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Ireland

WASTE LICENCE
LANDFILL FOR NON-HAZARDOUS WASTE

PROPOSED DECISION

Waste Licence Register Number:	60-2
Applicant:	Louth County Council
Location of Facility:	Whiteriver Landfill Site, Whiteriver and Gunstown Townland, Dunleer, County Louth.

INTRODUCTION

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

This Proposed Decision relates to an existing Local Authority landfill accepting municipal, commercial and non-hazardous industrial wastes at Whiteriver Landfill Site, Whiteriver and Gunstown Townland, Dunleer, County Louth. This review of the existing Waste Licence provides for the extension of the landfill by way of constructing six new engineered lined cells in two Phases (Phases 5 and 6) to the east of the existing landfill and for the continuation of landfilling in the remainder of the existing facility.

This Proposed Decision would allow for an increase in the maximum annual tonnage acceptable at the facility from 20,000 tonnes per annum to 96,000 tonnes per annum and for an amendment of the operational hours of the facility. The proposed extension will have capacity for approximately 1,248,000 tonnes of waste and the remaining capacity in the existing landfill and the capacity of the proposed extension is approximately 1,654,500 tonnes.

The existing landfill and proposed extension shall be connected to a landfill gas collection system with the landfill gas being flared initially and ultimately connected to a utilisation plant for the production of electricity for the National Grid if feasible.

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

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

Table of Contents

DECISION & REASONS FOR THE 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, 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 Agency proposes, under Section 46(2) of the said Act to grant this Waste Licence to Louth County Council to carry on the waste activities listed below at Whiteriver Landfill, Whiteriver and Gunstown Townlands, Dunleer, County Louth subject to conditions, with the reasons therefor and the associated schedules attached thereto set out in the licence.

Licensed Waste Disposal Activities, in accordance with the Third Schedule of the Waste Management Act 1996

Class 1	**Deposit on, in or under land (including landfill):**
	This activity is limited to disposal of the waste types specified in *Schedule A: Waste Acceptance*, of this licence.
Class 4	**Surface impoundment, including placement of liquid or sludge discards into pits, ponds or lagoons:**
	This activity is limited to the operation of the stormwater and leachate retention lagoons.
Class 5	**Specially engineered landfill, including placement into lined discrete cells which are capped and isolated from one another and the environment:**
	This activity is limited to the disposal of the waste types specified in *Schedule A: Waste Acceptance* of this licence into lined cells.
Class 6	**Biological treatment not referred to elsewhere in this Schedule which results in final compounds or mixtures which are disposed of by means of any activity referred to in paragraphs 1 to 10 of this Schedule:**
	This activity is limited to the treatment of leachate at the facility.
Class 7	**Physico-chemical treatment not referred to elsewhere in this Schedule (including evaporation, drying and calcination) which results in final compounds or mixtures which are disposed of by means of any activity referred to in paragraphs 1 to 10 of this Schedule (including evaporation, drying and calcination):**
	This activity is limited to the treatment of leachate at the facility.
Class 12	**Repackaging prior to submission to any activity referred to in a preceding paragraph of this Schedule:**
	This activity is limited to the compaction or repackaging of waste at the facility prior to disposal.
Class 13	**Storage prior to submission to any activity referred to in a preceding paragraph of this Schedule, other than temporary storage, pending collection, on the premises where the waste concerned is produced:**
	This activity is limited to the storage of waste prior to its disposal.

Class 2	**Recycling or reclamation of organic substances which are not used as solvents (including composting and other biological transformation processes):**
	This activity is limited to the use of compost or similar material in the restoration of the landfill.
Class 4	**Recycling or reclamation of other inorganic materials:**
	This activity is limited to the use of soil, subsoil and construction and demolition waste for daily cover, engineering works and the restoration of cells at the facility.
Class 9	**Use of any waste principally as a fuel or other means to generate energy:**
	This activity is limited to the use of landfill gas as a fuel for the generation of electricity / energy.
Class 10	**The treatment of any waste on land with a consequential benefit for an agricultural activity or ecological system:**
	This activity is limited to the use of various suitable wastes as daily or intermediate cover and in the restoration of the landfill, subject to the agreement of the Agency.
Class 13	**Storage of waste intended for submission to any activity referred to in a preceding paragraph of this Schedule, other than temporary storage, pending collection, on the premises where such waste is produced:**
	This activity is limited to the storage of soil, subsoil and construction and demolitions wastes at the facility prior to recovery / reuse at the facility.

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.

Adequate lighting	20 lux measured at ground level.
Agreement	Agreement in writing.
Annually	At approximately twelve monthly intervals.
Attachment	Any reference to Attachments in this licence refers to attachments submitted as part of the waste licence application.
Application	The application by the licensee for this waste licence.
Appropriate facility	A waste management facility, duly authorised under relevant law and technically suitable.
BAT	Best Available Techniques as defined in Article 2(11) of Council Directive 96/61/EC concerning integrated pollution prevention and control.
Biodegradable waste	Any waste that is capable of undergoing anaerobic or aerobic decomposition, such as food, garden waste, sewage sludge, paper and paperboard.
Construction and Demolition Waste	All wastes which arise from construction, renovation and demolition activities.
Cover material	Bricks, crushed concrete, tarmac, earth, soil, sub-soil, stone, rock (or other materials the use of which has been agreed with the Agency).
Daily Cover	Is the term used to describe material spread (about 150mm if soil cover is used) over deposited waste at the end of each day.
Daytime	0800 hrs to 2200 hrs.
Documentation	Any report, record, result, data, drawing, proposal, interpretation or other document in written or electronic form which is required by this licence.
Drawing	Any reference to a drawing or drawing number means a drawing or drawing number contained in the application, unless otherwise specified in this licence.
Emergency	Those occurrences defined in Condition 9.4.
Emission Limits	Those limits, including concentration limits and deposition levels established in *Schedule C: Emission Limits*, of this licence.
European Waste Catalogue (EWC)	A harmonised, non-exhaustive list of wastes drawn up by the European Commission and published as Commission Decision 94/3/EC and any subsequent amendment published in the Official Journal of the European Community.
Hours of Operation	The hours during which the facility is authorised to be operational.
Hours of Waste Acceptance	The hours during which the facility is authorised to accept waste.
Incident	An incident for the purposes of this licence is defined as

