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Ireland

WASTE LICENCE
RECOMMENDED DECISION
LANDFILL FOR NON-HAZARDOUS WASTE

Waste Licence Register Number:	W0026-03
Licensee:	Laois County Council
Location of Facility:	Kyletalesha Landfill, Clonsoughy, Kyleclonhobert, County Laois.

INTRODUCTION

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

This licence is for the continued operation of a non-hazardous waste landfill which will accept up to a maximum annual tonnage of 47,100 tonnes of waste for disposal. The licence also provides for the composting of biodegradable waste and the operation of a Civic Waste Facility.

The licensee must manage and operate the facility to ensure that the activities do not cause environmental pollution. The licensee is required to carry out regular environmental monitoring in addition to a wide range of reports on the operation and management of the facility, and submit these to the Agency.

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

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DECISION & REASONS FOR THE DECISION

Reasons for the decision

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

In reaching this decision the Agency has considered documentation received from the applicant, submissions received from other parties 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 Laois County Council to carry on the waste activities listed below at Kyletalesha Landfill, Clonsoughy, Kyleclonhobert, County Laois subject to conditions, with the reasons therefor 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 2	**Land treatment, including biodegradation of liquid or sludge discards in soils:**
	This activity is limited to the treatment of leachate at the on-site treatment plant.
Class 4	**Surface impoundment, including placement of liquid or sludge discards into pits, ponds or lagoons:**
	This activity is limited to the storage of leachate in lagoons or tanks.
Class 5	**Specially engineered landfill, including placement into lined discrete cells which are capped and isolated from one another and the environment:**
	This activity is limited to the placement of waste into lined cells.
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:**
	This activity is limited to the treatment of leachate at the on-site treatment plant.
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:**
	This activity is limited to the treatment of leachate at the on-site treatment plant and the flaring of landfill gas.
Class 11	**Blending or mixture prior to submission to any activity referred to in a preceding paragraph of this Schedule:**
	This activity is limited to the mixing of waste types prior to disposal into lined cells.
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:**
	This activity is limited to the temporary storage of waste at the facility prior to its disposal at the landfill or at an alternative appropriate disposal facility.

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):** This activity is limited to the composting of biodegradable waste.
Class 3	**Recycling or reclamation of metals and metal compounds:** This activity is limited to the recycling of metals at the Civic Waste Facility.
Class 4	**Recycling or reclamation of other inorganic materials:** This activity is limited to the recycling of waste at the Civic Waste Facility and for the recovery/reclamation of inert waste for the restoration of the facility.
Class 9	**Use of any waste principally as a fuel or other means to generate energy:** This activity is limited to the possible future use of landfill gas as an energy source.
Class 11	**Use of waste obtained from any activity referred to in a preceding paragraph of this Schedule:** This activity is limited to the use of inert waste, peat or composted materials at the facility.
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:** This activity is limited to the collection and storage of recyclable and reusable wastes at the facility prior to their use on-site or their removal off-site for recycling/recovery.

INTERPRETATION

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

Adequate lighting	20 lux measured at ground level.
Agreement	Agreement in writing.
Annually	At approximately twelve monthly intervals.
Application	The application by the licensee for this waste licence.
Appropriate facility	A waste management facility, duly authorised under relevant law and technically suitable.
BAT	Best Available Techniques as defined in Article 2(11) of Council Directive 96/61/EC concerning integrated pollution prevention and control.
Biodegradable waste	Waste that is capable of undergoing anaerobic or aerobic decomposition, such as food and garden waste and paper and cardboard.
Biodegradable municipal waste (BMW)	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.
Bio-stabilised residual waste	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.
CCTV system	Closed circuit television system.
Characterisation of waste	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.
Classification of waste	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.
Coding of waste	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.
Commercial waste	As defined in Section 5 (1) of the Act.
Condition	A condition of this licence.
Construction and Demolition Waste	All wastes which arise from construction, renovation and demolition activities.
Containment boom	A boom which can contain spillages and prevent them from entering drains or watercourses.
Cover material	Bricks, crushed concrete, tarmac, earth, soil, sub-soil, stone, rock or other similar natural materials; or other cover material the use of which has been agreed by the Agency.
Daily Cover	The term used to describe material spread (about 150mm if soil cover is used) over deposited waste at the end of each day.

Daytime	0800 hrs to 2200 hrs.
Documentation	Any report, record, result, data, drawing, proposal, interpretation or other document in written or electronic form which is required by this licence.
Drawing	Any reference to a drawing or drawing number means a drawing or drawing number contained in the application, unless otherwise specified in this licence.
Emergency	Those occurrences defined in Condition 9.4.
Emission Limits	Those limits, including concentration limits and deposition levels established in *Schedule C: Emission Limits,* of this licence.
European Waste Catalogue (EWC)	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.
Green waste	Waste wood (excluding timber), plant matter such as grass cuttings, and other vegetation.
Hours of Operation	The hours during which the facility is authorised to be operational.
Hours of Waste Acceptance	The hours during which the facility is authorised to accept waste.
Household waste	As defined in Section 5 (1) of the Act.
Incident	An incident for the purposes of this licence is defined as • An emergency; • Any emission which does not comply with the requirements of this licence; • Any trigger level specified in this licence which is attained or exceeded; or • Any indication that environmental pollution has, or may have, taken place.
Industrial waste	As defined in Section 5 (1) of the Act.
Inert waste	Inert waste as defined in the Waste Management (Licensing) (Amendment) Regulations, 2002 (SI No. 336 of 2002).
Intermediate Cover	The term used to describe material (minimum 300mm if soil is used) spread over deposited waste for a period of time prior to restoration or prior to further disposal of waste.
Landfill	Refers to the area of the facility where the waste is disposed of by placement on the ground or on other waste.
Landfill Gas	Gases generated from the landfilled waste.
LEL (Lower Explosive Limit)	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.
Licence	A waste licence issued in accordance with the Act.
Licensee	Laois County Council.
List I/II Organics	Substances classified pursuant to EC Directives 76/464/EEC and 80/68/EEC.
Liquid Waste	Any waste in liquid form and containing less than 2% dry matter. Any waste

	tankered to the facility.
Maintain	Keep in a fit state, including such regular inspection, servicing and repair as may be necessary to adequately perform its function.
Monthly	A minimum of twelve times per year, at approximately monthly intervals.
Municipal solid waste (MSW)	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.
Night-time	2200 hrs to 0800 hrs.
OMP	Odour Management Plan
Public Tipping Area	The location at the facility, which is separate from the main tipping area used by commercial waste vehicles, that is to be used by members of the public in private vehicles for the deposit/disposal of domestic waste.
Quarterly	At approximately three monthly intervals.
Residual waste	The fraction of collected waste remaining after a treatment or diversion step, which generally requires further treatment or disposal.
Sample(s)	Unless the context of this licence indicates to the contrary, samples shall include measurements by electronic instruments.
Sludge	The accumulation of solids resulting from chemical coagulation, flocculation and/or sedimentation after water or wastewater treatment with greater than 2% dry matter.
Specified Emissions	Those emissions listed in *Schedule C: Emission Limits,* of this licence.
Specified Engineering Works	Those engineering works listed in *Schedule B: Specified Engineering Works,* of this licence.
Treated Sludge	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.
Treatment/pre-treatment	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.
Trigger Level	A parameter value specified in the licence, the achievement or exceedance of which requires certain actions to be taken by the licensee.
Wastewater	Contaminated water including water that has been used for washing and/or flushing (including foul water).
White Goods	Refrigerators, cookers, ovens and other similar appliances.
EPA Working Day	Refers to the following hours: 0900 hrs to 1730 hrs Monday to Friday inclusive.
Working Face	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 III: CONDITIONS

CONDITION 1 SCOPE OF THE LICENCE

1.1. Waste activities at the facility shall be restricted to those listed and described in Part I: Activities Licensed and authorised by this licence.

1.2. For the purposes of this licence, the facility is the area of land outlined in red on the Drawing No. 1 of the application entitled "Kyletalesha Landfill Site Ownership Plan & Boundary for Licence" which was received by the Agency on 13th May 2002, excluding those areas which Laois County Council does not own. Any reference in this licence to "facility" shall mean the area thus outlined in red.

1.3. This licence is for the purposes of waste licensing under the Waste Management Acts, 1996 to 2008, only and nothing in this licence shall be construed as negating the licensee's statutory obligations or requirements under any other enactments or regulations.

1.4. Only the wastes listed in *Schedule A: Waste Acceptance,* of this licence, may be disposed of or recovered at the facility subject to the maximum quantities and other constraints specified therein.

1.5. Waste Acceptance

1.5.1. Whole used tyres (other than bicycle tyres and tyres with an outside diameter greater than 1400mm) shall not be disposed of at the facility. Shredded tyres shall not be accepted or disposed of at the facility.

1.5.2. No hazardous wastes or liquid wastes shall be disposed of at the facility.

1.5.3. 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.

1.5.4 The dilution or mixture of waste solely in order to fulfil relevant waste acceptance criteria established under Condition 5.2.1 is prohibited.

1.6. Waste Acceptance Hours and Hours of Operation

1.6.1. Landfill

1.6.1.1. Waste may be accepted only at the facility for disposal at the landfill between the hours of 8.00 a.m. to 4.30 p.m. Monday to Saturday inclusive.

1.6.1.2. The landfill at the facility may be operated only during the hours of 8.00 a.m. to 5.30 p.m. Monday to Saturday inclusive.

1.6.1.3. Waste shall not be accepted at the landfill on Sundays or Bank Holidays.

1.6.2. Civic Waste Facility

1.6.2.1. Waste shall be accepted only at the Civic Waste Facility between the hours of 8.00 a.m. to 4.30 p.m. Monday to Saturday inclusive.

1.7. Where the Agency considers that a non-compliance with any condition of this licence has occurred, it may serve a notice on the licensee specifying:

1.7.1. That only those waste as specified, if any, in the notice are to be accepted at the facility after the date set down in the notice.

