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

WASTE LICENCE
PROPOSED DECISION

Waste Licence Register Number:	27-1
Applicant:	Ballinasloe Urban District Council
Location of Facility:	Pollboy, Ballinasloe, Co. Galway

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Reasons for the Decision

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

In reaching this decision the Agency has considered the application and supporting documentation received from the applicant, all submissions 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 Act, 1996, the Environmental Protection Agency (the Agency) proposes, under Section 40(1) of the said Act to grant this Waste Licence to Ballinasloe Urban District Council, Civic Offices, Ballinasloe, Co. Galway to carry on the waste activities listed below at Pollboy Landfill, Pollboy, Ballinasloe, Co Galway subject to eleven conditions, with the reasons therefor and the associated schedules attached thereto set out in the licence.

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

Class 1: Deposit on, in or under land (including landfill).

Class 2: Land treatment, including biodegradation of liquid or sludge discards in soils.

Class 4: Surface impoundment, including placement of liquid or sludge discards into pits, ponds or lagoons.

Class 5: Specially engineered landfill, including placement into lined discrete cells which are capped and isolated from one another and the environment.

Class 6: Biological treatment not referred to elsewhere in this Schedule which results in final compounds or mixtures which are disposed of by means of any activity referred to in paragraphs 1. To 10. of this Schedule.

Class 7: Physico-chemical treatment not referred to elsewhere in this Schedule (including evaporation, drying and calcination) which results in final compounds or mixtures which are disposed of by means of any activity referred to in paragraphs 1. to 10. of this Schedule (including evaporation, drying and calcination).

Class 11: Blending or mixture prior to submission to any activity referred to in a preceding paragraph of this Schedule.

Class 13: Storage prior to submission to any activity referred to in a preceding paragraph of this Schedule, other than temporary storage, pending collection, on the premises where the waste concerned is produced.

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

Class 2: Recycling or reclamation of organic substances which are not used as solvents (including composting and other biological transformation processes).

Class 3: Recycling or reclamation of metals and metal compounds.

Class 4: Recycling or reclamation of other inorganic materials.

Class 9: Use of any waste principally as a fuel or other means to generate energy.

Class 10: The treatment of any waste on land with a consequential benefit for an agricultural activity or ecological system.

Class 11: Use of waste obtained from any activity referred to in a preceding paragraph of this Schedule.

Class 12: Exchange of waste for submission to any activity referred to in a preceding paragraph of this Schedule.

Class 13: Storage of waste intended for submission to any activity referred to in a preceding paragraph of this Schedule, other than temporary storage, pending collection, on the premises where such waste is produced.

INTERPRETATION

Note: Unless defined below all definitions are as per the Waste Management Act 1996

Aerosol	A suspension of solid or liquid particles in a gaseous medium.
Adequate lighting	20 lux measured at ground level.
Agreement	Agreement in writing.
Attachment	Any reference to Attachments in this licence refers to attachments submitted as part of the waste licence application.
Application	The application by the licensee for this waste licence, including any other material submitted to the Agency in writing by the licensee between the date of the application and the date of grant of this licence.
Appropriate facility	A waste management facility, duly authorised under relevant law and technically suitable.
BAT	Best Available Technology.
Biodegradable waste	Any waste that is capable of undergoing anaerobic or aerobic decomposition, such as food and garden waste, and paper and paperboard.
Condition	A condition of this licence. In any case where this licence refers to a numbered condition, the reference shall be taken to mean the condition and any sub-condition therein which the context of the reference requires that reference is made to
Containment boom	A boom which can contain spillages and prevent these 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 with the Agency.
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.
Emission Limit Value	Those limits, including concentration limits and deposition levels established in Schedule G.
European Waste Catalogue (EWC)	The EWC is a harmonised, non-exhaustive list of wastes drawn up by the European Commission and published as Commission Decision 94/3/EC and any subsequent amendment published in the Official Journal of the European Community.

Facility	That area or areas defined under Condition 1.2
Green waste	Waste wood, plant matter and other vegetation.
Inert waste	Waste that does not undergo any significant physical, chemical or biological transformations. Inert waste will not dissolve, burn or otherwise physically or chemically react, biodegrade or adversely affect other matter with which it comes into contact in a way likely to give rise to environmental pollution or harm human health. The total leachability and pollutant content of the waste and the ecotoxicity of the leachate must be insignificant, and in particular not endanger the quality of surface water and/or groundwater.
Incident	Any reference to an incident in this licence means an incident as defined in Condition 3.1.
Landfill Gas	Gases generated from the landfilled waste.
Leachate	Any liquid percolating through the deposited waste and emitted from or contained within a landfill as defined in Section 5 (1) of the Act.
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^{o}C and atmospheric pressure.
Licensee	Ballinasloe Urban District Council, Civic Offices, Ballinasloe, Co. Galway.
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
Maintain	Keep in a fit state, including such regular inspection, servicing and repair as may be necessary to adequately perform its function.
Mobile Plant	Self-propelled machinery used for the emplacement of wastes or for the construction of specified engineering works
Monthly	At least 12 times per year, at approximately monthly intervals.
Non-hazardous waste	Non-Hazardous Waste is any waste which is not a hazardous waste as defined in the Act.
Quarterly	A period of three calendar months, the first period of which commences on the date of grant of this licence
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 between 2% and 14% dry matter.
Specified Emissions	Those emissions listed in Schedule G: Emission Limits of this licence.
Specified Engineering	Those engineering works listed in Schedule E: Specified Engineering

Works	Works of this licence.
Submit	Unless the context of this licence indicates otherwise, submit in writing to the Agency for its agreement
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.
Trigger Level	A parameter value which when achieved or exceeded requires certain actions to be taken.
White Goods	Refrigerators, cookers, ovens and other similar appliances.
Working Day	9.00 a.m. to 5.30 p.m. Monday to Friday.
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 II CONDITIONS

CONDITION 1 SCOPE

1.1. Waste activities at the facility shall be restricted to those listed and described in Schedule A: Waste Activities and required by the licence.

1.2. Waste activities shall be restricted to the area of land outlined in red on Figure 3.2 of the application (page 17 of Vol. 2 of the EIS). Any reference in this licence to "facility" shall mean the area thus outlined in red.

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

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

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

a) that only those wastes as specified, if any, in the notice are to be accepted at the facility after the date set down in the notice;

b) that the licensee shall undertake the works stipulated in the notice, and/or otherwise comply with the requirements of the notice as set down therein, within the time-scale contained in the notice; and,

c) that the licensee shall carry out any other requirement specified in the notice.

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

1.6. Within three months of the date of grant of this licence, the licensee shall submit to the Agency, figures for the amount of waste deposited at the facility during 1998 and 1999.

REASON: To Clarify the Scope of the Licence.

CONDITION 2 MANAGEMENT OF THE ACTIVITY

2.1 Environmental Management System

2.1.1 The licensee shall within twelve months from the date of grant of this licence, submit to the Agency for its agreement a proposal for a documented Environmental Management System (EMS) for the facility. Following the agreement of the Agency, the licensee shall establish and maintain such a system. The EMS shall be updated on an annual basis with amendments being submitted to the Agency for its agreement.

2.1.2 The EMS shall include as a minimum those elements specified in the Conditions 2.2 to 2.7 below:

2.2 Schedule of Environmental Objectives and Targets

2.2.1 The licensee shall, within nine months from the date of grant of this licence, submit to the Agency for its agreement a Schedule of Objectives and Targets. The objectives should be specific and the targets measurable.

2.2.2 The Schedule shall address a five year period as a minimum and shall be reviewed and submitted annually to the Agency for its agreement.

2.3 Environmental Management Programme

2.3.1 The licensee shall, within nine months from the date of grant of this licence, submit to the Agency for its agreement an Environmental Management Programme (EMP). The EMP shall include a time-scale for achieving the Schedule of Objectives and Targets and shall comply with any other guidance issued by the Agency.

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

2.4 Corrective Action

2.4.1 Within three months of the date of grant of this licence the licensee shall establish and maintain written Corrective Action Procedures to ensure that corrective action is taken should specified requirements to this licence not be fulfilled.