	• An emergency; • Any emission which does not comply with the requirements of this licence; • Any trigger level specified in this licence which is attained or exceeded; and Any indication that environmental pollution has, or may have, taken place.
Inert waste	Waste as defined in SI 336 of 2002 Waste Management (Licensing) (Amendment) Regulations, 2002.
Intermediate Cover	Term used to describe material (minimum 300mm if soil is used) spread over deposited waste for a period of time prior to restoration or prior to further disposal of waste.
Landfill footprint	Refers to the area of the facility where the waste is disposed of by placement on the ground or on other waste (or deposited in lined cells where applicable).
Landfill Gas	Gases generated from the landfilled waste.
LEL (Lower Explosive Limit)	The lowest percentage concentration by volume of a mixture of flammable gas with air which will propagate a flame at 25^{o}C and atmospheric pressure.
Licence	A waste licence issued in accordance with the Act.
Licensee	Louth County Council.
List I/II Organics	Substances classified pursuant to EC Directives 76/464/EEC and 80/68/EEC.
Liquid Waste	Any waste in liquid form and containing less than 2% dry matter. Any waste tankered to the facility.
Maintain	Keep in a fit state, including such regular inspection, servicing and repair as may be necessary to adequately perform its function.
Mobile Plant	Self-propelled machinery used for the emplacement of wastes or for the construction of specified engineering works.
Monthly	A minimum of 12 times per year, at approximately monthly intervals.
Night-time	2200 hrs to 0800 hrs.
Quarterly	At approximately three monthly intervals.
Sample(s)	Unless the context of this licence indicates to the contrary, samples shall include measurements by electronic instruments.
SCADA system	Supervisory Control and Data Acquisition system.
Sludge	The accumulation of solids resulting from chemical coagulation, flocculation and/or sedimentation after water or wastewater treatment with greater than 2% dry matter.
Specified Emissions	Those emissions listed in *Schedule C: Emission Limits,* of this licence.
Specified Engineering Works	Those engineering works listed in *Schedule B: Specified Engineering Works,* of this licence.
Treated Sludge	Sludge which has undergone biological, chemical or heat treatment, long-term storage or any other appropriate process so as significantly to reduce its

	fermentability and the health hazards resulting from its use.
Treatment	Treatment means the physical, thermal, chemical or biological processes, including sorting, that change the characteristics of the waste in order to reduce its volume or hazardous nature, facilitate its handling or enhance recovery.
Trigger Level	A parameter value specified in the licence, the achievement or exceedance of which requires certain actions to be taken by the licensee.
Wastewater	Contaminated water including water that has been used for washing, and/or flushing (including foul water).
White Goods	Refrigerators, cookers, ovens and other similar appliances.
EPA Working Day	Refers to the following hours: 0900 hrs to 1730 hrs Monday to Friday inclusive.
Working Face	The area of the site in which waste other than cover material or material for the purposes of the construction of specified engineering works is being deposited.

PART II 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. 2 – *Location of Activity Map* and Drawing No. 2001-160-01-003 Rev. A – *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 Waste, Commercial Waste, Non-Hazardous Industrial Waste, Non-Hazardous Industrial Sludges, Construction and Demolition Waste and Inert Waste may be recovered and disposed of at the facility subject to the maximum quantities and other constraints listed in *Schedule A: Waste Acceptance*, of this licence.

1.5. Waste Acceptance

1.5.1. Whole used tyres (other than bicycle tyres and tyres with an outside diameter greater than 1400mm) shall not be disposed of at the facility from 16 July 2003. Shredded used tyres shall not be accepted or disposed of at the facility from 16 July 2006.

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

1.5.3. The licensee shall ensure that all waste accepted at the facility is subject to treatment by 16th July 2009 or earlier if otherwise instructed by the Agency. This provision may not apply to inert waste for which treatment is not technically feasible, nor to any other waste for which such treatment does not contribute to the objectives of the Landfill Directive (1999/31/EC), as set out in Article 1 of the Directive by reducing the quantity of the waste or the hazards to human health or the environment.

1.6. Waste Acceptance Hours and Hours of Operation

1.6.1. Landfill

1.6.1.1. Waste shall only be accepted at the facility for disposal at the landfill between the hours of 8:00 a.m. and 5:00 p.m. Monday to Thursday inclusive, 8:00 a.m. and 4:00 p.m. on Friday and 9:00 a.m. and 2:00 p.m. on Saturdays.

1.6.1.2. The landfill at the facility may only be operated between the hours of 8:00 a.m. and 6:00 p.m. Monday to Thursday inclusive, 8:00 a.m. and 5:00 p.m. on Friday and 9:00 a.m. and 3:00 p.m. on Saturdays.

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

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

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

1.7.2. That the licensee shall undertake the works stipulated in the notice, and/or otherwise comply with the requirements of the notice as set down therein, within the time-scale contained in the notice.

1.7.3. That the licensee shall carry out any other requirement specified in the notice.

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

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

1.9. This licence is being granted in substitution for the waste licence granted to the licensee on 10th October 2000 and bearing Waste Licence Register No. 60-1. The previous Waste Licence (Register No. 60-1) is superseded by this licence.

REASON: To clarify the scope of this licence.

CONDITION 2 MANAGEMENT OF THE FACILITY

2.1 Facility Management

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

2.1.2 Both the facility manager and deputy, and any replacement manager or deputy, shall successfully complete both the FAS Waste Management Training Programme (or equivalent agreed 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;

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

d) Proposals for the future management structure and staffing levels taking account of the increased scale and the activities being carried out at the facility.

2.3 Environmental Management System (EMS)

2.3.1 The licensee shall 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 the updating (where appropriate) of the documented Environmental Management System (EMS) for the facility. The EMS shall be updated on an annual basis with amendments being submitted to the Agency for its agreement.

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

2.3.2.1 Schedule of Environmental Objectives and Targets

The objectives should be specific and the targets measurable. The schedule shall address a five-year period as a minimum. The schedule shall include a time-scale for achieving the objectives and targets and shall comply with any other written guidance issued by the Agency.

2.3.2.2 Environmental Management Plan (EMP)

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

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

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

2.3.2.3 Corrective Action Procedures

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

2.3.2.4 Awareness and Training Programme

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

2.4 Communications Programme

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

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*, of this licence, to the Agency for its agreement at least two months prior to the intended date of commencement of any such works. No such works shall be carried out without the prior agreement of the Agency.

