



Headquarters,  
P.O. Box 3000,  
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County Wexford, Ireland

## WASTE LICENCE PROPOSED DECISION

<b>Waste Licence</b>	16-1
<b>Register Number:</b>	
<b>Applicant:</b>	Wexford County Council
<b>Location of Facility:</b>	Killurin Landfill Site, "The Deeps", Killurin, Co Wexford

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# Reasons for the Proposed Decision

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

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

## Part I: Activities Licensed

In pursuance of the powers conferred on it by the Waste Management Act 1996, the Environmental Protection Agency (the Agency) proposes, under Section 40(1) of the said Act to grant this Waste Licence to Wexford County Council, County Hall, Spawell Road, Wexford to carry on the waste activities listed below at Killurin Landfill Site, "The Deeps", Killurin, Co Wexford subject to 11 No. conditions, with the reasons therefor and the associated schedules attached thereto set out in the licence.

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

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

*Class 2:* Land treatment, including biodegradation of liquids and sludge discards in soils.

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

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

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

*Class 12:* Repackaging prior to submission to any activity referred to in a preceding paragraph of this Schedule

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

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

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

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

*Class 4:* Recycling or reclamation of other inorganic materials.

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

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

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

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

# INTERPRETATION

<b>Act</b>	The Waste Management Act, 1996 (No. 10 of 1996).
<b>Aerosol</b>	A suspension of solid or liquid particles in a gaseous medium.
<b>Adequate lighting</b>	20 lux measured at ground level.
<b>Agreement</b>	Agreement in writing.
<b>Application</b>	The application by the licensee for this waste licence, including any other material submitted to the Agency in writing by the licensee between the date of the application and the date of grant of this licence.
<b>Attachment</b>	Any reference to attachments in this licence refers to attachments submitted as part of the waste licence application.
<b>Commercial waste</b>	As defined in Section 5 (1) of the Act.
<b>Condition</b>	A condition of this licence. In any case where this licence refers to a numbered condition, the reference shall be taken to mean the condition and any sub-condition therein which the context of the reference requires that reference is to be made to.
<b>Cover material</b>	Bricks, crushed concrete, tarmac, earth, soil, sub-soil, stone, rock or other similar natural materials; or other cover material the use of which has been subject to a proposal made by the licensee for the Agency's agreement.
<b>Daytime</b>	0800 hrs to 2200 hrs.
<b>Documentation</b>	Any report, record, result, data, drawing, proposal, interpretation or other document in written or electronic form which is required by this licence.
<b>Emission</b>	As defined in Section 5 (1) of the Act.
<b>Emission Limit Value</b>	Those limits, including concentration limits or deposition limits, contained in Schedule G.
<b>Environmental Pollution</b>	As defined in Section 5 (1) of the Act.
<b>European Waste Catalogue (EWC)</b>	The EWC is a harmonised, non-exhaustive list of wastes drawn up by the European Commission and published as Commission Decision 94/3/EC and any subsequent amendment published in the Official Journal of the European Community.
<b>Facility</b>	That area or areas defined under Condition 1.2
<b>Green waste</b>	Waste wood, plant matter and other vegetation.
<b>Hazardous Waste</b>	As defined in Section 4 (2) of the Act.
<b>Household Waste</b>	As defined in Section 5 (1) of the Act.

<b>Industrial waste</b>	As defined in Section 5 (1) of the Act.
<b>Incident</b>	Any reference to an incident in this licence means an incident as defined in Condition 3.1.
<b>Landfill</b>	As defined in Section 5 (1) of the Act.
<b>Landfill Gas</b>	Gases generated from the landfilled waste.
<b>Leachate</b>	Any liquid percolating through the deposited waste and emitted from or contained within a landfill as defined in Section 5 (1) of the Act.
<b>LEL (Lower Explosive Limit)</b>	The lowest percentage concentration by volume of a mixture of flammable gas with air which will propagate a flame at 25°C and atmospheric pressure.
<b>Licence</b>	A Waste Licence issued in accordance with the Act.
<b>Licensee</b>	Wexford County Council
<b>List I/II Organics</b>	Substances classified pursuant to EC Directives 76/464/EEC and 80/68/EEC.
<b>Liquid Waste</b>	Any waste in liquid form and containing less than 20% dry matter.
<b>Maintain</b>	Keep in a fit state, including such regular inspection, servicing and repair as may be necessary to adequately perform its function.
<b>Mobile Plant</b>	Self-propelled machinery used for the emplacement of wastes or for the construction of specified engineering works.
<b>Monthly</b>	At least 12 times per year, at approximately monthly intervals.
<b>Municipal Waste</b>	Municipal waste as defined in Section 5 (1) of the Act.
<b>Night-time</b>	2200 hrs to 0800 hrs.
<b>Other Appropriate Facility</b>	A waste management facility, duly authorised under relevant law and technically suitable, other than the facility subject to this licence.
<b>Quarterly</b>	A period of three calendar months, the first period of which commences on the date of grant of this licence.
<b>Recovery</b>	As defined in Section 4 (4) of the Act.
<b>Sample(s)</b>	Unless the context of this licence indicates to the contrary, samples shall include measurements by electronic instruments.
<b>Sludge</b>	The accumulation of solids resulting from chemical coagulation, flocculation and/or sedimentation after water or wastewater treatment.
<b>Specified Emissions</b>	Those emissions listed in Schedule G of this licence.
<b>Specified Engineering Works</b>	Those engineering works listed in Schedule E of this licence.

<b>Submit</b>	Unless the context of this licence indicates otherwise, submit to the Agency in writing for agreement.
<b>Trigger Level</b>	A parameter value which when achieved or exceeded requires certain actions to be taken.
<b>Waste</b>	As defined in Section 4(1) of the Act.
<b>Waste disposal activity</b>	Includes the activities referred to in Section 4 of the Act and listed in the Third Schedule thereto.
<b>Waste recovery activity</b>	Includes the activities referred to in Section 4 of the Act and listed in the Fourth Schedule thereto.
<b>White Goods</b>	Refrigerators, cookers, ovens and other similar electronic appliances.
<b>Working Day</b>	08:30 to 17.45 Monday to Friday inclusive and 8.30 to 13.00 on Saturdays.
<b>Working Face</b>	The area of the site in which waste other than cover material or material for the purposes of the construction of specified engineering works is being deposited.

