

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

WASTE LICENCE

Waste Licence	77-1
Register Number:	
Licensee:	Cavan County Council
Location of Facility:	Corranure Landfill, Cootehill Road, Cavan, Co. Cavan.

INTRODUCTION

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

This licence is for the operation and development of an existing non-hazardous landfill at Corranure, Cavan, Co. Cavan.

The existing three-hectare unlined area will continue to receive waste for a further nine months. This area will then be capped and restored. During this period, an engineered lined area will be developed adjacent to the Existing Landfill. The lined landfill will be approximately 1.7 hectares in extent. It is envisaged that it will receive waste until 2008. Associated infrastructure, including a Civic Waste Facility, shall be located on the remaining 4.2 hectares of the site.

The waste intake for disposal at the landfill is limited to 30,050 tonnes per annum. An additional two thousand tonnes of biodegradable waste per annum may be composted subject to the agreement of the Agency.

The licensee must manage and operate the facility to ensure that the activities do not cause environmental pollution. The licensee has to carry out regular environmental monitoring and submit all monitoring results and reports on the development, operation and management of the facility, to the Agency. The conditions of this licence set out in detail the legal constraints under which Cavan County Council is allowed to operate and manage Corranure Landfill.

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Reasons for the Decision

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

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

Part I Activities Licensed

In pursuance of the powers conferred on it by the Waste Management Act, 1996, the Environmental Protection Agency (the Agency), under Section 40(1) of the said Act hereby grants this Waste Licence to Cavan County Council to carry on the waste activities listed below at Corranure Landfill, Cootehill Road, Cavan 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). This activity is limited to the disposal of waste (other than treated sludges) into the Existing Landfill for a specified period.
Class 4.	Surface impoundment, including placement of liquid or sludge discards into pits, ponds or lagoons: This activity is limited to the disposal of treated sludges accepted at the facility into pits within the Landfill Extension and the storage of leachate at the facility.
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 deposit of waste in the Landfill Extension.
Class 11.	Blending or mixture prior to submission to any activity referred to in a preceding paragraph of this Schedule. This activity is limited to the mixing of treated sludge with other materials prior to disposal within the Landfill Extension.
Class 12.	Repackaging prior to submission to any activity referred to in a preceding paragraph of this Schedule. This activity is limited to the repackaging of waste accepted at the Civic Waste Facility for disposal at the facility, and the dispatch of unacceptable wastes to alternative disposal facilities which have been agreed with the Agency.
Class 13.	Storage prior to submission to any activity referred to in a preceding paragraph of this Schedule, other than temporary storage, pending collection, on the premises where the waste concerned is produced. This activity is limited to the temporary storage prior to disposal within the facility of waste accepted at the Civic Waste Facility for disposal, and the temporary storage of unacceptable wastes in the waste quarantine area prior to dispatch from the facility.

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

Class 1.	Solvent reclamation or regeneration: This activity is limited to the recovery of solvents from household waste, subject to the prior agreement of the Agency, at the Civic Waste Facility.
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 recovery of paper, cardboard, timber, green waste, plastics and any other wastes agreed by the Agency at the Civic Waste Facility, and the composting of biodegradable waste at a composting area (subject to a maximum of 2,000 tonnes per annum unless otherwise agreed in advance with the Agency).
Class 3.	Recycling or reclamation of metals and metal compounds: This activity is limited to the recovery of waste at the Civic Waste Facility.
Class 4.	Recycling or reclamation of other inorganic materials: This activity is limited to the recovery of glass, clothing and other inorganic wastes at the Civic Waste Facility.
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 use of recovered materials in the restoration of the facility.
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 recovered materials (e.g. C& D waste) for development/restoration purposes.
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 activities associated with the Civic Waste Facility and the temporary storage of recovered materials for use in development and/or restoration purposes.

INTERPRETATION

Access Road	The road between the facility entrance and the weighbridge as show on drawing number CORR/REPL/04 of the application.
Aerosol	A suspension of solid or liquid particles in a gaseous medium.
Adequate lighting	20 lux measured at ground level.
Agreement	Agreement in writing.
Annually	At approximately twelve monthly intervals.
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.
Biodegradable waste	Any waste that is capable of undergoing anaerobic or aerobic decomposition, such as food and garden waste, and paper and paperboard.
Cleansing Waste	Street cleaning residues.
Condition	A condition of this licence.
Containment boom	A boom which can contain spillages and prevent these from entering drains or watercourses.
Corranure Stream	Also known as the Kinneypottle Stream.
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.
Daytime	8.00 a.m. to 10.00 p.m.
Documentation	Any report, record, result, data, drawing, proposal, interpretation or other document in written or electronic form which is required by this licence.
Drawing	Any reference to a drawing or drawing number means a drawing or drawing number contained in the application, unless otherwise specified in this licence.
Emergency	Those occurrences detailed in Condition 10.1.
Emission	As defined in Section 5 (1) of the Act.
Emission Limits	Those limits, including concentration limits and deposition levels established in <i>Schedule F: Emission Limits</i> of this licence.

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.
Existing Landfill	The existing unlined landfill area as shown on drawing number CORR/REPL/04 of the application.
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.
Landfill Extension	Lined Cells 1 and 2 as shown on drawing number CORR/REPL/04 of the application.
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. Leachate may also include sewage effluent from the facility office, run-off from the waste inspection/quarantine area, discharges from the wheelwash, run-off from any composting area and any other trade effluents agreed by the Agency.
LEL (Lower Explosive Limit)	The lowest percentage concentration by volume of a mixture of flammable gas with air which will propagate a flame at 25°C and atmospheric pressure.
Licence	A Waste Licence issued in accordance with the Act.
Licensee	Cavan County Council.
List I/II Organics	Substances classified pursuant to EC Directives 76/464/EEC and 80/68/EEC.
Liquid Waste	Any waste in liquid form and containing less than 2% dry matter.
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.
Night-time	10.00 p.m. to 8.00 a.m.
Noise Sensitive	Any dwelling house, hotel or hostel, health building, educational