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

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

a) A description of the works;

b) As-built drawings of the works;

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

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

e) Daily record sheets/diary;

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

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

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

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

3.3 Facility Notice Board

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

3.3.2 The board shall clearly show:-

a) The name and telephone number of the facility;

b) The normal hours of opening;

c) The name of the licence holder;

d) An emergency out of hours contact telephone number;

e) The licence reference number; and

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

3.4 Facility Security

3.4.1 Security and stockproof fencing and gates shall be installed and maintained as described in Section 2.1.1.1 of the EIS. The security fence and gates shall be at the locations shown on Drawing No. 2001-160-01-013 Rev. A. The base of the fencing shall be set in the ground. Subject to the implementation of the restoration and aftercare plan and to the agreement of the Agency, the requirement for such site security may be removed.

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

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

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

3.4.3 Within six month of the date of grant of this licence, the licensee shall install and commission the CCTV infrastructure as described in Section 2.1.1 of the EIS.

3.5 Facility Roads and site surfaces

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

3.5.2 Traffic awaiting access to the landfill shall queue inside the facility boundary along the site access road only, and not along the public road.

3.5.3 The facility entrance area, the access road as far as the proposed new wheel wash location as shown on Figure 2.4 of the EIS, the car parking area, where vehicle movement takes place and at the waste handling and storage area shall be paved and maintained in accordance with Section 2.1.2 of the EIS.

3.6 Facility Office

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

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

3.6.3 Within nine months of the date of grant of this licence, the licensee shall submit details to the Agency of proposals for the purpose built site accommodation to be established at the facility as referred to in Section 2.1.10 - *Site Accommodation* of the EIS.

3.7 Waste Inspection and Quarantine Areas

3.7.1 Within three months of the date of grant of this licence, a Waste Inspection Area and a Waste Quarantine Area shall be provided and maintained at the facility as shown in Dwg. No. 2001-160-01-003 Rev.A and Dwg. No. 2001-160-01-006 Rev. A of the EIS.

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

3.7.3 Drainage from these areas shall be directed to the leachate holding tank.

3.8 Weighbridge

3.8.1 The licensee shall provide and maintain a weighbridge at the facility.

3.9 Wheel Cleaning

3.9.1 The licensee shall establish and maintain a wheelwash/dry wheel shake at the facility.

3.10 Waste Water Treatment Plant

3.10.1 The licensee shall provide and maintain a Wastewater Treatment plant at the facility for the treatment of wastewater arising on-site. Any percolation area shall satisfy the criteria set out in the *Wastewater Treatment Manual, Treatment Systems for Single Houses*, published by the Environmental Protection Agency. The licensee shall submit

a report within 3 months of date of grant of licence on the compatibility of this system with this Agency guidance.

3.11 Tank and Drum Storage Areas

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

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

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

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

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

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

3.11.5 The integrity and water tightness of all the bunds and their resistance to penetration by water or other materials stored therein shall be confirmed by the licensee and shall be reported to the Agency within **six** months of the date of grant of this licence.

This confirmation shall be repeated at least once every three years thereafter and reported to the Agency on each occasion.

3.12 Landfill Lining

3.12.1 The landfill liner shall comprise:-

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

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

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

d) Side walls shall be designed and constructed to achieve an equivalent protection. Side walls located on the interface between the new cells and the existing landfill shall be of the design outlined in Section D.1 and Appendix B of the Article 13 information submitted December 2002. Final detailed design of the lining system for the interface areas shall be submitted as part of the Specified Engineering Works (SEWs) under for agreement with the Agency.

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

3.12.3 Formation levels of the cells shall be as shown on Drawing No. 2001-160-01-003 Rev. A – *Site Plan*.

3.13 Buffer Zone

3.13.1 A Buffer Zone, in which no waste shall be landfilled, shall be provided and maintained within the facility. The Buffer Zone shall be located as shown on Drawing No. 2001-160-01-003 Rev A – *Site Plan* in the application.

3.14 Leachate Management Infrastructure

3.14.1 Leachate management infrastructure shall be provided and maintained at the facility as described in Section 2.4. of the EIS – *Leachate Management Plan* and as shown on relevant drawings in the EIS.

3.15 Landfill Gas Management

3.15.1 Landfill gas management infrastructure shall be provided and maintained at the facility as described in Section 2.5 of the EIS and passive vents shall, where required include activated carbon filters.

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

3.15.3 Infrastructure for the active collection and flaring of landfill gas shall be installed, commissioned and operational at the facility no later than 30th September 2003. The flare shall be of an enclosed type design.

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

3.15.4 The combustion air supply to the enclosed gas flare shall be controlled so as to achieve a minimum temperature of 1,000°C and 0.3 seconds retention time.

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

3.16 Surface Water Management

3.16.1 Effective surface water management infrastructure shall be provided and maintained at the facility during construction, operation, restoration and aftercare of the facility. As a minimum, the infrastructure shall include that which is described in Sections 2.1.9 and 5.1.4 of the EIS and Section C.3 and Fig. 5.2 (Revision B) of Article 13 information dated December 2002 and shall be capable of the following:-

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

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

3.16.2 Surface water drainage swales at the facility shall be designed and constructed in such a manner so as to prevent erosion, stagnation and under capacity.

3.16.3 All silt traps and oil separators shall be in accordance with European Standard prEN 858 (installation for the separation of light liquids).

3.16.4 Stream Diversion

a) All works relating to the diversion of the existing stream at the facility shall be carried out during the period May to September and only after prior consultation with the Eastern Regional Fisheries Board (ERFB) and the EPA and the agreement of an appropriate method statement.

3.17 Screening embankments/berms shall be constructed at the facility as shown on Drawing No. 2001-160-003 Rev. A of the application.

3.18 Telemetry

3.18.1 Within nine months of the date of grant of this licence, a telemetry system shall be installed and maintained at the facility to the specification as described in Section 2.4.1 of the EIS and as indicated in Drawing No. 2001-160-01-011 Rev A. The extension of the telemetry system shall coincide with the phased development of the extended facility.

All facility operations linked to the telemetry system shall also have a manual control that will be reverted to in the event of break in power supply or during maintenance.

3.19 Monitoring Infrastructure

3.19.1 Landfill Gas

a) The licensee shall install landfill gas monitoring piezometers at 50 metre intervals along the perimeter of the landfill to monitor potential off-site migration of landfill gas. The installation of these piezometers shall coincide with the development of the extended facility and shall be completed prior to the placement of waste in the extended facility.

b) The licensee shall provide and maintain an effective permanent gas monitoring system in the site office and any other enclosed structures at the facility. The permanent gas monitoring system shall be connected to the Telemetry system required by Condition 3.18.1.

