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

WASTE LICENCE PROPOSED DECISION

Waste Licence Register Number:	63-1
Applicant:	Donegal County Council
Location of Facility:	Drumaboden Landfill Site, Drumaboden, Kilmacrennan, Co. Donegal

Introduction

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

This licence is for the orderly closure, capping and restoration of the landfill at Drumaboden, Kilmacrennan, Co. Donegal

The existing facility covers a total area of 8ha. Waste has been deposited on approximately 50% of this area. Donegal County Council will only be permitted to accept inert waste for disposal for the purposes of restoration and aftercare of this site. Activities carried out on site will consist of leachate treatment and disposal of inert waste. The quantity of inert waste to be accepted is limited to 40,000 Tonnes, and the maximum height of the facility shall not exceed 25mOD. The Council must manage and operate the facility to ensure that the activities do not cause environmental pollution. The Council has to carry out regular environmental monitoring and submit all monitoring results, and a wide range of reports on the operation and management of the facility, to the Agency.

The conditions of this licence set out in detail the legal constraints under which Donegal County Council is allowed to operate and manage this facility.

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Reasons for the Decision

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

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

Part I Activities Licensed

In pursuance of the powers conferred on it by the Waste Management Act, 1996, the Environmental Protection Agency (the Agency) proposes, under Section 40(1) of the said Act to grant this Waste Licence to Donegal County Council to carry on the waste activities listed below at Drumaboden Landfill Site, Drumaboden, Kilmacrennan, Co. Donegal subject to eleven 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 deposit of inert waste only and leachate treatment at the facility.
Class 13.	Storage prior to submission to any activity referred to in a preceding paragraph of this Schedule, other than temporary storage, pending collection, on the premises where the waste concerned is produced. This activity is limited to leachate collection and storage prior to treatment.

INTERPRETATION

Act	The Waste Management Act, 1996 (No. 10 of 1996).
Adequate lighting	20 lux measured at ground level.
Agreement	Agreement in writing.
Attachment	Any reference to Attachments in this licence refers to attachments submitted as part of the waste licence application.
Application	The application by the licensee for this waste licence, including any other material submitted to the Agency in writing by the licensee between the date of the application and the date of grant of this licence.
Appropriate facility	A waste management facility, duly authorised under relevant law & technically suitable.
BATNEEC	Best Available Technology Not Entailing Excessive Cost as defined in section 5 (2) of the Act.
Condition	In any case where this licence refers to a numbered condition, the reference shall be taken to mean the condition and any sub-condition therein which the context of the reference requires that reference is made to.
Containment boom	A boom which can contain spillages and prevent these from entering drains or watercourses.
Cover material	Bricks, crushed concrete, tarmac, earth, soil, sub-soil, stone, rock or other similar natural materials, or other cover material the use of which has been agreed with the Agency.
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.
Emission	As defined in Section 5 (1) of the Act.
Emission Limit Value	Those limits, including concentration limits and deposition levels established in <i>Schedule E: Emission Limits</i> of this licence.
Environmental Pollution	As defined in Section 5 (1) of the Act.
European Waste Catalogue (EWC)	The EWC is a harmonised, non-exhaustive list of wastes drawn up by the European Commission and published as Commission Decision 94/3/EC & any subsequent amendment published in the Official Journal of the European Community.
Facility	That area or areas defined under Condition 1.2.
Hazardous Waste	As defined in Section 4 (2) of the Act.
Household Waste	As defined in Section 5 (1) of the Act.