# **Part II CONDITIONS**

## **CONDITION 1 SCOPE**

- 1.1 The waste activities authorised by this licence are listed and described in *Schedule A: Waste Activities*. Waste activities at the facility shall be restricted to those listed in Schedule A and any restrictions set down therein.
- 1.2 Waste activities shall be restricted to the area of land outlined in red on Drawing No. K2 (entitled "Site Layout and Land Owned by Wexford County Council", dated August 1998 and as revised on 1 September 1998). Any reference in this licence to "facility" shall mean the area thus outlined in red.
- 1.3 Every plan, programme or proposal submitted to the Agency for agreement pursuant to any condition of this licence shall include a proposed timescale for its implementation. The Agency may modify or alter any such plan, programme or proposal in so far as it considers such modification or alteration to be necessary. Every plan, programme or proposal shall be carried out within the timescale fixed by the Agency but shall not be undertaken without the agreement of the Agency.
- 1.4 This licence is for the purposes of waste licensing under the Waste Management Act 1996 only and nothing in this licence shall be construed as negating the licensee's statutory obligations or requirements under any other enactments or regulations.
- 1.5 Where the Agency considers that a non-compliance with the conditions of this licence has occurred, it may serve a notice on the licensee specifying:
  - a) that only those wastes as specified, if any, in the notice are to be accepted at the facility after the date set down in the notice;
  - b) that the licensee shall undertake the works stipulated in the notice, and/or otherwise comply with the requirements of the notice as set down therein, within the time-scale contained in the notice; and,
  - c) that the licensee shall carry out any other requirement specified in the notice.

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

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

### 2.1 Environmental Management System

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

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

### 2.2 Schedule of Environmental Objectives and Targets

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

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

### 2.3 Environmental Management Programme

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

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

### 2.4 Corrective Action

2.4.1 The licensee shall, within six months from the date of grant of this licence, establish and maintain written corrective action procedures to ensure that corrective action is taken should specified requirements to this licence not be fulfilled.

### 2.5 Awareness and Training

2.5.1 The licensee shall, within six months from the date of grant of this licence, establish and maintain awareness and training procedures for identifying training needs and for providing appropriate training, for personnel whose work is related to the licensed facility. Written records of training shall be maintained.

### 2.6 Management Structure

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

- a) the names of all persons who are to provide the management and supervision of the waste activities authorised by the licence;
- b) details of the responsibilities for each individual named under a) above;
- c) details of the relevant experience, competence and qualifications held by each of the persons nominated under a) above; and
- d) contingency arrangements for the absences of the named persons from the facility.

## 2.7 Communications

- 2.7.1 Within six months from the date of grant of this licence, the licensee shall submit for agreement to the Agency 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 the year thereafter, an Annual Environmental Report (AER).

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

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

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

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

## CONDITION 3 NOTIFICATION AND RECORD KEEPING

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

- a) any emission which results in the contravention of any relevant standard, including any standard for an environmental medium, or any relevant emission limit value, prescribed under any relevant enactment;
  - b) any emission which does not comply with the requirements of this licence;
  - c) any trigger level specified in this licence or in the Environmental Management System which is attained or exceeded;
  - d) any malfunction of any environmental control system;
  - e) any indication that contamination has, or may have, taken place;
  - f) the cessation of waste activities at the facility for a period in excess of 28 days, and their recommencement;
  - g) any occurrence with the potential for environmental pollution; and,
  - h) any emergency.
- 3.2 The written record shall include all aspects described in Condition 10.6
- 3.3 Unless otherwise instructed in writing by the Agency, the licensee shall:
- a) notify the Agency by telephone, and by facsimile if available, as soon as practicable and in any case not later than 10.00 am the following working day after the occurrence of any incident; and
  - b) submit the written record required by this condition to the Agency as soon as practicable and in any case within five working days after the occurrence of any incident.
- 3.4 Should any further actions be taken after the date of written notification as a result of an incident occurring, the licensee shall forward a written report of those actions to the Agency as soon as practicable and no later than ten days after the initiation of those actions.
- 3.5 Unless otherwise agreed by the Agency, all documentation submitted to the Agency shall:
- (a) be sent to the Agency's headquarters;
  - (b) comprise one original and three copies;
  - (c) be formatted in accordance with any written instruction or guidance issued by the Agency;
  - (d) be identified by a unique code, indicate any modification or amendment, and be correctly dated to reflect any such modification or amendment;
  - (e) be submitted in accordance to the relevant reporting frequencies specified by this licence;
  - (f) be certified as accurate and representative by the licensee; and
  - (g) in the case of results of any environmental monitoring, be accompanied by a written interpretation setting out their significance.

- 3.6 Copies of all environmental monitoring data obtained by the licensee which relates to the facility shall be forwarded to the Agency at the frequencies set out in Schedule D to this licence.
- 3.7 In the event of any incident which relates to discharges to surface water, the licensee shall notify the Eastern Regional Fisheries Board as soon as practicable by telephone and in writing (by facsimile if available) and in any case not later than 10:00am on the following working day after such an incident.
- 3.8 Unless otherwise agreed by the Agency, all documentation required to be maintained by this licence shall be retained by the licensee.
- 3.9 Unless otherwise agreed in advance in writing with the Agency, the licensee must give at least fourteen days notice to the Agency of the following events:
- a) the cessation of waste disposal activities at the facility for a period in excess of twenty-eight days;
  - b) the re-commencement of waste disposal activities at the facility following a period of cessation referred to at a) above.
- 3.10 The licensee shall provide additional copies of any documentation referred to in this licence to the Agency upon written request, within the time specified in writing by the Agency.
- 3.11 The licensee shall keep the following documents at the facility office referred to in Condition 4.
- a) the current waste licence relating to the facility;
  - b) the current Environmental Management System for the facility;
  - c) the previous year's Annual Environmental Report for the facility;
  - d) all written procedures produced by the licensee which relate to the licensed activities.
- 3.12 The licensee shall maintain a written record for each load of waste arriving at the facility. The licensee shall record the following:
- a) the name of the carrier;
  - b) the vehicle registration number;
  - c) the name of the producer(s)/collector(s) of the waste as appropriate;
  - d) a description of the waste;
  - e) the quantity of the waste, recorded in tonnes;
  - f) the name of the person checking the load; and,
  - g) where loads or wastes are removed or rejected, details of the date of occurrence, the types of waste and the facility to which they were removed.
- 3.13 A written record shall be kept of any consignment of leachate removed from the facility. The record shall include the following:
- a) the name of the carrier;
  - b) the date and time of removal of leachate from the facility;
  - c) the volume of leachate, in cubic metres, removed from the facility on each occasion;
  - d) the name and address of the waste water treatment plant to which the leachate was transported;

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

*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 Site Notice Board**

4.1.1 Within three months of the date of grant of this licence, the licensee shall provide and maintain a 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.

