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

WASTE LICENCE
LANDFILL FOR NON-HAZARDOUS WASTE

PROPOSED DECISION OF A REVIEW OF A LICENCE

Waste Licence Application Register Number: 28-2
Applicant: Westmeath County Council

Location of Facility: Ballydonagh Landfill, Dublin Road, Athlone, County Westmeath

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 continued operation of a non-hazardous waste landfill located at Ballydonagh, Athlone, Co. Westmeath. The facility boundary has been extended to allow for three new lined cells to be installed (Phase 3). The waste intake is limited to 60,000 tonnes per annum of non-hazardous waste comprising of household waste, commercial waste, construction & demolition waste and industrial waste.

The licence allows for composting of green waste. The licence provides for the operation of a Civic Waste facility to include a compactor for municipal waste and a white goods storage area.

The licensee must manage and operate the facility to ensure that the activities do not cause environmental pollution. The licensee is required to 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 licence sets out in detail the conditions under which Westmeath County Council will operate and manage this facility.

Table of Contents

DECISION & REASONS FOR THE DECISION

Reasons for the Decision

On the basis of the information before it, the Environmental Protection Agency (the Agency) is satisfied, for the reasons set out in the following Schedule of Activities Licensed, that the requirements of Section 40(4) of the Waste Management Acts 1996 to 2003 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.

INTERPRETATION

All terms in this licence should be interpreted in accordance with the definitions in the Waste Management Acts 1996 to 2003, (the Acts), unless otherwise defined in this section.

Adequate lighting	20 lux measured at ground level.
Aerosol	A suspension of solid or liquid particles in a gaseous medium.
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 review 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 Technology as defined in Number 27 of 2003 Protection of the Environment Act, 2003.
Biodegradable waste	Any waste that is capable of undergoing anaerobic or aerobic decomposition, such as food, garden waste, sewage sludge, paper and paperboard.
CEN	Comité Européen De Normalisation – European Committee for Standardisation.
Commercial Waste	As defined in Section 5(1) of the Act.
Condition	A condition of this licence.
Construction and Demolition Waste	All wastes which arise from construction, renovation and demolition activities.
Containment boom	A boom which can contain spillages and prevent them from entering drains or watercourses.
Cover material	Bricks, crushed concrete, tarmac, earth, soil, sub-soil, stone, rock or other similar natural materials; or other cover material the use of which has been agreed by 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. 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.
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 review 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.
Green waste	Waste wood (excluding timber), plant matter such as grass cuttings, and other vegetation.
Hours of Operation	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.
Hours of Waste Acceptance	The hours during which the facility is authorised to accept waste.
Incident	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 exceedance of the daily duty capacity of the waste handling equipment d) any trigger level specified in this licence which is attained or exceeded; and, e) any indication that environmental pollution has, or may have, taken place.
Industrial Waste	As defined in Section 5(1) of the Act.
Inert waste	Waste as defined in SI 395 of 2004 Waste Management (Licensing) Regulations, 2004.
Initial Development Works	Means such works, actions or constructions as may be specified, which for the purposes of environmental protection and safe construction and operation of the facility, have to be carried out in the initial stages of site development, and in any case prior to the commencement of construction of the landfill cells.
Intermediate Cover	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.
Landfill	Refers to the area of the facility where the waste is disposed of by placement on the ground or on other waste.
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	Westmeath 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.
Municipal waste	As defined in Section 5(1) of the Act.
Night-time	2200 hrs to 0800 hrs.
Noise Sensitive Location	Any dwelling house, hotel or hostel, health building, educational establishment, place of worship or entertainment, or any other facility or area of high amenity which for its proper enjoyment requires the absence of noise at nuisance levels
Recyclable Materials	Those waste types, such as cardboard, batteries, gas cylinders, etc which may be recycled.
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 >2% dry matter.
SOP	Standard Operating Procedure.
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.
TOC	Total Organic Carbon.