1.7.2. 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.

1.7.3. 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 permission is received from the Agency.

1.8. Every plan, programme or proposal submitted to the Agency for its agreement pursuant to any condition of this licence shall include a proposed timescale for its implementation. The Agency may modify or alter any such plan, programme or proposal in so far as it considers such modification or alteration to be necessary and shall notify the licensee in writing of any such modification or alteration. Every such plan, programme or proposal shall be carried out within the timescale fixed by the Agency but shall not be undertaken without the agreement of the Agency. Every such plan, programme or proposal agreed by the Agency shall be covered by the conditions of this licence.

1.9. This licence is being granted in substitution for the waste licence granted to the licensee on 12th November 2003 and bearing Waste Licence Register No: W0026-02. The previous waste licence (Register No: W0026-02) is superseded by this licence.

REASON: To clarify the scope of this licence.

CONDITION 2 MANAGEMENT OF THE FACILITY

2.1 Facility Management

2.1.1 The licensee shall employ a suitably qualified facility manager with experience commensurate with the level of expertise required, who shall be designated as the person in charge. The facility manager or a nominated, suitably qualified and experienced, deputy shall be present on the facility at all times during its operation.

2.1.2 The Civic Waste Facility shall be supervised by an appropriately qualified and competent person at all times while waste may be accepted.

2.1.3 Both the facility manager and deputy, and any replacement manager or deputy, shall successfully complete both the FAS Waste Management Training Programme (or equivalent agreed by the Agency) and associated on site assessment appraisal within twelve months of appointment.

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

2.2 Management Structure

2.2.1 The licensee shall maintain onsite written details of the management structure of the facility. Any proposed replacement in the management structure shall be notified in advance in writing to the Agency. Written details of the management structure shall include the following information:-

a) The names of all persons who are to provide the management and supervision of the waste activities authorised by the licence, in particular the name of the facility manager and any nominated deputies;

b) Details of the responsibilities for each individual named under a) above; and

c) Details of the relevant education, training and experience held by each of the persons nominated under a) above.

2.3 Environmental Management System (EMS)

2.3.1 The licensee shall maintain an EMS. The EMS shall be updated on an annual basis with amendments being submitted to the Agency for its agreement.

2.3.2 The EMS shall include as a minimum the following elements.

2.3.2.1 Schedule of Environmental Objectives and Targets

The licensee shall prepare and maintain a Schedule of Environmental Objectives and Targets. The schedule shall, as a minimum, provide for a review of all operations and processes, including an evaluation of practicable options, for energy and resource efficiency, the use of cleaner technology (including emissions prevention/reduction), and the beneficial recovery/recycling of waste in subsequent landfill engineering operations. The schedule shall include time frames for the achievement of set targets and shall address a five-year period as a minimum. The schedule shall be reviewed annually and amendments thereto notified to the Agency for agreement as part of the Annual Environmental Report (AER).

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

2.3.2.2 Environmental Management Plan (EMP)

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

a) Methods by which the objectives and targets will be achieved and the identification of those responsible for achieving those objectives and targets; and

b) Any other items required by written guidance issued by the Agency.

2.3.2.3 Landfill Environmental Management Plan (LEMP)

Notwithstanding the requirements of Condition 2.3.2.2, the operator shall prepare, within 12 months of date of grant of this licence, a Landfill Environmental Management Plan (LEMP) covering aspects not already included in the EMP. The LEMP shall have regard to the guidance set out in EPA publications. A copy of this plan shall be submitted to the Agency in advance of commencement of waste disposal activities. 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 Agency as part of the AER.

2.3.2.4 Corrective Action Procedures

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

2.3.2.5 Awareness and Training Programme

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

2.4 Communications Programme

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

2.5 Resource Use and Energy Efficiency

2.5.1 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 2.3.2.1 above.

2.5.2 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.

2.5.3 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.

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

CONDITION 3 FACILITY INFRASTRUCTURE

3.1 The licensee shall establish all infrastructure referred to in this licence as required by the conditions of this licence.

3.2 Specified Engineering Works

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

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

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

a) A description of the works;

b) As-built drawings of the works;

c) Records and results of all tests carried out (including failures);

d) Drawings and sections showing the location of all samples and tests carried out;

e) Daily record sheets/diary;

f) Name(s) of contractor(s)/individual(s) responsible for undertaking the specified engineering works;

g) Name(s) of individual(s) responsible for supervision of works and for quality assurance validation of works;

h) Records of any problems and the remedial works carried out to resolve those problems; and

i) Any other information requested in writing by the Agency.

3.3 Facility Notice Board

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

3.3.2 The board shall clearly show:-

a) The name and telephone number of the facility;

b) The normal hours of opening;

c) The name of the licence holder;

d) An emergency out of hours contact telephone number;

e) The licence reference number; and

f) Where environmental information relating to the facility can be obtained.

3.4 Facility Security

3.4.1 The existing security and stockproof fencing and gates shall be maintained. The licensee shall install and maintain any additional security fencing as necessary, or following any written instructions from the Agency. The base of the fencing shall be set in the ground. Subject to the implementation of the restoration and aftercare plan and to the agreement of the Agency, the requirement for site security may be removed.

3.4.2 The licensee shall remedy any defect in the gates and/or fencing as follows:-

a) A temporary repair shall be made by the end of the working day; and

b) A repair to the standard of the original gates and/or fencing shall be undertaken within three working days.

3.4.3 The licensee shall operate and maintain the CCTV system, which is used for monitoring security at the Civic Waste Facility and the weighbridge office.

3.5 Facility Roads and Site Surfaces

3.5.1 Site roads shall be provided and maintained to ensure the safe movement of vehicles within the facility.

3.5.2 The facility entrance area, the access road to the Public tipping area, the Civic Waste Facility itself and the Composting Area shall be surfaced with impervious materials so as to minimise infiltration.

3.6 Facility Office

3.6.1 The licensee shall provide and maintain an office at the facility. The office shall be constructed and maintained in a manner suitable for the processing and storing of documentation.

3.6.2 The licensee shall provide and maintain a working telephone and a method for electronic transfer of information at the facility.

3.7 Waste Inspection and Quarantine Areas

3.7.1 A Waste Inspection Area and a Waste Quarantine Area shall be provided and maintained at the facility.

3.7.2 These areas shall be constructed and maintained in a manner suitable, and be of a size appropriate, for the inspection of waste and subsequent quarantine if required. The waste inspection area and the waste quarantine area shall be clearly identified and segregated from each other.

3.7.3 Drainage from these areas shall be directed only to the leachate collection system or a collection sump (pending its removal to the on-site leachate treatment plant).

3.8 Weighbridge

3.8.1 The licensee shall maintain a weighbridge at the facility.

3.9 Wheel Cleaning

3.9.1 The licensee shall provide and maintain a wheelwash at the facility. Drainage from the wheelwash shall be directed only to the leachate collection system or a holding tank pending its removal to the on-site leachate treatment plant.

3.10 Waste Water Treatment System

3.10.1 The licensee shall provide and maintain a Wastewater Treatment System at the facility for the treatment of wastewater arising on-site. The licensee shall ensure that any septic tanks and percolation areas being used at the facility are operated in accordance with the Agency's *Wastewater Treatment Manual: Treatment Systems for Single Houses.*

3.11 Tank and Drum Storage Areas

3.11.1 All tank and drum storage areas shall be rendered impervious to the materials stored therein.

3.11.2 All tank and drum storage areas shall, as a minimum, be bunded, either locally or remotely, to a volume not less than the greater of the following:-

(a) 110% of the capacity of the largest tank or drum within the bunded area; or

(b) 25% of the total volume of substance which could be stored within the bunded area.

3.11.3 All drainage from bunded areas shall be diverted for collection and safe disposal.

3.11.4 All inlets, outlets, vent pipes, valves and gauges must be within the bunded area.

3.11.5 Bunds should be designed having regard to Agency guidelines '*Storage and Transfer of Materials for Scheduled Activities*' (2004). The integrity and water tightness of all the bunds (and leachate/contaminated water storage tanks) and their resistance to penetration by water or other materials stored therein shall be confirmed by the licensee and shall be reported to the Agency in the AER for the facility (or in the case of new structures, following its installation and prior to its use as a storage area). This confirmation shall be repeated at least once every three years thereafter and reported to the Agency on each occasion.

3.12 Landfill Lining

3.12.1 The landfill liner shall comprise:-

a) A composite liner consisting of a 1m layer of compacted soil with a hydraulic conductivity of less than or equal to $1x10^{-9}$ m/s, (or equivalent to be agreed by the Agency) overlain by a 2mm thick high density polyethylene (HDPE) layer;

b) A geotextile protection layer placed over the HDPE layer;

c) A 500mm thick drainage layer placed over the geotextile layer with a minimum hydraulic conductivity of 1×10^{-3} m/s, of pre-washed, uncrushed, granular, rounded stone (16 - 32mm grain size) incorporating leachate collection drains; and

d) All side walls shall be designed and constructed to achieve an equivalent protection.

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

3.12.3 Unless otherwise agreed by the Agency, the layout of lined cells to be constructed at the facility shall be as shown on Drawing No. 57979/01 – Rev A entitled; "Landfill Site Phasing Sequence – General Site layout", which was received by the Agency on 19th May 2003.

3.12.4 Peat deposits shall be removed prior to the construction of lined cells and the formation levels of the liner in each cell shall be agreed by the Agency prior to construction of the liner.

3.13 Leachate Management Infrastructure

3.13.1 The licensee shall provide and maintain appropriate infrastructure for the collection, storage and treatment of leachate arising at the facility. This shall include as a minimum:

a) Leachate collection pipework, sumps and pumps to facilitate the collection and movement of leachate to the on-site storage structures;

b) Appropriate leachate storage structures; and

c) A leachate treatment plant, which may include appropriately constructed peat beds.

