

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

WASTE LICENCE
PROPOSED DECISION

Waste Licence	88-1
Register Number:	
Applicant:	Paul Joyce
Location of Facility:	Corbally, Blessington Road, Tallaght, Co. Dublin

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INTRODUCTION

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

This licence relates to the development and operation of an inert waste landfill for the acceptance of construction and demolition wastes and also the provision of facilities for the segregation of components of such wastes for the purpose of reuse and recovery.

The licence limits the quantity of waste to be accepted at the facility to 100,000 tonnes per annum. Only inert waste which satisfies the requirements of Schedule A of the licence may be deposited at the facility. Condition 5.6.2 of the licence also sets out recovery targets for wastes accepted at the facility, which are in line with the government policy document “*Changing Ours Ways*”, 1998.

The facility comprises an area of approximately 29 hectares, of which in the order of 12 hectares is to be landfilled in Phases 1 & 2. No waste is to be deposited in Phases 3 & 4. The licence sets out the requirements for restoration and aftercare of the facility, which incorporates the proposal to return the site to agricultural use. The final contours of the facility are also controlled by conditions of the licence.

The licensee must manage and operate the facility to ensure that the activities do not cause environmental pollution. The licensee is required to carry out regular environmental monitoring and submit all monitoring results, and reports on the operation and management of the facility, to the Agency. The licensee must also provide for the public to have access to information on the environmental performance of the facility, at all reasonable times.

DECISION & REASONS FOR THE DECISION

The Environmental Protection Agency (the Agency) is satisfied, on the basis of the information available, that the waste activity, or activities, licensed hereunder will comply with 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 reports of its inspector.

Part I Activities Licensed

In pursuance of the powers conferred on it by the Waste Management Act, 1996, the Agency proposes, under Section 40(1) of the said Act to grant this Waste Licence to Paul Joyce to carry on the waste activities listed below at Corbally, Blessington Road, Tallaght, Co. Dublin 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 inert waste comprising of topsoil, subsoil, clay, stone, rock and slate, pottery and china, brickwork and natural sand.
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Licensed Waste Recovery Activities, in accordance with the Fourth Schedule of the Waste Management Act 1996

Class 4.	Recycling or reclamation of other inorganic materials: This activity is limited to the segregation and/or crushing of concrete or brick material for recovery on and off site. On site use will be in road construction and off site use will be in the construction industry.
Class 10.	The treatment of any waste on land with a consequential benefit for an agricultural activity or ecological system: This activity is limited to the use of subsoil and topsoil at the facility for capping and restoration.

INTERPRETATION

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

Adequate lighting	20 lux measured at ground level.
Agreement	Agreement in writing.
Annually	At approximately twelve monthly intervals.
Attachment	Any reference to Attachments in this licence refers to attachments submitted as part of the waste licence application.
Application	The application by the licensee for this waste licence.
Appropriate facility	A waste management facility, duly authorised under relevant law and technically suitable.
Biodegradable waste	Any waste that is capable of undergoing anaerobic or aerobic decomposition, such as food, garden waste, sewage sludge, paper and paperboard.
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	Inert materials the use of which has been agreed with the Agency.
Daily Cover	Is the term used to describe material spread (about 150mm if soil cover is used) over deposited waste at the end of each day. 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	8.00 a.m. to 10.00 p.m.
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: <i>Emission Limits</i> 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.
Hours of Waste Acceptance	The hours during which the facility is authorised to accept waste.
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.
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°C and atmospheric pressure.
Licence	A Waste Licence issued in accordance with the Act.
Licensee	Paul Joyce.
List I/II Organics	Substances classified pursuant to EC Directives 76/464/EEC and 80/68/EEC.
Liquid Waste	Any waste in liquid form and containing less than 2% dry matter. Any waste tankered to the facility.
Maintain	Keep in a fit state, including such regular inspection, servicing and repair as may be necessary to adequately perform its function.
Mobile Plant	Self-propelled machinery used for the emplacement of wastes or for the construction of specified engineering works.
Monthly	A minimum of 12 times per year, at approximately monthly intervals.
Night-time	10.00 p.m. to 8.00 a.m.
Recyclable Materials	Those waste types, such as concrete bricks, 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.
Specified Emissions	Those emissions listed in Schedule C: <i>Emission Limits</i> of this licence.
Specified	Those engineering works listed in Schedule B: <i>Specified Engineering Works</i>

Engineering Works	of this licence.
Trigger Level	A parameter value specified in the licence, the achievement or exceedance of which requires certain actions to be taken by the licensee.
EPA Working Day	Refers to the following hours; 9.00 a.m. to 5.30 p.m. Monday to Friday inclusive.
Working Face	The area of the site in which waste other than cover material or material for the purposes of the construction of specified engineering works is being deposited.

PART II CONDITIONS

CONDITION 1 SCOPE OF THE LICENCE

- 1.1. Waste activities at the facility shall be restricted to those listed and described in Part I: *Activities Licensed* and authorised by this licence.
- 1.2. For the purposes of this licence, the facility is the area of land outlined in red on Drawing No. B.1.3 Rev. A - 1:2500 Plan of Site of the application. Any reference in this licence to “facility” shall mean the area thus outlined in red.
- 1.3. This licence is for the purposes of waste licensing under the Waste Management Act 1996 only and nothing in this licence shall be construed as negating the licensee’s statutory obligations or requirements under any other enactments or regulations.
- 1.4. Inert waste only shall be accepted to be recovered or disposed of at the facility subject to the maximum quantities and other constraints listed in Schedule A: *Waste Acceptance* of this licence. Waste shall only be considered inert if it complies with the criteria established in Schedule A: *Waste Acceptance* of this licence.
- 1.5. No hazardous wastes or liquid wastes shall be disposed of at the facility
- 1.6. Waste Acceptance Hours and Hours of Operation
 - 1.6.1. Landfill
 - 1.6.1.1. Waste shall only be accepted at the facility between the hours of 8.00 to 18.30 Monday to Saturday inclusive.
 - 1.6.1.2. The landfill at the facility shall only be operated during the hours of 8.00 and 19.00 Monday to Saturday inclusive.
 - 1.6.1.3. Waste shall not be accepted at the landfill on Bank Holidays.
- 1.7. The following shall constitute an incident for the purposes of this licence:
 - a) an emergency;
 - b) any emission which does not comply with the requirements of this licence;
 - c) any trigger level specified in this licence which is attained or exceeded; and
 - d) any indication that environmental pollution has, or may have, taken place.