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 I: Schedule of Activities Licensed

On the basis of the information before it, the Agency, pursuant to its powers under Section 46(2) of the Waste Management Acts 1996 to 2003, proposes, to grant this Waste Licence to Westmeath County Council to carry on the waste activities, that are the subject of Waste Licence Application Register Number 28-2, listed below at Ballydonagh Landfill, Dublin Road, Athlone, County Westmeath 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 Acts 1996 to 2003

Class 1	**Deposit on, in or under land (including landfill).**
Class 4	**Surface impoundment, including placement of liquid or sludge discards into pits, ponds or lagoons.**
Class 5	**Specially engineered landfill, including placement into lined discrete cells which are capped and isolated from one another and the environment.**
Class 13	**Storage prior to submission to any activity referred to in a preceding paragraph of this Schedule, other than temporary storage, pending collection, on the premises where the waste concerned is produced.**

Licensed Waste Recovery Activities, in accordance with the Fourth Schedule of the Waste Management Acts 1996 to 2003

Class 2	**Recycling or reclamation of organic substances which are not used as solvents (including composting and other biological processes).**
Class 3	**Recycling or reclamation of metals and metal compounds.**
Class 4	**Recycling or reclamation of other inorganic materials.**
Class 11	**Use of waste obtained from any activity referred to in a preceding paragraph of this Schedule.**
Class 13	**Storage of waste intended for submission to any activity referred to in a preceding paragraph of this Schedule, other than temporary storage, pending collection, on the premises where such waste is produced.**

PART II CONDITIONS

CONDITION 1 SCOPE OF THE LICENCE

1.1 Waste activities at the facility shall be restricted to those outlined in the licence review application and listed and described in Part I: Activities Licensed and authorised by this licence subject to the conditions of this licence.

1.2 For the purposes of this licence, the facility is the area of land outlined in red on Drawing No. 0304501–B2 *Site Plan – Licence Area* of the application. Any reference in this licence to "facility" shall mean the area outlined in red.

1.3 This licence is for the purposes of waste licensing under the Waste Management Acts 1996 to 2003 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 and Industrial 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 Hours and Hours of Operation

1.5.1 Waste may be accepted at the facility only between the hours of 8:30 to 17:30 Monday to Friday inclusive and 10:00 to 15:00 on Saturdays.

1.5.2 The facility may be operated only during the hours of 8:00 to 19:00 Monday to Friday inclusive and 9:30 to 16:00 on Saturdays.

1.5.3 Waste shall not be accepted at the facility on Sundays and Bank Holidays, other than with the written agreement of the Agency.

1.6 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.

1.7 This licence is being granted in substitution for the waste licence granted to the licensee on 24th of March 1999 and bearing Waste Licence Register No: 28-1. The previous waste licence (Register No: 28-1) 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 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 The Civic Waste Facility shall be supervised by an appropriately qualified and competent person at all times while waste may be accepted.

2.1.3 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 by the Agency) and associated on site assessment appraisal within twelve months of appointment.

2.1.4 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 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 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 EMS for the facility. The EMS shall be updated on an annual basis with amendments being submitted to the Agency for its agreement, as part of the AER.

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) The items specified to be contained in an Environmental Management Plan in the Landfill Operational Practices Manual published by the Agency;

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

c) 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 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.

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 Phased Construction Plan

3.2.1 Three months prior to the commencement of any site development, the licensee shall submit to the Agency for its agreement a construction schedule, sequence and timescale (Construction Plan) incorporating the requirements of this licence. This Plan shall have regard to the following development phases: (i) Initial Development Works (ii) Main infrastructure development works (pre acceptance of waste for disposal), and (iii) Future/planned works (in parallel with waste disposal, e.g. future cell development/phasing). The Construction Plan for cell development shall have regard to the sequencing necessary to provide medium and long term screening of the completed cells.

3.3 Specified Engineering Works

3.3.1 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.

3.3.2 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.

3.3.3 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 as appropriate 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.

3.4 Facility Notice Board

3.4.1 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.

3.4.2 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.

3.5 Facility Security

3.5.1 Security and stockproof fencing and gates shall be installed and maintained as described in Section 4.5.6 *Site Security* of the EIS submitted with the application. 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.

3.5.2 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.

3.6 Facility Roads and Site Surfaces

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

3.6.2 The facility entrance area, the access road to the Civic Waste Facility and the Civic Waste Facility itself shall be paved to ensure an impervious surface is maintained, unless otherwise agreed by the Agency.

3.7 Facility Office

3.7.1 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.

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

3.8 Waste Inspection and Quarantine Areas

3.8.1 A Waste Inspection Area and a separate Waste Quarantine Area shall be provided and maintained at the facility.

3.8.2 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.

