

**This licence was amended on 15<sup>th</sup> January 2013 under Section 42B(1)(c) of the Waste Management Acts, 1996 to 2011. The details of Amendment A must be read in conjunction with this licence. The amendment document is entitled “Technical Amendment A”**



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

WASTE LICENCE  
LANDFILL FACILITY FOR NON HAZARDOUS  
WASTE

<b>Waste Licence Register Number:</b>	73-1
<b>Licensee:</b>	Roscommon County Council
<b>Location of Facility:</b>	Roscommon Landfill Facility, Killarney Townland, Roscommon.

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# Reasons for the Decision

The 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 not contravene any of the requirements of Section 40(4) of the Waste Management Act, 1996.

In reaching this decision the Agency has considered the application and supporting documentation received from the applicant, all submissions and objections received and the report of its inspector.

## ***Part I Activities Licensed***

In pursuance of the powers conferred on it by the Waste Management Act, 1996, the Environmental Protection Agency (the Agency), under Section 40(1) of the said Act hereby grants this Waste Licence to Roscommon County Council to carry on the waste activities listed below at the Roscommon Landfill Facility, Killarney Townland, Roscommon subject to eleven conditions, with the reasons therefor and the associated schedules attached thereto set out in the licence.

### *Licensed waste disposal activities, in accordance with the Third Schedule of the Waste Management Act, 1996*

<b>Class 1.</b>	<b>Deposit on, in or under land (including landfill):</b> This activity is limited to the landfilling of non-hazardous wastes specified in condition 5.2.
<b>Class 4.</b>	<b>Surface impoundment, including placement of liquid or sludge discards into pits, ponds or lagoons:</b> This activity is limited to the storage of leachate in a lagoon and the deposition of treated sewage sludge.
<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 removal and deposition of surface layer of peat clogged as a result of leachate infiltration.
<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 (including evaporation, drying and calcination):</b> This activity is limited to the compaction of waste in the civic waste facility, prior to landfilling.
<b>Class 11.</b>	<b>Blending or mixture prior to submission to any activity referred to in a preceding paragraph of this Schedule.</b> This activity is limited to the mixing of waste at the civic waste facility prior to landfilling.
<b>Class 12.</b>	<b>Repackaging prior to submission to any activity referred to in a preceding paragraph of this Schedule.</b> This activity is limited to repackaging of waste with potential for dispersal prior to disposal.
<b>Class 13.</b>	<b>Storage prior to submission to any activity referred to in a preceding paragraph of this Schedule, other than temporary storage, pending collection, on the premises where the waste concerned is produced.</b> This activity is limited to the storage of wastes prior to disposal.

*Licensed waste recovery activities, in accordance with the Fourth Schedule  
of the Waste Management Act, 1996*

<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 recycling of materials.
<b>Class 3.</b>	<b>Recycling or reclamation of metals and metal compounds:</b>  This activity is limited to the recycling of metals.
<b>Class 4.</b>	<b>Recycling or reclamation of other inorganic materials:</b>  This activity is limited to the recycling of materials.
<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 inert material prior to its use as cover material and in capping and hardstanding.

# INTERPRETATION

<b>Act</b>	The Waste Management Act, 1996 (No. 10 of 1996).
<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>Attachment</b>	Any reference to Attachments in this licence refers to attachments submitted as part of the waste licence application.
<b>Application</b>	The application by the licensee for this waste licence, 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>BATNEEC</b>	Best Available Technology Not Entailing Excessive Cost as defined in section 5 (2) of the Act.
<b>Biodegradable waste</b>	Any waste that is capable of undergoing anaerobic or aerobic decomposition, such as food and garden waste, and paper and paperboard.
<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 agreed with the Agency.
<b>Daytime</b>	8.00 a.m. to 10.00 p.m.
<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 F.

<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>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>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>Incident</b>	Any reference to an incident in this licence means an incident as defined in Condition 3.1.
<b>Industrial waste</b>	As defined in Section 5 (1) of the Act.
<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>	Roscommon County Council.
<b>List I/II Organics</b>	Substances classified pursuant to EC Directives 76/464/EEC and 80/68/EEC
<b>Liquid Waste</b>	Any waste in liquid form and containing less than 2% dry matter
<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 Waste</b>	Municipal waste as defined in Section 5 (1) of the Act.
<b>Night-time</b>	10.00 p.m. to 8.00 a.m.
<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>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 with between 2% and 14% dry matter.
<b>Specified Emissions</b>	Those emissions listed in Schedule F: Emission Limits of this licence.
<b>Specified Engineering Works</b>	Those engineering works listed in Schedule D: Specified Engineering Works of this licence.
<b>Submit</b>	Unless the context of this licence indicates otherwise, submit in writing to the Agency for its agreement
<b>Treated Sludge</b>	Sludge which has undergone biological, chemical or heat treatment, long-term storage or any other appropriate process so as significantly to reduce its fermentability and the health hazards resulting from its use.
<b>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>	As per those hours set out in Condition 5.9 with an additional hour after the end of waste acceptance.
<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. Waste activities at the facility shall be restricted to those listed and described in Part I: Activities Licensed and required by the licence.
- 1.2. Waste activities shall be restricted to the area of land outlined in red on Drawing No. B.2.2 Roscommon Landfill Facility – Site & Ownership Plan. 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 its agreement pursuant to any condition of this licence shall include a proposed timescale for its implementation. The Agency may modify or alter any such plan, programme or proposal in so far as it considers such modification or alteration to be necessary. 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 Act 1996 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.