4.1.2 The board shall clearly show:

- a) the name and telephone number of the facility;
- b) the normal hours of opening;
- c) the name, address and telephone number of the licence holder;
- d) an emergency out of hours contact telephone number;
- e) the name, address and telephone number of the operator of the facility;
- f) the licence reference number;
- g) where and when environmental monitoring information relating to the facility can be obtained.

### **4.2 Site Security**

4.2.1 Gates, walls and fences shall be installed and maintained as described in Drawing K3A entitled "Gates and Fences" and dated September 1998.

4.2.2 Within three months of the date of grant of this licence, a proposal for fully fencing the facility shall be submitted to the Agency for its agreement. This proposal shall cover those parts of the facility which are currently unfenced and which are shown on Drawing K3A as being between the River Slaney and Point H, between Points C and B and between Point A and the River Slaney.

4.2.3 Within two months of the date of grant of the licence, all defects in the existing site gates and fences shall be rectified. Thereafter, the licensee shall remedy any defect in the gates and/or fencing as follows:

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

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

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

- 4.3 Unless otherwise agreed by the Agency, roads at the facility shall be provided and maintained as described in Section E.3 "Waste Handling" (which is attached to the letter from the licensee dated 4 November 1998) and at the locations shown on Drawing No K3 (entitled "Cell Layout" and dated September 1997 and amended in October 1998). All site roads shall at a minimum comply with the specification set out in Section D.1.B of the waste licence application.
- 4.4 The licensee shall provide and maintain an office on the facility, at the location shown in Drawing No K3 ("Cell Layout" dated September 1997 and as amended in October 1998). The office shall be constructed and maintained in a manner suitable for the processing and storing of documentation.
- 4.5 A working telephone shall be maintained at that location. A facsimile machine shall be provided within three months of the date of grant of this licence and maintained at this location thereafter.
- 4.6 Unless otherwise agreed by the Agency, a waste quarantine area shall be provided at the location described in Section D.1.F of the waste licence application.
- 4.7 The licensee shall provide and maintain a weighbridge at the facility at the location shown on Drawing No K3 ("Cell Layout", dated September 1997 and amended in October 1998)
- 4.8 Within twelve months of the date of grant of this licence, the licensee shall submit for the Agency's agreement a proposal for the installation of a wheelwash at the facility. The proposal shall include the location, a specification of construction and arrangements for drainage, including proposals for the retention of suspended solids. Once installed, the wheelwash shall be inspected on a daily basis and drained as required. Accumulated silt shall be removed and disposed of at the working face.
- 4.9 The licensee shall provide and use adequate lighting during the operation of the facility in hours of darkness.
- 4.10 Unless otherwise agreed by the Agency, the licensee shall maintain the sewage treatment facilities as shown in the A3-sized drawing attached to the letter from the licensee to the Agency dated 3/12/97.
- 4.11 Fuel Storage
  - 4.11.1 Within three months of the date of grant of this licence, the licensee shall submit a proposal to the Agency for its agreement for the provision of bunded fuel storage for all fuels stored at the facility in accordance with BS 8007:1987 (Code of Practice for the Design of Concrete Structures for Retaining Aqueous Liquids). Once constructed, fuels shall only be stored at this location unless contained in mobile plant at the facility.
  - 4.11.2 The bunded fuel storage referred to above shall be constructed and maintained to be rendered impervious to the materials stored therein and 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 tanks/drums in the bunded area.

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

- 4.11.3 All inlets, outlets, vent pipes, valves and gauges must be within the bunded area.
- 4.11.4 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 within six months of the date of construction of the storage area. This testing shall be carried out by the licensee at least once every three years thereafter and reported to the Agency on each occasion. A written record of all integrity tests and any maintenance or remedial work arising from them shall be maintained by the licensee.
- 4.11.5 All tanks and containers shall be labelled to clearly indicate their contents.
- 4.12 Within six months of the date of grant of this licence, the licensee shall submit a proposal to the Agency for its agreement for the construction of a public tipping facility to be located in the vicinity of the site entrance. This proposal shall set out the nature of hardstandings, tipping bay(s) or skip(s) and drainage arrangements to be constructed thereto, as well as containing procedures by which the facility is to be operated and supervised. Once completed, members of the public shall be prevented from depositing waste at other locations at the facility.
- 4.13 Within six months of the date of grant of this licence, the licensee shall submit a proposal to the Agency for its agreement for the hard surfacing and drainage arrangements of the scrap metal storage area shown in Drawing K3 ("Cell Layout", dated September 1997 and amended October 1998). Unless subject to the agreement of the Agency, this area only shall be used for the storage of scrap metal on the completion of the hard surfacing.
- 4.14 Specified Engineering Works
- 4.14.1 The licensee shall submit written proposals for all Specified Engineering Works, as defined in *Schedule E: Specified Engineering Works*, to the Agency for its agreement prior to any such works being carried out. No such works shall be carried out without the prior agreement of the Agency and, once carried out, shall be maintained at the location and to the specified agreed by the Agency.
- 4.14.2 All specified engineering works shall be supervised by a competent person(s) agreed in writing in advance by the Agency and that person, or persons, shall be present at all times during which relevant works are being undertaken.
- 4.14.3 Unless otherwise agreed by the Agency, the licensee shall submit a construction quality assurance validation report to the Agency following the completion of all specified engineering works. The validation 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) a drawing and sections showing the location of any samples and tests carried out;
  - e) daily records sheets/diary;
  - f) name(s) of contractor(s)/individual(s) responsible for undertaking the engineering works;

- g) name(s) of individual(s) responsible for supervision of works and for quality assurance validation of works;
- h) records of any problems and the remedial works carried out; and
- i) any other information requested in writing by the Agency.

#### 4.15 Leachate Management

4.15.1 Notwithstanding any requirements of condition 7.6, within six months of the date of grant of this licence a detailed proposal shall be submitted to the Agency for its agreement to reduce the level of leachate within the facility. This proposal shall include details of:

- (a) locations and specifications for pumping chambers and pumps in all cells;
- (b) leachate collection pipework and storage infrastructure;
- (c) disposal options for treated leachate, including an assessment of the desirability of on-site treatment;
- (d) target levels in respect of leachate heads in individual cells;
- (e) additional environmental monitoring necessary to provide confidence that leachate levels have been reduced in the manner required by this condition; and
- (f) timescales for implementation.