3.8.3 The waste quarantine area shall be secured, bunded and surfaced to deal with spillages.

3.9 Weighbridge and Wheel Cleaner

3.9.1 The licensee shall provide and maintain a weighbridge and a wheel cleaner at the facility.

3.9.2 The wheel cleaner shall be used by all vehicles leaving the facility as required to ensure that no process water or waste is carried off-site. All water from the wheel cleaning area shall be directed to the leachate storage tank.

3.10 Waste Water Treatment System

3.10.1 The licensee shall provide and maintain a Wastewater Treatment system at the facility for the treatment of toilet and canteen 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.

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 following its installation and prior to its use as a storage area. This confirmation shall be repeated at least once every three years thereafter and reported to the Agency as part of the AER.

3.12 Landfill Lining

3.12.1 Unless otherwise agreed by the Agency, the landfill liner at the proposed extension (Phase 3) 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 by 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 x 10^{-3} m/s, of pre-washed, uncrushed, granular, rounded stone (16 - 32mm grain size) incorporating leachate collection drains; and

d) The side walls shall be designed and constructed to achieve an equivalent protection.

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 for the upper surface of the engineered clay liner of the cells in Phase 3 shall be as shown on Drawing No. 0304501-02 Rev.A *Cell Layout: Formation Levels and Leachate Collection Pipework*.

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. 11.3.2 *Active Fill Areas & Buffers* of the Article 14 reply received on 2/07/04.

3.14 Leachate Management Infrastructure

3.14.1 Leachate management infrastructure shall be provided and maintained at the facility as described in Sections 4.3.3 and 4.3.4 of the EIS submitted with the application and specified on Drawing No. 0304501-15 Rev. A *Leachate Collection System* of the Article 14 reply received on 02/07/04 and Drawing No. 0304501-03 Rev. A *Construction Details*.

3.14.2 Within twelve months of the date of grant of this licence the licensee shall provide and maintain the proposed leachate storage lagoon in addition to the existing underground leachate storage tank at the facility to facilitate the storage of leachate abstracted/collected from the waste. The lagoon lining shall be a composite liner equivalent to the landfill liner and constructed using the same methods.

3.14.3 All structures for the storage and/or treatment of leachate shall be fully enclosed except for inlet and outlet piping.

3.15 Landfill Gas Management

3.15.1 Landfill gas management infrastructure shall be provided and maintained at the facility as described in Sections 4.3.5 of the EIS submitted with the application and specified in Drawing No. 0304501-03 Rev. A *Construction Details.* Within six months of the date of grant of this licence, the licensee shall submit an updated plan for the landfill gas management detailing works carried out at the existing Phases 1 and 2 and works proposed for Phase 3 to include an assessment of the efficiency of the landfill gas collection system and the need for additional landfill gas abstraction wells.

3.15.2 A landfill gas flare shall be provided and maintained at the facility. The flare shall be of an enclosed type design.

3.15.3 When the proposed cells in Phase 3 are operational, an evaluation of the collection and flaring system shall be submitted to the Agency determining whether an upgrade of the flare is required.

3.15.4 Flare unit efficiency shall be tested within six months of the date of grant of this licence and once every three years thereafter.

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.

3.15.6 The licensee shall maintain all gas wells, pipework, valves, pumps, flare and other infrastructure that form part of the landfill gas management scheme in a safe and fully operational manner. The licensee shall maintain back up and spares in the case of breakdown of pumps and other critical equipment.

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 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 The surface water run-off arising from the impermeable surfaces at the site entrance (excluding run-off from the waste inspection/quarantine areas and the composting area) shall be diverted to a silt trap and an oil interceptor prior to discharge from the facility.

3.16.2.1 The interceptors shall be a Class I interceptor and the silt traps and interceptors shall be in accordance with European Standard prEN 858 (installations for the separation of light liquids).

3.16.2.2 A manual shut-off valve shall be installed at the interceptor.

3.16.3 The surface water run-off from the waste inspection/quarantine areas and the composting area shall be discharged to the leachate collection system.

3.16.4 Surface water run-off perimeter drains shall be installed and maintained on the southern, eastern and northern sides of Phase 3 connecting to the existing perimeter drain at the facility as detailed in Section 8.4 *Impact Assessment* of the EIS submitted with the application and shown on Drawing No. 0304801-08 Rev. A *Drainage System Site Entrance* and Drawing No. 0304501-09 Rev. A *Surface Water Drainage Extension Area*, unless otherwise agreed by the Agency.