- 1.8. Where the Agency considers that a non-compliance with any condition of this licence has occurred, it may serve a notice on the licensee specifying:
 - 1.8.1. That only those wastes as specified, if any, in the notice are to be accepted at the facility after the date set down in the notice;
 - 1.8.2. That the licensee shall undertake the works stipulated in the notice, and/or otherwise comply with the requirements of the notice as set down therein, within the time-scale contained in the notice; and
 - 1.8.3. That the licensee shall carry out any other requirement specified in the notice.

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

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

REASON: To clarify the scope of this licence.

CONDITION 2 MANAGEMENT OF THE FACILITY

2.1 Facility Management

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

2.2 Management Structure

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

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

2.3 Environmental Management System (EMS)

2.3.1 The licensee shall establish and maintain an EMS. Three months prior to the intended commencement of waste activities the licensee shall submit to the Agency for its agreement a proposal for a documented Environmental Management System (EMS) for the facility. Following the agreement of the Agency, the licensee shall establish and maintain such a system. The EMS shall be updated on an annual basis with amendments being submitted to the Agency for its agreement.

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

2.3.2.1 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:

- (i) the items specified to be contained in an Environmental Management Plan in the Landfill Operational Practices Manual published by the Agency;
- (ii) methods by which the objectives and targets will be achieved and the identification of those responsible for achieving those objectives and targets;
- (iii) any other items required by written guidance issued by the Agency.

2.3.2.3 Corrective Action Procedures

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

2.3.2.4 Awareness and Training Programme

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

2.4 Communications Programme

2.4.1 The licensee shall establish and maintain a Communications Programme to ensure that members of the public can obtain information at the facility, at all reasonable times, concerning the environmental performance of the facility. This shall be established prior to the commencement of waste activities.

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 prior to the commencement of the licensed activities or 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 Where the existing hedgerow along the boundary does not prevent access to the facility, security/stockproof fencing shall be installed and maintained. The base of such fencing shall be set in the ground. Security gates shall be installed and maintained at the facility entrance as shown in Figure D.1.1 – Proposed Site Entrance.
- 3.4.2 The licensee shall remedy any defect in the gates and/or fencing as follows:
- a) a temporary repair shall be made by the end of the working day; and,
 - b) a repair to the standard of the original gates and/or fencing shall be undertaken within three working days.
- 3.5 Facility Roads and Hardstanding
- 3.5.1 Effective site roads shall be provided and maintained to ensure the safe movement of vehicles within the facility.
- 3.5.2 The facility entrance area and the access road shall be paved and maintained in accordance with Attachment D.1(b) of the application.
- 3.5.3 Traffic control within the facility shall be in accordance with Section 3.3 – Mitigation Measures of the EIS submitted as part of the application.
- 3.5.4 The licensee shall provide and maintain a 60m wide corridor underneath and bisected by the ESB 220kV transmission line that crosses the facility in those areas to be landfilled as specified in Condition 5.1. The requirements set out in correspondence from ESB International dated 9th August 1999 and included in Appendix II of the EIS submitted as part of the application shall be followed in relation to the corridors. Prior to the commencement of waste activities, the licensee shall following consultation with the ESB, submit to the Agency for agreement traffic control measures to be implemented at the facility to deal with traffic movements in the vicinity of the corridors.
- 3.5.5 Any proposed excavation within the 60m corridor referred to in Condition 3.5.4 may only be undertaken following consultation with the ESB and the agreement of the Agency.
- 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 provided and 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.
- 3.8 Weighbridge
- 3.8.1 The licensee shall provide and maintain a weighbridge at the facility.
- 3.9 Wheel Cleaning

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

3.9.2 The wheelwash water shall drain to an oil interceptor and grit chamber.

3.10 Waste Water

3.10.1 The licensee shall provide and maintain either of the following:

- (i) Toilet facilities as described in Attachment D.1.k; or
- (ii) A Wastewater Treatment plant at the facility for the treatment of wastewater arising on-site. Any percolation area shall satisfy the criteria set out in the Wastewater Treatment Manual, *Treatment Systems for Single Houses*, published by the Environmental Protection Agency.

3.11 Tank and Drum Storage Areas

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

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

- (a) 110% of the capacity of the largest tank or drum within the bunded area; or
- (b) 25% of the total volume of substance which could be stored within the bunded area.

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

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

3.11.5 The integrity and water tightness of all the bunds and their resistance to penetration by water or other materials stored therein shall be confirmed by the licensee and shall be reported to the Agency following its installation and prior to its use as a storage area .

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

3.12 Landfill Lining

3.12.1 All cells for landfilling shall be lined in accordance with Condition 3.12.2.

3.12.2 The landfill liner shall comprise:

Base and side wall mineral layer of a minimum thickness of 1m with a hydraulic conductivity less than or equal to 1×10^{-7} m/s or a minimum thickness of 0.5m artificial layer of enhanced soils or similar, giving equivalent protection to the foregoing.

3.13 Landfill Gas Management

3.13.1 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.

