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

WASTE LICENCE

Proposed Decision

Integrated Waste Management facility including Landfill for Non-Hazardous Waste and Recycling Centre

Licence Register Number: 179-1

Applicant/Licensee: Padraig Thornton Waste Disposal Limited

Location of Facility: Calf Field, Ballynadrumny, County Kildare

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 an Integrated Waste Management Facility including landfill for non-hazardous waste and Recycling Centre at a greenfield site at Calf Field, Ballynadrumny, County Kildare. The principal activity is that of landfilling with the landfill to cover approximately 25.4 hectares of the total facility area (approximately 82.5 hectares). The landfill is proposed in six phases to be constructed over thirteen years.

The landfill is licensed to accept up to an annual limit of 220,000 tonnes of waste with 20,000 tonnes of this to be for the recovery of construction and demolition waste in the construction/development of the landfill. The licensee is required to provide lined cells, install landfill gas collection infrastructure and landfill gas flaring/utilisation plant, leachate and surface water controls including leachate lagoon and surface water retention pond. Leachate collected at the facility is to be transferred off-site to an agreed wastewater treatment facility. The development of the landfill will require the diversion of a stream for which the licensee will have to consult with the Eastern Regional Fisheries Board.

The components and licensed limits of the Recycling Centre are; (i) End-of-Life Vehicle (ELV) processing facility (25,000 vehicles/annum – 30,000 tonnes/annum), (ii) Dry Recyclables sorting facility (5,000 tonnes/annum), (iii) Biodiesel Recovery Facility (5,200 tonnes/annum), and (iv) Wood (6,500 tonnes/annum) and Tyre (1,040 tonnes/annum) treatment facility.

The ELV processing facility is to be an enclosed building providing for the storage of up 300 vehicles prior to treatment, a pre-treatment bay area, a de-pollution area, a dismantling bay area, a crushing/baling area and a storage area for the final products. Dry recyclables including paper, cardboard, ferrous and non-ferrous metals will be loaded onto a conveyor belt for sorting by handpicking and use of magnets and trommels. The biodiesel recovery facility is to accept waste cooking and vegetable oils. All oil processing is to be carried out in a contained area in sealed self-contained units such that no liquids can escape and that there will be no significant atmospheric emissions. Raw wood and timber is to be shredded in an enclosed building with metals such as nails and staples to be removed by magnet. The tyre treatment area proposed is to be in an enclosed building and comprising a tyre storage area, a tyre shredding area and an area for the storage of shredded tyres.

The licensee is required to manage and operate the facility to ensure that the activities do not cause environmental pollution. The licensee is required to carry out regular monitoring and to keep records of results and details of facility operation for submission to/inspection by the Agency.

The licence sets out in detail the conditions under which Padraig Thornton Waste Disposal 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 Waste Management Acts 1996 to 2003, (the Acts), unless otherwise defined in this section.

Aerosol	A suspension of solid or liquid particles in a gaseous medium.
Adequate lighting	20 lux measured at ground level.
AER	Annual Environmental Report.
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.
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.
FID	Flame Ionisation Detector.
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: a) an emergency; b) any emission which does not comply with the requirements of this licence; c) any exceedence of the daily duty capacity of the waste handling equipment; d) any trigger level specified in this licence which is attained or exceeded; and, e) 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 2003.
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 prior to the commencement of construction of the landfill cells.
Installation	A stationary technical unit or plant where the activity concerned referred to in the First Schedule of EPA Acts 1992 and 2003 is or will be carried on, and shall be deemed to include any directly associated activity, which has a technical connection with the activity and is carried out on the site of the activity.
IPPC	Integrated Pollution Prevention & Control.
K	Kelvin.
KPa	Kilo Pascals.
Landfill Directive	Council Directive 1999/31/EC.
Leq	Equivalent continuous sound level.
Licensee	Padraig Thornton Waste Disposal Limited.

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	Kildare and Meath County Councils.
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	Eastern Regional Fisheries Board.
Sanitary Authority	Kildare and Meath County Councils, as appropriate.
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.
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.
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

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 will not contravene any of the requirements of Section 40(4) of the Waste Management Acts 1996 to 2003.

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

Part I Schedule of Activities Licensed

In pursuance of the powers conferred on it by the Waste Management Acts 1996 to 2003, the Environmental Protection Agency (the Agency) proposes, under Section 40(1) of the said Acts to grant this Waste Licence to Padraig Thornton Waste Disposal Limited to carry on the waste activity/activities listed below at Calf Field, Ballynadrumny, Co. Kildare 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) the landfill at 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 2003

Class 4.	Surface impoundment, including placement of liquid or sludge discards into pits, ponds or lagoons.
Class 5.	Specially engineered landfill, including placement into lined discrete cells which are capped and isolated from one another and the environment.
Class 6.	Biological treatment not referred to elsewhere in this Schedule which results in final compounds or mixtures which are disposed of by means of any activity referred to in paragraphs 1 to 5 or paragraphs 7 to 10 of this Schedule.
Class 7.	Physico-chemical treatment not referred to elsewhere in this Schedule which results in final compounds or mixtures which are disposed of by means of any activity referred to in paragraphs 1 to 5 or paragraphs 8 to 10 of this Schedule (including evaporation, drying and calcination).
Class 11.	Blending or mixture prior to submission to any activity referred to in a preceding paragraph of this Schedule.
Class 12.	Repackaging prior to submission to any activity referred to in a preceding paragraph of this Schedule.
Class 13.	Storage prior to submission to any activity referred to in a preceding paragraph of this Schedule, other than temporary storage, pending collection, on the premises where the waste concerned is produced.

Licensed Waste Recovery Activities, in accordance with the Fourth Schedule of the Waste Management Acts 1996 to 2003

Class 1.	Solvent reclamation or regeneration.
Class 2.	Recycling or reclamation of organic substances which are not used as solvents (including composting and other biological processes).
Class 3.	Recycling or reclamation of metals and metal compounds.
Class 4.	Recycling or reclamation of other inorganic materials.
Class 8.	Oil re-refining or other re-uses of oil.
Class 9.	Use of any waste principally as a fuel or other means to generate energy.
Class 10.	The treatment of any waste on land with a consequential benefit for an agricultural activity or ecological system.
Class 11.	Use of waste obtained from any activity referred to in a preceding paragraph of this Schedule.
Class 13.	Storage of waste intended for submission to any activity referred to in a preceding paragraph of this Schedule, other than temporary storage, pending collection, on the premises where such waste is produced.

