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

# WASTE LICENCE
## **Proposed Decision**

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| **Licence Register Number:** | 53-3 |
| **Applicant/Licensee:** | Greenstar Limited |
| **Location of Facility:** | Bray Depot, Fassaroe, Bray, County Wicklow |

# *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 located at Fassaroe, Bray, County Wicklow. Several different operations will be carried out at the facility: bulking of municipal solid waste prior to transfer off site for disposal, composting, wood shredding, processing/storage of dry recyclables, recovery of construction and demolition waste, acceptance of waste at a civic waste facility to include acceptance of hazardous waste such as bonded asbestos waste, WEEE and chlorofluorocarbons.

The maximum quantity of waste to be accepted at the facility is 200,000 tonnes per annum consisting of household waste, commercial waste, construction and demolition waste and hazardous waste.

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

The licence sets out in detail the conditions under which Greenstar 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 2005, unless otherwise defined in this section.

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| **Adequate lighting** | 20 lux measured at ground level. |
| **Aerosol** | A suspension of solid or liquid particles in a gaseous medium. |
| **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. |
| **Bioaerosol** | An aerosol of biological particles. |
| **Biodegradable waste** | Any waste that is capable of undergoing anaerobic or aerobic decomposition, such as food, garden waste, sewage sludge, paper and paperboard. |
| **BOD** | 5 day Biochemical Oxygen Demand. |
| **CEN** | Comité Européen De Normalisation – European Committee for Standardisation |
| **COD** | Chemical Oxygen Demand. |
| **Commercial Waste** | As defined in Section 5(1) of the Waste Management Acts 1996 to 2005. |
| **Compost** | Stable, sanitised and humus like material rich in organic matter and free from offensive odours resulting from composting, of seperately collected biowaste which complies with the environmental quality classes outlined in Schedule F: Standards for Compost Quality, of this licence. |
| **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. |

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| **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. |
| **Forced aeration** | The supply of air to a compost pile, by pumping (positive pressure) or by sucking air through the composting material (negative pressure). |
| **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:<br>a) an emergency;<br>b) any emission which does not comply with the requirements of this licence;<br>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.

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| **Industrial Waste** | As defined in Section 5(1) of the Waste Management Acts 1996 to 2005. |
| **Inert waste** | Waste that does not undergo any significant physical, chemical or biological transformations. Inert waste will not dissolve, burn or otherwise physically or chemically react, biodegrade or adversely affect other matter with which it comes into contact in a way likely to give rise to environmental pollution or harm human health. The total leachability and pollutant content of the waste and the ecotoxicity of the leachate must be insignificant, and in particular not endanger the quality of surface water and/or groundwater. |
| **In-vessel composting** | Different composting methods in which material for composting is contained in a building, reactor or vessel. |
| **IPPC** | Integrated Pollution Prevention & Control. |
| **K** | Kelvin. |
| **kPa** | Kilo Pascals. |
| **Landfill Directive** | Council Directive 1999/31/EC. |
| **Leq** | Equivalent continuous sound level. |
| **Licence** | A Waste Licence issued in accordance with the Waste Management Acts 1996 to 2005. |
| **Licensee** | Greenstar 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** | Wicklow County Council |
| **Maintain** | Keep in a fit state, including such regular inspection, servicing, calibration and repair as may be necessary to adequately perform its function. |
| **Mass Flow Limit** | An Emission Limit Value which is expressed as the maximum mass of a substance which can be emitted per unit time. |
| **Mass Flow Threshold** | A mass flow rate, above which, a concentration limit applies. |
| **Monthly** | A minimum of 12 times per year, at approximately monthly intervals. |
| **Municipal waste** | As defined in Section 5(1) of the Waste Management Acts 1996 to 2005. |
| **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 |

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| | 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. |
| **Recyclable Materials** | Those waste types, such as cardboard, batteries, gas cylinders, etc, which may be recycled. |
| **Regional Fisheries Board** | Eastern Regional Fisheries Board. |
| **Sanitary Authority** | Wicklow County Council |
| **Sanitary Effluent** | Waste water from facility toilet, washroom and canteen facilities. |
| **Sample(s)** | Unless the context of this licence indicates to the contrary, samples shall include measurements by electronic instruments. |
| **SOP** | Standard Operating Procedure. |
| **Specified Emissions** | Those emissions listed in *Schedule B: Emission Limits* of this licence. |
| **Specified Engineering Works** | Those engineering works listed in *Schedule D: Specified Engineering Works* of this licence. |
| **Stabilised Biowaste** | Waste resulting from the mechanical/biological treatment of unsorted waste or residual municipal waste including treated biowaste which does not comply with the environmental quality classes outlined in Schedule F: Standards for Compost Quality, of this licence. |
| **Standard Method** | A National, European or internationally recognised procedure (eg, I.S. EN, ISO, CEN, BS or equivalent), as an in-house documented procedure based on the above references, a procedure as detailed in the current edition of "Standard Methods for the Examination of Water and Wastewater", (prepared and published jointly by A.P.H.A., A.W.W.A & W.E.F), American Public Health Association, 1015 Fifteenth Street, N.W., Washington DC 20005, USA; or, an alternative method as may be agreed by the Agency. |
| **Storm Water** | Rain water run-off from roof and non-process areas. |
| **The Agency** | Environmental Protection Agency. |
| **TA Luft** | Technical Instructions on Air Quality Control - TA Luft in accordance with art. 48 of the Federal Immission Control Law (BImSchG) dated 15 March 1974 (BGBI. I p.721). Federal Ministry for Environment, Bonn 1986, including the amendment for Classification of Organic Substances according to Section 3.1.7 TA.Luft, published in July 1997. |
| **Temporary storage** | In relation to waste is a period of less than six months as defined in the Waste Management Acts 1996 to 2005. |

