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

WASTE LICENCE
LANDFILL FOR NON-HAZARDOUS WASTE

PROPOSED DECISION

Waste Licence Register Number:	29-2
Applicant:	Offaly County Council
Location of Facility:	Derryclure Landfill, Derryclure, Tullamore, County Offaly.

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 which will accept up to a maximum annual tonnage of 40,000 tonnes of waste for disposal. The licence also allows for the composting of biodegradable waste and the operation of a Civic Waste Facility.

Waste disposal shall be carried out into cells constructed from a low permeability mineral liner in accordance with the Landfill Directive. Prior to construction of future lined cells at the facility, the in-situ peat deposits will be removed or consolidated to ensure that the integrity of the liner is maintained at all times. Leachate, surfacewater and landfill gas control measures are required to be put in place which will include measures to reduce the impact of the existing waste body on the environment.

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 in addition to a wide range of reports on the operation and management of the facility, and submit these to the Agency.

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

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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 Offaly County Council to carry on the waste activities listed below at Derryclure Landfill, Derryclure, Tullamore, County Offaly 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 the deposition of waste in areas where waste has previously been deposited pending the completion of lined cells at the facility.
Class 4	**Surface impoundment, including placement of liquid or sludge discards into pits, ponds or lagoons:**
	This activity is limited to the storage of leachate in lagoons or tanks.
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 placement of waste into lined cells and the flaring/utilisation of landfill gas.
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:**
	This activity is limited to the stripping of methane from leachate stored at the facility.
Class 11	**Blending or mixture prior to submission to any activity referred to in a preceding paragraph of this Schedule:**
	This activity is limited to the mixing of waste types to be used in the restoration of the facility.
Class 13	**Storage prior to submission to any activity referred to in a preceding paragraph of this Schedule, other than temporary storage, pending collection, on the premises where the waste concerned is produced:**
	This activity is limited to the temporary storage of waste at the facility prior to its disposal at the landfill or at an alternative appropriate disposal facility.

Class 2	**Recycling or reclamation of organic substances which are not used as solvents (including composting and other biological transformation processes):**
	This activity is limited to the composting of biodegradable waste.
Class 3	**Recycling or reclamation of metals and metal compounds:**
	This activity is limited to the collection and storage of metals at the Civic Waste Facility.
Class 4	**Recycling or reclamation of other inorganic materials:**
	This activity is limited to the collection of waste at the Civic Waste Facility and for the storage/use of inert waste for the restoration of the facility.
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 collection and storage of recyclable and reusable wastes at the facility prior to their use on-site or their removal off-site for recycling/recovery.

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.
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.
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 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. 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 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, such as the removal and laying of daily cover. Different activities within the facility, such as the landfill and the civic waste facility, may have different hours of waste acceptance.
Hours of Waste Acceptance	The hours during which the facility is authorised to accept waste. Different activities within the facility, such as the landfill and the civic waste facility, may have different hours of waste acceptance.
Household waste	As defined in Section 5 (1) of the Act.
Industrial waste	As defined in Section 5 (1) of the Act.
Inert waste	Inert waste as defined in the Waste Management (Licensing) (Amendment) Regulations, 2002 (SI no. 336 of 2002).
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	Offaly 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.
Monthly	A minimum of twelve times per year, at approximately monthly intervals.
Night-time	2200 hrs to 0800 hrs.
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.

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	Water that has been used, as for washing, flushing or in a manufacturing process.
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 the Drawing entitled "Landfill Site at Derryclure, Tullamore, Co. Offaly" which was received by the Agency on 6th December 2002. 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. Only the wastes listed in *Schedule A: Waste Acceptance*, of this licence, may be disposed of or recovered at the facility subject to the maximum quantities and other constraints specified therein.

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 tyres shall not be accepted or disposed of at the facility from 16 July 2006.

1.5.2. No hazardous wastes or liquid wastes 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 may only be accepted at the facility for disposal at the landfill between the hours of 8.00 a.m. to 4.30 p.m. Monday to Friday inclusive and 8.00 a.m. to 3.00 p.m. on Saturdays.

1.6.1.2. The landfill at the facility may only be operated during the hours of 8.00 a.m. to 5.30 p.m. Monday to Friday inclusive and 8.00 a.m. to 4.00 p.m. on Saturdays.

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

1.6.2. Civic Waste Facility

1.6.2.1. Waste shall only be accepted at the Civic Waste Facility between the hours of 8.00 a.m. to 4.30 p.m. Monday to Friday inclusive and 8.00 a.m. to 3.00 p.m. on Saturdays.

