysis Method <sup>Note1</sup> /Technique <sup>Note2</sup>
	Monitoring Frequency	Monitoring Frequency	
Inlet			
Methane (CH <sub>4</sub> ) % v/v	Continuous	Weekly	Infrared analyser/flame ionisation detector/thermal conductivity
Carbon dioxide (CO <sub>2</sub> ) % v/v	Continuous	Weekly	Infrared analyser/thermal conductivity
Oxygen (O <sub>2</sub> ) % v/v	Continuous	Weekly	Electrochemical/thermal conductivity
Total Sulphur	Annually	Annually	Ion chromatography
Process Parameters			
Combustion Temperature	Continuous	Quarterly	Temperature Probe/datalogger
Outlet			
CO	Continuous	Continuous	Flue gas analyser/datalogger
Nox	Annually	Annually	Flue gas analyser
SO <sub>2</sub>	Annually	Annually	Flue gas analyser
Particulates	Not applicable	Annually	Isokinetic/Gravimetric
TOC	Annually	Not applicable	Flame ionisation

**Note 1:** All monitoring equipment used should be intrinsically safe.

**Note 2:** Or other methods agreed in advance by the Agency.

### D.8 Monitoring of Emissions to Sewer

Emission Point Reference No.: LTP-3

Location: Treated leachate outlet point.

**Table D.8.1 Sewer Monitoring - Parameters/Frequency**

Parameter	Monitoring Frequency	Analysis Method/Technique <sup>Note 1</sup>
Flow	Continuous	Flow meter/recorder
Biochemical Oxygen Demand		Standard Method <sup>Note 1</sup>
Chemical Oxygen Demand		Standard Method <sup>Note 1</sup>
Ammoniacal nitrogen		Standard Method <sup>Note 1</sup>
Nitrate Nitrogen		Standard Method <sup>Note 1</sup>
Alkalinity		Standard Method <sup>Note 1</sup>
Dissolved Methane		Dissolved Methane Probe <sup>Note 1</sup>

Note 1: All analyses shall be carried out by a competent laboratory using standard and internationally acceptable techniques.

### D.9 Monitoring of Composting Process

Parameter	Monitoring Frequency	Monitoring equipment/method
<ul style="list-style-type: none"> <li>Composting piles</li> </ul> <i>Temperature vs. time</i>	Continuous	Temperature probe/recorder
<ul style="list-style-type: none"> <li>Compost maturation (curing) piles</li> </ul> <i>Temperature</i>	Daily	Temperature probe
<i>Moisture</i>	Daily	Subjective by operator.

### D.10 Air & Odour Monitoring <sup>Note 1</sup>

#### Biofilters

Parameter	Monitoring Frequency	Analysis Method/Technique
<b>Bed Media</b>		
Odour assessment <sup>Note 2</sup>	Daily	Subjective Inspection
Condition and depth of biofilter <sup>Note 3</sup>	Daily	Visual Inspection
Moisture content	Bi-annually	Standard laboratory method
PH	Bi-annually	pH probe
Ammonia	Bi-annually	Standard laboratory method
Total viable counts	Bi-annually	Standard laboratory method
<b>Inlet and Outlet Gas</b>		
Ammonia	Bi-annually	Colourimetric Indicator Tubes
Hydrogen sulphide	Bi-annually	Colourimetric Indicator Tubes
Mercaptans	Bi-annually	Colourimetric Indicator Tubes

Note 1: All analyses shall be carried out by a competent laboratory using standard and internationally acceptable techniques. The testing laboratory and the testing technique shall be agreed by the Agency in advance.

Note 2: This subjective assessment should be carried out by a staff member immediately upon arriving on-site.

Note 3: The biofilter shall be examined to ensure that no channelling is evident, and that moisture content is adequate. Watering, turning, restructuring and the addition of supplementary bed materials, or total bed replacement shall be carried out, as required, subject to bed performance.