3.16.5 The licensee shall submit a revised drawing to the Agency within six months of the date of grant of this licence, indicating all drainage arrangement at the site as detailed in this licence.

3.17 Groundwater Management

3.17.1 Effective groundwater 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 be capable of the following:-

a) the protection of the groundwater resources from pollution by the waste activities; and

b) The protection of other infrastructure, such as the liner, from any adverse effects caused by the groundwater.

3.18 Civic Waste Facility

3.18.1 The licensee shall maintain the Civic Waste Facility infrastructure referred to in Section 4.5.4 *Civic Amenity Area/Public Waste Area* and specified on Drawing No. 0304501-04 Rev. B *Composting Location* of the Article 14 reply received on 2/07/04.

3.18.2 The licensee shall provide and maintain appropriate receptacles at the Civic Waste Facility for the storage of various waste types.

3.19 Compost facility

3.19.1 The licensee shall, within twelve months of the date of grant of this licence, provide and maintain a green waste composting area and associated infrastructure at the location shown on Drawing No. 0304501-04 Rev. B *Composting Location* of the Article 14 reply received on 2/07/04, unless otherwise agreed by the Agency.

3.19.2 Appropriate infrastructure for the composting of waste shall be established and maintained at the facility prior to any waste being composted. This infrastructure shall at a minimum comprise the following:-

3.19.2.1 An impermeable concrete slab for windrow process; and

3.19.2.2 All leachate generated from this activity shall be collected and discharged to the leachate collection system.

3.20 Telemetry

3.20.1 Within six months of the date of grant of this licence, a telemetry system shall be installed and maintained at the facility for recording of leachate levels in the lined cells, existing leachate storage tank and the proposed lagoon. All facility operations linked to the telemetry system shall also have a manual control which will be reverted to in the event of break in power supply or during maintenance.

3.21 Monitoring Infrastructure

3.21.1 Landfill Gas

a) Within six months of the date of grant of this licence, the licensee shall submit a proposal for the monitoring of landfill gas within the waste body at Phase 3 to include at least one landfill gas monitoring borehole per cell prior to the gas collection system being in place at the proposed Phase 3.

b) Within six months from date of grant of this licence, the licensee shall submit a proposal for the installation of additional perimeter landfill gas monitoring boreholes surrounding the facility based on a detailed exposure and risk assessment of gas migration at the facility with potential pathways and receptors identified in accordance with the Agency's *Landfill Manuals Landfill Monitoring, 2nd Edition*.

c) Within twelve months from the date of grant of this licence, the licensee shall install perimeter landfill gas G11, G12 and G13 as shown on Fig. 4.1 *Gas monitoring Location*, unless otherwise agreed by the Agency.

d) Within six months from the date of grant of this licence, the licensee shall install an effective permanent gas monitoring system in the site office and any other enclosed structures at the facility, unless an alternative monitoring system is agreed by the Agency.

3.21.2 Leachate

a) Within six months from the date of grant of this licence, the licensee shall submit a proposal for monitoring of leachate levels at the existing Phases 1 and 2 as well as the proposed Phase 3 including the locations of these monitoring points.

3.21.3 Dust

a) Prior to waste acceptance at the green waste composting area, the licensee shall submit a proposal for monitoring of dust deposition at the green waste composting area.

b) Within six months of the date of grant of this licence, the licensee shall install a dust monitoring point D7 as shown on Fig. 10.1 *Dust Monitoring Locations.*

3.21.4 Noise

a) Prior to waste acceptance at the green waste composting area, the licensee shall submit a proposal for monitoring of noise emission at the green waste composting area.

3.21.5 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. Within twelve months of the date of grant of this licence, the licensee shall submit to the Agency for its agreement revised Restoration and Aftercare Plans for the facility to incorporate Phases 1, 2 and 3 and the requirements of the conditions of this licence.

4.2 The final profile of the facility shall be as shown in Drawing No. 0304501-13 Rev. A *Final Restoration Cross-sections* of the EIS submitted with the application.

4.3 Final Capping

4.3.1. Unless otherwise agreed by the Agency, the final capping at Phases 1, 2 and 3 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;

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.

4.4 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. In any case waste (other than inert waste or compost necessary for restoration purposes) shall not be deposited in Phase 1, unless otherwise agreed by the Agency.

5.2 Waste Acceptance and Characterisation Procedures

5.2.1 Waste shall only be accepted at the facility, from Local Authority waste collection or transport vehicles or holders of waste permits, unless exempted or excluded, issued under the Waste Management (Collection Permit) Regulations 2001. Copies of these waste collection permits must be maintained at the facility.