3.14 Surface Water Management

3.14.1 The surface water management infrastructure described in Attachments D.1(k), H.9.1 and Article 16 response – point 2 received on 25th July 2000 which relate to Phases 1 & 2 shall be provided and maintained at the facility, subject to the following;

- (i) all surface water from the facility discharging to stream shall only do so after passing through a grit chamber/settlement pond or equivalent.

- (ii) where necessary to ensure the maintenance of the existing hedgerows, the locations of the surface water swales proposed should be altered.
- (iii) any drainage from the Construction and Demolition Waste Recovery Area, the Waste Inspection Area and the Waste Quarantine Area shall be directed through an oil interceptor and to a holding tank/pond or equivalent prior to discharge to stream.
- (iv) adequate drainage is provided in the areas of ESB towers 59 and 60 to ensure no standing water collects at the bases of the towers.
- (v) the buffer zone as referred to in Section 5.3 of the EIS submitted as part of the application shall be maintained along the length of the stream.

3.15 Groundwater Management

3.15.1 Effective groundwater management infrastructure shall be provided and maintained at the facility during construction, operation, restoration and aftercare of the facility. As a minimum, the infrastructure shall be capable of the protection of the groundwater resources from pollution by the waste activities.

3.16 Construction and Demolition Waste Recovery Area.

3.16.1 Prior to the commencement of waste activities the licensee shall provide and maintain a construction and demolition waste recovery area. This infrastructure shall at a minimum comprise the following:

- a) an impermeable concrete slab;
- b) appropriate visual, dust and noise screening. Noise screening shall be in accordance with the measures set out in Section 5 – Attenuation of Appendix 5 of the EIS submitted as part of the application; and
- c) collection and disposal infrastructure for all liquid run-off as required by Condition 3.14.1(iii).

3.16.2 Three months prior to the commencement of waste activities the licensee shall submit to the Agency a plan indicating waste separation and storage areas for concrete, bricks, topsoil, subsoil and tarmacadam.

3.17 Monitoring Infrastructure

3.17.1 Landfill Gas

- (i) Prior to commencement of waste activities on site the licensee shall install an effective permanent gas monitoring system in the facility office and any other enclosed structures at the facility.

3.17.2 Groundwater

- (i) Prior to the commencement of waste activities the licensee shall install replacement groundwater monitoring wells which provide for the monitoring of groundwater in subsoil and in bedrock. This shall include as a minimum one upgradient well and two downgradient wells to the west of the ravine running through the facility.
- (ii) All redundant wells shall be plugged and backfilled in accordance with BS 5930: 1981 to prevent potential contamination pathways.

3.17.3 Leachate

- (i) The licensee shall install leachate monitoring points within each cell to allow for the sampling and analysis of leachate.

3.17.4 Replacement of Infrastructure

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

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

CONDITION 4 RESTORATION AND AFTERCARE

- 4.1. The licensee shall restore the facility on a phased basis. The Restoration and Aftercare Plans for the facility shall be based on the plan submitted as part of Attachment G subject to revisions and limitations on areas to be landfilled as required by conditions of this licence or as otherwise instructed by the Agency. The licensee shall submit detailed revised Restoration and Aftercare Plans to the Agency within twelve months of the date of grant of this licence.
- 4.2. Prior to the commencement of waste activities the licensee shall submit a revised proposal for the final profile of the facility to the Agency for agreement to incorporate the following;
 - 4.2.1. An amended final profile for Phases 1 & 2 to reflect the surrounding existing landscape, including that of Phases 3 & 4, and in any case to be no higher than that shown for Phases 1 & 2 in Figure G.1.1 - Layout of Filling Phase of the application.
 - 4.2.2. The slopes of all outer slopes of phases, including any raised ground directly outside of the corridor referred to in Condition 3.5, are no greater than 1:6. Details of any excavations to existing areas in order to satisfy this requirement should also be included for consideration.
 - 4.2.3. Reference should be made to the results of the topographical survey required under Condition 8.11.1.
 - 4.2.4. Other requirements of this licence, such as *inter alia*, Conditions 3.5 and 3.14.
- 4.3. Final Capping
 - 4.3.1. The final capping shall be as detailed in Attachment D.6.
- 4.4. No material or object that is incompatible with the proposed restoration of the facility shall be present within one metre of the final soil surface levels.
- 4.5. Where tree planting is to be carried out above waste-filled areas, a synthetic barrier shall be used to augment the clay cap. Combined topsoil and subsoil depths shall be a minimum of 1m.
- 4.6. Soil Storage
 - 4.6.1. All soils shall be stored to preserve the soil structure for future use.

REASON: To provide for the restoration of the facility

CONDITION 5 FACILITY OPERATIONS

- 5.1 Waste may only be disposed of in those areas referred to as Phase 1 and Phase 2 and indicated on Figure D.2.2 *Layout of Filling Phases* of the application. Wastes shall not be disposed of in any cell in Phase 1 or Phase 2 without the prior agreement of the Agency.

5.2 Waste Acceptance and Characterisation Procedures

- 5.2.1 The licensee shall submit to the Agency for its agreement revised written procedures for the acceptance, verification and handling of all wastes prior to the commencement of waste activities. The written procedures shall at a minimum include the requirements of Level 1, 2 and 3 characterisation testing (Schedule A.2).
- 5.2.2 The licensee shall undertake a comprehensive assessment of all wastes to be disposed of in the landfill. The assessment shall include at a minimum the items outlined in Schedule A.2. Waste disposal at the facility shall only be permitted if the comprehensive assessment satisfies the criteria set out in Schedule A: *Waste Acceptance* of this licence.
- 5.2.3 In addition to the above, all wastes accepted for disposal at the landfill shall undergo the Level 3: On-site verification. At a minimum Level 3 requires that all wastes shall be checked at the working face to ensure that they comply with the requirements of the licence. Any wastes unsuitable for recovery or disposal at this facility shall be removed for recovery or disposal at an appropriate alternative facility. Such waste shall be stored in the Waste Quarantine Area only. No waste shall be stored in the Waste Quarantine Area for more than three months.
- 5.2.4 Wastes shall only be accepted at the facility from waste contractors that have been agreed in advance with the Agency.
- 5.2.5 The waste analysis testing (Schedule A: *Waste Acceptance* of this licence) shall use standardised and internationally accepted procedures and be carried out by a competent laboratory the details of which shall be submitted to the Agency for its agreement prior to waste acceptance at the facility.