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| **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. |
| **WEEE** | As defined in S.I. No. 340 of 2005. |
| **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 2005.

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 2005, the Environmental Protection Agency (the Agency) proposes, under Section 46(8)(a) of the said Act to grant this Waste Licence to Greenstar Limited to carry on the activities listed below at Bray Depot, Fassaroe, Bray, County Wicklow subject to conditions, with the reasons therefor and the associated schedules attached thereto set out in the licence.

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

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| **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 2005**

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| **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 11.** | **Use of waste obtained from any activity referred to in a preceding paragraph of this Schedule.** |
| **Class 12.** | **Exchange of waste for submission to 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 Schedule of Activities Refused*

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

# *Part III Conditions*

## Condition 1. Scope

1.1 Waste activities at this facility shall be restricted to those listed and described in Part I Activities Licensed, and shall be as set out in the licence application or as modified under Condition 1.7 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 Unless otherwise agreed by the Agency, only the wastes as listed under Annex 1 of the EC Working Document 'Biological Treatment of Biowaste' (2nd draft) or subsequent amendments shall be accepted at the facility for the production of compost.

1.4 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.

1.5 For the purposes of this licence, the facility authorised by this licence, is the area of land outlined in red on Drawing No. B9338-C002-B *Site Drainage Layout* of the Article 14 reply received on 18/10/05. Any reference in this licence to "facility" shall mean the area thus outlined in red colour. The licensed activities shall be carried on only within the area outlined.

1.6 Waste Acceptance Hours and Hours of Operation

1.6.1 With the exception of emergencies or as may be agreed by the Agency, waste shall be accepted at or despatched from the facility only between the hours of 7:30 to 19:00 Monday to Saturday inclusive.

1.6.2 The facility shall be operated only during the hours of 7:30 to 21:00 Monday to Saturday inclusive.

1.6.3 The facility shall not operate or accept/despatch waste on Sundays or Bank Holidays without the agreement of the Agency.

1.7 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.

1.8 Before commencing operations the licensee must satisfy the Agency that it has obtained written consent from the Department of Agriculture and Food to treat animal by-products in composting/biogas facilities.

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

1.10 This licence is being granted in substitution for the waste licence granted to the licensee on 3rd of April 2003 and bearing Waste Licence Register No: 53-2. The previous waste licence (Register No: 53-2) is superseded by this licence.

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

# Condition 2. Management of the Facility

2.1 Facility Management

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

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

2.2 Environmental Management System (EMS)

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

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

2.2.2.1 Management and Reporting Structure.

2.2.2.2 Schedule of Environmental Objectives and Targets.

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

2.2.2.3 Environmental Management Programme (EMP)

The licensee shall, not later than six months from the date of grant of this licence, submit to the Agency for agreement a proposal for the updating (where appropriate) of the EMP, including a time schedule, for achieving the Environmental Objectives and Targets

prepared under Condition 2.2.2.2. Once agreed the EMP shall be established and maintained by the licensee. It shall include:

(b) designation of responsibility for targets;

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

(d) 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 11.11).

A report on the programme, including the success in meeting agreed targets, shall be prepared and submitted to the Agency as part of the AER. Such reports shall be retained on-site for a period of not less than seven years and shall be available for inspection by authorised persons of the Agency.

2.2.2.4 Documentation

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

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

2.2.2.5 Corrective Action

The licensee shall establish procedures to ensure that corrective action is taken should the specified requirements of this licence not be fulfilled. The responsibility and authority for initiating further investigation and corrective action in the event of a reported non-conformity with this licence shall be defined.

2.2.2.6 Awareness and Training

The licensee shall establish and maintain procedures for identifying training needs, and for providing appropriate training, for all personnel whose work can have a significant effect upon the environment. Appropriate records of training shall be maintained.

2.2.2.7 Communications Programme

The licensee shall establish and maintain a Public Awareness and Communications Programme to ensure that members of the public are informed, and 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 prior to the commencement of the licensed activities or as required by the conditions of this licence.

