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

WASTE LICENCE
PROPOSED DECISION

Waste Licence	9-1
Register Number:	
Applicant:	Fingal County Council
Location of Facility:	Balleally, Lusk, Co. Dublin

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Reasons for the Decision

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

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

Part I Activities Licensed

In pursuance of the powers conferred on it by the Waste Management Act, 1996, the Environmental Protection Agency (the Agency) proposes, under Section 40(1) of the said Act to grant this Waste Licence to Fingal County Council to carry on the waste activities listed below at Balleally, Lusk, Co. Dublin subject to 11 No. conditions, with the reasons therefor and the associated schedules attached thereto set out in the licence.

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

- Class 1:* Deposit on, in or under land (including landfill).
- Class 2:* Land treatment, including biodegradation of liquid or sludge discards in soils.
- Class 5:* Specially engineered landfill, including placement into lined discrete cells which are capped and isolated from one another and the environment.
- Class 10:* Release of waste into a water body (including a seabed insertion).
- Class 11:* Blending or mixture prior to submission to any activity referred to in a preceding paragraph of this Schedule.
- Class 12:* Repackaging prior to submission to any activity referred to a preceding paragraph of in this Schedule.
- Class 13:* Storage prior to submission to any activity referred to in a preceding paragraph of this Schedule, other than temporary storage, pending collection, on the premises where the waste concerned is produced.

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

- Class 2:* Recycling or reclamation of organic substances which are not used as solvents (including composting and other biological transformation processes).
- Class 3:* Recycling or reclamation of metals and metal compounds.
- Class 4:* Recycling or reclamation of other inorganic materials.
- Class 9:* Use of any waste principally as a fuel or other means to generate energy.

- Class 10:** The treatment of any waste on land with a consequential benefit for an agricultural activity or ecological system.
- Class 11:** Use of waste obtained from any activity referred to in a preceding paragraph of this Schedule.
- Class 13:** Storage of waste intended for submission to any activity referred to in a preceding paragraph of this Schedule, other than temporary storage, pending collection, on the premises where such waste is produced.

INTERPRETATION

Act	The Waste Management Act, 1996 (No. 10 of 1996).
Aerosol	A suspension of solid or liquid particles in a gaseous medium.
Adequate lighting	20 lux measured at ground level.
Agreed	Agreed in writing.
Agreement	Agreement in writing.
Attachment	Any reference to Attachments in this licence refers to attachments submitted as part of the waste licence application.
Application	The application by the licensee for this waste licence, including any other material submitted to the Agency in writing by the licensee between the date of the application and the date of grant of this licence.
Appropriate facility	A waste management facility, duly authorised under relevant law and technically suitable.
BATNEEC	Best Available Technology Not Entailing Excessive Cost as defined in section 5 (2) of the Act.
Biodegradable waste	Any waste that is capable of undergoing anaerobic or aerobic decomposition, such as food and garden waste, and paper and paperboard.
Commercial waste	As defined in Section 5 (1) of the Act.
Condition	A condition of this licence. In any case where this licence refers to a numbered condition, the reference shall be taken to mean the condition and any sub-condition therein which the context of the reference requires that reference is made to.
Containment boom	A boom which can contain spillages and prevent these 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 subject to a proposal

made by the licensee for the Agency's agreement.

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	Unless otherwise specified in this licence, any reference to a drawing or drawing number in this licence means a drawing or drawing number contained in the application.
Emission	As defined in Section 5 (1) of the Act.
Emission Limit Value	Those limits, including concentration limits and deposition levels established in Schedule G.
Environmental Pollution	As defined in Section 5 (1) of the Act.
European Waste Catalogue (EWC)	The EWC is a harmonised, non-exhaustive list of wastes drawn up by the European Commission and published as Commission Decision 94/3/EC and any subsequent amendment published in the Official Journal of the European Community.
Facility	That area or areas defined under Condition 1.2.
Green waste	Waste wood, plant matter and other vegetation.
Inert waste	Waste that does not undergo any significant physical, chemical or biological transformations. Inert waste will not dissolve, burn or otherwise physically or chemically react, biodegrade or adversely affect other matter with which it comes into contact in a way likely to give rise to environmental pollution or harm human health. The total leachability and pollutant content of the waste and the ecotoxicity of the leachate must be insignificant, and in particular not endanger the quality of surface water and/or groundwater.
Hazardous Waste	As defined in Section 4 (2) of the Act.
Household Waste	As defined in Section 5 (1) of the Act.
Industrial waste	As defined in Section 5 (1) of the Act.
Incident	Any reference to an incident in this licence means an incident as defined in Condition 3.1.
Landfill	As defined in Section 5 (1) of the Act.
Landfill Directive	Council Directive 1993/31/EC of 26 April 1999 on the landfill of waste.
Leachate	Any liquid percolating through the deposited waste and emitted from or contained within a landfill as defined in Section 5 (1) of the Act.
Licence	A Waste Licence issued in accordance with the Act.
Licensee	Fingal 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 20% dry matter.
Maintain	Keep in a fit state, including such regular inspection, servicing and repair as may be necessary to adequately perform its function.
Monthly	At least 12 times per year, at approximately monthly intervals.
Municipal Waste	Municipal waste as defined in Section 5 (1) of the Act.
Night-time	2200 hrs to 0800 hrs.
Non-hazardous waste	Non-Hazardous Waste is any waste which is not a hazardous waste as defined in the Act.
Quarterly	A period of three calendar months, the first period of which commences on the date of grant of this licence.
Recovery	As defined in Section 4 (4) of the Act.
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.
Specified Emissions	Those emissions listed in Schedule G of this licence.
Specified Engineering Works	Those engineering works listed in Schedule E of this licence.
Submit	Unless the context of this licence indicates otherwise, submit to the Agency in writing for agreement.
Trigger Level	A parameter value which when achieved or exceeded requires certain actions to be taken.
Waste	As defined in Section 4(1) of the Act.
Waste disposal activity	Includes the activities referred to in Section 4 of the Act and listed in the Third Schedule thereto.
Waste recovery activity	Includes the activities referred to in Section 4 of the Act and listed in the Fourth Schedule thereto.
White Goods	Refrigerators, cookers, ovens and other similar appliances.
Working Day	9.00 a.m. to 5.30 p.m. Monday to Friday.
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