3.13.2 The licensee shall maintain an automatic flow control system to ensure that treated leachate is discharged only to surface water in accordance with the requirements of this licence.

3.13.3 The leachate storage structure shall be fully enclosed except for inlet and outlet piping.

3.13.4 Any leachate storage lagoons to be constructed at the facility shall meet the lining specifications given in Condition 3.12.

3.14 Landfill Gas Management

3.14.1 All infrastructure for the active collection and flaring of landfill gas shall be installed as required at the facility. This shall include infrastructure for the collection and flaring of landfill gas arising from waste deposits in unlined parts of the facility (e.g. Cells 1 to 5). The flare shall be of an enclosed type design.

3.14.2 The combustion air supply to the enclosed gas flare shall be controlled so as to achieve a minimum temperature of 1,000^{O}C and 0.3 seconds retention time at this temperature.

3.14.3 Landfill gas extraction wells shall be provided in the lined cells so as to match the phased development of the cells. Passive venting of landfill gas shall be carried out in the lined cells until such time as it is possible to flare the landfill gas.

3.14.4 Any landfill gas utilisation plant required under Condition 11.4.2 shall be installed at the facility within a timescale to be agreed by the Agency.

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

3.14.6 Flare unit efficiency shall be tested once it is installed, and once every three years thereafter.

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

3.15 Surface Water Management

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

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

b) The collection/diversion of run-off arising from capped and restored areas; and

c) The diversion of surface water where necessary, to prevent surface water ingress into areas where lining works are proposed.

3.15.2 Any surface water drainage swales shall be designed and constructed in such a manner so as to prevent erosion, stagnation and under capacity.

3.15.3 Surface water run-off arising from all impermeable surfaces located between the facility entrance and the public tipping area shall be diverted to a silt trap and oil interceptor prior to discharge from the facility. The location of the discharge point shall be agreed by the Agency. All silt traps and oil interceptors shall be adequately sized and shall be in accordance with European Standard EN 858 (installations for the separation of light liquids). The licensee shall maintain all silt traps.

3.16 Groundwater Management

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

a) The protection of the groundwater resources from pollution by the waste activities; and

b) The protection of other infrastructure, such as the liner, from any adverse effects caused by the groundwater.

3.16.2 The licensee shall ensure that groundwater levels are maintained below the base level of the clay layer of the lining system until such time as agreed in advance with the Agency. This shall be carried out through the installation and maintenance of a groundwater

control drainage layer beneath the lining system. Drainage from the groundwater control drainage layer shall be diverted to the surface water management system.

3.17 Civic Waste Facility and Public Tipping Area

3.17.1 The licensee shall provide and maintain a Civic Waste Facility and a Public Tipping Area.

3.17.2 The licensee shall provide and maintain appropriate receptacles at the Civic Waste Facility and the Public Tipping Area for the storage of the various waste types.

3.17.3 The licensee shall install and maintain a roof/cover over the waste oil storage tank bund to prevent the ingress of rainwater.

3.18 Compost Facility

3.18.1 Appropriate infrastructure for the composting of waste shall be established and maintained at the facility prior to any waste being composted. This infrastructure shall as a minimum comprise the following:-

a) An impermeable concrete slab; and

b) Collection infrastructure to direct all run-off to the leachate collection system.

3.19 Telemetry

3.19.1 A telemetry system shall be installed and maintained at the facility. All facility operations linked to the telemetry system shall also have a manual control which will be reverted to in the event of a break in the power supply or during maintenance.

3.19.2 The telemetry system shall include for the following:-

a) Recording of leachate flow and leachate quality at the on-site leachate treatment plant;

b) Recording of surface water flow in the River Triogue;

c) Recording of leachate levels in the lined cells, the lined leachate storage lagoon and all other leachate storage structures;

d) Recording of groundwater levels in the groundwater sump(s) located below the lined cell(s); and

e) Recording of landfill gas levels from the permanent gas monitoring system installed in the site office and any other enclosed structures at the facility.

3.20 Monitoring Infrastructure

3.20.1 Landfill Gas

a) Subject to the agreement of the landowners, the licensee shall provide a representative number of monitoring locations to facilitate the measurement of landfill gas for the purposes of detecting any potential off-site migration of landfill gas; and

b) The licensee shall provide and maintain an effective permanent gas monitoring system in the site office and any other enclosed structures at the facility.

3.20.2 Groundwater

a) The licensee shall provide and maintain additional monitoring points at locations and specifications to be agreed in advance with the Agency to allow for the sampling and analysis of overburden and bedrock groundwater independently of each other.

3.20.3 Leachate

a) The licensee shall install and maintain a minimum of two leachate monitoring points within each lined cell to allow for the determination of leachate levels and the sampling and analysis of leachate; and

b) The licensee shall provide and maintain appropriate automatic sampling and measuring devices to provide for the monitoring of flow and the testing of treated leachate quality which is being discharged to surface water.

3.20.4 Replacement of Infrastructure

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

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

CONDITION 4 RESTORATION AND AFTERCARE

4.1. The licensee shall restore the facility on a phased basis. The licensee shall develop and maintain a Restoration and Aftercare Plan for the facility to reflect the requirements of this licence. This plan shall address the restoration of deposited wastes in both the lined cells and all historically landfilled areas, and should include a schedule detailing the various stages of restoration, including timescales, for the facility.

4.2. The maximum final height of the facility following completion of the final capping shall be 93m OD Malin.

4.3. Final Capping

4.3.1. Unless otherwise agreed by the Agency, the final capping shall consist of the following:-

a) Peat/subsoil of at least 1m in thickness;

b) Geosynthetic layer;

c) Drainage layer of 0.5m thickness having a minimum hydraulic conductivity of $1x10^{-4}$ m/s, or similar material that provides an equivalent or better performance;

d) Compacted mineral layer of a minimum 0.6m thickness with a permeability of less than $1x10^{-9}$ m/s or a geosynthetic material (e.g. GCL) or similar that provides equivalent or better protection; and

e) Gas collection layer of natural material (minimum 0.3m) or a geosynthetic layer.

4.4. No material or object that is incompatible with the proposed restoration of the facility shall be present within one metre of the final soil surface levels.

4.5. Where tree planting is to be carried out above waste-filled areas, a synthetic barrier shall be used to augment the clay cap. Combined topsoil and subsoil depths shall be a minimum of 1m.

4.6. The final capping and restoration of the landfill facility shall be completed on the following basis:

a) Previously deposited waste in Cells 1 to 5 shall be finally capped within twenty-four months of the date of grant of this licence, unless otherwise agreed or instructed by the Agency.

b) Operational cells shall be finally capped within twenty-four months of the cells having been filled to the required level, unless otherwise agreed or instructed by the Agency; and

c) The restoration of the landfill facility shall commence as soon as a cell is finally capped. Restoration of each cell shall be completed within twenty-four months of the date of completion of capping of the cell.

4.7. Soil Storage

4.7.1. All soils/peat shall be stored to preserve the soil structure for future use.

4.8 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.

REASON: To provide for the restoration of the facility.

CONDITION 5 FACILITY OPERATION AND WASTE MANAGEMENT

5.1 Wastes shall not be deposited in any cell or part of the landfill without the prior agreement of the Agency. No waste shall be disposed of into any unlined areas of the facility.

5.2 Waste Acceptance and Characterisation Procedures

5.2.1 Within one month of the date of grant of this licence, the licensee shall submit to the Agency for its agreement updated written procedures for the acceptance and handling of all wastes. These procedures shall include details of the treatment of all waste to be carried out in advance of acceptance at the facility and shall also include methods for the characterisation, classification and coding of waste. The procedures shall have regard to the Council Decision (2003/33/EC) establishing criteria and procedures for the acceptance of waste at landfills pursuant to Article 16 of and Annex II to Directive 1999/31/EC on the landfill of waste.

5.2.2 Notwithstanding the above, the inert waste types listed in *Schedule G: Acceptance of Inert Waste,* of this licence may be accepted at the landfill for recovery.

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

(i) For the checking of waste documentation on receipt of waste in the waste reception area;

(ii) For non pre-cleared customers, the visual inspection and testing of waste in the waste inspection area pending acceptance/rejection;

(iii) For the visual inspection of waste when deposited at the working face;

(iv) For the keeping for two months of any samples associated with on-site verification sampling of waste accepted at the facility.

5.2.4 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).

5.2.5 Gypsum wastes shall not be placed in any landfill cell accepting biodegradable waste.

5.3 All wastes shall be checked at the working face. Any waste deemed unsuitable for acceptance at the facility and/or in contravention of this licence shall be immediately separated and removed from

the facility at the earliest possible time. Temporary storage of such wastes shall be in a designated Waste Quarantine Area. Waste shall be stored under appropriate conditions in the quarantine area to avoid putrefaction, odour generation, the attraction of vermin and any other nuisance or objectionable condition.

5.4 Working Face

5.4.1 Unless the prior agreement of the Agency is given, the following shall apply at the landfill:-

a) Only one working face shall exist at the landfill at any one time for the deposit of waste other than cover or restoration materials; and

b) The working face of the landfill shall be no more than 2.5 metres in height after compaction, no more than 25 metres x 50 metres in area, and have a slope no greater than 1 in 3.

5.4.2 All waste deposited at the working face shall be compacted, using a steel-wheeled compactor, and covered as soon as is practicable and at any rate prior to the end of the working day.

5.4.3 The working face, or faces, shall each day at the end of the day, be covered with suitable material. At the end of the week, a minimum of 150mm of inert material shall be placed over the waste.

5.5 Daily and Intermediate Cover

5.5.1 Bio-stabilised residual waste shall only be used as landfill cover where it has been stabilised in accordance with Condition 5.15.4, and complies with any requirements of the Department of Agriculture, Fisheries, and Food relating to the management of animal by-products and has been agreed in advance with the Agency.

