



Headquarters,  
P.O. Box 3000,  
Johnstown Castle Estate  
County Wexford, Ireland

## WASTE LICENCE

## RECOMMENDED DECISION

<b>Waste Licence</b>	W0021-02
<b>Register Number:</b>	
<b>Licensee:</b>	Mayo County Council
<b>Location of Facility:</b>	Derrinnumera Landfill
	Derrinnumera, Newport, Co. Mayo

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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 applicant, and the report of its inspector.

### *Part I: 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 Mayo County Council, Aras an Chontae, The Mall, Castlebar, Co. Mayo, to carry on the waste activity/activities listed below at Derrinnumera Landfill, Derrinnumera, Newport, Co. Mayo, subject to conditions, with the reasons therefore and the 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*

- Class 1:* Deposit on, in or under land (including landfill).
- Class 5:* Specially engineered landfill, including placement into lined discrete cells which are capped and isolated from one another and the environment.
- Class 6:* 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.
- Class 7:* 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.
- Class 13:* 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.

#### *Licensed waste recovery activities, in accordance with the Fourth Schedule of the Waste Management Acts, 1996 to 2008*

- Class 2:* Recycling or reclamation of organic substances which are not used as solvents (including composting and other biological transformation processes).
- Class 3:* Recycling or reclamation of metals and metal compounds.
- Class 4:* Recycling or reclamation of other inorganic materials.
- Class 13:* 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.

# INTERPRETATION

<b>Act</b>	The Waste Management Acts, 1996 to 2008
<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>Application</b>	The application by the licensee for this waste licence, including any other material submitted to the Agency in writing by the licensee between the date of the application and the date of grant of this licence.
<b>Appropriate facility</b>	A waste management facility, duly authorised under relevant law and technically suitable.
<b>Attachment</b>	Any reference to Attachments in this licence refers to attachments submitted as part of the waste licence application.
<b>BAT</b>	Best Available Technique.
<b>BATNEEC</b>	Best Available Technology Not Entailing Excessive Cost as defined in section 5 (2) of the Act.
<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>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>Civic waste facility</b>	A convenient centre used by householders and commercial operators to drop off recyclables and other 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>Commercial waste</b>	As defined in Section 5 (1) of the Act.

<b>Condition</b>	A condition of this licence. In any case where this licence refers to a numbered condition, the reference shall be taken to mean the condition and any sub-condition therein which the context of the reference requires that reference is made to
<b>Containment boom</b>	A boom which can contain spillages and prevent these 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 subject to a proposal made by the licensee for the Agency's agreement.
<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>Emission</b>	As defined in Section 5 (1) of the Act.
<b>Emission Limit Value</b>	Those limits, including concentration limits and deposition levels established in Schedule G.
<b>Environmental Pollution</b>	As defined in Section 5 (1) of the Act.
<b>European Waste Catalogue (EWC)</b>	The EWC is 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>Facility</b>	That area or areas defined under Condition 1.2
<b>Green waste</b>	Waste wood, plant matter and other vegetation.
<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>Hazardous Waste</b>	As defined in Section 4 (2) of the Act.
<b>Household Waste</b>	As defined in Section 5 (1) of the Act.
<b>Industrial waste</b>	As defined in Section 5 (1) of the Act.
<b>Incident</b>	Any reference to an incident in this licence means an incident as defined in Condition 3.1.
<b>Landfill</b>	As defined in Section 5 (1) of the Act.

<b>Landfill Gas</b>	Gases generated from the landfilled waste.
<b>Leachate</b>	Any liquid percolating through the deposited waste and emitted from or contained within a landfill as defined in Section 5 (1) of the Act.
<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>	Mayo County Council, Aras na Chontae, Castlebar, Co. Mayo.
<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 20% dry matter.
<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>	At least 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>Municipal Waste</b>	Municipal waste as defined in Section 5 (1) of the Act.
<b>Night-time</b>	2200 hrs to 0800 hrs.
<b>Non-hazardous waste</b>	Non-Hazardous Waste is any waste which is not a hazardous waste as defined in the Act.
<b>Quarterly</b>	A period of three calendar months, the first period of which commences on the date of grant of this licence.
<b>Recovery</b>	As defined in Section 4 (4) of the Act.
<b>Residual waste</b>	The fraction of collected waste remaining after a treatment or diversion step, which generally requires further treatment or disposal.
<b>Sample(s)</b>	Unless the context of this licence indicates to the contrary, samples shall include measurements by electronic instruments.
<b>Sludge</b>	The accumulation of solids resulting from chemical coagulation, flocculation and/or sedimentation after water or wastewater treatment.
<b>Specified Emissions</b>	Those emissions listed in Schedule G of this licence.
<b>Specified Engineering Works</b>	Those engineering works listed in Schedule E of this licence.
<b>Submit</b>	Unless the context of this licence indicates otherwise, submit to the Agency in writing for agreement

<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 which when achieved or exceeded requires certain actions to be taken.
<b>Waste</b>	As defined in Section 4(1) of the Act.
<b>Waste disposal activity</b>	Includes the activities referred to in Section 4 of the Act and listed in the Third Schedule thereto.
<b>Waste recovery activity</b>	Includes the activities referred to in Section 4 of the Act and listed in the Fourth Schedule thereto.
<b>White Goods</b>	Refrigerators, cookers, ovens and other similar appliances.
<b>Working Day</b>	08.00 to 18.00 Monday to Friday inclusive and 08.00 to 13.00 on Saturdays.
<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 II CONDITIONS***

### **CONDITION 1 SCOPE**

- 1.1. The waste activities authorised by this licence are listed and described in *Schedule A: Waste Activities*. Waste activities at the facility shall be restricted to those listed in Schedule A and any restrictions set down therein.
- 1.2. Waste activities shall be restricted to the area of land outlined in red on the Site Plan agreed with the Agency. Following agreement, waste activities shall be restricted to the area of land thus outlined in red and any reference in this licence to "facility" shall mean the area thus outlined in red.
- 1.3. Every plan, programme or proposal submitted to the Agency for 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. Every 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.
- 1.4. 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.
- 1.5. Where the Agency considers that a non-compliance with the Conditions of this licence has occurred, it may serve a notice on the licensee specifying:
  - a) that only those wastes as specified, if any, in the notice are to be accepted at the facility after the date set down in the notice;
  - b) that the licensee shall undertake the works stipulated in the notice, and/or otherwise comply with the requirements of the notice as set down therein, within the time-scale contained in the notice; and,
  - c) that the licensee shall carry out any other requirement specified in the notice.

When the notice has been complied with, the licensee shall provide written confirmation that the requirements of the notice have been carried out. No waste, other than that which is stipulated in the notice, shall be accepted at the facility until written confirmation is received from the Agency that the notice is withdrawn.

<b>Reason:</b> <i>To clarify the scope of this licence.</i>
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## CONDITION 2 MANAGEMENT OF THE ACTIVITY

### 2.1 Environmental Management System

2.1.1 The licensee shall maintain an Environmental Management System (EMS) at the facility. The EMS shall be updated on an annual basis with amendments being submitted to the Agency for agreement.