3.19.2 Groundwater

a) The licensee shall provide and maintain the groundwater monitoring points specified in Table D.1.1 to allow for representative sampling and analyses of groundwater.

3.19.3 Leachate

a) The licensee shall install and maintain a minimum of two leachate monitoring points within each lined cell to allow for the determination of leachate levels and the sampling and analysis of leachate. Each such monitoring point shall be connected to the telemetry system required by Condition 3.18.1.

b) Within three months of the date of grant of this licence, the licensee shall submit details of the locations and monitoring point reference codes for the existing leachate monitoring infrastructure to the Agency.

3.19.4 Replacement of Infrastructure

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

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

CONDITION 4 RESTORATION AND AFTERCARE

4.1. The licensee shall restore the facility on a phased basis. The Restoration and Aftercare Plans for the facility shall incorporate the plan submitted as part of Attachment G of the application. Within six months of the date of grant of this licence, the licensee shall submit a revised Restoration and Aftercare Plan to reflect changes due to:

a) The requirements of this licence;

b) The interface of new cells and side slopes of the existing landfill.

c) The recommendations of the report required by Condition 4.3.2.

4.2. The final profile/height of the facility shall be as shown in Drawing No. 2001-160-01-014 Rev.A., unless otherwise agreed with the Agency.

4.3. Final Capping

4.3.1. 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 $1x10^{-4}$ m/s or equivalent material;

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

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

4.3.2. Within six months of the date of grant of this licence, the licensee shall arrange for an independent assessment of the depth and permeability of capping installed on Phase I of the facility and its ability to satisfy the requirements of the Landfill Directive with respect to the minimisation of leachate generation. On completion of this assessment, the licensee shall submit a report to the Agency including a programme for the completion of any measures recommended in the report for its agreement. These measures shall be completed within a timescale to be agreed with the Agency.

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

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

4.6. 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 OPERATION AND WASTE MANAGEMENT

5.1 Wastes shall not be deposited in any cell or part of the landfill without the prior agreement of the Agency. No waste shall be disposed of in unlined areas (Phases I, II and Cell 1 of Phase III) of the facility.

5.2 Wastes shall only be accepted at the facility from holders of waste collection permits issued under the Waste Management (Collection) Permit Regulations, 2001 and from licensed/permitted facilities. Copies of the waste collection permits, waste licences and waste permits must be maintained at the facility.

5.3 Waste Acceptance and Characterisation Procedures

5.3.1 Within three months of the date of grant of this licence, the licensee shall submit to the Agency for its agreement, revised written procedures for the acceptance and handling of all wastes. These procedures shall include details of the pre-treatment of all waste to be carried out prior to acceptance at the facility and shall also include methods for the characterisation of waste in order to distinguish between inert, non-hazardous and hazardous wastes. The procedures shall have regard to the EU decision (2003/22/EC) on establishing the criteria and procedures for the acceptance of waste at landfills pursuant to Article 16 and Annex II of Directive (1999/31/EC) on the landfill of waste.

5.3.2 The acceptance of inert waste for recovery shall be as specified in *Schedule F – Acceptance of Inert Waste*, of this licence.

5.4 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.

5.5 Working Face

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

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

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

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

5.5.3 The working face, or faces, shall each day at the end of the day, be covered with suitable material.

5.6 Daily and Intermediate Cover

5.6.1 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.

5.6.2 Within three months of the date of grant of this licence, appropriate cover material shall be placed across the whole landfill so that no waste, other than the following is exposed:-

a) Waste suitable for specified engineering works; and

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

5.7 Landscaping

5.7.1 Within three months of the date of grant of this licence, the licensee shall submit to the Agency for Agreement, a detailed landscaping plan incorporating that set out in Section 9.5.3 of the EIS and including a programme of planting.

5.7.2 The existing hedgerow network which forms the boundary of the facility shall be retained and enhanced by the licensee as indicated in Figure 9.3 of the EIS.

5.8 Operational Controls

5.8.1 The landfill shall be filled in accordance with the three phase sequence outlined in Dwg. No. 2001-160-01-011.

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

5.8.3 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 and landfill gas collection systems only, without the prior agreement of the Agency.

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

5.8.5 Scavenging shall not be permitted at the facility.

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

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

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

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

5.8.10 No smoking shall be allowed on the facility other than in the facility office and canteen buildings.

5.9 Waste Handling

5.9.1 Industrial Non-Hazardous Sludges

5.9.1.1 Treated industrial non-hazardous sludges shall only be accepted at the facility between the hours of 8:30 a.m. and 2.00 p.m. Monday to Friday inclusive. All sludges shall be covered immediately with other waste.

5.9.1.2 In addition to the characterisation required under the Waste Acceptance Procedures, the licensee shall carry out analyses on a minimum of two samples per annum for all industrial sludges being accepted at the facility. The results of these analyses shall be presented in the Annual Environmental Report (AER).

5.10 Off-site Disposal and Recovery

5.10.1 Waste sent off-site for recovery or disposal shall only be conveyed by a waste carrier agreed in advance by the Agency. Any request for such agreement of a waste carrier shall include the following;

i) Copies of the waste carrier's permit(s) under the Waste Management (Collection Permit) Regulations 2001.

ii) Details of the waste types it is proposed the carrier will transfer from the facility.

5.10.2 All waste transferred from the facility shall only be transferred to an appropriate facility agreed by the Agency; Any request for agreement of such a facility shall be forwarded to the Agency at least one month in advance of its proposed use and shall include the following;

i) A copy of the waste permit or waste licence where applicable.

ii) The proposed waste types and quantities.

iii) Details of any limitations on waste types and quantities acceptable at the facility.

5.11 Leachate Management

5.11.1 Leachate management shall be as described in Section 2.4.1 of the EIS.

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

5.11.3 The level of leachate in the pump sumps shall be monitored as outlined Section 2.4.1 of the EIS.

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

5.11.5 Unless treated on the facility, leachate stored in the leachate storage lagoon shall be disposed of by tankering off-site in fully enclosed road tankers.

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

5.12 Maintenance

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

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

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

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

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

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

CONDITION 6 EMISSIONS

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

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

6.3. Landfill Gas

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

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

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

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

a) In the case of landfill gas flare:

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

b) In the case of landfill gas combustion plant:

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

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

6.3.3.1. Continuous monitoring

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

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

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

6.3.3.2 Non-Continuous Monitoring

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

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

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

6.4. Groundwater

6.4.1 There shall be no direct emissions to groundwater.

6.4.2 Within three months of the date of grant of this licence, the licensee shall submit to the Agency for its agreement, groundwater monitoring trigger levels in accordance with the requirements of Directive 1999/31/EC.