2.5 Awareness and Training

2.5.1 Within three months of the date of grant of this the licensee shall establish and maintain Awareness and Training Procedures for identifying training needs and for providing appropriate training, for personnel whose work is related to the licensed facility. Written records of training shall be maintained.

2.6 Management Structure

Within six months from the date of grant of this licence, the licensee shall submit written details of the management structure of the facility for the agreement of the Agency. Any proposed changes in the management structure shall be submitted in writing to the Agency for its agreement. Written details of the management structure shall include the following information:

a) the names of all persons who are to provide the management and supervision of the waste activities authorised by the licence;

b) a named contact person for communications with the Sanitary Authority

c) details of the responsibilities for each individual named under a) above;

d) details of the relevant experience, competence and qualifications held by each of the persons nominated under a) above; and

e) contingency arrangements for the absences of the named persons from the facility.

2.7 Communications

2.7.1 Within six months from the date of grant of this licence, the licensee shall submit to the Agency for its agreement a Communications Programme to ensure that members of the public can obtain information concerning the environmental performance of the facility at all reasonable times.

2.8 Annual Environmental Report

2.8.1 The licensee shall submit to the Agency for its agreement, within thirteen months from the date of grant of this licence, and within one month of the end of each year thereafter, an Annual Environmental Report (AER).

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

2.9 The licensee shall employ a suitably qualified and experienced facility manager who shall be designated as the person in charge. The facility manager or a suitably qualified and experienced deputy, shall be present at all times during the operation of the facility.

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

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

CONDITION 3 NOTIFICATION AND RECORD KEEPING

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

a) any nuisance caused by the activity;

b) any emission which results in the contravention of any relevant standard, including any standard for an environmental medium, or any relevant emission limit value, prescribed under any relevant enactment;

c) any emission which does not comply with the requirements of this licence;

d) any trigger level specified in this licence which is attained or exceeded;

e) any indication that environmental pollution has, or may have, taken place;

f) any occurrence with the potential for environmental pollution; and,

g) any emergency.

3.2 The written record shall include all aspects described in Condition 10.9 (a-e).

3.3 Unless otherwise instructed in writing by the Agency, the licensee shall:

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

b) submit the written record required by this condition to the Agency as soon as practicable and in any case within five working days after the occurrence of any incident; and

c) in the event of any incident which relates to discharges to surface water, notify the Shannon Regional Fisheries Board as soon as practicable and in any case not later than 10:00am on the following working day after such an incident.

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

3.5 Unless otherwise agreed by the Agency, all documentation submitted to the Agency shall:

(a) be sent to the Agency's headquarters;

(b) comprise one original and three copies;

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

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

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

(f) be submitted in accordance with the relevant reporting frequencies specified in this licence; and

(g) in the case of results of any environmental monitoring, be accompanied by a written interpretation setting out their significance.

3.6 Copies of all environmental monitoring data obtained by the licensee which relates to the facility shall be forwarded to the Agency at the frequencies set out in Schedule D: Recording and Reporting to the Agency of this licence.

3.7 Unless otherwise agreed with the Agency, all documentation and records required to be made under this licence, shall be retained by the licensee.

3.8 The licensee shall provide additional copies of any documentation and records referred to in this licence to the Agency upon written request, within the time specified in writing by the Agency.

3.9 The licensee shall keep the following documents at the facility office referred to in Condition 4.5.

a) the current waste licence relating to the facility;

b) the current EMS for the facility;

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

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

3.10 The licensee shall maintain a written record for each load of waste arriving at the facility. The licensee shall record the following:

a) the name of the carrier;

b) the vehicle registration number;

c) the name of the producer(s)/collector(s) of the waste as appropriate;

d) the name of the waste facility (if appropriate) from which the load originated;

e) a description of the waste including the associated EWC codes;

f) the quantity of the waste, recorded in tonnes;

g) the name of the person checking the load; and,

h) where loads or wastes are removed or rejected, details of the date of occurrence, the types of waste and the facility to which they were removed.

3.11 The licensee shall maintain a written record of the type and quantity, recorded in tonnes, of all wastes recovered or disposed of at the facility.

3.12 The licensee shall maintain a written record of all waste inspections carried out in the waste inspection area.

3.13 A written record shall be kept of each consignment of leachate removed from the facility. The record shall include the following:

a) the name of the carrier;

b) the date and time of removal of leachate from the facility;

c) the volume of leachate, in cubic metres, removed from the facility on each occasion;

d) the name and address of the Waste Water Treatment Plant to which the leachate was transported;

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

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

a) date and time of the complaint;

b) the name of the complainant;

c) details of the nature of the complaint;

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

e) the response made to each complainant.

3.15 The licensee shall assign and clearly label a unique reference code to each container at the Civic Waste Facility. A written record shall be kept for each load of waste departing from the facility. The following shall be recorded:

a) the number of sealed containers being stored overnight;

b) the name of the carrier;

c) the vehicle registration number;

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

e) a description of the waste (if recovered or rejected waste, the specific nature of the waste);

f) the quantity of waste, recorded in tonnes;

g) the name of the person checking the load; and,

h) the time and date of departure.

3.16 Provision shall be made for the transfer of environmental information specified by the Agency, in relation to the activities carried on under this licence, to the Agency's computer system within a timescale specified in writing by the Agency.

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

CONDITION 4 SITE INFRASTRUCTURE

4.1 The licensee shall establish all infrastructure referred to in this licence or as instructed by the Agency.

4.2 Site Notice Board

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

4.2.2 The board shall clearly show:

a) the name and telephone number of the facility;

b) the normal hours of opening;

c) the name, address and telephone number of the licence holder;

d) an emergency out of hours contact telephone number;

e) the name, address and telephone number of the operator of the facility;

f) the licence reference number;

g) where and when environmental monitoring information relating to the facility can be obtained.

4.3 Site Security

4.3.1 Within six months of the date of grant of this licence, security and stockproof fencing and gates shall be installed and maintained as described in Attachment D.1.a. The base of the fencing shall be set in the ground.

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

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

b) a repair to the standard of the original gates and/or fencing shall be undertaken within three working days or as otherwise agreed with the Agency.

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

4.4 Site Roads and Hardstanding

4.4.1 Effective site roads shall be provided and maintained to ensure the safe movement of vehicles within the facility. Unless otherwise agreed in advance with the Agency, these areas shall drain to the leachate treatment system.

4.4.2 Hardstanding areas, as detailed in Figure 3.2 (page 17 of vol. 2 of the EIS) shall be provided and maintained by the licensee. These areas shall drain to the leachate treatment system unless otherwise agreed with the Agency.

4.4.3 Unless otherwise agreed in advance with the Agency, signage to ensure effective traffic control shall be installed.

4.5 The licensee shall provide and maintain an office on the facility, at the location shown in Figure 3.2 (in Vol. 2 of the EIS). The office shall be constructed and maintained in a manner suitable for the processing and storing of documentation.

4.6 The licensee shall provide and maintain a working telephone and facsimile machine in the office specified in Condition 4.5 above.

4.7 Inspection

4.7.1 A Waste Inspection Area shall be provided and maintained at the location shown in Figure 3.2 (in Vol. 2 of the EIS) and in accordance with the details provided in section 4.3 of the EPA Landfill Manual: Landfill Site Design.

4.7.2 A waste quarantine area shall be provided by the licensee.

4.7.3 The licensee shall ensure that these areas shall be constructed and maintained in a manner suitable, and be of a size appropriate, for the inspection of waste and subsequent quarantine if required. The waste inspection area and the waste quarantine area shall be suitably and clearly segregated from each other.

4.7.4 Drainage from these areas shall be directed to the leachate collection system or the leachate collection chamber as shown in Figure 3.2 (in Vol. 2 of the EIS).

4.8 The licensee shall provide and maintain a weighbridge at the facility. Unless otherwise agreed with the Agency the location of the weighbridge shall be as shown on Figure 3.2 (in Vol. 2 of the EIS).

4.9 Wheelwash

4.9.1 The licensee shall establish and maintain a wheelwash/dry wheel shake out of the facility within six months of the date of grant of this licence. Unless otherwise agreed with the Agency the location of the wheelwash shall be as shown on Figure 3.2 (in Vol. 2 of the EIS).