5.3 Working Face

- 5.3.1 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.
- 5.3.2 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.
- 5.3.3 The working face, or faces, shall each day at the end of the day, be covered with suitable material.

5.4 Daily and Intermediate Cover

- 5.4.1 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 Operational Controls

- 5.5.1 Phase 1 and Phase 2 of the facility as outlined in Figure D.2.2 *Layout of Filling Phases* of the application may be landfilled, subject to the following;
- (a) Each section of a phase partly bounded by the corridor referred to in Condition 3.5 shall be regarded as separate cells for the purpose of this licence
 - (b) The sequence of the phases shall be agreed in advance with the Agency and subject to Condition 5.1.

- 5.5.2 All large hollow objects and other large articles deposited at the facility shall be crushed, broken up, flattened or otherwise treated.
 - 5.5.3 Wastes once deposited and covered shall not be excavated, disturbed or otherwise picked over without prior agreement from the Agency.
 - 5.5.4 Where wastes which would not have been accepted for deposition at the facility under the terms of this licence are uncovered on site during the course of facility development/excavations, the Agency shall be notified in accordance with the requirements of Condition 11.2. Subsequent to this the licensee shall undertake such actions as agreed with or directed by the Agency. Prior to the commencement of waste activities at the facility the licensee shall arrange for the collection of such wastes/materials currently in place at the facility for transport off site in accordance with Condition 5.7. This shall include;
 - (i) waste items deposited on or near the facility entrance and roadway, including waste vehicles.
 - (ii) the rusty coloured sediment identified in Article 16 response of 25th July 2000 - following further investigations into its extent and agreement with the Agency on procedures for its removal.
 - 5.5.5 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.
 - 5.5.6 Filled cells/phases shall be permanently capped within twelve months of the cells/phases having been filled to the required level.
 - 5.5.7 Scavenging shall not be permitted at the facility.
 - 5.5.8 Gates shall be locked shut when the facility is unsupervised.
 - 5.5.9 The licensee shall provide and use adequate lighting during the operation of the facility in hours of darkness.
 - 5.5.10 Fuels shall only be stored at appropriately bunded locations on the facility.
 - 5.5.11 All tanks and drums shall be labelled to clearly indicate their contents.
- 5.6 Waste Recovery
- 5.6.1 Stockpiles of recovered material shall not rise above the height of the noise screens required by Condition 3.16.1(b).
 - 5.6.2 The following recycling targets, in line with the government's publication "*Changing Our Ways*", apply to the facility;
 - (i) Prior to 2003
30% of all waste accepted at the facility shall be recycled, recovered or reused.
 - (ii) From 2003 to 2013
50% of all waste accepted at the facility shall be recycled, recovered or reused.
 - (iii) Post 2013
85% of all waste accepted at the facility shall be recycled, recovered or reused.
- 5.7 Off-site Recovery and Disposal
- 5.7.1 Waste sent off-site for recovery or disposal shall only be conveyed by a waste contractor agreed by the Agency;

- 5.7.2 All waste transferred from the facility shall only be transferred to an appropriate facility agreed by the Agency;
- 5.7.3 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.
- 5.8 Construction and Demolition Waste Recovery Area
 - 5.8.1 Wastes which are capable of being recovered may be separated and stored temporarily in this area prior to being subjected to other recovery activities at the facility or transport off the facility.
 - 5.8.2 All stockpiles shall be maintained so as to minimise dust generation.
- 5.9 Maintenance
 - 5.9.1 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.
 - 5.9.2 The licensee shall maintain and clearly label and name all sampling and monitoring locations.
 - 5.9.3 The wheelwash shall be inspected on a daily basis and drained as required. Silt, stones and other accumulated material shall be removed as required from the wheelwash and disposed of at the working face or to a skip.

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

CONDITION 6 EMISSIONS

- 6.1. No specified emission from the facility shall exceed the emission limit values set out in Schedule C: *Emission Limits* of this licence. There shall be no other emissions of environmental significance.
- 6.2. The licensee shall ensure that the activities shall be carried out in a manner such that emissions do not result in significant impairment of, or significant interference with the environment beyond the facility boundary.
- 6.3. Landfill Gas
 - 6.3.1. The following are the trigger levels for landfill gas emissions from the facility measured in any service duct or manhole on, at or immediately adjacent to the facility and/or at any other point located outside the body of the waste:
 - a) Methane, greater than or equal to 1.0% v/v; and
 - b) Carbon dioxide, greater than or equal to 1.5% v/v.
- 6.4. Emissions to Surface Water
 - 6.4.1. Emissions to surface water from the facility shall only be made to the stream running through the facility at emission point(s) agreed in advance with the Agency.
 - 6.4.2. No substance shall be discharged in a manner, or at a concentration which, following initial dilution causes tainting of fish or shellfish.

- 6.4.3. The licensee shall provide for the diversion/collection of any potential discharge which would not satisfy the requirements of this Condition. Unless otherwise agreed with the Agency such potential discharges shall be transported off-site for treatment at a suitable facility.
- 6.5. Emissions to Groundwater
 - 6.5.1. There shall be no direct emissions to groundwater.
 - 6.5.2. Surface water collected at the facility which is not discharged to stream may be discharged to soakpits at locations to be agreed in advance with the Agency.