1.7 The following shall constitute an incident for the purposes of this licence:-

a) An emergency;

b) Any emission which does not comply with the requirements of this licence;

c) Any trigger level specified in this licence which is attained or exceeded; and

d) Any indication that environmental pollution has, or may have, taken place.

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

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

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

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

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

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

1.10 This licence is being granted in substitution for the waste licence granted to the licensee on 16th November 1999 and bearing Waste Licence Register No: 29-1. The previous waste licence (Register No: 29-1) 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 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 with 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 Within three months from the date of grant of this licence, the licensee shall submit written details of the updated management structure of the facility to the Agency. Any proposed replacement in the management structure shall be notified in advance in writing to the Agency. Written details of the management structure shall include the following information:-

a) The names of all persons who are to provide the management and supervision of the waste activities authorised by the licence, in particular the name of the facility manager and any nominated deputies;

b) Details of the responsibilities for each individual named under a) above; and

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

2.3 Environmental Management System (EMS)

2.3.1 The licensee shall 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. Following the agreement of the Agency, the licensee shall establish and maintain such a system. The EMS shall be updated on an annual basis with amendments being submitted to the Agency for its agreement.

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

2.3.2.1 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 Within six months of the date of grant of this licence, the licensee shall establish and maintain a Communications Programme to inform and involve the local community and

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 The existing security and stockproof fencing and gates shall be maintained at the facility. Within six months of the date of grant of this licence, the licensee shall provide and maintain security and stockproof fencing around the boundary of the proposed new Civic Waste Facility. 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 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.

3.5 Facility Roads and Site Surfaces

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

3.5.2 The facility entrance area, the access road to the Civic Waste Facility, the Civic Waste Facility itself and the Composting Area shall be paved to ensure an impervious surface is maintained.

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.

3.7 Waste Inspection and Quarantine Areas

3.7.1 A Waste Inspection Area and a Waste Quarantine Area shall be maintained at the facility.

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 a collection sump or the leachate collection system.

3.8 Weighbridge

3.8.1 The licensee shall maintain a weighbridge at the facility.

3.9 Wheel Cleaning

3.9.1 The licensee shall maintain a wheelwash at the facility. Drainage from the wheelwash shall only be directed to the leachate collection system or a holding tank pending its removal off-site for disposal at an appropriate facility.

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 wastewater arising on-site. Within six months of the date of grant of this licence, the licensee shall ensure that any septic tanks and percolation areas being used at the facility are operated in accordance with the Agency's *Wastewater Treatment Manual: Treatment Systems for Single Houses.* A report on its operation and design shall be submitted as part of the AER.

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 leachate/contaminated water storage tanks) 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 (or in the case of new structures, 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 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;

d) All side walls (with the exception of those side walls located on the interface between the new cells and the existing unlined waste disposal areas) shall be designed and constructed to achieve an equivalent protection; and

e) For those side walls located on the interface between the new cells and the existing unlined waste disposal areas, the following shall be provided:

i) A gas collection layer of natural material (minimum thickness of 0.3m) or a geosynthetic layer overlain by a 2mm thick LLDPE layer which should be tied into the HDPE layer on the base of the lined cell; and

ii) A geocomposite leachate collection layer placed over the LLDPE layer.

3.12.2 The liner detailed design, 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 Unless otherwise agreed by the Agency, the layout of the lined cells shall be as shown on Drawing No. BEN45098A/004 of the application.

3.12.4 Peat deposits shall be removed or consolidated prior to the construction of lined cells so as to ensure that the integrity of the liner is maintained at all times. The formation levels of the liner in each cell shall be agreed with the Agency prior to the construction of the liner.

3.13 Leachate Management Infrastructure

3.13.1 Within six months of the date of grant of this licence, the licensee shall provide and maintain appropriate infrastructure to provide for the abstraction/collection of leachate from waste deposited in unlined parts of the facility. This shall consist *inter alia* of the following:

(i) Six leachate abstraction wells located within the waste body. These wells shall be fitted with automatic pumps to allow for the pumping of leachate to the storage structure referred to in Condition 3.13.2 at regular intervals; and

(ii) A leachate interceptor drain around the existing waste body. The leachate interceptor drain shall be designed so as to prevent the leachate collected in the interceptor drain from discharging to surfacewater or into the groundwater control drainage layer referred to under Condition 3.16.2.