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

### **CONDITION 2 MANAGEMENT OF THE ACTIVITY**

- 2.1 Environmental Management System
  - 2.1.1 The licensee shall within eighteen months from the date of grant of this licence, submit to the Agency for its agreement a proposal for a documented Environmental Management System (EMS) for the facility. Following the agreement of the Agency, the licensee shall establish and maintain such a system. The EMS shall be updated on an annual basis with amendments being submitted to the Agency for its agreement.
  - 2.1.2 The EMS shall include as a minimum those elements specified in the Conditions 2.2 to 2.7 below:



- 2.2 Schedule of Environmental Objectives and Targets
- 2.2.1 The licensee shall, within twelve months from the date of grant of this licence, submit to the Agency for its agreement a Schedule of Objectives and Targets. The objectives should be specific and the targets measurable.
- 2.2.2 The Schedule shall address a five year period as a minimum and shall be reviewed and submitted annually to the Agency for its agreement.
- 2.3 Environmental Management Programme
- 2.3.1 The licensee shall, within twelve months from the date of grant of this licence, submit to the Agency for its agreement 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 A: Content of the Environmental Management Programme. The EMP shall be reviewed and submitted to the Agency for its agreement annually.
- 2.4 Corrective Action
- 2.4.1 Within six months of the date of grant of this licence the licensee shall establish and 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 Within six months of the date of grant of this the licensee shall establish and 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 Within three months from the date of grant of this licence, the licensee shall submit written details of the management structure of the facility for the agreement of the Agency. 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) details of the responsibilities for each individual named under a) above;
  - c) details of the relevant experience, competence and qualifications held by each of the persons nominated under a) above; and
  - d) contingency arrangements for the absences of the named persons from the facility.
- 2.7 Communications
- 2.7.1 Within twelve months from the date of grant of this licence, the licensee shall submit to the Agency for its agreement 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, within thirteen months from the date of grant of this licence, and within one month of the end of each year thereafter, an Annual Environmental Report (AER).
- 2.8.2 The AER shall include as a minimum the information specified in Schedule B: 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.

**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.*

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

- 3.1 The licensee shall make written records of the following incidents:
- any nuisance caused by the activity
  - any emission which does not comply with the requirements of this licence;
  - any trigger level specified in this licence which is attained or exceeded;
  - any indication that environmental pollution has, or may have, taken place; and,
  - any emergency.
- 3.2 The written record shall include all aspects described in Condition 10.5(a-e).
- 3.3 Unless otherwise instructed in writing by the Agency, the licensee shall:
- notify the Agency as soon as practicable and in any case not later than 10.00 am the following working day after the occurrence of any incident;
  - 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; and
  - in the event of any incident which relates to discharges to surface water, notify Shannon Regional Fisheries Board as soon as practicable and in any case not later than 10:00am on the following working day after such an 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 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.
- 3.6 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) include whatever information as is specified in writing by the Agency;
  - (e) be identified by a unique code, indicate any modification or amendment, and be correctly dated to reflect any such modification or amendment;
  - (f) be submitted in accordance to the relevant reporting frequencies specified by this licence; and
  - (g) in the case of results of any environmental monitoring, be accompanied by a written interpretation setting out their significance.
- 3.7 Copies of all environmental monitoring data obtained by the licensee which relates to the facility shall be forwarded to the Agency at the frequencies set out in Schedule C: Recording and Reporting to the Agency of this licence.
- 3.8 Unless otherwise agreed with the Agency, all documentation and records required to be made under this licence, shall be retained by the licensee.
- 3.9 The licensee shall provide additional copies of any documentation and records referred to in this licence to the Agency upon written request, within the time specified in writing by the Agency.
- 3.10 The licensee shall keep the following documents at the facility office referred to in Condition 4.5.
- a) the current waste licence relating to the facility;
  - b) the current EMS for the facility;
  - c) the previous year's AER for the facility;
  - d) all written procedures produced by the licensee which relate to the licensed activities.
- 3.11 The licensee shall maintain a written record for each load of waste arriving at the facility (excluding at the civic waste facility, if adequately supervised). The licensee shall record the following:
- a) the date;
  - b) the name of the carrier (including if appropriate, the waste carrier registration details);
  - c) the vehicle registration number;
  - d) the name of the producer(s)/collector(s) of the waste as appropriate;
  - e) the name of the waste facility (if appropriate) from which the load originated including the waste licence or waste permit register number;
  - f) a description of the waste including the associated EWC codes;
  - g) the quantity of the waste, recorded in tonnes (or an estimate, prior to the installation of the weighbridge required by Condition 4.8);

- h) the name of the person checking the load;
  - i) the location of asbestos waste accepted; and,
  - j) 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.
- 3.12 The licensee shall maintain a written record of the type and quantity, recorded in tonnes, of all wastes recovered or disposed of at the facility.
- 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 assign and clearly label a unique reference code to each container at the Civic Waste Facility. A written record shall be kept for each load of waste departing from the facility. The following shall be recorded:
- a) the date on which filling of the container commenced;
  - b) the date on which the container was filled;
  - c) the number of sealed containers being stored overnight;
  - d) the name of the carrier;
  - e) the vehicle registration number;
  - f) the destination of the waste (facility name and waste licence/permit number as appropriate);
  - g) a description of the waste (if recovered or rejected waste, the specific nature of the waste);
  - h) the quantity of waste, recorded in tonnes;
  - i) the name of the person checking the load; and,
  - j) the time and date of departure.
- 3.16 Provision shall be made for the transfer of environmental information specified by the Agency, in relation to the activities carried on under this licence, to the Agency's computer system within a timescale specified in writing by the Agency.

**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 as instructed by the Agency.
- 4.2 Site Notice Board
- 4.2.1 Within three months of the date of grant of this licence the licensee shall provide and maintain a Site Notice Board 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; and
  - g) where and when environmental monitoring information relating to the facility can be obtained.
- 4.3 Site Security
- 4.3.1 Within nine months of the date of grant of this licence the licensee shall install and maintain security fencing and gates described in Attachment D.1.a, but including and surrounding the existing Halting Site. The security fence and gates shall be at the locations shown on Drawing No. D.1.a – Existing Infrastructure & Proposed Perimeter Fence. The base of the fencing shall be set in the ground.
- 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 with the Agency.
- 4.3.3 Gates shall be locked shut when the facility is unsupervised. Adequate provision for access to the facility in the event of an emergency shall be made.
- 4.4 Site Roads and Hardstanding
- 4.4.1 Effective site roads shall be provided and maintained to ensure the safe movement of vehicles within the facility.
- 4.4.2 Adequate traffic control including signage within the facility shall be provided by the licensee.
- 4.5 The licensee shall provide and maintain an office on the facility, at the location shown in Drawing No. D.1.d – Site Infrastructure Layout Proposals, unless otherwise agreed with the Agency. The office shall be constructed and maintained in a manner suitable for the processing and storing of documentation.