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.
Incident	Any reference to an incident in this licence is as defined in Condition 3.1.
Landfill	As defined in Section 5 (1) of the Act.
Landfill Gas	Gases generated from the landfilled waste.
Leachate	Any liquid percolating through the deposited waste and emitted from or contained within a landfill as defined in Section 5 (1) of the Act.
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	Donegal County Council
List I/II Organics	Substances classified pursuant to EC Directives 76/464/EEC & 80/68/EEC.
Maintain	Keep in a fit state, including such regular inspection, servicing and repair as may be necessary to adequately perform its function.
Monthly	At least 12 times per year, at approximately monthly intervals.
Night-time	10.00 p.m. to 8.00 a.m.
Operational Day of Facility	9.00 a.m. to 6.00 p.m. Monday to Friday, and 9.00 a.m. to 2.00 p.m. on Saturdays.
Quarterly	A period of three calendar months, the first period of which commences on the date of grant of this licence.
Recovery	As defined in Section 4 (4) of the Act.
Specified Emissions	Those emissions listed in <i>Schedule E: Emission Limits</i> of this licence.
Specified Engineering Works	Those engineering works listed in <i>Schedule C: Specified Engineering Works</i> of this licence.
Submit	Unless the context of this licence indicates otherwise, submit in writing to the Agency for its agreement.
Trigger Level	A parameter value which when achieved or exceeded requires certain actions to be taken.
Waste	As defined in Section 4(1) of the Act.
Waste disposal activity	Includes the activities referred to in Section 4 of the Act and listed in the Third Schedule thereto.
Waste recovery activity	Includes the activities referred to in Section 4 of the Act and listed in the Fourth Schedule thereto.
Working Day (Environmental Protection Agency)	9.00 a.m. to 5.30 p.m. Monday to Friday.

Part II CONDITIONS

CONDITION 1 SCOPE

- 1.1. Waste activities at the facility shall be restricted to those listed and described in Part I: Activities Licensed and required by the licence.
- 1.2. Waste activities shall be restricted to the area of land outlined in red and referred to as "Site Plan" on Drawing No. 3026.25/A02 of the application. Any reference in this licence to "facility" shall mean the area thus outlined in red.
- 1.3. Only inert waste shall be accepted at the facility.
- 1.4. Wastes shall be accepted for the purposes of remediation, rehabilitation, enhancement and restoration of the facility. The total amount of inert wastes to be accepted at the facility shall not exceed 40,000 tonnes.
- 1.5. Every plan, programme or proposal submitted to the Agency for its agreement pursuant to any condition of this licence shall include a proposed timescale for its implementation. The Agency may modify or alter any such plan, programme or proposal in so far as it considers such modification or alteration to be necessary. Every plan, programme or proposal shall be carried out within the timescale fixed by the Agency but shall not be undertaken without the agreement of the Agency.
- 1.6. 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.
- 1.7. Where the Agency considers that a non-compliance with the Conditions of this licence has occurred, it may serve a notice on the licensee specifying:
 - a) that only those wastes as specified, if any, in the notice are to be accepted at the facility after the date set down in the notice;
 - b) that the licensee shall undertake the works stipulated in the notice, and/or otherwise comply with the requirements of the notice as set down therein, within the time-scale contained in the notice; and,
 - c) that the licensee shall carry out any other requirement specified in the notice.

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

Reason: *To clarify the scope of this licence.*

CONDITION 2 MANAGEMENT OF THE ACTIVITY

2.1 Management Structure

2.1.1 The management structure of the facility shall be as outlined in Attachment L2 of the application. Any proposed changes in the management structure shall be submitted to the Agency in advance. This includes changes in any of the following:

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

2.2 Corrective Action

2.2.1 Within six months of the date of grant of this licence the licensee shall establish and maintain written Corrective Action Procedures to ensure that corrective action is taken should specified requirements to this licence not be fulfilled.

2.3 Awareness and Training

2.3.1 Within six months of the date of grant of this the licensee shall establish and maintain Awareness and Training Procedures for identifying training needs and for providing appropriate training, for personnel whose work is related to the licensed facility. Written records of training shall be maintained.