- 1.1. Waste activities at the facility shall be restricted to those listed and described in Schedule A and required by the licence.
- 1.2. Waste activities shall be restricted to the area of land outlined in red on Drawing No. Fig No. B2a. Rev A. "SITE PLAN", 11/09/98 of the application. Any reference in this licence to "facility" shall mean the area thus outlined in red.
- 1.3. Every plan, programme or proposal submitted to the Agency for agreement pursuant to any condition of this licence shall include a proposed timescale for its implementation. The Agency may modify or alter any such plan, programme or proposal in so far as it considers such modification or alteration to be necessary. Every plan, programme or proposal shall be carried out within the timescale fixed by the Agency but shall not be undertaken without the agreement of the Agency.
- 1.4. This licence is for the purposes of waste licensing under the Waste Management Act 1996 only and nothing in this licence shall be construed as negating the licensee's statutory obligations or requirements under any other enactments or regulations.
- 1.5. Where the Agency considers that a non-compliance with the Conditions of this licence has occurred, it may serve a notice on the licensee specifying:
 - a) that only those wastes as specified, if any, in the notice are to be accepted at the facility after the date set down in the notice;
 - b) that the licensee shall undertake the works stipulated in the notice, and/or otherwise comply with the requirements of the notice as set down therein, within the time-scale contained in the notice; and,
 - c) that the licensee shall carry out any other requirement specified in the notice.

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

Reason: To clarify the scope of this licence.

CONDITION 2 MANAGEMENT OF THE ACTIVITY

2.1 Environmental Management System

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

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

2.2 Schedule of Environmental Objectives and Targets

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

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

2.3 Environmental Management Programme

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

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

2.4 Corrective Action

2.4.1 Prior to the acceptance of any waste at the facility, the licensee shall establish and maintain written Corrective Action Procedures to ensure that corrective action is taken should specified requirements to this licence not be fulfilled.

2.5 Awareness and Training

2.5.1 Prior to the acceptance of any waste at the facility, the licensee shall establish and maintain Awareness and Training Procedures for identifying training needs and for providing appropriate training, for personnel whose work is related to the licensed facility. Written records of training shall be maintained.

2.6 Management Structure

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

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

2.7 Communications

2.7.1 Within six months from the date of grant of this licence, the licensee shall submit for agreement to the Agency a Communications Programme to ensure that members of the public can obtain information concerning the environmental performance of the facility at all reasonable times.

2.8 Annual Environmental Report

2.8.1 The licensee shall submit to the Agency for its agreement, within twelve months from the date of grant of this licence, and within one month of the end of the year thereafter, an Annual Environmental Report (AER).

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

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

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

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

CONDITION 3 NOTIFICATION AND RECORD KEEPING

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

- a) any emission which results in the contravention of any relevant standard, including any standard for an environmental medium, or any relevant emission limit value, prescribed under any relevant enactment;
- b) any emission which does not comply with the requirements of this licence;
- c) any trigger level specified in this licence or in the EMS which is attained or exceeded;

- d) any malfunction of any environmental control system;
 - e) any indication that contamination has, or may have, taken place;
 - f) the cessation of waste activities at the facility for a period in excess of 28 days, and their recommencement;
 - g) any occurrence with the potential for environmental pollution; and,
 - h) any emergency.
- 3.2 The written record shall include all aspects described in section (a) to (e), *Condition 10.9*
- 3.3 Unless otherwise instructed in writing by the Agency, the licensee shall:
- a) notify the Agency by telephone, and by facsimile if available, as soon as practicable and in any case not later than 10.00 am the following working day after the occurrence of any incident; and
 - b) submit the written record required by this condition to the Agency as soon as practicable and in any case within five working days after the occurrence of any incident.
- 3.4 Should any further actions be taken after the date of written notification, as a result of an incident occurring, the licensee shall forward a written report of those actions to the Agency as soon as practicable and no later than ten days after the initiation of those actions.
- 3.5 Unless otherwise agreed by the Agency, all documentation submitted to the Agency shall:
- (a) be sent to the Agency's headquarters;
 - (b) comprise one original and three copies;
 - (c) be formatted in accordance with any written instruction or guidance issued by the Agency;
 - (d) be identified by a unique code, indicate any modification or amendment, and be correctly dated to reflect any such modification or amendment;
 - (e) be submitted in accordance to the relevant reporting frequencies specified by this licence;
 - (f) be certified as accurate and representative by the licensee; and
 - (g) in the case of results of any environmental monitoring, be accompanied by a written interpretation setting out their significance.
- 3.6 Copies of all environmental monitoring data obtained by the licensee which relates to the facility shall be forwarded to the Agency at the frequencies set out in Schedule D to this licence.
- 3.7 In the event of any incident which relates to discharges to surface water, the licensee shall notify Eastern Regional Fishery Board and the Department of the Marine and Natural Resources as soon as practicable by telephone and in writing (by facsimile if available) and in any case not later than 10:00am on the following working day after such an incident.

- 3.8 Unless otherwise agreed with the Agency, all documentation required to be maintained under this licence, shall be retained by the licensee.
- 3.9 The licensee shall provide additional copies of any documentation referred to in this licence to the Agency upon written request, within the time specified in writing by the Agency.
- 3.10 The licensee shall keep the following documents at the facility office referred to in *Condition 4.5*.
- a) the current waste licence relating to the facility;
 - b) the current EMS for the facility;
 - c) the previous year's AER for the facility;
 - d) all written procedures produced by the licensee which relate to the licensed activities.
- 3.11 The licensee shall maintain a written record for each load of waste arriving at the facility. The licensee shall record the following:
- a) the name of the carrier;
 - b) the vehicle registration number;
 - c) the name of the producer(s)/collector(s) of the waste as appropriate;
 - d) a description of the waste;
 - e) the quantity of the waste, recorded in tonnes;
 - f) the name of the person checking the load; and,
 - g) where loads or wastes are removed or rejected, details of the date of occurrence, the types of waste and the facility to which they were removed.
- 3.12 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;
 - e) any incidents or spillages of leachate during its removal or transportation.
- 3.13 The licensee shall maintain a written record of all complaints relating to the operation of the activity. Each such record shall give details of the following:
- a) date and time of the complaint;
 - b) the name of the complainant;
 - c) details of the nature of the complaint;
 - d) actions taken on foot of the complaint and the results of such actions; and,
 - e) the response made to each complainant.

Reason : To provide for the notification of incidents, to update information on the activity and to provide for the keeping of records.