- 4.6 The licensee shall provide and maintain a working telephone and facsimile machine in the office specified in Condition 4.5 above.
- 4.7 Inspection
- 4.7.1 Within nine months from the date of grant of this licence, the licensee shall provide and maintain a Waste Inspection Area and a Waste Quarantine Area at the locations shown in Drawing No. D.1.d – Site Infrastructure Layout Proposals unless otherwise agreed with the Agency.
- 4.7.2 The licensee shall ensure that these areas shall be constructed and maintained in a manner suitable, and be of a size appropriate, for the inspection of waste and subsequent quarantine if required. The waste inspection area and the waste quarantine area shall be suitably and clearly segregated from each other.
- 4.8 Within six months of the date of grant of this licence the licensee shall provide and maintain a weighbridge at the facility. Unless otherwise agreed with the Agency the location of the weighbridge shall be as shown on Drawing No. D.1.d – Site Infrastructure Layout Proposals unless otherwise agreed with the Agency.
- 4.9 Wheelwash
- 4.9.1 Within six months from the date of grant of this licence, the licensee shall establish and maintain a wheelwash at the facility. The location of the wheelwash shall be as shown on Drawing No. D.1.d – Site Infrastructure Layout Proposals unless otherwise agreed with the Agency.
- 4.9.2 The wheelwash shall be inspected on a daily basis and drained as required. Silt, stones and other accumulated material shall be removed as required from the wheel cleaner and disposed of at the working face. The wheelwash water be directed to the leachate lagoon, referred to in Condition 4.14, or as otherwise agreed with the Agency.
- 4.10 The licensee shall provide and use adequate lighting during the operation of the facility in hours of darkness.
- 4.11 Wastewater
- 4.11.1 The licensee shall provide and maintain toilet facilities at the location shown on Drawing No. D.1.d – Site infrastructure Layout Proposals, unless otherwise agreed with the Agency. A chemical toilet as described in Attachment D.1.k shall be used unless otherwise agreed with the Agency.
- 4.12 Storage Areas
- 4.12.1 No fuel shall be stored on the facility unless suitably bunded in accordance with this condition.
- 4.12.2 All tank, container 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 must be within the bunded area.

4.12.5 The integrity and water tightness of 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 following installation and prior to its 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 at the facility. 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 Specified Engineering Works

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

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

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

- a) a description of the works;
- b) as-built drawings of the works;
- c) records and results of all tests carried out (including failures);
- d) where relevant a drawing and sections showing the location of all samples and tests carried out;
- e) where relevant 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.

#### 4.14 Leachate and Surface Water Management

4.14.1 The licensee shall within six months of the date of this licence, submit to the Agency for its agreement, a feasibility report on diverting or lining the culvert. The feasibility report shall include recommendations on measures to be implemented to manage surface water from the north and east of the facility and at the culvert.

4.14.2 Within 12 months of the date of grant of this licence, the licensee shall install leachate and surface water management systems at the facility. The systems shall provide for the abstraction/collection of leachate from the waste and its transport for treatment at a suitable treatment works and for the maximisation of clean surface water runoff from the facility.

4.14.3 It shall consist *inter alia* of the following;

- (i) leachate abstraction wells fitted with high level leachate alarms.
- (ii) adequately sized leachate storage prior to tankering off-site.
- (iii) The recommended measures agreed with the Agency under Condition 4.14.1 shall be carried out. Where works are required outside the facility boundary, they shall be subject to the agreement of the landowner.
- (iv) the extraction/diversion of leachate from the culvert for storage in accordance with (ii) above.
- (v) separation of clean surface water runoff from contaminated surface water, and discharge of contaminated surface water to the leachate storage lagoon.
- (vi) construction of sub-surface leachate toe drains around all of the landfill apart from the halting site, such that leachate collected is extracted/diverted for storage in accordance with (ii) above.

4.14.4 The leachate storage lagoon shall be subject to the following;

- (i) The lagoon lining shall be a composite liner consisting of,
  - an upper component of a flexible membrane liner. At minimum a 2mm HDPE or equivalent flexible membrane liner should be used; and
  - a lower component of a 1m layer of compacted soil with a hydraulic conductivity of less than or equal to  $1 \times 10^{-9}$  m/s constructed in a series of compacted lifts no thicker than 250mm when compacted or a 0.5m artificial layer of enhanced soil giving equivalent protection to the foregoing also constructed in a series of compacted lifts no thicker than 250mm when compacted.
- (ii) The frequency of leachate removal/discharge from the leachate lagoon shall be such that a minimum freeboard of 0.5m shall be maintained in the leachate lagoon at all times.
- (iii) The licensee shall submit to the Agency for its agreement prior to the use of the leachate storage lagoon Operational Procedures for the handling of leachate during removal from the lagoon and subsequent transport/discharge to the Roscommon Wastewater Treatment Plant or other wastewater treatment plant as agreed with the Agency.

4.14.5 All tanks for the storage and/or treatment of untreated leachate shall be covered except for inlet and outlet piping.

4.14.6 Leachate abstracted/collected from the waste shall be disposed of by tankering off-site in fully enclosed road tankers and discharging to Roscommon Wastewater Treatment Plant or other agreed facility.

#### 4.15 Landfill Gas Management:

4.15.1 The licensee shall install a system for the active collection and flaring of landfill gas at the facility, such that within eighteen months of the date of grant of this licence landfill gas shall be collected and flared (using an enclosed flare unit). Until the installation of the landfill gas flare passive landfill gas management at the facility shall be carried out.

#### 4.15.2 Landfill Gas Flare

- (i) The flare shall be of an enclosed type design.



- (ii) Flare unit efficiency shall be tested within three months of installation and once every three years thereafter.

4.15.3 The licensee shall maintain all gas wells, pipework, valves, pumps, flares and other infrastructure that form part of the landfill gas management scheme in a safe and fully operational manner.

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

4.15.5 On an annual basis as part of the AER the licensee shall submit an assessment of whether the utilisation of landfill gas as an energy resource is feasible. If feasible such a system shall be installed within a timeframe agreed with the Agency.

#### 4.16 Capping

4.16.1 Daily cover and intermediate capping shall consist of the following: subsoils and other excavation waste or construction industry waste such as bricks and crushed broken concrete, unless otherwise agreed with the Agency. The material should be free draining and of low clay content. Daily cover should be 150mm in depth, while intermediate capping should be 300mm in depth.

