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

WASTE LICENCE  
PROPOSED DECISION

<b>Waste Licence</b>	90-1
<b>Register Number:</b>	
<b>Applicant:</b>	Donegal County Council
<b>Location of Facility:</b>	Balbane Landfill Site, Balbane, Killybegs, Co. Donegal

# 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 orderly operation and subsequent closure, capping and restoration/aftercare of the landfill at Balbane Landfill Site, Balbane, Killybegs, Co. Donegal.

Donegal County Council are permitted to accept 7,500 tonnes of municipal waste for deposition at this landfill. In addition to this waste, Donegal County Council will be permitted to accept 70,000 tonnes of inert waste for the purposes of restoration of the facility. This will include grading, capping and final landscaping of the facility. The final height of the facility after restoration is limited to 185m OD. This restoration must be completed by July 31<sup>st</sup> 2004.

Donegal County Council are required to install various items of infrastructure at the facility including *inter alia*; a leachate management and collection system and a landfill gas venting system.

The council must manage and operate the facility to ensure that the activities do not cause environmental pollution. The council must carry out regular environmental monitoring and submit all monitoring results, and a wide range of reports on the operation and management of the facility to the Agency.

The conditions of this licence set out in detail the legal constraints under which Donegal County Council is allowed to operate and manage this facility.

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# DECISION & REASONS FOR THE DECISION

The Environmental Protection Agency (the Agency) is satisfied, on the basis of the information available, that the requirements of Section 40(4) of the Waste Management Act, 1996 have been complied with in respect of the application for a waste licence for the activities listed hereunder in Part I.

In reaching this decision the Agency has considered the application and supporting documentation received from the applicant 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 Agency proposes, under Section 40(1) of the said Act to grant this Waste Licence to Donegal County Council to carry on the waste activities listed below at Balbane Landfill Site, Balbane, Killybegs, Co. Donegal subject to twelve conditions, with the reasons therefor and the associated schedules attached thereto set out in the licence.

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

<b>Class 1.</b>	<b>Deposit on, in or under land (including landfill):</b> This activity is limited to deposition of municipal and inert waste <sup>Note 1 &amp; 2</sup>
<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 leachate collection and treatment.
<b>Class 13.</b>	<b>Storage prior to submission to any activity referred to in a preceding paragraph of this Schedule, other than temporary storage, pending collection, on the premises where the waste concerned is produced.</b> This activity is limited to leachate collection and storage prior to treatment.

**Note 1:** The deposition of municipal waste at this facility is limited to a total of 7,500 tonnes from the date of grant of licence

**Note 2:** The deposition of inert waste for the purposes of restoration and aftercare is limited to 70,000 tonnes.

## *Part II: 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.

*Waste disposal activities, in accordance with the Third Schedule of the Waste Management Act, 1996 for which a waste licence is refused.*

<b>Class 2.</b>	<b>Land treatment, including biodegradation of liquid or sludge discards in soils</b> REASON: Licensing under Class 4 and Class 13 (Third Schedule) will cover leachate management and storage, and therefore Class 2 is refused.
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**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: Licensing under Class 4 and Class 13 (Third Schedule) will cover leachate management and storage and therefore Class 6 is refused.