Part II 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 1.5 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 Figure No. B.2.1 - *Location Map* of the application. Any reference in this licence to "facility" shall mean the area thus outlined in red. The licensed activities shall be the carried on only within the area outlined.

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

(a) 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

(b) 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.

1.6 This licence is for the purposes of waste licensing under the Waste Management Acts 1996 to 2003 only and nothing in this licence shall be construed as negating the licensee's statutory obligations or requirements under any other enactments or regulations.

1.7 Having regard to the nature of the activity and arrangements necessary to be made or made in connection with the carrying on of the activity, the specified period for the purposes of Section 49(1) of the Waste Management Acts 1996 – 2003 is 5 years.

1.8 Waste Acceptance Hours and Hours of Operation

1.8.1 Waste Acceptance Hours

Waste may be accepted at the facility only between the hours of 0800 and 1800 Monday (Bank Holidays excluded) to Friday inclusive and 0800 and 1600 on Saturdays.

1.8.2 Hours of Operation

The facility may be operated only during the hours of waste acceptance with an additional hour on either side of this period to allow for daily preparation and closure operations each day.

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 establish and maintain an Environmental Management System (EMS) prior to the commencement of the waste activities. The EMS shall be updated on an annual basis.

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 prepare 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, prior to the commencement of waste activities, submit to the Agency for agreement an 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:

(a) designation of responsibility for targets;

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

(c) 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 11.10).

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 Communications Programme to ensure that members of the public can obtain information at the facility, at all reasonable times, concerning the environmental performance of the facility.

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 to the design set out in the Application documentation or as may be otherwise specified or varied by the conditions of this licence.

3.2 The landfill footprint (maximum lateral extent of landfilling) shall be as indicated in Drawing Reference Figure No. 2 – General Site Layout of the Application or as may otherwise be specified or varied by the conditions of this licence and subject to the distance between the landfill and facility boundary being no less than 60m as detailed in the application (e.g. Sections 3.3.5 & 4.12.6 of the EIS).

3.3 Wastes shall not be deposited in the landfill or any new cell of the landfill without the prior written agreement of the Agency.

3.4 Phased Construction Plan

3.4.1 Three months prior to the commencement 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. This Plan shall have regard to the following development phases: (i) Initial Development Works including landscaping measures referred to in Condition 10.2 (including the provision of all berms), (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.

3.4.2 Unless otherwise agreed by the Agency, and so as to permit the necessary time for establishment and maturation of landscaping measures for impact mitigation, the operation of the facility shall commence with Phase 1 (as indicated in Drawing Reference *Figure No. 2 – General Site Layout*).

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 prior to the intended date of commencement of any such works. No such works shall be carried out without the prior agreement of the Agency.

3.5.2 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

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

(i) A composite liner consisting of a 1m layer of clay with a hydraulic conductivity of less than or equal to $1x10^{-9}$m/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 x 10^{-3} $m^3/m^2/s$, of pre-washed, uncrushed, granular, rounded stone (16-32mm grain size) incorporating leachate collection drains;

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

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

(vi) The base of the composite liner shall be a minimum of +4m above rockhead. Drawing No. 006 *"Landfill Sections"* shall be amended to reflect this.

3.7 Leachate Management Infrastructure

3.7.1 Leachate management infrastructure shall be provided and maintained at the facility as described in the Application documentation, or as may be varied by a licence condition.

3.7.2 All structures for the storage and/or treatment of leachate shall be fully enclosed except for inlet and outlet piping.

3.8 Landfill Gas Management

3.8.1 Landfill Gas management infrastructure shall be provided and maintained at the facility as described in the Application documentation, or as may be varied by a licence condition.

3.8.2 Within six months of the date of commencement of waste disposal at the landfill, the licensee shall install and maintain an enclosed landfill gas flare(s) capable of flaring all landfill gas generated at the facility.

3.8.3 Vertical landfill gas collection wells shall be located at a maximum of 35m intervals throughout the landfill cells.

3.8.4 Passive landfill gas management shall be carried out in new cells until such time as it is possible to flare the landfill gas. Passive vents shall be fitted with effective activated carbon filters unless a suitable alternative is agreed by the Agency.

3.8.5 All buildings constructed on the facility shall have regard to the guidance given in the Department of Environment 1994 publication "Protection of New Buildings and Occupants from Landfill Gas" and any subsequent revisions.

3.9 Surface Water Management

3.9.1 As part of the Initial Development Works the licensee shall install and have operational a surface water retention pond, such as described in the application, and including a Class I Full Retention Separator.

3.9.2 The licensee shall seek and comply with advice/directions of the Eastern Regional Fisheries Board with regard to the initial construction phase of the development including the stream diversion.

3.10 Badgers/Bats/Amphibians

3.10.1 The licensee shall engage a suitably qualified ecologist(s) such that;

(i) Prior to the commencement of on site construction works

- An updated badger survey is carried out,
- The badger sett located within the proposed landfill footprint is appropriately closed/relocated,
- All onsite badgers setts, other than that referred to above, must be fenced off in such a way that badgers can still access them and on-site machinery will not damage them, unless otherwise advised by the ecologist,
- The measures proposed in the application with regard to the protection of amphibians including those detailed in additional information received on 13/06/03 must be implemented.

(ii) The licensee shall implement the measures proposed in the application with regard to protection of badgers including those detailed in additional information received on 13/06/03 unless otherwise varied by conditions of this licence.

(iii) The licensee shall provide fencing around the landfill footprint, which is set in the ground and such that it impedes access to the landfill area from burrowing animals in particular badgers.

(iv) The licensee shall implement the measures proposed in the application with regard to protection of bats including those detailed in additional information received on 13/06/03 and engage the ecologist to check all mature trees before and after felling and advise on mitigation measures such as bat boxes.

3.10.2 Advice and relevant licences shall be obtained from the National Parks and Wildlife Service of the Department of Environment, Heritage and Local Government in fulfilling the requirements of this condition.