3.2 Specified Engineering Works

3.2.1 The licensee shall submit proposals for all 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.

3.2.2 All specified engineering works shall be supervised by a competent person(s) and that person, or persons, shall be present at all times during which relevant works are being undertaken.

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

(a) A description of the works;

(b) As-built drawings of the works;

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

3.3 Facility Notice Board

3.3.1 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.

3.3.2 The board shall clearly show:-

a) the name and telephone number of the facility;

b) the normal hours of opening;

c) the name of the licence holder;

d) an emergency out of hours contact telephone number;

e) the licence reference number; and

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

3.4 Facility Security

3.4.1 Security and stockproof fencing and gates shall be 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.

3.4.2 The licensee shall maintain a CCTV system which record all truck movement into and out of the facility, the CCTV system shall be operated at all times and copies of recording kept on site and made available to the Agency on request.

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

3.4.4 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.

3.5 Facility Roads and Site Surfaces

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

3.5.2 The licensee shall provide, and maintain an impermeable concrete surface in all waste handling/storage areas, the truck washing area and the fuel storage area. The surfaces shall be concreted and constructed to British Standard 8110 or an alternative as agreed by the Agency.

3.6 Facility Office

3.6.1 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.

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

3.7 Waste Inspection and Quarantine Areas

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

3.7.2 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.

3.7.3 Drainage from the waste inspection area(s) shall be directed to the foul water drainage network as shown on Drawing No. B9338-C002-B *Civil Site Drainage Layout* of the Article 14 reply received on 18/10/05.

3.7.4 The Waste Quarantine Area shall be secured, bunded and surfaced to deal with spillages.

3.8 Weighbridge and Wheel Cleaner

The licensee shall provide and maintain weighbridge(s) and wheel cleaning equipment at the facility.

3.9 Waste handling, ventilation and processing plant

3.9.1 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:-

a) 100% duty capacity;

b) 20% standby capacity available on a routine basis; and

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

3.9.2 Within three months from the date of grant of this licence, the licensee shall provide an updated report for the agreement of the Agency detailing the duty and standby capacity in tonnes per day, of all waste handling and processing equipment to be used at the facility. These capacities shall be based on the licensed waste intake, as per *Schedule A: Limitations,* of this licence.

3.9.3 The quantity of waste to be accepted at the facility on a daily basis shall not exceed the duty capacity of the equipment at the facility. Any exceedance of this intake shall be treated as an incident.

3.10 Drainage Network

3.10.1 The drainage network shall be installed and maintained as shown on Drawing *No.* B9338-C002-B *Civil Site Drainage Layout* of the Article 14 reply received on 18/10/05, unless otherwise indicated or agreed by the Agency.

3.10.2 The licensee shall install and maintain silt traps and oil separator at the facility to ensure that all storm water (excluding storm water from roof buildings) and trade effluent excluding sanitary effluent discharged from the facility pass through a silt trap and oil separator prior to discharge. For storm water run-off, the separator shall be a Class I full retention separator. For discharges to foul sewer, the separators shall be Class II full retention separator. The silt traps and separator shall be in accordance with I.S. EN 585-2:2003 (separator systems for light liquids). Automatic shut-off valves shall be installed at the separators.

3.10.3 Any surplus trade effluent/leachate from the biowaste treatment facility shall be discharged to the on-site surplus storage tank and shall be tankered off-site in fully enclosed road tankers to an agreed Wastewater Treatment Plant and disposed of there.

3.11 Tank and Drum Storage Areas

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

3.11.2 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.

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

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

3.11.5 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.

3.12 Civic Waste Facility

3.12.1 The licensee shall establish and maintain the Civic Waste Facility as specified in Section 9 and shown on Drawing No. B9338-C002-B *Civil Site Drainage Layout* of the Article 16 reply received on 18/10/05, unless otherwise agreed by the Agency.

3.12.2 The licensee shall provide and maintain appropriate receptacles at the Civic Waste Facility for the storage of various waste types.

3.12.3 All waste deposited in the Civic Waste Facility shall be either:-

(a) into a skip;

(b) into the hopper of the compactor for disposal;

(c) into a receptacle for recovery; or

(d) in the case where inspection is required, into a designated inspection area.

3.12.4 The licensee shall assign and clearly label each container/bay at the Civic Waste Facility to indicate their contents.

3.12.5 At the end of the working day the ground around the Civic Waste Facility shall be cleared of waste.

3.12.6 All waste accepted at the Civic Waste Facility for disposal off-site shall be removed within forty eight hours of its arrival on-site.

3.13 Compost facility

3.13.1 Prior to commencement of composting at the facility, the licensee shall provide the biowaste treatment facility described in Section 5.4 *Biowaste Treatment Plant* of the EIS submitted with the application and shown on Drawing B8575-C005-A *Civil Proposed Biowaste Treatment Layout* of the application, unless otherwise indicated by or agreed by the Agency.