## INTERPRETATION

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

<b>Adequate lighting</b>	20 lux measured at ground level.
<b>Agreement</b>	Agreement in writing.
<b>Annually</b>	At approximately twelve monthly intervals.
<b>Attachment</b>	Any reference to Attachments in this licence refers to attachments submitted as part of the waste licence application.
<b>Application</b>	The application by the licensee for this waste licence.
<b>Appropriate facility</b>	A waste management facility, duly authorised under relevant law and technically suitable.
<b>Condition</b>	A condition of this licence.
<b>Construction and Demolition Waste</b>	All wastes which arise from construction, renovation and demolition activities.
<b>Cover material</b>	Bricks, crushed concrete, tarmac, earth, soil, sub-soil, stone, rock or other similar natural materials; or  other cover material the use of which has been agreed with the Agency.
<b>Daily Cover</b>	Is the term used to describe material spread (about 150mm if soil cover is used) over deposited waste at the end of each day. Synthetic materials may also be used. Its objective is to minimise odour, the amount of litter generated and to control flies and access to the waste by birds and vermin. Where soils are used for daily cover, it is recommended that they be removed at the start of the day and subsequently reused as much as possible
<b>Daytime</b>	8.00 a.m. to 10.00 p.m.
<b>Documentation</b>	Any report, record, result, data, drawing, proposal, interpretation or other document in written or electronic form which is required by this licence.
<b>Drawing</b>	Any reference to a drawing or drawing number means a drawing or drawing number contained in the application, unless otherwise specified in this licence.
<b>Emergency</b>	Those occurrences defined in Condition 9.4
<b>Emission Limits</b>	Those limits, including concentration limits and deposition levels established in Schedule C.
<b>European Waste Catalogue (EWC)</b>	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>Hours of Operation</b>	The hours during which the facility is authorised to be operational. The hours of operation of a facility are usually longer than the hours of waste acceptance to facilitate preparatory and completion works, such as the removal and laying of daily cover.
<b>Hours of Waste Acceptance</b>	The hours during which the facility is authorised to accept waste. Different activities within the facility, such as the landfill and the civic waste facility, may have different hours of waste acceptance.
<b>Inert waste</b>	Waste that does not undergo any significant physical, chemical or biological transformations. Inert waste will not dissolve, burn or otherwise physically or chemically react, biodegrade or adversely affect other matter with which it comes into contact in a way likely to give rise to environmental pollution or harm human health. The total leachability and pollutant content of the waste and the ecotoxicity of the leachate must be insignificant, and in particular not endanger the quality of surface water and/or groundwater.
<b>Intermediate Cover</b>	Refers to placement of material (minimum 300mm if soil is used) for a period of time prior to restoration or prior to further disposal of waste.
<b>Landfill</b>	Refers to the area of the facility where the waste is disposed of by placement on the ground or on other waste.
<b>Landfill Gas</b>	Gases generated from the landfilled waste.
<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>	Donegal County Council
<b>List I/II Organics</b>	Substances classified pursuant to EC Directives 76/464/EEC and 80/68/EEC.
<b>Liquid Waste</b>	Any waste in liquid form and containing less than 2% dry matter. Any waste tankered to the facility.
<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>Monthly</b>	A minimum of 12 times per year, at approximately monthly intervals.
<b>Night-time</b>	10.00 p.m. to 8.00 a.m.
<b>Recyclable Materials</b>	Those waste types, such as cardboard, batteries, gas cylinders, etc, which may be recycled
<b>Quarterly</b>	At approximately three monthly intervals.
<b>Sample(s)</b>	Unless the context of this licence indicates to the contrary, samples shall include measurements by electronic instruments.
<b>Sludge</b>	The accumulation of solids resulting from chemical coagulation, flocculation and/or sedimentation after water or wastewater treatment with between 2% and 14% dry matter.
<b>Specified Emissions</b>	Those emissions listed in Schedule C: Emission Limits of this licence.

<b>Specified Engineering Works</b>	Those engineering works listed in Schedule B: Specified Engineering Works of this licence.
<b>Trigger Level</b>	A parameter value specified in the licence, the achievement or exceedance of which requires certain actions to be taken by the licensee.
<b>EPA Working Day</b>	Refers to the following hours; 9.00 a.m. to 5.30 p.m. Monday to Friday inclusive.
<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 III CONDITIONS***

### **CONDITION 1 SCOPE OF THE LICENCE**

- 1.1. Waste activities at the facility shall be restricted to those listed and described in Part I: Activities Licensed and authorised by this licence.
- 1.2. For the purposes of this licence, the facility is the area of land outlined in red on Drawing No. 3026.26/A02 – Site Plan 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. Municipal and Inert Waste may be deposited at the facility subject to the maximum quantities listed in Schedule A.
- 1.5. No hazardous wastes, liquid wastes or fish/meat wastes shall be disposed of at this facility.
- 1.6. Waste Acceptance Hours and Hours of Operation
  - 1.6.1. Waste shall only be accepted for deposition at the facility between the hours of 8:30am-5pm Monday to Friday inclusive and 8:30am-1pm on Saturdays.
  - 1.6.2. The facility shall only be operated during the hours of 8:30am-5:30pm Monday to Friday inclusive and 8:30am-1:30pm on Saturdays.
  - 1.6.3. Waste shall not be accepted for deposition at the facility on Sundays or Bank Holidays.
- 1.7. The following shall constitute an incident for the purposes of this licence:
  - a) an emergency;
  - 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; and
  - d) any indication that environmental pollution has, or may have, taken place.
- 1.8. Where the Agency considers that a non-compliance with any condition of this licence has occurred, it may serve a notice on the licensee specifying:

- 1.8.1. 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;
- 1.8.2. That the licensee shall undertake the works stipulated in the notice, and/or otherwise comply with the requirements of the notice as set down therein, within the time-scale contained in the notice; and
- 1.8.3. That the licensee shall carry out any other requirement specified in the notice.

