



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

WASTE LICENCE

Waste Licence	W001
Register Number:	
Applicant:	Kerry County Council
Location of Facility:	North Kerry Landfill Muingnaminnane, Tralee, Co. Kerry



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

WASTE MANAGEMENT ACT, 1996

Waste Licence

Decision of the Agency, under Section 40(1) of the Waste Management Act, 1996

Waste Licence Register No: **W001**

Further to notice dated the 11th day of June 1998, the Agency in exercise of the powers conferred on it by the Waste Management Act, 1996 grants this waste licence to Kerry County Council, County Buildings, Rathass, Tralee, Co. Kerry to carry on the activities set out below at North Kerry Landfill Site, Muingnaminnane, Tralee, Co. Kerry subject to 11 No. conditions, as set out in the schedules attached hereto.

Licensed Waste Activities

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

Class 5: Specially engineered landfill, including placement into lined discrete cells which are capped and isolated from one another and the environment;

Class 2: Land treatment, including biodegradation of liquid or sludge discards in soils;

Class 4: Surface impoundment, including placement of liquid or sludge discards into pits, ponds or lagoons;

Class 6: Biological treatment not referred to elsewhere in this Schedule which results in final compounds or mixtures which are disposed of by means of any activity referred to in paragraphs 1. to 10. of this Schedule;

Class 7: Physico-chemical treatment not referred to elsewhere in this Schedule (including evaporation, drying and calcination) which results in final compounds or mixtures which are disposed of by means of any activity referred to in this Schedule (including evaporation, drying and calcination);

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 in a preceding paragraph of 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;

*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.

Signed on behalf of the said Agency: _____

Dated and sealed by the seal of the Agency on this day of July, 1998.

Schedules - Table of Contents

	Page No.
ACTIVITIES LICENSED	1
INTERPRETATION	2
CONDITION 1 SCOPE	6
CONDITION 2 MANAGEMENT OF THE ACTIVITY	7
CONDITION 3 NOTIFICATION AND RECORD KEEPING	10
CONDITION 4 SITE INFRASTRUCTURE	13
CONDITION 5 WASTE ACCEPTANCE AND HANDLING	18
CONDITION 6 ENVIRONMENTAL NUISANCES	20
CONDITION 7 EMISSIONS AND ENVIRONMENTAL IMPACTS	21
CONDITION 8 RESTORATION AND AFTERCARE	22
CONDITION 9 ENVIRONMENTAL MONITORING	23
CONDITION 10 CONTINGENCY ARRANGEMENTS	25
CONDITION 11 CHARGES AND FINANCIAL PROVISIONS	27
<i>SCHEDULE A Waste Activities</i>	29
<i>SCHEDULE B Content of the Environmental Management Programme</i>	31
<i>SCHEDULE C Content of the Annual Environmental Report</i>	32
<i>SCHEDULE D Recording and Reporting to the Agency</i>	33
<i>SCHEDULE E Monitoring</i>	35
<i>SCHEDULE F Specified Engineering Works</i>	43
<i>SCHEDULE G Emission Limits</i>	44

Activities Licensed

In pursuance of the powers conferred on it by the Waste Management Act, 1996, the Environmental Protection Agency (the Agency) grants this Waste Licence to Kerry County Council, County Buildings, Rathass, Tralee, County Kerry to carry on the waste activities listed below at North Kerry Landfill, Muingnaminnane, Tralee, County Kerry, subject to 11 No. conditions, as set out in the schedules attached hereto.

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

Class 5: Specially engineered landfill, including placement into lined discrete cells which are capped and isolated from one another and the environment;

Class 2: Land treatment, including biodegradation of liquid or sludge discards in soils;

Class 4: Surface impoundment, including placement of liquid or sludge discards into pits, ponds or lagoons;

Class 6: Biological treatment not referred to elsewhere in this Schedule which results in final compounds or mixtures which are disposed of by means of any activity referred to in paragraphs 1 to 10 of this Schedule;

Class 7: Physico-chemical treatment not referred to elsewhere in this Schedule (including evaporation, drying and calcination) which results in final compounds or mixtures which are disposed of by means of any activity referred to in this Schedule (including evaporation, drying and calcination);

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 in a preceding paragraph of 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).
AER	Annual Environmental Report.
Aerosol	A suspension of solid or liquid particles in a gaseous medium.
Adequate lighting	20 lux measured at ground level.
Annually	All or part of a period of twelve consecutive months.
BATNEEC	Best Available Technology Not Entailing Excessive Cost.
Bi-annually	All or part of a period of six consecutive months.
BOD	5 day Biochemical Oxygen Demand.
COD	Chemical Oxygen Demand.
Commercial waste	As defined in Section 5 (1) of the Waste Management Act 1996.
Compost	Organic matter decomposed aerobically and used as a fertiliser or soil conditioner.
Containment boom	A boom which can contain spillages and prevent these from entering drains or watercourses.
Daily	During days of the week with at least 200 measurements in a calendar year and no more than 1 measurement on any one day.
Day	Any 24 hour period.
Daytime	0800 hrs to 2200 hrs.
dB(A)	Decibels (A weighted).
DO	Dissolved Oxygen. A measure of the concentration of oxygen in a liquid, such as water or waste water, usually expressed in mg/l or % saturation.
Emission	As defined in Section 5 (1) of the Waste Management Act, 1996.
EMP	Environmental Management Plan.
Environmental Pollution	As defined in Section 5 (1) of the Waste Management Act, 1996.
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. It will be periodically reviewed and, if necessary, revised. The HWL was published as Council Decision 94/904/EC. The wastes listed in the HWL are those wastes that appear in the EWC which have been deemed to be hazardous.
Facility	Those areas defined under Condition 1.4
Fortnightly	At least 24 measurements in a calendar year with no more than one

	measurement in any one week.
GC/MS	Gas Chromatography/ Mass Spectroscopy
Hazardous Waste	As defined in the Act.
Household Waste	Household waste is waste produced within the curtilage of a building or self-contained part of a building used for the purposes of living accommodation.
Industrial waste	As defined in Section 5 (1) of the Waste Management Act, 1996.
K	Kelvin.
kPa	kilo Pascals.
Lagoon	A land area used to contain liquid, e.g. leachate collected from landfill. Lagoons may be formed in natural or artificially created depressions below surrounding ground level.
Landfill	A waste disposal facility used for the deposit of waste onto or under land.
Landfill Gas	Gases generated from the landfilled waste.
L(A)eq	Equivalent continuous sound level.
Leachate	Any liquid percolating through the deposited waste and emitted from or contained within a landfill.
Leachate Recirculation	The practice of returning leachate to the upper layers of a landfill, from which it has been abstracted, usually by direct spraying on to its surface.
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 Waste Management Act, 1996.
Liner	A natural or synthetic membrane material, used to line the base and sides of a landfill site to reduce the rates of leachate and gas emissions.
List I	As listed in the EC Directives 76/464/EEC and 80/68/EEC and amendments.
List II	As listed in the EC Directives 76/464/EEC and 80/68/EEC and amendments.