4.16.2 Final capping shall consist of the following:

- top soil (150 -300mm);
- subsoils, such that total thickness of top soil and subsoils is at least 1m;
- drainage layer of 0.5m thickness having a minimum hydraulic conductivity of  $1 \times 10^{-4}$  m/s;
- compacted mineral layer of a minimum 0.6m thickness with a permeability of less than  $1 \times 10^{-9}$  m/s or a geosynthetic material (e.g. GCL) or similar that provides equivalent protection; and
- gas collection layer of natural material (minimum 0.3m) or a geosynthetic layer,

unless otherwise agreed with the Agency.

4.16.3 Within six months of the cessation of the occupation or habitation of the Halting Site as referred to in Condition 5.3, the licensee shall install final capping to all areas of the facility other than:

- existing hardstanding areas;
- areas subject to further landfilling; and
- areas subject to other requirements under Condition 4.

4.16.4 The licensee shall maintain a stockpile of capping materials at the facility containing the requisite volume of capping materials for the next six months.

#### 4.17 Civic Waste Facility

4.17.1 Within twelve months of the date of grant of this licence the licensee shall establish the Civic Waste Facility infrastructure referred to in Attachment D.1.p. The area shall be surfaced in concrete to British Standard 8110, or to another equivalent standard as agreed with the Agency. Drainage from this area shall be directed through an oil separator and sediment trap.

4.17.2 Waste oils collected for recovery shall be stored as specified in Condition 4.12.

#### 4.18 Access Road

- 4.18.1 Traffic awaiting access to the facility shall queue only along the facility access road. No traffic queuing shall be allowed on the public road.

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

## CONDITION 5 WASTE MANAGEMENT

- 5.1. No hazardous waste, liquid waste, untreated sludges, septic tank waste, silt & dredgings, oil/water mixtures, vegetable oil, animal excrement (including paunch contents) or animal blood shall be disposed of at the facility.
- 5.2. Subject to Condition 5.1, only those waste types and quantities listed in Schedule G : Waste Acceptance shall be recovered or disposed of at the facility unless the prior agreement of the Agency has been obtained. Notwithstanding this, no waste shall be accepted for disposal to the landfill at the facility after 31<sup>st</sup> December, 2001.
- 5.3. No wastes shall be accepted for recovery at the facility after 30<sup>th</sup> June 2002 unless all occupation or habitation of the Halting Site ceases and all infrastructure relating to the Halting Site has been removed.
- 5.4. Waste Acceptance Procedures
- 5.4.1. Subject to Condition 5.5, Waste Acceptance Procedures shall be carried out in accordance with Attachment E.2 of the application unless otherwise agreed with or instructed by the Agency.
- 5.5. As a minimum all wastes shall be checked at the working face to ensure that they comply with the requirements of the licence. When installed, the Waste Inspection Area shall be used in the determination of the acceptability of suspect loads, unless the waste is being removed from the facility. Any wastes deemed to be in contravention of this licence and/or unsuitable for recovery or disposal at this facility shall be removed for recovery or disposal at an appropriate alternative facility. Such waste shall be stored in the Waste Quarantine Area only and may be stored for a maximum of thirty-six hours, unless otherwise agreed with the Agency.
- 5.6. The quantity of wastes to be accepted at the facility for disposal shall not exceed 20,000 tonnes per annum.
- 5.7. Wastes shall not be deposited in any cell or part of the landfill without the prior agreement of the Agency. Waste deposition is limited to the area proposed in the application for future landfilling and shown in Drawing D.2.a – Proposed Outline for Future Landfilling. Within three months of the date of grant of this licence the licensee shall submit details of phasing sequence for the current and future landfilling in this area to the Agency for its agreement.
- 5.8. Subject to Condition 5.3, scavenging shall not be permitted at the facility. Unauthorised access to the facility shall not be permitted.
- 5.9. Waste shall only be accepted at the facility between the hours of 8.00 a.m. to 4.30 p.m. Monday to Friday inclusive and 8.00 a.m. to 1.00 p.m. on Saturdays unless otherwise agreed in advance with the Agency.
- 5.10. 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.
- 5.11. The working face of the operational cell shall, at the end of each day, be covered with material suitable to minimise any nuisances occurring.
- 5.12. 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. Within three months of the date of grant of this licence, unless otherwise agreed with the Agency, the licensee shall place permeable cover material which does not prevent the venting of landfill gas to atmosphere across the whole landfill so that no waste other than cover material or material suitable for specified engineering works is exposed.
- 5.13. Sewage Sludge
- 5.13.1. Treated sewage sludge shall only be accepted at the facility between the hours of 8:30 a.m. and 2.00 p.m. Monday to Friday inclusive. All sewage sludge deposited at the facility shall be in accordance with the guidance set out in *Section 4.4 – The Disposal of Difficult Wastes* of the Agency's Landfill Operation Practices Manual (1997).
- 5.14. Asbestos Waste
- 5.14.1. All non-hazardous asbestos based construction and demolition waste must be double wrapped in heavy gauge plastic which is clearly labelled to indicate the presence of asbestos.
- 5.14.2. Disposal of such waste shall be into prepared bays or trenches of at least 2 metres in depth. Deposited asbestos waste shall be covered immediately with suitable material.
- 5.15. 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.
- 5.16. In order to prevent the formation of voids, all large hollow objects and other large articles deposited at the facility shall be crushed, broken up, flattened or otherwise treated.
- 5.17. Wastes once deposited and covered shall not be excavated, disturbed or otherwise picked over without prior agreement from the Agency.
- 5.18. Subject to Condition 5.3, no smoking shall be allowed on the facility other than in the on-site office.
- 5.19. Recovery
- Within six months of the date of grant of this licence the licensee shall submit a report to the Agency examining recovery provisions at the facility. Unless otherwise agreed with the Agency, this report shall address provisions for the following:
- 5.19.1. the separation of recyclable materials from the waste;
  - 5.19.2. the recovery of Construction and Demolition Waste;

- 5.19.3. the recovery of metal waste and white goods including written procedures for the de-gassing of CFC's from refrigerators;
  - 5.19.4. the recovery of commercial waste, including cardboard;
  - 5.19.5. composting of biodegradable or green waste at the facility having regard to good practice and sustainability; and
  - 5.19.6. the use of inert waste for cover/restoration material at the facility.
- 5.20. Waste sent off-site for recovery or disposal shall only be conveyed to a waste contractor agreed by the Agency. The ultimate recovery or disposal facility for all wastes shall be agreed in advance with the Agency. All wastes removed off-site for recovery or disposal shall be transported from the facility to the consignee in a manner which will not adversely affect the environment.
- 5.21. Civic Waste Facility
- 5.21.1. The following wastes may be accepted at the Civic Waste Facility in suitable individual containers: household and commercial waste; waste oils; glass; textiles; paper; metals; and any other recyclable wastes.

