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Ireland

WASTE LICENCE
Proposed Decision

Licence Register Number:	**W0049-02**
Licensee:	**Bord na Móna Energy Limited**
Location of Facility:	**Clonbullogue Ash Repository, Cloncreen Bog, Clonbullogue, County Offaly**

INTRODUCTION

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

This licence is for the operation of a non-hazardous waste landfill located at Clonbullogue Ash Repository, Cloncreen Bog, Clonbullogue, County Offaly. The waste intake is limited to 70,000 tonnes per annum comprising of industrial non-hazardous solids. The waste consists of bottom and fly ash from co-fuelling of peat, biomass and Category 3 meat and bone meal.

The licensee must manage and operate the facility to ensure that the activities do not cause environmental pollution. The licensee is required to carry out regular environmental monitoring and submit all monitoring results, and a wide range of reports on the operation and management of the facility to the Agency.

The licence sets out in detail the conditions under which Bord na Móna Energy Limited will operate and manage this facility.

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Glossary of Terms

All terms in this licence should be interpreted in accordance with the definitions in the Environmental Protection Agency Acts 1992 and 2003 / Waste Management Acts 1996 to 2005, unless otherwise defined in this section.

Adequate lighting	20 lux measured at ground level.
AER	Annual Environmental Report.
Aerosol	A suspension of solid or liquid particles in a gaseous medium.
Agreement	Agreement in writing.
Annually	At approximately twelve monthly intervals.
Attachment	Any reference to Attachments in this licence refers to attachments submitted as part of this licence application.
Application	The application by the licensee for this licence.
Appropriate facility	A waste management facility, duly authorised under relevant law and technically suitable.
BAT	Best Available Techniques.
Bi-annually	All or part of a period of six consecutive months.
Biennially	Once every two years.
BOD	5 day Biochemical Oxygen Demand.
CEN	Comité Européen De Normalisation – European Committee for Standardisation.
COD	Chemical Oxygen Demand.
Construction and Demolition Waste	Wastes that arise from construction, renovation and demolition activities: Chapter 17 of the EWC or as otherwise may be agreed.
Containment boom	A boom which can contain spillages and prevent them from entering drains or watercourses or from further contaminating watercourses.
Daily	During all days of plant operation, and in the case of emissions, when emissions are taking place; with at least one measurement on any one day.
Day	Any 24 hour period.
Daytime	0800 hrs to 2200 hrs.
dB(A)	Decibels (A weighted).
DO	Dissolved Oxygen.
Documentation	Any report, record, result, data, drawing, proposal, interpretation or other document in written or electronic form which is required by this licence.

Drawing	Any reference to a drawing or drawing number means a drawing or drawing number contained in the application, unless otherwise specified in this licence.
Dust Sensitive Location	Any dwelling house, hotel or hostel, health building, educational establishment, places of worship, or any other facility or area of high amenity which for its proper enjoyment requires the absence of dust at nuisance levels.
EMP	Environmental Management Programme.
Emission Limits	Those limits, including concentration limits and deposition rates established in *Schedule B: Emission Limits*, of this licence.
Environmental Damage	Has the meaning given it in Directive 2004/35/EC.
EPA	Environmental Protection Agency.
European Waste Catalogue (EWC)	A harmonised, non-exhaustive list of wastes drawn up by the European Commission and published as Commission Decision 2000/532/EC and any subsequent amendment published in the Official Journal of the European Community.
Facility	Any site or premises used for the purposes of the recovery or disposal of waste.
Fortnightly	A minimum of 24 times per year, at approximately two week intervals.
GC/MS	Gas Chromatography/Mass Spectroscopy.
Green waste	Waste wood (excluding timber), plant matter such as grass cuttings, and other vegetation.
Heavy Metals	This term is to be interpreted as set out in "Parameters of Water Quality, Interpretation and Standards" published by the Agency in 2001. ISBN 1-84095-015-3.
HFO	Heavy Fuel Oil.
Hours of Operation	The hours during which the facility is authorised to be operational.
Hours of Waste Acceptance	The hours during which the facility is authorised to accept waste.
ICP	Inductively Coupled Plasma Spectroscopy.
Incident	The following shall constitute an incident for the purposes of this licence: (i) an emergency; (ii) any emission which does not comply with the requirements of this licence; (iii) any exceedence of the daily duty capacity of the waste handling equipment; (iv) any trigger level specified in this licence which is attained or exceeded; and, (v) any indication that environmental pollution has, or may have, taken place.
Industrial Waste	As defined in Section 5(1) of the Waste Management Acts 1996 to 2005.

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.
Initial Development Works	Means such works, actions or constructions as may be specified, which for the purposes of environmental protection and safe construction and operation of the facility, have to be carried out in the initial stages of site development, and in any case in advance, of the commencement of construction of the landfill cells.
IPPC	Integrated Pollution Prevention & Control.
K	Kelvin.
kPa	Kilo Pascals.
Landfill Directive	Council Directive 1999/31/EC.
Landfill Footprint	The area of the facility where waste is deposited.
Leq	Equivalent continuous sound level.
Licensee	Bord na Móna Energy Limited, Leabeg, Tullamore, County Offaly.
Liquid Waste	Any waste in liquid form and containing less than 2% dry matter.
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.
Local Authority	Offaly County Council.
Maintain	Keep in a fit state, including such regular inspection, servicing, calibration and repair as may be necessary to adequately perform its function.
Mass Flow Limit	An Emission Limit Value which is expressed as the maximum mass of a substance which can be emitted per unit time.
Mass Flow Threshold	A mass flow rate, above which, a concentration limit applies.
Monthly	A minimum of 12 times per year, at approximately monthly intervals.
Night-time	2200 hrs to 0800 hrs.
Noise Sensitive Location (NSL)	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.
Oil Separator	Device installed according to the International Standard I.S.EN 858-2:2003 (Separator systems for light liquids, (e.g. oil and petrol)-Part 2:Selection of nominal size, installation, operation and maintenance.
PER	Pollution Emission Register.

Quarterly	All or part of a period of three consecutive months beginning on the first day of January, April, July or October.
Regional Fisheries Board	Southern Regional Fisheries Board.
Sanitary Authority	Offaly County Council.
Sanitary Effluent	Waste water from facility toilet, washroom and canteen facilities
Sample(s)	Unless the context of this licence indicates to the contrary, samples shall include measurements by electronic instruments.
SOP	Standard Operating Procedure.
Specified Emissions	Those emissions listed in *Schedule B: Emission Limits* of this licence.
Standard Method	A National, European or internationally recognised procedure (eg, I.S. EN, ISO, CEN, BS or equivalent), as an in-house documented procedure based on the above references, a procedure as detailed in the current edition of "Standard Methods for the Examination of Water and Wastewater", (prepared and published jointly by A.P.H.A., A.W.W.A & W.E.F), American Public Health Association, 1015 Fifteenth Street, N.W., Washington DC 20005, USA; or, an alternative method as may be agreed by the Agency.
Storm Water	Rain water run-off from roof and non-process areas.
The Agency	Environmental Protection Agency.
TA Luft	Technical Instructions on Air Quality Control - TA Luft in accordance with art. 48 of the Federal Immission Control Law (BImSchG) dated 15 March 1974 (BGBI. I p.721). Federal Ministry for Environment, Bonn 1986, including the amendment for Classification of Organic Substances according to section 3.1.7 TA.Luft, published in July 1997.
TOC	Total Organic Carbon.
Trade Effluent	Trade Effluent has the meaning given in the Water Pollution Acts 1977 and 1990.
Trigger Level	A parameter value, the achievement or exceedance of which requires certain actions to be taken by the licensee.
Weekly	During all weeks of plant operation, and in the case of emissions, when emissions are taking place; with at least one measurement in any one week.
WWTP	Waste Water Treatment Plant.

