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County Wexford, Ireland

WASTE LICENCE PROPOSED DECISION

Waste Licence	49-1
Register Number:	
Applicant:	Peat Energy Division, Bord na Mona
Location of Facility:	Clonbullogue Ash Repository, Cloncreen, Clonbullogue, Co. Offaly.

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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, the submission received from a third party 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 Bord na Mona, Peat Energy Division, Leabeg, Tullamore, Co. Offaly to carry on the waste activity listed below at the Clonbullogue Ash Repository, Cloncreen, Clonbullogue, Co. Offaly subject to eleven conditions, with the reasons therefor and the associated schedules attached thereto set out in the licence.

*Licensed waste disposal activity, in accordance with the Third Schedule
of the Waste Management Act, 1996*

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

INTERPRETATION

Act	The Waste Management Act, 1996 (No. 10 of 1996).
Aerosol	A suspension of solid or liquid particles in a gaseous medium.
Adequate lighting	20 lux measured at ground level.
Agreement	Agreement in writing.
Attachment	Any reference to Attachments in this licence refers to attachments submitted as part of the waste licence application.
Application	The application by the licensee for this waste licence, including any other material submitted to the Agency in writing by the licensee between the date of the application and the date of grant of this licence.
Appropriate facility	A waste management facility, duly authorised under relevant law and technically suitable.
Ash Disposal Area	Area of facility where ash waste will be deposited as shown on drawing number 2401011 entitled "Site Plan (Amendment 2) B2.1".
Ash Waste	Bottom and fly ash as specified in Condition 5.2.
BATNEEC	Best Available Technology Not Entailing Excessive Cost as defined in section 5 (2) of the Act.
Biodegradable waste	Any waste that is capable of undergoing anaerobic or aerobic decomposition, such as food and garden waste, and paper and paperboard.
Cell	A unit for the deposition of wastes as delineated in Drawing Number D4.2, Amendment 2, entitled "Leachate Management - Leachate Drainage Infrastructure". The term "active cell" refers to the cell where waste deposition is actually occurring.
Commercial waste	As defined in Section 5 (1) of the Act.
Condition	A condition of this licence. In any case where this licence refers to a numbered condition, the reference shall be taken to mean the condition and any sub-condition therein which the context of the reference requires that reference is made to
Containment boom	A boom which can contain spillages and prevent these from entering drains or watercourses.
Cover material	Peat harvested from the facility or peat borrow area, clay sourced within the facility or other cover material the use of which has been subject to a proposal made by the licensee and agreed by the Agency.
Daytime	0800 hrs to 2200 hrs.
Documentation	Any report, record, result, data, drawing, proposal, interpretation or other document in written or electronic form which is required by this licence.

Drawing	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.
Emission	As defined in Section 5 (1) of the Act.
Emission Limit Value	Those limits, including concentration limits and deposition levels established in Schedule G.
Environmental Pollution	As defined in Section 5 (1) of the Act.
European Waste Catalogue (EWC)	The EWC is a harmonised, non-exhaustive list of wastes drawn up by the European Commission and published as Commission Decision 94/3/EC and any subsequent amendment published in the Official Journal of the European Community.
Facility	That area or areas defined under Condition 1.2
Hazardous Waste	As defined in Section 4 (2) of the Act.
Household Waste	As defined in Section 5 (1) of the Act.
Industrial waste	As defined in Section 5 (1) of the Act.
Incident	Any reference to an incident in this licence means an incident as defined in Condition 3.1.
Landfill	As defined in Section 5 (1) of the Act.
Landfill 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.
Leachate Lagoon	Lined lagoon for the holding of collected leachate as located in Drawing Number 318/15/6 E entitled "Leachate Management - Leachate Drainage Infrastructure, Amendment 2, D4.2" and referred to therein as "Interceptor Lagoon".
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	Bord na Mona, Peat Energy Division, Leabeg, Tullamore, Co. Offaly.
List I/II Organics	Substances classified pursuant to EC Directives 76/464/EEC and 80/68/EEC
Liquid Waste	Any waste in liquid form and containing less than 20% dry matter

Local Authority	Offaly County Council
Maintain	Keep in a fit state, including such regular inspection, servicing and repair as may be necessary to adequately perform its function.
Mobile Plant	Self-propelled machinery used for the emplacement of wastes or for the construction of specified engineering works
Monthly	At least 12 times per year, at approximately monthly intervals.
Municipal Waste	Municipal waste as defined in Section 5 (1) of the Act.
Night-time	2200 hours to 0800 hours.
Non-hazardous waste	Non-Hazardous Waste is any waste which is not a hazardous waste as defined in the Act.
Noise 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 noise at nuisance levels.
Peat	Peat derived from the Peat Borrow Area or facility for use as intermediate cover material, bund construction and capping/restoration layer.
Peat Borrow Area	As shown in drawing Number C5.0, Amendment 1, entitled "Location of Occupied Premises" and referred to therein as the "Source Area".
Quarterly	A period of three calendar months, the first period of which commences on the date of grant of this licence
Recovery	As defined in Section 4 (4) of the Act.
Sample(s)	Unless the context of this licence indicates to the contrary, samples shall include measurements by electronic instruments
Sludge	The accumulation of solids resulting from chemical coagulation, flocculation and/or sedimentation after water or wastewater treatment.
Specified Emissions	Those emissions listed in Schedule G of this licence.
Specified Engineering Works	Those engineering works listed in Schedule E of this licence.
Submit	Unless the context of this licence indicates otherwise, submit to the Agency in writing for agreement
Trigger Level	A parameter value which when achieved or exceeded requires certain actions to be taken.
Waste	As defined in Section 4(1) of the Act.
Waste disposal activity	Includes the activities referred to in Section 4 of the Act and listed in the Third Schedule thereto.

Waste recovery activity	Includes the activities referred to in Section 4 of the Act and listed in the Fourth Schedule thereto.
West-East Drain	Referred to as the “main outfall to river Figile” in Drawing Number J1.0, Amendment 2, entitled “Environmental Monitoring”.
Working Day	8 am to 6 pm Monday to Friday inclusive and 8 am to 4 pm on Saturdays.
Working Face	The area of the active cell in which waste other than cover material or material for the purposes of the construction of specified engineering works is being deposited.