Receptor	establishment, places of worship, or any other facility or area of high amenity which for its proper enjoyment requires the absence of noise at nuisance levels.
Oil Separator	Device installed according to the draft European standard prEN 858 (Installation for the separation of light liquids eg. oil and petrol).
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 <i>Schedule F: Emission Limits</i> of this licence.
Specified Engineering Works	Those engineering works listed in <i>Schedule D: Specified Engineering Works</i> 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.
Operational Day	8.00 a.m. to 5.30 p.m. Monday to Friday and 8.30 a.m. to 1.00 p.m. Saturdays.
Working Day (Environmental Protection Agency)	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 *Part I: Activities Licensed* and required by the licence.
- 1.2. For the purposes of this licence the facility means the area of land outlined in red on Drawing No. CORR/WLA/02 of the application. Any reference in this licence to "facility" shall mean the area thus outlined in red.
- 1.3. This licence is for the purposes of waste licensing under the Waste Management 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.
- 1.4. The quantity of wastes to be accepted for disposal at the landfill shall not exceed 30,050 tonnes per annum. Additionally 2,000 thousand tonnes per annum of biodegradable waste for composting may be accepted at the facility, unless otherwise agreed by the Agency. Waste, other than inert waste for the purpose of capping/restoration, shall only be accepted for disposal at the Existing Landfill until 31st October, 2001.
- 1.5. The waste types listed in Table H.1 of *Schedule H: Waste Acceptance* may be recovered and disposed of at the facility subject to the maximum quantities and other constraints listed therein.
- 1.6. No hazardous or liquid wastes or waste types listed in Table H.2 (excluding wastes covered by Table H.1 of *Schedule H: Waste Acceptance* and wastes which the Agency agrees may be recovered in the Civic Waste Facility) shall be accepted at the facility.
- 1.7. Waste Acceptance Hours and Hours of Operation
 - 1.7.1. Waste shall only be accepted at the facility between the hours of 8.30 a.m. to 4.30 p.m. Monday to Friday inclusive and 9.00 a.m. to 12.00 noon on Saturdays with the exclusion of Bank Holidays.
 - 1.7.2. The facility shall only be operated during the hours of 8.00 a.m. to 5.30 p.m. Monday to Friday and 8.30 a.m. to 1.00 p.m. on Saturdays with the exclusion of Bank Holidays.
 - 1.7.3. Treated industrial and treated sewage sludges shall only be accepted at the facility between the hours of 9.00 a.m. and 2.00 p.m. Monday to Friday inclusive with the exclusion of Bank Holidays.
- 1.8. 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 or not 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.

- 1.9. 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 timescales fixed by the Agency but shall not be undertaken without the agreement of the Agency.

Reason: To clarify the scope of this licence.

CONDITION 2 MANAGEMENT OF THE ACTIVITY

2.1 Management Structure

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

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

2.1.2 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.

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

2.1 Environmental Management System

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

2.2.2 The EMS shall include as a minimum those elements specified in the Conditions 2.1 and 2.3 to 2.7 below:

2.3 Schedule of Environmental Objectives and Targets

- 2.3.1 The licensee shall, within twelve months from the date of grant of this licence, submit to the Agency for its agreement a Schedule of Objectives and Targets. The objectives should be specific and the targets measurable.
- 2.3.2 The Schedule shall address a five year period as a minimum and shall be reviewed and submitted annually to the Agency for its agreement.
- 2.4 Environmental Management Programme
- 2.4.1 The licensee shall, within twelve months from the date of grant of this licence, submit to the Agency for its agreement an Environmental Management Programme (EMP). The EMP shall include a time-scale for achieving the Schedule of Objectives and Targets and shall comply with any other guidance issued by the Agency.
- 2.4.2 The EMP shall include, as a minimum, the information specified in *Schedule A: Content of the Environmental Management Programme*. The EMP shall be reviewed and submitted to the Agency for its agreement annually.
- 2.5 Corrective Action
- 2.5.1 Within six months of the date of grant of this licence the licensee shall establish and maintain written Corrective Action Procedures to ensure that corrective action is taken should specified requirements of this licence not be fulfilled.
- 2.6 Awareness and Training
- 2.6.1 Within six months of the date of grant of this licence 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.
- 2.7 Communications
- 2.7.1 Within six months of the date of grant of this licence, the licensee shall submit to the Agency for its agreement a Communications Programme to ensure that members of the public can obtain information concerning the environmental performance of the facility at all reasonable times.
- 2.8 Annual Environmental Report
- 2.8.1 The licensee shall submit to the Agency for its agreement, within thirteen months from the date of grant of this licence, and within one month of the end of each year thereafter, an Annual Environmental Report (AER).
- 2.8.2 The AER shall include as a minimum the information specified in *Schedule B: Content of Annual Environmental Report* and shall be prepared in accordance with any relevant written guidance issued by the Agency.

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 does not comply with the requirements of this licence;
 - c) any trigger level specified in this licence which is attained or exceeded;
 - d) any indication that environmental pollution has, or may have, taken place; and,
 - e) any emergency.
- 3.2 The written record shall include all aspects described in Condition 10.7(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 a.m. 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 Northern Regional Fisheries Board as soon as practicable and in any case not later than 10.00 a.m. 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 by this licence; and
 - (g) in the case of results of any environmental monitoring, be accompanied by a written interpretation setting out their significance.

- 3.6 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 C: 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 or records in electronic format for each load of waste arriving at the facility other than waste accepted at the Civic Waste Facility. The licensee shall record the following:
- a) the date;
 - b) the name of the carrier (including if appropriate, the waste carrier registration details);
 - c) the vehicle registration number;
 - d) the name of the producer(s)/collector(s) of the waste as appropriate;
 - e) the name of the waste facility (if appropriate) from which the load originated including the waste licence or waste permit register number;
 - f) a description of the waste including the associated EWC codes;
 - g) the quantity of the waste, recorded in tonnes (or an estimate, prior to the installation of the weighbridge required by Condition 4.8);
 - h) the name of the person checking the load; and,
 - i) 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 or records in electronic format 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 or records in electronic format 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.

- 3.13 The licensee shall assign and clearly label a unique reference code to each container at the Civic Waste Facility. A written record or records in electronic format shall be kept for each load of waste departing from the Civic Waste Facility including any load which is landfilled at the facility. The following shall be recorded:
- a) the date on which filling of the container commenced;
 - b) the date on which the container was filled;
 - c) the name of the carrier;
 - d) the vehicle registration number;
 - e) the destination of the waste (facility name and waste licence/permit number as appropriate);
 - f) a description of the waste (if recovered or rejected waste, the specific nature of the waste);
 - g) the quantity of waste, recorded in tonnes;
 - h) the name of the person checking the load; and,
 - i) the time and date of departure.
- 3.14 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 prior to the commencement of the licensed activities in the Landfill Extension or as instructed by the Agency.
- 4.2 Site Notice Board
- 4.2.1 Within three months of the date of grant of this licence, the licensee shall provide and maintain a Site Notice Board on the facility so that it is legible to persons outside the main entrance to the facility. The minimum dimensions of the identification board shall be 1200 mm by 750 mm.
- 4.2.2 The board shall clearly show:
- a) the name and telephone number of the facility;
 - b) the normal hours of opening;
 - c) the name, address and telephone number of the licence holder;
 - d) an emergency out of hours contact telephone number;
 - e) the name, address and telephone number of the operator of the facility;
 - f) the licence reference number; and,
 - g) where and when environmental monitoring information relating to the facility can be obtained.