2.1.2 The EMS shall include as a minimum those elements specified in the Conditions 2.2 to 2.8 below:

### 2.2 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 Environmental Management Programme

2.3.1 The licensee shall maintain an Environmental Management Programme (EMP). The EMP shall include a time-scale for achieving the Schedule of Objectives and Targets and shall comply with any other guidance issued by the Agency.

2.3.2 The EMP shall include, as a minimum, the information specified in *Schedule B: Content of the Environmental Management Programme*. The EMP shall be reviewed and submitted to the Agency for its agreement annually.

2.3.3 Notwithstanding the provisions of Condition 2.3.1, the operator shall prepare, operate and maintain a Landfill Environmental Management Plan (LEMP) covering aspects not already included in the EMP. 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, with updates notified to the EPA as part of the AER.

### 2.4 Corrective Action

2.4.1 The licensee shall maintain written Corrective Action Procedures to ensure that corrective action is taken should specified requirements to this licence not be fulfilled.

### 2.5 Awareness and Training

2.5.1 The licensee shall maintain Awareness and Training Procedures for identifying training needs and for providing appropriate training, for personnel whose work is related to the licensed facility. Written records of training shall be maintained.

### 2.6 Management Structure

2.6.1 The licensee shall maintain written details of the management structure of the facility. Any proposed changes in the management structure shall be submitted in writing to the Agency for its agreement. 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;
- b) a named contact person for communications with the Sanitary Authority
- c) details of the responsibilities for each individual named under a) above;
- d) details of the relevant experience, competence and qualifications held by each of the persons nominated under a) above; and
- e) contingency arrangements for the absences of the named persons from the facility.

2.7 Communications

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

2.8 Annual Environmental Report

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

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

2.9 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 suitably qualified and experienced deputy, shall be present at all times during the operation of the facility.

2.10 The licensee shall ensure that personnel performing specifically assigned tasks shall be qualified on the basis of appropriate education, training and/or experience, as required and shall be aware of the requirements of this licence.

2.11 Resource Use and Energy Efficiency

2.11.1 The licensee shall carry out an audit of the energy efficiency of the site within one year of the date of grant of this licence. The audit shall:-

- (i) identify all opportunities for energy use reduction and efficiency;
- (ii) be carried out in accordance with the guidance published by the Agency - "Guidance Note on Energy Efficiency Auditing"; and
- (iii) be repeated at intervals as required by the Agency.

The recommendations of the audit will be incorporated into the Schedule of Environmental Objectives and Targets under Condition 2.2 above.

2.11.2 The licensee shall identify opportunities for reduction in the quantity of water used on site including recycling and reuse initiatives, wherever possible. Reductions in water usage shall be incorporated into the Schedule of Environmental Objectives and Targets.

2.11.3 The licensee shall undertake an assessment of the efficiency of use of raw materials in all processes, having particular regard to the reduction in waste generated. The assessment should take account of best international practice for this type of activity. Where improvements are identified, these shall be incorporated into the Schedule of Environmental Objectives and Targets.

#### 2.12 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 5.4.3. 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.

#### 2.13 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 2.2 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.

**Reason:** *To make provision for management of the activity on a planned basis having regard to the desirability of ongoing assessment, recording and reporting of matters affecting the environment. To provide for the efficient use of resources and energy in all site operations.*

### **CONDITION 3 NOTIFICATION AND RECORD KEEPING**

3.1 The licensee shall make written records of the following incidents:

- a) any emission which results in the contravention of any relevant standard, including any standard for an environmental medium, or any relevant emission limit value, prescribed under any relevant enactment;
- b) any emission which does not comply with the requirements of this licence;
- c) any trigger level specified in this licence or in the EMS which is attained or exceeded;
- d) any discharge of leachate to the Glaishty River;

- e) where the biological assessment of the Glaishtwy River immediately downstream of the facility indicates that the Q-rating is lower than 2;
  - f) any malfunction of any environmental control system;
  - g) any indication that contamination has, or may have, taken place;
  - h) the cessation of waste activities at the facility for a period in excess of 28 days, and their recommencement;
  - i) any occurrence with the potential for environmental pollution; and,
  - j) any emergency.
- 3.2 The written record shall include all aspects described in Condition 10.7.
- 3.3 Unless otherwise instructed in writing by the Agency, the licensee shall:
- a) notify the Agency by telephone, and by facsimile if available, as soon as practicable and in any case not later than 10.00 am the following working day after the occurrence of any incident; and
  - b) submit the written record required by this condition to the Agency as soon as practicable and in any case within five working days after the occurrence of any incident.
- 3.4 Should any further actions be taken after the date of written notification, 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.
- 3.5 Unless otherwise agreed by the Agency, all documentation submitted to the Agency shall:
- (a) be sent to the Agency's headquarters;
  - (b) comprise one original and three copies;
  - (c) be formatted in accordance with any written instruction or guidance issued by the Agency;
  - (d) be identified by a unique code, indicate any modification or amendment, and be correctly dated to reflect any such modification or amendment;
  - (e) be submitted in accordance to the relevant reporting frequencies specified by this licence;
  - (f) be certified as accurate and representative by the licensee; and
  - (g) in the case of results of any environmental monitoring, be accompanied by a written interpretation setting out their significance.
- 3.6 In the event of any incident which relates to discharges to surface water, the licensee shall notify the North Western Regional Fisheries Board, as soon as practicable by telephone and in writing (by facsimile if available) and in any case not later than 10:00am on the following working day after such an incident.
- 3.7 Unless otherwise agreed in writing with the Agency, all documentation required to be maintained under this licence, shall be retained by the licensee.
- 3.8 Unless otherwise agreed in advance in writing with the Agency, the licensee must give at least fourteen days notice to the Agency of the following events:

- a) the cessation of waste disposal activities at the facility for a period in excess of twenty-eight days;
  - b) the re-commencement of waste disposal activities at the facility following a period of cessation referred to at a) above.
- 3.9 The licensee shall provide additional copies of any documentation referred to in this licence to the Agency upon written request, within the time specified in writing by the Agency.
- 3.10 Unless otherwise agreed in advance in writing with the Agency, copies of all documentation referred to in this licence shall be maintained by the licensee at the Headquarters of Mayo County Council, Aras na Chontae, Castlebar, and, when constructed in the facility office referred to as "Control Building" in Drawing No. 002034/11/608, "Layout Plan of Derrinumera Landfill Site Showing Waste Reception Area" and shall be made available to the Agency at all reasonable times.
- 3.11 The licensee shall keep the following documents at the location referred to in Condition 3.10:
- a) the current waste licence relating to the facility;
  - b) any previous waste licence in respect of the facility;
  - c) the current EMS for the facility;
  - d) the previous year's AER for the facility;
  - e) all written procedures produced by the licensee which relate to the licensed activities.
- 3.12 The licensee shall maintain a written record for each load of waste arriving at the 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.
- 3.13 A written record shall be kept of each consignment of leachate removed from the facility. 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 from the facility on each occasion;
  - d) the name and address of the Waste Water Treatment Plant to which the leachate was transported;

- e) any incidents or spillages of leachate during its removal or transportation.
- 3.14 The licensee shall maintain a written record of all complaints relating to the operation of the activity. 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.
- 3.15 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).
- 3.16 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.