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

- 1.9. 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 and shall notify the licensee in writing of any such modification or alteration. Every such plan, programme or proposal shall be carried out within the timescale fixed by the Agency but shall not be undertaken without the agreement of the Agency. Every such plan, programme or proposal agreed by the Agency shall be covered by the conditions of this licence

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

## **CONDITION 2 MANAGEMENT OF THE FACILITY**

### **2.1 Facility Management**

- 2.1.1 The licensee shall employ a suitably qualified and experienced facility manager who shall be designated as the person in charge. The facility manager or a nominated, suitably qualified and experienced, deputy shall be present on the facility at all times during its operation.
- 2.1.2 Both the facility manager and deputy, and any replacement manager or deputy, shall successfully complete both the FÁS waste management training programme (or equivalent agreed with the Agency) and associated on site assessment appraisal within twelve months of appointment.
- 2.1.3 The licensee shall ensure that personnel performing specifically assigned tasks shall be qualified on the basis of appropriate education, training and experience, as required and shall be aware of the requirements of this licence.

### **2.2 Management Structure**

- 2.2.1 Within three months from the date of grant of this licence, the licensee shall submit written details of the management structure of the facility to the Agency. Any proposed replacement in the management structure shall be notified in advance in writing to the Agency. Written details of the management structure shall include the following information
  - a) the names of all persons who are to provide the management and supervision of the waste activities authorised by the licence, in particular the name of the facility manager and any nominated deputies;
  - b) details of the responsibilities for each individual named under a) above; and



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

### 2.3 Environmental Management System (EMS)

2.3.1 The licensee shall establish and maintain an EMS. Within six months from the date of grant of this licence, the licensee shall 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.

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

#### 2.3.2.1 Environmental Management Plan (EMP)

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

- (i) the items specified to be contained in an Environmental Management Plan in the Landfill Operational Practices Manual published by the Agency;
- (ii) any other items required by written guidance issued by the Agency.

#### 2.3.2.2 Corrective Action Procedures

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

### 2.4 Communications Programme

2.4.1 The licensee shall establish and maintain a Communications Programme to ensure that members of the public can obtain information at the facility, at all reasonable times, concerning the environmental performance of the facility. This shall be established within six months of granting of the licence.

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

## CONDITION 3 FACILITY INFRASTRUCTURE

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

### 3.2 Specified Engineering Works

3.2.1 The licensee shall submit proposals for all Specified Engineering Works, as defined in *Schedule B: Specified Engineering Works*, 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.

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

- 3.2.3 Following the completion of all specified engineering works, the licensee shall complete a construction quality assurance validation. The validation report shall be made available to the Agency on request. The report shall include the following information;
- a) a description of the works;
  - b) as-built drawings of the works;
  - c) records and results of all tests carried out (including failures);
  - d) drawings and sections showing the location of all samples and tests carried out;
  - e) daily record sheets/diary;
  - f) name(s) of contractor(s)/individual(s) responsible for undertaking the specified engineering works;
  - g) name(s) of individual(s) responsible for supervision of works and for quality assurance validation of works;
  - h) records of any problems and the remedial works carried out to resolve those problems; and
  - i) any other information requested in writing by the Agency.

### 3.3 Facility Notice Board

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

3.3.2 The board shall clearly show:

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

### 3.4 Facility Security

3.4.1 Security and stockproof fencing and gates shall be maintained around the perimeter of the site. The base of the fencing shall be set in the ground.

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

- a) a temporary repair shall be made by the end of the working day; and,
- b) a repair to the standard of the original gates and/or fencing shall be undertaken within three working days.