4.15.2 Within six months of the date of grant of this licence, a proposal shall be submitted to the Agency for its agreement for a leachate cut-off drain to be located between the area of waste deposited at the facility and the boundary of the proposed Natural Heritage Area as shown on Drawing K2A (entitled "W.C.C Site and N.H.A (Proposed)" and dated August 1998). This proposal for the cut-off drain shall include information on:

- (a) a design which prevents overland and sub-surface leachate flow from the facility into the area of the proposed Natural Heritage Area;
- (b) a design to intercept contaminated waters passing from the east of the facility by way of the ditches shown in Drawing K5 (entitled "Surface Water Drainage" dated September 1997 and amended in December 1997);
- (c) the depth of the drain, its construction and extent;
- (d) the method of removal of contaminated waters collected in the drain, including pipework, collection point(s), pumps and method of disposal of collected waters;
- (e) the locations and specification of construction of monitoring points/boreholes between the drain and the River Slaney to prove the effectiveness of the cut-off drain; and
- (f) mitigation measures, including landscaping and re-planting in respect of any vegetation, trees or other plant matter which is to be disturbed by the installation of the cut-off drain and associated works.

#### 4.16 Groundwater/Surface Water Management

4.16.1. Within six months of the date of grant of this licence, a proposal shall be submitted to the Agency for its agreement for the diversion/prevention of surface



waters and groundwaters entering the facility from the northern and eastern boundaries in order to prevent/reduce the production of leachate. The proposal shall include:

- (a) a design to prevent/significantly reduce groundwater from entering the facility at the above locations;
- (b) a design to prevent the surface waters as captioned "Stream Entering Site" on Drawing K5 (entitled "Surface Water Drainage" dated September 1997 and amended December 1997) becoming contaminated after entering the facility;
- (c) the location, depth and specification of all drains, pumping chambers, collection points and discharge points; and
- (d) environmental monitoring points to ensure the effectiveness of the measures required by this condition.

#### 4.17 Landfill Gas Management:

4.17.1 Within three months of the date of granting of this licence, a proposal shall be made to the Agency for its agreement for:

- (a) a landfill gas venting trench to be installed between the facility boundary and the public road, including its location and specification;
- (b) the location and specification of construction of additional gas monitoring points on either side of the trench in order to demonstrate its effectiveness;
- (c) mitigation measures, including landscaping and re-planting in respect of any vegetation, trees or other plant matter which is to be disturbed by the installation of the vent trench; and
- (d) the installation of permanent gas alarms in all site cabins, garages, storage sheds and other enclosed structures at the facility.

4.17.2 Within six months of the date of grant of this licence, a proposal shall be submitted to the Agency for its agreement for:

- (a) the active collection and utilisation of landfill gas as an energy resource; or
- (b) the active collection and flaring of landfill gas.

4.17.3 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 and as agreed by the Agency.

#### 4.18 Capping

4.18.1 The landfill shall be entirely capped with either a compacted mineral layer of a minimum thickness of 0.6 metres and having a maximum hydraulic conductivity of  $1 \times 10^{-9}$  metres per second or by a geosynthetic material which provides an equivalent specification of impermeability.

4.18.2 The capping of each phase shall be completed within twelve months of the deposit of wastes in each phase attaining a height of one metre below the final contour levels shown on Drawings K8 ("Finished Contour Plan", dated September 1997 and revised October 1998) and K10 ("Cross Sections Prop. Levels" as amended October 1998). The reference to "phase" in this condition means each

one of the phases referred to in Section E.3 "Waste Handling" and as attached to the letter from the licensee to the Agency dated 4 November 1998.

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

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

## CONDITION 5 WASTE ACCEPTANCE AND HANDLING

- 5.1. No hazardous waste or liquid waste shall be disposed of in the landfill and no waste of any kind shall be deposited in the area of ownership of the licensee which falls within the land identified as being part of the proposed Natural Heritage Area in drawing No K2A (entitled "W.C.C site and N.H.A (Proposed)" dated August 1998).
- 5.2. Subject to Condition 5.1 only those waste types listed in Table E.1.3 of the application shall be disposed of in the landfill unless the prior written agreement of the Agency has been obtained.
- 5.3. Within four months of the date of grant of this licence, a written procedure for the acceptance, checking and disposal of sludges shall be submitted to the Agency for its agreement.
- 5.4. All trenches or lagoons constructed for the deposition of sludges shall be fenced to a specification which prevents access by trespassers. Suitable safety signs shall also be erected. Unless otherwise agreed by the Agency, only one such trench or lagoon shall be in use at any one time.
- 5.5. Unless otherwise agreed by the Agency, the following wastes only are to be accepted for recycling in the area subject to Drawing K3B (untitled and dated September 1998):
- |              |            |               |                 |
|--------------|------------|---------------|-----------------|
| (a) Glass    | (b) Metals | (c) Paper     | (d) Cardboard   |
| (e) Plastic  | (f) Oil    | (g) Batteries | (h) Green Waste |
| (i) Clothing |            |               |                 |
- Waste oil and batteries shall only be accepted at this facility after three months of the date of grant of this licence if a proposal has been submitted to the Agency for its agreement on the bunding or other containment of spillages from any storage vessel.
- 5.6. Composting of waste shall only be undertaken at the facility after a proposal has been submitted to the Agency for its agreement. The proposal shall include information on:
- (a) the manner by which compost is to be produced, including the types and quantities of wastes to be accepted;
  - (b) the location of the proposed composting activity; and
  - (c) the method of construction of hardstandings and any other structures relating to the composting activity, including proposals for drainage.
- 5.7. Wastes shall be checked by staff at the facility in the manner set out in the sub-section entitled "Waste Acceptance Procedure" in Attachment E.2 of the application to ensure that they comply with the requirements of this licence. Within three months of the date of grant of the licence a procedure shall be submitted to the Agency for its agreement on how members of the public are to be supervised when using the site.
- 5.8. Any wastes deemed to be in contravention of this licence and/or unsuitable for disposal at this facility shall be removed for disposal at an appropriate alternative facility. Such waste shall be stored in the Waste Quarantine Area only and may be stored for a maximum of twenty-four hours.
- 5.9. The quantity of wastes to be accepted for disposal at the landfill, shall not exceed 70,000 tonnes per annum, unless otherwise agreed by the Agency.
- 5.10. Scavenging shall not be permitted at the facility.