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 & Dust Control
 - 7.3.1 All loose litter or other waste, placed on or in the vicinity of the facility, other than in accordance with the requirements of this 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.
 - 7.3.2 The licensee shall ensure that all vehicles delivering waste to and removing waste and materials from the facility are appropriately covered.
 - 7.3.3 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.
 - 7.3.4 From the commencement of construction activities the licensee shall implement and maintain the dust control measures outlined in Section 3.3.3 of the EIS received as part of the application.
 - 7.3.5 The stockpiles of all recovery materials shall be located and maintained such that there is no dust or noise nuisance and that appropriate surface water drainage control measures are put in place.
- 7.4 Prior to exiting the facility, all waste vehicles shall use the wheelwash.

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 prior to the commencement of waste activities.

- 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, subject to owner's consent, as required by the Agency.
- 8.5. Landfill Gas
- 8.5.1. All landfill gas monitoring equipment, other than permanent monitoring systems within buildings, shall be certified as being intrinsically safe.
- 8.6. Noise Monitoring
- 8.6.1. Prior to the commencement of waste activities the licensee shall submit to the Agency for its agreement four additional noise monitoring locations to be located 10m from the Construction and Demolition Waste Recovery Area.
- 8.7. Groundwater Monitoring
- 8.7.1. Subject to the agreement of the well owners, all private wells within 250m of the facility shall be included in the monitoring programme set out in Schedule D: *Monitoring* of this licence.
- 8.7.2. Prior to the commencement of waste activities the licensee shall carry out investigations into the potential sources of phenol and barium within and in the vicinity of the facility. The licensee shall within one month of the completion of such investigations submit a report to the Agency on the findings of the investigations and the actions to be taken in relation to those findings.
- 8.8. Surface Water Monitoring
- 8.8.1. Prior to the commencement of waste activities the licensee shall initiate a monitoring programme for the surface water discharging from the facility {both to surface water and to soakpits} and the flow in the stream running through the facility. The programme shall, at minimum, fulfil the requirements of Schedules D.1 & D.5 regarding Surface Water Monitoring.
- 8.9. Air Monitoring
- 8.9.1. The licensee shall carry out a monitoring programme of the levels of dust deposited at the boundary of the facility to include those locations referred to in Table D.1.1. Further monitoring locations should include;
- (i) a location along the facility boundary north of the Waste Recovery and Storage Area;
 - (ii) a location along the facility boundary west of the Waste Recovery and Storage Area; and
 - (iii) a location along the southern boundary.
- 8.10. Meteorological Monitoring
- 8.10.1. Prior to the commencement of waste activities the licensee shall make arrangements for representative meteorological data to be collated for the facility to fulfil the requirements of Schedule D.6: *Meteorological Monitoring*.

8.11. Topographical Survey

8.11.1. Prior to the commencement of waste activities the licensee shall carry out a topographical survey of the facility. Details of the results of this survey shall be submitted to the Agency.

8.11.2. A topographical survey shall be repeated twelve months after commencement of waste activities and annually thereafter. The survey shall include a measurement of the remaining available void space. The survey shall be in accordance with any written instructions issued by the Agency.

8.12. Biological Assessment

8.12.1. An annual biological assessment as identified in Attachment J.2 shall be carried out for Stream 1 and Stream 2 at the upstream and downstream locations identified in Figure 3.2 - Monitoring Locations of the EIS received as part of the application. This assessment shall use appropriate biological methods such as the EPA Q-rating system for the assessment of rivers and streams.

8.13. Stability Assessment

8.13.1. Within twelve months of the commencement of waste activities and annually thereafter, the licensee shall carry out a stability assessment of the side slopes of the facility.

8.14. Nuisance Monitoring

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

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

CONDITION 9 CONTINGENCY ARRANGEMENTS

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

- a) identify the date, time and place of the incident;
- b) carry out an immediate investigation to identify the nature, source and cause of the incident and any emission arising therefrom;
- c) isolate the source of any such emission;
- d) evaluate the environmental pollution, if any, caused by the incident;
- e) identify and execute measures to minimise the emissions/malfunction and the effects thereof;
- f) provide a proposal to the Agency for its agreement within one month of the incident occurring to:
 - i) identify and put in place measures to avoid reoccurrence of the incident; and
 - ii) identify and put in place any other appropriate remedial action.

9.2. The licensee shall, prior to commencement 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 local wells indicates that the facility is having a significant adverse effect on the quantity and/or quality of the water supply this shall be treated as an emergency and the licensee shall provide an alternative supply of water to those affected;
- 9.4.4. In the event that monitoring of the slide slopes of the facility indicate that there may be a risk of slope failure this will be treated as an emergency.

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

CONDITION 10 RECORDS

- 10.1 The licensee shall keep the following documents at the facility office.
- a) the current waste licence relating to the facility;
 - b) the current EMS for the facility;
 - c) the previous year's AER for the facility;
 - d) all written procedures produced by the licensee which relate to the licensed activities.
- 10.2 The licensee shall maintain a written record for each load of waste arriving at the facility. The licensee shall record the following:
- a) the date;
 - b) the name of the carrier (including if appropriate, the waste carrier registration details);
 - c) the vehicle registration number;
 - d) the name of the producer(s)/collector(s) of the waste as appropriate;
 - e) the source/location of origin of the waste;
 - 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 as set out in Condition 10.5.