Decision & Reasons for the Decisions

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 will not contravene any of the requirements of Section 40(4) of the Waste Management Acts 1996 to 2005.

In reaching this decision the Environmental Protection Agency has considered the application and supporting documentation received from the applicant, the submission received from a third party and the report of its inspector.

Part I Schedule of Activities Licensed

In pursuance of the powers conferred on it by the Waste Management Acts 1996 to 2005, the Environmental Protection Agency (the Agency) proposes, under Section 46(8)(a) of the said Acts to grant this Waste Licence to Bord na Móna Energy Limited, Leabeg, Tullamore, County Offaly to carry on the waste activity listed below at Clonbullogue Ash Repository, Cloncreen Bog, Clonbullogue, County Offaly subject to conditions, with the reasons therefor and the associated schedules attached thereto set out in the licence. For the purposes of Article 48 of the Waste Management Licensing Regulations 2004 (SI 395) this facility is classed as a non-hazardous waste landfill.

Licensed Waste Disposal Activities, in accordance with the Third Schedule of the Waste Management Acts 1996 to 2005

Class 1.	**Deposit on, in or under land (including landfill).**

Part II Schedule of Activities Refused

None of the proposed activities as set out in the licence application have been refused.

Part III Conditions

Condition 1. Scope

1.1 Waste activities at this facility shall be restricted to those listed and described in Part I Activities Licensed, and shall be as set out in the licence application or as modified under Condition 1.6 of this licence and subject to the conditions of this licence.

1.2 Activities at this facility shall be limited as set out in *Schedule A: Limitations*, of this licence.

1.3 The facility shall be controlled, operated, and maintained and emissions shall take place as set out in this licence. All programmes required to be carried out under the terms of this licence, become part of this licence.

1.4 For the purposes of this licence, the facility authorised by this licence, is the area of land outlined in red on Drawing No. 2401058-2 *Site Plan* of the application. Any reference in this licence to "facility" shall mean the area thus outlined in red colour. The licensed activity shall be the carried on only within the area outlined.

1.5 Waste Acceptance Hours and Hours of Operation

1.5.1 Waste may be accepted at the facility for disposal at the landfill only between the hours of 8:00 to 20:00 Monday to Friday inclusive and 8:00 to 18:00 on Saturdays.

1.5.2 The landfill at the facility may be operated only during the hours of 8:00 to 20:30 Monday to Friday inclusive and 8:00 to 18:30 on Saturdays.

1.5.3 Waste shall not be accepted at the facility on Sundays and Public Holidays, other than with the prior written agreement of the Agency.

1.6 No alteration to, or reconstruction in respect of, the activity or any part thereof which would, or is likely to, result in

(i) a material change or increase in:

- The nature or quantity of any emission,
- The abatement/treatment or recovery systems,
- The range of processes to be carried out,
- The fuels, raw materials, intermediates, products or wastes generated, or

(ii) any changes in:

- Site management infrastructure or control with adverse environmental significance,

shall be carried out or commenced without prior notice to, and without the agreement of, the Agency.

1.7 This licence is for the purposes of waste licensing under the Waste Management Acts 1996 to 2005 only and nothing in this licence shall be construed as negating the licensee's statutory obligations or requirements under any other enactments or regulations.

1.8 This licence is being granted in substitution for the waste licence granted to the licensee on 20th of April, 2000 and bearing Waste Licence Register No: 49-1. The previous waste licence (Register No: 49-1) is superseded by this licence.

Reason: To clarify the scope of this licence.

Condition 2. Management of the Facility

2.1 Facility Management

2.1.1 The licensee shall employ a suitably qualified and experienced facility manager who shall be designated as the person in charge. The facility manager or a nominated, suitably qualified and experienced, deputy shall be present on the facility at all times during its operation or as otherwise required by the Agency.

2.1.2 The licensee shall ensure that personnel performing specifically assigned tasks shall be qualified on the basis of appropriate education, training and experience, as required and shall be aware of the requirements of this licence. In addition, the facility manager and his/her deputy shall successfully complete FAS waste management training programme or equivalent agreed by the Agency.

2.2 Environmental Management System (EMS)

2.2.1 The licensee shall operate and maintain an Environmental Management System (EMS). Within six months of the date of grant of this licence, the licensee shall submit to the Agency for its agreement a proposal for the updating (where appropriate) of the documented Environmental Management System (EMS) for the facility. The EMS shall thereafter be updated on an annual basis with amendments being notified to the Agency, as part of the AER.

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

2.2.2.1 Management and Reporting Structure.

2.2.2.2 Schedule of Environmental Objectives and Targets.

The licensee shall maintain a Schedule of Environmental Objectives and Targets. The schedule shall as a minimum provide for a review of all operations and processes, including an evaluation of practicable options, for energy and resource efficiency, the use of cleaner technology, cleaner production, and the prevention, reduction and minimisation of waste, and shall include waste reduction targets. The schedule shall include time frames for the achievement of set targets and shall address a five year period as a minimum. The schedule shall be reviewed annually and amendments thereto notified to the Agency for agreement as part of the Annual Environmental Report (AER).

2.2.2.3 Environmental Management Programme (EMP)

The licensee shall, not later than six months from the date of grant of this licence, submit to the Agency for agreement a proposal for the updating (where appropriate) of the EMP, including a time schedule, for achieving the Environmental Objectives and Targets prepared under Condition 2.2.2.2. Once agreed the EMP shall be established and maintained by the licensee. It shall include:

(i) designation of responsibility for targets;

(ii) the means by which they may be achieved;

(iii) the time within which they may be achieved.

The EMP shall be reviewed annually and amendments thereto notified to the Agency for agreement as part of the Annual Environmental Report (AER) (Condition 11.9).

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.

2.2.2.4 Documentation

(i) The licensee shall establish and maintain an environmental management documentation system which shall be to the satisfaction of the Agency.

(ii) The licensee shall issue a copy of this licence to all relevant personnel whose duties relate to any condition of this licence.

2.2.2.5 Corrective Action

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.

2.2.2.6 Awareness and Training

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.

2.2.2.7 Communications Programme

The licensee shall establish and maintain a Public Awareness and Communications Programme to ensure that members of the public are informed.

2.2.2.8 Maintenance Programme

The licensee shall establish and maintain a programme for maintenance of all plant and equipment based on the instructions issued by the manufacturer/supplier or installer of the equipment. Appropriate record keeping and diagnostic testing shall support this maintenance programme. The licensee shall clearly allocate responsibility for the planning, management and execution of all aspects of this programme to appropriate personnel (see Condition 2.1 above).