CONDITION 4 SITE INFRASTRUCTURE

- 4.1 The licensee shall establish all infrastructure referred to in this licence within six months of the date of grant of this licence or as instructed in writing by the Agency.
- 4.2 Site Notice Board
- 4.2.1 The licensee shall provide and maintain a notice board on the facility so that it is legible to persons outside the main entrance to the facility. The minimum dimensions of the identification board shall be 1200 mm by 750 mm.
- 4.2.2 The board shall clearly show:
- a) the name and telephone number of the facility;
 - b) the normal hours of opening;
 - c) the name, address and telephone number of the licence holder;
 - d) an emergency out of hours contact telephone number;
 - e) the name, address and telephone number of the operator of the facility;
 - f) the licence reference number;
 - g) where and when environmental monitoring information relating to the facility can be obtained.
- 4.3 Site Security
- 4.3.1 Six foot high security and stockproof fencing and gates shall be installed and maintained on the northern and eastern boundaries of the facility.
- 4.3.2 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 or as otherwise agreed with the Agency.
- 4.3.3 Gates shall be locked shut when the facility is unsupervised.
- 4.3.4 Unless otherwise agreed with the Agency, security shall include twenty-four hour patrolling of the perimeter.
- 4.4 Site Roads and Hardstanding
- 4.4.1 The facility entrance area, the access road to the Civic Waste Facility, the Civic Waste Facility area itself and the Recycling Area shall be paved and maintained to the following specification of 200mm of concrete over sub-base.
- 4.4.2 Access to the working faces shall be via roads constructed of hardcore and maintained in an appropriate condition for their use.
- 4.5 The licensee shall provide and maintain an office on the facility, at the location shown in Fig. No. D1, Existing Landfill, 30/10/97. The office shall be constructed and maintained in a manner suitable for the processing and storing of documentation.
- 4.6 The licensee shall provide and maintain a working telephone and facsimile machine in the office specified in *Condition 4.5* above.

- 4.7 Within six months of the date of grant of this licence, the licensee shall submit a proposal for a Waste Inspection Area and Waste Quarantine Area to the Agency for its agreement. The licensee shall ensure that this area 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 suitably and clearly segregated from each other.
- 4.8 The waste inspection and quarantine areas referred to in Condition 4.7 shall:
- a) be constructed with a hard impervious base graded to a longitudinal cross-sectional fall;
 - b) be contained by an impervious bund not less than 100 mm high; and,
 - c) drain only to a sump.
- 4.9 The licensee shall provide and maintain a weighbridge at the facility. Unless otherwise agreed with the Agency the location of the weighbridge shall be as shown on Fig. No. D1, Existing Landfill, 30/10/97.
- 4.10 The licensee shall establish and maintain a wheelwash and holding tank for the wheelwash effluent at the facility. Unless otherwise agreed with the Agency the location of the wheelwash shall be as shown on Fig. No. D1, Existing Landfill, 30/10/97. The wheelwash shall be inspected on a daily basis and drained as required. Accumulated silt shall be removed and disposed of at the working face. The wheelwash water shall drain only to the holding tank pending construction of a leachate holding or treatment tank.
- 4.11 The licensee shall provide and use adequate lighting during the operation of the facility in hours of darkness .
- 4.12 The licensee shall, within six months of the date of grant of this licence, submit to the Agency for its agreement, a proposal for a sewage treatment plant at the facility for the treatment of sewage arising on-site to the Agency for its agreement.
- 4.13 Fuel Storage
- 4.13.1 The licensee shall submit a proposal for the design and location of a bunded fuel storage area to the Agency for its agreement within six months of the date of grant of this licence. Fuels shall only be stored at this agreed location. Mobile tankers shall be kept in this bunded area.
- 4.13.2 All tank and drum storage areas shall be rendered impervious to the materials stored therein. In addition, 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.
- 4.13.3 All drainage from bunded areas shall be diverted for collection and safe disposal.
- 4.13.4 All inlets, outlets, vent pipes, valves and gauges must be within the bunded area.
- 4.13.5 The integrity and water tightness of all the bunds, tanks and containers and their resistance to penetration by water or other materials stored therein shall be tested and demonstrated by the licensee and shall be reported to the Agency within six months of the date of grant of this licence. This testing shall be carried out by the licensee at least once every three years thereafter and reported to the Agency on each occasion. The licensee shall also submit to the Agency for its

agreement in each case a written report on the storage of fuels on site. A written record of all integrity tests and any maintenance or remedial work arising from them shall be maintained by the licensee.

4.13.6 All tanks and containers shall be labelled to clearly indicate their contents.

4.14 Within six months of the date of grant of this licence, the licensee shall submit to the Agency for its agreement, details for the storage of fridges on site and the procedures for de-gassing of CFC's from these fridges

4.15 Specified Engineering Works

4.15.1 The licensee shall submit written proposals for all Specified Engineering Works, as defined in *Schedule E: Specified Engineering Works*, to the Agency for its agreement prior to any such works being carried out. No such works shall be carried out without the prior agreement of the Agency.

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

4.15.3 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) where relevant a drawing and sections showing the location of all samples and tests carried out;
- e) daily records sheets/diary;
- f) name(s) of contractor(s)/individual(s) responsible for undertaking the engineering works;
- g) name(s) of individual(s) responsible for supervision of works and for quality assurance validation of works;
- h) records of any problems and the remedial works carried out; and
- i) any other information requested in writing by the Agency.

4.16 Landfill Lining:

4.16.1 All future cells for the disposal of nickel hydroxide sludges shall comply with the design requirements for landfills for hazardous waste as specified in the Landfill Directive.

4.17 Leachate Management

4.17.1 Within six months of the date of grant of this licence, the licensee shall submit proposals to the Agency for agreement for leachate management at the facility for the protection of surface waters and groundwater including timescales and objectives and targets relating to discharges. The proposal shall include

measures for the abstraction of leachate from the waste and its treatment either at the facility or at a suitable treatment works.

4.18 Landfill Gas Management:

- 4.18.1 Within six months of the date of grant of this licence, a proposal for the utilisation of landfill gas as an energy resource for that area of the facility not currently included in the utilisation programme, shall be submitted to the Agency for its agreement.
- 4.18.2 Within six months of the date of grant of this licence, a proposal for the active collection and flaring of landfill gas shall be submitted to the Agency for its agreement
- 4.18.3 The licensee shall maintain all gas wells, pipework, valves, pumps, flares and other infrastructure that form part of the landfill gas management scheme in a safe and fully operational manner.