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;
 - 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 activity. Each such record shall give details of the following:
- a) date and time of the complaint;
 - b) the name of the complainant;
 - c) details of the nature of the complaint;
 - d) actions taken on foot of the complaint and the results of such actions; and,
 - e) the response made to each complainant.
- 10.5 A written record shall be kept for each load of waste departing from the 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
- 10.6 A written record shall be kept at the facility of the programme for the control and eradication of vermin and fly infestations at the facility. These records shall include where applicable the following:
- a) the date and time during which spraying of insecticide is carried out;
 - b) contractor details;
 - c) contractor logs and site inspection reports;
 - d) details of the rodenticide(s) and insecticide(s) used;
 - e) operator training details;
 - f) details of any infestations;
 - g) mode, frequency, location and quantity of application; and,
 - h) measures to contain sprays within the facility boundary.

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

CONDITION 11 REPORTS AND NOTIFICATIONS

- 11.1 Unless otherwise agreed by the Agency, all reports and notifications submitted to the Agency shall:
- a) be sent to the Agency's headquarters;
 - b) comprise one original and three copies unless additional copies are required;
 - c) be formatted in accordance with any written instruction or guidance issued by the Agency;
 - d) include whatever information as is specified in writing by the Agency;
 - e) be identified by a unique code, indicate any modification or amendment, and be correctly dated to reflect any such modification or amendment;
 - f) be submitted 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 as soon as practicable and in any case not later than 10.00 am the following working day the event of an incident occurring on the facility, the licensee shall:
- a) notify the Agency after the occurrence of any incident;
 - b) submit a written record of the incident, including all aspects described in Condition 9.1(a-e), to the Agency as soon as practicable and in any case within five working days after the occurrence of any incident; and
 - c) in the event of any incident which relates to discharges to surface water, notify the Eastern Regional Fisheries Board and South Dublin County Council as soon as practicable and in any case not later than 10:00am on the following working day after such an incident.
 - d) Should any further actions be taken as a result of an incident occurring, the licensee shall forward a written report of those actions to the Agency as soon as practicable and no later than ten days after the initiation of those actions.
- 11.3 Monitoring Locations
- 11.3.1. Prior to the commencement of waste activities the licensee shall submit to the Agency an appropriately scaled drawing(s) showing all the monitoring locations that are stipulated in this licence. The drawing(s) shall include the reference code of each monitoring point.
- 11.4 Annual Environmental Report
- 11.4.1. The licensee shall submit to the Agency for its agreement, within thirteen months from the date commencement of waste activities, and within one month of the end of each year thereafter, an Annual Environmental Report (AER).
- 11.3.2. The AER shall include as a minimum the information specified in Schedule F: *Content of the Annual Environment Report* of this licence. Content of Annual Environmental Report and shall be prepared in accordance with any relevant written guidance issued by the Agency.

REASON: To provide for proper report to and notification of 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 £12,746 (€16,185) or such sum as the Agency from time to time determines, towards the cost of monitoring the activity or otherwise in performing any functions in relation to the activity, as the Agency considers necessary for the performance of its functions under the Waste Management Act, 1996. The licensee shall in 2002 and subsequent years, not later than January 31 of each year, pay to the Agency this amount updated in accordance with changes in the Public Sector Average Earnings Index from the date of the licence to the renewal date. The updated amount shall be notified to the licensee by the Agency. For 2001, the licensee shall pay a pro rata amount from the date of this licence to 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 the completion of a comprehensive and fully costed Environmental Liabilities Risk Assessment for the facility which will address liabilities arising from the carrying on of the activities to which this licence relates. A report on this assessment shall be submitted to the Agency for its agreement within six months of date of grant of this licence.

12.2.2 Within nine months of the date of grant of this licence, the licensee shall make a Proposal for Financial Provision to the Agency for its agreement to cover any liabilities incurred by the licensee in carrying on the activities to which this licence relates. Such provision shall be maintained by the licensee unless otherwise agreed by the Agency.

12.2.3 The amount of financial provision, held under condition 12.2.2 shall be reviewed and revised as necessary, but at least annually. Any proposal for such a revision shall be submitted to the Agency for its agreement.

12.2.4 The licensee shall within two weeks of purchase, renewal or revision of the financial provision required under condition 12.2.2, forward to the Agency written proof of such indemnity.

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

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

Where:

- Cost = Revised restoration and aftercare cost
ECOST = Existing restoration and aftercare cost
WPI = Appropriate Wholesale Price Index [Capital Goods, Building & Construction (i.e. Materials & Wages) Index], as published by the Central Statistics Office, for the year since last closure calculation/revision.
CiCC = Change in compliance costs as a result of change in site conditions, changes in law, regulations, regulatory authority charges, or other significant changes.

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

SCHEDULE A : Waste Acceptance

A.1 Acceptable Waste Categories and Quantities

The limits on the types and quantities of waste to be accepted at the facility shall be as set out in Table A.1.1.

Table A.1.1 Waste to be accepted at the facility

WASTE TYPE	MAXIMUM (TONNES PER ANNUM)
Construction and Demolition	100,000

Disposal

Table A.1.2 Waste Types for Disposal

INERT OR INACTIVE WASTE	
Topsoil	Pottery and China
Subsoil	Brickwork
Clay	Natural Sand
Stone, Rock and Slate	

Recovery

Table A.1.3 Waste Types for Recovery

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

A.2 Acceptance Criteria for Inert Waste

The general characterisation and testing must be based on the following three level hierarchy:

Level 1: Basic Characterisation

This constitutes a through determination, according to standardised analysis and behaviour testing methods, of the short and long-term leaching behaviour and/or characteristic properties of the waste.

Level 2: Compliance Testing

This constitutes periodical testing by simpler standard analysis and behaviour-testing methods to determine whether a waste complies with condition and /or specific reference criteria. The tests focus on key variables and behaviour identified by basic characterisation.

Level 3: On-site verification

This constitutes rapid check methods to confirm that a waste is the same as that which has been subjected to compliance testing and that which is described in the accompanying documents. It may merely consist of a visual inspection of a load of waste before and after unloading at the landfill site.