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

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

5.2.4 The licensee shall ensure that inert waste accepted at the facility is subject to treatment where technically feasible.

5.2.5 Within three months of the date of grant of this licence, the licensee shall submit to the Agency for its agreement 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 random inspection of incoming waste loads should also be addressed in the procedures The procedures shall have regard to the EU Decision (2003/33/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 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 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.

5.4.2 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.

5.4.3 The working face, or faces, 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.

5.5.2 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.

5.6 Landscaping

5.6.1 Within three months of the date of grant of this license, the licensee shall submit a proposal for the installation of a screening berm as part of the proposed cell development works to reduce the visual impact of the proposed extension.

5.6.2 A proposal for the landscaping of the facility shall be submitted to the Agency within three months of the date of grant of this licence, taking into consideration the effect of the planting programme proposed as part of the closure of Phases 1 and 2.

5.6.3 The existing hedgerow network which forms the boundary of the facility shall be retained by the licensee as indicated in Section 11.3.3 *Landscape Value* of the EIS submitted with the application.

5.7 Operational Controls

5.7.1 Phase 3 of the landfill shall be filled in accordance with the phase sequence shown on Drawing No. 0304501-06 Rev. A *Phasing Sequence*.

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

5.7.3 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 system unless with the prior agreement from the Agency.

5.7.4 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.

5.7.5 Filled cells shall be permanently capped within twenty-four months of the cells having been filled to the required level.

5.7.6 Scavenging shall not be permitted at the facility.

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

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

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

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

5.8 Waste Handling

5.8.1 Sludges

5.8.1.1 Treated industrial sludges, other than sewage sludges, shall be accepted at the facility only between the hours of 0830 hrs and 14.00 hrs. Monday to Friday inclusive. All sludges shall be covered immediately with other waste.

5.8.1.2 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).

5.8.2 Compost

5.8.2.1 The green waste composting facility shall not process greater than 500 tonnes of green waste per annum. Written records of the quantities and type of wastes composted must be maintained.

5.8.2.2 Within six months of the date of grant of this licence, the licensee shall develop procedures for the handling/management of the composting process to include operational controls to ensure the quality of the finished product and mitigate emissions as described in Section 5.6.2 *Composting* of the EIS submitted with the application. The procedures shall be submitted in accordance with Condition 5.2.5 of this licence.

5.8.2.3 Within six months of the date of grant of this licence, the licensee shall submit specifications for the compost in order not to be considered a waste to be agreed by the Agency. Analysis of the compost shall be carried out as described in Section 4.4.2 *Compost Quality* of the EIS submitted with the application.

5.8.3 Inert Waste

5.8.3.1 Inert waste accepted for recovery at the facility shall comply with the standards established in *Schedule F: Criteria for the Acceptance of Inert Waste*, of this licence

5.9 Off-site Disposal and Recovery

5.9.1 Waste sent off-site for recovery or disposal shall be conveyed only by a waste contractor agreed by the Agency.

5.9.2 All waste transferred from the facility shall be transferred only to an appropriate facility agreed by the Agency.

5.9.3 All wastes removed off-site for recovery or disposal shall be transported from the facility to the consignee in a manner which will not adversely affect the environment.

5.10 Civic Waste Facility

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

5.10.2 All waste deposited in the Civic Waste Facility shall be either:-

a) Into a skip;

b) Into the hopper of the compactor for disposal;

c) Into a receptacle for recovery; and

d) In the case where inspection is required, into a designated inspection area.

5.10.3 The licensee shall assign and clearly label each container at the Civic Waste Facility to indicate their contents.

5.10.4 At the end of the working day the floor of the Civic Waste Facility shall be cleared of waste.

5.10.5 White goods accepted at the facility in accordance with the procedures for acceptance and handling as per Condition 5.2.5 of this licence shall be stored on an impervious surface at the Civic Waste Facility.

5.10.6 All waste refrigeration equipment accepted at the Civic Waste Facility shall comply with the following; the door shall be adequately secured to prevent unauthorised opening or the door seal and latch removed.

5.11 Leachate Management

5.11.1 Leachate treatment shall be as detailed in Section 4.3.4 *Leachate Quality and Treatment* of the EIS submitted with the application.