3.14 Wood Shredding

Within six months of the date of grant of this licence, the licensee shall enclose the wood shredder at the facility. SEW proposal in accordance with Condition 3.2 shall include measures to mitigate noise and dust nuisances.

3.15 Landfill Gas Management

3.15.1 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.

3.15.2 Periodic gas monitoring of more vulnerable older buildings (those without gas proofing membranes or drainage layers in the foundation) shall be carried out with portable equipment or equivalent as approved by the Agency.

3.16 Groundwater Management

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

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

3.17 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.

3.18 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.

3.19 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.

3.20 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.

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

4.2.1 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.

4.2.2 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.

4.2.3 Discrete Sampling

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

4.3 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.

4.4 Noise

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

4.5 Dust and Particulate Matter

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

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

# Condition 5. Emissions

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

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

5.3 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.

5.4 The road network in the vicinity of the facility shall be kept free from any debris caused by vehicles entering or leaving the facility. Any such debris or deposited materials shall be removed without delay.

5.5 Landfill Gas:

The following are the trigger levels for landfill gas emissions from the facility measured in any service duct or manhole on, at or immediately adjacent to the facility and/or at any other point located outside the body of the waste:-

a) Methane, greater than or equal to 1.0% v/v; or

b) Carbon dioxide, greater than or equal to 1.5% v/v.

5.6 Emissions to Surface Water

5.6.1 No trade effluent, leachate and/or polluted storm water shall be discharged to surface water drains and surface water courses.

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

5.7 There shall be no direct emissions to groundwater.

5.8 Emissions to Sewer

5.8.1 The licensee shall permit authorised persons of the Agency and the Sanitary Authority to inspect, examine and test, at all reasonable times, any works and apparatus installed, in connection with the process effluent, and to take samples of the process effluent.

5.8.2 The licensee shall at no time discharge or permit to be discharged into the sewer any liquid matter or thing which is or may be liable to set or congeal at average sewer temperature or is capable of giving off any inflammable or explosive gas or any acid, alkali or other substance in sufficient concentration to cause corrosion to sewer pipes, penstock and sewer fittings or the general integrity of the sewer.

5.8.3 Appropriately designed screen/traps/balancing facilities shall be installed and maintained as required and house-keeping procedures adopted to ensure that gross solids and debris are prevented from entering the foul sewer system.

5.8.4 The trade effluent shall be discharged as uniformly as practical to the foul sewer system during the official hours of business; appropriate balancing facilities shall be installed and maintained for this purpose.

5.8.5 Grease removal devices shall be installed and maintained on the waste water pipe from the canteen prior to the collection of foul sewerage.

5.8.6 The company shall provide all appropriate drawings and information regarding the provision of the connection and foul sewer extension detailing layout, materials of construction levels, manholes, wayleave and contractors shall be provided to the satisfaction of the Sanitary Authority.

*Reason:* *To provide for the protection of the environment by way of control and limitation of emissions and to provide for the requirements of the Sanitary Authority in accordance with. Section 52 of the Waste Management Acts 1996 to 2005.*

# Condition 6. Control and Monitoring

6.1 Litter Control

6.1.1 The measures and infrastructure as described in Section 5.19.1 *Litter* of the EIS submitted with the application shall be applied to control litter at the facility.

6.1.2 Litter fencing shall be maintained around the perimeter of the construction and demolition waste recovery area. Subject to the cessation of all waste processing outdoors this requirement may, subject to the agreement of the Agency, be removed.

6.1.2.1 All litter control infrastructure shall be inspected on a daily basis. The licensee shall remedy any defect in the litter netting as follows:-

(a) A temporary repair shall be made by the end of the working day.

(b) A repair to the standard of the original netting shall be undertaken within three working days.

6.1.3 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.

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

6.2 Dust/Odour Control

6.2.1 All putrescible waste for disposal stored overnight at the facility, shall be stored in suitably covered and enclosed containers, and shall be removed from the facility within forty eight hours, except at Bank Holiday weekends. At Bank Holiday weekends, waste for disposal shall be removed within seventy-two hours of its arrival on site.

6.2.2 Any biowaste accepted at the facility for composting (other than bulking agents, e.g. woodchip, cardboard) shall be processed and put into the in-vessel composting unit(s) within twenty-four hours of it arrival at the facility.

6.2.3 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.

6.2.4 The licensee shall install and provide adequate measures for the control of odours and dust emissions, including fugitive dust emissions, from the facility. The measures shall be installed and provided within twelve months of the date of grant of this licence, except at the biowaste treatment facility where the measures shall be installed prior to commencement of any composting activity. Installation of an odour management system shall at a minimum include the following:-

6.2.4.1 Dust curtains (or equivalent approved by the Agency) shall be maintained on the entry/exit points from the waste transfer building(s), all other doors in these building shall be kept closed where possible. The licensee shall ensure that the doors to the biowaste reception building remain closed at all times other than to facilitate the delivery/removal of wastes from the building.