All waste loads must provide the following information:

Waste owner	Amount of waste
Source and origin of waste	Existing data on the waste
Description of the waste	Physical form
Waste Type and EWC code	Colour
Type of process producing the waste	Odour

All wastes accepted for disposal at the landfill shall undergo the Level 3: On-site verification at a minimum.

In addition to the above a representative load from every excavation/demolition/waste removal works is subjected to a comprehensive assessment which must satisfy Level 1 characterisation.

The comprehensive assessment must at a minimum include the following:

1. A chemical analysis of a representative sample. At least one sample per 1,500 tonnes or portion thereof must be taken for chemical analysis for each excavation or demolition works. However, if the comprehensive assessment is undertaken prior to the commencement of excavation or clearance activity, the licensee may reduce the number of samples for chemical analysis to one for each 7,500 t or portion thereof. The sampling location must be identified on a sampling grid and enclosed in the comprehensive assessment.
2. An evaluation of the acceptability of the disposal of the waste at the landfill including observance of limits for total pollutants contents in Schedule A.3 below.
3. A statement of any pre-treatment requirement (if any).
4. Evidence that the waste displays no hazardous properties upon disposal.

If as a result of examinations undertaken in the course of excavation or clearance activity, the suspicion of contamination should arise, the type and concentration of the contamination must be determined, and its extent established through additional sampling.

Wastes of unknown origin or with insufficient waste description must be subjected to a chemical analysis.

In addition to the assessment above representative samples upon delivery of wastes must be taken for compliance testing purposes (Level 2). The tests shall focus on key variables and behaviour identified by the chemical analysis.

A representative sample shall be taken from one in every 100 loads of waste accepted at the facility. This sample shall be subjected to Level 2 testing. Part of this sample shall be retained at the facility for three months and be available for inspection/analysis by the Agency.

A.3 Limit values for pollutant content for inert waste landfills.

The following limit values relate to the average amount of constituent substances in the waste. The mean value of all individual measuring values from one bulk sample must not exceed the limit value concerned.

Parameter	Limit Value (mg/kg dry mass, not including pH value and Electrical Conductivity)	
	Total Pollutant Contents	Eluate
pH		6 –13
Electrical conductivity		300
Dry residue		25,000
Arsenic (as As)	200.0	0.75
Aluminium (as Al)		20.0
Barium (as Ba)		20.0
Lead (as Pb)	500.0	2.0
Boron (as b)		30.0
Cadmium (as Cd)	10.0	0.5
Chromium, total (as Cr)	500.0	2.0
Chromium, hexavalent (as Cr)		0.5
Cobalt (as Co)	100.0	2.0
Copper (as Cu)	500.0	10.0
Nickel (as Ni)	500.0	2.0
Mercury (as Hg)	3.0	0.05
Silver (as Ag)		1.0
Zinc (as Zn)	1500.0	20.0
Tin (as Sn)		10.0
Ammonium (as N)		40.0
Chloride (as Cl)		5000.0
Cyanide, easily liberatable (as Cn)		1.0
Fluoride (as F)		50.0
Nitrate (as N)		500.0
Nitrite (as N)		10.0
Phosphate (as P)		50.0
Sulphate (as SO ₄)		5000.0
TOC (as C)	30,000.0 ¹	500.0
Total hydrocarbons	100.0	50.0
EOX		3.0
Total PAH ²	2.0	

¹ The TOC limit value is complied with as long as the loss on ignition does not exceed 5% per weight.

² For determining the total of PAH, the following 6 compounds must be added to a sum: flouranthene, benzoic(a)pyrene, benzoic(b)flouranthene, benzoic(k)flouranthene, benzoic(g,h,l)perylene, indenoic(1,2,3,-c,d)pyrene.

SCHEDULE B : Specified Engineering Works

Specified Engineering Works
Development of the facility including preparatory works and lining.
Final capping.
Installation of Wheelwash.
Installation of landfill gas monitoring systems including permanent systems.
Installation of Groundwater Control Infrastructure.
Installation of Surface Water Management Infrastructure.
Installation of a of a Construction and Demolition Waste Recovery Area including screening for waste component separation and concrete crusher.
Development of corridor running below ESB power lines, including the installation of site roads passing over and in proximity of the corridor.
Installation of leachate monitoring points.
Any other works notified in writing by the Agency.

SCHEDULE C : Emission Limits

C.1 Noise Emissions: (Measured at the facility boundary monitoring points indicated in *Table D.1.1 Monitoring Locations*), or other locations agreed or instructed by the Agency.

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

C.2 Landfill Gas Concentration Limits: (Measured in any building on or adjacent to the facility).

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

C.3 Dust Deposition Limits: (Measured at the monitoring points indicated in *Table D.1.1 Monitoring Locations*).

Level (mg/m ² /day) ^{Note 1}
350

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

C.4 Surface Water Discharge Limits: Measured at the monitoring points to be agreed in advance with the Agency.

Parameter	Level
Suspended Solids (mg/l)	25

SCHEDULE D : Monitoring

Monitoring to be carried out as specified below.

D.1 Monitoring Locations

Monitoring locations shall be those as set out in Table D.1.1 and shown in Drawing No. *Figure 3.2 – Monitoring Locations* of the EIS submitted as part of the application.

Table D.1.1 Monitoring Locations

LANDFILL GAS	DUST	NOISE	SURFACE WATER	GROUND WATER	LEACHATE
STATIONS	STATIONS	STATIONS	STATIONS	STATIONS	STATIONS
Site Office Note 1	ST1	B3 ^{Note 3}	SW1	SP5 Note 6	Note 7
	ST2	B4 ^{Note 3}	SW2		
	ST3	B5 ^{Note 3}	SW3		
	ST4	Note 4	SW4		
	Note 2		SW5		
			SW6		
			Note 5		

Note 1: At the groundwater monitoring locations required under Condition 3.17.2

Note 2: Further monitoring locations to be agreed under Condition 8.9.1

Note 3: At nearest point on facility boundary to this reference point.