2.2.2.9 Efficient Process Control

The licensee shall establish and maintain a programme to ensure there is adequate control of processes under all modes of operation. The programme shall identify the key indicator parameters for process control performance, as well as identifying methods for measuring and controlling these parameters. Abnormal process operating conditions shall be documented, and analysed to identify any necessary corrective action.

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. Infrastructure and Operation

3.1 The licensee shall establish all infrastructure referred to in this licence in accordance with the conditions of this licence and as required by the Agency.

3.2 The landfill footprint (maximum lateral extent of landfilling) shall be as indicated in Drawing No. 2401058-3 *Cell Layout & Phasing* of the application.

3.3 Wastes shall not be deposited in any new cell including cell No. 3 without the prior agreement of the Agency.

3.4 Phased Construction Plan.

3.4.1 Three months in advance, of the commencement of any phase of site development, the licensee shall submit to the Agency for its agreement a construction schedule, sequence and timescale (Construction Plan) incorporating the requirements of this licence and to give effect to the commitments in the application documentation. This Plan shall have regard to the following development phases: (i) Initial Development Works (ii) Main infrastructure development works (pre acceptance of waste for disposal), and (iii) Future/planned works (in parallel with waste disposal, e.g. future cell development/phasing). The Construction Plan for cell development shall have regard to the sequencing necessary to provide short, medium and long term screening of the operational areas.

3.5 Specified Engineering Works

3.5.1 The licensee shall submit proposals for any Specified Engineering Works, as defined in *Schedule D: Specified Engineering Works*, of this licence, to the Agency for its agreement at least two months in advance, of the intended date of commencement of any such works. No such works shall be carried out without the prior agreement of the Agency.

3.5.2 All specified engineering works shall be supervised by an appropriately qualified person, and that person, or persons, shall be present at all times during which relevant works are being undertaken.

3.5.3 Following the completion of any 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, as appropriate, 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) Drawings and sections showing the location of all samples and tests carried out;

(v) Name(s) of contractor(s)/individual(s) responsible for undertaking the specified engineering works;

(vi) Records of any problems and the remedial works carried out to resolve those problems; and

(vii) Any other information requested in writing by the Agency.

3.6 Landfill Lining

Unless otherwise agreed in writing, the landfill lining system shall comprise:-

(i) A composite liner consisting of 0.5m proven in-situ clay overlain by a geosynthetic clay liner (GCL) with a hydraulic conductivity of

less than or equal to $1x10^{-10}m^3/m^2/s$, overlain by a 2mm thick high density polyethylene (HDPE) layer;

(ii) A geotextile protection layer placed over the HDPE layer;

(iii) A 500mm thick drainage layer placed over the geotextile layer with a minimum hydraulic conductivity of 1×10^{-3} $m^3/m^2/s$, of pre-washed, uncrushed, granular, rounded stone (16-32mm grain size) or composite drainage layer incorporating leachate collection drains;

(iv) The lining system on the base of the facility shall be laid to a minimum slope of 1:50, and

(v) The side walls shall be designed and constructed to achieve an equivalent protection.

3.7 Facility Security

3.7.1 Site security arrangement shall be provided and maintained as described in Section 2.2.4(1) *Site Security Arrangements* of the EIS submitted with the application on 9/12/05, unless otherwise agreed by the Agency. Subject to the implementation of the restoration and aftercare plan and to the agreement of the Agency, the requirement for such site security may be removed.

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

3.7.3 The licensee shall remedy any defect in the gates and/or fencing 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 gates and/or fencing shall be undertaken within three working days.

3.8 Facility Notice Board

3.8.1 The licensee shall provide and maintain a Facility Notice Board on the facility so that it is legible to persons outside the main entrance to the facility. The minimum dimensions of the board shall be 1200 mm by 750 mm.

3.8.2 The board shall clearly show:-

(i) the name and telephone number of the facility;

(ii) the normal hours of opening;

(iii) the name of the licence holder;

(iv) an emergency out of hours contact telephone number;

(v) the licence reference number; and

(vi) where environmental information relating to the facility can be obtained.

3.8.3 A plan of the facility clearly identifying the location of each storage and treatment area shall be displayed as close as is possible to the entrance to the facility. The plan shall be displayed on a durable material such that it is legible at all times. The plan shall be replaced as material changes to the facility are made.

3.9 Facility Roads

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

3.10 Facility Office

3.10.1 The licensee shall provide and maintain an office at the facility. The office shall be constructed and maintained in a manner suitable for the processing and storing of documentation.

3.10.2 The licensee shall provide and maintain a working telephone and a method for electronic transfer of information at a location agreed by the Agency.

3.11 Leachate Management Infrastructure

Leachate management infrastructure shall be provided and maintained at the facility as described in Section 2.2.8 *Leachate Management Details* of the EIS submitted with the application on 9/12/05 and shown on Drawing No. 2401058-5 *Leachate Management System* of the application, unless otherwise agreed by the Agency.

3.12 Groundwater

3.12.1 All wells & boreholes shall be adequately sealed to prevent surface contamination and, as may be appropriate, decommissioned according to the UK Environment Agency guidelines 'Decommissioning Redundant Boreholes and Wells' (or as otherwise may be agreed by the Agency).

3.12.2 Groundwater monitoring wells shall be constructed having regard to the guidance given in the Agency's landfill manual "Landfill Monitoring".

3.13 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.

3.14 In the case of composite sampling of aqueous emissions from the operation of the facility a separate composite sample or homogeneous sub-sample (of sufficient volume as advised) should be refrigerated immediately after collection and retained as required for EPA use.

3.15 The licensee shall clearly label and provide safe and permanent access to all on-site sampling and monitoring points and to off-site points as required by the Agency.

3.16 Tank, Container and Drum Storage Areas

3.16.1 All tank container and drum storage areas shall be rendered impervious to the materials stored therein. Bunds should be designed having regard to Agency guidelines 'Storage and Transfer of Materials for Scheduled Activities' (2004).

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

(i) 110% of the capacity of the largest tank or drum within the bunded area; or

(ii) 25% of the total volume of substance which could be stored within the bunded area.

3.16.3 All drainage from bunded areas shall be treated as hazardous waste unless it can be demonstrated to be otherwise. All drainage from bunded areas shall be diverted for collection and safe disposal.

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

3.16.5 All tanks, containers and drums shall be labelled to clearly indicate their contents.

3.17 The licensee shall have in storage an adequate supply of containment booms and/or suitable absorbent material to contain and absorb any spillage at the facility. Once used the absorbent material shall be disposed of at an appropriate facility.

3.18 All pump sumps, storage tanks, lagoons or other treatment plant chambers from which spillage of environmentally significant materials might occur in such quantities as are likely to breach local or remote containment or separator, shall be fitted with high liquid level alarms (or oil detectors as appropriate) within six months from the date of grant of this licence.

3.19 The provision of a catchment system to collect any leaks from flanges and valves of all over ground pipes used to transport material other than water shall be examined. This shall be incorporated into a schedule of objectives and targets set out in Condition 2.2 of this licence for the reduction in fugitive emissions.