6.5. Emissions to Surface Water

6.5.1. No raw leachate, treated leachate or contaminated surface water shall be discharged directly to White River catchment.

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

6.5.3. Storm water from impermeable areas around the site offices (excluding wastewater from the wheelwash and run-off from waste inspection/quarantine areas or bunded area) shall be directed to an oil separator prior to discharge to surface water.

6.5.4. Within three months of the date of grant of this licence, the applicant shall submit to the Agency for its agreement proposals for continuous monitoring of water in the surface water retention pond. These proposals shall include the criteria/trigger levels which will determine when the outlet from the pond shall be closed. Such continuous monitoring shall, as a minimum, include conductivity, pH and TOC and shall be carried out on the inlet to the storm-water retention pond.

6.6. Disposal of Leachate/Emission to Sewer

6.6.1. No raw leachate or contaminated surface water shall be discharged to any receiving surface water body.

6.6.2. Unless otherwise agreed in advance with the Agency and the Sanitary Authority, the following shall apply for the discharge of leachate, which shall be via tankering to Drogheda Borough Council WWTP or other WWTP agreed with the Agency. There shall be no other discharge or emission to sewer of environmental significance.

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

6.6.4. The licensee shall permit authorised persons of the Agency and the Sanitary Authority to inspect, examine and test, at all reasonable times, any works and apparatus installed, in connection with the discharge or emission, and to take samples of the discharge or emission.

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

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

6.6.7. The licensee shall submit monitoring results to the Sanitary Authority on a quarterly basis.

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

a) Continuous monitoring.

No flow value shall exceed the specified limit.

b) Non-Continuous monitoring.

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

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

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

CONDITION 7 NUISANCE CONTROL

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

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

7.3 Litter Control

7.3.1 The measures and infrastructure as described in Section 2.8.4 of the EIS shall, as a minimum, be applied to control litter at the facility. Within six months of the date of grant of this licence, portable litter nets/screens shall also be used at the active tipping face.

7.3.2 Notwithstanding Condition 7.3.1, litter fencing/netting shall be installed and maintained around the perimeter of the active tipping area to the specifications described in the Agency's Landfill Manual – Landfill Operational Practices prior to the disposal of any waste in any cell.

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

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

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

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

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

7.3.6 The licensee shall maintain appropriate procedures for the operation of the facility in adverse wind conditions.

7.4 Dust Control

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

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

7.6 Bird Control

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

REASON: To provide for the control of nuisances.

CONDITION 8 MONITORING

8.1 The licensee shall carry out such monitoring and at such locations and frequencies as set out in *Schedule D: Monitoring*, of this licence and as specified in this licence. 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 All landfill gas monitoring equipment, other than permanent monitoring systems within buildings, shall be certified as being intrinsically safe.

8.6 Within two months of the date of grant of this licence, the following information shall be submitted to the Agency for its agreement: the names, qualifications and a summary of the relevant experience of all persons that will 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. Any proposed changes to the above shall be submitted to the Agency for its agreement.

8.7 Within 3 months of the date of grant of this licence, the licensee shall submit to the Agency for its agreement an updated appropriately scaled drawing(s) showing all the monitoring locations

that are stipulated in this licence. The drawing shall include the reference code for each monitoring point. A list of all the various monitoring points including the reference code and the twelve figure National Grid Reference for each monitoring point shall accompany the drawing. Revisions of this drawing shall be submitted to the Agency for its agreement as monitoring locations are commissioned or amended.

8.8 Groundwater Monitoring

8.8.1 Subject to the agreement of the well owners, all private wells within 250m of the facility shall be included in the monitoring programme set out in *Schedule D: Monitoring,* of this licence.

8.9 Meteorological Monitoring

8.9.1 The licensee shall provide for the monitoring/collection of meteorological data as specified in *Schedule D.6: Meteorological Monitoring,* of this licence.

8.9.2 Within three months of the date of grant of this licence, the licensee shall install in a prominent location on the facility a wind sock or other wind direction indicator.

8.10 Topographical Survey

8.10.1 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 thereafter. The survey shall be in accordance with any written instructions issued by the Agency.

8.11 Biological Assessment

8.11.1 A biological assessment of the receiving stream and the White River shall be undertaken within nine months of the date of grant of this licence and biennially thereafter. This assessment shall use appropriate biological methods such as the EPA Q-rating system for the assessment of rivers and streams. The location of monitoring points shall be agreed with the Agency in advance of the assessment.

8.12 Archaeological Assessment

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

8.13 Stability Assessment

8.13.1 Within nine months of the date of grant of this licence, and annually thereafter, the licensee shall carry out a stability assessment of the side slopes of the facility.

8.14 Nuisance Monitoring

8.14.1 The licensee shall carry out daily inspections of the facility and its immediate surrounds for nuisances caused by litter, vermin, birds, flies, mud, dust, noise and odours. Subjective daily odour assessments shall be carried out by site personnel either prior to, or immediately following their arrival on-site.

8.15 Data Management System

8.15.1 The licensee shall, within six months of the date of grant of this licence, develop and establish a Data Management System for collation, archiving, assessing and graphically presenting the environmental monitoring data generated as a result of this licence.

8.16 Odour Monitoring

8.16.1 The licensee shall, within six months of the date of grant of this licence, undertake an independent odour assessment of the facility which shall include but is not limited to the identification and quantification of any significant odour sources and an assessment of the suitability and adequacy of the control system(s) for odour sources at the facility. The scope and methodology for this assessment shall be agreed with the Agency prior to its completion. This assessment shall be repeated annually unless otherwise agreed with the Agency.

8.16.2 The licensee shall, not later than two months from the date of undertaking the odour assessment submit to the Agency an odour assessment report that shall make recommendations as appropriate. Any such recommendations arising out of the report shall be implemented within a timescale to be approved by the Agency.

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

CONDITION 9 CONTINGENCY ARRANGEMENTS

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

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

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

c) Isolate the source of any such emission;

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

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

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

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

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 an appropriately revised written Emergency Response Procedure (ERP) to the Agency for its agreement. The revised ERP shall take account of the proposed change in the scale and types of activities to be carried out at the facility, shall address any emergency situations that may originate on the facility and shall include provision for minimising the effects of any emergency on the environment. This shall include a risk assessment to determine the requirements at the facility for fire fighting and fire water retention facilities. The Fire Authority shall be consulted by the licensee during this assessment.