4.19 Capping

- 4.19.1 The final cap shall consist of 150 - 200mm thick granular drainage and gas collection layer, an 800mm thick barrier clay layer with a permeability of 10^{-9} m/s or equivalent, a drainage layer with a permeability equal or greater than 10^{-4} m/s, all overlain by a minimum of 700mm thick of subsoil and 300mm thick of topsoil.
- 4.19.2 Within six months of the date of grant of this licence, a proposal for temporary capping shall be submitted to the Agency for its agreement.

4.20 Construction and Demolition Waste Recovery Area.

- 4.20.1 The area shall be located as shown on *Drawing No. env 9/60, C/D RECYCLING AREA, May '98* unless otherwise agreed with the Agency.
- 4.20.2 Within three months of the date of grant of this licence, the licensee shall submit a proposal for the design of the area for the period of operation until the landfill activities cease. This proposal shall include any hardstandings required, appropriate bunding to provide visual and noise screening, and locations of stockpiles.

Reason: To provide for the protection of the environment.

CONDITION 5 WASTE MANAGEMENT

- 5.1. No liquid wastes, animal wastes, Construction and Demolition wastes or hazardous waste, other than those listed in Schedule H, shall be disposed of at the facility.
- 5.2. Subject to *Condition 5.1* only those Waste Types and quantities listed in *Schedule H* shall be disposed of at the facility unless the prior agreement of the Agency has been obtained.
- 5.3. Nickel hydroxide sludge
 - 5.3.1. Nickel hydroxide sludge shall only be deposited in specially constructed cells in the area marked "Lined Area" on Drawing No. *Fig. No. D1, "Existing Landfill", 30/10/97.*
 - 5.3.2. Within six months of the date of grant of this licence, the licensee shall submit a proposal concerning the acceptance and handling of the nickel hydroxide sludge to the Agency for its agreement.
 - 5.3.3. Within six months of the date of grant of this licence, the licensee shall submit a proposal concerning the capping, restoration and monitoring of this area to the Agency for its agreement.
 - 5.3.4. Within nine months of the date of grant of this licence, the licensee shall submit a proposal concerning the cessation of disposal of nickel hydroxide sludge at the facility to the Agency for its agreement.
 - 5.3.5. Within six months of the date of grant of this licence, the licensee shall submit a proposal regarding procedures for the removal of liquid from these cells to the Agency for its agreement. The proposal shall include ; (i) procedures for monitoring the liquid level, (ii) for informing GE Superabrasives of the need for removal, (iii) for actual removal of the liquid, and (iv) for the treatment of such liquid once removed.
 - 5.3.6. The licensee shall ensure that any liquids or leachates arising in the cells used for the disposal of the nickel hydroxide sludges shall be removed by GE Abrasives and appropriately treated. The leachate levels in the cells shall not be allowed to rise greater than 0.5m over the liner.
- 5.4. Construction & Demolition Waste Recovery
 - 5.4.1. Within six months of the date of grant of this licence, the licensee shall submit a proposal concerning the acceptance, handling and processing of the Construction and Demolition waste for recovery.
 - 5.4.2. The Construction and Demolition Waste recovery activity shall continue for a period not exceeding twelve months after cessation of disposal activities at the facility.
 - 5.4.3. Within twelve months of the date of grant of this licence, the licensee shall submit proposals concerning the relocation of the Construction and Demolition Waste Recovery area and the cessation of the activity at the facility to the Agency for its agreement.
- 5.5. Unless otherwise agreed with the Agency and subject to Conditions 5.3 and 5.4, Waste Acceptance Procedures shall be carried out in accordance with "Section C Waste Reception and Handling" of the Environmental Management Plan, October 1997.

- 5.5.1. Within six months of the date of grant of this licence, the licensee shall submit a proposal concerning the acceptance, handling and processing of wastes for deep burial. The proposal shall include provisions to ensure that excavations of waste to allow deep burial do not cause odour or other nuisances.
- 5.6. The removal of wastes from the facility, for recovery or disposal purposes, or the removal of materials from the Construction and Demolition Recovery Area, shall only be by organisations who have registered with the licensee and whose registration is agreed in advance with the Agency.
- 5.7. Waste, other than that Construction and Demolition waste for recovery, referred to in Condition 5.4 above, shall not be accepted at the facility after 31st December 2002 or on reaching the deposit figure of 2.4 million tonnes, whichever date is soonest. The quantity of wastes to be accepted at the facility shall not exceed 1,200,000 tonnes per annum, unless otherwise agreed in advance with the Agency.
- 5.8. Wastes shall not be deposited in any cell or part of the landfill without the prior agreement of the Agency.
- 5.9. Scavenging shall not be permitted at the facility.
- 5.10. Waste shall only be accepted for disposal at the facility between the hours of 08.00 to 18.30 Monday to Friday inclusive with the exclusion of Bank Holidays unless otherwise agreed in advance with the Agency. The Construction and Demolition Recovery Area shall only be operational during the hours of 08.00 to 18.00 Monday to Friday inclusive with the exclusion of Bank Holidays. Wastes shall be only accepted at the Civic Waste Facility between the hours of 08.00 to 18.30 Monday to Friday inclusive and Saturdays 09.00 to 18.00 unless otherwise agreed in advance with the Agency.
- 5.11. 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;
 - b) the working face of the landfill shall be no more than 2.5 metres in height after compaction, no more than 50 metres wide and have a slope no greater than 1 in 3; and,
 - c) all waste deposited at the working face shall be compacted as soon as is practicable and at any rate prior to the end of the working day.
 - d) disposal of asbestos based construction materials, which shall be double-bagged, shall be into prepared bays or trenches. Deposited wastes shall be covered immediately with at least 250mm of suitable material. At the end of the day, the waste shall be covered with a minimum of 500mm of suitable cover material.
- 5.12. The working face of the operational cell shall, at the end of each day, be covered with material suitable to minimise any nuisances occurring. 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.
- 5.13. A steel wheeled compactor or other such vehicle as agreed with the Agency shall be used for compacting all waste other than that used for restoration or construction purposes.
- 5.14. Within nine months of the date of grant of this licence, the licensee shall submit a proposal concerning the recovery and composting of wastes delivered to the facility for disposal to the Agency for its agreement. These wastes shall include, as a minimum,

sewage sludge, commercial waste, CFCs from refrigerators, green waste, wood waste and glass.