2.4 Annual Environmental Report

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

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

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

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

CONDITION 3 NOTIFICATION AND RECORD KEEPING

- 3.1 The licensee shall make written records of the following incidents:
- any nuisance caused by the activity;
 - any emission which does not comply with the requirements of this licence;
 - any trigger level specified in this licence which is attained or exceeded;
 - any indication that environmental pollution has, or may have, taken place; and,
 - any emergency.
- 3.2 The written record shall include all aspects described in Condition 10.5(a-f).
- 3.3 Unless otherwise instructed in writing by the Agency, the licensee shall:
- notify the Agency as soon as practicable and in any case not later than 10.00 a.m. the following working day after the occurrence of any incident;
 - submit the written record required by this condition to the Agency as soon as practicable and in any case within five working days after the occurrence of any incident; and
 - in the event of any incident which relates to discharges to surface water, notify the Northern Regional Fisheries Board as soon as practicable and in any case not later than 10.00 a.m. on the following working day after such an incident.
- 3.4 Should any further actions be taken after the date of written notification, as a result of an incident occurring, the licensee shall forward a written report of those actions to the Agency as soon as practicable and no later than ten days after the initiation of those actions.
- 3.5 Unless otherwise agreed by the Agency, all documentation submitted to the Agency shall:
- comprise one original and three copies;
 - be formatted in accordance with any written instruction or guidance issued by the Agency;
 - include whatever information as is specified in writing by the Agency;
 - be identified by a unique code, indicate any modification or amendment, and be correctly dated to reflect any such modification or amendment;
 - be submitted in accordance with the relevant reporting frequencies specified by this licence; and
 - in the case of results of any environmental monitoring, be accompanied by a written interpretation setting out their significance.
- 3.6 Copies of all environmental monitoring data obtained by the licensee which relates to the facility shall be forwarded to the Agency at the frequencies set out in *Schedule B: Recording and Reporting to the Agency* of this licence.
- 3.7 Unless otherwise agreed with the Agency, all documentation and records required to be made under this licence shall be retained by the licensee.
- 3.8 The licensee shall provide additional copies of any documentation and records referred to in this licence to the Agency upon written request, within the time specified in writing by the Agency.
- 3.9 The licensee shall maintain the following documents;

- a) the current waste licence relating to the facility;
 - b) the current EMS for the facility;
 - c) the previous year's AER for the facility;
 - d) all written procedures produced by the licensee which relate to the licensed activities.
- 3.10 The licensee shall maintain a written record of the type and quantity, recorded in tonnes, of all wastes recovered at the facility.
- 3.11 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.
- 3.12 Provision shall be made for the transfer of environmental information specified by the Agency, in relation to the activities carried on under this licence, to the Agency's computer system within a timescale specified in writing by the Agency.

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

CONDITION 4 SITE INFRASTRUCTURE

- 4.1 The licensee shall establish all infrastructure referred to in this licence prior to the commencement of the licensed activities or as instructed by the Agency.
- 4.2 Site Notice Board
- 4.2.1 The licensee shall provide and maintain a Site Notice Board on the facility so that it is legible to persons outside the main entrance to the facility. The minimum dimensions of the identification board shall be 1200 mm by 750 mm.
- 4.2.2 The board shall clearly show:
- a) the name of the facility;
 - b) the name, address and telephone number of the licence holder;
 - c) an emergency out of hours contact telephone number;
 - d) the name, address and telephone number of the operator of the facility;
 - e) the licence reference number;
 - f) that the landfill is closed and is only permitted to accept inert waste for restoration of the facility;
 - g) where and when environmental monitoring information relating to the facility can be obtained.
- 4.3 Site Security
- 4.3.1 Security and stockproof fencing and gates shall be installed and maintained as described in Attachment D1.a of the waste licence application.

- 4.3.2 The licensee shall remedy any defect in the gates and/or fencing as follows:
- a) a temporary repair shall be made by the end of the operational day; and,
 - b) a repair to the standard of the original gates and/or fencing shall be undertaken within three operational days or as otherwise agreed with the Agency.

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

4.4 Site Roads and Hardstanding

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

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

4.6 Specified Engineering Works

4.6.1 The licensee shall submit written proposals for all Specified Engineering Works, as defined in *Schedule C: Specified Engineering Works* of this licence, to the Agency for its agreement at least one month 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.

4.6.2 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.

4.6.3 Following the completion of all specified engineering works, the licensee shall complete a construction quality assurance validation. The validation report shall be made available to the Agency on request. The report shall include the following information;

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

4.7 Leachate Management

4.7.1 By 31 July 2001, the licensee shall implement a leachate management programme. This shall consist *inter alia* of the following:

- (i) Installation of three leachate abstraction wells. Leachate shall be pumped from these wells to the leachate treatment system.
- (ii) Provision of an appropriately sized leachate treatment system.
- (iii) Installation of mains power to operate leachate extraction pumps.