6.2.4.2 Unless otherwise agreed by the Agency, all buildings processing putrescible waste shall be maintained at negative air pressure with ventilated gases being subject to treatment as specified or indicated by the Agency.

6.2.4.3 In the biowaste treatment facility ventilated gases shall be treated by biofilter(s).

6.2.4.4 Emissions from the biofilter shall not exceed those ELV's as set out in *Schedule B: Emission Limits,* of this licence.

6.2.4.5 Provision of 100% duty capacity and 20% stand by capacity, back ups and spares must be provided for the air handling, ventilation and abatement plant.

6.3 Operational Controls

6.3.1 The floor of the waste transfer building(s) and the biowaste treatment facility shall be cleaned on a weekly basis and on a daily basis where putrescible waste is handled. The floor of the storage bays for recovered wastes shall be washed down and cleaned on each occasion such bays are emptied, or as a minimum on a weekly basis.

6.3.2 All waste handling/processing plant used for putrescible waste shall be cleared of all waste and washed down on a weekly basis.

6.3.3 Unless agreed in advance by the Agency, no waste shall be placed, or allowed to accumulate outdoors other than glass, wood and construction and demolition waste stored in designated waste storage areas and baled cardboard stored in fully enclosed trailers/containers pending removal from the site.

6.3.3.1 Recyclable waste shall not be stored in stockpiles for periods greater than two months, unless agreed in advance by the Agency.

6.3.4 Prior to the shredder being enclosed in accordance with Condition 3.14, the timber shredder shall not be operated when wind speeds exceed 10.7 m/s (Force 5).

6.3.5 Wastes once deposited and covered shall not be excavated, disturbed or otherwise picked over with the exception of works associated with the construction and installation of necessary infrastructure or otherwise only with the prior agreement from the Agency.

6.3.6 Scavenging shall not be permitted at the facility.

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

6.3.7.1 The licensee shall to the satisfaction of the Agency revise the lighting arrangement on site particularly with respect to light sensitive areas (northern boundary) during night time hours within three months of the date of grant of this licence.

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

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

6.3.10 There shall be no casual public access to the facility, except to the civic waste facility.

6.4 Trade Effluent and Storm Water

The drainage system, bunds, silt traps and oil separators shall be inspected weekly, desludged as necessary and properly maintained at all times. All sludge and drainage from these operations shall be collected for safe disposal.

6.5 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:

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

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

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

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

6.6 Continuous Monitoring System

Prior to commencement of composting activities at the facility, a continuous monitoring system shall be installed and maintained at the biowaste treatment 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. As a minimum the system shall record and relay the following information:

(i) temperature and oxygen content of the compost at all stages during its production

6.7 Dust Monitoring

Prior to commencement of waste acceptance at the biowaste treatment facility, the licensee shall submit an updated dust monitoring programme to include additional dust monitoring locations at highest point(s) along the northern and western site boundary.

6.8 Noise

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

6.8.2 Within three months of the date of grant of this licence, the licensee shall submit a proposal, following consultation with the Health & Safety Authority, for agreement by the Agency to further reduce the noise impact by the installation of noise reduction measures at the facility. The proposal shall consider such measures as reversing strobe lights in addition to a muted siren or 'smart alarm' systems (locally directed reversing tones that self adjust volume according to ambient noise).

6.8.3 Within three months of the date of grant of this licence, the licensee shall carry out a feasibility study to be submitted to the Agency to assess the benefits of acoustic cladding of the waste processing buildings to further mitigate noise nuisances.

6.8.4 Within three months of the date of grant of this licence, the licensee shall submit an updated noise monitoring programme to include for noise monitoring of noise sensitive locations along Thornhill Road north of the facility.

6.9 Groundwater

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

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

6.10 Stability Assessment

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

6.11 Bioaerosol Monitoring

The licensee shall carry out the bioaerosol monitoring in accordance with *Schedule C: Control & Monitoring,* of this licence.

6.12 Meteorological Monitoring

The licensee shall provide suitable infrastructure at the facility for the monitoring of wind speed, wind direction and rainfall on a daily basis.

6.13 Nuisance Monitoring

The licensee shall inspect the facility and its immediate surrounds daily for nuisances caused by litter, vermin, birds, flies, mud, dust and odours. The licensee shall maintain a record of all nuisance inspections.

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

6.15 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.

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

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

6.18 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.

6.19 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.

6.20 All tanks and pipelines shall be maintained impervious to the materials carried by or stored therein. The integrity and water tightness of all underground pipes 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.