3.13.2 Within twelve months of the date of grant of this licence, the licensee shall provide and maintain a leachate storage structure(s). Any leachate storage lagoons to be constructed at the facility shall meet the lining specifications given in Condition 3.12.

3.13.3 Pending the completion of the leachate storage structure(s) referred to in Condition 3.13.2, the licensee shall provide a temporary storage structure at the facility to facilitate the storage of all leachate abstracted/collected from the waste body and any contaminated run-off or wastewater arising from impervious areas, including drainage arising from the wheelwash.

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

3.13.5 Within twelve months of the date of grant of this licence, the licensee shall provide appropriate infrastructure to allow for the removal of dissolved methane from the leachate prior to its removal off-site.

3.13.6 Leachate collection/abstraction from lined cells shall be by means of a side slope riser.

3.14 Landfill Gas Management

3.14.1 Within six months of the date of grant of this licence, infrastructure for the active collection and flaring of landfill gas shall be installed at the facility. This shall include infrastructure for the collection and flaring of landfill gas arising from waste deposits in unlined parts of the facility. 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.

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

3.14.3 Any landfill gas utilisation plant required under Condition 11.4.3 shall be installed at the facility.

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

3.14.5 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 Surface Water Management

3.15.1 Effective surface water management infrastructure shall be provided and maintained at the facility during the 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;

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

c) The diversion of surfacewater where necessary, to prevent surfacewater ingress either into the leachate interceptor drain, or into areas where lining works are proposed.

3.15.2 Within nine months of the date of grant of this licence, surfacewater run-off arising from all impermeable surfaces (excluding wastewater from the wheelwash and run-off from waste inspection/quarantine areas or bunded areas) shall be diverted to a silt trap and oil interceptor prior to discharge from the facility. All silt traps and oil interceptors shall be adequately sized and shall be in accordance with European Standard prEN 858 (installations for the separation of light liquids).

3.15.3 Within nine months of the date of grant of this licence, the licensee shall provide and maintain one or more surfacewater discharge points from the facility to be agreed with the Agency. Following the agreement of the Agency, all discharges to surfacewater from the facility shall only be from the agreed discharge point(s).

3.16 Groundwater Management

3.16.1 Effective groundwater management infrastructure shall be provided and maintained at the facility during the 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.

3.16.2 The licensee shall ensure that groundwater levels are maintained below the base level of the clay layer of the lining system until such time as agreed in advance with the Agency. This shall be carried out through the installation and maintenance of a groundwater control drainage layer beneath the lining system. Drainage from the groundwater control drainage layer shall be diverted to the surfacewater management system.

3.17 Civic Waste Facility

3.17.1 The licensee shall provide and maintain a Civic Waste Facility.

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

3.18 Compost Facility

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

a) An impermeable concrete slab;

b) Collection infrastructure to direct all run-off to the leachate collection system; and

c) Appropriate odour control/management infrastructure.

3.19 Telemetry

3.19.1 Within twelve months of the date of grant of this licence, a telemetry system shall be installed and maintained at the facility. All facility operations linked to the telemetry system shall also have a manual control which will be reverted to in the event of a break in the power supply or during maintenance.

3.19.2 The telemetry system shall include for the following:-

a) Recording of leachate levels in the lined cells, the interceptor drain and the lagoon (or other similar leachate storage structure);

b) Recording of groundwater levels in the groundwater sump(s) located below the lined cell(s); and

c) Recording of landfill gas levels from the permanent gas monitoring system installed in the site office and any other enclosed structures at the facility.

3.20 Monitoring Infrastructure

3.20.1 Landfill Gas

a) Within six months from the date of grant of this licence, and subject to the agreement of the landowners, the licensee shall provide a representative number of monitoring locations to facilitate the measurement of landfill gas for the purposes of detecting any potential off-site migration of landfill gas.

b) The licensee shall maintain an effective permanent gas monitoring system in the site office and any other enclosed structures at the facility.

3.20.2 Groundwater

a) Within six months from the date of grant of this licence, the licensee shall install three additional monitoring points at locations to be agreed in advance with the Agency to allow for the sampling and analysis of groundwater. One of these shall be located upgradient of the facility and the other two shall be located downgradient of the facility. Unless otherwise agreed with the Agency, each monitoring point shall include two separate standpipes and shall be screened appropriately such that overburden and bedrock groundwater can be sampled independently of each other.

3.20.3 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.