**Reason :** *To provide for the notification of incidents, to update information on the activity and to provide for the keeping of records.*

## **CONDITION 4 SITE INFRASTRUCTURE**

- 4.1 The licensee shall establish all infrastructure referred to in this licence in accordance to the conditions therein or as instructed by the Agency.
- 4.2 Site Notice Board
- 4.2.1 A Site Notice Board shall be maintained by the licensee on the facility, so that it is legible to persons outside the main entrance to the facility. The minimum dimensions of the identification board shall be 1200 mm by 750 mm.
- 4.2.2 The board shall clearly show:
- a) the name and telephone number of the facility;
  - b) the normal hours of opening;
  - c) the name, address and telephone number of the licence holder;
  - d) an emergency out of hours contact telephone number;
  - e) the name, address and telephone number of the operator of the facility;
  - f) the licence reference number;
  - g) where and when environmental monitoring information relating to the facility can be obtained.
- 4.3 Site Security
- 4.3.1 The licensee shall provide and maintain main access gates and palisade fencing along the front of the facility of a type as detailed in Drawing No. 002034/11/649, "Details of Main Access Gates & Palisade Fencing". The licensee shall provide and maintain security fencing around the remainder of the perimeter of the site, of a type, as detailed in Drawing

No. 002034/11/650, "Details of Proposed Site Fencing Type 2 - Security Post & Wire Fence"

4.3.2 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 or as otherwise agreed in writing with the Agency.

4.3.3 Gates shall be locked shut when the facility is unsupervised.

#### 4.4 Site Roads

4.4.1 The licensee shall maintain the access road (LT 4212) to the site as agreed with the Agency.

4.4.1 The licensee shall provide and maintain haul roads to the specification described in Attachment D.1.b of the application and detailed in Drawing No. 002034/11/651.

4.4.2 Unless otherwise agreed in advance with the Agency, the licensee shall provide traffic control barriers at the locations shown in Drawing No. 002034/11/608 "Layout Plan of Derrinnumera Landfill Site Showing Waste Reception Area".

#### 4.5 Hardstanding areas

4.5.1 Hardstanding areas shall be provided and maintained in accordance with the detail of Attachment D.1.c of the application.

4.5.2 Unless otherwise agreed by the Agency, the hardstanding areas shown in Drawing No. 002034/11/626 Revision A "Layout Plan Showing Control House, Weighbridge & Civic Amenity Area" shall drain to the sump detailed in Drawing No. 002034/11/632 "Layout Plan Showing Fouled Surface Area Drainage System" and shall subsequently pass to the leachate treatment system for storage/treatment and/or for off-site disposal.

4.6 The licensee shall maintain an office on the facility, at the location referred to as "Control Building" in Drawing No. 002034/11/608, "Layout Plan of Derrinnumera Landfill Site Showing Waste Reception Area" and to the detail as shown in Drawing No. 002034/11/627, "Control Building Plan, Elevation & Section". The office shall be maintained in a manner suitable for the processing and storing of documentation.

4.7 The licensee shall provide and maintain a working telephone and facsimile machine in the office specified in Condition 4.6 above.

4.8 The licensee shall maintain details of a potable water supply to the site and details of the proposed washwater borehole shown in Drawing No. 002034/11/608, "Layout Plan of Derrinnumera Landfill Site Showing Waste Reception Area".

4.9 Unless otherwise agreed in advance with the Agency, the licensee shall maintain a weighbridge at the location shown in Drawing No. 002034/11/626 Revision A "Layout Plan Showing Control House, Weighbridge & Civic Amenity Area" to the specification shown on Drawing No. 002034/11/629 "Weighbridge Layout Plan and Section". It shall be maintained in such condition and calibrated at such times as are necessary as to accurately measure the weight of all vehicles using it.

#### 4.10 Wheelwash

- 4.10.1 Unless otherwise agreed in advance with the Agency, the licensee shall provide a Wheelwash at the location and to the detail shown in Drawing No. 002034/11/631 "Plan and Section of Proposed Wheelwash".
- 4.10.2 The licensee shall inspect the wheelwash facilities on a daily basis and drain or empty them as required. Water drained from the wheelwash facilities shall be discharged to the sump detailed in Drawing No. 002034/11/632 "Layout Plan Showing Fouled Surface Area Drainage System" unless otherwise agreed in advance with the Agency. Accumulated silt shall be removed and disposed of at the working face as required.
- 4.11 Unless otherwise agreed by the Agency, the licensee shall:
- a) maintain a septic tank at the location shown in Drawing No. 002034/11/661 "General Arrangement of Site Area Showing Work Done at May 1999", and
  - b) the licensee shall maintain the septic tank system functions in accordance with SR6.
- 4.12 Fuel Storage, Storage Areas for Household Hazardous Waste and Leachate Transport
- 4.12.1 Unless agreed otherwise in advance with the Agency or unless contained in mobile plant at the facility, the licensee shall store all fuels at the location shown in Drawing No. 002034/11/610 "General Arrangement of Cell No.1" and shall be to the detail provided in Drawing No. 002034/11/645 but shall incorporate any amendments to meet the requirements of the following sub conditions.
- 4.12.2 All tank and drum storage areas shall be rendered impervious to the materials stored therein. In addition, 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.
- 4.12.3 All drainage from bunded areas shall be diverted for collection and safe disposal.
- 4.12.4 All inlets, outlets, vent pipes, valves and gauges shall be within the bunded area.
- 4.12.5 Bunds should be designed having regard to Agency guidelines 'Storage and Transfer of Materials for Scheduled Activities' (2004). The integrity and water tightness of any road vehicle used to transport leachate and all the bunds, tanks and containers and their resistance to penetration by water or other materials stored therein shall be tested and demonstrated by the licensee and shall be reported to the Agency within three months of construction and prior to use. This testing shall be carried out by the licensee at least once every three years thereafter and reported to the Agency on each occasion. The licensee shall also submit to the Agency for its agreement in each case a written report on the storage of fuels on site. A written record of all integrity tests and any maintenance or remedial work arising from them shall be maintained by the licensee.
- 4.12.6 All tanks and containers shall be labelled to clearly indicate their contents.
- 4.13 The licensee shall maintain the "Plant Sheds, Garages and Equipment Compound" referred to in Section D.1.m of the application.
- 4.14 Civic Waste Facility
- 4.14.1 Unless otherwise agreed with the Agency, a Civic Waste Facility shall be provided at the location shown in Drawing No. 002034/11/626 Revision A "Layout Plan Showing Control House, Weighbridge & Civic Amenity Area" and constructed in accordance with the



details in Drawing No. 002034/11/628 "Plan And Sections of Proposed Civic Amenity Site".

4.14.2 The licensee shall provide and maintain receptacles at the civic waste facility at locations shown in Drawing No. 002034/11/628 "Plan And Sections of Proposed Civic Amenity Site" unless otherwise agreed with the Agency. All receptacles shall be clearly labelled to indicate their contents.

4.14.3 Storage areas for household hazardous waste shall be constructed, tested and reported on in accordance with Condition 4.12.

#### 4.15 Waste Inspection / Quarantine Areas

4.15.1 Unless otherwise agreed with the Agency, Waste Inspection and Quarantine Areas shall be provided at the location referred to as Sorting Shed in Drawing No. 002034/11/626 Revision A "Layout Plan Showing Control House, Weighbridge & Civic Amenity Area" and constructed in accordance with the details in Drawing No. 002034/11/630 "Plan, Elevation and Section of Proposed Sorting Shed" of the application. The licensee shall ensure that this area 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 suitably and clearly segregated from each other.