4.9.2 The wheelwash shall be inspected on a daily basis and drained as required. Silt, stones and other accumulated material shall be removed as required from the wheel cleaner and disposed of at the working face. The water drained from the wheelwash shall only be drained/pumped to the leachate treatment system, unless otherwise agreed with the Agency.

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

4.11 Waste Water

4.11.1 Sewage arising on-site shall be directed to the leachate treatment system.

4.11.2 Within eighteen months of the date of grant of this licence, the licensee shall install a sewer connecting the facility to the Ballinasloe Sewage Treatment Works in order to discharge the leachate from the facility to the Works.

4.12 Storage Areas

The licensee shall provide and maintain a bunded fuel storage area at the facility. Unless otherwise agreed with the Agency the location of the fuel storage area shall be as shown on Figure 3.2 (in Vol. 2 of the EIS). Fuels shall only be stored at the agreed location.

4.12.1 All tank and drum storage areas shall be rendered impervious to the materials stored therein. In addition, tank and drum storage areas shall, as a minimum be bunded, either locally or remotely, to a volume not less than the greater of the following:

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

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

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

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

4.12.4 The integrity and water tightness of all the bunds, tanks and containers and their resistance to penetration by water or other materials stored therein shall be tested and demonstrated by the licensee and shall be reported to the Agency following its installation and prior to its use as a fuel storage area. This testing shall be carried out by the licensee at least once every three years thereafter and reported to the Agency on each occasion. The licensee shall also submit to the Agency for its agreement in each case a written report on the storage of fuels at the facility. A written record of all integrity tests and any maintenance or remedial work arising from them shall be maintained by the licensee.

4.12.5 All tanks and containers shall be labelled to clearly indicate their contents.

4.13 The licensee shall provide an appropriate area for the storage of white goods. All CFC gases contained within such white goods shall be extracted and recovered. A written record shall be kept of the quantity of all gases extracted at the facility at which they are recovered.

4.14 Specified Engineering Works

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

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

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

a) a description of the works;

b) as-built drawings of the works;

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

d) where relevant a drawing and sections showing the location of all samples and tests carried out;

e) where relevant daily records sheets/diary;

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

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

h) records of any problems and the remedial works carried out; and

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

4.15 Landfill Lining:

4.15.1 The landfill liner for all cells shall be a composite liner consisting of a basal mineral layer of at least 1m in thickness with a permeability of less than or equal to 1×10^{-9} m/s overlain by a 2mm thick high density polyethylene (HDPE) layer. The side walls shall be designed and constructed to achieve an equivalent protection.

4.16 Leachate Management

4.16.1 Unless otherwise agreed with the Agency, leachate management at the facility shall be carried out as described in Vol. 2 of the EIS, sections 3.3.4 and 3.4.6. Leachate collection pipes in lined cells will be connected to an upriser, from which the leachate will be removed to the leachate collection chamber.

4.16.2 Within six months of the date of grant of this licence, ten boreholes shall be installed in the unlined landfilled area to facilitate the measurement of leachate levels and the removal of leachate.

4.16.3 An interceptor drain will be constructed around the existing landfilled area to collect leachate, and the collected leachate will be directed to the leachate collection system.

4.16.4 Leachate levels in the lined cells shall not exceed a level of 1.0m over the top of the liner.

4.16.5 All leachate management structures on-site shall be inspected and certified fit for purpose by an independent and appropriately qualified chartered engineer. Any remedial works recommended in this report must be implemented within a time-scale to be agreed with the Agency.

4.16.6 All tanks for the storage and/or treatment of untreated leachate shall be fully enclosed except for inlet and outlet piping. All leachate holding tanks and lagoons are to be constructed to the same standard and specifications as the landfill liner.

4.16.7 Unless otherwise agreed with the Agency, leachate stored in the leachate collection chamber shall be disposed of by tankering off-site in fully enclosed road tankers and discharging to Ballinasloe Waste Water Treatment Plant.

4.16.8 The licensee shall submit to the Agency for its agreement within three months of the date of grant of this licence Operational Procedures for the handling of leachate during removal from the collection chamber and subsequent transport/discharge to the Ballinasloe Waste Water Treatment Plant.

4.16.9 The frequency of discharge from the leachate collection chamber, or removal by tanker, shall be such that a minimum freeboard of 0.75m shall be maintained in the leachate collection chamber at all times.

4.16.10 Recirculation of leachate or other contaminated water shall only be undertaken within cells which have been lined to the satisfaction of the Agency.

4.17 Landfill Gas Management:

4.17.1 Unless otherwise agreed with the Agency, landfill gas management at the facility shall be carried out as described in Vol. 2 of the EIS, sections 3.3.7 and 3.4.9.

4.17.2 Within twelve months of the date of grant of this licence, the licensee shall install a collection system for landfill gas in the body of the existing waste. This landfill gas shall be flared pending the installation of a gas recovery plant.

4.17.3 Within twelve months of the date of grant of this licence, a proposal for the utilisation of landfill gas as an energy resource shall be submitted to the Agency for its agreement.

4.17.4 Flare unit efficiency of the landfill gas flare shall be tested within six months of the date of installation of a landfill gas flare and once every three years thereafter.

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

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

4.18 Capping

4.18.1 The sequence for the temporary restoration of the facility shall be in accordance with section 3.3.5 of Vol. 2 of the EIS unless otherwise agreed with the Agency.

4.18.2 Unless otherwise agreed with the Agency daily and intermediate capping shall consist of the following:

- Subsoils and other excavation wastes or construction industry wastes such as bricks and crushed broken concrete. The material should be free-draining and preferably of low clay content. Daily cover should be 150mm in depth, while intermediate cover should be 300mm in depth.

4.18.3 Unless otherwise agreed with the Agency final capping shall consist of the following:

- top soil (150 -300mm);
- subsoils, such that total thickness of top soil and subsoils is at least 1m;
- drainage layer of 0.5m thickness having a minimum hydraulic conductivity of $1x10^{-4}$ m/s;
- 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 protection; and
- gas collection layer of natural material (minimum 0.3m) or a geosynthetic layer.

4.18.4 Filled cells and completed areas shall be permanently capped to the required specifications within twelve months of filling or completion.

4.18.5 The licensee shall provide a six monthly report to the Agency on the quantity of capping materials stockpiled at the facility. In the event that the stockpile fails to contain the requisite volume of capping materials for the next twelve months, the report required by this condition shall contain a proposal for the Agency's agreement for alternative sources of capping materials or for the utilisation of geosynthetic materials.

4.19 Surface Water Management

4.19.1 Unless otherwise agreed with the Agency or required by the conditions of the licence, surface water management at the facility shall be carried out as described in Vol. 2 of the EIS, sections 3.3.6 and 3.4.8.

4.19.2 All surface water collected shall be stored temporarily in the Surface Water Lagoon prior to discharge.

4.19.3 The licensee shall ensure effective control of surface water run-off from the facility during construction, operation and restoration. Surface water accumulating in lined cells will cease to be directed to nearby streams/drains as soon as waste deposition commences in the cell.

4.20 Civic Waste Facility

4.20.1 The licensee shall establish the Civic Waste Facility infrastructure referred to in section 3.4.1 of Vol. 2 of the EIS.

4.20.2 The licensee shall provide and maintain the receptacles at the Civic Waste Facility at the locations shown in Figure 3.2 (of Vol. 2 of the EIS) unless otherwise agreed with the Agency. All receptacles shall be clearly labelled to indicate their contents.

4.21 Compost facility

4.21.1 Within eighteen months of the date of grant of this licence, composting of segregated green garden waste and treated sludge shall be initiated at the facility. A minimum of ten tonnes of waste shall be composted per annum at the facility unless otherwise agreed with the Agency.

4.21.2 A concrete hardstanding area shall be provided and all composting shall be carried out on that area.

4.21.3 All leachate and run-off arising from the composting shall be collected and diverted to the leachate treatment system.