Part II CONDITIONS

CONDITION 1 SCOPE

- 1.1. The waste activities authorised by this licence are listed and described in Schedule A: Waste Activities. Waste activities at the facility shall be restricted to those listed in Schedule A and any restrictions set down therein.
- 1.2. Waste activities shall be restricted to the area of land outlined in red on the drawing entitled "Site Plan (Amendment 2) Drg. B2.1 and the area of land outlined as the "Source Area" in drawing number 2401011 entitled "Location of Occupied Premises (Amendment 1)". The Licensee shall, within one month of the date of grant of this licence, submit to the Agency for its agreement a revised version of drawing number 2401011 which outlines the two areas above in red. Any reference in this licence to "facility" shall mean the area agreed by the Agency and outlined in red.
- 1.3. Every plan, programme or proposal submitted to the Agency for agreement pursuant to any condition of this licence shall include a proposed timescale for its implementation. The Agency may modify or alter any such plan, programme or proposal in so far as it considers such modification or alteration to be necessary. Every plan, programme or proposal shall be carried out within the timescale fixed by the Agency but shall not be undertaken without the agreement of the Agency.
- 1.4. This licence is for the purposes of waste licensing under the Waste Management Act 1996 only and nothing in this licence shall be construed as negating the licensee's statutory obligations or requirements under any other enactments or regulations.
- 1.5. Where the Agency considers that a non-compliance with the Conditions of this licence has occurred, it may serve a notice on the licensee specifying:
 - a) that only those wastes as specified, if any, in the notice are to be accepted at the facility after the date set down in the notice;
 - b) that the licensee shall undertake the works stipulated in the notice, and/or otherwise comply with the requirements of the notice as set down therein, within the time-scale contained in the notice; and,
 - c) that the licensee shall carry out any other requirement specified in the notice.

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

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

CONDITION 2 MANAGEMENT OF THE ACTIVITY

- 4 Environmental Management System
 - 4.16 The licensee shall within eighteen months from the date of grant of this licence, submit to the Agency for its agreement a proposal for a documented Environmental Management System (EMS) for the facility. Following the agreement of the Agency, the licensee shall establish and maintain such a system. The EMS shall be updated on an annual basis with amendments being submitted to the Agency for agreement.
 - 4.17 The EMS shall include as a minimum those elements specified in the Conditions 2.2 to 2.8 below:
- 5 Schedule of Environmental Objectives and Targets
 - 5.16 The licensee shall, within twelve months from the date of grant of this licence, submit to the Agency for its agreement a Schedule of Objectives and Targets. The objectives should be specific and the targets measurable.
 - 5.17 The Schedule shall address a five year period as a minimum and shall be reviewed and submitted annually to the Agency for its agreement.
- 6 Environmental Management Programme
 - 6.16 The licensee shall, within twelve months from the date of grant of this licence, submit to the Agency for its agreement an Environmental Management Programme (EMP). The EMP shall include a time-scale for achieving the Schedule of Objectives and Targets and shall comply with any other guidance issued by the Agency.
 - 6.17 The EMP shall include, as a minimum, the information specified in Schedule B: Content of the Environmental Management Programme. The EMP shall be reviewed and submitted to the Agency for its agreement annually.
- 7 Corrective Action
 - 7.16 Prior to the commencement of the licensed activity, 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.
- 8 Awareness and Training
 - 8.16 Prior to the commencement of the licensed activity, the licensee shall establish and maintain Awareness and Training Procedures in order to identify training needs and to provide appropriate training for personnel whose work is related to the licensed facility. Written records of training shall be maintained.
- 9 Management Structure
 - 9.16 At least three months prior to the date of commencement of the licensed activity, the licensee shall submit written details of the management structure of the facility for the agreement of the Agency. Any proposed changes in the management structure shall be submitted in writing to the Agency for its agreement. Written details of the management structure shall include the following information:

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

10 Communications

10.16 At least three months prior to the date of commencement of the licensed activity, the licensee shall submit for agreement to the Agency a Communications Programme to ensure that members of the public can obtain information concerning the environmental performance of the facility at all reasonable times.

11 Annual Environmental Report

11.16 The licensee shall submit to the Agency for its agreement, within one month of the end of each year, an Annual Environmental Report (AER). The first AER shall be submitted in January 2001.

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

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

13 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

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

- d) any malfunction of any environmental control system;
 - e) any indication that contamination has, or may have, taken place;
 - f) the cessation of waste activities at the facility for a period in excess of 28 days, and their recommencement;
 - g) any occurrence with the potential for environmental pollution;
 - h) the discovery of any artefacts of archaeological importance as per Condition 7.6; and,
 - i) any emergency.
- 5 The written record shall include the aspects described in sections (a) to (e) of Condition 10.5.
- 6 Unless otherwise instructed in writing by the Agency, the licensee shall:
- a) notify the Agency by telephone, and by facsimile if available, as soon as practicable and in any case not later than 10.00 am the following working day after the occurrence of any incident; and
 - b) submit the written record required by this Condition to the Agency as soon as practicable and in any case within five working days after the occurrence of any incident.
- 7 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.
- 8 Unless otherwise agreed by the Agency, all documentation submitted to the Agency shall:
- (a) be sent to the Agency's headquarters;
 - (b) comprise one original and three copies;
 - (c) be formatted in accordance with any written instruction or guidance issued by the Agency;
 - (d) be identified by a unique code, indicate any modification or amendment, and be correctly dated to reflect any such modification or amendment;
 - (e) be submitted in accordance to the relevant reporting frequencies specified by this licence;
 - (f) be certified as accurate and representative by the licensee; and
 - (g) in the case of results of any environmental monitoring, be accompanied by a written interpretation setting out their significance.
- 9 Copies of all environmental monitoring data obtained by the licensee which relates to the facility shall be forwarded to the Agency at the frequencies set out in Schedule D to this licence.
- 10 In the event of any incident which relates to discharges to surface water, the licensee shall notify the Local Authority and the Southern Regional Fisheries Board as soon as practicable by telephone and in writing (by facsimile if available) and in any case not later than 10:00am on the following working day after such an incident.

- 11 Unless otherwise agreed in advance in writing with the Agency, the licensee must give at least fourteen days notice to the Agency of the following events:
 - a) the cessation of waste disposal activities at the facility for a period in excess of twenty-eight days;
 - b) the re-commencement of waste disposal activities at the facility following a period of cessation referred to at a) above.
- 12 The licensee shall provide additional copies of any documentation referred to in this licence to the Agency upon written request, within the time specified in writing by the Agency.
- 13 The licensee shall keep the following documents at the facility office referred to in Condition 4.5.
 - a) the current waste licence relating to the facility;
 - b) any previous waste licence in respect of the facility;
 - c) the current EMS for the facility;
 - d) the previous year's AER for the facility;
 - e) all written procedures produced by the licensee which relate to the licensed activities;
 - f) all documentation required to be maintained under this licence unless otherwise agreed in writing by the Agency.
- 14 Unless otherwise agreed in writing with the Agency, all documentation required to be maintained under this licence, shall be retained by the licensee.
- 15 The licensee shall maintain a written record for each load of waste arriving at the facility. The licensee shall record the following:
 - a) the date and time of acceptance;
 - b) the active cell number;
 - c) a description of the waste;
 - d) the quantity of the waste, recorded in tonnes;
 - e) the name of the person checking the load; and,
 - f) where loads or wastes are removed or rejected, details of the date of occurrence, the types of waste and the facility to which they were removed.
- 16 The licensee shall maintain a written record of all complaints relating to the operation of the activity. Each such record shall give details of the following:
 - a) date and time of the complaint;
 - b) the name of the complainant;
 - c) details of the nature of the complaint;
 - d) actions taken on foot of the complaint and the results of such actions; and,

- e) the response made to each complainant.