3.11 Trees/Hedgerows

3.11.1 Tree and hedgerow removal shall only be in accordance with the development as proposed in Section 4.7.1 of the EIS and Drawing No. DR-AI-303-Rev.1 – Landscape Proposals - Landscape Detailed Plan and outside of the bird-nesting season (1st March to 31st August).

3.12 Waste Inspection and Quarantine Areas

3.12.1 A Waste Inspection Area and a Waste Quarantine Area shall be provided and maintained at the facility.

3.12.2 These areas shall be constructed and maintained in a manner suitable, and be of a size appropriate, for the inspection of waste and subsequent quarantine if required. The waste inspection area and the waste quarantine area shall be clearly identified and segregated from each other.

3.12.3 Drainage from these areas shall be directed to the leachate management system.

3.13 Weighbridge and Wheel Cleaner

3.13.1 The licensee shall provide and maintain a weighbridge and wheel cleaners at the facility.

3.13.2 The wheel cleaners shall be used by all vehicles leaving the facility as required to ensure that no process water or waste is carried off-site. All water from the wheel cleaning area shall be directed to the leachate management system.

3.14 Facility Security

3.14.1 Security and stockproof fencing and gates shall be installed and maintained. The base of the fencing shall be set in the ground. 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.

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

3.14.3 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.

3.15 Facility Roads and Hardstanding

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

3.15.2 The facility entrance and hardstanding areas shall be appropriately paved and maintained in a fit and clean condition.

3.16 Facility Office

3.16.1 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.

3.16.2 The licensee shall provide and maintain a working telephone and a method for electronic transfer of information at the facility.

3.17 Facility Notice Board

3.17.1 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.

3.17.2 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.

3.18 Recycling Building No. 1: End-of-Life Vehicles

3.18.1 End-of-Life Vehicles shall not be accepted at the facility without the prior written agreement of the Agency.

3.19 Recycling Building No.2

3.19.1 Biodiesel Recycling Building and associated infrastructure

(i) Waste vegetable/cooking oils shall not be accepted at the facility without the prior written agreement of the Agency.

3.19.2 Dry Recyclable Sorting Area

(i) Dry recyclable wastes shall not be accepted at the facility without the prior written agreement of the Agency.

3.20 Wood and Tyre Areas

3.20.1 Wood Recycling Area

(i) The Wood Recycling Area shall be housed in an enclosed building.

(ii) Drainage from the Wood Recycling Area shall be collected and diverted to the leachate lagoon unless agreed otherwise by the Agency.

(iii) Wood wastes shall not be accepted at this facility without the prior written agreement of the Agency.

3.20.2 Tyre Treatment Building

Waste tyres shall not be accepted at this building without the prior written agreement of the Agency.

3.21 Waste handling, ventilation and processing plant

3.21.1 Items of plant deemed critical to the efficient and adequate processing of waste at the facility (including *inter alia* waste loading vehicles and ejector trailers) shall be provided on the following basis:-

(i) 100% duty capacity;

(ii) 50% duty capacity available on a routine basis; and

(iii) Provision of contingency arrangements and/or back up and spares in the case of breakdown of critical equipment.

3.21.2 Prior to the commencement of waste activities the licensee shall provide a report for the agreement of the Agency detailing the duty and standby capacity in tonnes per day, of all waste handling equipment to be used at the facility. These capacities shall be based on the licensed waste intake as per *Schedule A.2* of this licence.

3.21.3 The quantities of wastes to be accepted at the facility on a daily basis shall not exceed the duty capacity of the equipment at the facility.

3.22 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.

3.23 Tank and Drum Storage Areas

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

3.23.2 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.

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

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

3.23.5 The integrity and water tightness of all the bunding structures and their resistance to penetration by water or other materials stored therein shall be tested and demonstrated by the licensee at least once every three years. This testing shall be carried out in accordance with any guidance published by the Agency.

3.24 Silt Traps and Oil Separators

3.24.1 The licensee shall install and maintain silt traps and oil separator at the facility to ensure that all storm water discharges from the facility pass through a silt trap and oil separator prior to discharge. The separator shall be a Class I full retention separator and the silt traps and separator shall be in accordance with I.S. EN 858-2:2003 (separator systems for light liquids).

3.25 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).

3.26 Groundwater

3.26.1 All on site wells & boreholes shall be adequately sealed and protected to prevent contamination or physical damage 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).

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

3.27 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.

3.28 Sampling equipment shall be operated and maintained such that sufficient sample is collected to meet both internal monitoring requirements and those of the Agency. 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.

3.29 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.

3.30 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.

3.31 The licensee shall, prior to the commencement of waste activities, 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 atmosphere in this licence shall be interpreted in the following way:

4.1.1 Continuous Monitoring:

(i) No 24 hour mean value shall exceed the emission limit value.

(ii) 97% of all 30 minute mean values taken continuously over an annual period shall not exceed 1.2 times the emission limit value.

(iii) No 30 minute mean value shall exceed twice the emission limit value.

4.1.2 For Non-Continuous Monitoring

(i) For any parameter where, due to sampling/analytical limitations, a 30 minute sample is inappropriate, a suitable sampling period should be employed and the value obtained therein shall not exceed the emission limit value.

(ii) For flow, no hourly or daily mean value, calculated on the basis of appropriate spot readings, shall exceed the relevant limit value.

(iii) For all other parameters, no 30 minute mean value shall exceed the emission limit value.

4.2 The concentration limits for emissions to atmosphere specified in this licence shall be achieved without the introduction of dilution air and shall be based on gas volumes under standard conditions of :-

4.2.1 In the case of landfill gas flare:

Temperature 273 K, pressure 101.3 kPa, dry gas at 3% oxygen; and

4.2.2 In the case of landfill gas combustion plant:

Temperature 273 K, pressure 101.3 kPa, dry gas; 5% oxygen.

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

4.3.1 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.

4.3.2 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.

4.3.3 Discrete Sampling

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

4.4 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.