4.22 Facility Boundary /Perimeter Planting

4.22.1 The existing hedgerow network which forms part of the boundary of the facility shall be retained by the licensee.

4.22.2 The licensee shall submit a proposal for perimeter planting to the Agency for its agreement within six months of the date of grant of this licence.

4.23 A perimeter bund shall be constructed at the facility as described in section 6.4 of Vol. 2 of the EIS.

4.24 Access Road

4.24.1 The road improvements as described in Appendix H (section 8; Mitigation Measures) of Vol. 3 of the EIS shall be carried out within nine months of the date of grant of this licence. These shall include;

- Minor junction improvements at the N6/Pollboy Road junction.
- Major junction improvements at the Pollboy Road/Beechlawn Road junction.
- Substantial improvement of the Pollboy Road.

4.24.2 Access to the facility by construction and waste disposal vehicles shall only be from the Pollboy Road, via the N6/Pollboy Road junction.

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

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

CONDITION 5 WASTE PROCESSING

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

5.2. Subject to Condition 5.1, and any requirements of Condition 5.3, only those waste types and quantities listed in Schedule H : Waste Acceptance shall be recovered or disposed of at the facility unless the prior agreement of the Agency has been obtained. Only treated sludges shall be accepted at the facility.

5.3. Waste Acceptance Procedures

5.3.1. Unless otherwise agreed with the Agency, waste acceptance procedures shall be carried out in accordance with those described in Attachment E of the licence application.

5.3.2. Within nine months of the date of grant of this licence, any animal waste deposited at the facility shall be disposed of in lined cells only. Waste handling procedures for the handling of animal waste are to be submitted to the Agency for its agreement within six months of the date of grant of this licence.

5.3.3. Within six months of the date of grant of this licence, the licensee shall submit to the Agency for its agreement detailed written procedures for the acceptance of waste (to distinguish between inert, non-hazardous and hazardous wastes) and shall outline the procedures for dealing with hazardous wastes.

5.3.4. The procedures shall include a proposal for sludge, eluate and toxicity testing by standardised and internationally accepted procedures and carried out by a competent laboratory and shall be submitted to the Agency for its agreement within six months of the date of grant of this licence.

5.3.5. Testing shall be performed on a minimum of two samples per annum for all industrial sludges/solids being accepted at the facility and the results included in the AER.

5.4. The quantity of wastes to be accepted for disposal at the landfill, shall not exceed 120,000 tonnes per annum, unless otherwise agreed in advance with the Agency. The quantity of sludges to be accepted at the facility shall not exceed 4,000 tonnes per annum, unless otherwise agreed in advance with the Agency. The total quantity of waste to be accepted at the facility from February 1998 onwards shall not exceed 375,000 tonnes.

5.5. All waste vehicles bringing waste to the facility will be weighed at the weighbridge, unless subject to prior agreement of the Agency.

5.6. Wastes shall not be deposited in any cell or part of the landfill without the prior agreement of the Agency.

5.7. Scavenging shall not be permitted at the facility.

5.8. Waste shall only be accepted at the facility between the hours of 08.30 and 17.00 Monday to Friday inclusive, and 09.00 to 16.00 on Saturdays with the exclusion of Bank Holidays unless otherwise agreed in advance with the Agency.

5.9. Unless the prior agreement of the Agency is given, the following shall apply at the landfill:

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

b) the working face of the landfill shall be no more than 2.5 metres in height after compaction, no more than 25 metres wide and have a slope no greater than 1 in 3; and,

c) all waste deposited at the working face shall be compacted as soon as is practicable and at any rate prior to the end of the working day.

5.10. The working face of the operational cell shall, at the end of each day, be covered with material suitable to minimise any nuisances occurring.

5.11. Any cover material at any location within the facility which is eroded, washed off or otherwise removed shall be replaced by the end of the working day. Within three months of the date of grant of this licence, cover material shall be placed across the whole landfill so that no waste other than cover material or material suitable for specified engineering works is exposed.

5.12. Notwithstanding Condition 5.9 above, the landfill shall be filled in accordance with the four phase sequence outlined in section 3.4.3 (and figure 3.2) of Vol. 2 of the EIS.

5.13. Sludge

5.13.1. Industrial and sewage sludges shall only be accepted at the facility between the hours of 8:30 a.m. and 2.00 p.m. Monday to Friday inclusive. All sewage sludge shall be covered immediately with other waste.

5.13.2. Sludges shall only be permitted to be disposed of at the facility from producers who hold a disposal permit. Copies of such permits shall be available for inspection at the facility and shall be presented by the producer on delivery of the sludge consignment to the facility.

5.14. Leachate

5.14.1. Within eighteen months of the date of grant of this licence, all leachate shall be pre-treated prior to its removal off-site.

5.15. Asbestos Waste

5.15.1. All non-hazardous asbestos based construction and demolition waste must be double wrapped in heavy gauge plastic which is clearly labelled to indicate the presence of asbestos.

5.15.2. Disposal of such waste shall be into prepared bays or trenches of at least 2 metres in depth. Deposited asbestos waste shall be covered immediately with suitable material. A written record, including an appropriate grid reference, shall be kept of all such deposits.

5.16. A steel wheeled compactor or other such vehicle as agreed with the Agency shall be used for compacting all waste other than that used for restoration or construction purposes.

5.17. In order to prevent the formation of voids, all large hollow objects and other large articles deposited at the facility shall be crushed, broken up, flattened or otherwise treated.

5.18. Wastes once deposited and covered shall not be excavated, disturbed or otherwise picked over, without the prior agreement of the Agency.

5.19. No smoking shall be allowed on the facility (other than in the administrative building as shown on Figure 3.2).

5.20. Recovery

Unless otherwise agreed with the Agency, within six months of the date of grant of this licence, proposals for the following waste processing at the facility shall be submitted to the Agency for its agreement:

5.20.1. the separation of recyclable materials from the waste;

5.20.2. the achievement of the recovery targets for construction and demolition waste as specified in the Government publication "Changing Our Ways" to the Agency for its agreement;

5.20.3. the recovery of metal waste and white goods including written procedures for the recording of the quantity of CFC gases extracted from refrigerators at the facility at which they are recovered;

5.20.4. the recovery of commercial waste, including cardboard;

5.20.5. composting of biodegradable or green waste at the facility having regard to good practice and sustainability;

5.21. Within six months of the date of grant of this licence, proposals for the procedures dealing with the transfer of waste off-site by waste contractors should be submitted to the Agency for approval. The ultimate recovery or disposal facility for all wastes shall be agreed in advance with the Agency. All wastes removed off-site for recovery or disposal shall be transported from the facility to the consignee in a manner which will not adversely affect the environment.

5.22. Civic Waste Facility

a) The Civic Waste Facility shall only be used by private vehicles. The facility shall not be used as a transfer station for disposal of waste by commercial waste disposal contractors or local authority waste collection vehicles.

b) No hazardous waste (excluding waste oil and batteries collected for recovery), liquid waste, sludge or offal shall be deposited at the Civic Waste Facility, unless otherwise agreed by the Agency.

c) All tipping of waste will be either into the hopper of the compactor for disposal or into a receptacle for recovery, or in the case where inspection is required, into a designated inspection area.

d) All waste accepted at the Civic Waste Facility for disposal shall be removed within 24 hours unless otherwise agreed with the Agency.

e) At the end of the working day the floor of the Civic Waste Facility, the hopper and the compactor shall be cleaned of all waste.

f) Waste shall only be accepted at the Civic Waste Facility between the hours of 08.30 and 17.00 Monday to Friday inclusive, and 09.00 to 16.00 on Saturdays unless otherwise agreed in advance with the Agency.

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

CONDITION 6 ENVIRONMENTAL NUISANCES

6.1. The licensee shall, at a minimum of one week intervals, inspect the facility and its immediate surrounds for nuisances caused by vermin, birds, flies, mud, dust and odours. Written records shall be made of all inspections and any actions taken as a result of these inspections.

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

6.3. Litter Control

6.3.1. The measures and infrastructure as described in section 6.8.5 of Vol. 2 of the EIS shall be applied to control litter at the facility.