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

CONDITION 4 SITE INFRASTRUCTURE

- 4 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.
- 5 Site Notice Board
- 5.16 Within three months of the date of grant of this licence, a Site Notice Board shall be provided and maintained by the licensee on the facility, so that it is legible to persons approaching from the lane adjacent to the facility. The minimum dimensions of the identification board shall be 1200 mm by 750 mm.
- 5.17 The board shall clearly show:
- a) the name and telephone number of the facility;
 - b) the normal hours of opening;
 - c) the name, address and telephone number of the licence holder;
 - d) an emergency out of hours contact telephone number;
 - e) the name, address and telephone number of the operator of the facility;
 - f) the licence reference number;
 - g) where and when environmental monitoring information relating to the facility can be obtained.
- 6 Site Security
- 6.16 At least three months prior to the date of commencement of the licensed activity a proposal for site security shall be submitted to the Agency for its agreement.
- 6.17 Prior to the date of commencement of the licensed activity, the licensee shall provide and install perimeter fencing around the facility as agreed with the Agency. This fencing shall be designed so as to permit pedestrian access from the adjacent lane and rail access from Cloncreen Bog during hours of operation. Additional fencing shall be provided as instructed by the Agency.
- 6.18 The licensee shall remedy any defect in the gates and/or fencing as follows:
- a) a temporary repair shall be made by the end of the working day; and,
 - b) a repair to the standard of the original gates and/or fencing shall be undertaken within three working days or as otherwise agreed in writing with the Agency.
- 6.19 Gates shall be locked shut when the facility is unsupervised.
- 7 Facility Access
- 7.16 Other than pedestrian access from the adjacent lane, all fuel, waste and materials allowed under this licence shall only enter the facility and peat borrow area via rail link as shown in drawing B2.2b, entitled "Rail Connection to Site".

Plant shall access the facility by a similar route unless agreed otherwise by the Agency.

- 7.17 The licensee shall submit a proposal for pedestrian access to the Agency at least three months prior to the date of commencement of the licensed activity.
- 8 Prior to the date of commencement of the licensed activity the licensee shall provide an office at the facility. The office shall be constructed and maintained in a manner suitable for the processing and storing of documentation.
- 9 The licensee shall provide and maintain a working telephone and facsimile machine in the office specified in Condition 4.5 above.
- 10 Prior to the date of commencement of the licensed activity the licensee shall provide and maintain a toilet at the facility. No sewage shall be discharged from, or into, the facility (including by percolation) unless agreed by the Agency.
- 11 The licensee shall provide and use adequate lighting during the operation of the facility in hours of darkness.
- 12 Fuel Storage
- 12.16 No fuel shall be stored on the facility or peat borrow area unless and in accordance with the prior agreement of the Agency.
- 13 Peat Borrow Area
- 13.16 Any additional peat required for the development, covering and restoration of this facility shall only be sourced from the area marked "Source Area" as shown in drawing number C5.0, Amendment 1, entitled "Location of Occupied Premises" unless otherwise agreed by the Agency. This peat will be acquired using the methods described in Attachment G.1 of the further information supplied to the Agency on the 3rd November 1998.
- 13.17 The licensee shall within three months of the date of grant of this licence submit a proposal to the Agency for the control of dust and noise emissions from the peat borrow area. No waste shall be deposited at the facility until such a proposal has been agreed.
- 13.18 A minimum 0.5 metres depth of undisturbed peat must remain following peat harvesting in the Peat Borrow Area.
- 14 Landfill Lining:
- 14.16 The landfill liner shall be a composite liner consisting of a basal soil layer of at least one metre in thickness with a permeability of less than 1×10^{-9} metres per second (or equivalent protection as agreed by the Agency). The side walls shall be designed and constructed as shown in drawing number 318/15/11 A, entitled "Site Infrastructure - Cell Design D1.2". The basal soil layer and the side walls shall be overlain by a 2mm thick high density polyethylene (HDPE) layer.
- 14.17 The surface of the landfill liner shall be no lower than 70 metres Ordinance Datum at any point. Any residual peat shall be removed prior to lining.
- 14.18 There shall be a minimum fall of two percent in the basal liner towards the leachate collection pipes.
- 14.19 No pipework shall breach the liner.
- 15 Leachate Management

- 15.16 At least three months prior to the proposed date of commencement of the licensed activity the licensee shall submit a proposal to the Agency for its agreement for leachate management at the facility for the protection of surface waters and groundwater including, inter alia, design, operation, maintenance, phasing, timescales and method statement for the installation of the leachate collection (including surface water run-off from the active cell), and leachate recirculation systems. No ash waste shall be accepted at the facility until this proposal is agreed and implemented. This proposal shall, inter alia, provide for:
- a) The landfill liner shall be overlain by a leachate collection layer. The leachate collection layer shall be installed such that it is at least 50 centimetres deep, that it shall not damage the integrity of the landfill liner, and that it shall be adequately filtered from deposited waste. The collection layer shall have a minimum hydraulic conductivity of 1×10^{-3} metres per second. Leachate collection pipework shall be perforated, smooth bore and laid to a self-cleansing gradient;
 - b) Leachate monitoring manholes shall be installed as described in Drawing Number 318-15-12 entitled "Leachate Management - Leachate Monitoring Manhole, D.4.3" unless agreed otherwise by the Agency. There shall be at least two monitoring wells in each cell (one each side of the railway embankment) located at the lowest point in the leachate collection pipework for that cell;
 - c) The leachate storage lagoon shall have a minimum leachate storage volume of $1,680 \text{ m}^3$. It shall be at the location shown in Drawing Number 318/15/6 E entitled "Leachate Management - Leachate Drainage Infrastructure, Amendment 2, D4.2" and referred to therein as "Interceptor Lagoon". The leachate lagoon shall have a composite liner consisting of a basal soil layer of at least one metre in thickness with a permeability of less than 1×10^{-9} metres per second (or equivalent protection as agreed by the Agency) overlain by a 2mm thick high density polyethylene (HDPE) layer. The side walls shall be designed and constructed to achieve an equivalent protection. The leachate lagoon shall be designed so as to preclude back-flooding from the West-East Drain. ;
 - d) A leachate recirculation system for the purpose of ash waste dampening during and after delivery of the ash waste. Liquid for ash waste dampening at the facility shall be sourced from the leachate lagoon. Any additional liquid requirements for this purpose shall be sourced from the water reserve as specified in Condition 4.13.1.3;
 - e) A proposal designed to achieve the emission limit values set through Condition 7.1 and Table G.3 of Schedule G for any leachate to be discharged from the leachate lagoon to the West-East Drain. There shall be only one discharge point for emissions from the leachate storage/treatment system to the West-East Drain. The proposal shall include a discharge flow control loop. It shall be designed so as to preclude back-flooding from the West-East Drain;
 - f) Measurement of both flow (m^3/s) and level (metres O.D.) in the West-East Drain immediately upstream of the leachate storage/treatment discharge point;
 - g) Measurement of the discharge flow (m^3/s) from the leachate storage/treatment system to the West-East Drain; and,
 - h) A monitoring station for representative grab sampling of discharges to the West-East Drain.