- 5.11. Waste shall only be accepted at the facility between the hours of 8.30 to 17.45 Monday to Friday inclusive and 8.30 to 1.00 on Saturdays unless otherwise agreed by the Agency.
- 5.12. Unless subject to the agreement of the Agency, the following practices 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 wastes being used for cover, restoration materials or the construction of other specified engineering works;
  - b) the working face shall be no more than 2.5 metres in height after compaction, no more than 25 metres wide and have a slope no greater than 1 in 3; and,
  - c) all waste deposited at the working face shall be compacted as soon as is practicable and at any rate prior to the end of the working day.
- 5.13. Waste shall not be deposited in any cell or part of the landfill without the prior written agreement of the Agency. Further agreement shall be sought from the Agency prior to the deposit of wastes in the phase 2 and in each of the subsequent phases described in section E.3 "Waste Handling" (as contained in the letter of 11 November 1998 from the licensee to the Agency).
- 5.14. Within three months of the date of grant of this licence, cover material shall be placed across the whole landfill so that no waste other than cover material or material suitable for specified engineering works is exposed. In the case of waste being deposited at the working face, such waste shall, by the end of each day, be fully covered with cover material so that no other waste is exposed. Any cover material at any location within the facility which is eroded, washed-off or otherwise removed shall be replaced by the end of the working day.
- 5.15. A steel-wheeled compactor or other such vehicle as agreed by the Agency shall be used for compacting all waste other than that used as specified engineering works or as cover material.
- 5.16. In order to prevent the formation of voids, all hollow objects and large articles deposited on the site shall be crushed, broken up, flattened or otherwise treated.
- 5.17. Wastes once deposited and covered shall not be excavated, disturbed or otherwise picked over without prior agreement from the Agency.
- 5.18. No smoking shall be allowed on the facility other than in the site offices as referred to in condition 4.

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

## **CONDITION 6 ENVIRONMENTAL NUISANCES**

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

- 6.2. The road network in the vicinity of the facility shall be kept free from any debris caused by vehicles entering or leaving the facility. Any such debris or deposited materials shall be removed without delay.
- 6.3. The measures and infrastructure described in Section F.5 "Litter Control" of the waste licence application shall be applied to control litter at the facility.
- 6.4. All loose litter accumulated within the facility and its environs, excluding that which is deposited on the working face, shall be removed and appropriately disposed of on a daily basis.
- 6.5. Any waste placed on or in the vicinity of the facility other than in accordance with the requirements of this licence shall be removed by the licensee immediately and in any event by 10:00am of the next working day, after such waste is discovered. Such waste shall be disposed of at an appropriate facility.
- 6.6. The licensee shall ensure that all waste arriving at the facility is appropriately covered.
- 6.7. 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.
- 6.8. The licensee shall ensure that the activities shall be carried out in a manner such that odours do not result in significant impairment of, or significant interference with amenities or the environment beyond the facility boundary.
- 6.9. The licensee shall ensure that birds, vermin, flies and dust do not give rise to nuisance at the facility or the immediate area of the facility. Any method used by the licensee to control any such nuisance shall not cause environmental pollution.

*Reason: To provide for the control of nuisances*

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

- 7.1. No specified emission from the facility shall exceed the emission limit values set out in *Schedule G: Emissions* of this licence.
- 7.2. All treatment/abatement and emission control equipment shall be calibrated and maintained, in accordance with the instructions issued by the manufacturer/supplier or installer. Written records of the calibrations and maintenance shall be made and kept by the licensee.
- 7.3. The licensee shall ensure that the activities shall be carried out in a manner such that emissions do not result in significant impairment of, or significant interference with the environment beyond the facility boundary.
- 7.4. There shall be no clearly audible tonal component in the noise emissions from the activity at the facility boundary.
- 7.5. The following are the trigger levels for landfill gas emissions from the facility measured in any service on or immediately adjacent to the facility and/or at any other monitoring 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.

- 7.6. Any leachate or other contaminated water removed from the facility shall be transported to a wastewater treatment plant whose name and location has been agreed in advance by the Agency. Permission for the disposal of leachate at that wastewater treatment plant shall be obtained from the Sanitary Authority on an annual basis. Disposal procedures for the leachate at the waste water treatment plant shall be in accordance with any written requirements of the Sanitary Authority.

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

## **CONDITION 8 RESTORATION AND AFTERCARE**

- 8.1. The final profile of the facility shall be as shown in Drawing No. K8 "Finished Contour Plan" (dated September 1997 and as amended in October 1998) and in Drawing K10 "Cross Section Prop Levels" (dated September 1997 and amended in October 1998).
- 8.2. 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.
- 8.3. No material or object that is incompatible with the proposed restoration of the site shall be present within one metre of the final soil surface levels.
- 8.4. 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 in writing with the Agency.
- 8.5. Within twelve months of the date of grant of this licence, the licensee shall submit to the Agency for its agreement a detailed landscaping plan for the facility. The plan shall show proposals for the planting of trees and shrubs, seeding of other areas, leachate and gas management/monitoring points (including methods 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 frequencies as set out in *Schedule F: Monitoring* and as specified in the Conditions of this licence.
- 9.2. Monitoring shall be carried out as specified by this licence and in accordance with the following procedures:
- (a) Dust. As set out in Section J.1 "Dust" of the licensee's letter to the Agency of 3/12/97;
- (b) Ecological. An ecological survey of the land located in the part of the Natural Heritage Area which borders the facility and shown in Drawing K2A ("W.C.C Site and N.H.A (Proposed)" dated August 1998) shall be undertaken by a contractor whose name, qualifications and experience has been submitted to the Agency for its agreement. The scope and content of such a study shall be submitted to the Agency for agreement within six months of the date of grant of this licence;

- (c) Groundwater (Levels and composition). As set out in Attachment J.3 of the licence application and including - unless subject to the Agency's agreement - Boreholes 17, 18 and 19;
- (d) Landfill Gas. As set out in Attachment J.4 "Landfill Gas Monitoring" of the licence application;
- (e) Leachate (Levels and composition). As set out in Attachment J.5 "Leachate Monitoring" of the application;
- (f) Meteorological Monitoring. As set out in Attachment J.6 "Meteorological Data" of the application or as otherwise agreed by the Agency;
- (g) Noise monitoring. As set out in Attachment J.7 "Noise Monitoring" of the application;
- (h) Surface Water. As set out in Attachment J.9 "Surface Water Monitoring" of the application, with the monitoring of the River Slaney being conducted in accordance to condition 9.6.

In the event that there is any conflict between the section of the application being referred to in this condition and the requirements of this licence, the conditions of this licence shall take precedence.