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

9.4. Emergencies

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

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

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

9.4.4. In the event that monitoring of the slide slopes of the facility indicate that there may be a risk of slope failure this will be treated as an emergency.

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; and

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

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

a) The date;

b) The name of the carrier (including if appropriate, the waste collection permit details) except for cars or cars with small trailers;

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;

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; and

j) Where applicable a consignment note number (including transfrontier shipment notification and movement/tracking form numbers, as appropriate).

10.3 Written Records

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

a) The types and quantities of waste recovered and disposed of at the facility each year. These records shall include the relevant EWC Codes and any details required to complete National Reports on Waste Statistics;

b) All training undertaken by facility staff;

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

d) Details of all nuisance inspections; and

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

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

a) Date and time of the complaint;

b) The name of the complainant;

c) Details of the nature of the complaint;

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

e) The response made to each complainant.

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

a) The name of the carrier and collection permit details;

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

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

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

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

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

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

b) Contractor details;

c) Contractor logs and site inspection reports;

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

e) Operator training details;

f) Details of any infestations;

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

h) Measures to contain sprays within the facility boundary.

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

CONDITION 11 REPORTS AND NOTIFICATIONS

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

a) Be sent to the Agency's 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 tin accordance to the relevant reporting frequencies specified by this licence, such as in *Schedule E: Recording and Reporting to the Agency*, of this licence;

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

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

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

a) Notify the Agency as soon as practicable and in any case not later than 1000 hrs the following working day after the occurrence of any incident;

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

c) In the event of any incident which relates to discharges to surface water, notify the Eastern Regional Fisheries Board as soon as practicable and in any case not later than 1000 hrs on the following working day after such an incident; and

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

11.3 Waste Recovery Reports

Within six months of the date of grant of this licence, a report examining waste recovery options shall be submitted to the Agency for its agreement. This report shall address methods to contribute to the achievement of the recovery targets stated in national and European Union waste policies and shall include the following:-

a) Proposals for the contribution of the facility to the achievement of targets for the reduction of biodegradable waste going to landfills as specified in the Landfill Directive;

b) The treatment of waste as required by the Landfill Directive;

c) The separation of recyclable materials from the waste;

d) The recovery of Construction and Demolition Waste;

e) The recovery of metal waste and white goods including written procedures for the de-gassing of CFC's from refrigerators;

f) The recovery of commercial waste, including cardboard;

g) Inert waste to be used for cover/restoration material at the facility;

h) Proposals regarding the utilisation of energy from any gas utilisation plant.

11.4 Reports relating to Facility Operations

11.4.1. Leachate Handling Procedures

11.4.1.1 Within three months of the date of grant of this licence, the licensee shall submit to the Agency for its agreement 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.

11.4.2. Achievement of Final Profile

11.4.2.1 Within nine months of the date of grant of this licence, the licensee shall submit to the Agency for its agreement, proposals for landfilling and restoration to achieve the final profile/height of the facility to the Agency for its agreement.

11.5 Annual Environmental Report

11.5.1. The licensee shall submit to the Agency for its agreement, not later than January 31 of each year, an Annual Environmental Report (AER).

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

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

CONDITION 12 CHARGES AND FINANCIAL PROVISIONS

12.1 Agency Charges

12.1.1 The licensee shall pay to the Agency an annual contribution of €27,239.84 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 2004 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 2003, the licensee shall pay a pro rata amount from the date of this licence to 31st 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 Within twelve months of the date of grant of this licence, the licensee shall arrange for an independent third party risk assessment of the facility to be carried out. The risk assessment shall have particular regard to any accidents, emergencies, or other incidents, which might occur at the facility and their effect on the environment. The risk assessment shall include a comprehensive and fully costed Environmental Liabilities Risk Assessment for the facility together with a proposal for Financial Provision arising from the carrying on of the activities to which this licence relates including the restoration of the facility as required by this licence.

12.2.2 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.

12.2.3 The licensee shall provide a statement in writing to the Agency on an annual basis as part of the AER in respect of the determination of charges for the disposal of waste. The Statement shall be in accordance with the requirements of SI 337 of 2002 European Communities (Amendment of Waste Management (Licensing) Regulations, 2000) Regulation, 2002.

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

Cost = (ECOST x WPI) + CiCC

Where:-

Cost = Revised restoration and aftercare cost

ECOST = Existing restoration and aftercare cost

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

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

12.3 Sanitary Authority Charges.

12.3.1 The licensee shall pay to the Sanitary Authority a quarterly charge of €0.37 per cubic metre of trade effluent or such sum as may be determined from time to time, having regard to the variations in the cost of providing drainage and the variation in effluent reception and treatment costs. This amount shall be paid to the Sanitary Authority within one month of the date of grant of this licence and annually thereafter within one month of the date of notification by the Sanitary Authority of the updated annual amount.

12.3.2 The licensee shall pay to the Sanitary Authority an annual charge of as may be determined from time to time, towards the cost of monitoring the discharge of trade effluent. This amount shall be paid to the Sanitary Authority annually within one month of the date of notification by the Sanitary Authority of the updated annual amount.

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

Waste Type	Maximum (Tonnes Per Annum)
Household	31,200
Commercial	20,800
Construction and Demolition	5,000
Industrial Non-Hazardous Sludges	300
Industrial Non-Hazardous Solids	34,700
Waste Imported for restoration purposes	4,000
TOTAL	**96,000**

SCHEDULE B : Specified Engineering Works

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

SCHEDULE C : Emission Limits

C.1 Noise Emissions:

Measured at the noise sensitive locations indicated in *Table D1.1*.

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

C.2 Landfill Gas Concentration Limits:

Measured in any building on or adjacent to the facility.

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

C.3 Dust Deposition Limits:

Measured at the monitoring points indicated in *Table D.1.1*.

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

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

C.4 Surface Water Discharge Limits:

Measured at the outlet from the surface water retention pond.

Level (Suspended Solids mg/l)
35

C.5 Emission Limits Values for Landfill Gas Plant

Emission Point Reference numbers: To be agreed with Agency in advance.
Volume to be emitted: 3000m^3/hr (unless otherwise agreed with the Agency).
Minimum discharge height: 5m (unless otherwise agreed with the Agency).