- 15.17 All surface water run-off from an active cell and any leachate generated will be directed to the Leachate Lagoon.
- 15.18 Leachate levels in the waste shall not exceed a level of 1.0m over the HDPE liner at any point.
- 16 Surface Water Drainage
 - 16.16 Surface Water Drainage Outside The Ash Disposal Area.
 - 16.16.2 Prior to the date of commencement of the licensed activity drainage ditches in the surrounding peatlands will be closed off and/or diverted such that surface water ingress to the ash disposal area is minimised.
 - 16.16.3 All surface water run-off from the Peat Borrow Area shall discharge to the West-East Drain within the area covered by Condition 1.2.
 - 16.16.4 Within one month of the date of grant of this licence, the licensee shall submit a proposal which will comply with Conditions 4.13.1.1 and 4.13.1.2 to the Agency for its agreement. This proposal will also provide for:
 - a) a water reserve pond (minimum 10m x 10m x 2m deep);
 - b) representative monitoring stations for all discharges from the Peat Borrow Area to the West-East Drain; and,
 - c) control of any surface water discharge(s) from the Peat Borrow Area to the West-East Drain in line with the emission limits values set forth in Schedule G, Table G.5.
 - 16.17 Surface Water Drainage Inside The Ash Disposal Area.
 - 16.17.2 Subject to Condition 4.12.2, all surface water run-off from within the lined perimeter bund (ash disposal area) shall discharge to the West-East Drain at SWR-1 as shown in Drawing Number 2401011 entitled "Environmental Monitoring, J1.0, Amendment 3," unless agreed otherwise by the Agency.
 - 16.17.3 At least three months prior to the date of commencement of the licensed activity the licensee shall submit to the Agency for its agreement a proposal which will comply with Condition 4.13.2.1. This proposal will provide for:
 - a) the control of the surface water discharge at SWR-1 in line with the emission limits values set forth in Schedule G, Table G.4; and,
 - b) the inclusion of a monitoring station for the representative sampling of this discharge.
- 16.18 Groundwater Management
 - 16.18.2 The licensee shall prevent groundwater contamination by sealing groundwater monitoring boreholes MW-02, MW-03 and MW-04, as well as the gas monitoring borehole GP-02, prior to the deposition of waste in the vicinity of these boreholes.
 - 16.18.3 At least three months prior to the commencement of the licensed activity, the licensee shall provide and install boreholes for monitoring groundwater (both water bearing overburden layer and the bedrock aquifer)

upgradient (minimum of one borehole) and down gradient (minimum of two boreholes) of the proposed landfill.

16.18.4 At least one month prior to the commencement of the licensed activity the licensee shall install a system agreed by the Agency to control groundwater ingress to the facility.

17 The licensee shall provide and maintain a fixed benchmark referenced in situ to Ordinance Datum prior to the date of commencement of the licensed activity.

18 Specified Engineering Works

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

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

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

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

- j) where the specified engineering work involves the installation of a monitoring station, a unique monitoring code and 12 digit national grid reference for that monitoring point shall be submitted to the Agency within one month of such installation.

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

CONDITION 5 WASTE MANAGEMENT

- 5.1. No hazardous wastes or liquid wastes shall be disposed of in the landfill.
- 5.2. Other than materials imported to or generated within the facility for development and restoration purposes as agreed with the Agency, only bottom ash and fly ash from the proposed 120 megawatt peat power station at Ballykilleen, Edenderry, Co. Offaly shall be disposed of in the landfill.
- 5.3. Subject to Condition 5.1 and Condition 5.2 only those Waste Types and quantities listed in Schedule H of the application shall be disposed of in the landfill unless the prior written agreement of the Agency has been obtained.
- 5.4.** Waste Acceptance Procedures shall be carried out, unless agreed otherwise by the Agency, in accordance with;
- 5.4.1. the information supplied to the Agency in Attachment E.3, Dampening of Ash to 38% (w/w) Moisture, on the 18th August 1998, and
- 5.4.2.** the information supplied to the Agency in the section on Waste Acceptance, items 1 and 2, on the 12th April 1999.
- 5.5. All materials received at the facility shall have their weights recorded in tonnes. At least three months prior to the date of commencement of the licensed activity, the licensee shall provide a procedure for the measurement in tonnes of bottom ash, fly ash, development and restoration materials accepted at the facility for the agreement of the Agency. This procedure shall incorporate a quality control/assurance scheme.
- 5.6. All wastes shall be checked at the working face to ensure that they comply with the requirements of the licence. Any wastes deemed to be in contravention of this licence and/or unsuitable for disposal at this facility shall be removed for disposal at an appropriate alternative facility.
- 5.7. The quantity of ash wastes to be accepted for disposal at the landfill, shall not exceed 50,000 tonnes per annum, unless otherwise agreed in writing in advance with the Agency. The quantity of peat to be accepted at the landfill, shall not exceed 355,000 cubic metres over the lifetime of the facility unless otherwise agreed in writing in advance with the Agency.
- 5.8. Wastes shall not be deposited in any cell or part of the landfill without the prior agreement of the Agency. Within one month of the date of grant of this licence, the licensee shall notify the Agency of the proposed date for the commencement of ash waste deposition. Any subsequent alterations to this start date shall be notified in writing to the Agency without delay.
- 5.9. Scavenging shall not be permitted at the facility.
- 5.10. Waste shall only be accepted at the facility between the hours of 8 am to 6 pm Monday to Friday inclusive and 8 am to 4 pm on Saturdays unless otherwise agreed in writing in advance with the Agency.