Litter	A substance or object, whether or not intended as waste (other than waste within the meaning of the Waste Management Act, 1996, which is properly consigned for disposal) that, when deposited in a place other than a litter receptacle or other place lawfully designated for the deposit, is likely to become unsightly, deleterious, nauseous or unsanitary, whether by itself or with any other such substance or object, and regardless of its size or volume or the extent of the deposit. [S.I. No. 12 of 1997, Litter Pollution Act, 1997]
Maintain	Keep in a fit state, including such regular inspection, servicing and repair as may be necessary to adequately perform its function.
Methane (CH₄)	Natural gas which is colourless, odourless, flammable gas, formed during the anaerobic decomposition of putrescible organic matter. It forms explosive mixtures in the range 5-15% methane in air (by volume). Landfill gas consists of approx. 50% methane and 50% carbon dioxide. Methane can be burned as fuel.
Monthly	At least 12 times per year, once during each calendar month.
Municipal Waste	Municipal waste as defined in Section 5 (1) of the Waste Management Act, 1996.
Night-time	2200 hrs to 0800 hrs.
Noise sensitive location	Any dwelling house, hotel or hostel, health building, educational establishment, place of worship or entertainment, or any other facility or area of high amenity which for its proper enjoyment requires the absence of noise at nuisance levels.
Non hazardous waste	Non-Hazardous Waste is any waste which is not a hazardous waste as defined in Directive 91/689/EEC.
Odour	The (unpleasant) smell of a material or collection of materials. The characteristic odour of landfill gas is due mainly to alkyl benzenes and limonene, occasionally and additionally associated with esters and organo-sulphur compounds.
ppm	Parts per million.
Putrescible waste	Waste which is readily biodegradable such as vegetable matter, green waste, etc.
Quality Assurance	Quality assurance means all those planned and systematic actions necessary to provide adequate confidence that a product or service will satisfy given requirements for quality.
Quality Control	Quality control means the operational techniques and activities that are used to fulfil requirements for quality.
Recycling	Waste recycling means the subjection of waste to any process or treatment to make it re-usable in whole or in part.
Sludge	An intimate mixture of solid and liquid.

Specified Engineering Works	Those engineering works listed in Schedule F
The Licensee	Kerry County Council.
Total Organic Carbon (TOC)	A measure of the amount of carbon present in water and wastewater comprising of a variety of organic compounds in various oxidation states. Unlike BOD or COD, TOC is independent of the oxidation state of the organic matter and does not measure other organically bound elements, such as nitrogen, hydrogen and inorganics that can contribute to the oxygen demand measured by BOD and COD.
Trade effluent	As defined in the Local Government (Water Pollution) Act , 1977.
Trigger Level	A parameter value which when achieved or exceeded requires certain actions to be taken.
Vent	Usually refers to a facility provided in a landfill to permit the escape to atmosphere of gases and vapours generated by deposited waste during biodegradation. Perforated pipes, placed laterally or vertically within the landfill, are sometimes used.
Waste	Waste is any substance or object belonging to a category of waste specified in the <i>First Schedule</i> of the Act or for the time being included in the <i>European Waste Catalogue (EWC)</i> which the holder discards, or intends to or is required to discard, and anything which is discarded or otherwise dealt with as if it were a waste is presumed to be a waste unless the contrary is proved.
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.
Weekly	During all weeks of plant operation, and in the case of emissions, when emissions are taking place; with no more than one measurement in any one week.
White Goods	A general term used to describe discarded equipment and appliances, usually made from sheet steel, which incorporate a large void space. Typical examples of 'white goods' include refrigerators, freezers, cookers, washing machines. The term has evolved because, in the past, these goods were traditionally white.
Working Day	08:30 to 17:00 Monday to Friday inclusive, 09:00 to 13:00 on Saturdays.
Working Face	The area of the site in which waste other than cover material is being deposited.
WWTP	Waste Water Treatment Plant.

CONDITIONS

CONDITION 1 SCOPE

- 1.1 The extent of the waste recovery and disposal activities authorised by this licence is listed and described in *Schedule A: Waste Activities*.
- 1.2 Hazardous waste shall not be accepted at the facility.
- 1.3 The activities shall be controlled, operated and maintained in accordance with the conditions attaching to this licence. All programmes and plans required to be carried out under the terms of this licence, become part of this licence.
- 1.4 The activities shall be restricted to the area of land outlined in red on the Site Plan, Figure 7, of Attachment B.2 of the waste licence application. Any reference in this licence to "facility" shall mean the area thus outlined in red.
- 1.5 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.
- 1.6 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:
- (i) 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; and,
 - (ii) 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.

When the notice has been complied with, the licensee shall provide written confirmation that the requirements of the notice have been attended to. 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 The licensee shall establish and maintain an Environmental Management System (EMS) which shall fulfil the requirements of this licence within a time to be agreed by the Agency. The EMS shall describe, assess and review the design, construction, operation, monitoring, management and maintenance of the facility and shall include as a minimum those elements specified in the Conditions 2.2 to 2.9 below:
- 2.2 Schedule of Environmental Objectives and Targets
- 2.2.1 The licensee shall prepare a schedule of Environmental Objectives and Targets. The schedule shall include time frames for the achievement of set targets. The schedule shall address a five year period as a minimum. The schedule shall be prepared to the satisfaction of the Agency and shall be submitted to the Agency within four months of date of grant of this licence. The schedule shall be reviewed annually and amendments thereto notified to the Agency for agreement as part of the Annual Environmental Report (AER) (See also Condition 2.9).
- 2.2.2 The licensee shall have regard to those matters listed in *Schedule C Content of Annual Environmental Report* when establishing the schedule of Objectives and Targets.
- 2.3 Environmental Management Programme (EMP)
- 2.3.1 The licensee shall, not later than nine months from the date of grant of this licence, submit to the Agency for agreement an EMP, including a time schedule, for achieving objectives and targets. Once agreed the EMP shall be established and maintained by the licensee. It shall include, as a minimum, the information specified in *Schedule B: Content of the Environmental Management Programme*. The EMP shall be reviewed annually and amendments thereto notified to the Agency for agreement as part of the Annual Environmental Report (AER) (Condition 2.9).
- 2.3.2 A report on the programme, including the success in meeting agreed targets, shall be prepared and submitted to the Agency as part of the AER. Such reports shall be retained on-site for a period of not less than seven years and shall be available for inspection by authorised persons of the Agency.
- 2.4 Mass Balance of Specified Substances (MBSS)
- 2.4.1 The licensee shall prepare an MBSS as agreed in writing with the Agency. Substances to be included in the MBSS shall be agreed with the Agency each year by reference to the list specified in the AER guidance note to be published by the Agency. The MBSS shall be prepared in accordance with any relevant guidelines issued by the Agency and shall be submitted as part of the AER.
- 2.4.2 The licensee shall, not later than six months from the date of grant of this licence and thereafter as part of the AER, agree with the Agency the list of substances to be included in the MBSS, and the methodology to be used in their determination.
- 2.5 Documentation