4.15.2 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 the 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.

4.16 The licensee shall maintain a meteorological station to meet the monitoring requirements set out in Schedule F.5 at a location to be agreed in advance with the Agency.

4.17 The licensee shall provide and use adequate lighting during the operation of the facility in hours of darkness.

#### 4.18 Specified Engineering Works

4.18.1 The licensee shall submit a written report on any proposed specified engineering works, as defined in *Schedule E: Specified Engineering Works*, to the Agency for its agreement at least two months prior to any such works being carried out. No such works shall be carried out without the prior written agreement of the Agency.

4.18.2 All specified engineering works shall be supervised by a competent person(s) agreed in writing in advance by the Agency and that person, or persons, shall be present at all times during which relevant works are being undertaken.

4.18.3 Following the completion of all specified engineering works, the licensee shall complete a construction quality assurance validation report. The validation report shall be made available to the Agency on request and 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) where relevant a drawing and sections showing the location of all samples and tests carried out;
- e) daily records sheets/diary;

- f) name(s) of contractor(s)/individual(s) responsible for undertaking the 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; and
- i) any other information requested in writing by the Agency.

#### 4.19 Groundwater Control

- 4.19.1 The licensee shall, unless otherwise agreed with the Agency, construct and maintain a cut-off wall and trench, for the collection and diversion of surface water and groundwater, around the periphery of the landfill as outlined in Drawing No. 002034/11/612 Revision C "General Arrangement of Site Area" and in accordance with the detail in Drawing No. 002034/11/623 Revision A "Layout Plan & Construction Details of Proposed Cut-off Wall" but incorporating the following amendment: the cut-off wall shall be keyed into competent bedrock to a depth agreed with the Agency.
- 4.19.2 Intercepted surface water and groundwater shall be diverted to the settling pond at the location as shown on Drawing No. 002034/11/612 Revision C "General Arrangement of Site Area" where it may be subsequently discharged to the Glaishty River subject to the requirements of Condition 7.6.
- 4.19.3 The licensee shall inform the Agency in writing of any additions or alterations made to the agreed design and location of the following:
  - a) at least one permanent groundwater monitoring borehole between the landfill and the Glaishty River.
  - b) at least one permanent groundwater monitoring borehole at the southern boundary of the facility.

#### 4.20 Borrow Area

- 4.20.1 The licensee shall, carry out the extraction, grading, storage and use of material from the borrow area as shown in Drawing No. 002034/11/657, "Site Layout Plan and Longitudinal Sections A-A, & B-B, Through Proposed Gravel Borrow Area", in accordance with proposals agreed with the Agency.

#### 4.21 Landfill Lining

- 4.21.1 Unless otherwise agreed with the Agency, the licensee shall, in accordance with Attachment D.3 of the application, place and maintain an agreed lining system over the existing waste body for cells No. 1 and 2.

#### 4.22 Landfill Gas Management:

- 4.22.1 The licensee shall maintain a landfill gas control system, incorporating utilisation and flaring.
- 4.22.2 The licensee shall maintain all gas venting wells, pipework, valves, pumps, flares and other infrastructure that form part of the landfill gas management and utilisation scheme in a safe and fully operational manner.

#### 4.23 Leachate Management:

- 4.23.1 The licensee shall maintain agreed procedures to remove leachate from the facility for treatment.

- 4.23.2 Leachate collected in the cut-off trench (required under Condition 4.19) shall be drained to the collection sump as shown on Drawing No. 002034/11/612 Revision C "General Arrangement of Site Area", for subsequent removal off-site by the method agreed under Condition 4.23.1.
- 4.23.3 Leachate generated in Cells 1 to 2 inclusive shall be collected, as shown on Drawing No. 002034/11/613, unless otherwise agreed in advance with the Agency.
- 4.23.4 The licensee shall utilise agreed methods to reduce the leachate levels within the existing waste body. Leachate levels within the proposed lined fill area over the existing waste body shall not exceed a level of 1.0 metre over the proposed liner.
- 4.23.5 The licensee may treat and/or store leachate, as agreed with the Agency, prior to off-site disposal taking account of the prohibition on discharge to the Glaishty River in Condition 7.7.
- 4.23.6 Unless otherwise agreed by the Agency, the licensee shall not recirculate leachate over or into the waste body.
- 4.24 Capping:
- 4.24.1 Unless otherwise agreed or instructed by the Agency, the final capping of the landfill shall be in accordance with the detail shown in Drawing No. 030010/11/624, "Landfill Capping Details" but shall incorporate the following amendments: the combined thickness of the subsoil and topsoil shall be at minimum 1m; the flexible membrane liner shall be a 2mm linear low density polyethylene (LLDPE) membrane.
- 4.24.2 The licensee shall submit to the Agency for its agreement, at least three months prior to commencement of capping works, details of surface water control relating to run-off water arising from cap and restoration areas.
- 4.24.3 For cells accepting biodegradable wastes, future cell development/phasing plans shall have regard to the following timeframes:
- (i) Completed (filled) parts of cells, side slopes and cell interfaces shall be capped (temporary capping system) within 15 months of the commencement of waste disposal in that cell/sub-cell;
  - (ii) A settlement period, subsequent to (i), of up to 24 months prior to the installation of the final capping system for the cell;
  - (iii) The permanent capping (final capping system as per Condition ~~4.0.xx~~ 4.24.1) of cells or sub-cells within 48 months of the commencement of waste disposal in that cell/sub-cell.
- 4.25 No works shall be undertaken within 50m of the possible burial mound identified as Site D in attachment C3 of the application, unless agreed with the Agency subsequent to pre-testing by a qualified archaeologist, under licence from the Heritage Service in the Department of Arts, Heritage, Gaeltacht and the Islands.
- 4.26 Construction Schedule/Sequence:
- 4.26.1 Unless otherwise agreed with the Agency the licensee shall adhere to the agreed construction schedule and sequence.
- 4.27 All buildings constructed on the facility shall have regard to the guidance given in the Department of Environments 1994 publication "Protection of New Buildings and Occupants from Landfill Gas" and any subsequent revisions.

**Reason:** To provide for the protection of the environment.

## CONDITION 5 WASTE ACCEPTANCE AND HANDLING

- 5.1 No hazardous waste shall be disposed of in the landfill. Unless otherwise agreed by the Agency and with the exception of the wastes generated on-site and specified below, no liquid or sludge waste shall be accepted for disposal at the landfill from three months after the date of grant of this licence. The wastes generated by on-site activities specified for the purposes of this condition are sludge and silt.
- 5.2 Subject to Condition 5.1 only those waste types listed in Table E.1.3 of the application shall be disposed of in the landfill unless prior agreement of the Agency has been obtained.
- 5.3 Unless otherwise agreed by the Agency, only waste types specified in Drawing No. 002034/11/628 "Plan and Sections of Proposed Civic Amenity Site" shall be accepted at the civic waste facility. Household hazardous waste shall only be accepted at the facility once the requirements of Condition 4.14.3 have been satisfied.
- 5.4 Landfill Waste Acceptance Procedures
- 5.4.1 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.

### Waste Treatment

- 5.4.2 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.