- 5.11. Unless the prior written agreement of the Agency is given, the following shall apply at the landfill:
- a) ash waste shall only be deposited in specially engineered cells as detailed in "Plan : Typical Cell" as shown in drawing number 318/15/11^A entitled "Site Infrastructure - Cell Design D1.2";
 - b) ash deposition shall commence at Cell Number 1 and thereafter move sequentially to Cell Number 20. Thereafter ash deposition shall occur at Cell Number 25 and move in reverse sequential order to cell Number 21. This cell numbering system is depicted in drawing number 318/15/5/D entitled "Site Infrastructure - Surface Water Drainage Infrastructure, Amendment 2, D1.3".
 - c) there shall be only one active cell at the facility at any one time;
 - d) only two working faces, as shown in drawing number 318/15/11^A entitled "Site Infrastructure - Cell Design D1.2", shall exist within the active cell. Only one of these working faces may receive ash waste at any one time;
 - e) all waste deposited at a working face shall be compacted as soon as is practicable and at any rate prior to the end of the working day or the commencement of ash waste deposition in the alternative working face. The ash waste shall be compacted to a slope of 7% as shown in drawing number 318/15/11^A entitled "Site Infrastructure - Cell Design D1.2" unless otherwise agreed by the Agency;
 - f) a five centimetres deep layer of peat (intermediate cover) shall be placed over every twenty centimetre deep layer of compacted ash material deposited on a working face;
 - g) ash waste shall be deposited in an active cell until the restoration height as specified in Condition 8.2, and allowing for the emplacement of the final capping and/or restoration layer, is achieved;
 - h) a temporary cap shall be placed on the active cell if ash waste deposition is to cease for a period exceeding one week or as instructed by the Agency. At least three months prior to the date of commencement of the licensed activity, a proposal for temporary capping shall be submitted to the Agency for its agreement. This proposal shall, inter alia, include a method statement for the emplacement of the capping layer; and,
 - i) ash waste shall not be unloaded at the facility during periods of adverse wind speed. The licensee shall, at least one month prior to the date of commencement of the licensed activity, submit a proposal for waste handling (all relevant operations) during adverse wind conditions for the agreement of the Agency. This proposal will provide, inter alia, a wind speed trigger level, including the basis of its determination, above which waste handling shall be suspended.
- 5.12. Any cover material at any location within the facility which is eroded, washed off or otherwise removed shall be replaced by the end of the working day.
- 5.13. A vehicle as agreed with the Agency shall be used for compacting all waste other than that used for restoration or construction purposes.
- 5.14. Wastes once deposited and covered shall not be excavated, disturbed or otherwise picked over without prior agreement from the Agency.
- 5.15. Temporary Storage

5.15.1. Stockpiles of intermediate cover material, temporary and final capping materials, and any other development/restoration materials agreed by this licence, shall be maintained such that they do not exceed an elevation of 76 metres OD.

5.15.2. At least three months prior to the date of commencement of the licensed activity, the licensee shall submit a proposal to the Agency for its agreement for the management of waste ash due and/or arriving at the facility during periods when ash waste deposition is interrupted or suspended.

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

CONDITION 6 ENVIRONMENTAL NUISANCES

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

6.2. The rail 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.

6.3. All loose litter accumulated within the facility and its environs shall be removed and appropriately disposed of on a daily basis.

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

6.5. The licensee shall ensure that all waste being delivered from the power station to the facility does not cause a dust nuisance during transit.

6.6. 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.

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

6.8. The licensee shall ensure that birds, vermin, flies and dust do not give rise to nuisance at the facility or the immediate area of the facility.

6.9. The licensee shall ensure that the temporary storage of restoration and development materials do not give rise to nuisance.

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

CONDITION 7 EMISSIONS AND ENVIRONMENTAL IMPACTS

- 7.1. No specified emission from the facility, including the peat borrow area, shall exceed the emission limit values set out in Schedule G: Emissions of this licence. There shall be no other emissions of environmental significance.
- 7.2. All treatment/abatement and emission control equipment shall be calibrated and maintained, in accordance with the instructions issued by the manufacturer/supplier or installer. Written records of the calibrations and maintenance shall be made and kept by the licensee.
- 7.3. The licensee shall ensure that the activities shall be carried out in a manner such that emissions do not result in significant impairment of, or significant interference with the environment beyond the facility boundary.
- 7.4. There shall be no clearly audible tonal or impulsive component in the noise emissions from the activity measured at noise sensitive locations.
- 7.5. There shall be no direct emissions to groundwater.
- 7.6. Should any artefacts of archaeological importance be discovered due to activities in the facility or Peat Borrow Area, such activity shall cease immediately within a distance of at least 25 metres of the artefact. Advice from a suitably qualified archaeologist shall be obtained forthwith. No works, including the removal or burying of the artefact, shall occur without the agreement of the Agency.
- 7.7. Surface Waters
 - 7.9.2 Leachate Storage/Leachate Treatment Plant Discharge
 - .1. Leachate shall only be discharged from the leachate lagoon/leachate treatment plant to the West-East Drain when there are **at least** 100 dilutions available in the receiving waters.
 - .2. Any discharge from the leachate lagoon/leachate treatment plant to the West-East Drain shall meet the emission limit values set forth in Schedule G, Table G.3.
 - 7.9.2 Discharges at SWR-1
 - .1. Any discharge through SWR-1 to the West-East Drain shall meet the emission limit values set forth in Schedule G, Table G.4.
 - .2. Discharges from Peat Borrow Area
 - .1. Any discharge from the Peat Borrow Area to the West-East Drain shall meet the emission limit values set forth in Schedule G, Table G.5.
 - .3. Discharges From Sewage Treatment Plant (if any)
 - .1. Any discharge to surface waters from any agreed sewage plant installed through Condition 4.7 shall meet the emission limit values set forth in Schedule G, Table G.6.
- 7.9.2 Dust

- .1. Activities on the facility shall not give rise to dust levels off site at any Dust Sensitive Location which exceed a dust deposition limit of 350 mg/m²/day. The sampling method is set forth in Table F.1.2 of Schedule F.
 - .2. The trigger level for PM₁₀ emissions from the facility measured at any Dust Sensitive Location is 50 microgrammes per cubic metre for a daily sample.
- 7.9.2 Emission limit values for emissions to water in this licence shall be interpreted in the following way:
- .1. For Continuous Monitoring:
 - .1. No flow value shall exceed the specified limit.
 - .2. No pH value shall deviate from the specified range.
 - 7.9.2 For Non-Continuous Monitoring:
 - .1. No pH value shall deviate from the specified range.
 - .2. For parameters other than pH and flow, 80% of consecutive grab sample values shall not exceed the emission limit value, and no individual value shall exceed 1.2 times the emission limit value.

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

CONDITION 8 RESTORATION AND AFTERCARE

8.1. Restoration and Aftercare Plans

- 8.1.1. Within nine months of the date of commencement of ash waste deposition, the licensee shall submit to the Agency for agreement Restoration and Aftercare Plans for the facility and the peat borrow area. The restoration plan shall, inter alia, provide for a method statement for the emplacement of the final capping/restoration layer(s), dust control measures, seeding, tree planting, the ecological monitoring of restored cells and restoration of the leachate lagoon.
- 8.1.2. The licensee shall update these schemes when required by the Agency. No amendments may be implemented without the written agreement of the Agency.

8.2. Within three months of completion of the filling of each cell with ash waste, the cell will be capped and seeded so that the final profile of the facility shall be as shown in Drawing No. G1.1, Amendment 1, entitled "Final Contours of Completed Landfill Body".

8.3. Landscaping

- 8.3.1. The existing birch woodland south of the facility as shown in Figure 5, entitled "Landscape Restoration Plan" of the further information submitted to the Agency on the 12th April 1999, shall be retained unless agreed otherwise by the Agency.
- 8.3.2. The restoration planting scheme as described in Section 6 and shown in Figure 5 of the Landscape and Visual Assessment report of the further information submitted to the Agency on the 12th April 1999 shall be implemented upon the

date of grant of this licence unless agreed otherwise by the Agency. Plantings shall be adequately maintained.