3.20 The licensee shall, within three months of the date of grant of this licence, install in a prominent location on the site a wind sock, or other wind direction indicator, which shall be visible from the public roadway outside the site.

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

Condition 4. Interpretation

4.1 Emission limit values for emissions to waters in this licence shall be interpreted in the following way:-

4.1.1 Continuous monitoring:

(i) No flow value shall exceed the specified limit.

(ii) No pH value shall deviate from the specified range.

(iii) No temperature value shall exceed the limit value.

4.1.2 Composite Sampling:

(i) No pH value shall deviate from the specified range.

(ii) For parameters other than pH and flow, eight out of ten consecutive composite results, based on flow proportional composite sampling, shall not exceed the emission limit value. No individual result similarly calculated shall exceed 1.2 times the emission limit value.

4.1.3 Discrete Sampling

For parameters other than pH and temperature, no grab sample value shall exceed 1.2 times the emission limit value.

4.2 Where the ability to measure a parameter is affected by mixing before emission, then, with agreement from the Agency, the parameter may be assessed before mixing takes place.

4.3 Noise

Noise from the facility shall not give rise to sound pressure levels (Leq,T) measured at noise sensitive locations of the facility which exceed the limit value(s).

4.4 Dust and Particulate Matter

Dust and particulate matter from the activity shall not give rise to deposition levels which exceed the limit value(s).

Reason: To clarify the interpretation of limit values fixed under the licence.

Condition 5. Emissions

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

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

5.3 No substance shall be discharged in a manner, or at a concentration that, following initial dilution, causes tainting of fish or shellfish.

5.4 The licensee shall ensure that vermin, birds, flies, mud, dust, litter and odours do not give rise to nuisance at the facility or in the immediate area of the facility. Any method used by the licensee to control any such nuisance shall not cause environmental pollution.

5.5 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.

5.6 The road network between the facility and the power station shall be kept free from any debris caused by vehicles entering or leaving the facility or peat borrow area. Any such debris or deposited materials shall be removed without delay.

Reason: To provide for the protection of the environment by way of control and limitation of emissions.

Condition 6. Control and Monitoring

6.1 Leachate Management

6.1.1 Within twelve months of the date of grant of this licence, the licensee shall submit an updated leachate monitoring programme to include for leachate monitoring in all cells (Cells 1 to 8) at the landfill. Leachate monitoring shall be carried out at the leachate collection point and two other points in each cell.

6.1.2 Leachate levels in the waste shall not exceed a level of 1.0m over the top of the liner at the base of the landfill.

6.1.3 The level of leachate in the pump sumps shall be monitored as outlined in *Schedule C2.3 Leachate Monitoring*, of this licence.

6.1.4 The frequency of leachate removal from the leachate holding tank shall be such that a minimum freeboard of 0.5m shall be maintained in the tank at all times. The required freeboard shall be clearly indicated in the tank.

6.1.5 Unless treated on the facility, leachate stored in the leachate storage lagoon shall be disposed of by tankering off-site in fully enclosed road tankers.

6.1.6 Recirculation of leachate or other contaminated water shall only be undertaken within cells which have been lined to the satisfaction of the Agency.

6.2 The licensee shall monitor meteorological conditions as specified in *Schedule C.6 Meteorological Monitoring*, of this licence.

6.3 Litter Control

All loose litter or other waste, placed on or in the vicinity of the facility, other than in accordance with the requirements of this licence, shall be removed, subject to the agreement of the landowners, immediately and in any event by 10.00am of the next working day after such waste is discovered.

6.4 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.

6.5 Operational Controls

6.5.1 Only one working face shall exist at the landfill at any one time for the deposit of waste other than cover or restoration materials.

6.5.2 All waste deposited at the working face shall be compacted as soon as is practicable, and in any case by the end of the working day.

6.5.3 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 necessary infrastructure or otherwise only with the prior agreement from the Agency.

6.5.4 Any cover material at any location within the facility which is eroded, washed off or otherwise removed shall be replaced by the end of the working day.

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

6.6 Stability Assessment

The licensee shall carry out a stability assessment of the side slopes of the facility annually. The results of this assessment shall be reported as part of the AER.

6.7 Groundwater

6.7.1 Within three months of the date of grant of this, the licensee shall submit to the Agency for its agreement, groundwater monitoring trigger levels in accordance with the requirements of Directive 1999/31/EC.

6.7.2 The licensee shall ensure that groundwater monitoring well sampling equipment is available/installed on-site and is fit for purpose at all times. The sampling equipment shall be to Agency specifications.

6.8 The licensee shall carry out such sampling, analyses, measurements, examinations, maintenance and calibrations as set out below and as in accordance with *Schedule C*: *Control & Monitoring*, of this licence:

6.16.1 Analysis shall be undertaken by competent staff in accordance with documented operating procedures.

6.16.2 Such procedures shall be assessed for their suitability for the test matrix and performance characteristics determined.

6.16.3 Such procedures shall be subject to a programme of Analytical Quality Control using control standards with evaluation of test responses.

6.16.4 Where analysis is sub-contracted it shall be to a competent laboratory.

6.9 Sampling and analysis of all pollutants as well as reference measurement methods to calibrate automated measurement systems shall be carried out in accordance with CEN-standards. If CEN standards are not available, ISO, national or international standards which will ensure the provision of data of an equivalent scientific quality shall apply.

6.10 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 has 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. Agreement for the use of alternative equipment, other than in emergency situations, shall be obtained from the Agency.

6.11 Monitoring and analysis equipment shall be operated and maintained as necessary so that monitoring accurately reflects the emission or discharge.

6.12 All treatment/abatement and emission control equipment shall be calibrated and maintained, in accordance with the instructions issued by the manufacturer/supplier or installer.

6.13 The frequency, methods and scope of monitoring, sampling and analyses, as set out in this licence, may be amended with the agreement of the Agency following evaluation of test results.

6.14 All tanks and pipelines shall be maintained impervious to the materials carried by or stored therein. The integrity and water tightness of all underground pipes, tanks, bunding structures and containers and their resistance to penetration by water or other materials carried or stored therein shall be tested and demonstrated by the licensee. This testing shall be carried out by the licensee at least once every three years and reported to the Agency on each occasion. This testing shall be carried out in accordance with any guidance published by the Agency. A written record of all integrity tests and any maintenance or remedial work arising from them shall be maintained by the licensee.

6.15 Discharge from the Leachate Lagoon

6.15.1 Prior to any discharge from the leachate lagoon following disposal of ash containing meat and bonemeal and/or biomass, the acute toxicity of the undiluted final effluent 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. The name of the laboratory and the scope of testing to be undertaken shall be submitted, in writing, to the Agency, within 3 months of the date of grant of this licence. Once the testing laboratory and the scope of testing have been agreed by the Agency, the Agency shall decide when this testing is to be carried out and copies of the complete reports shall be submitted by the licensee to the Agency within six weeks of completion of the testing.

6.15.2 Having identified the most sensitive species outlined in Condition 6.15.1, subsequent compliance toxicity monitoring on the two most sensitive species shall be carried out by the laboratory identified in Condition 6.15.1 as per Condition 6.15.1. The Agency shall decide when this testing is to be carried out and copies of the complete reports shall be submitted by the licensee to the Agency within six weeks of completion of the testing.