5.5.2 Any cover material at any location within the facility which is eroded, washed off or otherwise removed shall be replaced by the end of the working day.

5.5.3 Appropriate cover material shall be placed across the whole landfill so that no waste is exposed and a suitable gradient is provided to reduce rainfall infiltration, with the exception of the following:

a) Waste suitable for specified engineering works; and

b) Waste on the working face during the operational hours of the facility.

5.6 Landscaping

5.6.1 The licensee shall maintain a landscaping plan for the facility. This shall include measures to screen the facility from the N80 National Secondary Road.

5.7 Operational Controls

5.7.1 All large hollow objects and other large articles deposited at the facility shall be crushed, broken up, flattened or otherwise treated.

5.7.2 Wastes once deposited and covered shall not be excavated, disturbed or otherwise picked over with the exception of works associated with the construction and installation of the final cap, leachate and landfill gas collection systems, unless with the prior agreement of the Agency.

5.7.3 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.

5.7.4 Scavenging shall not be permitted at the facility.

5.7.5 Gates shall be locked shut and appropriate security patrols and/or other measures employed to ensure that the facility is secure during periods when the facility is unsupervised.

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

5.7.7 Fuels shall be stored only at appropriately bunded locations on the facility.

5.7.8 All tanks and drums shall be labelled to clearly indicate their contents.

5.7.9 No smoking shall be allowed on the facility other than in the site office/canteen.

5.8 Waste Handling

5.8.1 Sludges

5.8.1.1 Only treated sewage sludge with greater than 25% solids shall be accepted at the facility. The hours of acceptance for treated sludges shall be between the hours of 08.30 hrs and 14.00 hrs Monday to Friday inclusive. All sewage sludge shall be covered immediately with other waste.

5.8.2 Compost

5.8.2.1 All waste grass clippings accepted at the facility (i.e. which are intended to be used in the composting process) shall be stored only in a skip or other similar receptacle.

5.8.2.2 Unless otherwise agreed by the Agency, the composting of Green/Biodegradable Waste shall be carried out in accordance with the proposal agreed to by the Agency (ref. WL26-1/AK12CN issued on 3rd February 2003) under the enforcement of the previous waste licence for this facility (ref. no. 26-1).

5.8.2.3 No waste (or actively composting materials) being kept in the composting area shall be left uncovered from the close of operation on Saturday until Monday morning opening, unless otherwise agreed by the Agency.

5.8.2.4 The licensee shall undertake regular monitoring of the composting process and maintain weekly records of moisture and temperature.

5.8.2.5 Compost and Stabilised Biowaste shall comply with the Quality Standards as specified in *Schedule F: Standards for Compost Quality*, of this licence, unless otherwise agreed by the Agency.

5.8.2.6 Subject to the prior agreement of the Agency, Stabilised Biowaste may be used in artificial soils or in land applications that are not used for food and fodder crop production.

5.8.2.7 Compost not reaching the standards designated as Class 1 or Class 2 (as specified in *Schedule F: Standards for Compost Quality* of this licence), and Stabilised Biowaste shall be considered a waste and the details recorded as required under Condition 10.6.

5.8.3 Inert Waste

5.8.3.1 Only the inert wastes specified in *Schedule G: Acceptance of Inert Waste,* of this licence shall be accepted for recovery at the facility.

5.9 Off-site Disposal and Recovery

5.9.1 Waste sent off-site for recovery or disposal shall be conveyed only by a waste contractor agreed by the Agency.

5.9.2 All waste transferred from the facility shall be transferred only to an appropriate facility agreed by the Agency.

5.9.3 All wastes removed off-site for recovery or disposal shall be transported from the facility to the consignee in a manner which will not adversely affect the environment.

5.10 Civic Waste Facility and Public Tipping Area

5.10.1 The Civic Waste Facility and the Public tipping Area shall be used only by private vehicles. The disposal of waste by commercial waste disposal contractors or local authority waste collection vehicles shall not be permitted.

a) All waste deposited at the Civic Waste Facility and the Public Tipping Area shall be placed in an appropriate receptacle or inspection area.

5.10.2 The licensee shall assign and clearly label each container at the Civic Waste Facility to indicate their contents.

5.10.3 All household hazardous wastes (including batteries and waste oils) accepted at the Civic Waste Facility shall be stored in appropriately bunded storage areas. Waste fluorescent tubes shall be stored in an enclosed container in such a manner so as to prevent breakage.

5.10.4 Domestic waste delivered to the Public Tipping Area for disposal shall be deposited at the working face prior to the end of the working day.

5.11 Leachate Management

5.11.1 All leachate collected at the facility shall be directed to the leachate storage lagoon prior to its treatment on-site and discharge to the River Triogue, or by tankering off-site in fully enclosed road tankers to a Waste Water Treatment Plant agreed by the Agency.

5.11.2 Leachate levels in lined cells shall not exceed a level of 1.0m over the top of the liner at the base of the landfill.

5.11.3 Leachate levels in Cells 1 to 5 shall not exceed a level of 1.0m over the base of the collection sump located in each cell.

5.11.4 The frequency of leachate removal/discharge from all leachate storage structures shall be such that a minimum freeboard of 0.75m shall be maintained in the structure at all times.

5.11.5 Recirculation of leachate or other contaminated water shall not be undertaken without the prior agreement of the Agency and, in any case, shall be undertaken only within cells which have been lined to the satisfaction of the Agency.

5.11.6 No leachate from any other facility shall be treated at the on-site leachate treatment plant.

5.12 Maintenance

5.12.1 All treatment/abatement and emission control equipment shall be calibrated and maintained, in accordance with the instructions issued by the manufacturer/supplier or installer. Written records of the calibrations and maintenance shall be made and kept by the licensee.

5.12.2 All lagoon structures on the facility shall be inspected and certified fit for purpose every three years by an independent and appropriately qualified chartered engineer.

5.12.3 The licensee shall maintain and clearly label and name all sampling and monitoring locations.

5.12.4 The wheel-wash shall be inspected on a daily basis and drained as required. Silt, stones and other accumulated material shall be removed as required from the wheel-wash and disposed of at the working face.

5.12.5 The licensee shall maintain the on-site leachate treatment plant, including back-up equipment, and shall carry out maintenance checks in accordance with *Schedule D.6: Leachate Treatment Plant Monitoring*, of this licence.

5.13 Waste Treatment

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

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

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

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

5.14 Limit on acceptance of biodegradable municipal waste

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

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

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

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

unless an alternative has been agreed in writing by the Agency in accordance with Condition 5.14.2

5.14.2 Two or more licensed landfills may seek the agreement of the Agency that collectively they will arrange to comply with Condition 5.14.1. Any agreements entered into become part of this licence. In seeking agreement, the following factors, as a minimum, shall be addressed in any proposal submitted to the Agency:

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

5.15 Determination of biodegradable municipal waste content of municipal waste

5.15.1 The licensee shall determine the biodegradable municipal waste content of MSW accepted to the body of the landfill. Waste that has been bio-stabilised in accordance with condition 5.15.4 shall not be considered BMW.

5.15.2 Bio-stabilised residual wastes meeting the requirements of Condition 5.15.4 received at the landfill facility may be included in the determination of MSW quantities accepted at the facility for the purposes of Condition 5.14.1.

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

5.15.4 In the case of bio-stabilised residual wastes, stabilisation means the reduction of the decomposition properties of the waste to such an extent that offensive odours are minimised and that the respiration activity after four days (AT_4) is <10mg O_2/g DM until 1 January 2016 and <7mg O_2/g DM thereafter.

5.15.5 Bio-stabilised residual wastes shall be monitored in accordance with Schedule D.9.

5.15.6 Waste that was accepted to the body of the landfill as stabilised but subsequently is found not to meet the stabilisation standard set out in Condition 5.15.4 shall be notified to the Agency and included in the calculation of BMW accepted to the body of the landfill when assessing compliance with Condition 5.14.1. In the event of failure to meet the stabilisation standard, each and every load of bio-stabilised residual waste from the failed source following receipt of the failed test result shall be tested, notwithstanding the testing frequency set out in Schedule D.9, until otherwise agreed with the Agency.

5.15.7 The licensee is required to maintain on-site as part of their waste acceptance procedures and associated documentation, evidence to demonstrate compliance with conditions 5.13.1 and 5.14, which shall be available for inspection by Agency personnel.

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

CONDITION 6 EMISSIONS

6.1. No specified emission from the facility shall exceed the emission limit values set out in *Schedule C: Emission Limits,* of this licence. There shall be no other emissions of environmental significance.

6.2. The licensee shall ensure that the activities shall be carried out in a manner such that emissions do not result in significant impairment of, or significant interference with the environment beyond the facility boundary.

6.3. Landfill Gas

6.3.1. The following are the trigger levels for landfill gas emissions from the facility measured in any service duct or manhole on, at or immediately adjacent to the facility and/or at any other point located outside the body of the waste:-

a) Methane, greater than or equal to 1.0% v/v; or

b) Carbon dioxide, greater than or equal to 1.5% v/v.

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

a) In the case of landfill gas flare:

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

b) In the case of landfill gas combustion plant:

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

6.3.3. Emission limits for emissions from landfill gas flare/combustion plant to atmosphere in this licence shall be interpreted in the following way:

6.3.3.1. Continuous monitoring

a) No 24 hour mean value shall exceed the emission limit value;

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

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

6.3.3.2. Non-Continuous Monitoring

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

b) For all other parameters, no 30 minute mean value shall exceed the emission limit value; and

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

6.4. Groundwater

6.4.1 There shall be no direct emissions to groundwater.

6.4.2 The licensee shall determine groundwater monitoring trigger levels in accordance with the requirements of Directive 1999/31/EC. The groundwater trigger levels for each monitoring location shall be based on previous groundwater monitoring results from those locations.