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- 2.5.1 The licensee shall establish and maintain an environmental management documentation system which shall be to the satisfaction of the Agency.
- 2.5.2 The licensee shall issue a copy of this licence to all relevant personnel whose duties relate to any condition of this licence.
- 2.6 Corrective Action
- 2.6.1 The licensee shall establish procedures to ensure that corrective action is taken should the specified requirements of this licence not be fulfilled. The responsibility and authority for initiating further investigation and corrective action in the event of a reported non-conformity with this licence shall be defined.
- 2.7 Awareness and Training
- 2.7.1 The licensee shall establish and maintain procedures for identifying training needs, and for providing appropriate training, for all personnel whose work can have a significant effect upon the environment. Appropriate records of training shall be maintained.
- 2.7.2 Personnel performing specifically assigned tasks shall be qualified on the basis of appropriate education, training and/or experience, as required.
- 2.8 Responsibilities
- 2.8.1 The operator 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.
- 2.8.2 Within three months of the date of grant of this licence, the licensee shall submit details of the management structure of the facility, including the following information, for the agreement of the Agency:
- (i) the names of all persons who are to provide the management and supervision of the waste activities authorised by the licence;
 - (ii) details of the responsibilities for each individual named under (i) above;
 - (iii) details of the relevant experience, competence and qualifications held by each of the persons nominated under (i) above; and,
 - (iv) contingency arrangement for the absences of the named persons from the facility.
- This information shall take into account the need for adequate staff coverage in relation to absences from work due to matters such as annual leave, illness, and other absences.
- 2.9 Communications
- 2.9.1 The licensee shall put in place a programme to ensure that members of the public can obtain information concerning the environmental performance of the licensee at all reasonable times. This programme shall be submitted for agreement to the Agency within six months of the date of grant of this licence.
- 2.9.2 The licensee shall submit to the Agency, eighteen months from the date of grant of this licence, and each calendar year thereafter, an AER which shall be to the satisfaction of the Agency. This report 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 guidelines issued by the Agency.

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:
- 3.1.1 any emission which does not comply with the requirements of this licence;
 - 3.1.2 any trigger level specified in this licence or in the EMP which is attained or exceeded;
 - 3.1.3 any malfunction of any environmental control system;
 - 3.1.4 any occurrence with the potential for environmental pollution; and,
 - 3.1.5 any emergency.
- 3.2 The written record shall include the following:
- 3.2.1 date and time of the incident;
 - 3.2.2 a description of the incident;
 - 3.2.3 an evaluation of the environmental pollution, if any, caused by the incident;
 - 3.2.4 steps taken to minimise the emissions/malfunction;
 - 3.2.5 steps taken to avoid recurrence; and,
 - 3.2.6 any other remedial action undertaken.
- 3.3 Unless otherwise instructed in writing by the Agency, the licensee shall notify the Agency by both telephone and in writing (by facsimile, if available) as soon as practicable and in any case not later than 10.00am the following working day after the occurrence of any of the incidences detailed in Condition 3.1.
- 3.4 The notification of the incident shall include the relevant written record, as far as is practicable.
- 3.5 Should any further actions be taken after the date of notification, as a result of such an incident occurring, details of those actions shall be forwarded to the Agency as soon as practicable and at least within ten days after the initiation of those actions.
- 3.6 All notifications, records, and reports as set out in *Schedule D: Recording and Reporting to the Agency*, shall be sent to the Agency's headquarters unless an alternative location is agreed in writing with the Agency. The format of all notifications, records and reports shall be to the satisfaction of the Agency. One original and three copies shall be submitted.
- 3.7 In the event of any incident as set out in Condition 3.1 which relates to discharges to surface water, or which affects the interests of the Local Authority, the licensee shall notify the South Western and the Shannon Regional Fishery Boards and/or the Sanitary Authority, as appropriate, 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 in writing with the Agency, at least fourteen days notice must be given to the Agency of the following events:

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- 3.8.1 the cessation of waste activities at the facility for a period in excess of 28 days;
- 3.8.2 the re-commencement of waste activities at the facility following a period of cessation referred to at (i) above.
- 3.9 Unless otherwise agreed in writing with the Agency, copies of the results of all monitoring required in *Schedule E: Monitoring* and a written interpretation of those results setting out their significance shall be submitted to the Agency quarterly or as otherwise agreed in writing by the Agency. The format in which the results and the interpretation are submitted shall be in accordance with any written guidelines issued by the Agency.
- 3.10 Provision shall be made for the transfer of environmental information, in relation to this licence, to the Agency's computer system, as may be requested in writing by the Agency. Such transfer shall be carried out within the timescale specified in writing by the Agency.
- 3.11 All written reports submitted to the Agency shall be certified accurate and representative by the licensee.
- 3.12 Unless otherwise agreed in writing with the Agency, all written records, required to be maintained under this licence, shall be retained by the licensee until the licensee receives notice from the Agency in accordance with Section 48(8) of the Waste Management Act 1996. The licensee shall then transfer those records, specified by the Agency, or copies of them, to the Agency within a time and in the manner specified by the Agency.
- 3.13 Unless otherwise agreed in writing with the Agency, copies of all written records referred to in this licence shall be maintained in the facility office shown in Drawing No. 97-01701-1 Revision F submitted in Section D of the further information submitted by the licensee on the 21 November 1997 in relation to the waste licence application (hereafter referred to as Drawing No. 97-01701-1 Revision F of the waste licence application), and referred to therein as the Site Office, and shall be made available to the Agency at all reasonable times.
- 3.14 Copies of any written records referred to in this licence shall be provided to the Agency upon written request, within the time specified in writing by the Agency.
- 3.15 The following documents shall also be kept at the facility office:
- 3.15.1 the current waste licence;
 - 3.15.2 any previous waste licence in respect of this facility;
 - 3.15.3 the current EMP;
 - 3.15.4 the previous year's AER for the facility;
 - 3.15.5 all written procedures produced by the licensee which relate to the licensed activities.
- 3.16 A written record shall be maintained for each load of waste arriving at the facility, other than those being delivered to the Public Tipping Area/Recycling Facilities, The following shall be recorded:
- 3.16.1 the name of the carrier;
 - 3.16.2 the vehicle registration number;
 - 3.16.3 the name of the producer(s)/collector(s) of the waste as appropriate;

- 3.16.4 a description of the waste;
 - 3.16.5 the quantity of the waste, recorded in tonnes;
 - 3.16.6 the name of the person checking the load; and,
 - 3.16.7 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 shall be recorded.
- 3.17 A written record shall be kept for each consignment of leachate removed from the facility. The following shall be recorded:
- 3.17.1 the name of the carrier;
 - 3.17.2 the date and time of removal of leachate from the facility;
 - 3.17.3 the volume of leachate in cubic metres removed from the facility;
 - 3.17.4 the name and address of the Waste Water Treatment Plant (WWTP) to which the leachate was transported;
 - 3.17.5 any incidents of spillage of leachate during its removal.
- 3.18 The licensee shall maintain a written record of all complaints of an environmental nature related to the operation of the activity. Each such record shall give details of the following:
- 3.18.1 date and time of the complaint;
 - 3.18.2 the name of the complainant;
 - 3.18.3 details of the nature of the complaint;
 - 3.18.4 actions taken on foot of the complaint and the results of such actions; and,
 - 3.18.5 the response made to each complainant.
- 3.19 The licensee shall, within six months of the date of grant of this licence, establish and maintain an information and record keeping system to ensure that members of the public can obtain information, at all reasonable times, concerning the environmental performance of the facility. A report on the system shall be forwarded for the agreement of the Agency within six months of the date of grant of this licence.