- 8.4. 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 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.
- 8.5. Completed areas of the landfill shall be profiled so that no depressions exist in which water may accumulate. Any depressions arising after profiling shall be rectified by the emplacement of suitable capping or restoration materials.
- 8.6. No material or object that is incompatible with the proposed restoration of the site shall be present within one metre of the final soil surface levels.

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

CONDITION 9 ENVIRONMENTAL MONITORING

- 9 The licensee shall carry out such monitoring and at such locations and frequencies as set out in Schedule F: Monitoring and as specified in the Conditions of this licence. All monitoring, unless specified otherwise in this licence or instructed otherwise by the Agency, shall commence at least one month prior to the date of commencement of the licensed activity.
- 10 Groundwater
 - 10.13 Prior to the commencement of ash waste deposition, two baseline surveys, at least four weeks apart, shall be undertaken in the boreholes specified in Condition 4.14.2 for all the groundwater parameters listed in Table F.3.6 of Schedule F as well as pizeometric maps for both sampling occasions.
 - 10.14 Prior to the date of commencement of the licensed activity, a survey for all the groundwater parameters listed in Table F.3.6 of Schedule F shall be undertaken in the private wells located to the north of the Clonbullogue to Daingean road (R402) as shown in Drawing Number 2401011, entitled "Groundwater Sampling Points, Drg. C6.1" of the application. Thereafter these wells shall be sampled annually for parameters as indicated by Note 6 of Table F.3.6, unless notified otherwise by the Agency.
- 11 At least one month prior to the date of commencement of the licensed activity, the licensee shall provide and install a meteorological monitoring station as agreed with the Agency.
- 12 Leachate
 - 12.13 At least three months prior to the date of commencement of the licensed activity, the licensee shall submit to the Agency for its agreement a proposal on monitoring leachate levels within the active cell, the leachate lagoon and any capped cells.
- 9.13 Discharges from the Leachate Lagoon/Leachate Treatment Plant to the West-East Drain

- 9.13.2 The acute toxicity of the undiluted final treated leachate to four aquatic species from different trophic levels shall be determined by standardised and internationally accepted procedures and carried out by a competent laboratory. This testing shall be undertaken by a date agreed with the Agency. Thereafter the two most sensitive trophic levels shall be used for biannual toxicity testing. A proposal for toxicity testing shall be submitted to the Agency for its agreement at least one month prior to the date of commencement of the licensed activity.
- 9.13.3 At least three months prior to the date of commencement of the licensed activity, the licensee shall submit to the Agency for its agreement a proposal for on-line monitoring and recording of discharges from the leachate lagoon/leachate treatment plant (as per Condition 4.12.1(e)) for the parameter pH. This on-line monitoring/recording shall also be undertaken for the discharge at SWR-1.
- 9.14 The licensee shall provide safe and permanent access to all on-site sampling and monitoring points and off-site points as required by the Agency.
- 9.15 Monitoring and analysis equipment shall be operated and maintained in accordance with the manufacturers instructions (if any) so that all monitoring results accurately reflect any emission or discharge or environmental parameter.
- 9.16 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.
- 9.17 Unless otherwise agreed in writing with the Agency, a written record shall be kept of the names, qualifications and a summary of relevant experience of all persons who carry out all sampling and monitoring as required by this licence and who carry out the interpretation of the results of such sampling and monitoring.
- 9.18 The licensee shall maintain all sampling and monitoring points so that they may be used for the representative sampling and monitoring of emissions from the facility.
- 9.19 All fixed monitoring points as described in Condition 9.1 which are located on the facility or peat borrow area shall be tagged in situ with their agreed sampling point codes at least one month after the date of commencement of the licensed activity or within one month of the installation of any such new monitoring points.
- 9.20 A topographical survey of the facility and Peat Borrow Area shall be carried out within six months of ash waste deposition commencing in cell number two. It shall be repeated annually thereafter. The survey shall also assess slope stability and integrity and be in accordance with any other written instructions issued by the Agency.
- 9.21 Dust
- 9.13.1 At least three months prior to the date of commencement of the licensed activity the licensee shall submit to the Agency for its agreement a proposal for monitoring dust deposition rates at the facility boundaries and at Dust Sensitive Locations.
- 9.13.2 At least three months prior to the date of commencement of the licensed activity, the licensee shall submit to the Agency for its agreement a written proposal for the monitoring of PM₁₀ emissions from the facility and at Dust Sensitive Locations. Following such agreement, a baseline survey shall be carried out prior to the acceptance of any ash waste.
- 9.13.3 At least three months prior to the date of commencement of the licensed activity, the licensee shall submit to the Agency for its agreement a written proposal concerning the monitoring, at twelve month intervals, of pasture soils to the south of the facility for mineral composition and quantities. Following

such agreement, the first such survey shall be carried out prior to the acceptance of any ash waste.

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, at least three months prior to the date of commencement of the licensed activity, 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. The licensee shall have in storage an adequate supply of containment booms and/or suitable absorbent material to contain and absorb any spillage at the facility. Once used the absorbent material shall be disposed of at an appropriate facility.
- 10.3. 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.
- 10.4. No waste shall be burnt within the boundaries of the facility. A fire at the facility shall be treated as an emergency. Immediate action shall be taken to extinguish it and the appropriate authorities notified.
- 10.5. In the event that any monitoring, sampling or observations indicate that an incident has, or may have, taken place, the licensee shall immediately (unless otherwise notified in writing by the Agency in the case of repeat incidents):
 - 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 agreement within one month to:
 - identify and put in place measures to avoid reoccurrence of the incident, and;
 - 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 £ 9,402 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 2001 and subsequent years, not later than January 31 of each year, pay to the Agency this amount updated in accordance with changes in the Consumer Price Index from the date of the licence to the renewal date. For 2000, the licensee shall pay a pro rata amount from the date of this licence to December 31st 2000. The updated amount shall be notified to the licensee by the Agency.
- 11.1.2 In the event that the frequency or extent of monitoring or other functions carried out by the Agency needs to be increased due to an incident occurring on or adjacent to the facility and associated with the facility, the licensee shall contribute such sums as determined by the Agency to defraying its costs.

Reason: *To provide for adequate financing for monitoring and enforcement by the Agency*

SCHEDULE A :Waste Activities

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

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

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

This activity is limited to the deposition of fly ash and bottom ash derived from the combustion of peat at the Europeat power station, Edenderry, County Offaly and the deposition of agreed development/restoration materials.

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

SCHEDULE B :Content of the Environmental Management Programme

Environmental Management Programme

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

Objectives and Targets

Objectives and targets for improving the environmental performance of the facility shall be detailed. These should include:

- the recovery/reuse/recycling of ash waste
- emissions

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

Designation of Responsibility for Achieving Targets and Objectives

Waste Handling and Acceptance Procedures

Other items specified by the Agency

SCHEDULE C :Content of the Annual Environmental Report

Annual Environmental Report Content ^{NOTE 1}

Reporting Period.

Waste activities carried out at the facility.

Quantity and Composition of waste received, disposed of and recovered during the reporting period and each previous year.

Calculated remaining capacity of the facility and year in which final capacity is expected to be reached.