- 9.3. Unless otherwise specified by this licence or agreed by the Agency, all environmental monitoring required by this licence shall commence no later than two months after the date of grant of this licence.
- 9.4. Monitoring locations shall be those as set out Drawing K4 "Monitoring Borehole Locations" (dated September 1997 and amended in December 1997), Drawing K7A "Sound Monitoring Points" (dated September 1997) and any other locations required by this licence or agreed by the Agency.
- 9.5. Where there is evidence that the monitoring results being obtained under this licence are being or have the potential to be affected by the salinity of surface water or groundwater, a proposal shall be made to the Agency for its agreement in respect of parameters to be subject to future monitoring at these locations.
- 9.6. Within three months of the date of grant of this licence, a proposal for monitoring points in the River Slaney immediately upstream and downstream of the facility shall be forwarded to the Agency for agreement. This shall include a written procedure which, on agreement by the Agency, shall be used to ensure that sampling is always done at these same locations.
- 9.7. All monitoring points shall be allocated a unique number which shall, along with the correct National Grid Reference, be submitted to the Agency for its agreement.
- 9.8. In the event that any monitoring boreholes become damaged or prove to be unusable for their purpose, they shall be replaced within three months of the date receipt of a notification to this effect from the Agency. Any replacement shall be constructed in the manner set out in such a notification and shall be subject to the unique numbering system required by this licence.
- 9.9. Within three months of the date of grant of this licence, the licensee shall submit a proposal to the Agency for its agreement on the location and frequency of monitoring of landfill gas in respect of domestic properties in proximity to the facility.
- 9.10. 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.

- 9.11. Ionic balances shall be carried out on groundwater and surface water monitoring results.
- 9.12. Monitoring and analytical equipment shall be operated and maintained in accordance with the manufacturer's instructions (if any) so that all monitoring results accurately reflect any emission or discharge or environmental parameter.
- 9.13. The licensee shall amend the frequency, locations, methods and scope of monitoring, sampling, analyses and investigations required by this licence only upon the written instruction of the Agency and shall provide such information concerning such amendments as may be requested in writing by the Agency. Such amendments shall be carried out within any timescale nominated by the Agency.
- 9.14. Unless otherwise agreed in writing with the Agency, a written record shall be kept of the names, qualifications and a summary of relevant experience of all persons who carry out all sampling and monitoring as required by this licence and who carry out the interpretation of the results of such sampling and monitoring.
- 9.15. The licensee shall maintain all sampling and monitoring points so that they may be used for the representative sampling and monitoring of emissions from the facility.
- 9.16. A topographical survey including the void space shall be carried out within thirteen 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.

*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 procedures (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. Contingency Arrangements for the facility shall be as detailed in Attachment K.1 "Contingency Arrangements" of the waste licence application.
- 10.3. The licensee shall have in storage an adequate supply of containment booms and/or suitable absorbent material to contain and absorb any spillage at the facility. Once used the absorbent material shall be disposed of at an appropriate facility.
- 10.4. All significant spillages occurring at the facility shall be treated as an emergency and immediately cleaned up and dealt with so as to alleviate their effects.
- 10.5. No waste shall be burnt within the boundaries of the facility. A fire at the facility shall be treated as an emergency. Immediate action shall be taken to extinguish it and the appropriate authorities notified.
- 10.6. In the event that any monitoring, sampling or observations indicate that an incident has, or may have, taken place, the licensee shall immediately:
  - a) identify the date, time and place of the incident;



- b) carry out an immediate investigation to identify the nature, source and cause of the incident and any emission;
- c) isolate the source of the emission;
- d) evaluate whether environmental pollution, if any, has been caused by the incident;
- e) identify and execute measures to minimise the emissions/malfunction and the effects thereof;
- f) identify and put in place measures to avoid reoccurrence of the incident, and
- g) identify and put in place any other appropriate remedial action.

*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 £13,097 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 2000 and subsequent years, not later than January 31 of each year, pay to the Agency this amount updated in accordance with changes in the Consumer Price Index from the date of the licence to the renewal date. The updated amount shall be notified to the licensee by the Agency. For 1999, the licensee shall pay a pro rata amount from the date of this licence to 31st December 1999. 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 due to an incident occurring on or adjacent to the facility and associated with the facility, 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 in writing by the Agency establish and maintain a fund, or other form of approved security or guarantee, that is adequate to assure the Agency that the licensee is at all times financially capable of complying with the Restoration and Aftercare Plan required by Condition 8. The type of fund and means of its release/recovery shall be submitted in writing to the Agency for its agreement prior to establishment.
- 11.2.2. The fund shall be maintained in an amount always sufficient to underwrite the current Restoration and Aftercare Plan.
- 11.2.3. The licensee shall revise the cost of aftercare and restoration annually and any details of the necessary adjustments to the above fund must, within two weeks of the revision, be forwarded to the Agency for its agreement.
- 11.2.4. Unless otherwise agreed by the Agency, any revision to the fund shall be computed using the following formula:

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

Where:

Cost = Revised restoration and aftercare cost

ECOST = Existing restoration and aftercare cost

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

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

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

# SCHEDULE A Waste Activities

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

<b>Waste Management Act, 1996: Third Schedule</b> <sup>Note 1</sup>	
<b>Class 1.</b>	<b>Deposit on, in or under land (including landfill):</b> This activity is limited to the disposal of the waste types specified in Condition 5.1.
<b>Class 2</b>	<b>Land treatment, including biodegradation of liquids and sludge discards in soils</b> This activity is limited to the disposal of sludges at the facility.
<b>Class 4</b>	<b>Surface impoundment, including placement of liquid or sludge discards into pits, ponds or lagoons</b> This activity is limited to the disposal of sludges at the facility
<b>Class 6</b>	<b>Biological treatment not referred to elsewhere in this Schedule which results in final compounds or mixtures which are disposed of by means of any activity referred to in paragraphs 1. to 10. of this Schedule.</b> This activity is limited to the disposal of sludges at the facility and the use of leachate treatment.
<b>Class 7</b>	<b>Physico-chemical treatment not referred to elsewhere in this Schedule (including evaporation, drying and calcination) which results in final compounds or mixtures which are disposed of by means of any activity referred to in paragraphs 1. to 10. of this Schedule (including evaporation, drying and calcination).</b> This activity is limited to the treatment of leachate at the facility.
<b>Class 12</b>	<b>Repackaging prior to submission to any activity referred to in a preceding paragraph of this Schedule</b> This activity is limited to the baling of waste at the facility, the occurrence of which shall be subject to any requirements communicated to the licensee by the Agency in writing.
<b>Class 13</b>	<b>Storage prior to submission to any activity referred to in a preceding paragraph of this Schedule, other than temporary storage, pending collection, on the premises where the waste concerned was produced.</b> This activity is limited to the storage of waste in the public tipping facility referred to in condition 4, as well as to the storage of waste, prior to disposal at an alternative appropriate facility, of wastes not acceptable for disposal at this facility.