4.3 Site Security

- 4.3.1 Security and stockproof fencing as proposed by the applicant shall be installed and maintained along the facility boundary. The facility entrance shall be located as shown in drawing number CORR/REPL/04. An additional gate for maintenance purposes only may be provided in the southwest corner of the Existing Landfill. 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 operational day; and,
 - b) a repair to the standard of the original gates and/or fencing shall be undertaken within three operational days.
- 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.
- 4.4.2 All internal roads and hardstanding areas associated with the Reception Area as outlined in section 3.4.1 of the EIS, Volume 2, shall be paved and maintained in accordance with the further information supplied to the Agency on 27th July 2000.
- 4.4.3 The unpaved service road shall be constructed in accordance with the further information supplied to the Agency on 27th July 2000.
- 4.4.4 Unless otherwise agreed in advance with the Agency traffic control including signage within the facility shall be as shown on drawing number CORR/REPL/04 of the waste licence application.
- 4.5 The licensee shall provide and maintain an office at the facility. The office shall be constructed and maintained in a manner suitable for the processing and storing of documentation.
- 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 Waste Inspection/Quarantine
- 4.7.1 A Waste Inspection Area and a Waste Quarantine Area shall be provided and maintained at the facility.
- 4.7.2 The licensee shall ensure that these areas shall be constructed and maintained in a manner suitable, and be of a size appropriate, for the inspection of waste and subsequent quarantine if required. The waste inspection area and the waste quarantine area shall be suitably and clearly segregated from each other.
- 4.7.3 Drainage from these areas shall be directed to the Leachate Storage Lagoon.
- 4.8 The licensee shall provide and maintain a weighbridge at the facility.
- 4.9 Wheel Cleaning
- 4.9.1 The licensee shall establish and maintain a wheelwash/dry wheel shake out at the facility.
- 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 or to a skip. The wheelwash wastewater shall drain only to the Leachate Storage Lagoon.

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

4.11 Sewage

4.11.1 Sewage arising on-site shall be collected in the Leachate Storage Lagoon.

4.12 Storage Areas

4.12.1 All tank and drum storage areas (including fuel storage areas) shall be rendered impervious to the materials stored therein. In addition, tank and drum storage areas (including fuel 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 their installation and prior to their use. This testing shall be carried out by the licensee at least once every three years thereafter and reported to the Agency on each occasion. The licensee shall also submit to the Agency for its agreement in each case a written report on the storage of fuels at the facility. A written record of all integrity tests and any maintenance or remedial work arising from them shall be maintained by the licensee.

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

4.13 Specified Engineering Works

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

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

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

a) a description of the works;

b) as-built drawings of the works;

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

- d) where relevant a drawing and sections showing the location of all samples and tests carried out;
- e) where relevant daily records sheets/diary;
- f) name(s) of contractor(s)/individual(s) responsible for undertaking the engineering works;
- g) name(s) of individual(s) responsible for supervision of works and for quality assurance validation of works;
- h) records of any problems and the remedial works carried out; and
- i) any other information requested in writing by the Agency.

4.14 Landfill Lining

- 4.14.1 The landfill liner for all cells in the Landfill Extension 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 2 mm thick high density polyethylene (HDPE) layer (or equivalent protection as agreed by the Agency). The side walls shall be designed and constructed to achieve an equivalent protection.
- 4.14.2 Formation levels of the cells shall be as shown on Drawing No. CORR/REPL/04 of the waste licence application.
- 4.14.3 No pipework shall breach the landfill liner.

4.15 Leachate Management

- 4.15.1 The licensee shall provide and maintain a Leachate Storage Lagoon at the facility to facilitate the storage of leachate abstracted/collected from the waste in both the Existing Landfill and the Landfill Extension. The leachate storage lagoon shall be lined in accordance with Condition 4.14.1. Prior to the completion of the Leachate Storage Lagoon, leachate collected from the Existing Landfill shall be pumped directly to Cavan Wastewater Treatment Plant.
- 4.15.2 Within twelve months of the date of grant of this licence, the licensee shall install a leachate interceptor drain around the Existing Landfill as shown on Figure 3.4 of the Environmental Impact Statement, Volume 2.
- 4.15.3 Within twelve months of the date of grant of this licence, the licensee shall install and maintain a system for the active extraction of leachate from the Existing Landfill.
- 4.15.4 Four leachate monitoring boreholes shall be provided in the Existing Landfill within twelve months of the date of grant of this licence. Each cell in the Landfill Extension shall have a minimum of two leachate monitoring points. These boreholes shall also be capable of monitoring landfill gas. The boreholes in the Existing Landfill shall also be designed to provide for the active extraction of leachate.
- 4.15.5 The liner in the Landfill Extension shall be overlain by a leachate collection layer at least 50 centimetres deep. The collection layer shall have a minimum hydraulic conductivity of 1×10^{-3} metres per second. Leachate collection pipework shall be perforated, smooth bore, laid to a self-cleansing gradient and shall be installed in a manner which facilitates their maintenance.
- 4.15.6 Leachate levels in the waste shall not exceed a level of 1.0 m over the top of the liner.

- 4.15.7 The frequency of leachate removal/discharge from the leachate storage lagoon shall be such that a minimum freeboard of 0.75 m shall be maintained in the leachate storage lagoon at all times. A minimum leachate storage capacity of seven days shall be provided.
- 4.15.8 Unless otherwise agreed with the Agency, leachate stored in the leachate storage lagoon shall be pumped to Cavan Waste Water Treatment Plant as shown on drawing number CORR/REPL/02. The leachate lagoon shall also be designed to facilitate removal of leachate by road tanker.
- 4.15.9 The licensee shall develop Operational Procedures for the handling of leachate during removal from the lagoon and subsequent transport/discharge to the Waste Water Treatment Plant.
- 4.15.10 Recirculation of leachate or other contaminated water shall not be undertaken without the prior agreement of the Agency and shall only be undertaken within cells which have been lined to the satisfaction of the Agency.
- 4.15.11 All pumps associated with the leachate management system shall be provided on a 100% duty and 50% standby basis.
- 4.15.12 All leachate management structures on-site shall be inspected and certified fit for purpose on an annual basis by an appropriately qualified chartered engineer. Any remedial works recommended in this report must be implemented within a time-scale to be agreed with the Agency. Within three months of the date of grant of this licence, the licensee shall demonstrate the integrity of the pipeline from the landfill to the existing sewer network.