5.15. Civic Waste Facility.

5.15.1. Within six months of the date of grant of this licence, the licensee shall submit a proposal regarding the operation of the Civic Waste Facility and the wastes collected there to the Agency for its agreement.

5.16. In order to prevent the formation of voids, all hollow objects and large articles deposited on the site shall be crushed, broken up, flattened or otherwise treated.

5.17. Wastes once deposited and covered shall not be excavated, disturbed or otherwise picked over without prior agreement of the Agency.

5.18. No smoking shall be allowed on the facility other than in the Office/Canteen as shown on Drawing No. Fig. No. D1, "Existing Landfill", 30/10/97.

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

CONDITION 6 ENVIRONMENTAL NUISANCES

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

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

6.3. The measures and infrastructure described in Attachment F.5 shall be applied to control litter at the facility.

6.4. All loose litter accumulated within the facility and its environs, excluding that which is deposited on the working face, shall be removed and appropriately disposed of on a daily basis.

6.5. Any waste placed on or in the vicinity of the facility, other than in accordance with the requirements of this licence, shall be removed by the licensee immediately and in any event by 10:00am of the next working day, after such waste is discovered. Such waste shall be disposed of at an appropriate facility.

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

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

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

6.9. The licensee shall ensure that birds, vermin, flies, dust and litter 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.

- 6.10. Within three months of the date of grant of this licence, the licensee shall submit a proposal to the Agency for its agreement regarding bird control at the facility.
- 6.11. Prior to exiting the facility, all waste vehicles shall use the wheelwash.

Reason: To provide for the control of nuisance.

CONDITION 7 EMISSIONS AND ENVIRONMENTAL IMPACTS

- 7.1. No specified emission from the facility shall exceed the emission limit values set out in *Schedule G: Emissions* of this licence. There shall be no other emissions of environmental significance.
- 7.2. All treatment/abatement and emission control equipment shall be calibrated and maintained, in accordance with the instructions issued by the manufacturer/supplier or installer. Written records of the calibrations and maintenance shall be made and kept by the licensee.
- 7.3. The licensee shall ensure that the activities shall be carried out in a manner such that emissions do not result in significant impairment of, or significant interference with the environment beyond the facility boundary.
- 7.4. The following are the trigger levels for landfill gas emissions from the facility measured in any service on or immediately adjacent to the facility and/or at any other point located outside the body of the waste:
- a) Methane, greater than or equal to 1.0% v/v; and
 - b) Carbon dioxide, greater than or equal to 1.5% v/v.
- 7.5. Within six months of the date of grant of this licence, the licensee shall submit a proposal concerning the collection, storage, treatment, monitoring and discharge of all surface water discharging from the facility.
- 7.6. 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 :-
- 7.6.1. In the case of combustion gases:
Temperature 273K, Pressure 101.3 kPa, dry gas; 5% oxygen for gas fuels.

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

CONDITION 8 RESTORATION AND AFTERCARE

- 8.1 Within nine months of the date of grant of this licence, the licensee shall submit a proposal concerning Restoration and Aftercare Plans for the facility to the Agency for its approval. The proposal shall include recommendations from Duchas, The Heritage Service and the Liaison Committee consisting of council officials, public representatives and local people.
- 8.2 The final profile of the facility shall be as shown in drawings; Fig. G.1 Short Term Landscape Plan for Existing Landfill 30/10/97 and Fig. No. G.2 "Cross Section Through Landfill Showing Proposed Final Level".
- 8.3 Within six months of the date of grant of this licence, the licensee shall submit proposals for landfilling and restoration to achieve the final contours defined in Condition 8.2 to the Agency for its agreement.
- 8.4 Completed areas of the landfill shall be profiled so that no depressions exist in which water may accumulate. Any depressions arising after profiling shall be rectified by the emplacement of suitable capping or restoration materials.
- 8.5 No material or object that is incompatible with the proposed restoration of the site shall be present within one metre of the final soil surface levels. No asbestos waste shall be present within 2.5 metres of the final surface levels.
- 8.6 Where tree planting is proposed to be carried out above waste-filled areas, a synthetic barrier shall be used to augment the clay cap. Topsoil and subsoil depths shall be a minimum of 1m unless otherwise agreed in advance with the Agency.

Reason: To provide for the restoration and aftercare of the facility.

CONDITION 9 ENVIRONMENTAL MONITORING

- 9.1 The licensee shall carry out such monitoring and at such locations and frequencies as set out in *Environmental Management Plan, Section E, subject to Schedule F: Monitoring* and as specified in the Conditions of this licence.
- 9.2 Within six months from the date of grant of this licence, the licensee shall submit to the Agency for its agreement, monitoring proposals to detect off-site migration of landfill gas with particular regard to the possible increase in migration following the placement of the capping layer.
- 9.3 Within three months from the date of grant of this licence, the licensee shall submit to the Agency for its agreement details of the permanent gas monitoring system to be installed in the site offices.
- 9.4 Within six months of the date of grant of this licence, proposals for the inclusion of all private wells, subject to the agreement of the well owners, within 250m of the facility, in the monitoring programme set out in *Schedule F* shall be submitted to the Agency for its agreement.

- 9.5 Within six months from the date of grant of this licence, the licensee shall submit a proposal on monitoring of leachate levels within the filled waste to the Agency for its agreement. The report shall include a drawing showing all leachate monitoring locations. The drawing shall also contain a unique reference number and a twelve figure national grid reference for each monitoring point.
- 9.6 Within six months of the date of grant of this licence, the licensee shall submit a proposal on monitoring of Rogerstown Estuary to the Agency for its agreement. The proposal shall include ecological monitoring in addition to monitoring of sediment and water quality. Particular consideration shall be given to the monitoring of the areas to the north-east of the facility and to the transition area between the inner and outer estuary.
- 9.7 Within six months of the date of grant of this licence, the licensee shall submit a proposal on the annual monitoring of birdlife using Rogerstown Estuary to the Agency for its agreement. The proposal shall be produced in consultation with Duchas, The Heritage Service.
- 9.8 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 and provide a report on that assessment to the Agency.
- 9.9 Within six months of the date of grant of this licence, the licensee shall submit a proposal concerning the monitoring of emissions from landfill gas utilisation and flaring plant to the Agency for its agreement.
- 9.10 The licensee shall provide safe and permanent access to all on-site sampling and monitoring points and off-site points as required by the Agency.
- 9.11 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 or discharge or environmental parameter.
- 9.12 The licensee shall amend the frequency, locations, methods and scope of monitoring, sampling, analyses and investigations 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.
- 9.13 Unless otherwise agreed with the Agency, a written record shall be kept of the names, qualifications and a summary of relevant experience of all persons who carry out all sampling and monitoring as required by this licence and who carry out the interpretation of the results of such sampling and monitoring.
- 9.14 The licensee shall maintain all sampling and monitoring points so that they may be used for representative sampling and monitoring.
- 9.15 A topographical survey including the void space shall be carried out within three months of the date of grant of this licence. It shall be repeated annually thereafter. The survey shall be in accordance with any written instructions issued by the Agency.