**D.11 Waste Monitoring**

Waste class	Frequency	Parameter	Method
Bio-stabilised residual waste	Every 200 tonnes from each source	To be agreed	To be agreed

**D.12 Ambient Odour Monitoring**

Parameter	Frequency	Analysis Method/Technique
Odour	Monthly	To be agreed

## SCHEDULE E : Compost Process Management

**Table E.1 Composting.** During the composting process the entire quantity of biowaste being composted shall be exposed to the following temperature :

Temperature	Treatment time
At least 60°C	1 week

**Table E.2 Category 3 Material.** All Category 3 Animal By-Product Waste shall be exposed to the following processing regime:

Temperature	Particle Size	Treatment Time
70 °C	12 mm <sup>Note 1</sup>	60 minutes

**Note 1:** Unless otherwise agreed by the Agency.

**Table E.3 Process validation.** The composting process shall be tested using the following indicator organism <sup>Note 1</sup>:

Indicator Organism	Frequency
<i>Salmonella spp.</i>	Annually <sup>Note 2</sup>

**Note 1:** Unless otherwise agreed by the Agency.

**Note 2:** This test shall be repeated if major changes to either the composition of the incoming biowaste or the treatment process are made.

## SCHEDULE F : Recording and Reporting to the Agency

Report	Reporting Frequency <sup>Note 1</sup>	Report Submission Date
Environmental Management System Updates	Annually	As part of the AER
Annual Environment Report (AER)	Annually	By 31 March of each year.
Record of incidents	As they occur	Within five days of the incident.
Notification of waste loads not meeting waste acceptance criteria	As they occur	As per Condition 5.2.9
Compliance with waste diversion targets	As required by the Agency	As per Condition 11.10
Specified Engineering Works reports	As they arise	Prior to the works commencing.
Monitoring of landfill gas	Quarterly	Ten days after end of the quarter being reported on.
Monitoring of Surface Water Quality	Quarterly	Ten days after end of the quarter being reported on.
Monitoring of Groundwater Quality	Quarterly	Ten days after end of the quarter being reported on.
Monitoring of Leachate	Quarterly	Ten days after end of the quarter being reported on.
Meteorological Monitoring	Annually	As part of the AER
Dust Monitoring	Three times a year	As part of the AER
Noise Monitoring	Quarterly	Ten days after end of the quarter being reported on.
Compost Quality Monitoring	Quarterly	Ten days after end of the quarter being reported on.
PM <sub>10</sub> and Bioaerosol monitoring	Annually	As part of the AER.
Odour assessment and condition and depth of biofilters	Daily	To be recorded by licensee.
Biofilter air monitoring	Biannually	Ten days after end of the period being reported on.
Any other monitoring	As they occur	Within ten days of obtaining results.

**Note 1:** Unless altered at the request of the Agency.

## SCHEDULE G : Compost Quality

Compost shall be deemed unsatisfactory if more than 25% of samples fail the criteria below. No sample shall exceed 1.2 times the quality limit values set.

[The following criteria are deemed a quality standard for the use of compost as a soil improver and should not be deemed as criteria for fertiliser. In addition N, P, K, NH<sub>4</sub>-N, NO<sub>3</sub>-N, pH and dry matter content should also be measured]

### 1. Maturity

The state of the curing pile must be conducive to aerobic biological activity.

Compost shall be deemed to be mature if it meets two of the following groups of requirements:

1. Respiration activity after four days AT<sub>4</sub> is ≤10mg/O<sub>2</sub>/g dry matter or Dynamic Respiration Index is ≤1,000mgO<sub>2</sub>/kg VS/h.
2. Germination of cress (*Lepidium sativum*) seeds and of radish (*Raphanus sativus*) seeds in compost must be greater than 90 percent of the germination rate of the control sample, and the growth rate of plants grown in a mixture of compost and soil must not differ more than 50 percent in comparison with the control sample.
3. Compost must be cured for at least 21 days; and  
Compost will not reheat upon standing to greater than 20°C above ambient temperature.
4. If no other determination of maturity is made, the compost must be cured for a six month period. In addition, offensive odours from the compost shall be minimal for the compost to be deemed mature.
5. Or other maturity tests as may be agreed by the Agency.