6.5. Emissions to Surface Water

6.5.1. No untreated leachate or contaminated surface water shall be discharged, either directly or indirectly (e.g. via land drains), to the River Triogue or the River Blackwater.

6.5.2. Unless otherwise specified in this licence, treated leachate (which meets the emission limits specified in *Schedule C: Emission Limits*, of this licence) shall be discharged only to the River Triogue at the discharge location L70.

6.5.3. Treated leachate that does not meet the emission limit values set out in *Schedule C: Emission Limits*, of this licence, shall be removed off-site in accordance with Condition 5.11.1.

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

6.5.5. Emission limit values for emissions to surface waters in this licence shall be interpreted in the following way:-

a) Continuous monitoring:

No flow value shall exceed the specified limit.

b) Non-Continuous monitoring:

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

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

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

CONDITION 7 NUISANCE CONTROL

7.1 The licensee shall ensure that vermin, birds, flies, mud, dust, litter, noise and odours do not give rise to nuisance at the facility or in the immediate area of the facility. Any method used by the licensee to control any such nuisance shall not cause environmental pollution.

7.2 The road network in the vicinity of the facility shall be kept free from any debris caused by vehicles entering or leaving the facility. Any such debris or deposited materials shall be removed without delay.

7.3 Litter Control

7.3.1 Portable litter nets/screens shall be installed and maintained around the perimeter of the active tipping area.

7.3.2 All litter control infrastructure shall be inspected on a daily basis. The licensee shall remedy any defect in the litter netting as follows:-

a) A temporary repair shall be made by the end of the working day; and

b) A repair to the standard of the original netting shall be undertaken within three working days.

7.3.3 All loose litter or other waste, placed on or in the vicinity of the facility, other than in accordance with the requirements of this licences, shall be removed, subject to the agreement of the landowners, immediately and in any event by 10.00am of the next working day after such waste is discovered.

7.3.4 The licensee shall ensure that all vehicles delivering waste to and removing waste and materials from the facility are appropriately covered.

7.3.5 The licensee shall implement procedures for the operation of the facility during adverse wind conditions.

7.4 Dust Control

7.4.1 In dry weather, site roads and any other areas used by vehicles shall be sprayed with water as and when required to minimise airborne dust nuisance.

7.4.2 All stockpiles shall be maintained so as to minimise dust generation.

7.5 Prior to exiting the facility, all waste vehicles shall use the wheelwash.

7.6 Bird Control

7.6.1 Birds shall be prevented from gathering on and feeding at the facility by the use of birds of prey and/or other bird scaring techniques. The birds of prey and/or other techniques shall maintain their presence every day, from before dawn to after dark, until the waste activities cease and all the waste is capped to the written satisfaction of the Agency. The use of gas operated bird scaring devices is prohibited at the facility.

REASON: To provide for the control of nuisances.

CONDITION 8 MONITORING

8.1 The licensee shall carry out such monitoring and at such locations and frequencies as set out in *Schedule D: Monitoring,* of this licence and as specified in this licence.

8.2 The licensee shall amend the frequency, locations, methods and scope of monitoring as required by this licence only upon the written instruction of the Agency and shall provide such information concerning such amendments as may be requested in writing by the Agency. Such alterations shall be carried out within any timescale nominated by the Agency.

8.3 Monitoring and analysis equipment shall be operated and maintained in accordance with the manufacturers' instructions (if any) so that all monitoring results accurately reflect any emission, discharge or environmental parameter.

8.4 The licensee shall provide safe and permanent access to all on-site sampling and monitoring points and to off-site points as required by the Agency.

8.5 All landfill gas monitoring equipment, other than permanent monitoring systems within buildings, shall be certified as being intrinsically safe.

8.6 All persons conducting the sampling, monitoring and interpretation of monitoring results as required by this licence shall be suitably competent.

8.7 Groundwater Monitoring

8.7.1 Subject to the agreement of the well owners, all private wells within 250m of the facility boundary shall be included in the monitoring programme set out in *Schedule D: Monitoring,* of this licence and shall be monitored on an annual basis.

8.8 Leachate Monitoring

8.8.1 Prior to the discharge of treated leachate to the River Triogue, the acute toxicity testing of the undiluted treated leachate to at least four aquatic species from different trophic levels shall be determined by standardised and internationally accepted procedures, and carried out by a competent laboratory according to a procedure agreed by the Agency.

8.8.2 Compliance monitoring shall be undertaken by the agreed laboratory on the two most sensitive species.

8.9 Meteorological Monitoring

8.9.1 The licensee shall provide for the monitoring/collection of meteorological data as referred to in *Schedule D.7: Meteorological Monitoring,* of this licence.

8.10 Topographical Survey

8.10.1 A topographical survey shall be carried out annually. The survey shall include levels for the installed groundwater wells and a measurement of the remaining available void space. The survey shall be in accordance with any written instructions issued by the Agency.

8.10.2 A suitable number of benchmarks shall be installed as part of the landfill operation and restoration.

8.11 Biological Assessment

8.11.1 A biological assessment of the River Triogue shall be undertaken annually. This assessment shall use appropriate biological methods such as the EPA Q-rating system for the assessment of rivers and streams. Unless otherwise agreed by the Agency, the location of monitoring points shall be at Kyle Bridge and Two Mile Bridge.

8.12 Archaeological Assessment

8.12.1 Prior to the development of lined cells/lagoons in any undisturbed area, the advice of Dúchas the Heritage Service shall be sought. On completion of such development, a report of the results of any archaeological monitoring shall be submitted to Dúchas the Heritage Service and to the Agency.

8.13 Stability Assessment

8.13.1 The licensee shall carry out an annual stability assessment of the side slopes of the facility using the latest topographical survey information.

8.14 Odour Control and Monitoring

8.14.1 The licensee shall, as part of the requirements of Condition 8.14.4 below agree the number and location of suitable odour monitoring points.

8.14.2 The licensee shall inspect the facility and its environs daily for nuisances caused by odours. This inspection shall include monitoring at the relevant locations agreed under Condition 8.14.4 and as specified in *Schedule D: Monitoring, Table D.1.1 Monitoring Locations,* of this licence.

8.14.3 Within six months of the date of grant of this licence, the licensee shall submit to the Agency for agreement, an Odour Management Plan (OMP) for the facility. The plan, as agreed, shall be implemented from the time of commencement of waste activities unless otherwise agreed by the Agency.

8.14.4 The OMP referred to in Condition 8.14.3 shall include measures to control potential sources of odour nuisance, including *inter alia,* provisions regarding:

a) Requirements of relevant conditions of this licence;

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

c) Acceptance and management of odorous waste deliveries;

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

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

f) Working face/active cell sizing and covering;

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

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

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

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

a) consideration of odour complaints received (including details and nature of the complaints, times and weather conditions, any unusual circumstances, problems, etc.);

b) review of any monitoring, including ambient odour monitoring in accordance with Schedule D.10, carried out (including investigation of complaints and actions taken where relevant);

c) an update on existing landfill gas control infrastructure (including operational status, number of wells and vents connected and unconnected to the landfill gas collection system, quantity of gas collected and flared/utilised, estimated quantity of landfill gas being produced, details of any problems with equipment during period);

d) details of any remedial/corrective actions taken, where relevant, including actions taken on foot of recommendations from previous reports;

e) recommendations.

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

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

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

(i) VOC greater than or equal to 50ppmv average over capped area; or

(ii) VOC greater than or equal to 100ppmv instantaneous reading on open surfaces within the landfill footprint; or

(iii) VOC greater than or equal to 500ppmv around all identified features.

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

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

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

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

8.15 Nuisance Monitoring

8.15.1 The licensee shall, at a minimum of one-week intervals, inspect the facility and its immediate surrounds for nuisances caused by litter, vermin, birds, flies, mud, dust, noise and odours.

8.16 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 conditions of this licence by provision of a satisfactory system of monitoring of emissions.

CONDITION 9 CONTINGENCY ARRANGEMENTS

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

a) Identify the date, time and place of the incident;

b) Carry out an immediate investigation to identify the nature, source and cause of the incident and any emission arising therefrom;

c) Isolate the source of any such emission;

d) Evaluate the environmental pollution, if any, caused by the incident;

e) Identify and execute measures to minimise the emissions/malfunction and the effects thereof; and

f) Provide a proposal to the Agency for its agreement within one month of the incident occurring to:-

a) Identify and put in place measures to avoid reoccurrence of the incident; and

b) Identify and put in place any other appropriate remedial action.

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

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

9.4. Emergencies

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

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

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

9.4.4. In the event that monitoring of the side slopes at the facility indicates that there may be a risk of slope failure, this will be treated as an emergency.

9.5. The licensee shall ensure that a documented Accident Prevention Policy is in place, 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 ensure compliance with the conditions of this licence by provision of a satisfactory system of monitoring of emissions. To provide for the protection of the environment.*

CONDITION 10 RECORDS

10.1 The licensee shall keep the following documents at the facility office:-

a) The current waste licence relating to the facility;

b) The current EMS for the facility;

c) The previous year's AER for the facility; and

d) All written procedures produced by the licensee which relate to the licensed activities.

10.2 The licensee shall maintain a written record for each load of waste arriving at the facility, excluding those arriving at the Civic Waste Facility. The licensee shall record the following:-

a) the date and time;

b) the name of the carrier (including if appropriate, the waste carrier registration details);
c) the vehicle registration number;
d) the trailer, skip or other container unique identification number (where relevant);
e) the name of the producer(s)/collector(s) of the waste as appropriate;
f) the name of the waste facility (if appropriate) from which the load originated including the waste licence or waste permit register number;
g) a description of the waste including the associated EWC/HWL codes;
h) the quantity of the waste, recorded in tonnes;
i) details of the treatment(s) to which the waste has been subjected;
j) the classification and coding of the waste, including whether MSW or otherwise;
k) whether the waste is for disposal or recovery and if recovery for what purpose;
l) the name of the person checking the load; and
m) where loads or wastes are removed or rejected, details of the date of occurrence, the types of waste and the facility to which they were removed.