6.3.2. Notwithstanding Condition 6.3.1 prior to the disposal of any waste in any cell effective litter fencing shall be installed and maintained around the perimeter of the active tipping area.

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

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

b) a repair to the standard of the original netting shall be undertaken within three working days or as otherwise agreed with the Agency.

6.3.4. Within three months of the date of grant of this licence the licensee shall submit to the Agency for its agreement proposals for the operation of the facility in adverse wind conditions.

6.3.5. All loose litter accumulated within the facility and its environs, excluding that which is deposited on the working face, shall be removed subject to the agreement of the landowners and appropriately disposed of on a daily basis.

6.4. Any waste placed on or in the vicinity of the facility, other than in accordance with the requirements of this licence, shall be removed by the licensee immediately and in any event by 10:00am of the next working day, after such waste is discovered. Such waste shall be disposed of at an appropriate facility.

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

6.6. Dust Control

6.6.1. 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.

6.6.2. From the commencement of construction activities, the Dust Control Measures outlined in section 6.8.1 of Vol. 2 of the EIS shall be implemented at the facility.

6.7. The licensee shall ensure that vermin, birds, flies, mud, dust and odours do not give rise to nuisance at the facility or the immediate area of the facility. Any method used

by the licensee to control any such nuisance shall not cause environmental pollution or contravene any national statutory protection granted in respect of protected species.

6.8. Within six months from the date of grant of this licence the licensee shall submit to the Agency for its agreement, an assessment of the effectiveness of the bird control measures at the facility. This assessment shall include, where required:

a) proposals for additional bird control measures;

b) method for assessing the effectiveness of such additional measures; and

c) timescales for the implementation of such measures.

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

6.10. The licensee shall apply the vermin and fly control measures outlined in section 6.8.3 of Vol. 2 of the EIS. Notwithstanding these measures prior to the commencement of waste activities, the licensee shall submit to the Agency for its agreement a programme for the control and eradication of vermin and fly infestations at the facility. These proposals should include as a minimum, details on the rodenticide(s) and insecticide(s) to be used, operator training, mode and frequency of application and measures to contain sprays within the facility boundary.

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

CONDITION 7 EMISSIONS AND ENVIRONMENTAL IMPACTS

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

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

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

7.4. Landfill Gas

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

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

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

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

a) in the case of landfill gas flare:

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

b) in the case of landfill gas combustion plant:

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

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

7.4.3.1. Continuous monitoring

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

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

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

7.4.3.2. Non-Continuous Monitoring

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

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

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

7.5. Emissions to Surface Water

7.5.1. Surface water discharges from the facility shall not result in a deterioration in the quality of the receiving waters.

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

7.6. There shall be no direct emissions to groundwater.

7.7. Disposal of Leachate

7.7.1. All leachate tankered from the facility shall be transported to Ballinasloe waste water treatment plant and disposed of there unless otherwise agreed in advance with the Agency. Disposal procedures for the leachate at the treatment plant shall be in accordance with any written requirements of the Sanitary Authority.

7.7.2. Leachate shall not be discharged to any rivers or streams in the area.

7.8. The trigger levels for TSP and PM10 from the facility measured at any location on the boundary of the facility are:

- TSP concentrations greater than 150µg/m3 for a daily sample,
- PM10 greater than 50µg/m3 for a daily sample.

7.9. Emissions to Sewer

7.9.1. Unless otherwise agreed in advance with the Agency, the following conditions shall apply for leachate discharged to Ballinalsoe Waste Water Treatment Plant.

i) No substance shall be present in emissions to sewer in such concentrations as would constitute a danger to sewer maintenance personnel working in the sewerage system, or as would be damaging to the fabric of the sewer, or as would interfere with the biological functioning of a downstream wastewater treatment works.

ii) No discharge or emission to sewer shall take place which gives rise to any reaction within the sewer or to the liberation of by-products which may be of environmental significance.

iii) The licensee shall ensure that the discharge shall not contain dissolved methane, petroleum spirits or organic solvents (including chlorinated organic solvents), at concentrations which would give rise to flammable or explosive vapours in the sewer.

iv) Non-trade effluent wastewater (e.g. firewater, accidental spillage) which occurs on-site shall not be discharged to the sewer without the prior authorisation of the Sanitary Authority.

v) The licensee shall provide and maintain an inspection chamber in a suitable position in connection with each pipe through which a discharge or emission is being made. Each such inspection chamber or manhole shall be constructed and maintained by the licensee so as to permit the taking of samples of the discharge.

vi) The acute toxicity of the undiluted final 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. A proposal for leachate toxicity testing including the name of the laboratory shall be submitted to the Agency for its agreement within three months of the date of grant of this licence.

vii) Having identified the more sensitive species, subsequent compliance monitoring on the two most sensitive species shall be undertaken by the laboratory agreed in accordance with Condition 7.9.1 vi) at the frequency specified in Table F.4.3.

7.10. Emission limit values for emissions to sewer in this licence shall be interpreted in the following way:-

7.10.1. Continuous monitoring

7.10.1.1. No flow value shall exceed the specified limit.

7.10.2. Non-Continuous monitoring

7.10.2.1. 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.

7.10.2.2. 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 8 RESTORATION AND AFTERCARE

8.1. Unless otherwise agreed in advance or instructed by the Agency, the remediation of the existing waste facility shall be carried out in accordance with section 3.3.8 of the EIS (Vol. 2). Final Restoration and Aftercare Plans for the facility shall be based on the plan submitted as part of section 6.4 of the EIS (Vol. 2) which accompanied the waste licence application.

8.2. Proposals for the profile of the restored facility, which take account of the total tonnage of waste which is permitted to be deposited under this licence, must be submitted to the Agency within nine months of the date of grant of this licence.

8.3. Within six months of the date of grant of this licence, the licensee shall submit proposals for landfilling and restoration to achieve the final contours defined in Condition 8.2 to the Agency for its agreement.

8.4. Completed areas of the landfill shall be profiled so that no depressions exist in which water may accumulate. Any depressions arising after profiling shall be rectified by the emplacement of suitable capping or restoration materials.

8.5. No material or object that is incompatible with the proposed restoration of the facility shall be present within one metre of the final soil surface levels. No asbestos waste shall be present within 2.5 metres of the final surface levels.

8.6. Where tree planting is proposed to be carried out above waste-filled areas, a synthetic barrier shall be used to augment the clay cap. Topsoil and subsoil depths shall be a minimum of 1m unless otherwise agreed in advance with the Agency.

8.7. Unless otherwise agreed in advance with the Agency, landscaping as described in section 6.4 of the EIS (Vol. 2) shall be undertaken. The licensee shall submit, within six months of the date of grant of this licence, to the Agency for its agreement the timeframe for carrying out such works.

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

CONDITION 9 ENVIRONMENTAL MONITORING

9.1. The licensee shall carry out such monitoring and at such locations and frequencies as set out in Schedule F: Monitoring and as specified in the Conditions of this licence.

9.2. Within three months from the date of grant of this licence, the licensee shall submit to the Agency for its agreement, monitoring proposals to detect off-site migration of landfill gas.

9.3. Within nine months from the date of grant of this licence, the licensee shall install a permanent gas monitoring system in the administration building and any other buildings on the facility.

9.4. Within six months of the date of grant of this licence, proposals for the inclusion of all private wells, subject to the agreement of the well owners, within 500m of the facility, in the monitoring programme set out in Schedule F: Monitoring shall be submitted to the Agency for its agreement.

9.5. Leachate levels within the unlined area of the facility shall be monitored at monthly intervals beginning within two weeks of the installation of the boreholes required by Condition 4.16.2.

9.6. Within six months from the date of grant of this licence, the licensee shall submit a proposal to the Agency for its agreement specifying a monitoring programme for the flow in the streams to the north and south of the facility.

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

9.8. A minimum of two upgradient monitoring boreholes shall be installed within six months of the date of grant of this licence. One of these boreholes shall monitor the shallow groundwater in the peat and the other shall monitor the deeper groundwater in the gravels and bedrock.

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

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

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

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

9.13. Unless otherwise agreed with the Agency, a written record shall be kept (by the licensee) of the names, qualifications and a summary of relevant experience of all

persons who carry out all sampling and monitoring as required by this licence and who carry out the interpretation of the results of such sampling and monitoring.