4.16 Landfill Gas Management:

- 4.16.1 Within fifteen months of the date of grant of this licence, a system for the active collection and flaring of landfill gas (from the Existing Landfill and Landfill Extension) shall be installed at the facility. The flare shall be of an enclosed type design and shall comply with the emission limits in *Schedule F: Emission Limits* of this licence.
- 4.16.2 Flare unit efficiency shall be tested once it is installed and once every three years thereafter.
- 4.16.3 The licensee shall maintain all gas wells, pipework, valves, pumps, flares and other infrastructure that form part of the landfill gas management scheme in a safe and fully operational manner.
- 4.16.4 All buildings constructed on the facility shall have regard to the guidance given in the Department of Environment's 1994 publication "Protection of New Buildings and Occupants from Landfill Gas" and any subsequent revisions.
- 4.16.5 Until the installation of the landfill gas flare passive landfill gas management at the facility shall be carried out. Landfill Gas management and infrastructure shall meet the recommendations given in the Agency Manual on "Landfill Operational Practices" (1997).
- 4.16.6 Within twenty four months of the date of grant of licence, the licensee shall submit an assessment of whether the utilisation of landfill gas as an energy resource is feasible. If feasible such a system shall be installed within a timeframe agreed with the Agency.

4.17 Capping

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

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

4.17.2 The Existing Landfill shall be permanently capped within twelve months of cessation of filling. Filled cells in the Landfill Extension shall be permanently capped within twelve months of the cells having been filled to the required level.

4.17.3 The licensee shall provide an annual 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.

4.18 Landscaping, Capping and Restoration Material Storage

4.18.1 The licensee shall provide adequate storage of landscaping, capping and restoration materials at the facility. The storage of soils shall be in such a manner as to maximise the preservation of the soil structure for future use within the facility.

4.19 Surface Water Management

4.19.1 The licensee shall ensure effective control of surface water run off from the facility during construction, operation and restoration.

4.19.2 Unless otherwise agreed with the Agency and within twelve months of the date of grant of this licence, surface water management at the Existing Landfill, including the diversion of Corranure Stream, shall be carried out as described in the further information supplied to the Agency on 27th July 2000. The diversion shall be designed so as to prevent leachate seepage from the Existing Landfill into Corranure Stream.

4.19.3 Prior to the commencement of the licenced activities in the Landfill Extension, the licensee shall submit to the Agency for its agreement a surface water management programme for both the Landfill Extension and all the infrastructure shown in drawing number CORR/REPL/04 of the waste licence application.

4.20 Groundwater Management

4.20.1 At least one month prior to the commencement of waste disposal in the proposed Landfill Extension, the licensee shall provide one monitoring point in the groundwater inflow region and two monitoring points in the groundwater outflow region of the facility. These boreholes shall be designed to also facilitate landfill gas monitoring.

4.21 Civic Waste Facility

- 4.21.1 Within twelve months of the date of grant of this licence, the licensee shall provide and maintain a Civic Waste Facility at the facility.
- 4.22 Facility Boundary /Perimeter Planting
- 4.22.1 The licensee shall carry out perimeter planting at the facility within twelve months of the date of grant of this licence.
- 4.22.2 A perimeter bund shall be constructed at the facility as shown in drawing number CORR/REPL/04 and as described in the further information supplied to the Agency on 27th July 2000. This perimeter bund shall form part of the Buffer Zone as described in the Environmental Impact Statement, Volume 2, section 3.4.1 of the application. The phasing of the construction of the perimeter bund shall be in accordance with Phases 1 and 2 of the construction schedule set forth in the Environmental Impact Statement, Volume 2, section 3.4.3. Each phase of the perimeter bund shall be planted as described during the first planting season following construction.
- 4.23 Access Road
- 4.23.1 Waste shall not be accepted at the Landfill Extension until the road improvements to the R188 Regional Road described in the additional information submitted to the Agency on 27th July 2000 have been implemented.
- 4.24 The licensee shall provide and maintain a fixed benchmark referenced in situ to Ordnance Datum (Malin Head) within three months of the date of grant of this licence. All elevations thereafter shall be reported in metres above Ordnance Datum (Malin Head).
- 4.25 Within three months of the date of grant of this licence, the licensee shall provide an alternative agreed source of potable water to the residence served by the well PW5 (as identified in the further information supplied to the Agency on 3rd May 2000) unless agreed otherwise by the Agency.
- 4.26 Composting Area
- 4.26.1 Run-off from any composting area shall be directed to the Leachate Storage Lagoon.

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

CONDITION 5 WASTE MANAGEMENT

5.1. Waste Acceptance Procedures

- 5.1.1. The licensee shall develop detailed written procedures for the acceptance and handling of all wastes, including unacceptable and hazardous wastes.
- 5.1.2. All wastes shall be checked at the working face to ensure that they comply with the requirements of the licence.
- 5.1.3. Waste loads shall be inspected at regular intervals in the Waste Inspection Area and the frequency of such inspections shall be specified in the waste acceptance procedures. A record of all inspections shall be maintained.
- 5.1.4. Eluate and toxicity testing by standardised and internationally accepted procedures and carried out by a competent laboratory shall be performed on a minimum of two samples per annum for all industrial sludges being accepted at the facility and the results shall be included in the AER.
- 5.1.5. Any wastes deemed to be in contravention of this licence and/or unsuitable for recovery or disposal at this facility shall be removed for recovery or disposal at an appropriate alternative facility. Such waste shall be stored in the Waste Quarantine Area only.

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

5.3. Scavenging shall not be permitted at the facility.

5.4. Access to the facility for waste recovery/disposal purposes by members of the public shall be restricted to the Civic Waste Facility.

5.5. 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;
- 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 operational day;
- d) the working face of the operational cell shall, at the end of each operational day, be covered with material suitable to minimise any nuisances occurring;
- e) temporary capping shall be a layer of soil at least 0.5 metre deep;
- f) within three months of the date of grant of this licence, cover material shall be placed across the Existing Landfill (other than the working face) so that no waste other than cover material or material suitable for specified engineering works is exposed; and,
- g) 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 operational day.