*Reason: To provide for the protection of the environment by way of treatment and monitoring of emissions and to provide for the requirements of the Sanitary Authority in accordance with. Section 52 of the Waste Management Acts 1996 to 2005.*

# Condition 7. Resource Use and Energy Efficiency

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

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

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

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

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

# Condition 8. Materials Handling

8.1 All waste processing shall be carried out inside the waste transfer building(s) from the date of grant of this licence, except wood shredding (see Condition 3.14) and composting which shall be carried out at the biowaste treatment facility shown on Drawing No. B9338-C002-B *Civil Site Drainage Layout*.

8.2 Waste Acceptance and Characterisation Procedures

8.2.1 Waste shall only be accepted at the facility, from Local Authority waste collection or transport vehicles or holders of waste permits, unless exempted or excluded, issued under the the Waste Management Acts

1996 to 2005. Copies of these waste collection permits must be maintained at the facility.

8.2.2 The licensee shall maintain detailed written procedures for the acceptance and handling of all wastes

8.2.3 Waste arriving at the facility shall be inspected at the point of entry to the facility and subject to this inspection, weighed, documented and directed to the Waste Transfer Building(s) or the Biowaste Treatment Facility. Each load of waste arriving at the Waste Transfer Building(s) or the Biowaste Treatment Facility shall be inspected upon tipping. Only after such inspections shall the waste be processed for disposal or recovery.

8.2.4 Any waste deemed unsuitable for processing at the facility and/or in contravention of this licence shall be immediately separated and removed from the facility at the earliest possible time. Temporary storage of such wastes shall 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.

8.2.5 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. There shall be no casual public access to the facility, except at the civic waste facility.

8.3 Inert Waste

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

8.3.2 Only inert waste specified for restoration use in *Schedule A: Waste Acceptance*, *Table A.2 Waste for Restoration on Site,* of this licence, shall be used for the restoration purposes at the facility.

8.4 Compost

8.4.1 The biowaste treatment facility shall not process greater than 10,000 tonnes of biodegradable and green waste per annum, unless otherwise agreed by the Agency.

8.4.2 All incoming waste intended for composting shall be processed inside the biowaste reception building prior to composting taking place in the in-vessel units.

8.4.3 The aerated static piles (ASPs) shall be covered while the curing process is taking place.

8.4.4 In order not to be considered a waste, compost produced by the facility shall, unless otherwise agreed by the Agency, comply with the quality standards established in *Schedule F: Standards for Compost Quality*, of this licence. Analysis of the compost shall be in accordance with the requirements of that Schedule.

8.4.5 Compost not meeting the above standard may be reused in the process or handled as a waste and details recorded as per Condition 11.12.

8.4.6 Screening of compost shall be carried out inside the waste transfer building(s) or any other adequate indoor facility as agreed by the Agency.

8.4.7 While awaiting collection, mature compost shall be stored in areas protected against uncontrolled run-off and nuisance formation.

8.4.8 No waste shall be deposited outside the biowaste treatment facility without the prior permission of the Agency.

8.5 Asbestos Waste

8.5.1 Bonded asbestos waste shall only be accepted at the civic waste facility for temporary storage prior to its removal for final disposal.

8.5.2 Detailed operational procedures on the handling, storage and monitoring of asbestos waste shall be submitted to the Agency for agreement at least three months prior to the commencement of acceptance of asbestos waste at the facility.

8.5.3 No unwrapped asbestos waste shall be accepted or stored at the facility. Care shall be taken in handling the waste that no damage is caused to any plastic bags or wrapping as may permit the escape of fibres and dust. Any damage shall be recorded as an incident. In addition, no unwrapping of asbestos waste shall be carried out.

8.5.4 Asbestos waste shall be placed in lockable steel containers immediately on arrival at the facility, or into dedicated buildings/structures for temporary storage. Containers and any dedicated buildings shall remain locked at all times when asbestos waste is not being placed in them. No asbestos waste shall be deposited or allowed to accumulate outside the containers or buildings being used for waste storage. Containers used to store asbestos waste shall not be used for any other purpose.

8.5.5 Appropriate warning labels shall be displayed on containers so that persons using the facility or handling the containers are aware of its contents and hazards. All full containers shall be sealed with high tensile seal and clearly labelled.

8.5.6 All containers used to store or transport asbestos waste before onward transport shall be of a design suitable for washing and cleansing without lodgement of debris or fibres and secure from escape of fibres or dust. The design should also ensure maximum protection from accidental or deliberate damage.

8.5.7 The licensee shall ensure that during transport, handling and storage of asbestos waste that fibres or dust from such waste are not emitted or released to any environmental medium.

8.5.8 Copies of the results of any asbestos fibre monitoring carried out for health and safety reasons shall be submitted to the Agency within 10 days of such results becoming available to the licensee.

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

8.8 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.

8.9 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.

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

8.11 All waste transferred abroad for recovery or disposal including 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/disposal with the agreement of the Agency.