Note 4: Further locations as required under Condition 8.6.1.

Note 5: Discharge locations or equivalent to be agreed under Condition 8.8.1

Note 6: Further locations as required under Condition 3.17.2

Note 7: As required by Condition 3.17.3

D.2 Landfill Gas

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

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

Note1: All monitoring equipment used should be intrinsically safe.

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

D.3 Dust

Table D.3.1 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.

D.4 Noise

Table D.4.1 Noise Monitoring Frequency and Technique

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

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

D.5 Surface Water, Groundwater and Leachate

Table D.5.1 Water and Leachate - Parameters/Frequency

Parameter ^{Note 1}	SURFACE WATER Monitoring Frequency	GROUNDWATER Monitoring Frequency	LEACHATE Monitoring Frequency
Visual Inspection/Odour ^{Note 2}	Weekly	Quarterly	Monthly
Groundwater Level	Not Applicable	Monthly	Not Applicable
Leachate Level	Not Applicable	Not Applicable	Monthly
Ammoniacal Nitrogen	Biannually ^{Note 5}	Monthly	Not Applicable
BOD	Biannually ^{Note 5}	Not Applicable	Not Applicable
COD	Biannually	Not Applicable	Not Applicable
Chloride	Biannually	Quarterly	Not Applicable
Dissolved Oxygen	Biannually	Quarterly	Not Applicable
Electrical Conductivity	Biannually ^{Note 5}	Monthly	Not Applicable
pH	Biannually ^{Note 5}	Monthly	Not Applicable
Total Suspended Solids	Quarterly ^{Note 5}	Not Applicable	Not Applicable
Temperature	Biannually ^{Note 5}	Monthly	Not Applicable
Boron	Not Applicable	Annually	Not Applicable
Cadmium	Not Applicable	Annually	Not Applicable
Barium	Quarterly	Quarterly	Not Applicable
Calcium	Biannually	Quarterly	Not Applicable
Chromium (Total)	Quarterly ^{Note 5}	Quarterly	Not Applicable
Copper	Not Applicable	Annually	Not Applicable
Cyanide (Total)	Not Applicable	Annually	Not Applicable
Fluoride	Not Applicable	Annually	Not Applicable
Iron	Quarterly ^{Note 5}	Quarterly	Not Applicable
Lead	Not Applicable	Annually	Not Applicable
List III organic substances ^{Note 3}	Not Applicable	Annually	Not Applicable
Magnesium	Not Applicable	Annually	Not Applicable
Manganese	Quarterly ^{Note 5}	Quarterly	Not Applicable
Mercury	Quarterly ^{Note 5}	Annually	Not Applicable
Arsenic	Quarterly ^{Note 5}	Quarterly	Not Applicable
Nickel	Quarterly ^{Note 5}	Quarterly	Not Applicable
Potassium	Not Applicable	Quarterly	Not Applicable
Sulphate	Biannually	Quarterly	Not Applicable
Sodium	Biannually	Quarterly	Not Applicable
Total Alkalinity	Not Applicable	Annually	Not Applicable
Total Phosphorus / orthophosphate	Biannually ^{Note 5}	Annually	Not Applicable
Total Oxidised Nitrogen	Not Applicable	Quarterly	Not Applicable
Total Organic Carbon	Not Applicable	Annually	Not Applicable
Residue on evaporation	Not Applicable	Annually	Not Applicable
Zinc	Quarterly ^{Note 5}	Quarterly	Not Applicable
Phenols	Quarterly	Quarterly	Not Applicable
Faecal Coliforms ^{Note 4}	Not Applicable	Annually	Not Applicable
Total Coliforms ^{Note 4}	Not Applicable	Annually	Not Applicable
Biological Assessment	Annually ^{Note 6}	Not Applicable	Not Applicable

- Note 1:** All the analysis shall be carried out by a competent laboratory using standard and internationally accepted procedures.
- Note 2:** Where there is evident gross contamination of leachate, additional samples should be analysed.
- Note 3:** 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 facility 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:** In the case where groundwater is extracted for drinking water, 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:** Discharge of diverted surface water shall be monitored on a monthly basis for these parameters unless flow in that month does not allow such monitoring.
- Note 6:** Appropriate biological methods (such as EPA Q-Rating System to be used for the assessment of rivers and streams).

D.6 Meteorological Monitoring

Table D.6.1 Meteorological Monitoring:

Data to be obtained from the nearest Met. Éireann Synoptic Station, unless otherwise agreed with the Agency.

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

SCHEDULE E : Recording and Reporting to the Agency

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	Thirteen months from the date of grant of licence and one month after the end of each year thereafter.
Record of incidents	As they occur	Within five days of the incident.
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.
Any other monitoring	As they occur	Within ten days of obtaining results.

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

SCHEDULE F : Content of the Annual Environmental Report

Annual Environmental Report Content

Reporting Period.

Waste activities carried out at the facility.

Quantity and Composition of waste received, 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.

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

Report on restoration of completed cells/ phases.

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

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

Estimated annual and cumulative quantity of indirect emissions to groundwater.

Annual water balance calculation and interpretation.

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

Schedule of Environmental Objectives and Targets for the forthcoming year.

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

Tank, pipeline and bund testing and inspection report.

Reported incidents and Complaints summaries.

Review of Nuisance Controls.

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

Report on training of staff.

Any other items specified by the Agency.

Signed on behalf of the said Agency
on the 12th day of June, 2001

Breda Sheehan Authorised Person