- 5.6. The filling sequence for the Landfill Extension shall be Cell 1 first followed by Cell 2, as outlined in drawing number CORR/REPL/04 of the application.
- 5.7. Sludge
- 5.7.1. Treated sludges shall only be disposed of into lined cells in the Landfill Extension. All sludges shall be treated as difficult wastes and disposed of into trenches and covered immediately with other waste as specified in the Agency's Landfill Operational Practices manual (1997).
- 5.7.2. From 1st January, 2005 this practice is to stop and no sludge shall be accepted or deposited after that date.
- 5.8. 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.
- 5.9. 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.
- 5.10. Wastes once deposited and covered shall not be excavated, disturbed or otherwise picked over without prior agreement from the Agency.
- 5.11. No smoking shall be allowed on the facility (other than in the facility office as shown on Drawing No. CORR/REPL/04 of the waste licence application).
- 5.12. Recovery
- Within six months of the date of grant of this licence, a report shall be submitted to the Agency on:
- 5.12.1. the recovery of inert waste, including Construction and Demolition Waste, for cover/development/restoration purposes; and,
- 5.12.2. the recovery of other wastes, including additional wastes that may be recovered at the Civic Waste Facility.
- 5.13. Waste sent off-site for recovery or disposal shall only be conveyed to a waste contractor agreed by the Agency. The ultimate recovery or disposal facility for all wastes shall be agreed in advance with the Agency. All wastes removed off-site for recovery or disposal shall be transported from the facility to the consignee in a manner which will not adversely affect the environment.
- 5.14. Civic Waste Facility
- a) Only household waste, commercial waste and those recyclable waste types outlined in the application (glass, cans, cardboard and waste oil) shall be accepted at the Civic Waste Facility unless subject to the prior agreement of the Agency.
- b) 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.
- c) All tipping of waste will be either into a receptacle for recovery or disposal, or in the case where inspection is required, into a designated inspection area.
- d) At the end of the operational day the floor of the Civic Waste Facility shall be cleaned of all waste.

- e) Unless subject to the prior written agreement of the Agency, a maximum of 3 enclosed waste containers containing waste for disposal (including sealed containers of compacted waste), shall be stored on the facility overnight. These containers shall be stored at areas clearly designated for the purpose.

5.15. Composting Area

- 5.15.1. Prior to any composting of waste at the facility, the licensee shall submit a composting proposal to the Agency for its agreement.
- 5.15.2. A maximum of 1000 cubic metres of compost shall be located on the facility at any one time.
- 5.15.3. Unless otherwise agreed with the Agency, only source segregated organic (i.e. kitchen and garden) waste, green waste and compost shall be used in the operation of the organic waste composting facility.
- 5.15.4. All wastes accepted at the organic waste composting unit shall be introduced into the compost process within 24 hours of delivery.
- 5.15.5. No waste shall be left uncovered in the composting area from the close of operation on Saturday until Monday morning opening unless otherwise agreed with the Agency.
- 5.15.6. The licensee shall maintain a daily written record of temperature and turning of the compost.
- 5.15.7. Compost shall meet the quality criteria set out in *Schedule G: Compost Quality* of this licence.

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 litter, vermin, birds, flies, mud, dust and odours. Written records shall be made of all inspections, their findings 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. Subject to Condition 5.5, the measures and infrastructure as described in section 6.8.5 of the Environmental Impact Statement, Volume 2, shall be applied to control litter at the facility unless agreed otherwise by the Agency.
 - 6.3.2. All litter control infrastructure shall be inspected on a daily basis and the licensee shall remedy any defect in the litter netting as follows:
 - a) a temporary repair shall be made by the end of the operational day; and,
 - b) a repair to the standard of the original netting shall be undertaken within three operational days or as otherwise agreed with the Agency.

- 6.3.3. Prior to the commencement of the licenced activities in the Landfill Extension the licensee shall develop procedures for the operation of the facility in adverse wind conditions.
- 6.3.4. All loose litter accumulated within the facility and its environs, excluding that which is deposited at 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 10.00 a.m. of the next operational 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.
- 6.7. 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. Prior to the date of commencement of the licenced activities in the Landfill Extension, the licensee shall establish a bird control programme. This programme shall include:
- a) bird control measures in addition to those proposed in section 6.8.4 of the Environmental Impact Statement, Volume 2;
 - b) method for assessing the effectiveness of bird control 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 the Environmental Impact Statement, Volume 2.

Reason: To provide for the control of nuisance.

CONDITION 7 EMISSIONS AND ENVIRONMENTAL IMPACTS

- 7.1. No specified emission from the facility shall exceed the emission limit values set out in *Schedule F: Emission Limits* of this licence. There shall be no other emissions of environmental significance.
- 7.2. All treatment/abatement and emission control equipment shall be calibrated and maintained, in accordance with the instructions issued by the manufacturer/supplier or installer. Written records of the calibrations and maintenance shall be made and kept by the licensee.

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

7.4. Landfill Gas

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

- a) Methane, greater than or equal to 1.0% v/v; and
- b) Carbon dioxide, greater than or equal to 1.5% v/v.

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

a) in the case of landfill gas flare:

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

b) in the case of landfill gas combustion plant (where relevant):

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

- 7.5.2. All surface water run-off from paved areas which does not drain to the leachate storage lagoon shall undergo Class I full-retention oil separation treatment prior to discharge to receiving waters .
- 7.5.3. The drainage system, bunds, sediment traps and oil separators shall be inspected weekly, desludged as necessary and properly maintained at all times. All sludge and drainage from these operations shall be collected for safe disposal at an appropriate facility. A written record shall be kept of the inspections, desludging, cleaning, disposal of associated waste products, maintenance and performance of the interceptors, bunds and drains.
- 7.6. There shall be no direct emissions to groundwater from the Landfill Extension.
- 7.7. Emissions to Sewer

Unless otherwise agreed in advance with the Agency and the Sanitary Authority, the following conditions shall apply for the discharge of leachate from the Leachate Storage Lagoon to Cavan Wastewater Treatment Plant. There shall be no other discharge or emission of environmental significance.

- 7.7.1. Monitoring and analyses of each discharge or emission to sewer shall be carried out as specified in *Schedule E.7: Monitoring of Emissions to Sewer* of this licence.
- 7.7.2. 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.
- 7.7.3. The licensee shall permit authorised persons of the Agency and the Sanitary Authority to inspect, examine and test, at all reasonable times, any works and apparatus installed, in connection with the discharge or emission, and to take samples of the discharge or emission.
- 7.7.4. 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.
- 7.7.5. 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.
- 7.7.6. 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.
- 7.7.7. 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.