3.20.4 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. Within six months of the date of grant of this licence, the licensee shall submit to the Agency for agreement a Restoration and Aftercare Plan for the facility to reflect the requirements of this licence. This plan shall address the restoration of deposited wastes in the proposed lined cells and all historically landfilled areas, and should include a schedule detailing the various stages of restoration, including timescales, for the facility.

4.2. The final height of the facility following completion of the final capping shall be 94m OD Malin.

4.3. Final Capping

4.3.1. With the exception of those unlined areas located on the interface with the proposed new lined cells (and which will be lined in accordance with Condition 3.12.1(e)), the final capping shall consist of the following:-

a) Top soil (150 -300mm);

b) Subsoils, such that the 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 an equivalent geosynthetic layer;

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. The final capping and restoration of the landfill facility shall be completed on the following basis:

a) Areas which have been filled to the required level (other than the interface with the proposed new cells) shall be finally capped within twelve months of the date of grant of this licence unless otherwise agreed with or instructed by the Agency.

b) The restoration of the landfill facility shall commence as soon as a cell is finally capped. Restoration of each cell shall be completed within twenty-four months of the date of cessation of waste deposition in that cell.

4.7. Soil Storage

4.7.1. 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.

5.2 Waste Acceptance and Characterisation Procedures

5.2.1 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 methods for the characterisation of waste in order to distinguish between inert, non-hazardous and hazardous wastes and shall have regard to Council Decision (2003/33/EC).

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 one month.

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 licence, the licensee shall submit to the Agency for agreement a landscaping plan for the facility. This shall include measures to screen the proposed new Civic Waste Facility.

5.7 Operational Controls

5.7.1 Unless otherwise agreed by the Agency, the landfill extension shall be filled in accordance with the phase sequence outlined in Drawing No. BEN45098A/004 entitled "Extension Design Showing Leachate Drainage System".

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 final cap, leachate and landfill gas collection systems, unless with the prior agreement of 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 Scavenging shall not be permitted at the facility.

5.7.6 Gates shall be locked shut and appropriate security patrols and/or other measures employed to ensure that the facility is secure during periods when the facility is unsupervised.

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

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

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

5.7.10 No smoking shall be allowed on the facility other than in the site office/canteen.

5.8 Waste Handling

5.8.1 Sludges

5.8.1.1 Only treated sewage sludge with greater than 25% solids shall be accepted at the facility. The hours of acceptance for treated sludges shall be between the hours of 08.30 hrs and 14.00 hrs Monday to Friday inclusive. All sewage sludge shall be covered immediately with other waste.

5.8.2 Compost

5.8.2.1 Prior to the commencement of composting at the facility, the licensee shall submit to the Agency for agreement proposals for the operation of the compost facility. These proposals shall as a minimum include details of the composting process, waste acceptance/screening procedures, location of the compost facility, nuisance control measures, surfacewater management, monitoring of the composting process and of the end product, and the proposed end use of the compost.

5.8.2.2 All wastes accepted at the composting facility shall be introduced into the composting process within 24 hours of delivery.

5.8.2.3 No waste shall be left uncovered in the composting area from the close of operation on Saturday until Monday morning opening unless otherwise agreed with the Agency.

5.8.2.4 The licensee shall undertake regular monitoring of the composting process and maintain daily records of certain parameters (to be agreed with the Agency under Condition 5.8.2.1).

5.8.2.5 In order not to be considered a waste, compost produced by the facility shall comply with the quality standards established in *Schedule F: Standards for Compost Quality*, of this licence. Analysis of the compost shall be in accordance with the requirements of that Schedule.

5.8.3 Inert Waste

5.8.3.1 Only the inert wastes specified in *Schedule G: Acceptance of Inert Waste*, of this licence shall be accepted for recovery at the facility.

5.9 Off-site Disposal and Recovery

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

5.9.2 All waste transferred from the facility shall only be transferred 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 only be used by private vehicles. The disposal of waste by commercial waste disposal contractors or local authority waste collection vehicles shall not be permitted.

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; or

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 All unsorted domestic waste and household hazardous wastes (including batteries and waste oils) accepted at the new Civic Waste Facility shall be stored in appropriately bunded storage areas. Waste fluorescent tubes shall be stored in an enclosed container in such a manner so as to prevent breakage.

5.10.5 Domestic waste delivered to the Civic Waste Facility for disposal shall be deposited at the working face prior to the end of the working day or removed off-site to an alternative facility agreed with the Agency.

5.11 Leachate Management

5.11.1 All leachate collected at the facility shall be pumped/drained to the leachate storage lagoon (or similar storage structure) prior to removal off-site.