6.15.3 A representative sample of effluent shall be screened for the presence of organic compounds. Such screening shall be repeated at intervals as requested by the Agency thereafter.

6.16 Storm water

A visual examination of the storm water discharge shall be carried out weekly. A log of such inspections shall be maintained.

6.17 Noise

The licensee shall carry out a noise survey of the site operations annually. The survey programme shall be undertaken in accordance with the methodology specified in the 'Environmental Noise Survey Guidance Document' as published by the Agency.

6.18 Pollution Emission Register (PER)

The licensee shall prepare and maintain a PER for the site. The substances to be included in the PER shall be agreed by the Agency each year by reference to the list specified in the Agency's AER Guidance Note. The PER shall be prepared in accordance with any relevant guidelines issued by the Agency and shall be submitted as part of the AER.

6.19 The licensee shall, within six months of the date of grant of this licence, develop and establish a Data Management System for collation, archiving, assessing and graphically presenting the environmental monitoring data generated as a result of this licence.

Reason: To provide for the protection of the environment by way of treatment and monitoring of emissions.

Condition 7. Resource Use and Energy Efficiency

7.1 The licensee shall carry out an audit of the energy efficiency of the site within one year of the date of grant of this licence. The audit shall be carried out in accordance with the guidance published by the Agency; "Guidance Note on Energy Efficiency Auditing". The energy efficiency audit shall be repeated at intervals as required by the Agency.

7.2 The audit shall identify all opportunities for energy use reduction and efficiency and the recommendations of the audit will be incorporated into the Schedule of Environmental Objectives and Targets under Condition 2 above.

7.3 The licensee shall identify opportunities for reduction in the quantity of water used on site including recycling and reuse initiatives, wherever possible. Reductions in water usage shall be incorporated into Schedule of Environmental Objectives and Targets.

7.4 The licensee shall undertake an assessment of the efficiency of use of raw materials in all processes, having particular regard to the reduction in waste generated. The assessment should take account of best international practice for this type of activity. Where improvements are identified, these shall be incorporated into the Schedule of Environmental Objectives and Targets.

Reason: To provide for the efficient use of resources and energy in all site operations.

Condition 8. Materials Handling

8.1 Waste Acceptance and Characterisation Procedures

8.1.1 Only pre-treated wastes are acceptable for disposal as set out in Article 6 (a) of the Landfill Directive.

8.1.2 No hazardous wastes or liquid wastes shall be disposed of at the facility.

8.1.3 All materials received at the facility shall have their weights recorded in tonnes.

8.1.4 All wastes shall be checked at the working face to ensure that they comply with the requirements of the licence.

8.1.5 Within three months of the date of grant of this licence, the licensee shall submit to the Agency for its agreement written updated procedures (where appropriate) for the acceptance and handling of all wastes. These procedures shall include details of the pre-treatment of all waste to be carried out in advance, of acceptance at the facility and shall also include methods for the characterisation of waste in order to distinguish between inert, non-hazardous and hazardous wastes. The procedures shall have regard to the EU Decision (2003/33/EC) on establishing the criteria and procedures for the acceptance of waste at landfills pursuant to Article 16 and Annex II of Directive (1999/31/EC) on the landfill of waste.

8.2 A temporary cap shall be placed on the active cell if ash waste deposition is to cease for a period exceeding two months or as instructed by the Agency.

8.3 Inert waste accepted at the facility shall comply with the standards established in the EU Decision (2003/22/EC).

8.4 Disposal of waste on-site shall only take place in accordance with the conditions of this licence and in accordance with the appropriate National and European legislation and protocols.

8.5 The loading and unloading of materials shall be carried out in designated areas protected against spillage and leachate run – off.

8.6 Waste shall be stored in designated areas, protected as may be appropriate, against spillage and leachate run-off. The waste is to be clearly labelled and appropriately segregated.

8.7 Unless approved in writing by the Agency the licensee is prohibited from mixing a hazardous waste of one category with a hazardous waste of another category or with any other non-hazardous waste.

8.8 With the exception of use of recovered fuels as may be approved for this site by the Agency, no waste shall be burnt at the facility.

Reason: To provide for the appropriate handling of materials and the protection of the environment.

Condition 9. Accident Prevention and Emergency Response

9.1 The licensee shall ensure that a documented Accident Prevention Policy is in place which will address the hazards on-site, particularly in relation to the prevention of accidents with a possible impact on the environment. This procedure shall be reviewed annually and updated as necessary.

9.2 The licensee shall ensure that a documented Emergency Response Procedure is in place, which shall address any emergency situation which may originate on-site. This procedure shall include provision for minimising the effects of any emergency on the environment. This procedure shall be reviewed annually and updated as necessary.

9.3 Incidents

9.3.1 In the event of an incident the licensee shall immediately:-

(i) isolate the source of any such emission;

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

(iii) evaluate the environmental pollution, if any, caused by the incident;

(iv) identify and execute measures to minimise the emissions/malfunction and the effects thereof;

(v) identify the date, time and place of the incident;

(vi) notify the Agency and other relevant authorities.

9.3.2 The licensee shall provide a proposal to the Agency for its agreement within one month of the incident occurring or as otherwise agreed by the Agency 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 10. Closure, Restoration and Aftercare

10.1 The licensee shall restore the facility on a phased basis. Unless otherwise agreed, filled cells shall be permanently capped within twelve months of the cells having been filled to the required level.

10.2 Landscaping

10.2.1 Landscaping of the facility shall be as described in the Application documentation (Reg. No. 49-1), unless otherwise agreed by the Agency.

10.2.2 Unless otherwise agreed by the Agency, the finished (post settlement restored) levels of the landfill shall be as indicated in Drawing No.

2401057-4 *Detail of Capping Contours and S.W. Drainage* and 2401057-5 *Sections A-A & B-B* of the application.

10.2.3 Completed areas of the landfill shall be profiled so that no depressions exist in which water may accumulate. Any depressions arising after profiling shall be rectified by the emplacement of suitable capping or restoration materials.

10.3 Final Capping

Unless otherwise agreed by the Agency, the final capping shall consist of a minimum 1m thick soil layer consisting of 20:80 mix of peat:clay.

10.4 No material or object that is incompatible with the proposed restoration of the facility shall be present within one metre of the final soil surface levels.

10.5 All soils shall be stored to preserve the soil structure for future use.

10.6 Following termination, or planned cessation for a period greater than six months, of use or involvement of all or part of the site in the licensed activity, the licensee shall, to the satisfaction of the Agency, decommission, render safe or remove for disposal/recovery, any soil, subsoils, buildings, plant or equipment, or any waste, materials or substances or other matter contained therein or thereon, that may result in environmental pollution.

10.7 Closure, Restoration & Aftercare Management Plan (CRAMP)

10.7.1 Within twelve months of the date of grant of this licence, the licensee shall prepare for agreement by the Agency, a fully detailed and costed plan for the closure, restoration and long-term aftercare of the site or part thereof. This plan shall have regard to the commitments given in the application documentation for Licence Register 49-1 and W0049-02 (as may be varied herein).