### 3.5 Facility Roads and Hardstanding

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

### 3.6 Facility Office

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

3.6.2 The licensee shall provide and maintain a working telephone at the facility.

### 3.7 Waste Quarantine Area

3.7.1 Within four months of date of grant of licence, a Waste Quarantine Area shall be provided and maintained at the facility,

3.7.2 This area shall be constructed and maintained in a manner suitable, and be of a size appropriate, for the quarantine of waste. The waste quarantine area shall be clearly identified.

### 3.8 Leachate Management Infrastructure

3.8.1 Within six months of date of grant of this licence, unless the licensee can demonstrate that leachate discharges from the facility have no significant impact upon the receiving waters, the licensee shall implement a leachate management programme. This shall consist of the following:

- (i) Installation of a leachate collection toe drain around the perimeter of the facility. This toe drain shall consist of a gravel and perforated pipe drainage system. The leachate collection toe drain shall be keyed into and covered by the capping layer, once the capping layer is installed.
- (ii) Provision of an appropriately sized leachate storage tank at the South-Eastern corner of the facility.
- (iii) Installation of an appropriate road for access to the leachate storage tank by the leachate tanker vehicle.
- (iv) Separation of clean surface water from contaminated surface water/leachate. Contaminated surface water shall be discharged to the leachate collection system. Clean surface water shall be discharged to adjacent watercourses.

3.8.2 The frequency of leachate removal/discharge from the leachate lagoon shall be such that a minimum freeboard of 0.5m shall be maintained in the leachate lagoon at all times.

3.8.3 Leachate stored in the leachate storage lagoon shall be disposed of by tankering off-site in fully enclosed road tankers, to an agreed waste water treatment plant.

### 3.9 Landfill Gas Management

3.9.1 Landfill gas management infrastructure shall be installed and maintained at the facility as described in Attachment D5(a)-(f) and specified in Drawing 3026.26/A13. This infrastructure shall be installed during the capping of the facility.

### 3.10 Replacement of Infrastructure

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

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

## **CONDITION 4 RESTORATION AND AFTERCARE**

4.1. The licensee shall restore the facility on a phased basis. The Restoration and Aftercare Plans for the facility shall include the plan submitted as part of Attachment H (Figure C7/04).

4.2. The restoration of the facility shall be completed by July 31<sup>st</sup> 2004.

- 4.3. The final height of the facility shall not exceed 185mOD (Malin Head).
- 4.4. Final Capping
- 4.4.1. The final capping shall consist of the following:
- a) top soil (150 -300mm);
  - b) subsoils, such that total thickness of top soil and subsoils is at least 1m;
  - c) drainage layer of 0.5m thickness having a minimum hydraulic conductivity of  $1 \times 10^{-4}$  m/s;
  - d) compacted mineral layer of a minimum 0.6m thickness with a permeability of less than  $1 \times 10^{-9}$  m/s or a geosynthetic material (e.g. GCL) or similar that provides equivalent protection; and
  - e) gas collection layer of natural material (minimum 0.3m) or a geosynthetic layer.
- 4.5. 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.
- 4.6. Soil Storage
- 4.6.1. All soils shall be stored to preserve the soil structure for future use.

**Reason :** *To provide for the restoration of the facility*

## **CONDITION 5 FACILITY OPERATIONS**

- 5.1 Wastes shall not be deposited in any cell or part of the facility without the prior agreement of the Agency.
- 5.2 The licensee shall submit to the Agency for its agreement, prior to the use of the leachate storage tank, leachate Handling Procedures for the handling of leachate on the facility and during removal from the lagoon and subsequent transport/discharge to the Waste Water Treatment Plant.
- 5.3 All wastes shall be checked at the working face. Any wastes not suitable for acceptance shall be removed for recovery or disposal at an appropriate alternative facility. Such waste shall be stored in the Waste Quarantine Area only. No waste shall be stored in the Waste Quarantine Area for more than three months.
- 5.4 Working Face
- 5.4.1 Unless the prior agreement of the Agency is given, the following shall apply at the facility:
- a) Only one working face shall exist at the landfill at any one time for the deposit of waste other than cover or restoration materials; and
  - b) The working face of the landfill shall be no more than 2.5 metres in height after compaction, no more than 25 metres wide and have a slope no greater than 1 in 3.
  - c) All waste deposited at the working face shall be compacted, and covered as soon as is practicable and at any rate prior to the end of the working day.
  - d) The working face shall each day at the end of the day, be covered with suitable material.
- 5.5 Daily and Intermediate Cover

- 5.5.1 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.