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

CONDITION 8 RESTORATION AND AFTERCARE

- 8.1. The Restoration and Aftercare Plans for the facility shall be based on the plan submitted in Appendix G of the Environmental Impact Statement, Volume 3, of the application and the information contained in section 3.4.10 of the Environmental Impact Statement, Volume 2, subject to the conditions of this licence.
- 8.2. The restoration of the Existing Landfill shall be completed within twenty four months of the date of grant of this licence, unless otherwise agreed with the Agency. Restoration of the Landfill Extension cells shall be completed within twelve months of the completion of the permanent cap.
- 8.3. The height of the landfill shall not exceed 129.5mOD (Malin Head).
- 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.
- 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. Within nine months of the date of grant of this licence a detailed landscaping plan shall be submitted to the Agency for its agreement for the establishment of tree and wildflower areas referred to in Appendix G of the Environmental Impact Statement, Volume 3 of the application. The plan shall contain proposals for the planting of trees and shrubs, seeding of other areas, details of leachate and gas management/monitoring points (including method of access), site security measures and any other matter notified in writing by the Agency.

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

CONDITION 9 ENVIRONMENTAL MONITORING

- 9.1. The licensee shall carry out such monitoring and at such locations and frequencies as set out in *Schedule E: Monitoring* of this licence and as specified in the Conditions of this licence.
- 9.2. 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.
- 9.3. 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 such that monitoring can be carried out successfully.
- 9.4. 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.

- 9.5. 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.
- 9.6. 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.
- 9.7. 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.
- 9.8. 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.
- 9.9. Development
 - 9.9.1. A topographical survey including the void space shall be carried out within three 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.
 - 9.9.2. Within twelve 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. In relation to the Existing Landfill, the first stability assessment shall include recommendations on the integration of the capping/restoration layer required by this licence so as to ensure side slope stability following restoration.
 - 9.9.3. Prior to any development of an 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.
- 9.10. Surface Waters
 - 9.10.1. Within three months of the date of grant of this licence, the licensee shall map the Corranure watercourse upstream of the facility and, based on this survey, shall submit a proposal for upstream (background) monitoring to the Agency for its agreement.
 - 9.10.2. A biological assessment of Corranure Stream at the locations specified on Map 3, Appendix I of Vol. 3 of the EIS shall be undertaken each year between the months of May and September. 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.
- 9.11. Groundwater
 - 9.11.1. Prior to the commencement of waste activities in the proposed Landfill Extension, a baseline survey, shall be undertaken in the boreholes specified in Condition 4.20.1 for all the groundwater parameters listed in Table E.4.3 of *Schedule E: Monitoring* of this licence, as well as piezometric maps for both

sampling occasions. The results of this monitoring shall be submitted to the Agency upon completion.

9.11.2. Within three 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 500 m of the facility, in the monitoring programme set out in *Schedule E: Monitoring* of this licence shall be submitted to the Agency for its agreement.

9.12. Landfill Gas

9.12.1. Within three months from the date of grant of this licence, the licensee shall submit to the Agency for its agreement details of the permanent gas monitoring system to be installed in the site office and any other enclosed structures at the facility.

9.12.2. Within three months from the date of grant of this licence, the licensee shall submit to the Agency for its agreement, additional monitoring locations to check for off-site migration of landfill gas.

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

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.1 of the application and the further contingency information supplied to the Agency on 23rd July 1999 (subject to the conditions of this licence).
- 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 burned within the boundaries of the facility. A fire at the facility shall be treated as an emergency. Immediate action shall be taken to extinguish it and the appropriate authorities notified.
- 10.6. In the event that monitoring of local wells (identified in Condition 9) indicates that the facility is having a significant adverse effect on the quantity and/or quality of the water supply this shall be treated as an incident. The licensee shall submit to the Agency for its agreement and within a time specified in writing by the Agency, written proposals for the provision of an alternative supply of water to those affected.
- 10.7. 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 recurrence of the incident; and
 - ii) identify and put in place any other appropriate remedial action.
- 10.8. In the event that monitoring of the side 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 remedial action submitted to the Agency for its agreement within one month of the date of the monitoring being carried out.

- 10.9. 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 Cavan 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 £11,430 (€14,513) or such sum as the Agency from time to time determines, towards the cost of monitoring the activity or otherwise in performing any functions in relation to the activity, as the Agency considers necessary for the performance of its functions under the Waste Management Act, 1996. The licensee shall in 2002 and subsequent years, not later than January 31 of each year, pay to the Agency this amount updated in accordance with changes in the Public Sector Average Earnings Index from the date of the licence to the renewal date. The updated amount shall be notified to the licensee by the Agency. For 2001, the licensee shall pay a pro rata amount from the date of this licence to 31st December 2001. This amount shall be paid to the Agency within one month of the date of grant of this licence.
- 11.1.2 In the event that the frequency or extent of monitoring or other functions carried out by the Agency needs to be increased or decreased the licensee shall contribute such sums as determined by the Agency to defraying its costs.

11.2 Financial Provision for Closure, Restoration and Aftercare

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

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

Where:

$$\text{Cost} = \text{Revised restoration and aftercare cost}$$

$$\text{ECOST} = \text{Existing restoration and aftercare cost}$$

- WPI = Appropriate Wholesale Price Index [Capital Goods, Building & Construction (i.e. Materials & Wages) Index], as published by the Central Statistics Office, for the year since last closure calculation/revision.
- CiCC = Change in compliance costs as a result of change in site conditions, changes in law, regulations, regulatory authority charges, or other significant changes.

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

SCHEDULE A : Content of the Environmental Management Programme

Environmental Management Programme

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

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

Designation of Responsibility for Achieving Targets and Objectives

Other items specified by the Agency

SCHEDULE B : Content of the Annual Environmental Report

Annual Environmental Report Content ^{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.

Estimated annual and cumulative quantity of direct and indirect emissions to groundwater.

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.

Monthly water balance calculation and interpretation.

Schedule of Environmental Objectives and Targets for the forthcoming year.

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

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

Tank, pipeline and bund testing and inspection report.

Reported incidents and complaints summaries.

Review of Nuisance Controls.

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

Any other items specified by the Agency.

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

SCHEDULE C : Recording and Reporting to the Agency

Table C.1 Recurring Reports

Report	Reporting Frequency ^{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	Quarterly	Ten days after end of the quarter being reported on.
Meteorological Monitoring	Annually	One month after end of the year being reported on.
Dust Monitoring	Three times a year	Ten days after the period being reported on
Noise Monitoring	Annually	One month after end of the year being reported on.
Monitoring of emissions to sewer	Quarterly	Ten days after end of the quarter 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 D : 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).

Landscaping, capping and restoration material storage.

Fencing and site security works.

Bunding of fuel and oil storage areas.

Installation of Civic Waste Facility and associated landscaping.

Installation of Waste Inspection and Waste Quarantine Areas

Installation of Weighbridge

Installation of Wheel Cleaning Infrastructure

Installation of Construction and Demolition Waste Recovery Area

Installation of landfill gas management and monitoring systems.