10.7.2 The plan shall be maintained and reviewed annually and proposed amendments thereto notified to the Agency for agreement as part of the AER. No amendments may be implemented without the prior agreement of the Agency.

10.8 The CRAMP shall include as a minimum, the following:-

(i) A scope statement for the plan.

(ii) The criteria, including those specified in this licence, which define the successful closure & restoration of the facility or part thereof, and which ensures minimum impact to the environment.

(iii) A programme to achieve the stated criteria.

(iv) Where relevant, a test programme to demonstrate the successful implementation of the plan.

(v) Details of the long-term supervision, monitoring, control, maintenance and reporting requirements for the restored facility,

(vi) Details of the costings for the plan and the financial provisions to underwrite those costs.

10.9 A final validation report to include a certificate of completion for the CRAMP, for all or part of the site as necessary, shall be submitted to the Agency within three months of execution of the plan. The licensee shall carry out such tests, investigations or submit certification, as requested by the Agency, to confirm that there is no continuing risk to the environment.

Reason: *To make provision for the proper closure of the activity ensuring protection of the environment.*

Condition 11. Notifications, Records and Reports

11.1 In relation to landfilling activities, the licensee shall notify the Agency of any wastes presented at but not accepted to the facility.

11.2 In advance, of the development of any undisturbed area, the advice of the Heritage Section of the Department of the Environment, Heritage and Local Government shall be sought.

11.3 The licensee shall notify the Agency by both telephone and either facsimile or electronic mail, if available, to the Agency's Headquarters in Wexford, or to such other Agency office as may be specified by the Agency, as soon as practicable after the occurrence of any of the following:

(i) Any release of environmental significance to atmosphere from any potential emission point including bypasses.

(ii) Any emission which does not comply with the requirements of this licence.

(iii) Any malfunction or breakdown of key control equipment or monitoring equipment set out in S*chedule C: Control & Monitoring*, of this licence which is likely to lead to loss of control of the abatement system.

(iv) Any incident with the potential for environmental contamination of surface water or groundwater, or posing an environmental threat to air or land, or requiring an emergency response by the Local Authority.

The licensee shall include as part of the notification, date and time of the incident, summary details of the occurrence, and where available, the steps taken to minimise any emissions.

11.4 In the case of any incident which relates to discharges to water, the licensee shall notify the Local Authority and the Southern Regional Fisheries Board as soon as practicable after such an incident.

11.5 The licensee shall make a record of any incident. This record shall include details of the nature, extent, and impact of, and circumstances giving rise to, the incident. The record shall include all corrective actions taken to; manage the incident, minimise wastes generated and the effect on the environment, and avoid recurrence. The licensee shall as soon as practicable following incident notification, submit to the Agency the incident record.

11.6 The licensee shall record all complaints of an environmental nature related to the operation of the activity. Each such record shall give details of the date and time of the complaint, the name of the complainant and give details of the nature of the complaint. A record shall also be kept of the response made in the case of each complaint.

11.7 The licensee shall record all sampling, analyses, measurements, examinations, calibrations and maintenance carried out in accordance with the requirements of this licence and all other such monitoring which relates to the environmental performance of the facility.

11.8 The licensee shall as a minimum keep the following documents at the site:-

(i) the licences relating to the facility;

(ii) the current EMS for the facility;

(iii) the previous year's AER for the facility;

(iv) records of all sampling, analyses, measurements, examinations, calibrations and maintenance carried out in accordance with the requirements of this

licence and all other such monitoring which relates to the environmental performance of the facility;

(v) relevant correspondence with the Agency;

(vi) up to date site drawings/plans showing the location of key process and environmental infrastructure, including monitoring locations and emission points

(vii) up to date Standard Operational Procedures for all processes, plant and equipment necessary to give effect to this licence or otherwise to ensure that standard operation of such processes, plant or equipment does not result in unauthorised emissions to the environment;

and this documentation shall be available to the Agency for inspection at all reasonable times.

11.9 The licensee shall submit to the Agency, by the 31st March of each year, an AER covering the previous calendar year. This report, which shall be to the satisfaction of the Agency, shall include as a minimum the information specified in *Schedule F: Annual Environmental Report*, of this licence and shall be prepared in accordance with any relevant guidelines issued by the Agency.

11.10 A full record, which shall be open to inspection by authorised persons of the Agency at all times, shall be kept by the licensee on matters relating to the waste management operations and practices at this site. This record shall be maintained on a monthly basis and shall as a minimum contain details of the following:

(i) The tonnages and EWC Code for the waste materials imported and/or sent off-site for disposal/recovery.

(ii) Details of the ultimate disposal/recovery destination facility for the waste and its appropriateness to accept the consigned waste stream, to include its permit/licence details and issuing authority, if required.

(iii) Details of any rejected consignments.

(iv) Details of any approved waste mixing.

(v) The tonnages and EWC Code for the waste materials disposed on-site.

Reason: To provide for the collection and reporting of adequate information on the activity.

Condition 12. Financial Charges and Provisions

12.1 Agency Charges

12.1.1 The licensee shall pay to the Agency an annual contribution of €11,275, or such sum as the Agency from time to time determines, having regard to variations in the extent of reporting, auditing, inspection, sampling and analysis or other functions carried out by the Agency, towards the cost of monitoring the activity as the Agency considers necessary for the performance of its functions under the Waste Management Acts 1996 to 2005. The first payment shall be a pro-rata amount for the period from the date of this licence to the 31st day of December, and shall be paid to the Agency within one month from the date of the licence. In subsequent years the licensee shall pay to the Agency such revised annual contribution as the Agency shall from time to time consider necessary to enable performance by the Agency of its relevant functions under the Waste Management Acts 1996 to 2005, and all such payments shall be made within one month of the date upon which demanded by the Agency.

12.1.2 In the event that the frequency or extent of monitoring or other functions carried out by the Agency needs to be increased the licensee shall contribute such sums as determined by the Agency to defraying its costs in regard to items not covered by the said annual contribution.

12.2 Environmental Liabilities

12.2.1 The licensee shall as part of the AER provide an annual statement as to the measures taken or adopted at the site in relation to the prevention of environmental damage, and the financial provisions in place in relation to the underwriting of costs for remedial actions following anticipated events (including closure) or accidents/incidents, as may be associated with the carrying on of the activity.

12.2.2 The licensee shall arrange for the completion, by an independent and appropriately qualified consultant, of a comprehensive and fully costed Environmental Liabilities Risk Assessment (ELRA), which addresses the liabilities from past and present activities. The assessment shall include those liabilities and costs identified in Condition 10 for execution of the CRAMP. A report on this assessment shall be submitted to the Agency for agreement within twelve months of date of grant of this licence. The ELRA shall be reviewed as necessary to reflect any significant change on site, and in any case every three years following initial agreement: review results are to be notified as part of the AER.

12.2.3 As part of the measures identified in Condition 12.2.1, the licensee shall, to the satisfaction of the Agency, make financial provision to cover any liabilities identified in Condition 12.2.2. The amount of indemnity held shall be reviewed and revised as necessary, but at least annually. Proof of renewal or revision of such financial indemnity shall be included in the annual 'statement of measures' report identified in Condition 12.2.1.