- (iv) Separation of clean and contaminated surface water, and discharge of contaminated surface water to the leachate treatment system.
 - (v) Upgrading the leachate collection toe drain to a gravel and perforated pipe drainage system. The leachate collection toe drain shall be keyed into and covered by the capping layer, once the capping layer is installed.
- 4.7.2 Notwithstanding Condition 4.7.1, within nine months of date of grant of this licence, the licensee shall provide a report examining the effectiveness of the leachate collection and control measures in operation on-site. This report should also provide recommendations to improve the effectiveness of the leachate capture and control measures, if necessary.
- 4.8 Within three months of the date of grant of licence, a site survey shall be submitted to the Agency in order to assess the effectiveness of the existing flood protection bund. This survey shall address the bund level, river levels, the structure and stability of the bund and recommendations shall be made for augmentation and extension of the bund where appropriate.
- 4.9 Landfill Gas Management:
- 4.9.1 Unless otherwise agreed with the Agency, landfill gas management at the facility shall be carried out as described in Attachment D5 of the application.
- 4.9.2 The licensee shall maintain any gas wells, pipework, valves, pumps, and other infrastructure that form part of the landfill gas management scheme in a safe and fully operational manner.
- 4.9.3 Landfill Gas management and infrastructure shall meet the recommendations given in the Agency Manual on "Landfill Operational Practices".
- 4.10 Capping
- 4.10.1 Final capping shall consist of the following, unless otherwise agreed with the Agency:
- top soil (150 –300 mm);
 - subsoils, such that total thickness of top soil and subsoils is at least 1m;
 - drainage layer of 0.5m thickness having a minimum hydraulic conductivity of 1×10^{-4} m/s;
 - compacted mineral layer of a minimum 0.6m thickness with a permeability of less than 1×10^{-9} m/s or a geosynthetic material (e.g. GCL) or similar that provides equivalent protection; and
 - gas collection layer of natural material (minimum 0.3m) or a geosynthetic layer.
- 4.10.2 All landfill areas shall be permanently capped to the specifications in Condition 4.10.1, within eighteen months of the date of grant of this licence.
- 4.10.3 The licensee shall submit to the Agency for its agreement, at least three months prior to commencement of capping works, details of surface water control relating to run-off water arising from cap and restoration areas.
- 4.11 Within six months from the date of grant of this licence, the licensee shall provide and install three groundwater monitoring locations (outside the waste body) as follows:
- one up-gradient groundwater monitoring borehole, and;
 - two down-gradient groundwater monitoring boreholes.

These boreholes shall be installed to a time frame agreed with the Agency.

Reason: *To provide for the protection of the environment.*

CONDITION 5 WASTE MANAGEMENT

- 5.1. Waste Acceptance Procedures
 - 5.1.1. The licensee shall provide detailed written procedures for the acceptance and handling of all wastes for disposal as part of the Restoration and Aftercare plan.
- 5.2. Waste shall only be accepted at the facility between the hours of 9.00 a.m. to 5.00 p.m. Monday to Friday inclusive and 9.00 a.m. to 1.00 p.m. on Saturdays with the exclusion of Bank Holidays unless otherwise agreed in advance with the Agency.
- 5.3. Wastes once deposited and covered shall not be excavated, disturbed or otherwise picked over, with the exception of works associated with the construction and installation of the leachate collection system or without prior agreement from the Agency.

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

CONDITION 6 ENVIRONMENTAL NUISANCES

- 6.1. The licensee shall ensure that litter, vermin, birds, flies, mud, dust and odours do not give rise to nuisance at the facility or the immediate area of the facility. Any method used by the licensee to control any such nuisance shall not cause environmental pollution.
- 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. Any waste placed on or in the vicinity of the facility, other than in accordance with the requirements of this licence, shall be removed by the licensee immediately and in any event by 10.00 a.m. of the next working day, after such waste is discovered. Such waste shall be disposed of at an appropriate facility.
- 6.4. The licensee shall ensure that all vehicles delivering waste to the facility are appropriately covered.

Reason: *To provide for the control of nuisance.*

CONDITION 7 EMISSIONS AND ENVIRONMENTAL IMPACTS

- 7.1. No specified emission from the facility shall exceed the emission limit values set out in *Schedule E: Emission Limits* of this licence. There shall be no other emissions of environmental significance.