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

Installation of groundwater control and/or monitoring systems.

Surface water management works.

Restoration and Aftercare Works.

Nuisance control measures

Construction of Office

Construction of Garage

Alterations to monitoring infrastructure.

Perimeter bund.

Meteorological Station.

Composting.

Any component separation on site.

Any other works notified in writing by the Agency.

SCHEDULE E : Monitoring

Monitoring to be carried out as specified below.

E.1 Landfill Gas

Landfill gas monitoring locations shall be those as set out in Table E.1.1.

Table E.1.1 Monitoring Locations

STATION
Leachate monitoring wells as required by Condition 4
Landfill gas migration monitoring as required by Condition 9
New groundwater monitoring boreholes as required by Condition 4

Table E.1.2 Landfill Gas Monitoring Frequency and Technique

Parameter	Monitoring Frequency	Analysis Method ^{Note1} /Technique ^{Note2}
	Gas Boreholes/ Vents/Wells	
Methane (CH₄) % v/v	Monthly	Infrared analyser/flame ionisation detector
Carbon dioxide (CO₂)%v/v	Monthly	Infrared analyser/ flame ionisation detector
Oxygen(O₂) %v/v	Monthly	Electrochemical cell
Atmospheric Pressure	Monthly	Standard
Temperature	Monthly	Standard

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

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

E.2 Dust

Dust monitoring locations shall be those as set out in Table E.2.1 and drawing number K.02, revision B of the application.

Table E.2.1 Boundary Dust Monitoring Locations

STATION			
D1	D3	D2	D4

Table E.2.2 Dust Monitoring Frequency and Technique

Parameter (mg/m ² /day)	Monitoring Frequency	Analysis Method/Technique
Dust	Three times a year ^{Note 2}	Standard Method ^{Note 1, 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) in 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: A wind rose, obtained from the meteorological station for the relevant sampling period, shall be submitted with each set of results.

E.3 Noise

Noise monitoring locations shall be those as set out in Table E.3.1 and Attachment C.8 of the application.

Table E.3.1 Noise Monitoring Locations

STATION	
Noise Sensitive Locations	Facility Boundary Locations
NSL1	B1
NSL2	Others facility boundary locations as agreed by the Agency
NSL3	
Noise sensitive locations on northern and western flanks of the facility as agreed by the Agency	

Table E.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."

E.4 Surface Water, Groundwater and Leachate

Surface water monitoring locations shall be those as set out in Table E.4.1 and drawing number K.02 (revision B) of the application and of the parameters and frequencies outlined in Table E.4.3.

Table E.4.1 Surface Water Monitoring Locations

STATION
K1 (The suitability of this upstream monitoring location shall be re-examined as per Condition 9)
K2
K3
Analee monitoring stations to be agreed with the Agency.
Any surface water run-off discharge points agreed by the Agency through Condition 4.13 ^{Note 1}

Note 1: At minimum, surface water discharges shall be monitored monthly (unless flow in that month does not allow such monitoring) for parameters denoted by Note 6 in Table E.4.3.

Groundwater monitoring locations shall be those as set out in Table E.4.2 and drawing number K.02 (revision B) or drawing number CORR/REPL/03 of the application. Parameters and frequencies are outlined in Table E.4.3.

Table E.4.2 Groundwater Monitoring Locations

STATION
Upgradient of Landfill Extension to be agreed as per Condition 4
Downgradient of Landfill Extension to be agreed as per Condition 4
Upgradient of Existing Landfill to be agreed as per Condition 4
RC5
RC1 until construction of Cell 2 commences
SA1
All private wells within 500m of the facility boundary subject to owners agreement
PW5 prior to treatment

Leachate monitoring locations shall be as agreed through Condition 4. Leachate monitoring parameters and frequencies are outlined in Table E.4.3.

Table E.4.3 Water and Leachate - Parameters /Frequency

Parameter ^{Note 1}	SURFACE WATER	GROUNDWATER	LEACHATE
	Monitoring Frequency	Monitoring Frequency	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 5}	Quarterly	Quarterly
BOD	Quarterly ^{Note 5}	Not Applicable	Quarterly
COD	Quarterly	Not Applicable	Quarterly
Chloride	Quarterly	Quarterly	Quarterly
Dissolved Oxygen	Quarterly	Quarterly	Not Applicable
Electrical Conductivity	Quarterly ^{Note 5}	Quarterly	Quarterly
pH	Quarterly ^{Note 5}	Quarterly	Quarterly
Total Suspended Solids	Quarterly ^{Note 5}	Not Applicable	Not Applicable
Temperature	Quarterly ^{Note 5}	Monthly	Quarterly
Arsenic	Not Applicable	Annually	Annually
Boron	Not Applicable	Annually	Annually
Cadmium	Annually	Quarterly	Annually
Calcium	Annually	Annually	Annually
Chromium (Total)	Annually	Annually	Annually
Copper	Annually	Annually	Annually
Cyanide (Total)	Not Applicable	Quarterly	Annually
Fluoride	Not Applicable	Annually	Annually
Iron	Annually	Quarterly	Annually
Lead	Annually	Annually	Annually
List I/II organic substances ^{Note 3}	Note 6	Annually	Note 7
Magnesium	Annually	Annually	Annually
Manganese	Annually	Annually	Annually
Mercury	Annually	Annually	Annually
Nickel	Not Applicable	Annually	Not Applicable
Potassium	Annually	Quarterly	Annually
Sulphate	Annually	Annually	Annually
Sodium	Annually	Quarterly	Annually
Total Alkalinity	Annually	Annually	Annually
Molybdate-Reactive Phosphate	Annually ^{Note 5}	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	Quarterly	Annually
Total Coliforms ^{Note 4}	Not Applicable	Quarterly	Annually
Biological Assessment	Annually	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). In cases where large quantities of harbour dredgings have been accepted at the facility it is recommended to analyse for organotin compounds. Where there is reason to suspect organophosphorous contamination it is recommended to also scan for these compounds.
- Note 4: In the case where groundwater is extracted for drinking water, if there is evidence of bacterial contamination, the analysis at up gradient and downgradient monitoring points should include enumeration of total bacteria at 22°C and 37°C and faecal streptococci.
- Note 5: Discharges to surface water at any monitoring locations agreed in accordance with Condition 4.13, shall be monitored on a monthly basis for these parameters unless flow in that month does not allow such monitoring.
- Note 6: Once off for List I/II organic substances at Corranure stream monitoring locations and thereafter as required by the Agency.
- Note 7: Once off for List I/II organic substances and thereafter as required by the Agency.