10.3 Written Records

The following written records shall be maintained by the licensee:-

a) The types and quantities of waste recovered and disposed of at the facility each year. These records shall include the relevant EWC Codes;

b) All training undertaken by facility staff;

c) Results from all integrity tests of bunds and other structures and any maintenance or remedial work arising from them;

d) Details of all nuisance inspections; and

e) The names and qualifications of all persons who carry out all sampling and monitoring as required by this licence and who carry out the interpretation of the results of such sampling and monitoring.

10.4 The licensee shall maintain a written record of all complaints relating to the operation of the facility. Each such record shall give details of the following:-

a) Date and time of the complaint;

b) The name of the complainant;

c) Details of the nature of the complaint;

d) Actions taken on foot of the complaint and the results of such actions; and

e) The response made to each complainant.

10.5 A written record shall be kept of 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; and

e) Any incidents or spillages of leachate during its removal or transportation.

10.6 A written record shall be kept for each load of waste departing from the Civic Waste Facility. The following shall be recorded:-

a) The name of the carrier;

b) The vehicle registration number;

c) The destination of the waste (facility name and waste licence/permit number as appropriate);

d) A description of the waste (if recovered or rejected waste, the specific nature of the waste);

e) The quantity of waste, recorded in tonnes;

f) The name of the person checking the load; and

g) The time and date of departure.

10.7 A written record shall be kept at the facility of the programme for the control and eradication of vermin and fly infestations at the facility. These records shall include as a minimum the following:-

a) The date and time during which spraying of insecticide is carried out;

b) Contractor details;

c) Contractor logs and site inspection reports;

d) Details of the rodenticide(s) and insecticide(s) used;

e) Operator training details;

f) Details of any infestations;

g) Mode, frequency, location and quantity of application; and

h) Measures to contain sprays within the facility boundary.

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

CONDITION 11 REPORTS AND NOTIFICATIONS

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

a) Be sent to the Agency's Regional Inspectorate in Castlebar;

b) Comprise one original and three copies unless additional copies are required;

c) Be formatted in accordance with any written instruction or guidance issued by the Agency;

d) Include whatever information as is specified in writing by the Agency;

e) Be identified by a unique code, indicate any modification or amendment, and be correctly dated to reflect any such modification or amendment;

f) Be submitted in accordance to the relevant reporting frequencies specified by this licence, such as in *Schedule E: Recording and Reporting to the Agency,* of this licence;

g) Be accompanied by a written interpretation setting out their significance in the case of all monitoring data; and

h) Be transferred electronically to the Agency's computer system if required by the Agency.

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

a) Notify the Agency as soon as practicable and in any case not later than 10.00 hrs the following working day after the occurrence of any incident;

b) Submit a written record of the incident, including all aspects described in Condition 9.1 (a-f), to the Agency as soon as practicable and in any case within five working days after the occurrence of any incident;

c) In the event of any incident which relates to discharges to surface water, notify the Southern Regional Fisheries Board as soon as practicable and in any case not later than 10.00 hrs on the following working day after such an incident; and

d) Should any further actions be taken as a result of an incident occurring, the licensee shall forward a written report of those actions to the Agency as soon as practicable and no later than ten days after the initiation of those actions.

11.3 Waste Recovery Reports

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

(i) the recovery of Construction and Demolition Waste;

(ii) the recovery of other waste in landfill operations, including restoration;

(iii) the recovery of energy through landfill gas combustion.

11.4 Reports relating to Facility Operations

11.4.1 Achievement of Final Profile

11.4.1.1 The licensee shall maintain drawing(s) detailing the final contours of the facility, taking into account the Conditions of this licence and as agreed by the Agency.

11.4.2 Landfill Gas Utilisation

11.4.2.1 Where the utilisation of landfill gas as an energy source is feasible, any system proposed for such utilisation shall be installed within a timeframe to be agreed by the Agency.

11.4.2.2 The licensee shall submit data as required for the European Pollution Emission Register (EPER) and the National Waste Database. Such Data shall be in accordance with any relevant guidance issued by the Agency.

11.5 Monitoring Locations

11.5.1 The licensee shall maintain an appropriately scaled drawing(s) showing all the monitoring locations that are stipulated in this licence. The drawing(s) shall be updated as necessary and shall include a unique reference code and the twelve figure National Grid Reference for each monitoring point.

11.6 Annual Environmental Report

11.6.1 The licensee shall submit to the Agency for its agreement an Annual Environmental Report (AER) by the 31st March each year covering the previous calendar year.

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

11.7 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.

11.8 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 5.14. From 1 January 2010, and unless otherwise advised by the Agency, the licensee shall submit quarterly summary reports to the Agency within one week of the end of each quarter on the quantity of MSW and BMW accepted at the landfill during the preceding quarter and on a cumulative basis for the calendar year to date. The report shall detail the tonnage of MSW and BMW accepted and the basis (including all calculation factors) on which the figures have been calculated.

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

CONDITION 12 CHARGES AND FINANCIAL PROVISIONS

12.1 Agency Charges

12.1.1 The licensee shall pay to the Agency an annual contribution of €28,920, 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 31st day of December, and shall be paid to the Agency within one month from the date of grant of the licence. In subsequent years the licensee shall pay to the Agency such revised annual contribution as the Agency shall from time to time consider necessary to enable performance by the Agency of its relevant functions under the Waste Management Acts 1996 to 2008, and all such payments shall be made within one month of the date upon which demanded by the Agency.

12.1.2 In the event that the frequency or extent of monitoring or other functions carried out by the Agency needs to be increased the licensee shall contribute such sums as determined by the Agency to defray~~ing~~ its costs.

12.2 Environmental Liabilities

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

12.2.2 The licensee shall arrange for the completion, by an independent and appropriate qualified consultant, of a comprehensive and fully costed Environmental Liabilities Risk Assessment (ELRA) to address the liabilities from past and present activities. The assessment shall include those liabilities and costs identified in Condition 4 for execution of the Restoration and Aftercare Plan (RAP). A report on this assessment shall be submitted to the Agency for agreement within twelve months of date of grant of this licence. The ELRA shall be reviewed as necessary to reflect any significant change on site, and in any case every three years following initial agreement. The results of the review shall be notified as part of the AER.

12.2.3 As part of the measures identified in Condition 12.2.1, the licensee shall, to the satisfaction of the Agency, make financial provision to cover any liabilities associated with the operation, including closure and aftercare, of the facility. The amount of indemnity held shall be reviewed and revised as necessary, but at least annually. Proof of renewal or revision of such financial indemnity shall be included in the annual 'Statement of Measures' report identified in Condition 12.2.1.

12.2.4 The licensee shall have regard to the Environmental Protection Agency Guidance on Environmental Liability Risk Assessment, Decommissioning Management Plans and Financial Provision when implementing Conditions 12.2.2 and 12.2.3 above

12.2.5 Unless otherwise agreed any revision to the element of financial provision relation to restoration and aftercare of the facility shall be computed using the following formula:-

Cost = (ECOST x WPI) + CiCC

Where:-

Cost = Revised restoration and aftercare cost

ECOST = Existing restoration and aftercare cost

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

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

12.3 Cost of landfill

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.

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

SCHEDULE A : Waste Acceptance

A.1 Waste Acceptance

Table A.1 Waste Categories and Quantities to be accepted for disposal

Waste Type	Maximum (Tonnes Per Annum) Note 1
Household	28,400
Commercial	13,400
Industrial Non-Hazardous Solids	3,000
Sewage Sludge	1,800
Construction and Demolition Waste	500
Total	**47,100**

Note 1: The categories and quantities of waste referred to in this table may be amended with the agreement of the Agency, provided that the total quantity of waste accepted at the facility for disposal does not exceed 47,100 tonnes per annum.

Table A.2 Waste Categories and Quantities for recovery, restoration and site development works

Waste Type	Maximum (Tonnes Per Annum)
Biodegradable waste for composting Note	1,000 or as agreed by the Agency to 2,000 Note 4
Inert Waste Note 2	To be agreed by the Agency.
Waste to be accepted at the Civic Waste Facility Note 3	To be agreed by the Agency.
Peat	To be agreed by the Agency.

Note 1: Including Green Waste, but excluding sludges and/or food waste.
Note 2: As listed in *Schedule G: Acceptance of Inert Waste.* of this licence.
Note 3: Unless otherwise agreed by the Agency, the following wastes may be accepted at the Civic Waste Facility: metal, white goods, paper, cardboard, plastic, glass, aluminium cans, waste oils, batteries, textiles and fluorescent tubes.
Note 4: 1,000 tonnes per annum for Phase 1; Subject to Agency approval an additional 1,000 tonnes per annum for Phase 2.

Table A.3 Total Permitted Landfill Capacity

Total quantity of waste permitted to be placed at the landfill facility (over authorised life of facility)	1,888,937 m^3

SCHEDULE B : Specified Engineering Works

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

SCHEDULE C : Emission Limits

C.1 Noise Emissions: (Measured at any noise sensitive locations).

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

C.2 Landfill Gas Concentration Limits: (Measured in any building on or adjacent to the facility).

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

C.3 Dust Deposition Limits: (Measured at the monitoring points indicated in *Table D.1.1*).

Level (mg/m^2 /day) Note 1
350

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

C.4 Emission Limits Values for Landfill Gas Plant:

Emission Point Reference no.s: To be agreed by the Agency.
Location: Landfill Gas Utilisation Plant and/or flare.
Max. Volume to be emitted: $3{,}000m^3$/hr. (unless otherwise agreed by the Agency).
Minimum discharge height: 5m (unless otherwise agreed by the Agency).