#### 5.6 Operational Controls

- 5.6.1 All large hollow objects and other large articles deposited at the facility shall be crushed, broken up, flattened or otherwise treated.
- 5.6.2 Wastes once deposited and covered shall not be excavated, disturbed or otherwise picked over with the exception of works associated with the construction and installation of the leachate collection system or with the prior agreement from the Agency.
- 5.6.3 Completed areas of the landfill shall be profiled so that no depressions exist in which water may accumulate. Any depressions arising after profiling shall be rectified by the emplacement of suitable capping or restoration materials.
- 5.6.4 Scavenging shall not be permitted at the facility.
- 5.6.5 Gates shall be locked shut when the facility is unsupervised.
- 5.6.6 The licensee shall provide and use adequate lighting during the operation of the facility in hours of darkness.
- 5.6.7 All tanks and drums shall be labelled to clearly indicate their contents.
- 5.6.8 No smoking shall be allowed on the facility (other than in the site office).

#### 5.7 Maintenance

- 5.7.1 All treatment/abatement and emission control equipment shall be calibrated and maintained, in accordance with the instructions issued by the manufacturer/supplier or installer. Written records of the calibrations and maintenance shall be made and kept by the licensee.
- 5.7.2 All tanks on the facility shall be inspected and certified fit for purpose every three years by an independent and appropriately qualified chartered engineer.
- 5.7.3 The licensee shall maintain and clearly label and name all sampling and monitoring locations.

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

## CONDITION 6 EMISSIONS

- 6.1. No specified emission from the facility shall exceed the emission limit values set out in Schedule C: 'Emission Limits' of this licence. There shall be no other emissions of environmental significance.
- 6.2. The licensee shall ensure that the activities shall be carried out in a manner such that emissions do not result in significant impairment of, or significant interference with the environment beyond the facility boundary.
- 6.3. Landfill Gas
- 6.3.1. The following are the trigger levels for landfill gas emissions from the facility measured in any service duct or manhole on, at or immediately adjacent to the facility and/or at any other point located outside the body of the waste:

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

#### 6.4. Disposal of Leachate

- 6.4.1. Unless the licensee can demonstrate that leachate discharges from the facility have no significant impact upon the receiving waters, leachate shall be transported off-site as outlined in Condition 6.4.2.
- 6.4.2. All leachate or contaminated water tankered from the facility shall be transported to an agreed Waste Water Treatment Plant. The Waste Water Treatment Plant to be used for disposal of leachate shall be agreed with the Agency prior to commencement of transport of leachate.

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

## CONDITION 7 NUISANCES

- 7.1 The licensee shall ensure that vermin, birds, flies, mud, dust, litter and odours do not give rise to nuisance at the facility or in the immediate area of the facility. Any method used by the licensee to control any such nuisance shall not cause environmental pollution.
- 7.2 The road network in the vicinity of the facility shall be kept free from any debris caused by vehicles entering or leaving the facility. Any such debris or deposited materials shall be removed without delay.
- 7.3 Litter Control
  - 7.3.1 All loose litter or other waste, placed on or in the vicinity of the facility, other than in accordance with the requirements of this licence, shall be removed, subject to the agreement of the landowners, immediately and in any event by 10.00am of the next working day after such waste is discovered.
  - 7.3.2 The licensee shall ensure that all vehicles delivering waste to and removing waste and materials from the facility are appropriately covered.
  - 7.3.3 The licensee shall within two months of date of grant of licence carry out a full litter inspection and clean-up on the land adjacent to the facility. The licensee shall pay particular attention to removing any litter from the watercourses adjacent to the facility.
- 7.4 Dust Control
  - 7.4.1 In dry weather, site roads and any other areas used by vehicles shall be sprayed with water as and when required to minimise airborne dust nuisance.
- 7.5 The licensee shall within four months of date of grant of this licence put in place a programme for the control and/or eradication of vermin and fly infestations, and for the control of birds at the facility. This programme shall include as a minimum, a written record of the control measures including rodenticide(s) and insecticide(s) to be used (where not previously submitted), operator training, mode and frequency of application, inspection and maintenance records and measures to contain sprays within the facility boundary.