5.11.2 Leachate levels in lined cells 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 leachate storage lagoon shall be such that a minimum freeboard of 0.75m shall be maintained in the leachate lagoon at all times.

5.11.4 Leachate stored in the leachate storage lagoon shall be disposed of by tankering off-site in fully enclosed road tankers to Tullamore Waste Water Treatment Plant, unless otherwise agreed by the Agency.

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 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.

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 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 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. The groundwater trigger levels for each monitoring location shall be based on previous groundwater monitoring results from those locations.

6.5. Emissions to Surface Water

6.5.1. No raw leachate, treated leachate or contaminated surface water shall be discharged to surfacewater.

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. The following are the trigger levels for surface water emissions from the facility, measured at those discharge locations agreed under Condition 3.15.3:

a) BOD 25mg/l

b) Suspended Solids 60mg/l

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 Litter fencing shall be installed and maintained around the perimeter of the active tipping area prior to the disposal of any waste in any cell. Within six months of the date of grant of this licence, portable litter nets/screens shall be used at the active tipping face.

7.3.2 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.

7.3.3 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.

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

7.3.5 The licensee shall implement procedures for the operation of the facility during 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.

7.4.2 All stockpiles shall be maintained so as to minimise dust generation.

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.

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 All persons conducting the sampling, monitoring and interpretation of monitoring results as required by this licence shall be suitably competent. The licensee shall maintain the following information at the facility:

a) 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.

8.7 Meteorological Monitoring

8.7.1 The licensee shall maintain a meteorological station at the facility capable of monitoring the parameters listed in *Schedule D.6: Meteorological Monitoring*, of this licence.

8.8 Topographical Survey

8.8.1 A topographical survey shall be carried out within six months of the date of grant of this licence. The survey shall include a measurement of the remaining available void space. It shall be repeated annually thereafter. The survey shall be in accordance with any written instructions issued by the Agency

8.9 Archaeological Assessment

8.9.1 Prior to the development of lined cells/lagoons in 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.

8.10 Stability Assessment

8.10.1 Within six 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.

8.11 Nuisance Monitoring

8.11.1 The licensee shall, at a minimum of one week intervals, inspect the facility and its immediate surrounds for nuisances caused by litter, vermin, birds, flies, mud, dust and odours.

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

CONDITION 9 CONTINGENCY ARRANGEMENTS

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

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

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

c) Isolate the source of any such emission;

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

e) Identify and execute measures to minimise the emissions/malfunction and the effects thereof; 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, within six months of the date of grant of this licence, submit a written Emergency Response Procedure (ERP) to the Agency for its agreement. The ERP shall address any emergency situations which may originate on the facility and shall include provision for minimising the effects of any emergency on the environment. This shall include a risk assessment to determine the requirements at the facility for fire fighting and fire water retention facilities. The Fire Authority shall be consulted by the licensee during this assessment.

9.3. The licensee shall have in storage an adequate supply of 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 the side slopes or exposed peat faces at the facility indicates 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, 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 carrier registration details);

c) The vehicle registration number;

d) The name of the producer(s)/collector(s) of the waste as appropriate and details of the waste collection permit;

e) The name of the waste facility (if appropriate) from which the load originated including the waste licence or waste permit register number;

f) A description of the waste including the associated EWC codes;

g) The quantity of the waste, recorded in tonnes;

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

i) Where loads or wastes are removed or rejected, details of the date of occurrence, the types of waste and the facility to which they were removed.

10.3 Written Records

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

a) The types and quantities of waste 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;

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 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 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 Administration, Waste Enforcement Section, at the Agency's headquarters;

b) Comprise one original and three copies unless additional copies are required;

c) Be formatted in accordance with any written instruction or guidance issued by the Agency;

d) Include whatever information as is specified in writing by the Agency;

e) Be identified by a unique code, indicate any modification or amendment, and be correctly dated to reflect any such modification or amendment;

f) Be submitted in accordance to the relevant reporting frequencies specified by this licence, such as in *Schedule E: 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-f), 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 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 nine 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 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) Composting of biodegradable or green waste at the facility having regard to good practice and sustainability; and

h) Inert waste to be used for cover/restoration material at the facility.

11.4 Reports relating to Facility Operations

11.4.1. Leachate Handling Procedures

11.4.1.1 Within three months from the date of grant of this licence, the licensee shall submit to the Agency for its agreement Leachate Handling Procedures for the storage and handling of leachate on the facility, and for the removal of leachate from the facility. These procedures shall also address the abstraction of leachate from the six abstraction boreholes located within the waste body, and from the leachate interceptor drain (following its completion).