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

## Waste Management Act, 1996: Fourth Schedule <sup>Note 1</sup>

<b>Class 2</b>	<b>Recycling and reclamation of organic substances which are not used as solvents (including composting and other biological transformation processes)</b> This activity is limited to the re-use of green waste (including the production of compost).
<b>Class 3</b>	<b>Recycling or reclamation of metals and metal compounds.</b> This activity is limited to receipt, holding and collection of scrap metal
<b>Class 4</b>	<b>Recycling or reclamation of other inorganic materials.</b> This activity is limited to the receipt, holding and reusing of inert construction and demolition wastes such as clay, topsoil, broken concrete and asphalt.
<b>Class 9</b>	<b>Use of any waste principally as a fuel or other means to generate energy</b> This activity is limited to the combustion of landfill gas
<b>Class 10</b>	<b>The treatment of any waste on land with a consequential benefit for an agricultural activity or ecological system.</b> This activity is limited to the production and spreading of compost
<b>Class 11</b>	<b>Use of waste obtained from any activity referred to in a preceding paragraph of this Schedule.</b> This activity is limited to the use of composted wastes as cover materials
<b>Class 13</b>	<b>Storage of waste intended for submission to any activity referred to in a preceding paragraph of this Schedule, other than temporary storage, pending collection, on the premises where such waste is produced.</b> This activity is limited to the storage of materials pending their recycling as set out in Condition 5

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

## SCHEDULE B Content of the Environmental Management Programme

### Environmental Management Programme

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

Schedule of Drawings

Other items as specified in writing by the Agency

# SCHEDULE C Content of the Annual Environmental Report

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

Reporting Period.

Waste activities carried out at the facility.

Quantity and composition of waste received, disposed of and recovered during the reporting period and each previous year.

Calculated remaining capacity of the facility and year in which final capacity is expected to be reached.

Methods of deposition of waste.

Summary report on emissions and an assessment of their effects

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

Resource and energy consumption summary.

Proposed development of the site and timescale of such development.

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

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

Report on restoration of completed cells/ phases.

Site survey showing existing levels of the facility at the end of the reporting period.

Estimated annual and cumulative quantities of landfill gas emitted from the site.

Estimated annual and cumulative quantity of emissions to groundwater.

Monthly water balance calculation and interpretation.

Meteorological report.

A report on the ecology of the land situated between the facility and the River Slaney in the area of the Natural Heritage Area as shown on drawing K2A (entitled "W.C.C Site and N.H.A. (proposed)" and dated August 1998) and details of any proposals required as a result of such a report.

Schedule of Environmental Objectives and Targets for the forthcoming year.

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

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

Tank, pipeline and bund testing and inspection report.

Reported incidents and complaints summaries.

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

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

# SCHEDULE D Recording and Reporting to the Agency

Table D.1 Recurring Reports

Report	Reporting Frequency <sup>Note1</sup>	Report Submission Date
Environmental Management System Updates	Annually	One month after the end of the year reported on.
Annual Environment Report (AER)	Annually	Within 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 three days of the incident.
Site topographical survey	Annually	Within thirteen months from the date of grant of licence and one month after the end of each year thereafter.
Bund, tank and container integrity assessment	Every three years	Six months from the construction of bunds as required by Condition 4.
Specified Engineering Works reports	As they arise	Prior to the works commencing.
Report of stockpile of capping materials	six monthly	Ten days after the six months being reported on
Monitoring of landfill gas	Quarterly	Ten days after end of the quarter being reported on.
Dust Monitoring	Quarterly	One month after end of the quarter being reported on.
Noise Monitoring	Quarterly	One month 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.

**Note 1: Unless altered with the agreement of the Agency**

Table D.2 Once-off Reports

Report and Contents	Report Submission Date
<b>Environmental Management System</b>	Within six months of the date of grant of this licence unless stated otherwise.
<ul style="list-style-type: none"> <li>(i) EMS Proposals</li> <li>(ii) Schedule of Objectives and Targets</li> <li>(iii) Environmental Management Programme</li> <li>(iv) Management Structure</li> <li>(v) Communication Programme</li> </ul>	twelve months
<b>Infrastructure</b>	Within six months of the date of grant of this licence, unless stated otherwise.
<ul style="list-style-type: none"> <li>(i) Upgrading of site security as required by condition 4</li> <li>(ii) Wheelwash proposal</li> <li>(iii) Fuel storage bunding</li> <li>(iv) Public tipping area by site entrance</li> <li>(v) Surfacing of scrap metal storage area</li> <li>(vi) Proposal to reduce leachate levels</li> <li>(vii) Proposal for leachate cut-off drain</li> <li>(ix) Proposal for groundwater/surface water diversion</li> <li>(x) Gas vent trench and gas alarms</li> <li>(xi) Active collection (etc) of landfill gas</li> <li>(xii) Landscaping plan</li> </ul>	<p>three months</p> <p>twelve months</p> <p>three months</p> <p>three months</p> <p>three months</p> <p>twelve months</p>
<b>Waste Acceptance</b>	Within three months of the date of grant of this licence unless stated otherwise
<ul style="list-style-type: none"> <li>Procedure for supervision of the public tipping area</li> <li>Procedure for the acceptance of sludges</li> <li>Proposal for bunding of waste oil and battery storage area</li> </ul>	four months
<b>Environmental Monitoring</b>	Within three months of the date of grant of this licence unless stated otherwise
<ul style="list-style-type: none"> <li>(i) Location and sampling procedures for monitoring points in the River Slaney</li> <li>(ii) Unique numbering system and NGRs for all monitoring points</li> <li>(iii) content of ecological study on the area of land in the NHA</li> <li>(iv) Gas monitoring domestic properties</li> </ul>	six months
<b>Emergency Response Procedure</b>	Within six months of the date of grant of this licence

## SCHEDULE E Specified Engineering Works

### Specified Engineering Works

Wheelwash construction

Construction of public tipping facility

Hard surfacing of scrap metal storage facility

Landfill cap installation, including temporary and intermediate capping,

Fencing and site security works.

Bunding of fuel and oil storage areas.

Installation of landfill gas vent trench, and other gas management and monitoring systems.

Installation of leachate pumping, collection, interception, management, storage, treatment, monitoring and control systems.

Installation of groundwater/surface water control and monitoring systems.

Restoration on individual phases, landscaping and other aftercare works.

Any other works notified in writing by the Agency.



# SCHEDULE F Monitoring

Monitoring to be carried out at the locations specified in Condition 9.