**Reason :** *To provide for the control of nuisances*

## CONDITION 8 MONITORING

- 8.1. The licensee shall carry out such monitoring and at such locations and frequencies as set out in Schedule D: Monitoring and as specified in this licence. Unless otherwise specified by this licence, all environmental monitoring shall commence no later than two months after the date of grant of this licence.
- 8.2. The licensee shall amend the frequency, locations, methods and scope of monitoring as required by this licence only upon the written instruction of the Agency and shall provide such information concerning such amendments as may be requested in writing by the Agency. Such alterations shall be carried out within any timescale nominated by the Agency.
- 8.3. Monitoring and analysis equipment shall be operated and maintained in accordance with the manufacturers' instructions (if any) so that all monitoring results accurately reflect any emission, discharge or environmental parameter.
- 8.4. The licensee shall provide safe and permanent access to all on-site sampling and monitoring points and to off-site points as required by the Agency.
- 8.5. Dust monitoring.
- 8.5.1. The licensee shall establish two further dust monitoring locations as required under Schedule D.1: Monitoring Locations.
- 8.6. Landfill Gas
- 8.6.1. All landfill gas monitoring equipment, other than permanent monitoring systems within buildings, shall be certified as being intrinsically safe.
- 8.7. Meteorological Monitoring
- 8.7.1. The licensee shall make arrangements for representative meteorological data to be collated for the facility to fulfil the requirements of Schedule D.6: Meteorological Monitoring.
- 8.8. Topographical Survey
- 8.8.1. A topographical survey shall be carried out within six months of the date of grant of this licence. The survey shall include a measurement of the remaining available void space. It shall be repeated annually thereafter. The survey shall be in accordance with any written instructions issued by the Agency.
- 8.9. Nuisance Monitoring
- 8.9.1. 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.

**Reason :** *To ensure compliance with the conditions of this licence by provision of a satisfactory system of monitoring of emissions*

## CONDITION 9 CONTINGENCY ARRANGEMENTS

- 9.1. In the event of an incident the licensee shall immediately:
- a) identify the date, time and place of the incident;

- b) carry out an immediate investigation to identify the nature, source and cause of the incident and any emission arising therefrom;
  - c) isolate the source of any such emission;
  - d) evaluate the environmental pollution, if any, caused by the incident;
  - e) identify and execute measures to minimise the emissions/malfunction and the effects thereof;
  - f) provide a proposal to the Agency for its agreement within one month of the incident occurring to:
    - i) identify and put in place measures to avoid reoccurrence of the incident; and
    - ii) identify and put in place any other appropriate remedial action.
- 9.2. 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. This shall include a risk assessment to determine the requirements at the facility for fire fighting and fire water retention facilities. The Fire Authority shall be consulted by the licensee during this assessment.
- 9.3. The licensee shall have in storage an adequate supply of suitable absorbent material to contain and absorb any spillage at the facility. Once used the absorbent material shall be disposed of at an appropriate facility.
- 9.4. Emergencies
- 9.4.1. All significant spillages occurring at the facility shall be treated as an emergency and immediately cleaned up and dealt with so as to alleviate their effects;
  - 9.4.2. No waste shall be burnt within the boundaries of the facility. A fire at the facility shall be treated as an emergency and immediate action shall be taken to extinguish it and notify the appropriate authorities.

***Reason : To ensure compliance with the conditions of this licence by provision of a satisfactory system of monitoring of emissions***

## **CONDITION 10 RECORDS**

- 10.1 The licensee shall keep the following documents at the facility office.
- a) the current waste licence relating to the facility;
  - b) the current EMS for the facility;
  - c) the previous year's AER for the facility;
  - d) all written procedures produced by the licensee which relate to the licensed activities.
- 10.2 The licensee shall maintain a written record for each load of waste arriving at the facility. 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
- 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.

10.3 Written Records

The following written records shall be maintained by the licensee:

- a) the types and quantities of waste deposited at the facility each year. These records shall include the relevant EWC Codes;
- b) all training undertaken by facility staff;
- c) details of all nuisance inspections; and
- d) the names and qualifications of all persons who carry out all sampling and monitoring as required by this licence and who carry out the interpretation of the results of such sampling and monitoring.

10.4 The licensee shall maintain a written record of all complaints relating to the operation of the 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.