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 All infrastructure referred to in this licence shall be established prior to the commencement of the licensed activities or as agreed in writing with the Agency.
- 4.2 Site Notice Board
- 4.2.1 Within six months of the date of grant of this licence, an identification board shall be provided and maintained 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 1200mm by 750 mm.
- 4.2.2 The board shall clearly show:
- (i) the name and telephone number of the facility;
 - (ii) the normal hours of opening;
 - (iii) the name, address and telephone number of the licence holder;
 - (iv) an emergency out of hours contact telephone number;
 - (v) the name, address and telephone number of the operator of the facility;
 - (vi) the licence reference number.
- 4.3 Site Security
- 4.3.1 A 2.3m high security fence and appropriate gates shall be provided according to the Drawing No. 97-01701-1 Revision F and Drawing No. 97-01701-2 Revision B, of Volume 3 of the waste licence application.
- 4.3.2 Any defect in the gates and/or fencing shall be remedied as follows:
- (i) a temporary repair shall be made by the end of the working day; and,
 - (ii) a repair to the standard of the original fence shall be undertaken within three working days or as otherwise agreed in writing with the Agency.
- 4.3.3 Gates shall be kept locked shut when the facility is unsupervised.
- 4.4 Site Roads
- 4.4.1 A primary access road shall be provided and maintained to the specification described in Attachment D.6 of the waste licence application. The access road shall be located as shown in Drawing No. 97-01701-2 Revision B of the waste licence application.
- 4.4.2 An access road to the public tipping area/ and recycling facilities shall be provided and maintained to the specification described in Attachment D.6 of the waste licence application. The access road shall be located as shown in Drawing No. 97-01701-2 Revision B of the waste licence application.
- 4.4.3 Internal site haul roads and access roads to cells shall be provided and maintained to the specification described in Attachment D.6 of the waste licence application.

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- 4.5 An office shall be provided and maintained on the facility, at the location shown in Drawing No. 97-01701-1 Revision F of the waste licence application and referred to therein as the Site Office. The office shall be constructed and maintained in a manner suitable for the processing and storing of documentation.
- 4.6 A working telephone and facsimile machine shall be provided and maintained at the facility.
- 4.7 A Waste Inspection Area shall be provided and maintained at the facility, at the location shown in Drawing No. 97-01701-1 Revision F of the waste licence application and referred to therein as Inspection Area. This area shall be constructed and maintained in a manner suitable for the inspection of waste.
- 4.8 A Public Tipping Area shall be provided and maintained at the facility, at the location shown in Drawing No. 97-01701-1 Revision F of the waste licence application and referred to therein as Public Tipping Area/Recycling Facilities.
- 4.9 The Waste Inspection Area and the Public Tipping Area/Recycling Facilities referred to in conditions 4.7 and 4.8 shall:
- be constructed with a hard impervious base graded to a longitudinal cross-sectional fall;
 - be contained by an impervious bund not less than 100mm high; and,
 - drain only to a sump or to the leachate lagoon.
- 4.10 An appropriate range of recycling skips/containers shall be provided at the Recycling Facilities shown on Drawing No. 97-01701-1 Revision F of the waste licence application.
- 4.11 A weighbridge shall be provided at the location shown in Drawing No. 97-01701-1 Revision F of the waste licence application and referred to therein as Weigh Bridge and shall be maintained and calibrated in such condition as to accurately measure the weight of all vehicles using it.
- 4.12 Wheelwash
- 4.12.1 Wheelwash facilities shall be provided and maintained at the location and to the specification as shown in Drawing No. 97-01701-2 Revision B of the waste licence application.
- 4.12.2 The wheelwash facility shall be inspected on a daily basis and drained as required. Water drained from the wheelwash shall be discharged to the leachate storage lagoon. Accumulated silt shall be removed and disposed of at the working face as required.
- 4.13 Site lighting and power supplies shall be established and maintained as described in Attachment D.6 of the waste licence application. Adequate lighting must be provided and in use during the operation of the facility in hours of darkness.
- 4.14 A septic tank and percolation system shall be provided and maintained at the facility at the location as shown in Drawing No. 97-01701-1 Revision F of the waste licence application.
- 4.15 Fuel Storage
- 4.15.1 Within six months of the date of grant of this licence the applicant shall provide bounded fuel storage area(s) at a location or locations to be agreed in writing in

advance with the Agency. Unless contained in mobile plant at the facility, fuels shall be stored at these agreed locations.

- 4.15.2 Prior to the construction of the bunded fuel storage area fuel shall be stored in a bunded tank as specified in Attachment D.6 of the waste licence application.
 - 4.15.3 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 110% of the capacity of the largest tank or drum within the bunded area.
 - 4.15.4 Drainage from bunded areas shall be diverted for collection and safe disposal.
 - 4.15.5 All inlets, outlets, vent pipes, valves and gauges must be within the bunded area.
 - 4.15.6 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 from the date of grant of this licence. This testing shall be carried out at least once every three years thereafter. A written record of such tests and any maintenance or remedial work arising from them shall be maintained by the licensee.
 - 4.15.7 All tanks and containers shall be labelled to clearly indicate their contents.
- 4.16 Specified Engineering Works
- 4.16.1 No specified engineering works as defined in *Schedule F: Specified Engineering Works*, shall be undertaken without the prior written agreement of the Agency.
 - 4.16.2 All specified engineering works shall be supervised by a competent person(s) agreed in writing in advance by the Agency. A person subject to a such an agreement shall be continuously present at all times during which relevant works are being undertaken.
 - 4.16.3 Following the completion of all specified engineering works, a construction quality assurance validation report shall be submitted to the Agency. The validation report shall include the following information
 - (i) a description of the works;
 - (ii) as-built drawings of the works;
 - (iii) records and results of all tests carried out (including failures);
 - (iv) where relevant a drawing and sections showing the location of all samples and tests carried out;
 - (v) daily records sheets/diary;
 - (vi) name(s) of contractor(s)/individual(s) responsible for undertaking the engineering works;
 - (vii) name(s) of individual(s) responsible for supervision of works and for quality assurance validation of works;
 - (viii) records of any problems and the remedial works carried out; and

(ix) any other information requested in writing by the Agency.

4.16.4 Development of Phase 3 and all future development phases of the landfill shall be carried out in accordance with the specifications set out in Attachment D and Drawing No. 97-01701-3 Revision B and Drawing No. 97-01701-5 Revision B of the waste licence application and as described in Section D.1 of the further information submitted to the Agency on 21 November 1997.

4.16.5 A construction quality assurance validation report as required under Condition 4.16.3 shall be submitted to the Agency for the Phase 3 development within six months from the date of grant of this licence.

4.17 Landfill Gas Management

4.17.1 Landfill gas generated at the site shall be vented to the atmosphere in accordance with the landfill gas management scheme set down in Attachment D.4 and shown in Drawing No. 97-01701-3 Revision B of the waste licence application.

4.17.2 All gas venting wells, pipework, valves, pumps and flares that form part of the landfill gas management scheme shall be maintained in a safe and fully operational manner.

4.17.3 Within twelve months of the date of grant of this licence, the licensee shall submit details of an active landfill gas control system, incorporating flaring, to the Agency for agreement. The agreed system shall be installed within such timescale as may be specified in writing by the Agency.

4.17.4 The licensee shall submit proposals to the Agency for agreement for the utilisation of landfill gas at the facility within a timescale to be agreed by the Agency.

4.18 Leachate Management

4.18.1 Leachate generated within the facility shall be collected, stored and disposed of in accordance with the leachate management scheme set down in Attachment D.3 and shown in Drawing No. 97-01701-3 Revision B and Drawing No. 97-01701-5 Revision B of the waste licence application.