- 7.2. All treatment/abatement and emission control equipment shall be calibrated and maintained, in accordance with the instructions issued by the manufacturer/supplier or installer. Written records of the calibrations and maintenance shall be made and kept by the licensee.
- 7.3. The licensee shall ensure that the activities shall be carried out in a manner such that emissions do not result in significant impairment of, or significant interference with the environment beyond the facility boundary.
- 7.4. Landfill Gas
- 7.4.1. The following are the trigger levels for landfill gas emissions from the facility measured in any service 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.
- 7.5. Emissions to Surface Water
- Emission limit values for emissions to surface water in this licence shall be interpreted in the following way:-
- 7.5.1 For Continuous monitoring:
- 7.5.1.1 No flow value shall exceed the specified limit.
- 7.5.2 Non-Continuous monitoring
- 7.5.2.1 Eight out of ten consecutive results, calculated as daily mean concentration or mass emission values on the basis of flow proportional composite sampling shall exceed 1.2 times the emission limit value.
- 7.5.2.2 No grab sample shall exceed 1.2 times the emission limit value.
- 7.6. In the case of an exceedence of the leachate emission limits to surface water as outlined in *Schedule E: Emission Limits* of this licence, discharge of treated leachate to the River Leannan shall cease. Arrangements shall be made for storage or tankering of the leachate off-site to a location agreed with the Agency, while these exceedences are occurring.
- 7.7. The acute toxicity of the undiluted final treated leachate to at least four aquatic species from different trophic levels shall be determined by standardised and internationally accepted procedures and carried out by a competent laboratory. A proposal for toxicity testing shall be submitted to the Agency within three months of date of grant of licence.
- 7.8. No substance shall be discharged in a manner, or at a concentration which, following initial dilution, causes tainting of fish or shellfish.

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

CONDITION 8 RESTORATION AND AFTERCARE

- 8.1. A revised Restoration and Aftercare Plan for the facility shall be submitted to the Agency for agreement within six months of date of grant of this licence. This plan should also incorporate landscaping proposals for the facility. The final height of the facility shall not exceed 25mOD (Malin Head).

- 8.2. Completed areas of the landfill shall be profiled so that no depressions exist in which water may accumulate.
- 8.3. The restoration of the landfill facility shall be completed within 24 months of the date of grant of this licence, unless otherwise agreed with the Agency.

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

CONDITION 9 ENVIRONMENTAL MONITORING

- 9.1. The licensee shall carry out such monitoring and at such locations and frequencies as set out in *Schedule D: Monitoring* of this licence and as specified in the Conditions of this licence.
- 9.2. Within six months from the date of grant of this licence, the licensee shall install a minimum of three additional monitoring locations to check for off-site migration of landfill gas.
- 9.3. Within six months of the date of grant of this licence, proposals for the inclusion of all appropriate domestic private wells within 500m of the facility, subject to the agreement of the well owners, in the monitoring programme set out in *Schedule D: Monitoring* of this licence shall be submitted to the Agency for its agreement.
- 9.4. The licensee shall maintain all sampling and monitoring points, and clearly label and name all sampling and monitoring locations, so that they may be used for representative sampling and monitoring.
- 9.5. Monitoring and analysis equipment shall be operated and maintained in accordance with the manufacturer's instructions (if any) so that all monitoring results accurately reflect any emission or discharge or environmental parameter.
- 9.6. The licensee shall amend the frequency, locations, methods and scope of monitoring, sampling, analyses and investigations only upon the written instruction of the Agency and shall provide such information concerning such amendments as may be requested in writing by the Agency. Such alterations shall be carried out within any timescale nominated by the Agency.
- 9.7. Unless otherwise specified by this licence or agreed by the Agency, all environmental monitoring shall commence no later than two months after the date of grant of this licence.
- 9.8. All landfill gas monitoring equipment used for monitoring landfill gas under the requirements of this licence shall be certified as being intrinsically safe.
- 9.9. Within six months of the date of grant of this licence, the licensee shall submit to the Agency an updated appropriately scaled drawing(s) showing the location of all the monitoring locations that are stipulated in this licence.
- 9.10. All on-site monitoring points as described in *Schedule D: Monitoring* of this licence shall be tagged in situ with their agreed sampling point codes within six months of the granting of this licence.