Parameter	Flare (enclosed) Emission Limit Value Note 1, 2	Utilisation Plant Emission Limit Value Note 1, 2
Nitrogen oxides (NO_x)	150 mg/m^3	500 mg/m^3
CO	50 mg/m^3	1400 mg/m^3
Particulates	Not applicable	130 mg/m^3
Total Volatile Organic Compounds (VOCs)	Not applicable	1000 mg/m^3
Total non-methane VOCs	Not applicable	75 mg/m^3

Total organic carbon (TOC)	10 mg/m^3	Not applicable
Hydrogen Chloride	50 mg/m^3 (at mass flows > 0.3 kg/h)	50 mg/m^3 (at mass flows > 0.3 kg/h)
Hydrogen Fluoride	5 mg/m^3 (at mass flows > 0.05 kg/h)	5 mg/m^3 (at mass flows > 0.05 kg/h)

Note 1: Dry gas referenced to 5% oxygen by volume for utilisation plants and 3% oxygen by volume for flares.
Note 2: These emission limit values may be revised with the agreement of the Agency on the basis of the technology employed.

C.5 Emission Limits for Treated Leachate Discharged to Surface Water:

Emission Point Reference No.: L70 (unless otherwise specified in Table D.5.2)
Volume to be emitted: Maximum in any one day: $103m^3$
Maximum rate per hour: 4,291 l/hr
Time of emission: River flow must be at least equal to the 95%ile flow (140 l/s) and there must be greater than 117 dilutions of effluent available at all times.

Parameter	Emission Limit (all units in mg/l except pH)
pH	6-9
CBOD	40
Suspended Solids	60
Total Oxidised N (as N)	250
Total P (as P)	2
Total Ammonia (as N)	20
Toxicity Units	10

SCHEDULE D : Monitoring

D.1 Monitoring Locations

Monitoring locations shall be those as set out in Table D.1.1.

Table D.1.1 Monitoring Locations

Landfill Gas Stations [Note 1]	Dust Deposition Stations	Noise Stations	Surface Water Stations [Note 1, 8]	Ground Water Stations [Note 1, 8]
M1 to M9	D1 to D4 [Note 3]	NSL1 to NSL3 [Note 3]	S1, S2, S4, S7, S8, S9, S25	G1, G2, G3, G7, G8
Site Office & Buildings			S30 [Note 5]	Additional locations [Note 6]
Perimeter locations [Note 2]				Private wells [Note 7]
Flare / Utilisation Plant [Note 3]				
Lined cells [Note 4]				
Leachate Monitoring Stations [Note 1]				
Treated Leachate Discharge (see Table D.5.2)	Leachate Treatment Plant (see Table D.6.1)	Untreated leachate (see Table D.5.1)	Leachate levels - L11 to L13; two locations per lined cell (see Condition 3.20.3); leachate storage structures	

Note 1: As shown on Drawing No. 11 Rev E "Kyletalesha Landfill Site Sampling Points" of the application.
Note 2: Perimeter wells to monitor for potential off-site migration of landfill gas to be provided in accordance with Condition 3.20.1 at locations to be agreed by the Agency.
Note 3: Locations to be agreed by the Agency.
Note 4: At least one per cell within lined waste disposal areas.
Note 5: S30 to be located on the stream/ditch flowing northwards from the facility at a location to be agreed by the Agency.
Note 6: As per the requirements of Condition 3.20.2.
Note 7: To be done on an annual basis as per the requirements of Condition 8.7.1.
Note 8: Monitoring locations to be agreed by the Agency.

D.2 Landfill Gas

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

Parameter	Monitoring Frequency		Analysis Method[Note 1]/Technique[Note 2]
	Gas Boreholes/ Vents/Wells	Site Office	
Methane (CH_4) % v/v	Monthly	Continuous	Infrared analyser/flame ionisation detector
Carbon dioxide (CO_2) % v/v	Monthly	Continuous	Infrared analyser/ flame ionisation detector
Oxygen (O_2) % v/v	Monthly	Continuous	Electrochemical cell
Atmospheric Pressure	Monthly	-	Standard
Temperature	Monthly	-	Standard

Note 1: All monitoring equipment used should be intrinsically safe.
Note 2: Or other methods agreed in advance with the Agency.

D.3 Dust Monitoring

Table D.3.1 Dust Monitoring Parameters, Frequency and Technique

Parameter ($mg/m^2/day$)	Monitoring Frequency	Analysis Method/Technique
Dust Deposition [Note 1]	Three times a year [Note 2]	Standard Method [Note 3]

Note 1: A wind rose, obtained from the meteorological station for the relevant sampling period, shall be submitted with each set of results.

Note 2: At least twice during the period May to September.

Note 3: Standard method VDI2119 (Measurement of Dustfall, Determination of Dustfall using Bergerhoff Instrument (Standard Method) German Engineering Institute). Any modifications to eliminate interference due to algae growth in the gauge should be reported to the Agency.

D.4 Noise

Table D.4.1 Noise Monitoring Parameters, Frequency and Technique

Parameter	Monitoring Frequency	Analysis Method/Technique
$L(A)_{EQ}$ [30 minutes]	Annual	Standard [Note 1]
$L(A)_{10}$ [30 minutes]	Annual	Standard [Note 1]
$L(A)_{90}$ [30 minutes]	Annual	Standard [Note 1]
Frequency Analysis ($^1/_3$ Octave band analysis)	Annual	Standard [Note 1]

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

D.5 Surface Water, Groundwater and Leachate

Table D.5.1 Water and Leachate - Parameters / Frequency

Parameter [Note 1]	Surface Water [Note 2] Monitoring Frequency	Groundwater Monitoring Frequency	Leachate [Note 11] Monitoring Frequency
Visual Inspection/Odour [Note 2]	Weekly	Quarterly	Quarterly [Note 12]
Groundwater Level	Not Applicable	Monthly	Not Applicable
Leachate Level	Not Applicable	Not Applicable	Continuous [Note 6]
Ammoniacal Nitrogen	Quarterly [Note 13]	Quarterly	Annually
BOD	Quarterly	Not Applicable	Annually
COD	Quarterly	Not Applicable	Annually
Chloride	Quarterly	Quarterly	Annually
Dissolved Oxygen	Quarterly	Quarterly	Not Applicable
Electrical Conductivity	Quarterly	Quarterly	Annually
pH	Quarterly [Note 13]	Quarterly	Annually
Total Suspended Solids	Quarterly	Not Applicable	Not Applicable
Temperature	Quarterly [Note 13]	Quarterly	Quarterly
Metals / non metals [Note 3]	Annually	Annually	Annually
Cyanide (Total)	Not Applicable	Annually	Annually
Fluoride	Not Applicable	Annually	Annually
List I/II organic substances [Note 4]	Once off [Note 5]	Annually [Note 5]	Annually [Note 5]
Mercury	Annually	Annually	Annually
Sulphate	Annually	Annually	Annually
Total Alkalinity	Annually	Annually	Not applicable
Total P/orthophosphate	Annually	Annually	Annually
Total Oxidised Nitrogen	Annually	Annually	Annually
Total Organic Carbon	Not Applicable	Quarterly	Not Applicable
Residue on evaporation	Not Applicable	Annually	Not Applicable
Biological Assessment	Annually [Note 7]	Not Applicable	Not Applicable
Flow (l/s)	Continuous [Note 8]	Not Applicable	Continuous [Note 9]
Faecal Coliforms [Note 10]	Not Applicable	Annually	Not Applicable
Total Coliforms [Note 10]	Not Applicable	Annually	Not Applicable

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

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

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

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

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

Note 6: Continuous monitoring in the leachate storage structure(s) and in lined cells, and monthly in the other borehole/collection sumps (unlined areas). See Table D.1.1 for details of the specific monitoring locations.

Note 7: Appropriate biological methods (such as EPA Q-Rating System) to be used for the assessment of surface water quality on the River Triogue at Kyle Bridge and Two Mile Bridge in accordance with Condition 8.12.

Note 8: Surface water flow to be monitored continuously in the River Triogue and the Tip Stream at locations to be agreed by the Agency.

Note 9: Treated leachate being discharged to the River Triogue to be monitored continuously at location L70. Flow of leachate at the treatment plant to be monitored in accordance with Table D.6.1.

Note 10: In the case where groundwater is abstracted for drinking water and there is evidence of bacterial contamination, the analysis at upgradient and downgradient monitoring points (and including the leachate storage structure) should include enumeration of total bacteria at 22°C and 37°C and faecal streptococci.

Note 11: Unless otherwise stated, leachate monitoring is to be carried out on untreated leachate contained in the leachate storage structure located beside the treatment plant. See Tables D.5.2 and D.6.1 for monitoring of treated leachate discharge and the leachate treatment plant.

Note 12: To be monitored at those leachate level locations specified in Table D.1.1.

Note 13: Monitoring points – (to be agreed by the Agency) one upstream and one downstream of discharge point to River Triogue to be monitored monthly. The monitoring results to be used to calculate unionised ammonia values in the River Triogue.

Table D.5.2 Treated Leachate Discharge – Parameters / Frequency

Parameter [Note 5]	Monitoring Frequency	Analysis Method/Technique [Note 1]
Treated Leachate Flow	Continuous	Flow meter with recorder
pH	Continuous [Note 6]	pH electrode/meter and recorder
Temperature	Continuous [Note 6]	Standard Methods
Chemical Oxygen Demand	Weekly [Note 2, 3]	Standard Methods
Carbonaceous Biochemical Oxygen Demand	Weekly [Note 2, 3]	Standard Methods [Note 4]
Suspended Solids	Weekly [Note 2, 3]	Standard Methods
Total Ammonia (as N)	Weekly [Note 2, 3]	Standard Methods
Total Oxidised Nitrogen (as N)	Weekly [Note 2, 3]	Standard Methods
Total Phosphorus (as P)	Weekly [Note 2, 3]	Standard Methods
Toxicity	Bi-Annual	To be agreed by the Agency
List I/II organic substances	Annually	Note 7

Note 1: Or an equivalent method acceptable to the Agency.