Methods of deposition of waste.

Summary report on emissions.

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

Resource and energy consumption summary.

Proposed development of the site and timescale of such development.

Volume of leachate discharged off-site.

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

Report on restoration of completed cells/ phases.

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

Estimated annual and cumulative quantity of indirect emissions to groundwater.

Monthly water balance calculation and interpretation.

Meteorological Report.

Schedule of Environmental Objectives and Targets for the forthcoming year.

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

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

Reported incidents and Complaints summaries.

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

Any other items specified by the Agency.

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

SCHEDULE D :Recording and Reporting to the Agency

Table D.1 Recurring Reports

Report	Reporting Frequency ^{Note1}	Report Submission Date
Environmental Management System Updates	Annually	One month after the end of the year reported on.
Annual Environment Report (AER)	Annually	One month after the end of the year reported on. First report due January 2001.
Environmental Objectives and Targets Updates	Annually	One month after the end of the year reported on.
Environmental Management Programme Updates	Annually	One month after the end of the year reported on.
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 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.
Monitoring of Surface Water Discharges	Quarterly	Ten days after end of the quarter being reported on.
Monitoring of Flows	Quarterly	Ten days after end of the quarter being reported on.
Meteorological Monitoring	Annually	One month after end of the year being reported on.
Topographical Survey	Annually	One month after end of the year being reported on.
Soil Mineral Levels	12 month intervals	One month after end of the year being reported on.
PM ₁₀	Annually	One month after end of the year being reported on.
Dust Monitoring	Three times a year	Ten days after the period being reported on
Noise Monitoring	Annually	One month after end of the year being reported on.

Note 1: Unless altered at the request of the Agency

Table D.2 Once-off Reports

Report and Contents	Condition Number	Report Submission Date (At least three months prior to the date of commencement of the licensed activity, unless otherwise specified)
Environmental Management System		
(i) EMS Proposals	2.1	18 months from date of grant of licence
(ii) Schedule of Objectives and Targets	2.2.1	12 months from date of grant of licence
(iii) Environmental Management Programme	2.3	12 months from date of grant of licence
(iv) Management Structure	2.6	
(v) Communication Programme	2.7	
Infrastructure		
(i) Facility Boundary Drawing	1.2	1 months from date of grant of licence
(ii) Proposals for site security	4.3.1	
(iii) Control of Emissions from Peat Borrow Area	4.10.2	3 months from date of grant of licence
(iv) Leachate management	4.12.1	
(v) Surface water drainage outside ash disposal area	4.13.1.3	1 months from date of grant of licence
(vi) Surface water drainage within ash disposal area	4.13.2.2	
Waste Acceptance Procedures		
(i) Recording weight of materials.	5.5	
(ii) Notification of commencement of ash waste deposition	5.8	1 months from date of grant of licence
(iii) Proposals for temporary capping	5.11.h	
(iv) Waste handling in adverse wind conditions.	5.11.i	1 month prior to ash waste deposition
(v) Management of ash waste during periods when no landfilling	5.15.2	
Environmental Monitoring		
(i) A proposal for the monitoring of leachate levels within the waste	9.4.1	
(ii) Toxicity testing	9.5.1	1 month prior to ash waste deposition
(iii) On-line pH monitoring and recording	9.5.2	
(iv) A proposal to monitor dust deposition rates.	9.13.1	
(v) A proposal to monitor PM ¹⁰ emissions.	9.13.2	
(vi) A proposal to monitor pasture soils.	9.13.3	
Restoration/Aftercare		
(i) Restoration and Aftercare Plans	8.1	Within nine months of ash waste deposition in Cell Number 1 commencing.
Contingency Arrangements		
(i) Emergency Response Procedures	10.1	

SCHEDULE E :Specified Engineering Works

Specified Engineering Works

Site Notice Board

Fencing and site security works.

Facility Office.

Facility toilet.

Landfill lining.

Perimeter Bund.

Sealing of boreholes.

Installation of groundwater monitoring system.

Groundwater control.

Benchmark.

Meteorological station.

Development of Phases and future Cells of the facility including preparatory works and lining.

Landfill cap installation, including temporary and intermediate capping, installation and all other containment works (including any containment works relating to leachate control).

Installation of leachate management, detection, storage, treatment, monitoring, recirculation and control systems.

Surface water management works.

Restoration and Aftercare Works.

Any other works notified in writing by the Agency.

SCHEDULE F :Monitoring

Monitoring to be carried out as specified below.

F.1 Dust

Dust monitoring locations shall be those as set out in Table F.1.1.

Table F.1.1 Dust Monitoring Locations

Parameter	STATION	EASTING	NORTHING
Dust Deposition	Northern boundary	To be agreed	To be agreed
Dust Deposition	Western boundary	To be agreed	To be agreed
Dust Deposition	Southern Boundary	To be agreed	To be agreed
Dust Deposition	Eastern Boundary	To be agreed	To be agreed
Dust Deposition	Dust Sensitive Location	To be agreed	To be agreed
PM ₁₀	Facility boundary directly downwind of ash being tipping from train.	Wind direction dependant	Wind direction dependant
PM ₁₀	Facility boundary directly upwind of active cell.	Wind direction dependant	Wind direction dependant
PM ₁₀	Dust Sensitive Location	To be agreed	To be agreed
Soil Mineral Levels	To be agreed as per Condition 9.13.3.		

Table F.1.2 Dust Monitoring Frequency and Technique

Parameter (mg/m ² /day)	Monitoring Frequency	Analysis Method/Technique <small>Note 3</small>
PM ₁₀	Annually	To be agreed.
Soil Mineral Levels	12 month intervals	To be agreed as per Condition 9.13.3.
Dust Deposition	Three times a year <small>Note 2</small>	Standard Method <small>Note 1</small>

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) in which 2 methoxy ethanol may be employed to eliminate interference due to algae growth in the gauge is allowed.

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

Note 3: A wind rose, obtained from the facility meteorological station, for the relevant monitoring period shall be submitted with each set of results.

F.2 Noise

Noise monitoring locations shall be those as set out in Table F.2.1.

Table F.2.1 Noise Monitoring Locations

STATION	EASTING	NORTHING
N1	259722	224999
N2	258893	224920
N3	258864	225219
N4	259694	225298
N5 ^{Note 1}	259186	224354

Note 1 : N5 is a Noise Sensitive Location.

Table F.2.2 Noise Monitoring Frequency and Technique

Parameter	Monitoring Frequency ^{Note 2}	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."

Note 2: The first monitoring event shall occur within three months of the date of commencement of ash waste deposition.

F.3 Surface Water, Groundwater and Leachate

Surface water monitoring locations shall be those as set out in Table F.3.1 and shown in Drawing Number J1.0, Amendment 3, entitled "Environmental Monitoring".