8.12 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.

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| *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, within six months of date of grant of this licence, 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 maintain a documented Emergency Response Procedure (ERP). Within six months of date of grant of this licence, the licensee shall submit to the Agency for its agreement, a proposal for updating (where appropriate) of the documented ERP for the facility. 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 with 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.

(vii) Notify any other appropriate Agency or Authority.

9.4 Emergencies

9.4.1 In the event of a breakdown of equipment or any other occurrence which results in the closure of the transfer station building, any waste arriving at or already collected at the facility shall be transferred directly to appropriate landfill sites or any other appropriate facility until such time as the transfer station building is returned to a fully operational status. Such a breakdown event will be treated as an emergency and rectified as soon as possible.

9.4.2 All significant spillages occurring at the facility shall be treated as an emergency and immediately cleaned up and dealt with so as to alleviate their effects.

9.4.3 No waste shall be burnt within the boundaries of the facility. A fire at the facility shall be treated as an emergency and immediate action shall be taken to extinguish it and notify the appropriate authorities.

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

# Condition 10. Closure, Restoration and Aftercare

10.1 The licensee shall restore the facility on a phased basis as shown on Drawing No. B9058-CK03-B *Item 1 Void Infill Over Gas Main* of the Article 16 reply received on 18/10/05, unless otherwise agreed by the Agency.

10.2 Landscaping

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

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;

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.

The capping standard specified may be varied by agreement by the Agency. Any application for variation must be supported by a risk assessment.

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

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

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

10.7 Closure, Restoration & Aftercare Management Plan (CRAMP):

10.7.1 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.

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

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

10.8.1 A scope statement for the plan.

10.8.2 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.

10.8.3 A programme to achieve the stated criteria.

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

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

10.8.6 Details of costings for the plan and a statement as to how these costs will be underwritten.

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

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

# Condition 11. Notifications, Records and Reports

11.1 The licensee shall notify the Agency, in writing, one moth prior to the intended date of commencement of the Scheduled Composting Activity.

11.2 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:

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

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

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

11.2.4 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.

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.

11.3 In the event of any incident which relates to discharges to sewer, having taken place, the licensee shall notify the Agency, Local Authority and Sanitary Authority as soon as practicable, after such an incident.

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 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.

11.7 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.

11.8 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 A record shall be kept of each consignment of trade effluent, leachate and/or polluted storm water removed from the facility. The record shall include the following:-

a) the name of the carrier;

b) the date and time of removal of trade effluent, leachate and/or polluted storm water from the facility;

c) the volume of trade effluent, leachate and/or polluted storm water, in cubic metres, removed from the facility on each occasion;

d) the name and address of the Waste Water Treatment Plant to which the trade effluent, leachate and/or polluted storm water was transported; and

e) any incidents or spillages of trade effluent, leachate and/or polluted storm water during its removal or transportation.

11.11 The licensee shall submit to the Agency, by the 31$^{st}$ 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 G: Annual EnvironmentalReport*, of this licence and shall be prepared in accordance with any relevant guidelines issued by the Agency.

11.12 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:

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

11.12.2 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).

11.12.3 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.

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

11.12.5 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.

11.12.6 Details of any rejected consignments.

11.12.7 Details of any approved waste mixing.

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

11.13 Waste Recovery Reports

11.13.1 The licensee shall as part of their EMP prepare a report examining waste recovery options which 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 and WEEE;

(e) composting of biodegradable or green waste at the facility having regard to good practice and sustainability; and

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

*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 €15,910.00, or such sum as the Agency from time to time determines, having regard to variations in the extent of reporting, auditing, inspection, sampling and analysis or other functions carried out by the Agency, towards the cost of monitoring the activity as the Agency considers necessary for the performance of its functions under the Waste Management Acts 1996 to 2005. The first payment shall be a pro-rata amount for the period from the date of this licence to the 31st day of December, and shall be paid to the Agency within one month from the date of the licence. In subsequent years the licensee shall pay to the Agency such revised annual contribution as the Agency shall from time to

time consider necessary to enable performance by the Agency of its relevant functions under the Waste Management Acts 1996 to 2005, and all such payments shall be made within one month of the date upon which demanded by the Agency.

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

12.2 Sanitary Authority Charges

12.2.1 The licensee shall pay to the Sanitary Authority 0.73 cent per cubic metre of trade effluent discharged to the foul sewer or such sum as may be determined from time to time, having regard to the variations in the cost of providing drainage and the variation in effluent reception and treatment costs. Payment to be made annually on demand.

12.2.2 The licensee shall pay an annual charge of €300 to the Sanitary Authority towards the cost of monitoring the trade effluent. This amount will be revised from time to time. Payment to be made on demand.