4.5 Noise

4.5.1 Noise from the facility shall not give rise to sound pressure levels (Leq,T) measured at the noise sensitive locations of the facility which exceed the limit(s) specified in *Schedule B.4.*

4.6 Dust

4.6.1 Dust from the activity shall not give rise to deposition levels which exceed the levels specified in *Schedule B.1.*

Reason: To clarify the interpretation of emission 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 Prior to the acceptance of waste for disposal, the licensee shall submit to the Agency for approval, evidence to demonstrate that an agreement is in place regarding leachate removal (from the site) and treatment.

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

5.5 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.

5.6 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.

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

Condition 6. Control and Monitoring

6.1 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:

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

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

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

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

6.2 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.

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

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

6.5 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.

6.6 The licensee shall prepare a programme, to the satisfaction of the Agency, for the identification and reduction of fugitive emissions. This programme shall be included in the Environmental Management Programme.

6.7 The integrity and water tightness of all underground pipes and tanks 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 thereafter and reported to the Agency on each occasion. A written record of all integrity tests and any maintenance or remedial work arising from them shall be maintained by the licensee.

6.8 Surface water

6.8.1 The licensee shall implement a continuous monitoring programme for the water in the surface water retention pond. This programme shall include the criteria/trigger levels, which will determine when the automated penstock/hydrobrake in the outlet from the surface water retention pond shall be closed. Such continuous monitoring shall, as a minimum, include conductivity, pH and TOC and shall be carried out on the inlet to the surface water retention pond at a monitoring location to be agreed by the Agency. A visual examination of the surface water discharge shall be carried out daily. A log of such inspections shall be maintained.

6.8.2 In the event that the hydrobrake is activated to shut off discharge from the surface water retention pond in accordance with Condition 6.8.1 the licensee shall ensure that;

(i) A minimum freeboard of 0.5m shall be maintained in the pond, until such time as it is appropriate to deactivate the hydrobrake,

(ii) Any liquid removed from the surface water retention pond while the discharge is shut off shall be disposed of by tankering off-site in fully enclosed road tankers unless otherwise agreed by the Agency,

(iii) The hydrobrake shall not be deactivated until such time as the appropriate actions have been taken to ensure that the criteria/triggers levels of condition 6.8.1 no longer apply,

(iv) Any other actions as directed by the Agency are implemented.

6.9 Groundwater

6.9.1 Subject to the agreement of the wells owners, all private wells within 500m of the landfill footprint shall be included in the monitoring set out in *Schedule C.4 – Groundwater Monitoring.*

6.9.2 Prior to the acceptance of waste at the landfill facility the licensee, shall submit to the Agency results of four sets of groundwater monitoring carried out on a quarterly basis and establish trigger levels in accordance with the requirements of the Landfill Directive.

6.10 Noise

6.10.1 The licensee shall carry out a noise survey of the site operations bi-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.

6.10.2 Noise monitoring shall be carried out at the relevant noise sensitive locations & boundary locations identified in drawings Figure No. 1.2 – *Noise Monitoring Locations* and Figure No. 5.1 – *Proposed Noise Monitoring Locations* and any further monitoring locations as instructed by the Agency. Prior to the commencement of waste activities the licensee shall submit to the Agency a drawing showing all noise monitoring locations, with appropriate identification.

6.10.3 The licensee shall establish and maintain best work practices for the control of noise emissions from the site as described in the Application documentation, including Sections 4.3.6 & 4.3.7 of the EIS and Sections 1(d) & 1(f) of further information received 13/06/03, or as may be otherwise specified or varied by the conditions of this licence.

6.11 Pollution Emission Register (PER)

6.11.1 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.

6.12 Telemetry

6.12.1 Prior to the commencement of waste disposal activities a telemetry system shall be installed and maintained at the facility. All facility operations linked to the telemetry system shall also have a manual control which will be reverted to in the event of break in power supply or during maintenance.

6.12.2 This system shall include for:-

(a) Recording of leachate levels in the lined cells and lagoon;

(b) Recording of levels in the surface water retention pond and flows to the perimeter streams;

(c) Quality of the surface water at the inlet to the surface water retention pond and being discharged to the perimeter stream(s); and

(d) Permanent gas monitoring system to be installed in the site office and any other enclosed structures at the facility.

6.13 Leachate Management

6.13.1 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.

6.13.2 The level of leachate in the pump sumps shall be monitored as outlined in *Schedule C2.3*.

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

6.13.4 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.

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

6.14 The licensee shall monitor meteorological conditions as specified in *Schedule C.4*.

6.15 Landfill Gas

6.15.1 Prior to the commencement of waste disposal activities the licensee shall submit for agreement a specification for the construction, location and installation phasing of landfill gas monitoring locations.

6.15.2 At least two rounds of landfill gas sampling (one during falling atmospheric pressure) in locations external to the disposal cells should be completed prior to commencement of filling of any new area.

6.15.3 Flares shall be operated to ensure a burn chamber residence time of minimum 0.3 sec and burn temperature of minimum 1000^{o}C.

6.15.4 In relation to landfill derived gases the following shall constitute a trigger level:

(i) Methane greater than 1% v/v; or,

(ii) Carbon Dioxide greater than 1.5% v/v,

measured in any monitoring borehole, service duct, manhole or other point as may be specified, located external to the body of waste.

6.16 Litter Control

6.16.1 The measures and infrastructure as described in Section 3.3.3 of the EIS shall be applied to control litter at the facility.

6.16.2 All litter control infrastructure shall be inspected on a daily basis. The licensee shall remedy any defect in the litter netting 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 netting shall be undertaken within three working days.

6.16.3 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.

6.16.4 The licensee shall ensure that all vehicles delivering waste to and removing waste and materials from the facility are appropriately covered.

6.17 Odour Control & Monitoring

6.17.1 From the date of commencement of waste acceptance for disposal at the landfill measures and infrastructure as described in the recommendations of the Desktop Odour Impact Assessment of Odour Monitoring Ireland (26/08/03) shall be applied to control odours at the facility or as may be otherwise specified or varied by conditions of this licence.

6.17.2 Leachate holding tanks/lagoons shall be covered/enclosed as per Condition 3.7.2, and head gases vented to treatment as may be required by the Agency.

6.17.3 All odorous or odour forming wastes shall be covered as soon as practicable and in any case at the end of the working day.

6.17.4 When siting and operating landfill gas infrastructure regard shall be had to the potential for, and mitigation of, odour nuisance. This matter is to be addressed in the relevant Specified Engineering Works proposals as required by Condition 3.5.