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

- a) the name of the carrier;
- b) the date and time of removal of leachate from the facility;
- c) the volume of leachate, in cubic metres, removed from the facility on each occasion;
- d) the name & address of the Wastewater Treatment Plant to which the leachate was transported;
- e) any incidents or spillages of leachate during its removal or transportation.

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

- a) the date and time during which spraying of insecticide is carried out;
- b) contractor details;
- c) contractor logs and site inspection reports;
- d) details of the rodenticide(s) and insecticide(s) used;
- e) operator training details;
- f) details of any infestations;
- g) mode, frequency, location and quantity of application; and,
- h) measures to contain sprays within the facility boundary.

## **CONDITION 11 REPORTS AND NOTIFICATIONS**

- 11.1 Unless otherwise agreed by the Agency, all reports and notifications submitted to the Agency shall:
- a) be sent to the Agency's headquarters;
  - b) comprise one original and three copies unless additional copies are required;
  - c) be formatted in accordance with any written instruction or guidance issued by the Agency;
  - d) include whatever information as is specified in writing by the Agency;
  - e) be identified by a unique code, indicate any modification or amendment, and be correctly dated to reflect any such modification or amendment;
  - f) be submitted in accordance to the relevant reporting frequencies specified by this licence, such as in Schedule E;
  - g) be accompanied by a written interpretation setting out their significance in the case of all monitoring data; and
  - h) be transferred electronically to the Agency's computer system if required by the Agency.
- 11.2 In the event of an incident occurring on the facility, the licensee shall:
- a) notify the Agency as soon as practicable and in any case not later than 10.00 am the following working day after the occurrence of any incident;
  - b) submit a written record of the incident, including all aspects described in Condition 9.1(a-e), 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 10:00am on the following working day after such an incident.
  - d) Should any further actions be taken as a result of an incident occurring, the licensee shall forward a written report of those actions to the Agency as soon as practicable and no later than ten days after the initiation of those actions.
- 11.4 All written reports submitted to the Agency shall be certified accurate and representative by the licensee.
- 11.5 Monitoring Locations
- 11.5.1. Within three months of the date of grant of this licence, the licensee shall submit to the Agency an appropriately scaled drawing(s) showing all the monitoring locations that are stipulated in this licence. The drawing(s) shall include the reference code of each monitoring point.
- 11.10 Annual Environmental Report
- 11.10.1 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).
- 11.10.2 The AER shall include as a minimum the information specified in Schedule F. Content of Annual Environmental Report and shall be prepared in accordance with any relevant written guidance issued by the Agency.

## **CONDITION 12 CHARGES AND FINANCIAL PROVISIONS**

### 12.1 Agency Charges

- 12.1.1 The licensee shall pay to the Agency an annual contribution of £7,673 (~~€~~,743) or such sum as the Agency from time to time determines, towards the cost of monitoring the activity or otherwise in performing any functions in relation to the activity, as the Agency considers necessary for the performance of its functions under the Waste Management Act, 1996. The licensee shall in 2002 and subsequent years, not later than January 31 of each year, pay to the Agency this amount updated in accordance with changes in the Public Sector Average Earnings Index from the date of the licence to the renewal date. The updated amount shall be notified to the licensee by the Agency. For 2001, the licensee shall pay a *pro rata* amount from the date of this licence to 31<sup>st</sup> December. This amount shall be paid to the Agency within one month of the date of grant of this licence.
- 12.1.2 In the event that the frequency or extent of monitoring or other functions carried out by the Agency needs to be increased the licensee shall contribute such sums as determined by the Agency to defraying its costs.

### 12.2 Financial Provision for Closure, Restoration and Aftercare

- 12.2.1 The licensee shall from a date to be set by the Agency establish and maintain a fund, or provide a 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 4. The type of fund established and means of its release/recovery shall be agreed by the Agency prior to its establishment.
- 12.2.2 Any fund established shall be maintained in an amount always sufficient to underwrite the current Restoration and Aftercare Plan.
- 12.2.3 The licensee shall revise the cost of restoration and aftercare annually and any details of the necessary adjustments to the fund or guarantee 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.
- 12.2.4 Unless otherwise agreed any revision to the fund shall be computed using the following formula:

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

Where:

Cost = Revised restoration and aftercare cost

ECOST = Existing restoration and aftercare cost

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

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

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

## SCHEDULE A : Waste Acceptance

### A.1 Waste Acceptance

*Table A.1 Waste Categories and Quantities*<sup>NOTE 1</sup>

WASTE TYPE	MAXIMUM (tonnes)
Municipal waste	7,500
Inert Waste <sup>Note 2</sup>	70,000

*Note 1:* From the date of grant of licence.