11.4.2. Achievement of Final Profile

11.4.2.1 Within six 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. This shall include a revised drawing detailing the final contours of the facility, taking into account the Conditions of this licence.

11.4.3. Landfill Gas Utilisation

11.4.3.1 Within twenty-four months of the date of grant of this licence, the licensee shall submit to the Agency an assessment of whether the utilisation of landfill gas as an energy source is feasible. If feasible, such a system shall be installed within a timeframe to be agreed with the Agency.

11.4.4. Surfacewater Management

11.4.4.1 Within six months of the date of grant of this licence, the licensee shall submit a report to the Agency which shall assess the adequacy of surface water control measures at the facility. Any recommendations arising from this report shall be implemented within a timeframe agreed with the Agency.

11.4.5. European Pollution Emission Register reporting shall be in accordance with any relevant guidance issued by the Agency.

11.5 Monitoring Locations

11.5.1 Within six months of the date of grant of this licence, the licensee shall submit to the Agency an appropriately scaled drawing(s) showing all the monitoring locations that are stipulated in this licence. The drawing(s) shall include a unique reference code and the twelve figure National Grid Reference for each monitoring point.

11.6 Annual Environmental Report

11.6.1 The licensee shall submit to the Agency for its agreement an Annual Environmental Report (AER) by the 31st January each year. The AER shall be submitted on an annual basis thereafter.

11.6.2 The AER shall include as a minimum the information specified in *Schedule H: 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 €18,728.84 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 The licensee shall arrange for a 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.

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 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.

12.2.4 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 the European Communities (Amendment of Waste Management (Licensing) Regulations, 2000) Regulations, 2002 (SI No. 337 of 2002).

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 to be accepted for disposal

WASTE TYPE	MAXIMUM (TONNES PER ANNUM) Note 1
Household	15,500
Commercial	9,500
Industrial Non-Hazardous Solids	7,500
Treated Sewage Sludge	5,500
Construction and Demolition Waste	2,000
Total	**40,000**

Note 1: The tonnage of household waste, commercial waste, industrial non-hazardous solids, treated sewage sludge and construction and demolition waste accepted for disposal may be altered with the prior agreement of the Agency, provided that the total amount of waste accepted at the facility for disposal does not exceed 40,000 tonnes per annum (as specified in the total above).

Table A.2 Waste Categories and Quantities to be accepted for Recovery

Waste Type	Maximum (Tonnes Per Annum)
Biodegradable waste for composting	To be agreed with the Agency. Note 1
Inert Waste	To be agreed with the Agency. Note 1
Waste to be accepted at the Civic Waste Facility Note 2	To be agreed with the Agency. Note 1

Note 1: Within three months of the date of grant of this licence, the licensee shall submit a proposal to the Agency for agreement on the annual tonnage of these waste types to be accepted for recovery at the facility. The agreed tonnages shall only be amended with the prior agreement of the Agency.

Note 2: Unless otherwise agreed with the Agency, the following wastes may be accepted at the Civic Waste Facility: metal, white goods, paper, cardboard, plastic, glass, aluminium cans, waste oils, batteries and fluorescent tubes.

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 the proposed new Civic Amenity 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 Emission Limits Values for Landfill Gas Plant:

Emission Point Reference no.s: To be agreed with the Agency.
Location: Landfill Gas Utilisation Plant and/or flare.
Max. Volume to be emitted: $3{,}000m^3$/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	1400 mg/m^3
Particulates	Not applicable	130 mg/m^3
Total Volatile Organic Compounds (VOCs)	Not applicable	1000 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.

SCHEDULE D : Monitoring

D.1 Monitoring Locations

Monitoring locations shall be those as set out in Table D.1.1.

Table D.1.1 Monitoring Locations

Landfill Gas Stations Note 1	Dust Deposition Stations Note 1	Noise Stations Note 1	Surface Water Stations Note 1	Ground Water Stations Note 1	Leachate Stations Note 1
GP-01, GP-03, GP-05, GP-08, GP-09, GP-13, GP-14, GP-15	DM-02, DM-04, DM-05, DM-07	N2, N3, N6, N8	SW1, SW7, SW8 Note 5, SW11	MW-01D, MW-05D, MW-08S, MW-08B	LE-01, LE-02, LE-03, LE-04, LE-05, LE-06 Note 10
Site Office & Buildings			1 upstream location Note 6	BH-01S, BH-01D Note 8	Lined cells Note 11
Perimeter locations Note 2			Discharge locations Note 7	3 other locations Note 9	Leachate storage structure Note 4
Lined cells Note 3					
Flare / Utilisation Plant Note 4					