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 frequency of leachate removal/discharge from the existing leachate storage tank and the proposed leachate lagoon shall be such that a minimum freeboard of 0.75m shall be maintained in the leachate tank and lagoon at all times.

5.11.4 Unless treated on the facility, leachate stored in the leachate storage tank and lagoon shall be disposed of by tankering off-site to an Agency approved facility in fully enclosed road tankers.

5.11.5 Recirculation of leachate or other contaminated water shall not be undertaken without the prior agreement of the Agency and, in any case, shall be undertaken only 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 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.

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 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 sample 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, the licensee shall submit to the Agency for its agreement, groundwater monitoring trigger levels in accordance with the requirements of Directive 1999/31/EC.

6.4.3 The trigger levels as specified in Condition 6.4.2 for groundwater shall be measured at monitoring boreholes BH1, BH6 and BH7.

6.5 Emissions to Surface Water

6.5.1 No leachate, wastewater or contaminated surface water run-off shall be discharged to surface water drains and courses.

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.

6.6 Disposal of Leachate

6.6.1 All leachate or contaminated water tankered from the facility shall be transported to Mullingar or Athlone Waste Water Treatment Plant, or alternative facility agreed in advance by the Agency, and disposed of there.

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 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 5.13.1 *Litter Control* of the EIS submitted with the application shall be applied to control litter at the facility.

7.3.2 Litter fencing shall be installed and maintained around the perimeter of the active tipping area to the specifications described in the Agency's *Landfill Manuals, 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.

7.4 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.

7.4.2 Addition of water shall be used to prevent dust emissions from the storage and processing of waste/compost at the green waste composting area.

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 be in place and shall be employed 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.

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

8.6 All landfill gas monitoring equipment, other than permanent monitoring systems within buildings, shall be certified as being intrinsically safe.

8.7 Within twelve 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 including any noise sensitive locations and private wells to be monitored. The drawing shall include the eight-digit national grid reference of each monitoring point.

8.8 Groundwater Monitoring

8.8.1 Subject to the agreement of the well owners, all private wells within 500m 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 make arrangements for representative metrological date to be collated for the facility to fulfil the requirements of *Schedule D.6: Meteorological Monitoring*, of this licence.

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 annually thereafter during landfilling operations and installation of the final capping. 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 stream north of the facility shall be undertaken within six months of the date of grant of this licence and annually 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 by the Agency.

8.12 Archaeological Assessment

8.12.1 Prior to the development of any undisturbed area, the advice of The Heritage Section of the Department of the Environment, Heritage and Local Government (formerly Dúchas) shall be sought. On completion of such development a report of the results of any archaeological monitoring shall be submitted to The Development Applications Section and to the Agency.

8.13 Stability Assessment

8.13.1 The licensee shall carry out a stability assessment of the side slopes of the facility annually.

8.14 Nuisance Monitoring

8.14.1 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.

8.14.2 Daily odour inspections shall be carried out at the designated area for composting shown on Drawing No. 0304501-04 Rev. B *Composting Location* of the Article 14 reply received on 2/07/04, unless otherwise agreed by the Agency. Written records shall be made of all inspections and any actions taken as a result of these inspections.

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:-

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

b) Identify and put in place any other appropriate remedial action.

9.2 The licensee shall maintain an Emergency Response Procedure (ERP). Within six months of the date of grant of this licence, the licensee shall submit to the Agency for its agreement, a proposal for updating (where appropriate) of the documented ERP for the facility.

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 and specified attachments and drawings 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 record for each load of waste arriving at the facility, excluding those arriving at the Civic Waste Facility. The licensee shall record the following:-

a) The date;

b) The name of the carrier (including if appropriate, the waste collection permit 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 including the waste licence and waste permit register number of these facilities as appropriate.

10.3 The following 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;

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

a) The name of the carrier;

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

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

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

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

10.6 A record shall be kept for each load of waste departing from the Civic Waste Facility. The following shall be recorded:-

a) The name of the carrier;

b) The vehicle registration number;

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

d) A description of the waste (if recovered or rejected waste, the specific nature of the waste);

e) The quantity of waste, recorded in tonnes;

f) The name of the person checking the load; and

g) The time and date of departure.