### Limit on acceptance of biodegradable municipal waste

- 5.4.3 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 5.4.4.

5.4.4 Two or more licensed landfills may seek the agreement of the Agency that collectively they will arrange to comply with condition 5.4.3. 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 the 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.

#### Determination of biodegradable municipal waste content of municipal waste

5.4.5 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 5.4.8 shall not be considered BMW.

5.4.6 Bio-stabilised residual wastes meeting the requirements of Condition 5.4.8 received at the landfill facility may be included in the determination of MSW quantities accepted at the facility for the purposes of Condition 5.4.3.

5.4.7 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.

5.4.8 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<sub>4</sub>) is <10mg O<sub>2</sub>/g DM until 1 January 2016 and <7mg O<sub>2</sub>/g DM thereafter.

5.4.9 Bio-stabilised residual wastes shall be monitored in accordance with Schedule F.6.

5.4.10 Waste that was accepted to the body of the landfill as stabilised waste, but subsequently is found not to meet the stabilisation standard set out in Condition 5.4.8 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 5.4.3. 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 F.6, until otherwise agreed with the Agency.

- 5.4.11 The licensee is required to maintain on-site as part of their waste acceptance procedures and associated documentation, evidence to demonstrate compliance with condition 5.4.3, which shall be available for inspection by Agency personnel.
- 5.4.12 The waste acceptance procedures established under Condition 5.4.1 shall provide:-
- (iv) For the checking of waste documentation on receipt of waste in the waste reception area;
  - (v) For non pre-cleared customers, the visual inspection and testing of waste in the waste inspection area pending acceptance/rejection;
  - (vi) For the visual inspection of waste when deposited at the working face;
  - (vii) For the keeping for two months of any samples associated with on-site verification sampling of waste accepted at the facility.
- 5.4.13 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.
- 5.4.14 The dilution or mixture of waste solely in order to fulfil relevant waste acceptance criteria established under Condition 5.4.1 is prohibited.
- 5.4.15 Whole used tyres (other than bicycle tyres and tyres with an outside diameter greater than 1400mm) and shredded tyres shall not be disposed of at the facility.
- 5.5 All wastes shall be checked at the working face to ensure that it complies with the requirements of this licence. All wastes deemed to be in contravention of this licence and/or unsuitable for disposal at this facility shall be removed for disposal at an appropriate alternative facility.
- 5.6 The quantity of wastes to be accepted for disposal to landfill at the facility shall not exceed 40,000 tonnes per annum, unless otherwise agreed in advance with the Agency.
- 5.7 Wastes shall not be deposited in any cell or part of the landfill without the prior agreement of the Agency.
- 5.8 Scavenging shall not be permitted at the facility.
- 5.9 Unless otherwise agreed by the Agency, waste shall only be accepted:
- a) at the landfill between the hours of 08:00 and 18.00 Monday to Friday inclusive and from 08:00 to 13:00 on Saturdays; and
  - b) at the civic waste facility referred to in Condition 5.3 above between the hours of 08:00 and 18.00 Monday to Friday inclusive and from 08:00 to 17:00 on Saturdays.
- 5.10 Traffic control at the facility shall be in accordance with the details provided in Attachment D.1.j "Traffic Control" of the application unless otherwise agreed with the Agency.
- 5.11 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;
  - 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; and,
  - c) all waste deposited at the working face shall be compacted as soon as is practicable and at any rate prior to the end of the working day.

- 5.12 Cover material shall be placed across the whole landfill so that no waste other than cover material or material suitable for specified engineering works is exposed. In the case of waste being deposited at the working face, such waste shall, by the end of each day, be fully covered with cover material, suitable to minimise any nuisances occurring, so that no other waste is exposed. 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.
- 5.13 A steel wheeled compactor or other such vehicle as agreed with the Agency shall be used for compacting all waste other than that used for restoration or construction purposes.
- 5.14 Wastes once deposited and covered shall not be excavated, disturbed or otherwise picked over without prior agreement from the Agency.
- 5.15 No smoking shall be allowed on the facility other than in the Control Building as shown on Drawing No. 002034/11/627 "Control Building Plan, Elevation & Section".
- 5.16 Gypsum wastes shall not be placed in any landfill cell accepting biodegradable waste.
- 5.17 Bio-stabilised residual waste shall only be used as landfill cover where it has been stabilised in accordance with Condition 5.4.8, 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.

**Reason:** *To provide for the acceptance and management of wastes authorised under this waste licence.*

## CONDITION 6 ENVIRONMENTAL NUISANCES

- 6.1 The licensee shall, at a minimum of one week intervals, inspect the facility and its immediate surrounds for nuisances caused by vermin and odours. Written records shall be made of all inspections and any actions taken as a result of these inspections.
- 6.2 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.
- 6.3 All vehicles leaving the working face shall use the wheelwash unit, once commissioned, prior to leaving the facility.
- 6.4 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.
- 6.5 Unless otherwise agreed in advance with the Agency, the licensee shall provide and maintain litter fencing around the perimeter of cells 1 and 2 as detailed in Drawing No. 002034/11/650, "Details of Proposed Site Fencing Type 3 - Wind Blown Litter Fence".
- 6.6 All loose litter accumulated within the facility and its environs, excluding that which is deposited on the working face, shall be removed and appropriately disposed of on a daily basis.
- 6.7 Any waste placed on or in the vicinity of the facility, other than in accordance with the requirements of this licence, shall be removed by the licensee immediately and in any event by 10:00am of the next working day, after such waste is discovered. Such waste shall be disposed of at an appropriate facility.

- 6.8 The licensee shall ensure, insofar as it is practicable, that all vehicles delivering waste to and from the facility are appropriately covered.
- 6.9 The licensee shall ensure that the activities shall be carried out in a manner such that odours do not result in significant impairment of, or significant interference with amenities or the environment beyond the facility boundary.
- 6.10 The licensee shall ensure that birds, vermin, flies and dust do not give rise to nuisance at the facility or the immediate area of the facility. Any method used by the licensee to control any such nuisance shall not cause environmental pollution.

**Reason:** *To provide for the control of nuisance.*

## **CONDITION 7 EMISSIONS AND ENVIRONMENTAL IMPACTS**

- 7.1. No specified emission from the facility shall exceed the emission limit values set out in *Schedule G: Emissions* of this licence.
- 7.2. 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.
- 7.3. 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.
- 7.4. There shall be no clearly audible tonal or impulsive component in the noise emissions from the activity at the facility boundary.
- 7.5. The licensee shall maintain and submit to the Agency for its agreement any proposals for their revision, trigger levels for landfill gas emissions from the facility measured in any service on or immediately adjacent to the facility and/or at any other point located outside the body of the waste.
- 7.6. Emissions to Surface Water
  - 7.6.1. Emissions to surface water from the facility shall only be made to the Glaishty River at the location designated by emission point reference number EF-02 shown on Drawing No. 002034/11/612 Revision C "General Arrangement of Site Area".
  - 7.6.2. No substance shall be discharged in a manner, or at a concentration which, following initial dilution causes tainting of fish or shellfish.
- 7.7. Disposal of Leachate
  - 7.7.1. Leachate shall not be discharged to the Glaishty River.
  - 7.7.2. Unless otherwise agreed in advance with the Agency, leachate shall be removed from the facility for treatment at the Castlebar Sewerage Treatment Works.