6.17.5 As part of the odour control programme in place at the facility, the licensee shall carry out a monthly review and report of odour control measures in place at the facility. This shall include:

(i) Consideration of odour complaints received (including details and nature of the complaints, times and weather conditions);

(ii) Details of any monitoring carried out (including the investigation of complaints and identify the source of the complaint and actions taken, where relevant);

(iii) An update on existing landfill gas control infrastructure (including operational status, number of vents connected and not connected to the landfill gas collection system, quantity of gas collected and flared/utilised, and estimated quantity of landfill gas being produced); and

(iv) Recommendations and implementation of same.

The licensee shall maintain these reports on site and forward them to the Agency on request.

6.18 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.

6.19 Prior to exiting the facility, all waste vehicles shall use the wheelwashes as detailed in Section 3.3.3 of the EIS.

6.20 Bird Control

6.20.1 Birds shall be prevented from gathering on and feeding at the facility by the use of birds of prey and/or other bird scaring techniques. The birds of prey and/or other techniques shall be in place at least two weeks prior to any waste being disposed of and shall maintain their presence every day, from before dawn to after dark, until the waste activities cease and all the waste is capped to the written satisfaction of the Agency.

6.21 Vermin/Fly Control

6.21.1 The licensee shall establish and maintain a programme for the control and eradication of vermin and fly infestations at the facility, using suitably trained personnel and such methods, which will not cause any nuisance at the facility or in the immediate area of the facility.

6.22 Nuisance Monitoring

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

6.23 Operational Controls

6.23.1 Fuels shall be stored only at appropriately bunded locations on the facility.

6.23.2 All tanks and drums shall be labelled to clearly indicate their contents.

6.23.3 There shall be no casual public access to the facility.

6.23.4 Scavenging shall not be permitted at the facility.

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

6.23.6 No smoking shall be allowed at the facility.

6.23.7 Landfill

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

(ii) The working face of the landfill shall be no more than 2.5 metres in height after compaction, no more than 25 metres wide and have a slope no greater than 1 in 3.

(iii) All waste deposited at the working face shall be compacted, using a steel wheeled compactor, and covered as soon as is practicable and at any rate prior to the end of the working day.

(iv) The working face, or faces, shall each day at the end of the day, be covered with suitable material.

(v) All large hollow objects and other large articles deposited at the facility shall be crushed, broken up, flattened or otherwise treated.

(vi) 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.

(vii) 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.

6.23.8 Recycling Centre

(i) At the end of the working day all wastes shall be stored in designated storage areas and other floors/hardstanding areas shall be cleared of all waste, and washed down as appropriate.

6.24 Stability Assessment

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

6.25 The licensee shall, prior to the acceptance of waste at the facility, 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 commencement of waste activities. 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 Waste shall be accepted at the facility, only from Local Authority waste collection or transport vehicles or from holders of valid waste collection permits, unless exempted or excluded, issued under the Waste Management (Collection Permit) Regulations 2001. Copies of these waste collection permits shall be maintained at the facility.

8.1.2 Waste arriving at the facility shall be inspected on arrival and subject to this inspection, weighed, documented and directed to the relevant area of the facility. A record of all inspections of incoming waste loads shall be maintained. Data from the weighbridge must be recorded electronically and be available for inspection on site.

8.1.3 Landfill

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

(ii) Prior to commencement of waste acceptance at the facility, the licensee shall submit to the Agency for its agreement written procedures for the acceptance and handling of all wastes. These procedures shall include details of the pre-treatment of all waste to be carried out prior to acceptance at the facility for disposal 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.

(iii) All wastes shall be inspected for suitability at the working face. Any wastes not suitable for acceptance shall be removed for recovery or disposal at an appropriate alternative facility. Such waste shall be stored in the Waste Quarantine Area only. No waste shall be stored in the Waste Quarantine Area for more than three months.

(iv) Whole used tyres (other than bicycle tyres and tyres with an outside diameter greater than 1400mm) shall not be disposed of at the landfill. Shredded tyres shall not be disposed of at the landfill from 16 July 2006.

(v) No hazardous wastes, liquid wastes or asbestos wastes shall be disposed of at the landfill.

(vi) The licensee shall ensure that inert waste accepted at the landfill is subject to treatment where technically feasible.

(vii) Bulk gypsum wastes shall not be placed in any landfill cell accepting biodegradable waste.

8.1.4 Recycling Centre

(i) Prior to the commencement of waste acceptance at the Recycling Centre or part thereof the licensee shall establish and maintain detailed written procedures for the acceptance and handling of the wastes.

(ii) Waste shall be accepted at the facility only from known customers or new customers subject to initial waste profiling and waste characterisation off-site. The written records of this off-site waste profiling and characterisation shall be retained by the licensee for all active customers and for a two year period following termination of licensee/customer agreements.

(iii) Each load of waste arriving at the Recycling Centre shall be inspected upon tipping in the relevant processing area. Only after such inspections shall the waste be processed for recovery or disposal.

(iv) Any waste deemed unsuitable for processing at the facility and/or in contravention of the licence shall be immediately separated and removed from the facility at the earliest possible time. Temporary storage of such wastes shall only be in a designated Waste Quarantine Area. Waste shall be stored under appropriate conditions in the quarantine area to avoid putrefaction, odour generation, the attraction of vermin and any other nuisance or objectionable condition.

(v) All waste processing shall be carried out inside the appropriate buildings/areas.

8.2 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.

8.3 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.

8.4 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.

8.5 Off-site Recovery and Disposal

8.5.1 Waste sent off-site for recovery or disposal shall be transported only by an authorised waste contractor.

8.5.2 The waste shall be transported off-site only to an approved site of recovery/disposal in a manner which will not adversely affect the environment and in accordance with the appropriate National and European legislation and protocols.

8.6 The licensee shall ensure that waste prior to transfer to another person shall be classified packaged and labelled in accordance with National, European and any other standards which are in force in relation to such labelling.

8.7 No waste classified as green list waste in accordance with the EU Transfrontier Shipment of Waste Regulations (Council Regulation EEC No.259/1993, as amended) shall be consigned for recovery without the agreement of the Agency.