**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, birds, flies, mud, dust 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. Litter Control
- 6.3.1. Litter fencing shall be installed and maintained around the perimeter of the active tipping area.
  - 6.3.2. All litter control infrastructure shall be inspected on a daily basis and the licensee shall remedy any defect in the litter netting as follows:
    - a) a temporary repair shall be made by the end of the working day; and,
    - b) a repair to the standard of the original netting shall be undertaken within three working days or as otherwise agreed with the Agency.
  - 6.3.3. All loose litter accumulated within the facility and its environs, excluding that which is deposited on the working face, shall be removed subject to the agreement of the landowners and appropriately disposed of on a daily basis.
- 6.4. 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.

- 6.5. The licensee shall ensure that all vehicles delivering waste to and removing waste and materials from the facility are appropriately covered.
- 6.6. 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.
- 6.7. The licensee shall ensure that vermin, birds, flies, mud, dust and odours 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.
- 6.8. Not later than three months from the date of grant of this licence, the licensee shall submit to the Agency, an assessment of the effectiveness of the bird control measures at the facility. This assessment shall include, where required:
  - a) proposals for additional bird control measures;
  - b) method for assessing the effectiveness of such additional measures; and
  - c) timescales for the implementation of such measures.
- 6.9. Once installed, the wheelwash shall be used by all waste vehicles exiting the facility.
- 6.10. The licensee shall apply the vermin and fly control measures outlined in Attachment F.7 of the application. Notwithstanding these measures and unless otherwise agreed with the Agency, not later than three months from the date of grant of this licence, the licensee shall submit to the Agency a programme for the control and eradication of vermin and fly infestations at the facility. This programme should include as a minimum, details on the rodenticide(s) and insecticide(s) to be used, operator training, mode and frequency of application and measures to contain sprays within the facility boundary.

**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 F: Emission Limits of this licence. There shall be no other emissions of environmental significance.
- 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. Landfill Gas
  - 7.4.1. The following are the trigger levels for landfill gas emissions from the facility measured in any service on, at or immediately adjacent to the facility and/or at any other point located outside the body of the waste:
    - a) Methane, greater than or equal to 1.0% v/v; and
    - b) Carbon dioxide, greater than or equal to 1.5% v/v.

7.4.2. The concentration limits for emissions to atmosphere specified in this licence shall be achieved without the introduction of dilution air and shall be based on gas volumes under standard conditions of :-

a ) in the case of landfill gas flare:

Temperature 273 K, pressure 101.3 kPa, dry gas at 3% oxygen; and

b) in the case of landfill gas combustion plant:

Temperature 273 K, pressure 101.3 kPa, dry gas; 5% oxygen.

7.4.3. Emission limits for emissions to atmosphere in this licence shall be interpreted in the following way:-

7.4.3.1. Continuous monitoring

(i) No 24 hour mean value shall exceed the emission limit value.

(ii) 97% of all 30 minute mean values taken continuously over an annual period shall not exceed 1.2 times the emission limit value.

(iii) No 30 minute mean value shall exceed twice the emission limit value.

7.4.3.2. Non-Continuous Monitoring

(i) For any parameter where, due to sampling/analytical limitations, a 30 minute samples is inappropriate, a suitable sampling period should be employed and the value obtained therein shall not exceed the emission limit value.

(ii) For all other parameters, no 30 minute mean value shall exceed the emission limit value.

(iii) For flow, no hourly or daily mean value shall exceed the emission limit value.

7.5. There shall be no direct emissions to groundwater.

7.6. There shall be no discharge of leachate to surface water.

7.7. Disposal of Leachate

7.7.1. Any leachate or other contaminated water removed from the facility shall be transported to Roscommon Wastewater Treatment Plant and disposed of there unless otherwise agreed in advance with the Agency. Disposal procedures for the leachate or other contaminated water at the treatment plant shall be in accordance with any written requirements of the Sanitary Authority.

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

## **CONDITION 8 RESTORATION AND AFTERCARE**

8.1. Within six months of the date of grant of this licence the licensee shall submit a revised Restoration and Aftercare Plan for the facility which shall be based on the plan

submitted as part of Attachment G1 and have regard to the requirements of the Landfill Directive (1999/31/EC) and the guidance published in the Agency's Landfill Manual: *Landfill Restoration and Aftercare*. The plan shall address all areas of the facility and relevant requirements of this licence and include the following:

- a planting and phasing programme;
  - a final contour map;
  - details of leachate and gas management/monitoring points (including method of access); and
  - any other matter notified in writing by the Agency.
- 8.2. Notwithstanding Condition 8.1, the final maximum height of the facility shall not exceed 62mOD (Malin Head) and the completed areas of the landfill shall be profiled to a dome shape to minimise rainwater infiltration.
- 8.3. 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.
- 8.4. No material or object that is incompatible with the proposed restoration of the facility shall be present within one metre of the final soil surface levels. No asbestos waste shall be present within 2.5 metres of the final surface levels.
- 8.5. Where tree planting above waste-filled areas is proposed, a synthetic barrier shall be used to augment the clay cap. Topsoil and subsoil depths shall be a minimum of 1m unless otherwise agreed in advance with the Agency.
- 8.6. The restoration of the landfill facility shall be completed within twelve months of the completion of landfilling activities, unless otherwise agreed in advance with the Agency.