Reason: To ensure compliance with the requirements of other conditions of this licence by provision of a satisfactory system of measurement and monitoring of emissions.

CONDITION 10 CONTINGENCY ARRANGEMENTS

- 10.1 The licensee shall, within nine 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.
- 10.2 Contingency Arrangements for the facility shall be as detailed in Attachment K.1 "Contingency Arrangements" of the application.
- 10.3 The licensee shall have in storage an adequate supply of containment booms and/or suitable absorbent material to contain and absorb any spillage at the facility. Once used the absorbent material shall be disposed of at an appropriate facility.
- 10.4 All significant spillages occurring at the facility shall be treated as an emergency and immediately cleaned up and dealt with so as to alleviate their effects.
- 10.5 No waste shall be burnt within the boundaries of the facility. A fire at the facility shall be treated as an emergency. Immediate action shall be taken to extinguish it and the appropriate authorities notified.
- 10.6 In the event that monitoring of the estuary or of the birdlife using the estuary indicates that the facility is having a significant adverse effect on the quality of the estuary, this shall be treated as an incident.
- 10.7 In the event that monitoring of the slide slopes of the facility indicate that there may be a risk of slope failure, this will be treated as an incident and a proposal for remediation action submitted to the Agency for its agreement within one month of the date of the monitoring being carried out.
- 10.8 In the event that monitoring of local wells (identified in *Condition 9*) indicates that the facility is having a significant adverse effect on the quantity and/or quality of the water supply, this shall be treated as an incident. The licensee shall submit to the Agency for its agreement and within a time specified in writing by the Agency, written proposals for the provision of an alternative supply of water to those affected.
- 10.9 Unless otherwise notified in writing by the Agency, in the case of repeat incidents, in the event that any monitoring, sampling or observations indicate that an incident has, or may have, taken place, the licensee shall immediately:
 - a) identify the date, time and place of the incident;
 - b) carry out an immediate investigation to identify the nature, source and cause of the incident and any emission;
 - c) isolate the source of the emission;
 - d) evaluate the environmental pollution, if any, caused by the incident;
 - e) identify and execute measures to minimise the emissions/malfunction and the effects thereof;
 - f) provide a proposal to the Agency for its agreement within one month to:
 - i) identify and put in place measures to avoid reoccurrence of the incident; and
 - ii) identify and put in place any other appropriate remedial action.

Reason: To provide for the protection of the environment.

CONDITION 11 CHARGES AND FINANCIAL PROVISIONS

11.1 Agency Charges

11.1.1 The licensee shall pay to the Agency an annual contribution of £ 17,269 or such sum as the Agency from time to time determines, towards the cost of monitoring the activity or otherwise in performing any functions in relation to the activity, as the Agency considers necessary for the performance of its functions under the Waste Management Act, 1996. The licensee shall in 2000 and subsequent years, not later than January 31 of each year, pay to the Agency this amount updated in accordance with changes in the Consumer Price Index from the date of the licence to the renewal date. The updated amount shall be notified to the licensee by the Agency. For 1999 the licensee shall pay a pro rata amount from the date of this licence to 31st December 1999. This amount shall be paid to the Agency within one month of the date of grant of this licence.

11.1.2 In the event that the frequency or extent of monitoring or other functions carried out by the Agency needs to be increased the licensee shall contribute such sums as determined by the Agency to defraying its costs.

11.2 Financial Provision for Closure, Restoration and Aftercare

11.2.1 The licensee shall from a date to be set by the Agency establish and maintain a fund, or other form of approved security, that is adequate to assure the Agency that the licensee is at all times financially capable of implementing the Decommissioning and Aftercare Plan required by Condition 8.1. The type of fund and means of its release/recovery shall be agreed by the Agency prior to its establishment.

11.2.2 The fund shall be maintained in an amount always sufficient to underwrite the current Decommissioning and Aftercare Plan.

11.2.3 The licensee shall revise the cost of decommission, restoration and aftercare annually and any details of the necessary adjustments to the fund must, within two weeks of the revision, be forwarded to the Agency for agreement. Any adjustment agreed by the Agency shall be effected within four weeks of said written agreement.

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

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

Where:

Cost = Revised decommission, restoration and aftercare cost

ECOST = Existing decommission restoration and aftercare cost

WPI = Appropriate Wholesale Price Index [Capital Goods, Building & Construction (i.e. Materials & Wages) Index], as published by

the Central Statistics Office, for the year since last closure calculation/revision.

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

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

SCHEDULE A :Waste Activities

Waste Management Act, 1996: Third Schedule ^{Note 1}	
Class 1.	Deposit on, in or under land (including landfill): This activity is limited to landfilling of waste in the existing landfill
Class 2.	Land treatment, including biodegradation of liquid or sludge discards in soils: This activity is limited to disposal of sludge
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 disposal of nickel hydroxide sludges
Class 10.	Release of waste into a water body (including a seabed insertion): This activity is limited to discharge of leachate and runoff to estuary water
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 mixing of sludge with soil
Class 12.	Repackaging prior to submission to any activity referred to in a preceding paragraph of this Schedule. This activity is limited to disposal activities in the Civic Waste 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 was produced. This activity is limited to storage of wastes deposited in the Civic Waste Facility prior to disposal

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

Waste Management Act, 1996: Fourth Schedule ^{Note 1}	
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 composting
Class 3.	Recycling or reclamation of metals and metal compounds: This activity is limited to activities associated with the recovery of Construction

Waste Management Act, 1996: Fourth Schedule ^{Note 1}

and Demolition waste

- Class 4. **Recycling or reclamation of other inorganic materials:**
This activity is limited to activities associated with the recovery of Construction and Demolition waste
- Class 9. **Use of any waste principally as a fuel or other means to generate energy:**
This activity is limited to utilisation of landfill gas
- Class 10. **The treatment of any waste on land with a consequential benefit for an agricultural activity or ecological system:**
This activity is limited to spreading of compost, treated sludge or other wastes on the landfill as part of restoration
- Class 11. **Use of waste obtained from any activity referred to in a preceding paragraph of this Schedule:**
This activity is limited to activities in the Civic Waste 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 activities in the Civic Waste Facility

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

SCHEDULE B :Content of the Environmental Management Programme

Environmental Management Programme

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

Timescale for achieving the objectives and targets listed in the Schedule of Objectives and Targets

Designation of Responsibility for Achieving Targets and Objectives

Other items specified in writing by the Agency

SCHEDULE C :Content of the Annual Environmental Report

Annual Environmental Report Content ^{NOTE 1}

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

Resource and energy consumption summary.