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, prior to the commencement of waste activities, 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, prior to the commencement of waste activities, 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 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) provide a proposal to the Agency for its agreement within one month of the incident occurring or as otherwise agreed by the Agency 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 10. Decommissioning and Landfill Closure, Restoration and Aftercare

Landfill

10.1 The licensee shall restore the landfill on a phased basis, which follows on from cell development and filling (Condition 3.4) unless otherwise agreed or instructed by the Agency. Unless otherwise agreed, filled cells shall be permanently capped within twenty-four months of the cells having been filled to the required level.

10.2 Landscaping

10.2.1 Landscaping measures at the facility shall be as proposed in Section 4.10 Drawing No. DR-AI-303-Rev.1 - Landscape Proposals - Landscape Detail Plans or as may be otherwise specified or varied by conditions of this licence.

10.2.2 Unless otherwise agreed by the Agency, the finished (post settlement restored) levels of the landfill shall be as indicated in Drawing Reference DR-AI-303 – *Landscape Proposals – Landscape Detail Plan – Proposals for Landfill Area* of the Application. The licensee shall monitor the composition of wastes being deposited at the landfill, as well as the settlement of existing areas and adjust final waste deposition levels accordingly to ensure that the finished levels of the landfill as referred to above are not exceeded.

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

10.3.1 Unless otherwise agreed by the Agency, the final capping shall consist of the following:-.

(a) Top soil (150 -300mm);

(b) Subsoils, such that total thickness of top soil and subsoils is at least 1m;

(c) Drainage layer of 0.5m thickness having a minimum hydraulic conductivity of 1x10-4 m/s or a geosynthetic material that provides equivalent transmissivity;

(d) Compacted mineral layer of a minimum 0.6m thickness with a permeability of less than 1x10-9 m/s or a geosynthetic material (e.g. GCL) or similar that provides equivalent protection; and

(e) Gas collection layer of natural material (minimum 0.3m) or a geosynthetic layer.

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 Closure, Restoration & Aftercare Management Plan (CRAMP):

10.6.1 Prior to the acceptance for waste for disposal at the site, 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.

10.6.2 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 written agreement of the Agency.

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

10.7.1 A scope statement for the plan.

10.7.2 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.

10.7.3 A programme to achieve the stated criteria.

10.7.4 Where relevant, a test programme to demonstrate the successful implementation of the plan.

10.7.5 Details of the long-term supervision, monitoring, control, maintenance and reporting requirements for the restored facility.

10.7.6 Details of costings for the plan and the financial provisions to underwrite these costs.

10.8 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.

Recycling Centre

10.9 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(ies), 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. The licensee shall carry out such tests, investigation or submit certification, as requested by the Agency, to confirm that there is no 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 The licensee shall notify the Agency, in writing, one month prior to the intended date of commencement of acceptance of waste for Scheduled Disposal/Recovery activities at the facility (wastes used in the facility construction excepted).

11.2 Prior to 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:

11.3.1 Any release of environmental significance to atmosphere from any potential emission point including bypasses.

11.3.2 Any emission which does not comply with the requirements of this licence.

11.3.3 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.

11.3.4 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.

11.3.5 Any event which may have comprised the protection of the species referred to in Conditions 3.10 & 3.11.

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

11.8 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.

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

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

11.10 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 D: Annual Environmental Report* of this licence and shall be prepared in accordance with any relevant guidelines issued by the Agency.

11.11 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:

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

11.11.2 The names of the agent and carrier of the waste, and their waste collection permit details, if required (to include issuing authority and vehicle registration number).

11.11.3 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.

11.11.4 Written confirmation of the acceptance and disposal/recovery of any hazardous waste consignments sent off-site.

11.11.5 Details of all wastes consigned abroad for Recovery and classified as 'Green' in accordance with the EU Transfrontier Shipment of Waste Regulations (Council Regulation EEC No. 259/1993, as amended). The rationale for the classification must form part of the record.

11.11.6 Details of any rejected consignments.

11.11.7 Details of any approved waste mixing.

11.11.8 The results of any waste analyses required under *Schedule C: Control & Monitoring* of this licence.

11.11.9 The tonnages and EWC Code for the waste materials recovered/disposed on-site.

11.12 Waste Recovery Reports

11.12.1 The licensee shall as part of their EMP prepare a report examining waste recovery options shall be submitted to the Agency for its agreement in the AER. This report shall address methods to contribute to the achievement of the recovery targets stated in national and European Union waste policies and shall include the following:-

(a) proposals for the contribution of the facility to the achievement of targets for the reduction of biodegradable waste to landfill as specified in the Landfill Directive;

(b) the separation of recyclable materials from the waste;

(c) the recovery of Construction and Demolition Waste;

(d) the recovery of metal waste;

(e) inert waste to be used for cover/restoration material at the facility.

11.13 The licensee shall maintain records/daily logs of any actions taken with regard to the requirements of Conditions 3.10 – 3.11.

11.14 A written record shall be kept at the facility of the programme for the control and eradication of vermin and fly infestations at the facility. These records shall include as a minimum the following:-

(i) The date and time during which spraying of insecticide is carried out;

(ii) Contractor details;

(iii) Contractor logs and site inspection reports;

(iv) Details of the rodenticide(s) and insecticide(s) used;

(v) Operator training details;

(vi) Details of any infestations;

(vii) Mode, frequency, location and quantity of application; and

(viii) Measures to contain sprays within the facility boundary.

11.15 The licensee shall submit a report from a suitably qualified ecologist on an annual basis, unless otherwise agreed or instructed by the Agency, based on surveys of badgers, bats and frogs at the facility and its immediate surrounds.

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 €32,048 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 2003. The first payment shall be a pro-rata amount for the period from the date of commencement of enforcement to the 31st day of December, and shall be paid to the Agency within one month from the date of commencement of enforcement. 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 2003, 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 financial provisions taken or adopted at the site in relation to the prevention of environmental damage, and the measures 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 prior to the commencement of the activity. 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 Prior to the commencement of the activity, 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 (refer Condition 10.6.1), shall be computed using the following formula:-

Cost = (ECOST x WPI) + 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 2003, 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.