### 2. Trace Elements <sup>Note 1/ 2/3</sup>

Maximum Trace Element Concentration Limits for Compost

Parameter (mg/kg, dry mass)	Compost Quality Standards <sup>Note 4</sup>		Stabilised Biowaste
	Class 1	Class 2	
Cadmium (Cd)	0.7	1.5	5
Chromium (Cr)	100	150	600
Copper (Cu)	100	150	600
Mercury (Hg)	0.5	1	5
Nickel (Ni)	50	75	150
Lead (Pb)	100	150	500
Zinc (Zn)	200	400	1500
PolyChlorinated Biphenyls (PCB's)	-	-	0.4
Polynuclear Aromatic Hydrocarbons (PAH's)	-	-	3
Impurities >2mm <sup>Note 5</sup>	<0.5%	<0.5%	<3%
Gravel and Stones >5mm <sup>Note 5</sup>	<5%	<5%	-

Note 1: These limits apply to the compost just after the composting phase and prior to mixing with any other materials.

Note 2: Incoming sludges shall be monitored quarterly (on a client by client basis) for the parameters outlined in this table.

Note 3: These limits alone should not be taken as an indication of suitability for addition to soil as the cumulative metal additions to soil should be first calculated.

Note 4: Normalised to 30% organic matter content.

Note 5: Compost must not contain any sharp foreign matter measuring over a 2 mm dimension that may cause damage or injury to humans, animals and plants during or resulting from its intended use.

### 3. Pathogens

Pathogenic organism content must not exceed the following limits:

<i>Salmonella sp.</i>	Absent in 50g	n=5
<i>Faecal Coliforms</i>	≤ 1000 Most Probable Number (MPN) in 1g	n=5

Where: n = Number of samples to be tested;

### 4. Monitoring

The licensee shall monitor the compost product at least biannually. The sampling protocol, methods of analyses and sample numbers shall be as agreed in advance by the Agency.

## **SCHEDULE H : Content of the Annual Environmental Report**

### **Annual Environmental Report Content**

Reporting Period.

Waste activities carried out at the facility.

Quantity and Composition of waste received, disposed of and recovered during the reporting period and each previous year. This should include a separate section detailing all animal by-product wastes treated.

Calculated remaining capacity of the facility and year in which final capacity is expected to be reached.

Methods of deposition of waste.

Summary report on emissions.

Summary of results and interpretation of environmental monitoring.

Resource and energy consumption summary.

Proposed development of the facility and timescale of such development.

Volume of leachate produced and volume of leachate transported / discharged off-site.

Report on development works undertaken during the reporting period, and a timescale for those proposed during the coming year.

Report on restoration of completed cells/ phases.

Meteorological monitoring.

Dust monitoring.

PM<sub>10</sub> and bio aerosol monitoring.

Site survey showing existing levels of the facility at the end of the reporting period.

Estimated annual and cumulative quantities of landfill gas emitted from the facility.

Estimated annual and cumulative quantity of indirect emissions to groundwater.

Annual water balance calculation and interpretation.

Report on the progress towards achievement of the Environmental Objectives and Targets contained in previous year's report.

Environmental Management System updates

Schedule of Environmental Objectives and Targets for the forthcoming year.

Full title and a written summary of any procedures developed by the licensee in the year which relates to the facility operation.

Tank, pipeline and bund testing and inspection report.

Reported incidents and Complaints summaries.

Review of Nuisance Controls.

Reports on financial provision made under this licence, management and staffing structure of the facility, and a programme for public information.

Report on training of staff.

Updates/Amendments to Odour Management Plan (OMP)

Updates to Landfill environmental Management Plan (LEMP)

Review of Environmental Liabilities.

Report on waste recovery.

Statement of compliance of facility with any updates of the relevant Waste Management Plan  
Statement on the achievement of the waste acceptance and treatment obligations.  
Any other items specified by the Agency.

Sealed by the seal of the Agency on this the ... day of September 2009

PRESENT when the seal of the Agency  
was affixed hereto:

\_\_\_\_\_  
..., **Director/Authorised Person**