10.7 A 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 two 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: 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/sewer water, notify Shannon 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 to landfill, going to landfills as specified in the Landfill Directive;

b) The separation of recyclable materials from the waste;

c) The recovery of Construction and Demolition Waste;

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

e) The recovery of commercial waste, including cardboard;

f) Composting of green waste at the facility having regard to good practice and sustainability;

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

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

11.4 Annual Environmental Report

11.4.1 The licensee shall submit to the Agency for its agreement, by 31st March of each year an Annual Environmental Report (AER) for the previous year.

11.4.2 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 €18,388 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 Acts 1996 to 2003. The licensee shall in 2005 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 2004, 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 in regard to items not covered by the said annual contribution.

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:-

$$Cost = (ECOST \times WPI) + CiCC$$

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 Cost of landfill of waste

The licensee shall ensure the costs in the setting up, operation of, provision of financial security and closure and after-care for a period of at least 30 years shall be covered by the price to be charged for the disposal of waste at the facility.

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 and Commercial Waste	53,500
Construction and Demolition Waste	2,000
Industrial Waste	4,500
TOTAL	60,000[Note 1]

Note 1: The quantities of the individual waste types may be adjusted, only with the agreement of the Agency, subject to the total annual waste quantity remaining the same.

SCHEDULE B : Specified Engineering Works

Specified Engineering Works
Development of the facility including preparatory works and lining.
Final capping.
Installation of Compost Facility.
Installation of Landfill Gas Management Infrastructure.
Installation of Leachate Management Infrastructure.
Installation of Groundwater Control 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 any noise sensitive locations).

Day Db(A) L_{Aeq}(15 minutes)	Night dB(A) L_{Aeq}(15 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 surface water monitoring point SW3.

Level (Suspended Solids mg/l)
35

C.5 Emission Limits Values for Landfill Gas Plant

Emission Point Reference numbers: *to be agreed by Agency*
Volume to be emitted: 3000m^3/hr (unless results from modelling suggests otherwise)
Minimum discharge height: 5m (unless results from modelling suggests otherwise)

Parameter	Flare (enclosed) Emission Limit Value [Note 1]	Utilisation Plant Emission Limit Value [Note 1]
Nitrogen oxides (NO_x)	150 mg/m^3	500 mg/m^3
CO	50 mg/m^3	650 mg/m^3
Particulates	Not applicable	130 mg/m^3
Total organic carbon (TOC)	10 mg/m^3	Not applicable

Note 1: Dry gas referenced to 5% oxygen by volume for utilisation plants and 3% oxygen by volume for flares.

SCHEDULE D : Monitoring

D.1 Monitoring Locations

Monitoring locations shall be those as set out in Table D.1.1and Fig. No. Art. 12-18.2 *Monitoring Locations* of the Article 14 reply received 02/07/04, unless otherwise indicated or agreed by the Agency.

Table D.1.1 Monitoring Locations

Landfill Gas within Waste and Boundary Locations	Landfill Gas Flare/Utili-sation Plant	Dust Deposition	Noise	Surface Water	Ground Water	Leachate
Stations		**Stations**	**Stations**	**Stations**	**Stations**	**Stations**
Within Waste Note 1	Note 3	Note 4 **D1** **D2** **D3** **D4** **D5** **D6** **D7**	Note 5 **N1** **N2** **N3** **N4** **N5** **N6** **N7** **N8** **N9** **N10**	**SW1** **SW2** **SW3**	**BH1** Note 7 **BH4** **BH5** **BH6** Note 7 **BH7** Note 7 **BH8** **BH9** **BH10**	**Leachate collection chamber** **1** **2** **3** **4** **MH1** **MH2** **MH3** **MH4** Note 9
Perimeter Locations Note 2 **G1** **G2** **G3** **G4** **G6** **G7** **G8** **G9** **G10**			**Any noise sensitive locations**	**Biological assessment monitoring locations** Note 6	**Private Wells** Note 8	**Within Cell** Note 9
Within all enclosed buildings on site.						

Note 1: Location of landfill gas monitoring wells within the waste body to be agreed by the Agency in accordance with Condition 3.21.1.

Note 2: Additional perimeter wells to monitor for potential off-site migration of landfill gas to be provided in accordance with Condition 3.21.1.

Note 3: Location to be agreed by the Agency.

Note 4: Additional dust monitoring point(s) to be installed in relation to the operation of the green waste composting area in accordance with Condition 3.21.3.

Note 5: Additional noise monitoring point(s) to be installed in relation to the operation of the green waste composting area in accordance with Condition 3.21.4.