## F.1 Landfill Gas

Table F.1.1 Landfill Gas Monitoring

Parameter	Monitoring Frequency		Analysis Method <sup>Note 1</sup> /Technique <sup>Note 2</sup>
	Gas Boreholes/ Vents/Wells	Site Office, Garage and any other Structure at the Facility	
Methane (CH <sub>4</sub> ) % v/v	Monthly	Weekly	Infrared analyser/flame ionisation detector
Carbon dioxide (CO <sub>2</sub> ) %v/v	Monthly	Weekly	Infrared analyser/ flame ionisation detector
Oxygen(O <sub>2</sub> ) %v/v	Monthly	Weekly	Infrared analyser
Atmospheric Pressure	Monthly	Weekly	Standard
Temperature	Monthly	Weekly	Standard

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

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

## F.2 Dust/PM<sub>10</sub>

Table F.2.1 Dust/PM<sub>10</sub><sup>Note 1</sup> Monitoring

Parameter (mg/m <sup>2</sup> /day)	Monitoring Frequency	Analysis Method/Technique
Dust	Annual <sup>Note 2</sup>	Standard Method <sup>Note 3</sup>

Note 1: PM<sub>10</sub> monitoring shall be performed at three monitoring locations to be agreed by the Agency. Dust monitoring shall be performed in the period May to September (inclusive), or as otherwise agreed by the Agency

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

Note 3: Standard method VDI2119 (Measurement of Dustfall, Determination of Dustfall using Bergerhoff Instrument (Standard Method) German Engineering Institute) or other method agreed by the Agency.

### F.3 Noise

Table F.3.1 Noise Monitoring Frequency and Technique:

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

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

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

Table F.4.1 Water and Leachate - Parameters /Frequency

Parameter <sup>(Note 1)</sup>	SURFACE WATER Monitoring Frequency	GROUNDWATER Monitoring Frequency	LEACHATE Monitoring Frequency
Visual Inspection	Weekly	Not Applicable	Not Applicable
Groundwater Level	Not Applicable	Monthly	Not Applicable
Leachate Level	Not Applicable	Not Applicable	Weekly
Salinity	As agreed with the Agency <sup>2</sup>	As agreed with the Agency <sup>2</sup>	As agreed with the Agency <sup>2</sup>
Ammoniacal Nitrogen	Quarterly	Quarterly	Biannually
BOD	Quarterly	Not Applicable	Biannually
COD	Quarterly	Not Applicable	Biannually
Chloride	Quarterly	Quarterly	Biannually
Dissolved Oxygen	Monthly	Not applicable	Not Applicable
Electrical Conductivity	Monthly	Monthly	Biannually
Odour/visual inspection	Not Applicable	Monthly	Biannually
pH	Monthly	Monthly	Biannually
Total Suspended Solids	Quarterly	Quarterly	Biannually
Temperature	Quarterly	Quarterly	Biannually
Boron	Not Applicable	Quarterly	Biannually
Cadmium	Quarterly	Quarterly	Biannually
Calcium	Quarterly	Quarterly	Biannually
Chromium (Total)	Quarterly	Quarterly	Biannually
Copper	Quarterly	Quarterly	Biannually
Cyanide (Total)	Not Applicable	Quarterly	Biannually
Fluoride	Not Applicable	Quarterly	Biannually
Iron	Quarterly	Quarterly	Biannually
Nickel	Quarterly	Quarterly	Biannually
Nitrite	Quarterly	Not applicable	Not applicable

Table F.4.1 (Continued) Water and Leachate - Parameters /Frequency

Parameter <sup>(Note 1)</sup>	SURFACE WATER Monitoring Frequency	GROUNDWATER Monitoring Frequency	LEACHATE Monitoring Frequency
Lead	Quarterly	Quarterly	Biannually
List I/II organic substances (Note 2)	Quarterly	Quarterly	Biannually
Magnesium	Quarterly	Quarterly	Biannually
Manganese	Quarterly	Quarterly	Biannually
Mercury	Quarterly	Quarterly	Biannually
Potassium	Quarterly	Quarterly	Biannually
Sulphate	Quarterly	Quarterly	Biannually
Sodium	Quarterly	Quarterly	Biannually
Total Alkalinity	Quarterly	Quarterly	Biannually
Total Phosphorus or orthophosphate	Annually	Annually	Biannually
Total Oxidised Nitrogen	Quarterly	Quarterly	Biannually
Total Organic Carbon	Quarterly	Quarterly	Biannually
Residue on evaporation	Not Applicable	Quarterly	Biannually
Arsenic	Not Applicable	Quarterly	Not Applicable
Barium	Not Applicable	Quarterly	Not Applicable
Selenium	Not Applicable	Quarterly	Not Applicable
Silver	Not Applicable	Quarterly	Not Applicable
Phenol	Quarterly	Quarterly	Not Applicable
Zinc	Quarterly	Quarterly	Biannually
Faecal Coliforms <sup>(Note 3)</sup>	Quarterly	Quarterly	Not Applicable
Total Coliforms <sup>(Note 4)</sup>	Quarterly	Quarterly	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 in writing with the Agency in advance.

Note 2. Salinity measurements shall be taken as set out in Condition 9.

Note 3. Representative samples of the leachate 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 methods include : volatiles (US EPA method 524 or equivalent), semi-volatiles (US EPA method 525 or equivalent, and pesticides (US EPA method 608 or equivalent).

Note 4. If there is evidence of bacterial contamination, the analysis at up gradient and downgradient monitoring points should include enumeration of total bacteria at 22°C, 37°C and faecal streptococci. The frequency should be increased to quarterly monitoring in cases where nearby wells may be of local importance for drinking water.

## F.5 Ecological

Table F.5.1 Ecological assessment in the area of the proposed Natural Heritage Area between the facility and the River Slaney

Parameter	Monitoring Frequency	Analysis Method/Technique
To be agreed <sup>1</sup>	Annual	to be agreed <sup>Note 1</sup>

Note 1: As agreed in the manner set out in Condition 9.

## F.6 Meteorological Monitoring

Table F.6.1 Meteorological Monitoring:

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

# SCHEDULE G Emission Limits

**G.1 Dust Deposition Levels:** (Measured at the locations referred to in Drawing K4 (“Monitoring Boreholes Layout” dated September 1997 and revised December 1997).

Level (mg/m <sup>2</sup> /day) <sup>Note 1</sup>
240

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

**G.2 Noise Emissions:** (Measured as set in Drawing K7A (“Sound monitoring Points” as dated September 1997).

Day dB(A) L <sub>Aeq</sub> (15 minutes)	Night dB(A) L <sub>Aeq</sub> (15 minutes)
55	45

**G.3 Landfill Gas Concentration Limits:** (Measured in any building or other enclosed structure and at any other monitoring points notified to the licensee by the Agency).

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

**G.4 Composition Limits for Leachate Tankered to the Wastewater Treatment Plant**

pH	COD
To be agreed1	To be agreed1

Note 1: As agreed in the manner set out in Condition 7

**Given** by the Agency on the 23rd day of June 1999.

**Signed on behalf of the said Agency**

on the 23rd day of June 1999

\_\_\_\_\_ P. Nolan

**Authorised Person**