Parameter	Flare (enclosed) Emission Limit Value [Note 1,2]	Utilisation Plant Emission Limit Value [Note 1,2]
Nitrogen oxides (NO_x)	150 mg/m^3	500 mg/m^3
CO	50 mg/m^3	1,400 mg/m^3
Particulates	Not applicable	130 mg/m^3
Total Volatile Organic Compounds (VOCs)	Not applicable	1,000 mg/m^3
Total non-methane VOCs	Not applicable	75 mg/m^3
Total organic carbon (TOC)	10 mg/m^3	Not applicable
Hydrogen Chloride	50 mg/m^3 (at mass flows > 0.3 kg/h)	50 mg/m^3 (at mass flows > 0.3 kg/h)
Hydrogen Fluoride	5 mg/m^3 (at mass flows > 0.05 kg/h)	5 mg/m^3 (at mass flows > 0.05 kg/h)

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

C.6 Emission Limits for Leachate Being Discharged to Sewer

Emission Point Reference No. L1 – Leachate Storage Lagoon prior to tankering to WWTP agreed in advance with the Agency.

Volume to be emitted: Maximum in any one day: 70 m^3

Maximum rate per hour: 35 m^3/hr

Parameter	Emission Limit Value
	Grab Sample (mg/l)
BOD	500
COD	1500
Ammoniacal Nitrogen (NH_4-N)	900
Sulphate	250
pH	>6.0 and < 9.0
Temperature	<25^{0}C

SCHEDULE D : Monitoring

D.1 Monitoring Locations

Monitoring locations shall be those as set out in Table D.1.1 and Attachment F of the application.

Table D.1.1 Monitoring Locations

Landfill Gas	**Dust Deposition** Note 6	**Noise** Note 6	**Surface Water** Note 6	**Ground Water** Note 6	**Leachate**
Stations	**Stations**	**Stations**	**Stations**	**Stations**	**Stations**
Within Waste Note 1, 2.	DG1, DG2, ST1, ST2	NSL's N1 N3 N4 N5	SW1 SW2 (SW2A) SW3	BH1, BH2A, BH3, BH4, BH5, BH6, BH9, BH10, BH11, BH12, BH13, BH14, BH15	L1 – Leachate Lagoon Note 4
Perimeter Locations Note 3		N2 N6	Ambient Monitoring locations to be agreed with the Agency.	Private Wells Note 7	Within Cells Note 5
Site Office and Buildings			Inlet and Outlet to surface water retention pond		
Flare/Utilisation Plant Note 1			Biological assessment locations to be agreed with the Agency.		

Note 1: Locations to be agreed with the Agency.
Note 2: At least 1 per cell within lined cells.
Note 3: Perimeter wells to monitor for potential off-site migration of landfill gas to be provided in accordance with Condition 3.19.1.

Note 4: Leachate lagoon and one other leachate location to be agreed with the Agency to be monitored for leachate composition and level. Leachate level only at other monitoring points.
Note 5: Leachate monitoring locations within cells to be agreed and confirmed with the Agency as required by Condition 3.19.3. The number of samples taken shall be as instructed by the Agency.
Note 6: As indicated in Figure 3.2 –Environmental Monitoring Locations received by the Agency 23/12/2002.
Note 7: As agreed with the Agency under Condition 8.8.1.

D.2 Landfill Gas

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

Parameter	Monitoring Frequency		Analysis Method[Note1]/Technique[Note2]
	Gas Boreholes/ Vents/Wells	Site Office	
Methane (CH_4) % v/v	Monthly	Continuous	Infrared analyser/flame ionisation detector
Carbon dioxide (CO_2) % v/v	Monthly	Continuous	Infrared analyser/ flame ionisation detector
Oxygen(O_2) % v/v	Monthly	Continuous	Electrochemical cell
Atmospheric Pressure	Monthly	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.

D.3 Dust Monitoring

Table D.3.1 Dust Monitoring Frequency and Technique

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

Note 1: Standard method VDI2119 (Measurement of Dustfall, Determination of Dustfall using Bergerhoff Instrument (Standard Method) German Engineering Institute). Any modifications to eliminate interference due to algae growth in the gauge should be reported to the Agency.
Note 2: Twice during the period May to September.

D.4 Noise

Table D.4.1 Noise Monitoring Frequency and Technique

Parameter	Monitoring Frequency	Analysis Method/Technique
$L(A)_{EQ}$ [30 minutes]	Annual	Standard [Note 1]
$L(A)_{10}$ [30 minutes]	Annual	Standard [Note 1]
$L(A)_{90}$ [30 minutes]	Annual	Standard [Note 1]
Frequency Analysis (1/3 Octave band analysis)	Annual	Standard [Note 1]

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

D.5 Surface Water, Groundwater and Leachate

Table D.5.1 Water and Leachate - Parameters / Frequency

PARAMETER[Note 1]	SURFACE WATER [Note 2] Monitoring Frequency	GROUNDWATER Monitoring Frequency	LEACHATE [Note 3] Monitoring Frequency
Visual Inspection/Odour [Note 2]	Weekly	Quarterly	Quarterly
Groundwater Level	Not Applicable	Monthly	Not Applicable
Leachate Level	Not Applicable	Not Applicable	Continuous [Note 7]
Ammoniacal Nitrogen	Quarterly	Quarterly	Annually [Note 8]
BOD	Quarterly	Not Applicable	Annually [Note 8]
COD	Quarterly	Not Applicable	Annually [Note 8]
Chloride	Quarterly	Quarterly	Annually
Dissolved Oxygen	Quarterly	Quarterly	Not Applicable
Electrical Conductivity	Quarterly	Quarterly	Annually
pH	Quarterly	Quarterly	Annually [Note 8]
Total Suspended Solids	Quarterly	Not Applicable	Not Applicable
Temperature	Quarterly	Quarterly	Quarterly
Metals / non metals [Note 3]	Annually	Annually	Annually
Cyanide (Total)	Not Applicable	Annually	Annually
Fluoride	Not Applicable	Annually	Annually
List I/II organic substances [Note 4]	Once off [Note 5]	Annually [Note5]	Once off [Note 5]
Mercury	Annually	Annually	Annually
Sulphate	Annually	Annually	Annually [Note 8]
Total Alkalinity	Annually	Annually	Not applicable
Total P/orthophosphate	Annually	Annually	Annually
Total Oxidised Nitrogen	Annually	Annually	Annually
Total Organic Carbon	Not Applicable	Quarterly	Not Applicable
Residue on evaporation	Not Applicable	Annually	Not Applicable
Biological Assessment	Biennially [Note 6]	Not Applicable	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: Metals and elements to be analysed by AA/ICP should include as a minimum: boron, cadmium, calcium, chromium (total), copper, iron, lead, magnesium, manganese, nickel, potassium, sodium and zinc.
Note 4: Samples screened for the presence of organic compounds using Gas Chromatography / Mass Spectrometry (GC/MS) or other appropriate techniques and using the list I/II Substances from EU Directive 76/464/EEC and 80/68/EEC as a guideline. Recommended analytical techniques include: volatiles (US Environmental Protection Agency method 524 or equivalent), semi-volatiles (USEPA method 525 or equivalent, and pesticides (USEPA method 608 or equivalent).
Note 5: 2 surface water locations, 3 groundwater locations and 2 leachate locations to be agreed with the Agency for these parameters.
Note 6: Appropriate biological methods (such as EPA Q-Rating System) to be used for the assessment of rivers and streams.
Note 7: Continuous monitoring in the leachate storage lagoon and in lined cells, and weekly level measurements in leachate abstraction wells (unlined areas).
Note 8: Quarterly analysis of grab samples from *L1 – Leachate Storage Lagoon* for these parameters as required by the Sanitary Authority unless otherwise agreed.