Note 6: Biological assessment monitoring locations to be agreed in advance by the Agency as required by Condition 8.11.

Note 7: Groundwater monitoring wells for which trigger levels shall be set as specified in Condition 6.4.

Note 8: Private wells to be monitored in accordance with Condition 8.8.

Note 9: Location of leachate monitoring points at the facility to be agreed with the Agency in accordance with Condition 3.21.2.

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	Weekly	Infrared analyser/flame ionisation detector
Carbon dioxide (CO_2) % v/v	Monthly	Weekly	Infrared analyser/ flame ionisation detector
Oxygen (O_2) % v/v	Monthly	Weekly	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 by the Agency.

D.3 Dust

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 Monitoring Frequency	GROUNDWATER Monitoring Frequency	LEACHATE [Note 7] Monitoring Frequency
Visual Inspection/Odour [Note 2]	Weekly	Quarterly	Quarterly
Groundwater Level	Not Applicable	Monthly	Not Applicable
Leachate Level	Not Applicable	Not Applicable	Weekly
Ammoniacal Nitrogen	Quarterly	Monthly	Annually
BOD	Quarterly	Not Applicable	Annually
COD	Quarterly	Not Applicable	Annually
Chloride	Quarterly	Quarterly	Annually
Dissolved Oxygen	Quarterly	Quarterly	Not Applicable
Electrical Conductivity	Quarterly	Monthly	Annually
Ph	Quarterly	Monthly	Annually
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
Total Alkalinity	Annually	Annually	Not applicable
Total P/orthophosphate	Annually	Annually	Annually
Total Oxidised Nitrogen	Annually	Annually	Annually
Total Organic Carbon	Not Applicable	Monthly	Not Applicable
Residue on evaporation	Not Applicable	Annually	Not Applicable
Faecal Coliforms	Not Applicable	Monthly	Not Applicable
Total Coliforms	Not Applicable	Monthly	Not Applicable
Biological Assessment	Annually [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 by 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: Visual Inspection and Leachate Levels to be monitored at all leachate monitoring points specified in Table D.1.1. Leachate composition to be monitored at the leachate storage tank/lagoon.

D.6 Meteorological Monitoring

Table D.6.1 Meteorological Monitoring:
Data to be obtained from Mullingar Meteorological Station, unless otherwise agreed or instructed by the Agency.

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

D.7 Landfill Gas Combustion Plant/Enclosed Flare

Location: Utilisation plant and enclosed flare**.**

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
Process Parameters			
Combustion Temperature	Continuous	Quarterly	Temperature Probe/datalogger
Outlet			
Carbon monoxide (CO)	Continuous	Continuous	Flue gas analyser/datalogger
Nitrogen Oxides (Nox)	Annually	Annually	Flue gas analyser
Sulphur dioxide (SO_2)	Annually	Annually	Flue gas analyser
Particulates	Not applicable	Annually	Isokinetic/Gravimetric
TOC	Annually	Not applicable	Flame ionisation

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

SCHEDULE E : Recording and Reporting to the Agency

Report	Reporting Frequency [Note1]	Report Submission Date
Environmental Management System Updates	Annually	Submit as part of AER.
Annual Environment Report (AER)	Annually	By 31st March of each year.
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 as part of the AER.
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	Submit as part of AER.
Dust Monitoring	Three times a year	Submit as part of AER.
Noise Monitoring	Annually	Submit as part of AER.
Biological Monitoring	Annually	Six months from the date of grant of licence and every year thereafter as part of the AER.
Side Slope Stability assessment	Annually	Submit as part of AER.
Topographical survey	Annually	Six months from the date of grant of licence and every year thereafter as part of the AER.
Any other monitoring	As they occur	Within ten days of obtaining results.

Note 1: Unless altered at the request of the Agency.

SCHEDULE F : Criteria for the Acceptance of Inert Waste

F.1 Acceptable Inert Waste for Recovery

Only the wastes listed below are acceptable for recovery at the facility, unless otherwise agreed by 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.
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.
Meteorological summary report.
Resource and energy consumption summary.
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.
Topographical Survey.
Slope stability monitoring report.
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.
Environmental Management System updates.
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.
Statement of charges and costs of landfill (Condition 12.3 and Section 53A(5) of the Waste Management Acts 1996 to 2003)
Report on training of staff.
Any other items specified by the Agency.

Signed on behalf of the said Agency
on the 27th day of September, 2004 **Authorised Person**