12.2.4 Unless otherwise agreed, any revision to that part of the indemnity dealing with restoration and aftercare liabilities, 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.

12.3 Cost of landfill of waste

In accordance with the provisions of Section 53A of the Waste Management Acts 1996 to 2005, the licensee shall ensure the costs in the setting up, operation of, provision of financial security and closure and after-care for a period of at least 30 years shall be covered by the price to be charged for the disposal of waste at the facility. The statement required under Section 53A(5) of said Acts is to be included as part of the AER.

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

SCHEDULE A: Limitations

A.1

The following waste related processes are authorised:

i. Landfilling of inert and non-hazardous waste
ii. Use of compost, peat & inert waste in landfill operation
iii. Use of inert waste for land improvement

No addition to these processes are permitted unless agreed in advance by the Agency.

A.2 Waste Acceptance

Table A.1 Waste Categories and Quantities

WASTE TYPE Note 1	**MAXIMUM (TONNES PER ANNUM)** Note 2
Industrial Non-Hazardous Solids Note 3	**70,000**
TOTAL	**70,000**

Note 1: Any proposals to accept other compatible waste streams must be agreed in advance by the Agency and the total amount of waste must be within that specified.

Note 2: The individual limitation on waste streams may be varied with the agreement of the Agency subject to the overall total limit staying the same.

Note 3: The facility is allowed to only accept ash from co-fuelling of peat, biomass and/or Category 3 meat and bone meal from Edenderry Power Limited (Reg. No. 654) for disposal at the landfill.

SCHEDULE B: Emission Limits

B.1 Emissions to Air

Dust Deposition Limits:

Measured at the monitoring points DM-01, DM-02, DM-03 and DM-04 shown on Drawing No: 2401057-6 *Environmental Monitoring & Sampling Locations.*

Level (mg/m^2 /day)[Note 1]
350

Note 1: 30 day composite sample with the results expressed as mg/m^2/day.

B.2 Emissions to Water

Emission Point Reference No.: SWR-1, SWR-2[Note 1] and L-2

Name of Receiving Waters: River Figile

Parameter	Emission Limit Value
pH	6 - 9
	mg/l
Suspended Solids	35
Toxicity Units[Note 2]	5

Note 1: The discharge from the peat borrow area measured at monitoring point SWR-2 shall only meet the emission limit value set for the parameter suspended solids.

Note 2 This emission limit value only applies to discharges from the leachate lagoon to discharge point L-2 as shown on Drawing No. 2401057-6 *Environmental Monitoring and Sampling Locations*. Emission from the leachate lagoon is only allowed when 100 dilutions of effluent is available in West-East Drain.

B.3 Emission to Sewer

There are no Process Effluent Emissions to Sewer.

B.4. Noise Emissions

Measured at any noise sensitive locations

Daytime dB(A) L_{Aeq}(30 minutes)	Night-time dB(A) L_{Aeq}(30 minutes)
55[Note 1]	45[Note 1]

Note 1: There shall be no clearly audible tonal component or impulsive component in the noise emission from the activity at any noise sensitive location.

SCHEDULE C: Control & Monitoring

C.1.1 Control of Emissions to Air

There are no Emissions to Air of environmental significance.

C.1.2 Monitoring of Emissions to Air

There are no Emissions to Air of environmental significance.

C.2.1 Control of Emissions to Water

Emission Control Locations: Silt Pond and Leachate Lagoon

Description of Treatment: Sedimentation

Control Parameter	Monitoring	Key Equipment[Note 1]
Residence time & Flow restriction	Flow rate, depth	Flow meter, overflow alarm, emergency storage

Note 1: The licensee shall maintain appropriate access to standby and/or spares to ensure the operation of the abatement system.

C.2.2 Monitoring of Emissions to Water

Emission Point Reference No.: Outlet from Silt Pond (SWR-1) and Leachate Lagoon (L-2)

PARAMETER[Note 1]	SURFACE WATER Monitoring Frequency
Visual Inspection/Odour [Note 2]	Weekly
Level	Weekly
COD	Quarterly
Dissolved Oxygen	Quarterly
Electrical Conductivity	Quarterly
Ammoniacal Nitrogen	Quarterly
pH	Quarterly
Temperature	Quarterly
Total Suspended Solids	Quarterly
Nitrate	Quarterly
Metals / non metals [Note 3]	Annually
List I/II organic substances (Screen) [Note 4]	Annually
Mercury	Annually
Sulphate (SO_4)	Annually
Total P/orthophosphate	Annually
Toxicity [Note 5]	As agreed by the Agency in accordance with Condition 6.15

Note 1: All the analysis shall be carried out by a competent laboratory using standard and internationally accepted procedures.

Note 2: Where there is evident gross contamination, additional samples should be analysed and the full suite of parameters shown tested.

Note 3: Metals and elements to be analysed by AA/ICP should include as a minimum: boron, cadmium, calcium, chromium (total), copper, iron, lead, magnesium, manganese, nickel, potassium, sodium and zinc.

Note 4: Samples screened for the presence of organic compounds using Gas Chromatography / Mass Spectrometry (GC/MS) or other appropriate techniques and using the list I/II Substances from EU Directive 76/464/EEC and 80/68/EEC as a guideline. Recommended analytical techniques include: volatiles (US Environmental Protection Agency method 524 or equivalent), semi-volatiles (USEPA method 525 or equivalent, and pesticides (USEPA method 608 or equivalent).

Note 5: Toxicity to be determined for discharge from the leachate lagoon (l-2) only. The number of toxic units (Tu) = 100/x hour EC/LC_{50} in percentage vol/vol so that higher Tu values reflect greater levels of toxicity. For test regimes where species death is not easily detected, immobilisation is considered equivalent to death.

C.2.3 Monitoring of Storm Water Emission

Emission Point Reference No.: **SWR-2**

Parameter	Monitoring Frequency	Analysis Method/Technique
Visual Inspection	Weekly	Sample and examine for colour and odour
pH	Quarterly	pH electrode/meter
Temperature	Quarterly	Thermometer
COD	Quarterly	Standard Method
Total Ammonia	Quarterly	Standard Method
Total Nitrogen	Quarterly	Standard Method
Conductivity	Quarterly	Standard Method

C2.4 Leachate Monitoring

Location: Leachate Lagoon, Leachate Sumps and Leachate Monitoring Points as shown on Drawing No. 2401058-5 *Leachate Management System*, unless otherwise agreed by the Agency. Additional leachate monitoring points to be installed in accordance with Condition 6.1.1.