4.18.2 Within nine months of the date of grant of this licence, the licensee shall submit a report on the capacity and the integrity of the leachate storage lagoon. This report shall also include leachate balance calculations for the ongoing operation of the site.

4.18.3 Unless agreed otherwise in writing in advance with the Agency, leachate stored in the leachate storage lagoon shall be periodically removed from the facility for treatment at either the Castleisland WWTP or the Ballybunion WWTP. The frequency of removal shall be such that a minimum freeboard of 0.5 m is maintained at all times in the leachate storage lagoon.

4.18.4 Removal of leachate from the leachate storage lagoon shall be in accordance with the Operational Procedure for Handling of Leachate as outlined in Section D.3.3- Off -site Leachate Disposal submitted by the licensee on 21 November 1997 in relation to the waste licence application.

4.18.5 Leachate levels within the filled waste shall not exceed a level of 1 metre over the base of the liner as shown in Drawing No. 97-01701-3 Revision B of the waste licence application.

4.18.6 The licensee shall submit details of the operation and maintenance of the leachate recirculation system to the Agency for agreement within nine months of the date of grant of this licence.

4.18.7 Unless agreed otherwise in writing in advance with the Agency, leachate recirculation shall only be undertaken beneath the capped cells in the manner as described in Section D.3 - Leachate Management -Leachate Recirculation of the further information submitted by the licensee on the 21 November 1997 in relation to the licence.

4.19 Capping

4.19.1 The facility shall be subject to the temporary and permanent capping works shown in Drawing No. 97-01701-5 Revision B of the waste licence application.

Reason: To provide for the protection of the environment

CONDITION 5 WASTE ACCEPTANCE AND HANDLING

- 5.1 Non hazardous waste only shall be accepted at the facility.
- 5.2 Liquid wastes (other than waste oils at the Recycling Facilities), sludges and/ or animal wastes shall not be accepted at the facility
- 5.3 Where waste types are not permitted to be accepted at the facility, then those waste types shall not be accepted whether or not they have been packaged, placed in other containers or waste materials, or pre-treated by any form of solidification or encapsulation.
- 5.4 Unless agreed in writing in advance with the Agency, the following wastes only shall be accepted at the Recycling Facilities;
- Paper and cardboard, Glass, Aluminium (Food cans and beverage cans), Waste Oils, Batteries, White goods (fridges, cookers, washing machines etc.)
- 5.5 In particular, putrescible waste shall not be accepted at the Recycling Facilities
- 5.6 The quantity of wastes to be accepted at the facility, excluding those accepted at the Recycling Facilities, shall not exceed 40,000 tonnes per annum, unless otherwise agreed in writing with the Agency.
- 5.7 Waste shall not be deposited in any part of any engineered cell until a leachate collection system has been installed to the specifications set down in the Attachment D.3 of the waste licence application. The leachate collection system shall be maintained to the specification set out in Attachment D.3 of the waste licence application.
- 5.8 Scavenging shall not be permitted at the facility.
- 5.9 Waste shall only be accepted at the facility between the hours of 08:30 and 17:00 Monday to Friday inclusive and from 09:00 to 13:00 on Saturdays.
- 5.10 Within six months of the date of grant of this licence, the operator shall forward to the Agency procedures for the testing, characterisation and acceptance of waste. These procedures shall be revised in accordance with any written guidelines issued by the Agency, within such timescale as may be defined by the Agency.
- 5.11 Vehicles shall enter and leave the facility in the manner described in Attachment D.6 of the waste licence application and shall adhere to the internal traffic control layout as shown in Drawing No. 97-01701-10 Revision A.
- 5.12 Each load of waste arriving at the facility shall be visually inspected prior to compaction at the working face. Any waste deemed unsuitable and/or in contravention of this Waste Licence shall be separated and removed immediately. Such waste should be disposed of (or recovered) at an appropriate alternative facility.
- 5.13 Unless subject to the prior written agreement of the Agency the following shall apply at the site:
- (i) only one working face shall exist at the facility at any one time for the deposit of waste other than cover or restoration materials; and,
 - (ii) the working face shall be no more than 2.5 metres deep after compaction, no more than 25 metres wide and have a slope no greater than 1 in 3.

- 5.14 Unless subject to the prior written agreement by the Agency, cover material of the type described in Attachment E - Environmental Nuisances of the waste licence application shall be placed on the deposited waste progressively throughout each day, or at a minimum, at the end of the day in the manner set down in Attachment E. Any cover material eroded, washed off or otherwise removed shall be replaced by the end of the working day.
- 5.15 A steel wheeled compactor or other such vehicle as agreed in writing with the Agency shall be used for compacting all waste other than that used for restoration or construction purposes.
- 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 Unless subject to prior written agreement by the Agency, wastes once deposited and covered shall not be excavated, disturbed or otherwise picked over.
- 5.18 A ban on smoking and all ignition sources, other than vehicles and the flaring or other combustion of landfill gas as agreed in writing in advance with the Agency, shall be imposed on all areas of the site other than the Site Office as shown on Drawing No. 97-01701-1 Revision F of the waste licence application.
- 5.19 Skips containing waste in the Public Tipping Area shall be emptied as necessary and in any event by the end of the week.

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 for nuisances caused by vermin 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 as described in Attachment E.5 of the waste licence application 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 such waste is discovered and in any event by 10:00am of the next working day.
- 6.6 The licensee shall ensure that all open-topped vehicles delivering waste to the facility are suitably netted or otherwise covered.
- 6.7 Skips containing waste in the Public Tipping Area shall be covered prior to removal for disposal.
- 6.8 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.
- 6.9 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.
- 6.10 The precautions set out in Attachment E.10: Vermin Control of the further information submitted by the licensee on 21 November 1997 in relation to the waste licence application shall be carried out to prevent, control and eradicate infestations of insects, pests and vermin.
- 6.11 The precautions set out in Attachment E.2 of the waste licence application shall be applied to ensure birds do not give rise to nuisance at the facility or the immediate environment of the facility. The use of gas operated bird scaring devices shall be minimised and in any event shall not be used outside of the hours of operation of the facility as specified in Condition 5.9.

Reason: To provide for the control of nuisances

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 Immediate steps shall be taken to mitigate the effects of an emission which does not comply with the requirements of this licence. Measures shall be put in place to prevent further such emissions.
- 7.3 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.
- 7.4 Emissions to atmosphere
- 7.4.1 Dust deposition arising from the facility shall not exceed the level of 10mg/m²/h as measured at or beyond the boundary of the facility as shown on Drawing No. 97-01701- 1 Revision F of the waste licence application.
- 7.4.2 There shall be no clearly audible tonal component in the noise emissions from the activity at the facility boundary.
- 7.4.3 Should landfill gas be detected in any building or service at concentrations which exceed those stipulated in (i) and (ii) below, then, the contingency arrangements specified in Condition 10.8 should be put in place.
- (i) 20% LEL(1% v/v) CH₄;
- (ii) 1.5% v/v CO₂.
- 7.5 Emissions to Surface Water
- 7.5.1 An ongoing management programme for control of surface water run off from the facility during construction, operation and restoration shall be submitted to the Agency for agreement within twelve months of the date of grant of this licence.
- 7.5.2 Surface water discharge from the facility shall only be made at the locations shown in Drawing No. 97-01701-1 Revision F of the waste licence application and shall be referred to as SW1 and SW2 respectively.