Proposed development of the site and timescale of such development.

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

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

Verification of the grid references provided to the Agency for all monitoring and emission points

Report on restoration of completed cells/ phases.

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

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

Estimated annual and cumulative quantity of indirect emissions to groundwater.

Monthly water balance calculation and interpretation.

Meteorological Report.

Schedule of Environmental Objectives and Targets for the forthcoming year.

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

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

Tank, pipeline and bund testing and inspection report.

Reported incidents and Complaints summaries.

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

Any other items specified by the Agency.

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

SCHEDULE D :Recording and Reporting to the Agency

Table D.1 Recurring Reports

Report	Reporting Frequency ^{Note1}	Report Submission Date
Environmental Management System Updates	Annually	One month after the end of the year reported on.
Annual Environment Report (AER)	Annually	Twelve months from the date of grant of licence and one month after the end of each year thereafter.
Record of incidents	As they occur	Within five days of the incident.
Bund, tank and container integrity assessment	Every three years	Six months from the date of grant of licence and one month after end of the three year period being reported on.
Specified Engineering Works reports	As they arise	Prior to the works commencing.
Monitoring of landfill gas	Quarterly	Ten days after end of the quarter being reported on.
Monitoring of Surface Water Quality	Quarterly	Ten days after end of the quarter being reported on.
Monitoring of Groundwater Quality	Quarterly	Ten days after end of the quarter being reported on.
Monitoring of Leachate	Quarterly	Ten days after end of the quarter being reported on.
Meteorological Monitoring	Annually	One month after end of the year being reported on.
Dust Monitoring	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.

Note 1: Unless altered at the request of the Agency

Table D.2 Once-off Reports

Report and Contents	Condition Number	Report Submission Date (Number of months within which to submit, from date of granting of licence, unless otherwise specified)
Environmental Management System		
(i) EMS Proposals	2.1.1	12
(ii) Schedule of Objectives and Targets	2.2.1	9
(iii) Environmental Management Programme	2.3.1	9
(iv) Management Structure	2.6.1	3
(v) Communication Programme	2.7.1	6
(vi) Annual Environmental Report	2.8.1	12
Infrastructure		
(i) Proposals for waste inspection and quarantine areas	4.7	6
(ii) Sewage treatment plant	4.12	6
(iii) Bunded fuel storage area	4.13.1	6
(iv) CFC recovery	4.14	6
(v) Leachate management	4.17	6
(vi) Proposals for landfill gas utilisation	4.18.1	6
(vii) Active Landfill Gas Control System: Flare	4.18.2	6
(viii) Temporary Capping	4.19.2	6
(ix) Construction and Demolition Waste Recovery Area	4.20.2	3

Waste Acceptance Procedures		
(i) Waste Acceptance Procedures	5.3.2	6
(ii) Capping of nickel hydroxide sludge disposal area	5.3.3	6
(iii) Cessation of disposal of nickel hydroxide sludge	5.3.4	9
(iv) Removal of liquid from cells	5.3.5	6
(v) Management of C&D wastes	5.4.1	6
(vi) Relocation of C&D Recovery site	5.4.3	12
(vii) CFC Recovery	5.14	
(viii) Civic Waste Facility operation	5.15.1	6
Environmental Nuisances		
(i) Bird Control	6.10	3
Emissions		
(i) Surface Water discharge	7.5	6
Restoration and Aftercare		
(i) Restoration and Aftercare Plans	8.1	9
(ii) Achievement of final contours	8.3	6
Environmental Monitoring		
(i) Monitoring proposals to detect off-site migration of landfill gas	9.2	6
(ii) A proposal for a permanent gas monitoring system to be installed in the site office.	9.3	3
(iii) A proposal to include all private wells within 500m of the facility in the monitoring programme	9.4	6
(iv) A proposal for the monitoring of leachate levels within the waste	9.5	6
(v) Monitoring of the estuary	9.6	6
(vi) Monitoring of birdlife.	9.7	6
(vii) Stability assessment	9.8	6
(viii) Monitoring of landfill gas emissions	9.9	6
Contingency Arrangements		
(i) Emergency Response Procedures	10.1	9
Charges & Financial Provisions		
(i) Proposal for Financial Provision	11.2	9

SCHEDULE E : Specified Engineering Works

Specified Engineering Works
Development of Phases and future Cells of the facility including preparatory works and lining.
Landfill cap installation, including temporary and intermediate capping, installation and all other containment works (including any containment works relating to leachate control).
Fencing and site security works.
Bunding of fuel and oil storage areas.
Installation of landfill gas management and monitoring systems.
Installation of leachate management, detection, storage, treatment, monitoring and control systems.
Installation of alternative drinking water supplies.

Installation of groundwater control and/or monitoring systems.

Surface water management works.

Restoration and Aftercare Works.

Any other works notified in writing by the Agency.

SCHEDULE F : Monitoring

Monitoring to be carried out as specified below.

F.1 Landfill Gas

Landfill gas monitoring locations shall be agreed with the Agency within three months of the date of grant of this licence.

Table F.1.2 Landfill Gas Monitoring Frequency and Technique

Parameter	Monitoring Frequency		Analysis Method ^{Note1} /Technique ^{Note2}
	Gas Boreholes/ Vents/Wells	Site Office	
Methane (CH ₄) % v/v	Monthly	Weekly	Infrared analyser/flame ionisation detector
Carbon dioxide (CO ₂)%v/v	Monthly	Weekly	Infrared analyser/ flame ionisation detector
Oxygen(O ₂) %v/v	Monthly	Weekly	Electrochemical cell
Atmospheric Pressure	Monthly	Weekly	Standard
Temperature	Monthly	Weekly	Standard

Note1: All monitoring equipment used should be intrinsically safe.