9.14. A topographical survey including the void space shall be carried out within six months of the date of grant of this licence. It shall be repeated annually thereafter. The survey shall be in accordance with any written instructions issued by the Agency.

9.15. An annual biological assessment of the streams to the north and south of the facility shall be undertaken. This assessment shall use appropriate biological methods such as the EPA Q-rating system for the assessment of rivers and streams. The report shall include a drawing showing the location of monitoring points, each identified by a unique number and a twelve figure grid reference.

9.16. Prior to any development of the 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 and copied to the Agency.

9.17. Unless otherwise specified by this licence or agreed by the Agency, all environmental monitoring shall commence no later than two months after the date of grant of this licence.

9.18. Unless otherwise agreed in advance with the Agency, monitoring infrastructure which proves to be unsuitable for its purpose shall be replaced within three months of monitoring results indicating that the monitoring infrastructure is damaged or unsuitable.

9.19. Within six months of the date of grant of this licence, and annually thereafter, the licensee shall carry out a stability assessment of the side slopes of the facility and provide a report on that assessment to the Agency.

9.20. All landfill gas monitoring equipment used for monitoring landfill gas under the requirements of this licence shall be certified as being intrinsically safe.

9.21. Within six months of the date of grant of this licence, the licensee shall submit to the Agency an updated appropriately scaled drawing(s) showing the location of all the monitoring locations that are stipulated in this licence.

9.22. Within three months from the date of grant of this licence, the licensee shall submit to the Agency for its agreement twelve figure National Grid References for the various monitoring points given in Schedule F: Monitoring, that have no Grid References specified.

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

CONDITION 10 CONTINGENCY ARRANGEMENTS

10.1. The licensee shall, within six months of the date of grant of this licence, submit a written Emergency Response Procedure (ERP) to the Agency for its agreement. The ERP shall address any emergency situations which may originate on the facility and shall include provision for minimising the effects of any emergency on the environment.

10.2. Unless otherwise agreed with the Agency, Contingency Arrangements for the facility shall be as detailed in Attachment K of the licence application.

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

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

10.5. No waste shall be burnt within the boundaries of the facility. A fire at the facility shall be treated as an emergency. Immediate action shall be taken to extinguish it and the appropriate authorities notified. Fire extinguishers shall be provided on-site at all times.

10.6. Within six months of the date of grant of this licence, a proposal shall be made to the Agency for its agreement in respect of fire control measures at the facility.

10.7. In the event that monitoring of local wells and livestock water supplies indicates that the facility is having a significant adverse effect on the quantity and/or quality of the water supply, this shall be treated as an incident. The licensee shall submit to the Agency for its agreement and within a time specified in writing by the Agency, written proposals for the provision of an alternative supply of water to those affected.

10.8. In the event that monitoring should indicate contamination of the water in the surface water lagoon, the outlet penstock shall be closed and the contaminated water shall be pumped to the leachate collection chamber until such time as the source of the contamination has been identified and appropriate measures introduced to prevent further contamination of surface water.

10.9. Unless otherwise notified in writing by the Agency, in the event that any monitoring, sampling, complaints or observations indicate that an incident has, or may have, taken place, the licensee shall immediately:

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

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

c) isolate the source of the emission;

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

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

f) provide a proposal to the Agency for its agreement within one month to:

i) identify and put in place measures to avoid reoccurrence of the incident; and

ii) identify and put in place any other appropriate remedial action.

10.10. In the event that monitoring of the slide slopes of the facility indicate that there may be a risk of slope failure, this will be treated as an incident and a proposal for remediation action submitted to the Agency for its agreement within one month of the date of the monitoring being carried out.

10.11. The licensee shall carry out a risk assessment to determine the requirements at the facility for fire fighting and fire water retention facilities and shall, within six months from the date of grant of this licence submit a report, including recommendations on the risk assessment to the Agency for its agreement. The Chief Fire Officer of Galway County Council shall be consulted by the licensee during this assessment.

REASON: To Provide for the Protection of the Environment.

CONDITION 11 CHARGES AND FINANCIAL PROVISIONS

11.1 Agency Charges

11.1.1 The licensee shall pay to the Agency an annual contribution of £19,032 or such sum as the Agency from time to time determines, towards the cost of monitoring the activity or otherwise in performing any functions in relation to the activity, as the Agency considers necessary for the performance of its functions under the Waste Management Act, 1996. The licensee shall in 2001 and subsequent years, not later than January 31 of each year, pay to the Agency this amount updated in accordance with changes in the Consumer Price Index from the date of the licence to the renewal date. The updated amount shall be notified to the licensee by the Agency. For 2000, the licensee shall pay a pro rata amount from the date of this licence to 31st December 2000. This amount shall be paid to the Agency within one month of the date of grant of this licence.

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

11.2 Financial Provision for Closure, Restoration and Aftercare

11.2.1 The licensee shall from a date to be set by the Agency establish and maintain a fund or written guarantee, that is adequate to assure the Agency that the licensee is at all times financially capable of implementing the Restoration and Aftercare Plan required by Condition 8.1. The type of fund and means of its release/recovery shall be agreed by the Agency prior to its establishment.

11.2.2 The fund shall be maintained in an amount always sufficient to underwrite the current Restoration and Aftercare Plan.

11.2.3 The licensee shall revise the cost of restoration and aftercare annually and any details of the necessary adjustments to the fund must, within two weeks of the revision, be forwarded to the Agency for its agreement. Any adjustment agreed by the Agency shall be effected within four weeks of said written agreement.

11.2.4 Unless otherwise agreed any revision to the fund shall be computed using the following formula:

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.

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

SCHEDULE A :Waste Activities

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

Waste Management Act, 1996: Third Schedule [Note 1]	
Class 1.	**Deposit on, in or under land (including landfill):**
	This activity is limited to the landfilling of non-hazardous waste.
Class 2.	**Land treatment, including biodegradation of liquid or sludge discards in soils:**
	This activity is limited to the deposition of treated sludges and the re-circulation of leachate in lined cells.
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 a lagoon or collection chamber and the storage of surface water in a lagoon.
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 development of specifically engineered lined cells for the deposition of waste.
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 composting of green waste and treated sludges, and also the aerobic treatment of leachate on-site.
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 (including evaporation, drying and calcination):**
	This activity is limited to leachate treatment on-site.
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 and or compacting of waste.
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 was produced.**
	This activity is limited to the storage of wastes prior to treatment/final disposal off-site.

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

Waste Management Act, 1996: Fourth Schedule [Note 1]	
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 green waste and treated sludges.
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 diversion of inert and construction and demolition waste away from the waste stream.
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 to generate electrical power.
Class 10.	**The treatment of any waste on land with a consequential benefit for an agricultural activity or ecological system:**
	This activity is limited to the possible use of composted materials or peat as cover material or in

Waste Management Act, 1996: Fourth Schedule [Note 1]	
	restoration.
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 material as raw materials at the facility.
Class 12.	**Exchange of waste for submission to any activity referred to in a preceding paragraph of this Schedule:**
	This activity is limited to the exchange of waste in the future operation of 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 storage of waste prior to being recycled, re-used or reclaimed.