**Reason:** *To provide for the restoration and aftercare of the facility.*

## **CONDITION 9 ENVIRONMENTAL MONITORING**

- 9.1. The licensee shall carry out such monitoring and at such locations and frequencies as set out in Schedule E: Monitoring and as specified in the Conditions of this licence.
- 9.2. Within three months from the date of grant of this licence, the licensee shall submit to the Agency for its agreement, additional monitoring locations to detect off-site migration of landfill gas.
- 9.3. Landfill Gas Monitoring
- 9.3.1. Within three months from the date of grant of this licence, the licensee shall submit to the Agency for its agreement details of the permanent gas monitoring system to be installed in the site office and any other enclosed structures at the facility.
- 9.3.2. The licensee shall as soon as practicable from the date of grant of this licence, and subject to agreement of inhabitants, provide for weekly gas monitoring in all inhabited structures on the facility. This system shall be capable of detecting those parameters and those levels specified in Schedule F.2.

9.4. Dust Monitoring

9.4.1. Within three months of the date of grant of this licence the licensee shall submit further dust monitoring locations, to satisfy Schedule E: Monitoring, for agreement with the Agency.

9.4.2. Dust deposition monitoring shall be carried out as specified in Schedule E: Monitoring. The first such monitoring shall be undertaken during the first relevant period following agreement under Condition 9.4.1.

9.5. Noise Monitoring

9.5.1. Within six months of the date of grant of this licence, the licensee shall submit further noise monitoring locations to satisfy Schedule E: Monitoring, for agreement with the Agency.

9.5.2. Noise monitoring as specified in Schedule E: Monitoring shall be carried out on an annual basis during operational hours.

9.6. Within six months of the date of grant of this licence the licensee shall submit further leachate monitoring locations to satisfy Schedule E: Monitoring, for agreement with the Agency.

9.7. The licensee shall within six months of the date of grant of this licence, provide for three additional groundwater monitoring boreholes. One of these boreholes shall be upgradient of the facility and the other two downgradient. The three boreholes shall be constructed for the purposes of monitoring groundwater in the limestone aquifer.

9.8. Subject to the diversion of surface water in accordance with Condition 4.14, the licensee shall, following prior Agency agreement, provide for an additional surface water monitoring location for the monitoring of the diverted surface water to satisfy Schedule E: Monitoring.

9.9. The licensee shall make arrangements for representative meteorological data to be collated for the facility to fulfil the requirements of Schedule E.5: Monitoring.

9.10. The licensee shall provide safe and permanent access to all on-site sampling and monitoring points and off-site points, subject to owner's agreement, as required by the Agency. All ditches and drains located around the perimeter of the facility are to be kept clear such that monitoring can be carried out successfully.

9.11. The licensee shall maintain all sampling and monitoring points, and clearly label and name (including national grid number) all sampling and monitoring locations, so that they may be used for representative sampling and monitoring.

9.12. 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.

9.13. 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.

9.14. 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.



- 9.15. A topographical survey shall be carried out within six months of the date of grant of this licence. It shall be repeated annually thereafter. The survey shall be in accordance with any written instructions issued by the Agency and shall as a minimum consist of the following:
- Drawing showing site levels (mOD); and
  - A calculation of the material requirements (in m<sup>3</sup>) necessary to comply with capping, daily cover and height requirements of conditions of this licence and the Restoration and Aftercare Plan to be agreed with the Agency under condition 8.1.
- 9.16. Unless otherwise specified by this licence or agreed by the Agency, all environmental monitoring shall commence no later than two months after the date of grant of this licence.
- 9.17. Unless otherwise agreed in advance with the Agency, monitoring infrastructure which proves to be unsuitable for its purpose shall be replaced within three months of monitoring results indicating that the monitoring infrastructure is damaged or unsuitable.
- 9.18. All landfill gas monitoring equipment used for monitoring landfill gas under the requirements of this licence shall be certified as being intrinsically safe.
- 9.19. Within six months of the date of grant of this licence, the licensee shall submit to the Agency an updated appropriately scaled drawing(s) showing the location of all the monitoring locations that are stipulated in this licence.
- 9.20. All on-site monitoring points as described in Condition 9 shall be tagged in site with their agreed sampling point codes within twelve months of the granting of this licence.
- 9.21. Within six months of the date of grant of this licence, and annually thereafter, the licensee shall carry out a stability assessment of the side slopes, until closure of the facility.

**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, within six months of the date of grant of this licence, submit a written Emergency Response Procedure (ERP) to the Agency for its agreement. 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.
- 10.2. 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.
- 10.3. 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.
- 10.4. Subject to Condition 5.3, no waste shall be burned 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.

- 10.5. Unless otherwise notified in writing by the Agency, in the event that any monitoring, sampling, complaints 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) provide a proposal to the Agency for its agreement within one month to:
    - i) identify and put in place measures to avoid reoccurrence of the incident; and
    - ii) identify and put in place any other appropriate remedial action.

**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 £12,077 or such sum as the Agency from time to time determines, towards the cost of monitoring the activity or otherwise in performing any functions in relation to the activity, as the Agency considers necessary for the performance of its functions under the Waste Management Act, 1996. The licensee shall in 2002 and subsequent years, not later than January 31 of each year, pay to the Agency this amount updated in accordance with changes in the Public Sector Average Earnings Index from the date of the licence to the renewal date. The updated amount shall be notified to the licensee by the Agency. For 2001, the licensee shall pay a pro rata amount from the date of this licence to 31<sup>st</sup> December 2001. This amount shall be paid to the Agency within one month of the date of grant of this licence.
- 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 or decreased the licensee shall contribute such sums as determined by the Agency to defraying its costs.

## 11.2 Financial Provision for Closure, Restoration and Aftercare

- 11.2.1 The licensee shall from a date to be set by the Agency establish and maintain a fund, or written guarantee, that is adequate to assure the Agency that the licensee is at all times financially capable of implementing the Restoration and Aftercare Plan required by Condition 8.1. The type of fund and means of its release/recovery shall be agreed by the Agency prior to its 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 restoration and aftercare annually and any details of the necessary adjustments to the fund must, within two weeks of the revision, be forwarded to the Agency for its agreement. Any adjustment agreed by the Agency shall be effected within four weeks of said written agreement.
- 11.2.4 Unless otherwise agreed any revision to the fund shall be computed using the following formula:

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

Where:

Cost = Revised restoration and aftercare cost

ECOST = Existing restoration and aftercare cost

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

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

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

# SCHEDULE A :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 B :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 and any updates of all monitoring locations including 12 digit grid references.

Resource and energy consumption summary.

Proposed development of the facility and timescale of such development.

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

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

Diversion of biodegradable waste.

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 facility.