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



## CONDITION 8 RESTORATION AND AFTERCARE

- 8.1. Unless otherwise agreed in advance or instructed by the Agency, the final profile of the landfill area shall be as shown in Drawing No. 002034/11/625, "Layout Plan Showing Plan Profile of Capped Site".
- 8.2. The licensee shall restore the facility on a phased basis, in accordance with the agreed restoration and aftercare plan for the facility (including the civic waste facility). The licensee shall update this plan when required in writing by the Agency and submit proposed amendments to the Agency for its agreement.
- 8.3. Unless otherwise agreed in advance with the Agency, landscaping as described in Attachment H7 of the application shall be undertaken, in a timeframe agreed with the Agency.
- 8.4. 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.
- 8.5. No material or object that is incompatible with the proposed restoration of the site shall be present within one metre of the final soil surface levels.
- 8.6. A final validation report to include a certificate of completion for the Restoration and Aftercare Plan, for all or part of the site as necessary, shall be submitted to the Agency within three months of execution of the plan. The licensee shall carry out such tests, investigations or submit certification, as requested by the Agency, to confirm that there is no continuing risk to the environment.

<b>Reason:</b> <i>To provide for the restoration and aftercare of the facility.</i>
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## CONDITION 9 ENVIRONMENTAL MONITORING

- 9.1. The licensee shall carry out such monitoring and at such locations and frequencies as set out in *Schedule F: Monitoring* and as specified in the Conditions of this licence.
- 9.2. The licensee shall maintain a record of the unique number and twelve-figure National Grid Reference for each monitoring location.
- 9.3. Unless otherwise agreed by the Agency a bi-annual biological assessment of the Glaishty River shall be undertaken. This assessment shall include the use of appropriate biological methods such as the EPA Q-rating system for biological water quality assessment of rivers and streams. The report shall include a drawing showing the location of monitoring points, each identified by a unique number and a twelve figure grid reference.
- 9.4. The licensee shall maintain details of the agreed permanent gas monitoring system to be installed in site buildings.
- 9.5. All landfill gas monitoring equipment used for monitoring landfill gas under the requirements of this licence shall be certified as being intrinsically safe.

- 9.6. The licensee shall adhere to the monitoring programme for both the surface water discharged from the site and the flow in the Glaishty River, in accordance with the proposals agreed with the Agency.
- 9.7. The licensee shall comply with the programme for the monitoring of leachate to be removed from site, in accordance with the proposal agreed with the Agency.
- 9.8. The licensee shall implement a monitoring programme, in accordance with the proposal agreed with the Agency, to assess surface water and groundwater within the area confined by the cut-off wall and trench. Remediation of surface water and groundwater shall be carried out as deemed necessary by the Agency in an agreed time-scale for such works.
- 9.9. The licensee shall monitor leachate levels at all of the leachate monitoring locations within the filled waste and in the ponds to the northern and eastern ends of the landfill, as agreed with the Agency.
- 9.10. The licensee shall maintain on site a drawing showing the location of all private wells within 500m downgradient of the facility boundary and include them in the monitoring programme set out in Schedule F.
- 9.11. The licensee shall provide safe and permanent access to all on-site sampling and monitoring points and (subject to landowners' agreement) off-site points as agreed with the Agency.
- 9.12. In the event that any monitoring boreholes become damaged or prove to be unusable for their purpose, they shall be replaced within three months of the date of receipt of a notification to this effect from the Agency. Any replacement shall be constructed in the manner set out in such a notification and shall be subject to the unique numbering system required by this licence.
- 9.13. Ionic balances shall be carried out on groundwater and surface water monitoring results performed annually.
- 9.14. 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 or discharge or environmental parameter.
- 9.15. The licensee shall amend the frequency, locations, methods and scope of monitoring, sampling, analyses and investigations 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.
- 9.16. Unless otherwise agreed in writing with the Agency, a written record shall be kept of the names, qualifications and a summary of relevant experience 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.
- 9.17. The licensee shall maintain all sampling and monitoring points so that they may be used for the representative sampling and monitoring of emissions from the facility.
- 9.18. A topographical survey including the void space shall be carried out annually. The survey shall be in accordance with any written instructions issued by the Agency.
- 9.19. Within three months of the date of grant of this licence, the licensee shall submit to the Agency for its agreement, groundwater monitoring trigger levels in accordance with the requirements of Directive 1999/31/EC.
- 9.20. 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.

**Reason:** *To ensure compliance with the requirements of other conditions of this licence by provision of a satisfactory system of measurement and monitoring of emissions.*

## **CONDITION 10 CONTINGENCY ARRANGEMENTS**

- 10.1. The licensee shall maintain an emergency response procedure (ERP). 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. The Emergency Response Procedure shall be reviewed annually and updated as necessary.
- 10.2. Contingency Arrangements for the facility shall be as detailed in Attachment K.1 "Contingency Arrangements" of the application.
- 10.3. 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.
- 10.4. 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.
- 10.5. No waste shall be burnt within the boundaries of the facility. A fire at the facility shall be treated as an emergency. Immediate action shall be taken to extinguish it and the appropriate authorities notified.
- 10.6. In the event that monitoring of local wells (identified in Condition 9) 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 incident. The licensee shall submit to the Agency for its agreement and within a time specified in writing by the Agency, written proposals for the provision of an alternative supply of water to those affected.
- 10.7. In the event that any monitoring, sampling or observations indicate that an incident has, or may have, taken place, 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;
  - c) isolate the source of the 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;
  - f) identify and put in place measures to avoid reoccurrence of the incident, and;
  - g) identify and put in place any other appropriate remedial action.
- 10.8. Accident Prevention and Emergency Response
  - 10.8.1 The licensee shall maintain a documented Accident Prevention Policy, which will address the hazards on-site, particularly in relation to the prevention of accidents with a possible impact on the environment. This procedure shall be reviewed annually and updated as necessary.

**Reason:** To provide for the protection of the environment.

## **CONDITION 11 CHARGES AND FINANCIAL PROVISIONS**

### 11.1 Agency Charges

- 11.1.1 The licensee shall pay to the Agency an annual contribution of €26,486, 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.
- 11.1.2 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.

### 11.2 Financial Provision for Closure, Restoration and Aftercare

- 11.2.1 The licensee shall from a date to be set in writing by the Agency establish and maintain a fund, or other form of approved security or guarantee, that is adequate to assure the Agency that the licensee is at all times financially capable of complying with the Restoration and Aftercare Plan required by Condition 8. The type of fund and means of its release/recovery shall be submitted in writing to the Agency for its agreement prior to establishment.
- 11.2.2 The fund shall be maintained in an amount always sufficient to underwrite the current Restoration and Aftercare Plan.
- 11.2.3 The licensee shall revise the cost of aftercare and restoration annually and any details of the necessary adjustments to the above fund must, within two weeks of the revision, be forwarded to the Agency for its agreement.
- 11.2.4 Unless otherwise agreed by the Agency, 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 facility conditions, changes in law, regulations, regulatory authority charges, or other significant changes.

11.3 Environmental Liabilities

11.3.1 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.

11.3.2 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.