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

SCHEDULE B :Content of the Environmental Management Programme

Environmental Management Programme
Items specified to be contained in an Environmental Management Plan in the Landfill Operational Practices Manual published by the Agency, or otherwise as agreed with the Agency
Timescale for achieving the objectives and targets listed in the Schedule of Objectives and Targets
Designation of Responsibility for Achieving Targets and Objectives
Other items specified by the Agency

SCHEDULE C :Content of the Annual Environmental Report

Annual Environmental Report Content [NOTE 1]
Reporting Period.
Waste activities carried out at the facility.
Quantity and Composition of waste received, disposed of and recovered during the reporting period and each previous year.
Calculated remaining capacity of the facility and year in which final capacity is expected to be reached.
Methods of deposition of waste.
Summary report on emissions.
Summary of results and interpretations of environmental monitoring, including plans and any updates of all monitoring locations including 12 digit grid references.
Resource and energy consumption summary.
Proposed development of the facility and timescale of such development.
Volume of leachate produced and volume of leachate transported / discharged off-site.
Report on development works undertaken during the reporting period, and a timescale for those proposed during the coming year.
Report on restoration of completed cells/ phases.
Site survey showing existing levels of the facility at the end of the reporting period.
Estimated annual and cumulative quantities of landfill gas emitted from the facility.
Estimated annual and cumulative quantity of indirect emissions to groundwater.
Monthly water balance calculation and interpretation.
Schedule of Environmental Objectives and Targets for the forthcoming year.
Report on the progress towards achievement of the Environmental Objectives and Targets contained in previous year's report.
Full title and a written summary of any procedures developed by the licensee in the year which relates to the facility operation.
Tank, pipeline and bund testing and inspection report.
Reported incidents and Complaints summaries.
Review of Nuisance Controls.
Reports on financial provision made under this licence, management and staffing structure of the facility, and a programme for public information.
Any other items specified by the Agency.

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

SCHEDULE D :Recording and Reporting to the Agency

Table D.1 Recurring Reports

Report	Reporting Frequency [Note1]	Report Submission Date
Environmental Management System Updates	Annually	One month after the end of the year reported on.
Annual Environment Report (AER)	Annually	Thirteen months from the date of grant of licence and one month after the end of each year thereafter.

Record of incidents	As they occur	Within five days of the incident.
Bund, tank and container integrity assessment	Every three years	Six months from the date of grant of licence and one month after end of the three year period being reported on.
Specified Engineering Works reports	As they arise	Prior to the works commencing.
Monitoring of landfill gas	Quarterly	Ten days after end of the quarter being reported on.
Monitoring of Surface Water Quality	Quarterly	Ten days after end of the quarter being reported on.
Monitoring of Groundwater Quality	Quarterly	Ten days after end of the quarter being reported on.
Monitoring of Leachate	Monthly	Ten days after end of the quarter being reported on.
Meteorological Monitoring	Annually	One month after end of the year being reported on.
Dust Monitoring	Three times a year	Ten days after the period being reported on.
Noise Monitoring	Annually	One month after end of the year being reported on.
Any other monitoring	As they occur	Within ten days of obtaining results.

Note 1: Unless altered at the request of the Agency

SCHEDULE E : Specified Engineering Works

Specified Engineering Works
Development of Phases and future Cells of the facility including preparatory works and lining.
Landfill cap installation, including temporary and intermediate capping, installation and all other containment works (including any containment works relating to leachate control).
Fencing and site security works.
Construction of a perimeter bund.
Installation of Civic Waste Facility.
Installation of a wheelwash.
Installation of a weighbridge.
Improvement of the access route to the facility including the re-design of the Pollboy Road/Beechlawn Road junction.
Installation of a Waste Quarantine Area.
Installation of a weather station if required.
Upgrading of the Pollboy road and relevant junctions situated between the N6 and the facility.
Bunding of fuel and oil storage areas.
Installation of landfill gas management and monitoring systems.
Installation of leachate management, detection, storage, treatment, monitoring, recirculation and control systems.
Installation of alternative drinking water supplies.
Installation of groundwater control and/or monitoring systems.
Installation of a landfill gas permanent monitoring system in the facility buildings.
Provision of a compactor on the Civic Waste Facility only.

Surface water management works, including the construction of the surface water drain and the surface water lagoon.

Restoration and Aftercare works.

Any future composting of organic wastes.

Nuisance control measures.

Any other works notified in writing by the Agency.

SCHEDULE F : Monitoring

Monitoring to be carried out as specified below.

F.1 Landfill Gas

Landfill gas monitoring locations shall be agreed with the Agency within six months of the date of grant of this licence.

Table F.1.1 Landfill Gas Monitoring Frequency and Technique

Parameter	Monitoring Frequency		Analysis Method[Note1]/Technique[Note2]
	Gas Boreholes/ Vents/Wells	Site Office/Admin building	
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	Continuous	Standard
Temperature	Monthly	Continuous	Standard

Note1: All monitoring equipment used should be intrinsically safe.
Note 2: Or other methods agreed in advance with the Agency.

F.2 Dust

Dust monitoring locations shall be agreed with the Agency within six months of the date of grant of this licence.

Table F.2.1 Dust, TSP, and PM_{10} Monitoring Frequency and Technique

Parameter	Monitoring Frequency [Note 2]	Analysis Method/Technique
Dust ($mg/m^2/day$)	Quarterly	Standard Method[Note 1]
TSP (mg/m^3)	Quarterly	Standard Method[Note 3]
PM_{10}(mg/m^3)	Quarterly	See Note 3

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

Note 2: Twice during the period May to September, or as otherwise specified in writing by the Agency. With the agreement of the Agency monitoring can cease once landfill restoration is complete.

Note 3: As described in prEN12341 "Air Quality - field test procedure to demonstrate reference equivalence of sampling methods for PM10 fraction of particulate matter" or an alternative agreed in writing with the Agency.

F.3 Noise

Noise monitoring locations shall be those as set out in Table F.3.1 and of the parameters and frequencies outlined in Table F.3.2. The location of the monitoring location adjacent to the Traveller halting site shall be agreed with the Agency within two months of the date of grant of this licence.

Table F.3.1 Noise Monitoring Locations

STATION	EASTING	NORTHING
B1	185057.24E	229444.38N
B2	184866.97E	229414.00N
B3	184806.72E	228915.43N
NSL	185129.02E	229741.88N
Traveller Halting Site	To be agreed	To be agreed

Table F.3.2 Noise Monitoring 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."

F.4 Surface Water, Groundwater and Leachate

Surface water monitoring locations shall include streams to the north and south of the facility, both upstream and downstream, and include those as set out in Table F.4.1 and of the parameters and frequencies outlined in Table F.4.3. The location of the monitoring points at SW6 and the Surface Water Lagoon shall be agreed with the Agency within two months of the date of grant of this licence.

Table F.4.1 Surface Water Monitoring Locations

STATION	EASTING	NORTHING
SW1	185250.17E	229538.99N
SW2	184599.50E	228856.49N
SW3	184778.93E	228877.05N
SW4	185256.63E	228881.49N
SW5	185414.62E	228687.14N
SW6	To be agreed	To be agreed
Surface Water Lagoon	To be agreed	To be agreed

Groundwater monitoring locations shall be those as set out in Table F.4.2 and of the parameters and frequencies outlined in Table F.4.3. A minimum of two upgradient monitoring boreholes shall be installed within six months of the date of grant of this licence (see condition 9.8).

Table F.4.2 Groundwater Monitoring Locations

STATION	EASTING	NORTHING
B1AP	185326.62E	229335.15N
B1A	185307.39E	229192.06N
B2AP	185350.66E	229202.23N
B3AP	185402.09E	228909.38N
B3A	185383.12E	228896.20N
B5AP	185236.68E	228935.13N
B5A	185262.44E	228922.94N
B6A	185329.26E	229412.63N
B7AP	185098.96E	228879.70N
B7A	185069.40E	228866.52N
B8AP	185111.56E	229400.04N
B8A	185182.46E	229354.62N
Upgradient borehole	To be agreed	To be agreed
Upgradient borehole	To be agreed	To be agreed

Leachate monitoring locations shall be agreed with the Agency within six months of the date of grant of this licence and of the parameters and frequencies outlined in Table F.4.3.