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

CONDITION 8 RESTORATION AND AFTERCARE

- 8.1 A Restoration and Aftercare Plan for the facility shall be submitted to the Agency for agreement within twelve months of the date of grant of this licence. The plan shall be in accordance with any written guidelines issued by the Agency. It shall be updated annually and proposed amendments thereto notified to the Agency for agreement as part of the AER.
- 8.2 Until final restoration, completed areas of the landfill shall be profiled so that no depressions exist in which water may accumulate.
- 8.3 The final ground levels shall not exceed those shown in Drawing No. 97-01701 -6 Revision B of the waste licence application.
- 8.4 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. This metre of cover material shall be subject to minimal compaction.
- 8.5 All restoration and landscaping shall be maintained in accordance to the Restoration and Aftercare Plan, referred to in Condition 8.1, and any additional guidance issued by the Agency and notified in writing to the licensee.

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 frequencies as set out in *Schedule E: Monitoring* and as specified in the conditions of this licence.
- 9.2 The licensee shall within three months of the date of grant of this licence, submit to the Agency for agreement monitoring proposals to detect off-site migration of landfill gas.
- 9.3 The licensee shall within three months of the grant of this licence, submit to the Agency for agreement noise monitoring proposals for the nearest noise sensitive location. Such proposals shall address the establishment of noise levels(day time and night time) at the proposed monitoring locations during and outside of normal operations at the facility.
- 9.4 The licensee shall, submit to the Agency for agreement monitoring proposals for biological assessment of the Lee and Smearlagh catchments immediately upstream and downstream of the facility.
- 9.5 The licensee shall within three months of the date of grant of this licence, submit to the Agency for agreement proposals for the establishment of a meteorological station to facilitate the monitoring required under *Schedule E.5 Meteorological Monitoring*. A Drawing shall be provided showing the location of the proposed meteorological station.
- 9.6 The licensee shall within six months of the date of grant of this licence, submit to the Agency a Drawing showing all environmental monitoring locations with site specific coded reference numbers and twelve figure grid references for each monitoring location.
- 9.7 The licensee shall provide safe and permanent access to all the sampling and monitoring points.
- 9.8 Monitoring and analysis equipment shall be operated and maintained so that all monitoring results accurately reflect any emission or discharge or environmental parameter.
- 9.9 The licensee shall amend the frequency, locations, methods and scope of monitoring, sampling and analyses upon the written instruction of the Agency. Such alterations shall occur within the timescale nominated by the Agency.
- 9.10 The licensee may apply in writing to the Agency to amend the frequency, locations, methods and scope of monitoring, sampling and analyses. Proposed amendments shall be carried out only in the event of the advance written agreement of the Agency.
- 9.11 Unless otherwise agreed in writing with the Agency, a written record shall be kept of the names, position, qualifications and a summary of relevant experience of all persons who carry out all sampling and monitoring and who carry out the interpretation of the results of such sampling and monitoring.
- 9.12 All monitoring equipment required under this licence shall be calibrated and/or maintained when in use, in accordance with the manufacturer's instructions (if any) or as otherwise agreed by the Agency in writing.
- 9.13 All automatic monitors and samplers shall be functioning at all times (except during maintenance and calibration) when the activity is being carried on unless alternative sampling or monitoring arrangements have been agreed in writing by the Agency for a limited period. In the event of the malfunction of any continuous monitor, the licensee shall contact the Agency as soon as practicable, and alternative sampling and monitoring

facilities shall be put in place. Prior written agreement for the use of alternative equipment, other than in emergency situations, shall be obtained from the Agency.

- 9.14 The licensee shall install on all emission points such sampling points or equipment, including any data-logging or other electronic communication equipment, as may be required by the Agency. All such equipment shall be consistent with the safe operation of all sampling and monitoring systems.
- 9.15 The licensee shall maintain all sampling and monitoring points so that they may be used for the representative sampling and monitoring of emissions from the facility.
- 9.16 The licensee shall carry out such further investigations and monitoring of the facility as required by the Agency. The scope, detail and programme, including report structure and reporting schedule, for any such investigations and monitoring shall be in accordance with any written instructions issued by the Agency.
- 9.17 A site survey and void space survey shall be carried out within twelve 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.
- 9.18 A copy of all monitoring results shall be available at the facility for examination by any interested party.

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 six months of the date of grant of this licence, submit a written Emergency Response Procedure (ERP) to the Agency. The ERP shall address any emergency situation which may originate on the facility and shall include provision for minimising the effects of any emergency on the environment. Following the written agreement of the Agency, the ERP shall be put in place within three months.
- 10.2 The licensee shall have in storage an adequate supply of containment booms and 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.
- 10.3 All significant spillages, including all spillages of greater than 100 litres, other than water, occurring at the facility shall be treated as an emergency and immediately cleaned up and dealt with so as to alleviate their effects.
- 10.4 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.
- 10.5 The licensee shall carry out risk assessments to determine the requirements at the facility for fire fighting and fire water retention facilities. This assessment shall include an examination of the existing arrangements for storage of fire water and an investigation into the feasibility of automatic diversion of surface water to a retention facility. The assessment shall have regard to any guidelines issued by the Agency with regard to provision of fire water retention facilities. The Chief Fire Officer of Kerry County Council shall be consulted by the licensee during this assessment. The licensee shall submit the assessment and a report to the Agency on the findings and recommendations of the assessment within six months from the date of grant of this licence
- 10.6 The licensee shall carry out an assessment to determine if the activity should have a retention facility for surface water at the facility. This shall include an assessment of the current arrangements for surface water management at the facility and the potential risk of pollution of the Lee and Smearlagh rivers. The licensee shall submit the assessment and a report to the Agency on the findings and recommendations of the assessment within twelve months from the date of grant of this licence.
- 10.7 In the event that a significant risk is found to exist for the release of contaminated fire-water and/or surface drainage, the licensee shall, based on the findings of the risk assessments prepare and implement, with the agreement of the Agency, a suitable risk management programme. The risk management programme shall be fully implemented within the timescale as notified in writing by the Agency.
- 10.8 In the event that any monitoring, sampling or observations made indicate that contamination has, or may have, taken place, the licensee shall treat such an event as an incident, and shall:
 - (i) carry out an immediate investigation to identify the source of the contamination;
 - (ii) once identified, shall isolate that source;
 - (iii) put in place appropriate measures to prevent further contamination;
 - (iv) put in place measures to minimise and mitigate where necessary the effects of any contamination on the environment; and

- (v) consider the implications of the contamination in relation to the ongoing operation of the facility and take appropriate 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 £12,594 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 1999 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 1998, the licensee shall pay a pro rata amount from the date of this licence to December 31 1998. 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 due to an incident occurring on or adjacent to the facility and associated with the facility, 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 complying with the Restoration and Aftercare Plan required by Condition 8.1. The type of fund and means of its release/recovery shall be agreed in writing by the Agency prior to its establishment.
- 11.2.2 The fund shall be maintained in an amount always sufficient to underwrite the current Restoration and Aftercare Plan.
- 11.2.3 The licensee shall revise the cost of aftercare and restoration 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 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 Activities

Activities authorised by the licence shall be restricted to those described below.