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

F.2 Dust

Dust monitoring locations shall be agreed with the Agency within three months of the date of grant of this licence..

Table F.2.1 Dust Monitoring Frequency and Technique

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

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

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

F.3 Noise

Noise monitoring locations shall be those as set out in Table F.3.1 and shown on Fig 1 Measurement Locations of Report ref 1005571 of the application. The grid references shall be agreed with the Agency within three months of the date of grant of the licence.

Table F.3.1 Noise Monitoring Locations

STATION	EASTING	NORTHING
NSL1		
NSL2		
NSL3		
B1		
B2		
B4		
B5		
B6		
B7		

Table F.3.2 Noise Monitoring Frequency and Technique

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

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

F.4 Surface Water, Groundwater and Leachate

Surface water monitoring locations shall be those as set out in Table F.4.1 and shown on Fig. A. Location of Monitoring Points (index map), and as agreed with the Agency under the conditions of this licence. The grid references shall be agreed with the Agency within three months of the date of grant of the licence.

Table F.4.1 Surface Water Monitoring Locations

STATION	EASTING	NORTHING
S3		
S4		
S7		
S20		
S21		
S22		
S23		

Groundwater monitoring locations shall be those as set out in Table F.4.2 The grid references shall be agreed with the Agency within three months of the date of grant of the licence.

Table F.4.2 Groundwater Monitoring Locations

STATION	EASTING	NORTHING
MB2		
MB3		
MB4a		
MB11		
MB20		
MB22		
MB27		
MB30		
MB31		
MB32		
MB33		
MB35		
MB37		
MB37		
MB37		

Leachate monitoring locations shall comprise two boreholes which shall be agreed with the Agency within three months of the date of grant of the licence.

Table F.4.3 Water and Leachate - Parameters /Frequency

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

Note 1: All the analysis shall be carried out by a competent laboratory using standard and internationally accepted procedures. The testing laboratory and the testing procedures shall be agreed with the Agency in advance.

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

- Note 3: Samples screened for the presence of organic compounds using Gas Chromatography / Mass Spectrometry (GC/MS) or other appropriate techniques and using the list I/II Substances from EU Directive 76/464/EEC and 80/68/EEC as a guideline. Recommended analytical techniques include: volatiles (US Environmental Protection Agency method 524 or equivalent), semi-volatiles (US Environmental Protection Agency method 525 or equivalent, and pesticides (US Environmental Protection Agency method 608 or equivalent). In cases where large quantities of harbour dredgings have been accepted at the site it is recommended to analyse for organotin compounds. Where there is reason to suspect organophosphorous contamination it is recommended to also scan for these compounds.
- Note 4: If there is evidence of bacterial contamination, the analysis at up gradient and downgradient monitoring points should include enumeration of total bacteria at 22°C and 37°C and faecal streptococci.
- Note 5: Only to be analysed in instances of on-site treatment of leachate.

F.5 Meteorological Monitoring

Table F.5.1 Meteorological Monitoring:

Data to be obtained from at a location to be agreed with the Agency within three months of the date of grant of this licence.

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

F.6 Landfill Gas Combustion Plant

Monitoring to be obtained at locations to be agreed with the Agency within three months of the date of grant of this licence.

Parameter	Monitoring Frequency	Analysis Method ^{Note1} /Technique ^{Note2}
Inlet		
Methane (CH ₄) % v/v	Weekly	Infrared analyser/flame ionisation detector
Carbon dioxide (CO ₂)%v/v	Weekly	Infrared analyser/ flame ionisation detector
Oxygen (O ₂) %v/v	Weekly	Infrared analyser
Outlet		
Volumetric Flow rate	Biannually	Pitot Tube Method
SO ₂	Biannually	Flue gas analyser
NO _x	Biannually	Flue gas analyser
CO	Continuous	Flue gas analyser
Particulates	Annually	Isokinetic/Gravimetric
TA Luft Class I, II, III organics	Annually	Adsorption/Desorption / GC /GCMS ^(Note 3)
Hydrochloric acid	Annually	Impinger / Ion Chromatography
Hydrogen fluoride	Annually	Impinger / Ion Chromatography

Note1: All monitoring equipment used should be intrinsically safe.

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

Note 3: Test methods should be capable of detecting acetonitrile, dichloromethane, tetrachlorethylene and vinyl chloride as a minimum.

SCHEDULE G :Emission Limits

G.1 Noise Emissions: (Measured at the monitoring points indicated in Table F.3.1).

Day dB(A) L _{Aeq} (30 minutes)	Night dB(A) L _{Aeq} (30 minutes)
55	45

G.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

G.3 Emission Limits Values for Landfill Gas Utilisation Plant

Emission Point reference nos: (to be agreed with the Agency)

Location: Landfill Gas Combustion Plant and flarestacks

Volume to be emitted:3000m³/hr

Minimum discharge height:5m

Parameter	Emission Limit Value
Nitrogen oxides as (NO ₂)	500 mg/m ³
CO	650 mg/m ³
Particulates	130 mg/m ³
TA Luft Organics Class I ^(Note 1)	20 mg/m ³ (at mass flows > 0.1 kg/hr)
TA Luft Organics Class II ^(Note 1)	100 mg/m ³ (at mass flows > 2 kg/hr)
TA Luft Organics Class III ^(Note 1)	150 mg/m ³ (at mass flows > 3kg/hr)
Hydrogen Chloride	50 mg/m ³ (at mass flows > 0.3 kg/h)
Hydrogen Fluoride	5 mg/m ³ (at mass flows > 0.05 kg/h)

Note 1: In addition to the above individual limits, the sum of the concentrations of Class I, II and III shall not exceed the Class III limits.

G.4 Dust Deposition Limits: (Measured at the monitoring points indicated in Table F.2.1).

Level (mg/m ² /day) ^{Note 1}
350

Note 1: 30 day composite sample with the results expressed as mg/m² /day.

SCHEDULE H :Waste Types

WASTE TYPE	QUANTITY PER ANNUM
Household	192,000
Commercial	234,000
Sewage Sludge	12,700
Industrial Non-hazardous Sludges	12,000
Industrial Non-hazardous Solids	12,000
Dead dogs from the Fingal County Council pound	To be agreed with the Agency
Hazardous, nickel hydroxide sludges from GE Superbrasives	To be agreed with the Agency

Given by the Agency on the 22nd day of September 1999

Signed on behalf of the said Agency
on the 22nd day of September 1999

B. Sheehan

Authorised Person