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 for its agreement. The ERP shall address any emergency situations which may originate on the facility and shall include provision for minimising the effects of any emergency on the environment.
- 10.2. All significant spillages occurring at the facility shall be treated as an emergency and immediately cleaned up and dealt with so as to alleviate their effects.
- 10.3. No waste shall be burned 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.
- 10.4. In the event that monitoring of local wells (identified in Condition 9) indicates that the facility is having a significant adverse effect the quantity and/or quality of the water supply this shall be treated as an incident. The licensee shall submit to the Agency for its agreement and within a time specified in writing by the Agency, written proposals for the provision of an alternative supply of water to those affected.
- 10.5. Unless otherwise notified in writing by the Agency, in the event that any monitoring, sampling, complaints or observations indicate that an incident has, or may have, taken place, the licensee shall immediately:
 - a) identify the date, time and place of the incident;
 - b) carry out an immediate investigation to identify the nature, source and cause of the incident and any emission;
 - c) isolate the source of the emission;
 - d) evaluate the environmental pollution, if any, caused by the incident;
 - e) identify and execute measures to minimise the emissions/malfunction and the effects thereof;
 - f) provide a proposal to the Agency for its agreement within one month to:
 - i) identify and put in place measures to avoid reoccurrence of the incident; and
 - ii) identify and put in place any other appropriate remedial action.

Reason: *To provide for the protection of the environment.*

CONDITION 11 CHARGES AND FINANCIAL PROVISIONS

11.1 Agency Charges

- 11.1.1 The licensee shall pay to the Agency an annual contribution of £3,789 (€4,811) 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 2001. 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 or decreased the licensee shall contribute such sums as determined by the Agency to defraying its costs.

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

SCHEDULE A : Content of the Annual Environmental Report

Annual Environmental Report Content
Reporting Period.
Quantity and Composition of waste used for restoration during the reporting period and each previous year and capping and restoration of completed cells/phases.
Summary report on emissions.
Summary of results and interpretations of environmental monitoring, including plans and any updates of all monitoring locations.
Volume of leachate produced and volume of leachate discharged.
Reported incidents and complaints summaries and review of nuisance controls.
Any other items specified by the Agency.

SCHEDULE B : Recording and Reporting to the Agency

Table B.1 Recurring Reports

Report	Reporting Frequency ^{Note1}	Report Submission Date
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.
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.
Any other monitoring	As they occur	Within ten days of obtaining results.

Note 1: Unless altered at the request of the Agency

SCHEDULE C : Specified Engineering Works

Specified Engineering Works
Surface water management works.
Groundwater monitoring infrastructure.
Landfill gas monitoring infrastructure.
Restoration and Aftercare Works.
Any other works notified in writing by the Agency.

SCHEDULE D : Monitoring

D.1 Monitoring Locations

Monitoring locations shall be those as set out below (and as per Figure 3026.25/A12 Revision B of the application – unless otherwise stated).

Landfill Gas Monitoring locations
LG1 (formerly KM01)
LG2 (formerly KM02)
LG3 (formerly KM03)
LG4 (formerly KM04)
LG5 (formerly KM05)
Further locations to be agreed for detection of off-site migration of landfill gas (Condition 9.2)
Dust Monitoring Locations
DG1
DG2
DG3
Noise Monitoring Locations (as per Attachment C8, Figure 2: Measurement locations)
N1
N2
N3
Groundwater Monitoring Locations
GW1 (formerly BH 1)
GW2 (formerly BH 2) – only for leachate levels
GW3 (formerly BH 3) – only for leachate levels
GW4 (formerly BH 4) – only for leachate levels
GW5 (upgradient) (location to be agreed)
GW6 (downgradient) (location to be agreed)
GW7 (downgradient) (location to be agreed)
Leachate Monitoring Locations
L1 (formerly EP3)
L2 (location to be agreed)
L3 (location to be agreed)
L4 (location to be agreed)

Surface Water Monitoring Locations
S1 (to be relocated upstream of Ballydone bridge)
S2
S3
S4
S5
S6

D.2 Landfill Gas

Landfill Gas Monitoring Frequency and Technique

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

Note 1: All monitoring equipment used should be intrinsically safe.