D.6 Meteorological Monitoring

Table D.6.1 Meteorological Monitoring:
Data to be obtained from **Ardee (Bohernamore) Weather Station unless otherwise agreed with the Agency**.

Parameter	Monitoring Frequency	Analysis Method/Technique
Precipitation Volume	Daily	Standard
Temperature (min/max.)	Daily	Standard
Wind Force and Direction	Daily	Standard
Evaporation	Daily	Standard
Evapotranspiration [Note 1]	Daily	Standard
Humidity	Daily	Standard
Atmospheric Pressure [Note 1]	Daily	Standard

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

D.7 Landfill Gas Combustion Plant/Enclosed Flare
Location(s): **to be agreed in advance with the Agency**.

Table D.7.1 Landfill Gas Utilisation Plant/Enclosed Flare Parameters and Monitoring Frequency

Parameter	Flare (enclosed) Monitoring Frequency	Utilisation Plant Monitoring Frequency	Analysis Method[Note1]/Technique[Note2]
Inlet			
Methane (CH_4) % v/v	Continuous	Weekly	Infrared analyser/flame ionisation detector/thermal conductivity
Carbon dioxide (CO_2) % v/v	Continuous	Weekly	Infrared analyser/thermal conductivity
Oxygen (O_2) % v/v	Continuous	Weekly	Electrochemical/thermal conductivity
Total Sulphur	Annually	Annually	Ion chromatography
Total Chlorine	Annually	Annually	Ion chromatography
Total Fluorine	Annually	Annually	Ion Selective Electrode
Process Parameters			
Combustion Temperature	Continuous	Quarterly	Temperature Probe/datalogger
Outlet			
CO	Continuous	Continuous	Flue gas analyser/datalogger
NOx	Annually	Annually	Flue gas analyser
SO_2	Annually	Annually	Flue gas analyser
Particulates	Not applicable	Annually	Isokinetic/Gravimetric
Total VOCs	Not applicable	Annually	Flame ionisation
Total non-methane VOCs	Not applicable	Annually	Adsorption-thermal desorption
TOC	Annually	Not applicable	Flame ionisation
Hydrochloric acid	Annually	Annually	Impinger /Ion Chromatography
Hydrogen fluoride	Annually	Annually	Impinger /Ion Chromatography

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

SCHEDULE E : Recording and Reporting to the Agency

Report	Reporting Frequency Note1	Report Submission Date
Environmental Management System Updates	Annually	One month after end of year being reported on.
Annual Environment Report (AER)	Annually	By 31st January 2004 and within one month of the end of each year thereafter.
Record of incidents	As they occur	Within five days of the incident.
Bund, tank and container integrity assessment	Every three years	Six months from the date of grant of licence and one month after end of the three year period being reported on.
Specified Engineering Works reports	As they arise	Prior to the works commencing.
Flare unit efficiency testing	Every three years	One month from date of commissioning of landfill gas flare and one month after end of three year period being reported on.
Monitoring of landfill gas	Quarterly	Ten days after end of quarter being reported on.
Monitoring of Surface Water Quality	Quarterly	Ten days after end of quarter being reported on.
Monitoring of Groundwater Quality	Quarterly	Ten days after end of quarter being reported on.
Monitoring of Leachate	Quarterly	Ten days after end of quarter being reported on.
Meteorological Monitoring	Annually	One month after end of year being reported on.
Dust Monitoring	Three times a year	Ten days after the period being reported on
Noise Monitoring	Annually	One month after end of year being reported on.
Biological Monitoring	Biennially	Within one month of obtaining results.
Side Slope Stability Assessment	Annually	Nine months from the date of grant of licence and one month after end of the year being reported on.
Topographical survey	Annually	Six months from the date of grant of licence and 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 : Acceptance of Inert Waste

F.1 Acceptable Waste for Recovery

Only the wastes listed below are acceptable for recovery at the facility, unless otherwise agreed with the Agency.

	WASTE
Topsoil	Solid Road Planings, Solid Tarmacadam, Solid Asphalt
Subsoil	Brickwork
Stone, Rock and Slate	Natural Sand
Clay, Pottery and China	Concrete

SCHEDULE G : Content of the Annual Environmental Report

Annual Environmental Report Content
Reporting Period.
Waste activities carried out at the facility.
Quantity and Composition of waste received, disposed of and recovered during the reporting period and each previous year.
Results of waste analysis including an interpretation.
Calculated remaining capacity of the facility and year in which final capacity is expected to be reached.
Methods of deposition of waste.
Summary report on emissions.
Summary of results and interpretation of environmental monitoring including appropriately updated drawing indicating locations of monitoring points.
Resource and energy consumption summary.
Proposed development of the facility and timescale of such development.
Volume of leachate produced and volume of leachate transported / discharged off-site.
Report on development works undertaken during the reporting period, and a timescale for those proposed during the coming year.
Report on restoration of completed cells/ phases.
Site survey showing existing levels of the facility at the end of the reporting period.
Estimated annual and cumulative quantities of landfill gas emitted from the facility.
Estimated annual and cumulative quantity of indirect emissions to groundwater.
Annual water balance calculation and interpretation.
Report on the progress towards achievement of the Environmental Objectives and Targets contained in previous year's report.
Schedule of Environmental Objectives and Targets for the forthcoming year.
Full title and a written summary of any procedures developed by the licensee in the year which relates to the facility operation.
Tank, pipeline and bund testing and inspection report.
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 4th day of June, 2003 Patrick J. Nolan **Authorised Person**