Table F.3.1 Surface Water Monitoring Locations

STATION	DESCRIPTION	EASTING	NORTHING
SW1	West-East Drain upstream of Ash Disposal Area	258882	224880
SW4	West-East Drain downstream of Leachate Lagoon/Leachate Treatment Plant	259752	224970
SW5	Figile River upstream of confluence with West-East Drain	260587	224959
SW6	Figile River downstream of confluence with West-East Drain	260555	224915

Monitoring locations for discharges to surface waters shall be those as set out in Table F.3.2 .

Table F.3.2 Discharges to Surface Water - Monitoring Locations

STATION	DESCRIPTION	EASTING	NORTHING
SWR-1	Clean surface water run-off from the Ash Disposal Area discharge point	259625	224967
L.2 or as otherwise agreed.	Discharge from the Leachate Storage/Leachate Treatment Plant to the West-East Drain	259722	224967
To be agreed as per Condition 4.13.1.3	Surface Water Run-Off Point(s) from the Peat Borrow Area		

Flow monitoring locations shall be those as set out in Table F.3.3 .

Table F.3.3 Flow Measurements - Locations/Frequency/Methology

LOCATION	MONITORING Frequency	Analysis Method/Technique
Discharge from Leachate Lagoon/Leachate Treatment Plant ^{Note 1}	To be agreed	Standard Method ^{Note 3}
West-East Drain upstream of discharge from Leachate Lagoon/Leachate Treatment Plant ^{Note 2}	To be agreed	Standard Method ^{Note 3}

Note 1 : As per Condition 4.12.1(g).

Note 2 : As per Condition 4.12.1(f).

Note 3 : To be agreed in advance with the Agency.

Groundwater monitoring locations shall be those as set out in Table F.3.4 .

Table F.3.4 Groundwater Monitoring Locations

STATION	LOCATION
Upgradient	To be agreed per Condition 4.14.2
Downgradient	To be agreed per Condition 4.14.2
Private wells	As per Condition 9.2.2

Leachate monitoring locations shall be those as set out in Table F.3.5

Table F.3.5 Leachate Monitoring Locations

LEACHATE INSPECTION POINTS	EASTING	NORTHING
L1	259702	225096
Active Cell and filled cells ^(Note 1)	To be provided.	To be provided.

Note 1 : As per Condition 4.12.1(b).

Table F.3.6 Water and Leachate - Parameters /Frequency

Parameter ^{Note 1}	Monitoring Frequency			
	SURFACE WATER	SURFACE WATER DISCHARGES Notes 3 and 4	GROUNDWATER Note 6	LEACHATE Note 2
Visual Inspection/Odour	Weekly	Weekly	Quarterly	Quarterly
Groundwater Level	Not Applicable	Not Applicable	Monthly	Not Applicable
Leachate Level	Not Applicable	Not Applicable	Not Applicable	Weekly
Ammoniacal Nitrogen	Quarterly	Quarterly *	Monthly	Quarterly
BOD	Not Applicable	Annually	Not Applicable	Not Applicable
COD	Quarterly	Quarterly *	Not Applicable	Quarterly
Chloride	Quarterly	Quarterly #	Quarterly*	Quarterly
Dissolved Oxygen	Quarterly	Not Applicable	Not Applicable	Not Applicable
Electrical Conductivity	Quarterly	Quarterly	Monthly*	Quarterly
pH	Quarterly	Continuous *	Monthly*	Quarterly
Total Suspended Solids	Quarterly	Quarterly *	Not Applicable	Quarterly
Temperature	Quarterly	Quarterly	Monthly	Quarterly
Boron	Annually	Annually	Annually	Annually
Cadmium	Annually	Annually	Annually	Annually
Calcium	Annually	Annually #	Annually*	Annually
Copper	Annually	Annually	Annually	Annually
Fluoride	Not Applicable	Not Applicable	Annually	Annually
Iron	Annually	Annually	Annually	Annually
Lead	Annually	Annually	Annually	Annually
Magnesium	Annually	Annually	Annually	Annually
Manganese	Annually	Annually	Annually	Annually
Potassium	Annually	Annually	Quarterly*	Quarterly
Sulphate	Annually	Annually #	Annually*	Annually
Sodium	Annually	Annually #	Quarterly*	Quarterly
Salinity	Quarterly	Quarterly #	Quarterly	Quarterly
Strontium	Annually	Annually	Not Applicable	Annually
Total Alkalinity	Annually	Annually	Annually	Annually
Total Phosphorus / orthophosphate	Annually	Annually *	Annually	Annually
Total Oxidised Nitrogen	Annually	Annually	Quarterly	Quarterly
Toxicity	Not Applicable	Biannually ^{Note 5:}	Not Applicable	Not Applicable
Zinc	Annually	Annually	Annually	Annually

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

Note 2: Other than leachate level, which shall be monitored at all locations set forth in Table F.3.5, the leachate parameters listed in this table shall be only undertaken in the active cell and at L1.

Note 3: Only the parameters indicated by a hash sign or an asterisk in this column shall apply to the discharge at SWR-1 (as per Condition 4.13.2).

- Note 4: Only the parameters indicated by an asterisk in this column shall apply to the discharges from the Peat Borrow Area (as per Condition 4.13.1.2). The pH samples for such discharges shall be measured in situ.
- Note 5: This parameter shall only apply to the discharge at L2 and monitoring shall commence as agreed through Condition 9.5.1.
- Note 6: The range of parameters for routine private well monitoring, as per Condition 9.2.2, are indicated by an asterisk in this column.

F.4 Meteorological Monitoring

Table F.4.1 Meteorological Monitoring:
At a location on the facility to be agreed with the Agency as per Condition 9.3.

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

SCHEDULE G :Emission Limits

G.1 Noise Emissions: (Measured at Noise Sensitive Locations).

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

G.2 Dust Deposition Limits: (Measured at Dust Sensitive Locations).

Level (mg/m ² /day) ^{Note 1}
350

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

G.3 Leachate Storage/Leachate Treatment Plant Emission Limits to West-East Drain:

Emission Point Reference Number: L.2 or as otherwise agreed by the Agency.
Time of Emission: Only when 100 dilutions of effluent available in West-East Drain.

Parameter	Limit
pH	6 to 9
Suspended Solids	35 mg/l
Toxicity Units	5

G.4 Surface Water Emissions through SWR-1:

Emission Point Reference Number: SWR-1

Parameter	Limit
pH	6 to 9
Suspended Solids	35 mg/l

G.5 Surface Water Emissions from Peat Borrow Area:

Emission Point Reference Number: To be agreed as per Condition 4.13.1.3.

Parameter	Limit
Suspended Solids	35 mg/l

G.6 Treated Sewage Emissions:

Emission Point Reference Number: To be agreed as per Condition 4.7 if required.

Parameter	Limit
BOD	25 mg/l
Suspended Solids	35 mg/l

SCHEDULE H : Acceptable Waste Types

Table H.1

Waste Type	Tonnes Per Annum
Bottom and fly ash from the 120 MW peat power station at Ballykilleen, Edenderry, Co. Offaly.	50,000

Given by the Agency on the 14th day of December 1999

Signed on behalf of the said Agency
on the 14th day of December 1999

Patrick J. Nolan Authorised Person