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

D.3 Dust

Dust Monitoring Frequency and Technique

Parameter (mg/m ² /day)	Monitoring Frequency	Analysis Method/Technique
Dust	Annually ^{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: To be carried out while restoration and associated activities are occurring.

D.4 Noise

Noise Monitoring Frequency and Technique

Parameter	Monitoring Frequency	Analysis Method/Technique
L(A) _{Eq} [30 minutes]	Annual ^{Note2}	Standard ^{Note 1}
L(A) ₁₀ [30 minutes]	Annual ^{Note2}	Standard ^{Note 1}
L(A) ₉₀ [30 minutes]	Annual ^{Note2}	Standard ^{Note 1}
Frequency Analysis(1/3 Octave band analysis)	Annual ^{Note2}	Standard ^{Note 1}

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

Note 2: To be carried out while restoration and associated activities are occurring.

D.5 Surface Water, Groundwater and Leachate Monitoring parameters

Surface water, groundwater & leachate monitoring shall be as below:

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

- Note 1: All the analysis shall be carried out by a competent laboratory using standard and internationally accepted procedures. The testing laboratory and the testing procedures shall be agreed with the Agency in advance.
- Note 2: Where there is evident gross contamination of leachate, additional samples should be analysed.
- Note 3: Samples screened for the presence of organic compounds using Gas Chromatography / Mass Spectrometry (GC/MS) or other appropriate techniques and using the list I/II Substances from EU Directive 76/464/EEC and 80/68/EEC as a guideline. Recommended analytical techniques include: volatiles (US Environmental Protection Agency method 524 or equivalent), semi-volatiles (US Environmental Protection Agency method 525 or equivalent, and pesticides (US Environmental Protection Agency method 608 or equivalent).
- 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.
- Note 5: Once off for List I/II organic substances at GW5, GW6 and GW7 and thereafter as required by the Agency.
- Note 6: Once off for toxicity at L1 and thereafter as required by the Agency.

SCHEDULE E : Emission Limits

E.1 Noise Emissions: (Measured at the monitoring points indicated in *Schedule D: Monitoring* of this licence).

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

E.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

E.3 Dust Deposition Limits: (Measured at the monitoring points indicated in *Schedule D: Monitoring* of this licence).

Level (mg/m ² /day) ^{Note 1}
350

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

E.4 Leachate Emission Limits:

Emission Point Reference No.: L-1 at Ballydone Bridge (Formerly EP-3)

Maximum volume to be emitted: 48 m³/day
2 m³/hour

Parameter	Limit
Toxicity	10 TU
pH	6-9
BOD	20 mg/l
Suspended Solids	30 mg/l
Total P (as P)	2 mg/l
Total Ammonia (as N)	25 mg/l

Part III Activities Refused

Reasons for the Decision

The Agency is not satisfied, on the basis of information available, that emissions from the activities below will comply with and not contravene any of the requirements of Section 40(4) of the Waste Management Act, 1996.

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

In pursuance of the powers conferred on it by the Waste Management Act, 1996, the Environmental Protection Agency (the Agency) proposes, under Section 40(1) of the said Act to refuse to grant a Waste Licence to Donegal County Council, Lifford, Co. Donegal to carry out the following waste activities, as listed below, at Drumaboden Landfill Site, Drumaboden, Kilmacrennan, Co. Donegal.

Waste disposal activities, in accordance with the Third Schedule of the Waste Management Act, 1996 for which a waste licence is refused.

Class 2.	Land treatment, including biodegradation of liquid or sludge discards in soils. REASON: Licensing under Class 1 (Third Schedule) will cover leachate treatment, and therefore Class 2 is refused.
Class 4.	Surface impoundment, including placement of liquid or sludge discards into pits, ponds or lagoons. REASON: Licensing under Class 1 (Third Schedule) will cover leachate treatment, and therefore Class 4 is refused.

Signed on behalf of the said Agency

on the 6th day of February, 2001

_____ **B. Sheehan Authorised Person**