Note 1: As shown on Map J.1 "Environmental Monitoring (Amendment 4)" in Article 13 response received by the Agency on 24/9/02 from Bord na Mona.
Note 2: Perimeter wells to monitor for potential off-site migration of landfill gas to be provided in accordance with Condition 3.20.1 at locations to be agreed with the Agency.
Note 3: At least one per cell within lined waste disposal areas.
Note 4: Locations to be agreed with the Agency.
Note 5: SW8 to be located on the main surfacewater outfall from the present moate on the western boundary of the facility.
Note 6: One surfacewater monitoring point to be located upstream of the northern boundary of the facility at a location to be agreed with the Agency.
Note 7: At those locations to be agreed under Condition 3.15.3.
Note 8: As shown on Map C6.2 "Peizometric Map (Revision 2)" in Article 13 response received by the Agency on 13/1/03 from Bord na Mona.
Note 9: As per the requirements of Condition 3.20.2.
Note 10: Leachate quality and levels to be monitored at LE-05. Only leachate levels to be recorded at the other locations.
Note 11: At two locations per lined cell, as per the requirements of Condition 3.20.3.

D.2 Landfill Gas

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

Parameter	Monitoring Frequency		Analysis Method Note 1 /Technique Note 2
	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	-	Standard
Temperature	Monthly	-	Standard

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

D.3 Dust/Odour Monitoring

Table D.3.1 Dust Monitoring Parameters, Frequency and Technique

Parameter ($mg/m^2/day$)	Monitoring Frequency	Analysis Method/Technique
Dust Deposition [Note 1]	Three times a year [Note 2]	Standard Method [Note 3]

Note 1: A wind rose, obtained from the meteorological station for the relevant sampling period, shall be submitted with each set of results.
Note 2: At least twice during the period May to September.
Note 3: 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.

D.4 Noise

Table D.4.1 Noise Monitoring Parameters, 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 6]
Ammoniacal Nitrogen	Quarterly	Quarterly	Annually
BOD	Quarterly	Not Applicable	Annually
COD	Quarterly	Not Applicable	Annually
Chloride	Quarterly	Quarterly	Annually
Dissolved Oxygen	Quarterly	Quarterly	Not Applicable
Electrical Conductivity	Quarterly	Quarterly	Annually
pH	Quarterly	Quarterly	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 [Note 5]	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	Quarterly	Not Applicable
Residue on evaporation	Not Applicable	Annually	Not Applicable

Note 1: All the analyses 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: Continuous monitoring in the leachate storage lagoon/structure and in lined cells, and weekly in the leachate abstraction boreholes (unlined areas).

D.6 Meteorological Monitoring

Data to be obtained from the meteorological monitoring station on-site.

Table D.6.1 Meteorological Monitoring Parameters, Frequency and Technique

Parameter	Monitoring Frequency	Analysis Method/Technique
Precipitation Volume	Daily	Standard
Temperature (min/max.)	Daily	Standard
Wind Force and Direction	Daily	Standard
Evaporation	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 Enclosed Flare/Utilisation Plant

Location: to be agreed with the Agency in advance.

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

Parameter	Flare (enclosed) Monitoring Frequency	Utilisation Plant Monitoring Frequency	Analysis Method [Note 1] / Technique [Note 2]
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	Continuous	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 [Note 1]	Report Submission Date
Environmental Management System Updates	Annually	One month after the end of the year reported on.
Annual Environment Report (AER)	Annually	By the 31st January 2004 and within one month after the end of each calendar year thereafter.
Record of incidents	As they occur	Within five days of the incident.
Bund, tank and container integrity assessment	Every three years	Within six months of the date of grant of the licence (or prior to the use of any new structures) and within one month after end of the three year period being reported on.
Specified Engineering Works reports	As they arise	Prior to the works commencing.
Monitoring of landfill gas	Quarterly	Ten days after end of the quarter being reported on.
Monitoring of Surface Water Quality	Quarterly	Ten days after end of the quarter being reported on.
Monitoring of Groundwater Quality	Quarterly	Ten days after end of the quarter being reported on.
Monitoring of Leachate	Quarterly	Ten days after end of the quarter being reported on.
Dust Monitoring	Three times a year	Ten days after the period being reported on
Noise Monitoring	Annually	One month after end of the year being reported on.
Topographical Survey	Annually	Within six months of the date of grant of the licence and one month after the end of the year being reported on.
Stability Assessment	Annually	Six months from the date of grant of licence and one month after the end of the year being reported on.
Waste Recovery Report	Once Off	Within nine months of the date of grant of the licence.
Leachate Handling Procedures	Once Off	Within three months of the date of grant of the licence.
Report on Achievement of Final Profile	Once Off	Within six months of the date of grant of the licence.
Assessment of Feasibility of Landfill Gas Utilisation	Once Off	Within twenty-four months of the date of grant of the licence.
Report on Surfacewater Management	Once Off	Within six months of the date of grant of the licence.
Any other monitoring	As they occur	Within ten days of obtaining results.