Table F.4.3 Water and Leachate - Parameters /Frequency

Parameter [Note 1]	SURFACE WATER Monitoring Frequency	GROUNDWATER Monitoring Frequency	LEACHATE Monitoring Frequency
Visual Inspection/Odour [Note 2]	Weekly	Quarterly	Quarterly
Groundwater Level	Not Applicable	Monthly	Not Applicable
Leachate Level	Not Applicable	Not Applicable	Weekly
Ammoniacal Nitrogen	Quarterly [Note 6]	Monthly	Quarterly
BOD	Quarterly [Note 6]	Not Applicable	Quarterly
COD	Quarterly	Not Applicable	Quarterly
Chloride	Quarterly [Note 6]	Quarterly	Quarterly
Dissolved Oxygen	Quarterly [Note 6]	Quarterly	Not Applicable
Electrical Conductivity	Quarterly [Note 6]	Monthly	Quarterly
pH	Quarterly [Note 6]	Monthly	Quarterly
Total Suspended Solids	Quarterly [Note 6]	Not Applicable	Not Applicable
Temperature	Quarterly [Note 6]	Monthly	Quarterly
Boron	Not Applicable	Annually	Annually
Cadmium	Annually	Annually	Annually
Calcium	Annually	Annually	Annually
Chromium (Total)	Annually	Annually	Annually
Copper	Annually	Annually	Annually
Cyanide (Total)	Not Applicable	Annually	Annually
Fluoride	Not Applicable	Annually	Annually
Iron	Annually	Annually	Quarterly
Lead	Annually	Annually	Annually
List I/II organic substances [Note 3]	Note 8	Annually	Note 9
Magnesium	Annually	Annually	Annually
Manganese	Annually	Annually	Annually
Mercury	Annually	Annually	Annually
Potassium	Annually	Quarterly	Quarterly
Sulphate	Annually	Annually	Annually
Sodium	Annually	Quarterly	Quarterly
Total Alkalinity	Annually	Annually	Annually [Note 5]
Total Phosphorus / orthophosphate	Annually [Note 6]	Annually	Annually
Total Oxidised Nitrogen	Annually	Quarterly	Quarterly
Total Organic Carbon	Not Applicable	Quarterly	Not Applicable
Residue on evaporation	Not Applicable	Annually	Not Applicable
Zinc	Annually	Annually	Annually
Phenols	Not Applicable	Quarterly	Not Applicable
Faecal Coliforms [Note 4]	Not Applicable	Annually	Annually
Total Coliforms [Note 4]	Not Applicable	Annually	Annually
Biological Assessment	Annually [Note7]	Not Applicable	Not Applicable

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

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

Note 3: Samples screened for the presence of organic compounds using Gas Chromatography / Mass Spectrometry (GC/MS) or other appropriate techniques and using the list I/II Substances from EU Directive 76/464/EEC and 80/68/EEC as a guideline. Recommended analytical techniques include: volatiles (US Environmental Protection Agency method 524 or equivalent), semi-volatiles (US Environmental Protection Agency method 525 or equivalent, and pesticides (US Environmental Protection Agency method 608 or equivalent).

Note 4: If there is evidence of bacterial contamination, the analysis at up gradient and downgradient monitoring points should include enumeration of total bacteria at 22^{o}C and 37^{o}C and faecal streptococci.

Note 5: Only to be analysed in instances of on-site treatment of leachate.

Note 6: Discharge of diverted surface water/groundwater from the surface water lagoon shall be monitored on a weekly basis for these parameters unless flow in that week does not allow such monitoring.

Note 7: Appropriate biological methods (such as EPA Q-Rating System to be used for the assessment of rivers and streams).

Note 8: Once off for List I/II organic substances and thereafter as required by the Agency.

Note 9: Once off for List I/II organic substances and thereafter as required by the Agency.

F.5 Meteorological Monitoring

Table F.5.1 Meteorological Monitoring:
Data to be obtained from a location on the facility to be agreed with the Agency.

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

F.6 Landfill Gas Combustion Plant

Monitoring to be obtained at locations to be agreed with the Agency at least two months prior to the installation of a combustion plant.

Parameter	Monitoring Frequency	Analysis Method[Note1]/Technique[Note2]
Inlet		
Methane (CH_4) % v/v	Weekly	Infrared analyser/flame ionisation detector
Carbon dioxide (CO_2)%v/v	Weekly	Infrared analyser/ flame ionisation detector
Oxygen (O_2) %v/v	Weekly	Infrared analyser
Outlet		
Volumetric Flow rate	Biannually	Pitot Tube Method
SO_2	Biannually	Flue gas analyser
Nox	Biannually	Flue gas analyser
CO	Continuous	Flue gas analyser
Particulates	Annually	Isokinetic/Gravimetric
TA Luft Class I, II, III organics	Annually	Adsorption/Desorption / GC /GCMS (Note 3)
Hydrochloric acid	Annually	Impinger / Ion Chromatography
Hydrogen fluoride	Annually	Impinger / Ion Chromatography

Note1: All monitoring equipment used should be intrinsically safe.
Note 2: Or other methods agreed in advance with the Agency.
Note 3: Test methods should be capable of detecting acetonitrile, dichloromethane, tetrachlorethylene and vinyl chloride as a minimum.

F.7 Monitoring of Leachate Discharges

Emission Point Reference No.: To be agreed with the Agency.

Location: To be agreed with the Agency.

Table F.7.1 Sewer Monitoring - Parameters /Frequency

Parameter	Monitoring Frequency	Analysis Method/Technique Note 1
Flow	Quarterly	Flow meter / recorder
Biochemical Oxygen Demand	Quarterly	Standard Method Note 2
Chemical Oxygen Demand	Quarterly	Standard Method Note 2
Ammoniacal nitrogen	Quarterly	Standard Method Note 2
Suspended Solids	Quarterly	Gravimetric
Sulphates	Quarterly	Standard Method Note 2
pH	Quarterly	pH meter/recorder
Temperature	Quarterly	

Note 1: Or an equivalent method acceptable to the Agency.
Note 2: "Standards Methods for the Examination of Water and Wastewater", (prepared and published jointly by A.P.H.A., A.W.W.A & W.E.F) 19th Ed. 1995, American Public Health Association, 1015 Fifteenth Street, N.W., Washington DC 20005, USA".

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SCHEDULE G : Emission Limits

G.1 Noise Emissions: (Measured at the monitoring points indicated in **Table F.3.1**).

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

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

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

G.3 Dust Deposition Limits: (Measured at the monitoring points indicated in **Table F.2.1**).

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

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

G.4 Surface Water Discharge Limits: Measured at the surface water lagoon.

Level (Suspended Solids mg/l)
50

G.5 Emission Limits Values for Landfill Gas Utilisation Plant

Emission Point reference nos: (to be agreed with the Agency)
Location: Landfill Gas Combustion Plant and flarestacks
Volume to be emitted: $3000m^3$/hr
Minimum discharge height: 5m

Parameter	Emission Limit Value
Nitrogen oxides as (NO_2)	500 mg/m^3
CO	650 mg/m^3
Particulates	130 mg/m^3
TA Luft Organics Class I (Note 1)	20 mg/m^3 (at mass flows > 0.1 kg/hr)
TA Luft Organics Class II (Note 1)	100 mg/m^3 (at mass flows > 2 kg/hr)
TA Luft Organics Class III (Note 1)	150 mg/m^3 (at mass flows > 3kg/hr)
Hydrogen Chloride	50 mg/m^3 (at mass flows > 0.3 kg/h)
Hydrogen Fluoride	5 mg/m^3 (at mass flows > 0.05 kg/h)

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

G.6 Emission Limits for Leachate Being Discharged

Emission Point Reference No.: to be agreed
Grid Reference: to be agreed
Volume to be emitted: to be agreed Maximum in any one day: to be agreed with the UDC
Maximum rate per hour: to be agreed with the UDC

Parameter	Emission Limit Value		
	Grab Sample (mg/l)	Daily Mean Concentration (mg/l)	Daily Mean Loading (kg/day)
BOD	10,000	8,000	800
COD	30,000	2,400	240
Ammoniacal Nitrogen (NH_4-N)	50	-	5
Suspended solids	2,000	1,600	160
Sulphate	500	400	40
Detergents (as MBAs)	100	-	10
Fats, Oils, Grease	100	-	10
pH	5-10	-	-
Temperature	42^0C max	-	-

SCHEDULE H : Waste Acceptance

Table H.1 Waste Categories and Quantities

WASTE TYPE	MAXIMUM TONNES PER ANNUM
Municipal Solid Waste	70,000
Industrial Non-Hazardous	46,000
Sludge	4,000
TOTAL	120,000

Given by the Agency on the 29th day of March, 2000 .

Signed on behalf of the said Agency
on the 29th day of March, 2000 Breda Sheehan **Authorised Person**