11.3.3 As part of the measures identified in Condition 11.3.1, the licensee shall, to the satisfaction of the Agency, make financial provision to cover any liabilities associated with the operation, including closure and aftercare of the facility not already covered in Condition 11.2. 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 11.3.1.

11.4 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.

<p><i>Reason:</i> To provide for adequate financing for monitoring and financial provisions for measures to protect the environment.</p>
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# SCHEDULE A :Waste Activities

Activities authorised by the licence shall be restricted to those described below.

<b>Waste Management Acts, 1996 to 2008: Third Schedule</b> <sup>Note 1</sup>	
<b>Class 1.</b>	<b>Deposit on, in or under land (including landfill):</b> This activity is limited to the landfilling of Non-hazardous Waste at the facility
<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 disposal of Non-hazardous Waste into lined cells at the facility; the construction of a cut-off wall around the site; the collection and pumping of leachate to a treatment plant; the collection and flaring of landfill gas.
<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 biological treatment of leachate arising from the waste disposed of on site.
<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 physico-chemical treatment of leachate arising from the waste disposed of on site.
<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 was produced.</b> This activity is limited to the storage of waste at the civic waste facility for eventual disposal, as well as the storage of waste not acceptable for disposal at the landfill.

**Note 1:** Any reference to an activity Class is to be taken as being from the Third Schedule of the Waste Management Acts, 1996 to 2008, unless otherwise stated.

<b>Waste Management Acts, 1996 to 2008: Fourth Schedule</b> <sup>Note 1</sup>	
<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 reclamation of organic wastes within the civic waste facility
<b>Class 3.</b>	<b>Recycling or reclamation of metals and metal compounds:</b> This activity is limited to the reclamation of metals and metal compounds within the civic waste facility.
<b>Class 4.</b>	<b>Recycling or reclamation of other inorganic materials:</b> This activity is limited to the reclamation of inorganic materials arising from the waste disposed 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 wastes arising from the waste disposed at the civic waste facility for the purpose of recovery.

**Note 1:** Any reference to an activity Class is to be taken as being from the Fourth Schedule of the Waste Management Acts, 1996 to 2008, unless otherwise stated.

**Table A.1 Waste Categories and Annual Permitted Intake**

WASTE TYPE <sup>Note 1</sup>	MAXIMUM (TONNES PER ANNUM) <sup>Notes 2, 3</sup>
Municipal and Industrial Residual Waste	40,000
Non-hazardous C&D Waste	

**Note 1:** Any proposals to accept other compatible waste streams must be agreed in advance by the Agency and the total amount of waste must be within the amount specified.

**Note 2:** The individual limitation on waste streams may be varied with the agreement of the Agency subject to the overall total limit staying the same.

**Note 3:** Non-hazardous Construction & Demolition waste or inert waste/secondary materials or compost imported to the site for use in construction are not included in these limitations. A detailed statement (with mass balance) of waste used in construction should be included as part of the AER.

**Table A.2 Total Permitted Landfill Capacity**

Total quantity of waste permitted to be placed at the landfill facility (over authorised life of facility)	272,639 m <sup>3</sup>
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## **SCHEDULE B :Content of the Environmental Management Programme**

### **Environmental Management Programme**

Items specified to be contained in an Environmental Management Plan in the Landfill Operational Practices Manual published by the Agency, or otherwise as agreed with the Agency

Timescale for achieving the objectives and targets listed in the Schedule of Objectives and Targets

Designation of Responsibility for Achieving Targets and Objectives

Other items specified by the Agency

# SCHEDULE C :Content of the Annual Environmental Report

## Annual Environmental Report Content <sup>NOTE 1</sup>

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.

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 interpretations of environmental monitoring, including plans of all monitoring locations including 12 digit grid references.

Resource and energy consumption summary.

Proposed development of the site 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 those proposed during the coming year.

Report on leachate management.

Report on the biological status of the Glaishwy River.

Report on restoration of completed cells/ phases.

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 site.

Estimated annual and cumulative quantity of indirect emissions to groundwater.

Monthly water balance calculation and interpretation.

Meteorological Report.

Schedule of Environmental Objectives and Targets for the forthcoming year.

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

Updates to Landfill environmental Management Plan (LEMP)

Review of Environmental Liabilities.

Report on waste recovery.

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.

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

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.

**NOTE 1 Content to be revised subject to the written agreement of the Agency after cessation of waste acceptance at the facility.**



# SCHEDULE D :Recording and Reporting to the Agency

Table D.1 Recurring Reports

Report	Reporting Frequency <sup>Note1</sup>	Report Submission Date
Environmental Management System Updates	Annually	One month after the end of the year reported on.
Annual Environment Report (AER)	Annually	By 31 <sup>st</sup> March each year.
Notification of waste loads not meeting waste acceptance criteria	As they occur	As per Condition 3.16
Compliance with waste diversion targets	As required by the Agency	As per Condition 2.12
Record of incidents	As they occur	Within five days of the incident.
Bund, tank and container integrity assessment	Every three years	Three months from the date of construction of bunds and prior to use and one month after end of the three year period being reported on.
Specified Engineering Works reports	As they arise	Prior to the works commencing.
Monitoring of Leachate being removed from site	As agreed under Condition 9.7	Ten days after end of the period being reported on.
Monitoring of diverted surface water/groundwater to Glaiswy River	As agreed under Condition 9.6	Ten days after end of the period being reported on.
<b>Monthly Monitoring</b>	Monthly	Ten days after end of the quarter being reported on.
Monitoring of Surface Water Quality Monitoring of Groundwater Quality Monitoring of Leachate Monitoring of diverted Water Quality		
<b>Quarterly Monitoring</b>	Quarterly	Ten days after end of the quarter being reported on.
Monitoring of landfill gas Monitoring of Surface Water Quality Monitoring of Groundwater Quality Monitoring of Leachate		
<b>Biological Assessment</b>	Biannual Monitoring	Ten days after end of the period being reported on.
<b>Annual Monitoring</b>	Annually	One month after end of the year being reported on.
Dust Monitoring Noise Monitoring Meteorological Monitoring Topographical survey of entire site		

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

## SCHEDULE E : Specified Engineering Works

Specified Engineering Works
Fencing and site security works.
Construction of control building and plant sheds, garages and equipment compound.
Wheelwash construction.
Installation of weighbridge.
Construction of storage areas for fuel & household hazardous waste.
Construction of civic waste facility.
Construction of waste inspection/quarantine areas.
Installation of groundwater control and/or monitoring systems.
Surface water management works.
Development of borrow area.
Development of two future Cells of the facility including preparatory works and lining.
Installation of landfill gas management and monitoring systems.
Installation of leachate management, collection, treatment, monitoring and control systems.
Installation of alternative drinking water supplies.
Landfill cap installation, including temporary and intermediate capping, installation and all other containment works (including any containment works relating to leachate control).
Restoration and aftercare works.
Any other works notified in writing by the Agency.

## SCHEDULE F : Monitoring

Monitoring to be carried out as specified below.

### ***F.1 Landfill Gas***

Landfill gas monitoring locations shall be those, i.e. G1 to G15 except G3, G5, and G12 which have since been destroyed, as set out in Attachment C.6 of the application.

Table F.1.1 Landfill Gas Monitoring Frequency and Technique

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

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

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

## **F.2 Dust**

Three dust monitoring locations to be agreed with the Agency within three months of date of this licence in accordance with Condition 9.2.