PARAMETER[Note 1]	LEACHATE [Note 2] Monitoring Frequency
Visual Inspection/Odour	Weekly
Leachate Level	Weekly
COD	Bi-annually
Temperature	Bi-annually
Ammoniacal Nitrogen	Bi-annually
Electrical Conductivity	Bi-annually
pH	Bi-annually
Total Oxidised Nitrogen	Annually
Metals / non metals [Note 3]	Annually
Cyanide (Total)	Annually
Fluoride	Annually
List I/II organic substances [Note 4]	Annually
Mercury	Annually
Total P/orthophosphate	Annually

Note 1: All the analysis shall be carried out by a competent laboratory using standard and internationally accepted procedures.
Note 2: Visual Inspection and Leachate Levels to be monitored at all leachate monitoring points in the cells, Collection sumps and leachate lagoon. Leachate composition to be monitored at the leachate lagoon.
Note 3: Metals and elements to be analysed by AA/ICP should include as a minimum: boron, cadmium, calcium, chromium (total), copper, iron, lead, magnesium, manganese, nickel, potassium, sodium and zinc.
Note 4: Samples screened for the presence of organic compounds using Gas Chromatography / Mass Spectrometry (GC/MS) or other appropriate techniques and using the list I/II Substances from EU Directive 76/464/EEC and 80/68/EEC as a guideline. Recommended analytical techniques include: volatiles (US Environmental Protection Agency method 524 or equivalent), semi-volatiles (USEPA method 525 or equivalent, and pesticides (USEPA method 608 or equivalent).

C.3.1 Control of Emissions to Sewer

There are no Process Effluent Emissions to Sewer.

C.3.2 Monitoring of Emissions to Sewer

There are no Process Effluent Emissions to Sewer.

C.4 Waste Monitoring

No waste monitoring is required.

C.5 Noise Monitoring

Emission Point Reference No.: N1, N2, N3, N4, N5 and any noise sensitive locations as may be specified by the Agency.

Location: Location of monitoring points as shown on Drawing Reference 2401057-6 *Environmental Monitoring & Sampling Locations*, unless otherwise agreed by the Agency.

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."

C.6 Ambient Monitoring

Air Monitoring

Emission Point Reference No.: DM-01, DM-02, DM-03, M-04

Location: Location of monitoring points as shown on Drawing No. 2401057-6 *Environmental Monitoring & Sampling Locations*, unless otherwise agreed by the Agency.

Parameter	Monitoring Frequency	Analysis Method/Technique
Dust deposition	Three times a year [Note 1]	Bergerhoff[Note 2]

Note 1: Twice during the period May to September, or as otherwise specified in writing by the Agency.
Note 2: Standard method VDI2119 (Measurement of Dustfall, Determination of Dustfall using Bergerhoff Instrument (Standard Method) German Engineering Institute).

Groundwater Monitoring

Emission Point Reference No.: MW-02, MW-03, MW-04, MW-05, MW-06, MW-07, MW-08, MW-09, MW-10, MW-11, unless otherwise agreed by the Agency.

Location: Location of monitoring points as shown on Drawing No. 2401057-6 *Environmental Monitoring & Sampling Locations*, unless otherwise agreed by the Agency.

Parameter	Monitoring Frequency
Visual Inspection [Note 1]	Monthly
Groundwater level	Monthly
pH	Monthly
Conductivity	Monthly
Total Ammonia	Monthly
Sulphate (SO_4)	Monthly
Metals / non metals [Note 2]	Annually
List I/II organic substances (Screen) [Note 3]	Annually
Mercury	Annually
Fluoride	Annually
Orthophosphate	Annually

Note 1: Where there is evident gross contamination, additional samples should be analysed and the full suite of parameters shown tested.
Note 2: Metals and elements to be analysed by AA/ICP should include as a minimum: boron, cadmium, calcium, chromium (total), copper, iron, lead, magnesium, manganese, nickel, potassium, sodium and zinc.
Note 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 (USEPA method 525 or equivalent, and pesticides (USEPA method 608 or equivalent).

Receiving Water Monitoring

Emission Point Reference No.: SW5 and SW6

Location: Location of monitoring points as shown on Drawing No. 2401057-6 *Environmental Monitoring & Sampling Locations*, unless otherwise agreed by the Agency.

Parameter	Monitoring Frequency	Analysis Method/Technique
Biological Quality (Q) Rating/Q Index	Annually Note 1	To be agreed by the Agency
Parameters in Table C2.2	Visual Inspection Weekly All others Quarterly unless specified as Annually in Table C2.2	Standard Methods

Note 1: Monitoring period - June to September.

Meteorological Monitoring

Location : At the facility at a location to be agreed, or from an agreed representative station in the region.

Parameter	Monitoring Frequency	Analysis Method/Technique
Precipitation Volume	Daily	Standard
Temperature (min/max.)	Daily	Standard
Wind Direction	Daily	Standard
Wind Force Note 1	Daily	Standard
Atmospheric Pressure `Note 1	Daily	Standard

Note 1: Monitoring frequency for these parameters may be decreased with the agreement of the Agency.

SCHEDULE D Specified Engineering Works

Specified Engineering Works
Development of the facility including preparatory works and lining.
Final capping.
Installation of Leachate Management Infrastructure.
Installation of Groundwater Control Infrastructure.
Installation of Surface Water Management Infrastructure.
Any other works notified in writing by the Agency.

SCHEDULE E Reporting

Completed reports shall be submitted to:

The Environmental Protection Agency
Office of Environmental Enforcement
PO Box 3000
Johnstown Castle Estate
County Wexford
or Any other address as may be specified by the Agency

Reports are required to be forwarded as required in the licence and as may be set out below:

Report	Reporting Frequency Note1	Report Submission Date
Annual Environment Report (AER)	Annually	By 31st March of each year.
Record of incidents	As they occur	Within five days of the incident.
Specified Engineering Works reports	As they arise	In advance of the works commencing.
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	Bi-annually	Ten days after end of the quarter being reported on.
Dust Monitoring	Three times a year	As part of the AER.
Noise Monitoring	Annually	As part of the AER.
Drawing with Monitoring locations	-	Within twelve months of the date of grant of this licence. Any amendments thereafter to be submitted as part of the AER.
Schedule of Objectives & Targets	-	To be submitted as part of the AER.
Phased Construction Plan	-	Three months prior to commencement of any site development.

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

SCHEDULE F Annual Environmental Report

Annual Environmental Report Content[Note 1]
Emissions from the facility.
Waste management record.
Topographical survey.
Remaining void, projected completion date.
Resource consumption summary.
Complaints summary.
Schedule of Environmental Objectives and Targets.
Environmental management programme – report for previous year.
Environmental management programme – proposal for current year.
Pollution emission register – report for previous year.
Pollution emission register – proposal for current year.
Noise monitoring report summary.
Meteorological data summary.
Ambient monitoring summary.
Current monitoring location reference drawing.
Tank and pipeline testing and inspection report.
Reported incidents summary.
Energy efficiency audit report summary.
Report on the assessment of the efficiency of use of raw materials in processes and the reduction in waste generated.
Report on progress made and proposals being developed to minimise water demand and the volume of trade effluent discharge.
Development / Infrastructural works summary (completed in previous year or prepared for current year).
Report on management and staffing structure of the installation/facility.
Report on the programme for public information.
Reports on financial provision made under this licence.
Statement on the costs of Landfill.
Review of Environmental Liabilities.
Any amendments to the CRAMP.
Detailed Statement, with mass balance, of C & D wastes, peat and compost used in construction.
Any other items specified by the Agency.

Note 1: Content may be revised subject to the agreement of the Agency.

Signed on behalf of the said Agency
on the 10th day of July, 2006

Dr Tom McLoughlin,
Authorised Person