Estimated annual and cumulative quantity of indirect emissions to groundwater.

Monthly water balance calculation and interpretation.

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.

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

Tank, pipeline and bund testing and inspection report.

Reported incidents and Complaints summaries.

Review of Nuisance Controls.

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

Any other items specified by the Agency.

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

# SCHEDULE C :Recording and Reporting to the Agency

Table C.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	Thirteen months from the date of grant of licence and one month after the end of each year thereafter.
Record of incidents	As they occur	Within five days of the incident.
Bund, tank and container integrity assessment	Every three years	Six months from the date of grant of licence 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 landfill gas	Quarterly	Ten days after end of the quarter being reported on.
Monitoring of Surface Water Quality	Quarterly	Ten days after end of the quarter being reported on.
Monitoring of Groundwater Quality	Quarterly	Ten days after end of the quarter being reported on.
Monitoring of Leachate	Quarterly	Ten days after end of the quarter being reported on.
Meteorological Monitoring	Annually	One month after end of the year being reported on.
Dust Monitoring	Three times a year	Ten days after the period being reported on
Noise Monitoring	Annually	One month after end of the year being reported on.
Slope Stability Assessment	Annually	Within six months of the date of grant of this licence and annually thereafter.
Any other monitoring	As they occur	Within ten days of obtaining results.

Note 1: Unless altered at the request of the Agency

# SCHEDULE D :Specified Engineering Works

## Specified Engineering Works

Landfill cap installation, including temporary and intermediate capping, installation and all other containment works (including any containment works relating to leachate control).

Fencing and site security works.

Bunding of fuel and oil storage areas.

Installation of Civic Waste Facility

Installation of Waste Inspection and Waste Quarantine Areas

Installation of Weighbridge

Installation of Wheelwash

Installation of landfill gas management and monitoring systems.

Installation of leachate management, detection, storage, treatment, monitoring and control systems.

Installation of alternative drinking water supplies.

Installation of groundwater control and/or monitoring systems.

Surface water management works.

Restoration and Aftercare Works.

Nuisance control measures

Any future composting of organic wastes

Any component separation on site

Any other works notified in writing by the Agency.

# SCHEDULE E :Monitoring

Monitoring to be carried out as specified below.

## E.1 Monitoring Locations

Monitoring locations shall be those as set out below (and indicated on Drawing No. C.6.2.Rev.A unless otherwise agreed) for the parameters and frequencies outlined in Schedule E.2.

Landfill Gas Monitoring locations	
LFG 1 – LFG 7	Site Office
LFG 8 – LFG 13	Perimeter Monitoring Locations <sup>Note 1</sup>
Dust Monitoring Locations <sup>Note 2</sup>	
Western boundary of the facility.	Northern boundary of facility.
Eastern boundary of facility.	South-western boundary of facility.
Southern boundary of facility.	
Noise Monitoring Locations <sup>Note 3</sup>	
Western boundary of the facility.	Northern boundary of facility.
Eastern boundary of facility.	South-western boundary of facility.
Southern boundary of facility.	
Meteorological Monitoring	
Data to be obtained from the Claremorris Station of Met Éireann	
Groundwater Monitoring Locations	
GW2	BH u/gradient <sup>Note 4</sup>
GW4	BH d/gradient <sup>Note 4</sup>
GW5	BH d/gradient <sup>Note 4</sup>
Surface Water Monitoring Locations	
SW1	SW2
SW6	SW7
SW3	Diverted surface water <sup>Note 6</sup>
Leachate Monitoring Locations	
LW1 - LW4	Note 5
Landfill Gas Flare / Combustion Plant	
Inlet(s) and Outlet(s)	

- Note 1: Locations to be agreed subject to Condition 9.2.  
 Note 2: Locations to be agreed subject to Condition 9.4.  
 Note 3: Locations to be agreed subject to Condition 9.5.  
 Note 4: Locations to be agreed subject to Condition 9.7.  
 Note 5: Locations to be agreed subject to Condition 9.6.  
 Note 6: Location to be agreed subject to Condition 9.8.

## E.2 Monitoring Parameters, Frequencies and Techniques

**Table E.2.1** Landfill Gas Monitoring

Parameter	Monitoring Frequency		Analysis Method/Technique <sup>Notes 1 &amp; 2</sup>
	Gas Boreholes/ Vents/Wells	Site Office	
Methane (CH <sub>4</sub> ) % v/v	Monthly	Weekly	Infrared analyser/flame ionisation detector
Carbon dioxide (CO <sub>2</sub> )%v/v	Monthly	Weekly	Infrared analyser/ flame ionisation detector
Oxygen(O <sub>2</sub> ) %v/v	Monthly	Weekly	Electrochemical cell
Atmospheric Pressure	Monthly	Weekly	Standard
Temperature	Monthly	Weekly	Standard

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

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

**Table E.2.2** Dust Monitoring

Parameter (mg/m <sup>2</sup> /day)	Monitoring Frequency	Analysis Method/Technique
Dust	Three times a year <sup>Note 2</sup>	Standard Method <sup>Note 1</sup>

**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:** Twice during the period May to September, or as otherwise specified in writing by the Agency. With the agreement of the Agency monitoring can cease once landfill restoration is complete.

**Table E.2.3** Noise Monitoring

Parameter	Monitoring Frequency	Analysis Method/Technique
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."

**Table E.2.4** 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
Evapotranspiration	Daily	Standard
Humidity	Daily	Standard
Atmospheric Pressure	Daily	Standard