12.4 Community Fund

The Licensee shall pay €1 (Index Linked) for every tonne of waste accepted for disposal in the landfill, into a secure and dedicated to purpose, community support and development fund. Prior to the commencement of waste disposal activities the Licensee shall establish a community managed charitable trust (or equivalent) to manage and discharge this fund for the benefit of the social and physical environment of the local community.

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 non-hazardous waste
ii. Storage of waste
iii. C&D waste recovery (for use in the landfill)
iv. Inert waste recovery (for use in the landfill)
v. Recovery of End-of-life vehicles including tyres indoors
vi. Recovery of wood (including sorting, shredding) indoors
vii. Recovery of waste cooking/vegetable oils
viii. Use of waste (biodiesel) as a fuel (for on site machinery and vehicles)
ix. Recovery of dry recyclables
x. Biological treatment of wastewater

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

A.2 Waste Acceptance

Table A.2.1 Waste Categories and Quantities - For acceptance at the landfill for recovery/disposal

WASTE TYPE Note 1	**MAXIMUM (TONNES PER ANNUM)** Note 2
Household	81,500
Commercial	72,000
Construction & Demolition (C & D)	26,500 Note 3 & 4
Industrial Non-Hazardous Solids	40,000
TOTAL	**220,000** Note 4

Note 1: Any proposals to accept other compatible waste streams must be agreed in advance with 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: C & D or Inert waste/secondary materials or compost imported to the site for use in the construction are not included in these limitations. A detailed statement (with mass balance) of waste used in construction should be included as part of the AER.
Note 4: 20,000 tonnes per annum of which to be used for recovery/restoration purposes.

Table A.2.2 Waste Categories and Quantities - For acceptance at the Recycling Centre for Treatment

WASTE TYPE	**MAXIMUM (TONNES PER ANNUM)**
End of Life Vehicles (ELVs)	30,000
Dry Recyclables	5,000
Wood Waste	6,500
Tyres	1,040
Vegetable/cooking oil	5,200
TOTAL	**47,740**

SCHEDULE B: Emission Limits

B.1 Emissions to Air

Landfill Derived Gas Concentration Limits:
(Measured in any building on or adjacent to the facility and perimeter boreholes).

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

Emission Limits Values for Landfill Gas Plant:

Emission Point Reference numbers: (To be agreed by Agency in advance.)
Minimum discharge height: 5m

Parameter	Flare (enclosed) Emission Limit Value Note 1	Utilisation Plant Emission Limit Value Note 1
Nitrogen oxides (NO_x)	150 mg/m^3	500 mg/m^3
Particulates	Not applicable	130 mg/m^3

Note 1: Dry gas referenced to 5% oxygen by volume for utilisation plants and 3% oxygen by volume for flares.

Dust Deposition Limits:
Measured at the monitoring points indicated on Figure No. 5.2 – Proposed Dust Monitoring Locations and any further boundary monitoring locations instructed by the Agency.

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.: Outlet from surface water retention pond

Name of Receiving Waters: "Southern Stream" - tributary of River Boyne

Parameter	Emission Limit Value (mg/l)
Suspended Solids	35

B.3 Emission to Sewer

There are no Process Effluent Emissions to Sewer.

B.4. Noise Emissions

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

Emission Point Reference No.: **Flare Stacks & Generation Plant**

Description of Treatment: Gas Extraction & Combustion

Control Parameter	Monitoring	Key Equipment[Note 1]
Continuous burn	Continuous with alarm/call-out	Flame detector or equivalent approved Pumps/engines
Extraction	Continuous with alarm/call-out	Pressure gauge or equivalent approved Pumps/engines

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

C.1.2 Monitoring of Emissions to Air

Emission Point Reference No.: Flare Stacks & Generation Plant

Parameter	Flare (enclosed) Monitoring Frequency	Utilisation Plant Monitoring Frequency	Analysis Method[Note1]/Technique
Inlet			
Methane (CH_4) % v/v	Continuous	Weekly	Infrared analyser or equivalent approved
Carbon dioxide (CO_2) % v/v	Continuous	Weekly	Infrared analyser or equivalent approved
Oxygen (O_2) % v/v	Continuous	Weekly	Electrochemical or equivalent approved
Process Parameters			
Combustion Temperature	Continuous	Quarterly	Temperature Probe/datalogger
Residence Time	Quarterly	Quarterly	To be agreed
Outlet			
Carbon monoxide (CO)	Continuous	Continuous	Flue gas analyser/datalogger or equivalent approved
Nitrogen Oxides (Nox)	Biannually	Biannually	Flue gas analyser or equivalent approved
Sulphur dioxide (SO_2)	Biannually	Biannually	Flue gas analyser or equivalent approved
Particulates	Not applicable	Annually	Isokinetic/Gravimetric or equivalent approved

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

C.1.3 Monitoring of Landfill Gas Emissions

Location: Perimeter Landfill Gas boreholes at maximum 50m spacings as outlined in Figure No. 5.6 – *Proposed Gas Monitoring Locations*, in accordance with Condition 6.14.1 Note1

And
At least one monitoring point per cell (to be Agreed) in accordance with Condition 6.15.1
And
Other selected locations as may be specified by the Agency

Parameter	Monitoring Frequency	Analysis Method/Technique Note 2
Methane (CH_4)	Monthly	InfraRed Analyser/FID
Carbon Dioxide (CO_2)	Monthly	InfraRed
Oxygen (O_2)	Monthly	Electrochemical Cell
Atmospheric pressure & Trend	Monthly	Standard method

Note 1: All perimeter monitoring boreholes must be installed to the standards specified in the Agency Guidance on Landfill Monitoring.
Note 2: Or other method agreed.

C.2.1 Control of Emissions to Water

Emission Control Location: Surface Water Retention Pond

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 surface water retention pond [Note 1]

PARAMETER [Note 2]	SURFACE WATER Monitoring Frequency
Visual Inspection/Odour [Note 3]	Daily
Pond Level	Daily
Dissolved Oxygen	Daily
Electrical Conductivity	Daily
Ammoniacal Nitrogen	Weekly
Chloride	Weekly
pH	Weekly
Total Suspended Solids	Weekly
BOD	Quarterly
COD	Quarterly
Metals / non metals [Note 4]	Annually
List I/II organic substances (Screen) [Note 5]	Annually
Mercury	Annually
Sulphate (SO_4)	Annually
Nitrate	Annually
Total P/orthophosphate	Annually
Faecal Coliforms	Monthly
Total Coliforms	Monthly

Note 1: See also Condition 6.8.1 in relation to monitoring at inlet to surface water retention pond.