Note 2: Samples to be collected on a flow proportional composite sample basis.

Note 3: The frequency, methods and scope of monitoring, sampling and analysis may be amended following evaluation of the test results.

Note 4: Analysis for Carbonaceous BOD shall include the addition of a nitrification inhibitor.

Note 5: To be monitored at location L70, unless otherwise specified. Leachate discharge monitoring point L70 to be located as shown on Drawing No. 19 Rev B "Kyletalesha Landfill Site Treated Leachate Discharge Pipe" which was received by the Agency on 12/6/00.

Note 6: To be monitored at location L60.

Note 7: Samples screened for the presence of organic compounds using Gas Chromatography / Mass Spectrometry (GC/MS) or other appropriate techniques and using the list I/II Substances from EU Directive 76/464/EEC and 80/68/EEC as a guideline. Recommended analytical techniques include: volatiles (US Environmental Protection Agency method 524 or equivalent), semi-volatiles (USEPA method 525 or equivalent, and pesticides (USEPA method 608 or equivalent).

D.6 Leachate Treatment Plant Monitoring

Table D.6.1 Leachate Treatment Plant Control – Parameters / Frequency

Parameter	Monitoring Frequency	Analysis Technique	Backup equipment
Effective operation of equipment [Note 1] e.g. Peat beds, pumps (surface and submersible), sprinkler system, distribution pipework, flow measurement devices, monitoring probes, logging and control system	Daily	Visual	Spares held on-site
Inlet flow to leachate lagoon	Continuous	To be agreed by the Agency	-
Inlet flow to leachate header tank (from lagoon)	Continuous	To be agreed by the Agency	-
Inlet flow to individual peat beds	Continuous	To be agreed by the Agency	-
Outlet flow from individual peat beds	Continuous	To be agreed by the Agency	-
Flow discharged from collection sump (L60) back to leachate lagoon	Continuous	To be agreed by the Agency	-

Note 1: The parameters and equipment used for the control of the leachate treatment plant may be amended following the agreement of the Agency.

D.7 Meteorological Monitoring

Data to be obtained from the meteorological monitoring station on-site or from an alternative location to be agreed by the Agency.

Table D.7.1 Meteorological Monitoring Parameters, Frequency and Technique

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 [Note 1]	Daily	Standard

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

D.8 Landfill Gas Enclosed Flare/Utilisation Plant

Location: to be agreed by the Agency in advance.

Table D.8.1 Landfill Gas Enclosed Flare/Utilisation Plant Parameters, Frequency and Technique

Parameter	Flare (enclosed) Monitoring Frequency	Utilisation Plant Monitoring Frequency	Analysis Method [Note 1] / Technique [Note 2]
Inlet			
Methane (CH_4) % v/v	Continuous	Weekly	Infrared analyser/flame ionisation detector/thermal conductivity
Carbon dioxide (CO_2) % v/v	Continuous	Weekly	Infrared analyser/thermal conductivity
Oxygen (O_2) % v/v	Continuous	Weekly	Electrochemical/thermal conductivity
Total Sulphur	Annually	Annually	Ion chromatography
Total Chlorine	Annually	Annually	Ion chromatography
Total Fluorine	Annually	Annually	Ion Selective Electrode
Process Parameters			
Combustion Temperature	Continuous	Quarterly	Temperature Probe/datalogger
Outlet			
CO	Continuous	Continuous	Flue gas analyser/datalogger
NOx	Annually	Continuous	Flue gas analyser
SO_2	Annually	Annually	Flue gas analyser
Particulates	Not applicable	Annually	Isokinetic/Gravimetric
Total VOCs	Not applicable	Annually	Flame ionisation
Total non-methane VOCs	Not applicable	Annually	Adsorption-thermal desorption
TOC	Annually	Not applicable	Flame ionisation
Hydrochloric acid	Annually	Annually	Impinger /Ion Chromatography
Hydrogen fluoride	Annually	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.

D.9 Waste Monitoring

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

D.10 Ambient Odour Monitoring

Parameter	Frequency	Analysis Method/Technique
Odour	Monthly	As agreed with the Agency

SCHEDULE E : Recording and Reporting to the Agency

Report	Reporting Frequency Note 1	Report Submission Date
Environmental Management System Updates	Annually	One month after the end of the year reported on.
Annual Environment Report (AER)	Annually	By the 31 March each year
Record of incidents	As they occur	Within five days of the incident.
Bund, tank and container integrity assessment	Every three years	Prior to the use of any new structures and within 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.
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.
Topographical Survey	Annually	As part of the AER
Stability Assessment	Annually	As part of the AER
Waste Recovery Report	Annual	As part of the AER
Any other monitoring	As they occur	Within ten days of obtaining results.

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

SCHEDULE F : Standards for Compost Quality

The following criteria are deemed a quality standard for the use of compost as a soil improver and should not be deemed as criteria for fertiliser. In addition N, P, K, NH_4-N, NO_3-N, pH and dry matter content should also be measured.

Compost/digestate shall meet the standards below if not more than 25% of samples fail the criteria below. No sample shall exceed 1.2 times the quality limit values set.

1. **Maturity** (Compost only)

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

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

1. Respiration activity after four days AT_4 is $\leq 10mg/O_2/g$ dry matter or Dynamic Respiration Index is $\leq 1{,}000mgO_2/kg$ VS/h.
2. Germination of cress (*Lepidium sativum*) seeds and of radish (*Raphanus sativus*) seeds in compost must be greater than 90 percent of the germination rate of the control sample, and the growth rate of plants grown in a mixture of compost and soil must not differ more than 50 percent in comparison with the control sample.
3. Compost must be cured for at least 21 days and Compost will not reheat upon standing to greater than 20°C above ambient temperature.
4. If no other determination of maturity is made, the compost must be cured for a six month period. In addition, offensive odours from the compost shall be minimal for the compost to be deemed mature.
5. Or other maturity tests as may be agreed by the Agency.

Guidance on testing may be obtained from the German document LAGA M10 'Quality Criteria and Application Recommendations for Compost'.

2. **Trace Elements** (Compost and Digestate) [Note 1]

Maximum Trace Element Concentration Limits [Note 2]

Parameter (mg/kg, dry mass)	Compost Quality Standards [Note 3] / Digestate Quality Standards [Note 3]		Stabilised Biowaste
	Class 1 [Note 5]	Class 2 [Note 6]	
Cadmium (Cd)	0.7	1.5	5
Chromium (Cr)	100	150	600
Copper (Cu)	100	150	600
Mercury (Hg)	0.5	1	5
Nickel (Ni)	50	75	150
Lead (Pb)	100	150	500
Zinc (Zn)	200	400	1500
Impurities >2mm [Note 4]	<0.5%	<0.5%	<3%
Gravel and Stones >5mm [Note 4]	<5%	<5%	-

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

Note 2: The above alone should not be taken as an indication of suitability for addition to soil as the cumulative metal additions to soil should be first calculated.

Note 3: Normalised to 30% organic matter content.

Note 4: Compost must not contain any sharp foreign matter measuring over a 2 mm dimension that may cause damage or injury to humans, animals and plants during or resulting from its intended use.

Note 5: All use of compost of Class 1 Standard shall be in accordance with best agronomic practice.

Note 6: All use of compost of Class 2 Standard shall be in accordance with best agronomic practice. Notwithstanding this, it shall be used in a quantity not exceeding 30 Tonnes dry matter per hectare (on a three year average).

3. Pathogens

Pathogenic organism content must not exceed the following limits:

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

Where: n = Number of samples to be tested.

4. Monitoring

The licensee shall monitor the compost product at least annually. The licensee shall submit to the Agency for its agreement, prior to commencement of compost operations, details of methods of analyses and sample numbers.

SCHEDULE G : Acceptance of Inert Waste

G.1 Acceptable Waste for Recovery

Only those inert wastes listed in Table G.1.1 are acceptable for recovery at the facility, unless otherwise agreed by the Agency.

Table G.1.1 Waste for Recovery

Waste	
Topsoil	Solid Road Planings, Solid Tarmacadam, Solid Asphalt [Note 1]
Subsoil	Brickwork
Stone, Rock and Slate	Natural Sand
Clay, Pottery and China	Concrete

Note 1: Acceptance subject to the prior written agreement of the Agency.

SCHEDULE H : Content of the Annual Environmental Report

Annual Environmental Report Content
Reporting Period.
Waste activities carried out at the facility.
Quantity and Composition of waste received, disposed of and recovered during the reporting period and each previous year.
Calculated remaining capacity of the facility and year in which final capacity is expected to be reached.
Methods of deposition of waste.
Summary report on emissions.
Summary of results and interpretation of environmental monitoring.
Resource and energy consumption summary.
Proposed development of the facility and timescale of such development.
Volume of leachate produced and volume of leachate transported / discharged off-site.
Report on development works undertaken during the reporting period, and a timescale for those proposed during the coming year.
Report on restoration of completed cells/ phases.
Site survey showing existing levels of the facility at the end of the reporting period.
Estimated annual and cumulative quantities of landfill gas emitted from the facility.
Estimated annual and cumulative quantity of indirect emissions to groundwater.
Annual water balance calculation and interpretation.
Report on the progress towards achievement of the Environmental Objectives and Targets contained in previous year's report.
Schedule of Environmental Objectives and Targets for the forthcoming year.
Full title and a written summary of any procedures developed by the licensee in the year which relates to the facility operation.
Tank, pipeline and bund testing and inspection report.
Report on the performance and compatibility of the septic tank (and associated percolation area) with the Agency's *Wastewater Treatment manual: Treatment Systems for Single Houses.*
Reported incidents and Complaints summaries.
Review of Nuisance Controls.
Reports on financial provision made under this licence, management and staffing structure of the facility, and a programme for public information.
Report on training of staff.
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.
Updates/amendments to the Odour Management Plan.
Waste Recovery Report.
Any other items specified by the Agency.

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