**Table E.2.5** Surface Water, Groundwater and Leachate Monitoring

<b>Parameter</b> <sup>Note 1</sup>	<b>SURFACE WATER</b>	<b>GROUNDWATER</b>	<b>LEACHATE</b>
	<b>Monitoring Frequency</b>	<b>Monitoring Frequency</b>	<b>Monitoring Frequency</b>
<b>Visual Inspection/Odour</b> <sup>Note 2</sup>	Weekly	Quarterly	Quarterly
<b>Groundwater Level</b>	Not Applicable	Monthly	Not Applicable
<b>Leachate Level</b>	Not Applicable	Not Applicable	Weekly
<b>Ammoniacal Nitrogen</b>	Quarterly <sup>Note 5</sup>	Quarterly	Quarterly
<b>BOD</b>	Quarterly <sup>Note 5</sup>	Not Applicable	Quarterly
<b>COD</b>	Quarterly	Not Applicable	Quarterly
<b>Chloride</b>	Quarterly	Quarterly	Quarterly
<b>Dissolved Oxygen</b>	Quarterly	Quarterly	Not Applicable
<b>Electrical Conductivity</b>	Quarterly <sup>Note 5</sup>	Quarterly	Quarterly
<b>pH</b>	Quarterly <sup>Note 5</sup>	Quarterly	Quarterly
<b>Total Suspended Solids</b>	Quarterly <sup>Note 5</sup>	Not Applicable	Not Applicable
<b>Temperature</b>	Quarterly <sup>Note 5</sup>	Monthly	Quarterly
<b>Cadmium</b>	Annually	Annually	Annually
<b>Calcium</b>	Annually	Annually	Annually
<b>Chromium (Total)</b>	Annually	Annually	Annually
<b>Copper</b>	Annually	Annually	Annually
<b>Cyanide (Total)</b>	Not Applicable	Annually	Annually
<b>Fluoride</b>	Not Applicable	Annually	Annually
<b>Iron</b>	Annually	Quarterly	Annually
<b>Lead</b>	Annually	Annually	Annually
<b>List I/II organic substances</b> <sup>Note 3</sup>	<sup>Note 6</sup>	Annually	<sup>Note 6</sup>
<b>Magnesium</b>	Annually	Annually	Annually
<b>Manganese</b>	Annually	Annually	Annually
<b>Mercury</b>	Annually	Annually	Annually
<b>Potassium</b>	Annually	Quarterly	Annually
<b>Sulphate</b>	Annually	Annually	Annually
<b>Sodium</b>	Annually	Quarterly	Annually
<b>Total Alkalinity</b>	Annually	Annually	Not Applicable
<b>Total Phosphorus / orthophosphate</b>	Annually <sup>Note 5</sup>	Annually	Annually
<b>Total Oxidised Nitrogen</b>	Annually	Quarterly	Quarterly
<b>Total Organic Carbon</b>	Not Applicable	Quarterly	Not Applicable
<b>Residue on evaporation</b>	Not Applicable	Annually	Not Applicable
<b>Zinc</b>	Annually	Annually	Annually
<b>Phenols</b>	Not Applicable	Quarterly	Not Applicable
<b>Faecal Coliforms</b> <sup>Note 4</sup>	Not Applicable	Quarterly	Annually
<b>Total Coliforms</b> <sup>Note 4</sup>	Not Applicable	Quarterly	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 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).

- 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, at a monitoring location to be agreed in accordance with Condition 9.8, shall be monitored on a monthly basis for these parameters unless flow in that month does not allow such monitoring.
- Note 6: Once off for List I/II organic substances and thereafter as required by the Agency.

**Table E.2.6** Landfill Gas Flare/Combustion Plant Monitoring

Parameter	Monitoring Frequency	Analysis Method <sup>Note1</sup> /Technique <sup>Note2</sup>
Inlet		
Methane (CH <sub>4</sub> ) % v/v	Weekly	Infrared analyser/flame ionisation detector
Carbon dioxide (CO <sub>2</sub> )%v/v	Weekly	Infrared analyser/ flame ionisation detector
Oxygen (O <sub>2</sub> ) %v/v	Weekly	Infrared analyser
Outlet		
Volumetric Flow rate	Biannually	Pitot Tube Method
SO <sub>2</sub>	Biannually	Flue gas analyser
NO <sub>x</sub>	Biannually	Flue gas analyser
CO	Continuous	Flue gas analyser
Particulates	Annually	Isokinetic/Gravimetric
TA Luft Class I, II, III organics	Annually	Adsorption/Desorption / GC /GCMS <sup>(Note 3)</sup>
Hydrochloric acid	Annually	Impinger / Ion Chromatography
Hydrogen fluoride	Annually	Impinger / Ion Chromatography

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

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

Note 3: Test methods should be capable of detecting acetonitrile, dichloromethane, tetrachlorethylene and vinyl chloride as a minimum.

## SCHEDULE F :Emission Limits

**F.1 Noise Emissions:** (Measured at the monitoring points indicated in Schedule E).

Day dB(A) L <sub>Aeq</sub> (30 minutes)	Night dB(A) L <sub>Aeq</sub> (30 minutes)
55	45

**F.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

**F.3 Dust Deposition Limits:** (Measured at the monitoring points indicated in Schedule E).

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

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

### F.4 Emission Limits Values for Landfill Gas Flare/Utilisation Plant

Emission Point Reference No.s: (to be agreed with the Agency)  
 Location: Landfill Gas Combustion Plant and flarestacks  
 Volume to be emitted: 3000m<sup>3</sup>/hr  
 Minimum discharge height: 5m

Parameter	Emission Limit Value
Nitrogen oxides as (NO <sub>2</sub> )	500 mg/m <sup>3</sup>
CO	650 mg/m <sup>3</sup>
Particulates	130 mg/m <sup>3</sup>
TA Luft Organics Class I <sup>(Note 1)</sup>	20 mg/m <sup>3</sup> (at mass flows > 0.1 kg/hr)
TA Luft Organics Class II <sup>(Note 1)</sup>	100 mg/m <sup>3</sup> (at mass flows > 2 kg/hr)
TA Luft Organics Class III <sup>(Note 1)</sup>	150 mg/m <sup>3</sup> (at mass flows > 3kg/hr)
Hydrogen Chloride	50 mg/m <sup>3</sup> (at mass flows > 0.3 kg/h)
Hydrogen Fluoride	5 mg/m <sup>3</sup> (at mass flows > 0.05 kg/h)

**Note 1:** In addition to the above individual limits, the sum of the concentrations of Class I, II and III shall not exceed the Class III limits.

## **SCHEDULE G : Waste Acceptance**

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

<b>WASTE TYPE</b>	<b>MAXIMUM TONNES PER ANNUM</b>
Household	13,650
Commercial	5,000
Treated Sewage Sludge	350
Construction & Demolition	1,000
<b>TOTAL</b>	<b>20,000</b>

**Sealed by the seal of the Agency on this  
3rd day of August, 2001.**

**PRESENT when the seal of the Agency  
was affixed hereto:**

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**Iain Maclean    Director/Authorised Person**