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

SCHEDULE F : Standards for Compost Quality

The following criteria are deemed a quality standard for the use of compost as a soil improver and should not be deemed as criteria for fertiliser. In addition N, P, K, NH_4-N, NO_3-N, pH and dry matter content should also be measured.

Compost/digestate shall meet the standards below if not more than 25% of samples fail the criteria below. No sample shall exceed 1.2 times the quality limit values set.

1. Maturity (Compost only)

The state of the curing pile must be conducive to aerobic biological activity.

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

1. Respiration activity after four days AT_4 is ≤10mg/O_2/g dry matter or Dynamic Respiration Index is ≤1,000mgO_2/kg VS/h.
2. Germination of cress (*Lepidium sativum*) seeds and of radish (*Raphanus sativus*) seeds in compost must be greater than 90 percent of the germination rate of the control sample, and the growth rate of plants grown in a mixture of compost and soil must not differ more than 50 percent in comparison with the control sample.
3. Compost must be cured for at least 21 days and Compost will not reheat upon standing to greater than 20°C above ambient temperature.
4. If no other determination of maturity is made, the compost must be cured for a six month period. In addition, offensive odours from the compost shall be minimal for the compost to be deemed mature.
5. Or other maturity tests as may be agreed with the Agency.

Guidance on testing may be obtained from the German document LAGA M10 'Quality Criteria and Application Recommendations for Compost'.

2. Trace Elements (Compost and Digestate) **Note 1**

Maximum Trace Element Concentration Limits **Note 2**

Parameter (mg/kg, dry mass)	**Compost Quality Standards Note 3 / Digestate Quality Standards Note 3**		**Stabilised Biowaste**
	Class 1 Note 5	**Class 2 Note 6**	
Cadmium (Cd)	0.7	1.5	5
Chromium (Cr)	100	150	600
Copper (Cu)	100	150	600
Mercury (Hg)	0.5	1	5
Nickel (Ni)	50	75	150
Lead (Pb)	100	150	500
Zinc (Zn)	200	400	1500
Impurities >2mm **Note 4**	<0.5%	<0.5%	<3%
Gravel and Stones >5mm **Note 4**	<5%	<5%	-

Note 1: These limits apply to the compost just after the composting phase and prior to mixing with any other materials.
Note 2: The above alone should not be taken as an indication of suitability for addition to soil as the cumulative metal additions to soil should be first calculated.
Note 3: Normalised to 30% organic matter content.
Note 4: Compost must not contain any sharp foreign matter measuring over a 2 mm dimension that may cause damage or injury to humans, animals and plants during or resulting from its intended use.
Note 5: All use of compost of Class 1 Standard shall be in accordance with best agronomic practice.
Note 6: All use of compost of Class 2 Standard shall be in accordance with best agronomic practice. Notwithstanding this, it shall be used in a quantity not exceeding 30 Tonnes dry matter per hectare (on a three year average).

3. Pathogens

Pathogenic organism content must not exceed the following limits:

Salmonella sp.	Absent in 50g	n = 5
Faecal Coliforms	≤ 1000 Most Probable Number (MPN) in 1g	n = 5

Where: n = Number of samples to be tested.

4. Monitoring

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

SCHEDULE G : Acceptance of Inert Waste

G.1 Acceptable Waste for Recovery

Only those inert wastes listed in Table G.1.1 are acceptable for recovery at the facility, unless otherwise agreed with the Agency.

Table G.1.1 Waste for Recovery

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

SCHEDULE H : 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.
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.
Report on the performance and compatibility of the septic tank (and associated percolation area) with the Agency's *Wastewater Treatment manual: "Treatment Systems for Single Houses".*
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 17th day of June, 2003 Patrick J. Nolan **Authorised Person**