E.5 Meteorological Monitoring

Table E.5.1 Meteorological Monitoring:

Data to be obtained at a location on the facility to be agreed with the Agency. However, Evaporation, Evapotranspiration and Humidity may be obtained from the Clones weather station.

Parameter	Monitoring Frequency	Analysis Method/Technique
Precipitation Volume	Daily	Standard
Temperature (min/max. 14.00 hours)	Daily	Standard
Wind Force and Direction	Daily	Standard
Evaporation	Daily	Standard
Evapotranspiration	Daily	Standard
Humidity (14.00 hours)	Daily	Standard
Atmospheric Pressure	Daily	Standard

E.6 Landfill Gas Combustion Plant

Monitoring to be obtained at locations to be agreed with the Agency prior to the commissioning of the 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
NO _x	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

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

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

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

E.7 Monitoring of Emissions to Sewer

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

Location: To be agreed with the Agency.

Table E.7.1 Sewer Monitoring - Parameters /Frequency

Parameter	Monitoring Frequency	Analysis Method/Technique ^{Note 1}
Volume	Daily	Flow meter / recorder
Biochemical Oxygen Demand	Every three months	Standard Method ^{Note 2}
Chemical Oxygen Demand	Every three months	Standard Method ^{Note 2}
Ammoniacal nitrogen	Every three months	Standard Method ^{Note 2}
Suspended Solids	Every three months	Gravimetric
Sulphates	Every three months	Standard Method ^{Note 2}
pH	Every three months	pH meter/recorder
Temperature	Every three months	Standard Method ^{Note 2}

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".

SCHEDULE F : Emission Limits

F.1 Noise Emissions: (Measured at the Noise Sensitive Locations indicated in Table E.3.1).

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

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

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

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

Level (mg/m ² /day) ^{Note 1}
350

Note 1: 30 day composite sample with the results expressed as mg/m² /day.

F.4 Surface Water Discharge Limits: (Measured at surface water discharge points indicated in Table E.4.1).

Parameter	Emission Limit Value
Suspended Solids	35 mg/l

F.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: 3000m³/hr

Minimum discharge height: 5 m

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.

SCHEDULE G : Compost Quality

Unless otherwise agreed with the Agency, the licensee shall monitor the compost product, at least monthly, from any organic waste composting unit to ensure it meets the following criteria.

The following criteria are deemed a quality standard for the use of compost as a soil improver and should not be deemed as criteria for fertiliser. In addition N, P, K, NH₄-N, NO₃-N, pH and dry matter content should also be measured.

Compost shall be deemed unsatisfactory if more than 10% of samples fail the criteria below. No sample shall exceed 1.2 times the quality limit values set.

1. Maturity

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

- C/N ratio ≤ 25
- oxygen uptake rate ≤ 150 mg O₂/kg volatile solids per hour; and
- germination of cress (*Lepidium sativum*) seeds and of radish (*Raphanus sativus*) seeds in compost must be greater than 90 percent of the germination rate of the control sample, and the growth rate of plants grown in a mixture of compost and soil must not differ more than 50 percent in comparison with the control sample.
- Elimination of the following test organisms (used to evaluate composting system efficiency in removing plant pathogens and weed seeds during the composting process): *Plasmodiophora brassicae*, tobacco-mosaic-virus (TMV) and tomato seeds. Guidance on test may be obtained from the German document LAGA M10 'Quality Criteria and Application Recommendations for Compost'.

OR

- Compost must be cured for at least 21 days; and
- Compost will not reheat upon standing to greater than 20°C above ambient temperature.

OR

- Compost must be cured for at least 21 days; and
- Reduction of organic matter must be > 60 percent by weight.

OR

- If no other determination of maturity is made, the compost must be cured for a six month period. The state of the curing pile must be conducive to aerobic biological activity. The curing stage begins when the pathogenic reduction process is complete and the compost no longer reheats to thermophilic temperatures.

2. Foreign Matter

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

Foreign matter content as a percentage of oven-dried mass	≤ 1.5
Foreign matter, maximum dimensions, in mm	25

3. Trace Elements

Maximum Trace Element Concentration Limits for Compost

Trace Elements	(mg/kg, dry mass)
Arsenic (As) ^{Note 1}	15
Cadmium (Cd)	1.5
Chromium (Cr)	100
Copper (Cu)	100
Mercury (Hg)	1
Molybdenum (Mo) ^{Note 1}	5
Nickel (Ni)	50
Lead (Pb)	150

Selenium (Se) ^{Note 1}	2
Zinc (Zn)	350

Note 1: Monitoring of these parameters required if waste from an industrial source.

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

4. Pathogens

Pathogenic organism content must not exceed the following limits:

- the quantity of faecal coliforms must be < 1,000 Most Probable Number (MPN)/g of total solids calculated on a dry weight basis; and
- there can be no salmonellae present (< 3 MPN/4g total solids).

5. Monitoring

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

SCHEDULE H : Waste Acceptance

H.1 Waste Acceptance

Table H.1 Waste Categories and Quantities

WASTE TYPE	MAXIMUM TONNES PER ANNUM
Municipal	25,850
Commercial	550
Non-Hazardous Treated Sludges	1,750
Industrial Non-Hazardous Treated Sludges	1,650
Cleansing Waste	100
Construction and Demolition Waste	150
Biodegradable waste for composting	2,000
TOTAL	32,050

H.2 Unacceptable Waste

Table H.2 Unacceptable Wastes

WASTE TYPE
Animal by-products, excrement or remains
Silt and dredgings
Untreated sludges
Oil/water mixtures
Septic tank waste

Part III: Activities Refused

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 refuse the following classes of activities.

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

Class 2.	Land treatment, including biodegradation of liquid or sludge discards in soils: Reason: The applicant applied for this class on the basis that sludges are accepted at the site. However, no proposal for land treatment was specified in the application. Other licenced classes of the Third Schedule allow for disposal of treated sludges into pits within the Landfill Extension and for the mixing of treated sludges with other waste prior to disposal in the Landfill Extension.
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: Reason: This class was applied for in order to facilitate composting of green waste which may be carried out in the future. However, composting of green waste is a waste recovery activity and, as such Class 2 of the Fourth Schedule is the correct waste activity description. This latter class has been granted.

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

Class 8.	Oil re-refining or other re-uses of oil: Reason: Application inappropriately applied for this class in order to facilitate the recovery of waste oils in the civic waste facility. Class 2 of this Schedule, which has been granted, will provide for the collection of waste oil in the civic waste facility.
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Sealed by the seal of the Agency on this 12th day of June, 2001.

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

Anne Butler Director/Authorised Person