WASTE MANAGEMENT ACT, 1996: THIRD SCHEDULE <small>Note 1</small>	
Class 2.	<p>Land treatment, including biodegradation of liquid or sludge discards in soils:</p> <p>This activity is limited to the landspreading of leachate generated at the site.</p>
Class 4.	<p>Surface impoundment, including placement of liquid or sludge discards into pits, ponds or lagoons:</p> <p>This activity is limited to the storage of leachate in the leachate storage lagoon, fire water and surface water at the facility.</p>
Class 5.	<p>Specially engineered landfill, including placement into lined discrete cells which are capped and isolated from one another and the environment:</p> <p>This activity is limited to the disposal of waste at an annual rate not exceeding 40,000m³.</p>
Class 6	<p>Biological treatment not referred to elsewhere in this Schedule which results in final compounds or mixtures which are disposed of by means of any activity referred to in paragraphs 1 to 10 of this Schedule:</p> <p>This activity is limited to the disposal of waste arising from composting carried out in accordance with Class 11.</p>
Class 7.	<p>Physico-chemical treatment not referred to elsewhere in this Schedule (including evaporation, drying and calcination) which results in final compounds or mixtures which are disposed of by means of any activity referred to in paragraphs 1 to 10 of this Schedule (including evaporation, drying and calcination):</p> <p>This activity is limited to the pre-treatment of leachate by aeration or chemical precipitation or other physico-chemical means, at the facility, subsequent to prior approval by the Agency.</p>
Class 11.	<p>Blending or mixture prior to submission to any activity referred to in a preceding paragraph of this Schedule:</p> <p>This activity is limited to the trial composting of wastes accepted at the facility subject to a limit of 1000m³ at any one time prior to deposition.</p>
Class 12.	<p>Repackaging prior to submission to any activity referred to in a preceding paragraph of this Schedule:</p> <p>This activity is limited to the repackaging or baling of materials deposited in the recycling facility prior to deposition.</p>
Class 13.	<p>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:</p> <p>This activity is limited to the storage of materials deposited in the recycling facility prior to deposition.</p>

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 the trial composting of wastes accepted subject to a limit of 1000m ³ at any one time at the facility, subsequent to prior written approval by the Agency.
Class 3.	Recycling or reclamation of metals and metal compounds: This activity is limited to can recycling at the recycling facilities as shown in Drawing No.1 (97-01701-1) Revision F.
Class 4.	Recycling or reclamation of other inorganic materials: This activity is limited to glass recycling at the recycling facilities as shown in Drawing No.1 (97-01701-1) Revision F.
Class 9.	Use of any waste principally as a fuel or other means to generate energy. This activity is limited to the utilisation of landfill gas to generate electricity at the facility, subsequent to the prior written approval of the Agency.
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 trial composting of wastes accepted at the facility subject to a limit of 1000m ³ at any one time prior to landspreading 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: This activity is limited to the use of waste at the site as landfill cover material following the composting on site of the waste.
Class 13.	Storage of waste intended for submission to any activity referred to in a preceding paragraph of this Schedule, other than temporary storage, pending collection, on the premises where such waste is produced: This activity is limited to the storage of paper or woodchips prior to use as a bulking agent in the composting on site of waste.

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.

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SCHEDULE C Content of the Annual Environmental Report

Annual Environmental Report Content

Reporting Period.

Details of activity.

Volume and Composition of waste received during the year.

Total accumulated quantities of waste deposited.

Calculated remaining capacity of the site.

Year in which final capacity is expected to be reached.

Area occupied by waste.

Methods of deposition of waste.

Summary report on emissions (Certified results/data sheets to be attached as Appendices)

Summary of results and interpretations of environmental monitoring.

Resource consumption summary.

Proposed development of the site and timescale of such development.

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

Report on development works undertaken during the reporting period.

Proposed development works to be undertaken during the coming year.

Progress on restoration of completed cells/ phases.

Site survey showing existing levels of the site at a maximum of two months prior to the submission of the Report.

Estimated Annual and Cumulative Quantity of landfill gas emitted from the site.

Monthly Water Balance calculation and interpretation.

Meteorological Report

Environmental Management Programme - Proposal

Environmental Management Programme - Report

Mass Balance of Specified Substances - Proposal

Mass Balance of Specified Substances - 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 operation of the facility.

Tank, pipeline and bund testing and inspection report.

Reported incidents summary.

Complaints summary.

Report on financial provision made under this licence.

Report on management and staffing structure of the facility.

Report on programme for public information.

SCHEDULE D Recording and Reporting to the Agency

Table D(i) Recurring Reports

Report	Reporting Frequency	Report Submission Date
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 levels and Composition	Quarterly	Ten days after end of the quarter being reported on.
Monitoring of Leachate Volumes produced and transported off-site	Quarterly	Ten days after end of the quarter being reported on.
Meteorological Monitoring	Annually	One month after end of the year being reported on.
Noise Monitoring	Annually	One month after end of the year being reported on.
Dust Monitoring	Annually	One month after end of the year being reported on.
Complaints (where these arise)	Monthly	Within ten (10) days of the end of the month being reported on.
Site Survey	Annually	One month after end of the year being reported on.
Annual Environment Report (AER)	Annually	Eighteen months from the date of grant of licence and two months after the end of each year thereafter.
Bund integrity assessment	Every three years	Six months from the date of grant of licence and one month after end of the three year being reported on.
Environmental Management Programme Updates	Annually	One month after the end of the year reported on.
Construction Quality Assurance	As required by the EPA	As required by the EPA.

3/4 3/4 3/4 3/4 3/4 3/4 3/4 3/4 3/4 3/4 3/4 3/4

Table D(ii) Once-off Reports

Report	Report Submission Date
Management and manning levels	Within three months of the date of grant of licence.
System for public information.	Within six months of the date of grant of licence.
Landfill gas management /utilisation proposals	Within twelve months of the date of grant of licence.
Leachate Storage Lagoon capacity and integrity assessment	Within nine months of the date of grant of licence.
Leachate Recirculation - Operation and maintenance Report	Within nine months of the date of grant of licence.
Procedures for testing, characterisation and acceptance of waste	Within six months of the date of grant of licence.
Surface Water Management	Within twelve months of the date of grant of licence.
Restoration and Aftercare Plan	Within twelve months of the date of grant of licence.
Monitoring Programme to detect off-site migration of landfill gas.	Within three months of the date of grant of licence.
Noise monitoring proposals for nearest noise sensitive location	Within three months of the date of grant of licence.
Emergency Response Procedure	Within six months of the date of grant of licence.
Risk Assessment, Fire Fighting and Fire-water retention study.	Within six months of the date of grant of licence.
Schedule of Environmental Objectives and Targets	Within four months of the date of grant of this licence.
Environmental Management Programme proposal	Within nine months of the date of grant of licence.
Construction Quality Assurance Validation Report for Phase 3	Within six months of the date of grant of this licence.