*Note 2:* For the purposes of restoration and after care.

## SCHEDULE B : Specified Engineering Works

Specified Engineering Works
Final capping.
Installation of Landfill Gas Management Infrastructure
Installation of Leachate Management Infrastructure
Any other works notified in writing by the Agency.

## SCHEDULE C :Emission Limits

*C.1 Landfill Gas Concentration Limits:* (Measured in any building on or adjacent to the facility).

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

*C.2 Dust Deposition Limits:* (Measured at the monitoring points indicated in Table D1)

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

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

## SCHEDULE D : Monitoring

Monitoring to be carried out as specified below.

### D.1 Monitoring Locations

Monitoring locations shall be those as set out in Table D.1 and as per Drawing 3026.26/A12 Revision C of the application.

Table D.1 Monitoring Locations

LANDFILL GAS	DUST	SURFACE WATER	GROUND WATER	LEACHATE
BH1	D1	S1	GW1	BH2
BH2	D2 <sup>Note 1</sup>	S2	GW2	-
BH3	D3 <sup>Note 1</sup>	S3	GW3	-
-	-	S4	-	-
-	-	S5	-	-

### D.2 Landfill Gas

Table D.2 Landfill Gas Monitoring Parameters, Frequency and Technique

Parameter	Monitoring Frequency Gas Boreholes/ Vents/Wells	Analysis Method <sup>Note1</sup> /Technique <sup>Note2</sup>
Methane (CH <sub>4</sub> ) % v/v	Quarterly	Infrared analyser/flame ionisation detector
Carbon dioxide (CO <sub>2</sub> )%v/v	Quarterly	Infrared analyser/ flame ionisation detector
Oxygen(O <sub>2</sub> ) %v/v	Quarterly	Electrochemical cell
Atmospheric Pressure	Quarterly	Standard
Temperature	Quarterly	Standard

Note1: All monitoring equipment used should be intrinsically safe.

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

### D.3 Dust

Table D.3 Dust Monitoring Frequency and Technique

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

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

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

## D.4 Surface Water, Groundwater and Leachate

Table D.5 Water and Leachate - Parameters /Frequency

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

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

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

Note 3: 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 EPA method 525 or equivalent, and pesticides (US EPA method 608 or equivalent).

Note 4: Discharge of diverted surface water/groundwater shall be monitored on a monthly basis for these parameters unless flow in that month does not allow such monitoring.

Note 5: Once off for List I/II organic substances.

## D.5 Meteorological Monitoring

Table D.6 Meteorological Monitoring: (Data to be obtained from the nearest Met Éireann Meteorological monitoring station)

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 E :Recording and Reporting to the Agency

Report	Reporting Frequency <sup>Note1</sup>	Report Submission Date
Environmental Management System Updates	Annually	One month after the end of the year reported on.
Annual Environment Report (AER)	Annually	Thirteen months from the date of grant of licence and one month after the end of each year thereafter.
Record of incidents	As they occur	Within five days of the incident.
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	Annually	One month after end of the year being reported on.
Any other monitoring	As they occur	Within ten days of obtaining results.

Note 1: Unless altered at the request of the Agency



# SCHEDULE F :Content of the Annual Environmental Report

## Annual Environmental Report Content

Reporting Period.

Waste activities carried out at the facility.

Quantity and Composition of waste received and deposited during the reporting period and each previous year.

Summary report on emissions, results and interpretation of environmental monitoring.

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

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

Report on restoration of completed cells/ phases.

Site survey showing existing levels of the facility at the end of the reporting period and calculated remaining capacity of the facility

Annual water balance calculation and interpretation.

Reported incidents and Complaints summaries.

Review of Nuisance Controls.

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

Report on training of staff.

Any other items specified by the Agency.

**Signed on behalf of the said Agency**  
on the 22<sup>nd</sup> day of June, 2001

\_\_\_\_\_  
Ana Bolger      **Authorised Person**