Note 2: All the analysis shall be carried out by a competent laboratory using standard and internationally accepted procedures.

Note 3: Where there is evident gross contamination, additional samples should be analysed and the full suite of parameters shown tested.

Note 4: 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 5: 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.2.3 Leachate Monitoring

Location: Leachate Holding Tank, Leachate Sumps and Leachate Monitoring Points in the Cells.

PARAMETER[Note 1]	LEACHATE [Note 2] Monitoring Frequency
Visual Inspection/Odour	Daily
Leachate Level	Weekly
BOD	Quarterly
COD	Quarterly
Chloride	Annually
Ammoniacal Nitrogen	Annually
Electrical Conductivity	Annually
PH	Annually
Metals / non metals [Note 3]	Annually
Cyanide (Total)	Annually
Fluoride	Annually
List I/II organic substances [Note 4]	Annually
Mercury	Annually
Sulphate	Annually
Total P/orthophosphate	Annually
Total Oxidised Nitrogen	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 holding tank. Leachate composition to be monitored at the leachate holding tank.
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 Ambient Monitoring

Air Monitoring

Location: **Dust:** Monitoring Locations shown on Figure No. 5.2 – Proposed Dust Monitoring Locations and any further boundary monitoring locations instructed by the Agency.

Odour: 3 fixed locations to be agreed by the Agency and 2 locations to be chosen on the day (upwind/downwind) from a list of locations to be agreed by the Agency (Condition 6.17).

Parameter	Monitoring Frequency	Analysis Method/Technique
Dust deposition	Monthly	Bergerhoff
Odour	**Biannual**	**To be agreed by the Agency**

Groundwater Monitoring

Location: Groundwater Wells as outlined in Figure 5.4 – *Proposed Shallow Groundwater Monitoring Locations* and Figure 5.5 – *Proposed Bedrock Groundwater Monitoring Locations* and including those wells to satisfy requirements of Condition 6.9 and discharge from groundwater pumping to surface water collection system/retention pond, unless agreed or instructed otherwise by the Agency.

Parameter [Note 1]	Monitoring Frequency
Visual Inspection/Odour [Note 2]	Monthly
Groundwater Level (wells)	Monthly
Flow (pumped groundwater)	Continuous
Dissolved Oxygen	Daily (pumped groundwater) Monthly otherwise
Electrical Conductivity	Daily (pumped groundwater) Monthly otherwise
Ammoniacal Nitrogen	Monthly
Chloride	Monthly
PH	Monthly
Sulphate (SO_4)	Monthly
Metals / non metals [Note 3]	Annually
List I/II organic substances (Screen) [Note 4]	Annually
Mercury	Annually
Nitrate	Annually
Total P/orthophosphate	Annually
Faecal Coliforms	Monthly
Total Coliforms	Monthly

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).

Receiving Water Monitoring

Location: Monitoring locations in Figure No. 5.3 – *Proposed Surface Water Sampling Stations* unless agreed or instructed otherwise 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 locations specified in Section 3.5.2 of the EIS submitted as part of the application unless agreed or instructed otherwise by the Agency.

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.

C.5 Noise Monitoring

Location	Measurement [Note 1]	Frequency
Boundary locations, **Noise sensitive locations** [Note 2]	L_{Aeq}, L_{A10}, L_{A90}	Bi-annual

Note 1: Noise monitoring shall be undertaken in accordance with the 'Environmental Noise Survey Guidance Document' as published by the Agency.

Note 2: As required by Condition 6.10, unless otherwise agreed or instructed by the Agency.

SCHEDULE D: Specified Engineering Works

Specified Engineering Works
Determination of rockhead by geophysical methods.
Development of the facility including preparatory works and lining.
Final capping.
Installation of Landfill Gas Management Infrastructure.
Installation of Leachate Management Infrastructure.
Installation of Groundwater Control Infrastructure.
Installation of Surface Water Management Infrastructure.
Installation of dust/odour control systems.
Installation of waste handling, processing, recycling/recovery infrastructure and installation of increased waste processing capacity.
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
Environmental Protection Agency Headquarters
PO Box 3000
Johnstown Castle Estate
Co. 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	Prior to the works commencing.
Monitoring of landfill gas	Quarterly	Ten days after end of the quarter being reported on.
Monitoring of Surface Water Quality	Quarterly	Ten days after end of the quarter being reported on.
Monitoring of Groundwater Quality	Quarterly	Ten days after end of the quarter being reported on.
Monitoring of Leachate	Quarterly	Ten days after end of the quarter being reported on.
Dust Monitoring	Quarterly	Ten days after end of the quarter being reported on.
Drawing with Monitoring locations	-	Prior to commencement of waste disposal.
Schedule of Objectives & Targets	-	3 months prior to commencement of development.
Phased Construction Plan	-	Prior to commencement of development.
Leachate Disposal Agreement	-	Prior to commencement of waste disposal.

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.
Waste Recovery Report, including consideration/evaluation of further recovery of the wastes being accepted at the facility.
Topographical Survey (landfill).
Remaining void, projected completion date (landfill).
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 drawing.
Tank and pipeline testing and inspection report.
Reported incidents summary.
Energy efficiency audit report summary.
Report on progress made and proposals being developed to minimise generation of leachate for disposal.
Development / Infrastructural works summary (completed in previous year or prepared for current year).
Report on management and staffing structure of the installation.
Report on programme for public information.
Reports on financial provision made under this licence.
Statement on the costs of Landfill.
Review of Environmental Liabilities.
Review of Closure, Restoration & Aftercare Management Plan including any amendments.
Detailed Statement, with mass balance of C & D wastes used in construction (landfill).
Statement of measures in relation to prevention of environmental damage and remedial actions (Environmental Liabilities).
Environmental Liabilities Risk Assessment Review (every three years or more frequently as dictated by relevant on site change including financial provisions.
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 29th day of July, 2005 Kieran O'Brien, **Authorised Person**