Table F.2.1 Dust Monitoring Frequency and Technique

<b>Parameter (mg/m<sup>2</sup>/day)</b>	<b>Monitoring Frequency</b>	<b>Analysis Method/Technique</b>
<b>Dust</b>	Annually <sup>Note 2</sup>	Standard Method <sup>Note 1</sup>

**Note 1:** Standard method VDI2119 (Measurement of Dustfall, Determination of Dustfall using Bergerhoff Instrument (Standard Method) German Engineering Institute). A modification (not included in the standard) which 2 methoxy ethanol may be employed to eliminate interference due to algae growth in the gauge.

**Note 2:** During the period May to September, or as otherwise specified in writing by the Agency.

### **F.3 Noise**

Noise Monitoring Locations shall be N1, N2, N5 and N6 as set out in Attachment C8 of the application.

Table F.3.1 Noise Monitoring Frequency and Technique

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

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

### **F.4 Surface Water, Groundwater and Leachate**

#### **F.4.1 Surface Water.**

Surface water monitoring locations shall be S1 to S6 as set out in Attachment C9 (Figure C.9.1) of the application.

Additional monitoring points to be included subject to Condition 9.6 (Discharge of diverted surface water/groundwater to the Glaishty River). At minimum, diverted surface water/groundwater shall be monitored monthly (unless flow in that month does not allow such monitoring) for parameters denoted by Note 5 in Table F.4.1, at a monitoring location to be agreed with the Agency.

#### **F.4.2 Groundwater.**

Groundwater monitoring locations shall be those, i.e. MW1, MW2s, MW2d, MW3, MW4s, MW4d, MW5, MW7, as set out in Attachment C.6 of the application and the location(s) to be agreed within three months of date of licence as per Condition 4.19.

All private wells within 500m downgradient of the facility boundary to be sampled on an annual basis for the following as a minimum: ammoniacal N, EC, K, Na, TOC and bacteriological. A written report and interpretation shall accompany the analysis results.

#### **F.4.3 Leachate**

Minimum of four leachate monitoring locations to be agreed with the Agency within three months of date of this licence in accordance with Condition 9.9. One of these shall be monitoring location MW6, as shown in Attachment C.6 of the application. Leachate monitoring and frequency shall be as set out in Table F.4.2.

Table F.4.1 Water and Leachate - Parameters /Frequency

Parameter <sup>Note 1</sup>	SURFACE WATER	GROUNDWATER	LEACHATE
	Monitoring Frequency	Monitoring Frequency	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	Weekly
Ammoniacal Nitrogen	Monthly <sup>Note 5</sup>	Monthly	Monthly
BOD	Monthly <sup>Note 5</sup>	Not Applicable	Monthly
COD	Quarterly	Not Applicable	Quarterly
Chloride	Quarterly	Quarterly	Quarterly
Dissolved Oxygen	Quarterly	Quarterly	Not Applicable
Electrical Conductivity	Monthly <sup>Note 5</sup>	Monthly	Monthly
pH	Monthly <sup>Note 5</sup>	Monthly	Monthly
Total Suspended Solids	Monthly <sup>Note 5</sup>	Not Applicable	Monthly
Temperature	Monthly <sup>Note 5</sup>	Monthly	Monthly
Boron	Not Applicable	Annually	Annually
Cadmium	Annually	Annually	Annually
Calcium	Annually	Annually	Annually
Chromium (Total)	Annually	Annually	Annually
Copper	Annually	Annually	Annually
Cyanide (Total)	Not Applicable	Annually	Annually
Fluoride	Not Applicable	Annually	Annually
Iron	Annually	Annually	Quarterly
Lead	Annually	Annually	Annually
List I/II organic substances <sup>Note 3</sup>	Annually	Annually	Annually
Magnesium	Annually	Annually	Annually
Manganese	Annually	Annually	Annually
Mercury	Annually	Annually	Annually
Nickel	Annually	Annually	Annually
Potassium	Quarterly	Quarterly	Quarterly
Sulphate	Annually	Annually	Annually
Sodium	Quarterly	Quarterly	Quarterly
Total Alkalinity	Annually	Annually	Not Applicable
Total Phosphorus / orthophosphate	Monthly <sup>Note 5</sup>	Monthly	Monthly
Total Oxidised Nitrogen	Annually	Quarterly	Quarterly
Total Organic Carbon	Not Applicable	Quarterly	Not Applicable
Residue on evaporation	Not Applicable	Annually	Not Applicable
Zinc	Annually	Annually	Annually
Faecal Coliforms <sup>Note 4</sup>	Not Applicable	Annually	Annually
Total Coliforms <sup>Note 4</sup>	Not Applicable	Annually	Annually

Note 1: All the analysis shall be carried out by a competent laboratory using standard and internationally accepted procedures. The testing laboratory and the testing procedures shall be agreed in writing with the Agency in advance.

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

Note 3: 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 (US Environmental Protection Agency method 525 or equivalent), and pesticides (US Environmental Protection Agency method 608 or equivalent). In cases where large quantities of harbour dredgings have been accepted at the site it is recommended to analyse for organotin compounds. Where there is reason to suspect organophosphorous contamination it is recommended to also scan for these compounds.

- Note 4: If there is evidence of bacterial contamination, the analysis at up gradient and downgradient monitoring points should include enumeration of total bacteria at 22°C and 37°C and faecal streptococci.
- Note 5: Discharge of diverted surface water/groundwater, at a monitoring location to be agreed in accordance with Condition 9.6, shall be monitored on a monthly basis for these parameters unless flow in that month does not allow such monitoring.

**Table F.4.2 Leachate Monitoring Locations and Frequency**

Monitoring Medium	Parameters	Frequency		Monitoring Points
		Operational	Aftercare	
Leachate in waste body/cells	Leachate levels in waste body/cells	Weekly	Monthly	Note 1
	Leachate composition analysis as per Table F.4.1	As per Table F.4.1	See Note 2	

Note 1: Minimum of four leachate monitoring points to be agreed with the Agency in accordance with Condition 9.9

Note 2: For permanently capped cells or cells in aftercare phase monitoring shall be at half the frequency specified in Table F.4.1 with a minimum of once per annum.

### ***F.5 Meteorological Monitoring***

Monitoring location to be agreed with the Agency in accordance with Condition 4.16.

**Table F.5.1 Meteorological Monitoring:**

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

### ***F.6 Waste Monitoring***

**Table F.6.1 Waste Monitoring**

Waste class	Frequency	Parameter	Method
Bio-stabilised residual waste	Every 200 tonnes from each source	As Agreed	As Agreed

## SCHEDULE G :Emission Limits

**G.1 Noise Emissions:** Measured at Noise Sensitive Locations.

Day dB(A) $L_{Aeq}$ (30 minutes)	Night dB(A) $L_{Aeq}$ (30 minutes)
55	45

**G.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

**G.3 Dust Deposition Limits:** Measured at the dust monitoring locations to be agreed with the Agency within three months in accordance with Condition 9.2.

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

Note 1: 30 day composite sample with the results expressed as  $mg/m^2/day$ .



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

PRESENT when the Seal of the Agency

was affixed hereto:

... **Director/Authorised Person**