3/4 3/4 3/4 3/4 3/4 3/4 3/4 3/4 3/4 3/4 3/4 3/4 3/4 3/4 3/4

SCHEDULE E Monitoring

E.1(i) Emissions to Atmosphere: Landfill Gas

Monitoring Point Reference Numbers:

- Gas vents(Cells 1-4), 2 gas vents per cell (Refer to Drawing No. 97-01701-3 Revision B)
- Gas Monitoring Well 16 [Drawing No. 97-01701 -1, Revision F](O.S 094899,117314)]
- Perimeter Monitoring Locations: to be agreed
- Site office

The frequency of sampling and analysis is listed in the following table:

Parameter	Monitoring Frequency		Analysis Method/Technique
	Perimeter/Gas Vents/Well	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	Infrared analyser
Other Landfill gases (H ₂ S, H ₂ , etc)	Monthly	Weekly	Infrared analyser/flame ionisation detector
Atmospheric Pressure	Monthly	Weekly	Standard
Temperature	Monthly	Weekly	Standard

3/4 3/4

E.1(ii) Emissions to Atmosphere: Dust

Monitoring Point Reference Numbers: Monitoring locations 11,13,14,15 (Refer to Drawing No.97-01701 - 1 Revision F)

11(O.S. 094894,117085),

13(O.S. 095148,117163)

14(O.S. 095050,117490)

15(O.S. 094844,117335)

The frequency of sampling and analysis is listed in the following table:

Parameter	Monitoring Frequency	Analysis Method/Technique
Dust	Annual	Standard Method

3/4 3/4 3/4 3/4 3/4 3/4 3/4 3/4 3/4 3/4 3/4 3/4

E.1(iii) Emissions to Atmosphere: Noise

Monitoring Point Reference Numbers: Monitoring locations N1, N2, N3, S1 (refer to Drawing No.97-01701 -1 Revision F) and nearest noise sensitive location.

N1 (O.S.095090, 117410),

N2(O.S.095240, 117140),

N3 (O.S.094895, 117083)

S1(O.S.094530, 117470),

Nearest Noise Sensitive Location (grid reference to be agreed)

The frequency of sampling and analysis is listed in the following table:

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."

3/4 3/4 3/4 3/4 3/4 3/4 3/4 3/4 3/4 3/4 3/4 3/4

E.2 Emissions to Surface Water

E.2(i) Surface Water

Monitoring Locations Reference Numbers: Monitoring locations 10, 11,12, 13, 14 and 15 (refer to Drawing No. 97-01701-1 Revision F)

10 (O.S.094849,117252)

11 (O.S.094894,117085)

12 (O.S.095091,117147)

13 (O.S.095148,117163)

14 (O.S.095050,117410)

15 (O.S.094844,117335)

The frequency of sampling and analysis is listed in the Table E.2(i) overleaf.

E.2(ii)Surface Water- Lee and Smearlagh Catchments

Table E.2(ii) Surface Water -Lee and Smearlagh Catchments- frequency of sampling and analysis

Monitoring Locations: Upstream and Downstream (precise locations to be agreed)

Parameter	Monitoring Frequency	Analysis Method/Technique)
Visual Inspection	Weekly	Not applicable
Biological Assessment	Annual	Appropriate biological methods(such as EPA Q-Rating System used for the assessment of rivers and streams)

E.3 Groundwater Monitoring

Monitoring Locations Reference Numbers: **Drawing No. 97-01701-1 Revision F**

Borehole 1(O.S. 094697,117360)

Borehole 2(O.S. 094814,117306)

Borehole 3(O.S. 094808,117005)

Borehole 4(O.S. 095430,117040)

Borehole 5 (Grid reference to be provided by licensee)

E.4 Leachate Monitoring

Table E.4(i) Leachate Monitoring Locations and Frequency

Monitoring Medium	Parameters	Frequency ^{Note 1}		Monitoring Points
		Operational	Aftercare	
Leachate in Cells	Leachate levels in each cell, collection sump	Weekly	Monthly	Monitoring in each cell at leachate collection point; collection sump
	Leachate composition analysis as per Table E.4 (ii)	As per Table E.4(ii)	At half the frequency specified in Table E4(ii) with a minimum of once per annum	Monitoring at leachate collection point. [Specific location to be identified and agreed by the Agency]
Leachate Detection Manholes (LDMH)	Leachate Level	Weekly	Monthly	LDMH Cell 1 (O.S. 094904,117273) LDMH Cell 2 (O.S. 094911,117254) LDMH Lagoon (O.S.094901,117247)
	Leachate composition analysis as per Table E.4 (ii)	As per Table E.4(ii)	At half the frequency specified in Table E4(ii) with a minimum of once per annum	Leachate Pumped From Cells (O.S. 094898,117234)
Leachate lagoon	Leachate Level in Lagoon Leachate discharge volume leachate composition analysis as per Table E.4 (ii)	Weekly Monthly/ (as dictated by transport of leachate off-site) As per Table E.4(ii)	Monthly Monthly Bi-annually	Leachate Lagoon (O.S. 094902,117209)

Note 1: For leachates in closed cells monitoring frequency for each parameter shall be bi-annually.

Table E.4(ii) Leachate Monitoring, Parameters, Frequency and Analysis Method/Technique

Parameter	Monitoring Frequency	Analysis Method/Technique
Ammoniacal Nitrogen	Quarterly ^(note 1)	ISE / Colorimetry
BOD	Quarterly ^(note 1)	Electrometry / Titrimetry with nitrification inhibitor
COD	Quarterly ^(note 1)	Digestion=Colorimetry / Titrimetry
Calcium	Quarterly ^(note 1)	Atomic spectroscopy / Ion Chromatography
Chloride	Quarterly ^(note 1)	Colorimetry / Ion Chromatography
Electrical Conductivity	Quarterly ^(note 1)	Electrometry
Iron	Quarterly ^(note 1)	Atomic Spectroscopy / Colorimetry
Odour / Visual Inspection	Quarterly ^(note 1)	Not applicable
pH	Quarterly ^(note 1)	Electrometry
Potassium	Quarterly ^(note 1)	Atomic Spectroscopy / Ion Chromatography/ Colorimetry
Sodium	Quarterly ^(note 1)	Atomic Spectroscopy / Ion Chromatography/ Colorimetry
Temperature	Quarterly ^(note 1)	Thermometry
Total Oxidised Nitrogen	Quarterly ^(note 1)	Colorimetry / Ion Chromatography
Total Organic Carbon	Quarterly ^(note 1)	TOC Analyser (UV persulphate / thermal oxidation)
Total Suspended Solids	Quarterly ^(note 1)	Gravimetry
Boron	Annually	Atomic Spectroscopy / Colorimetry
Cadmium	Annually	Atomic Spectroscopy / Colorimetry
Chromium (Total)	Annually	Atomic Spectroscopy / Colorimetry
Copper	Annually	Atomic Spectroscopy / Colorimetry
Fluoride	Annually	Ion Chromatography / ISE
Lead	Annually	Atomic Spectroscopy / Colorimetry
List I/II organic substances	Annually	See Note 2
Magnesium	Annually	Atomic Spectroscopy / Ion Chromatography/ Colorimetry
Manganese	Annually	Atomic Spectroscopy / Colorimetry
Mercury	Annually	Atomic Spectroscopy / Electrochemical
Nickel	Annually	Atomic Spectroscopy / Electrochemical
Sulphate	Annually	Ion Chromatography / Turbidimetric / Colorimetry
Total Alkalinity	Annually	Colorimetry/Titrimetry
Total Phosphorous or Orthophosphate	Annually	Digestion / Colorimetry
Zinc	Annually	Atomic Spectroscopy or Colorimetry

Note 1: For leachates in closed cells monitoring frequency for each parameter shall be bi-annually.

Note 2: The licensee shall arrange to have representative samples of the leachate 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. The analysis shall be carried out on an annual basis by a competent laboratory using standard and internationally accepted procedures. The testing laboratory and the testing procedures shall be agreed in writing with the Agency in advance.