12.3 Environmental Liabilities

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

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

12.3.3 As part of the measures identified in Condition 12.3.1, the licensee shall, to the satisfaction of the Agency, make financial provision to cover any liabilities identified in Condition 12.3.2. 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 12.3.1.

12.3.4 Unless otherwise agreed, any revision to that part of the indemnity dealing with restoration and aftercare liabilities (refer Condition 10.7.1), 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

| | |
|---|---|
| *Reason:* | *To provide for adequate financing for monitoring and financial provisions for measures to protect the environment and to provide for the requirements of the Sanitary Authority in accordance with Section 52 of the Waste Management Acts 1996 to 2005.* |

# SCHEDULE A: Limitations

## *A.1*

The following waste related processes are authorised:

i. Composting
ii. Shredding, crushing, baling, repackaging processes
iii. C & D waste recovery (incl. crushing, screening, sorting, blending)
iv. Storage of waste
v. Recovery of dry recyclables
vi. Collection and storage of hazardous waste at the civic waste facility.
vii. Use of inert waste for restoration purposes

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

## *A.2 Waste Acceptance*

### *Table A.1 Waste Categories and Quantities*

| WASTE TYPE Note 1 | MAXIMUM (TONNES PER ANNUM) Notes 2 & 3 |
|---|---|
| **Household and commercial waste** | 143,560 |
| **Construction and demolition waste** | 54,040 |
| **Hazardous waste Note 4** | 2,400 |
| **TOTAL** | 200,000 |

Note 1: Any proposals to accept other compatible waste streams must be agreed in advance by the Agency and the total amount of waste must be within that specified.
Note 2: The individual limitation on waste streams may be varied with the agreement of the Agency subject to the overall total limit staying the same.
Note 3: 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: Hazardous waste types as listed in Table H.1.2 *Hazardous Waste Types and Quantities* of the Article 16 reply received on 18/10/05, or as may otherwise be agreed by the Agency in writing.

## *A.3 Acceptable Waste for Restoration on Site*

Only the inert wastes in Table A.2 are acceptable for restoration on site, unless otherwise agreed by the Agency.

### *Table A.2 Waste for Restoration on Site.*

| DESCRIPTION | RESTRICTIONS Note 2 |
|---|---|
| **Stones and Soil** | **Note 1** |
| **Topsoil** | **Note 1** |
| **Brick** | **Note 1** |
| **Natural Sand** | **Note 1** |
| **Concrete** | **Note 1** |

**Note 1:** These wastes can be accepted for restoration on site provided:

- The waste is a pure, single stream from a single source.

- Waste listed in Table A.2 may be accepted together provided they are from the same source.
- In the case of suspicion of contamination (either from visual inspection or from knowledge of the origin of the waste) the waste should not be accepted for restoration purposes on site unless tested in advance.

**Note 2:** Waste acceptance criteria and limit values for pollutant content must comply with those listed in the *Council Decision of 19 December 2002 establishing criteria and procedures for the acceptance of waste at landfills pursuant to Article 16 of and Annex II to Directive 1999/31/EC (2003/33/EC)*, unless otherwise instructed by the Agency.

# 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 |

### Dust Deposition Limits:

Measured at the monitoring points DS-01, DS-02, DS-03 and DS-04 shown on Drawing No. 03072-01 Rev. A *Existing & Proposed Monitoring Locations.* Additional dust monitoring point(s) to be installed in accordance with Condition 6.7.

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

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

### *Emission Limits Values for Biofilters:*

**Emission Point reference no: to be agreed by the Agency**

| Parameter | Emission Limit Value |
|---|---|
| Ammonia | 50 ppm(v/v) |
| Hydrogen sulphide | 5 ppm (v/v) |
| Mercaptans | 5 ppm (v/v) |

## *B.2 Emissions to Water*

### There are no Emissions to Water of environmental significance.

## *B.3 Emission to Sewer*

**Emission Point Reference No.:** SE-1

**Volume to be emitted:** Maximum in any one day: 4 $m^3$

Maximum rate per hour: 1$m^3$

| Parameter | Emission Limit Value | |
|---|---|---|
| **Temperature** | 42°C (max.) | |
| **pH** | 6- 10 | |
| | mg/l | kg/day |
| **BOD** | 800 | 3.2 |
| **COD** | 2400 | 9.6 |
| **Suspended Solids** | 800 | 3.2 |
| **Sulphates (as $SO_4$)** | 1000 | 4.0 |
| **Oils, Fats, Greases** | 100 | 0.4 |
| **Mineral Oils** | 10 | 0.04 |
| **Detergent** | 100 | 0.4 |

## *B.4. Noise Emissions*

**To be measured at any noise sensitive location.**

| 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.:** **To be agreed by the Agency**

**Description of Treatment:** **Biofilter(s)**

| Control Parameter | Monitoring | Key Equipment[Note 1] |
|---|---|---|
| **Extraction** | Continuous with alarm/call-out | Pressure gauge or equivalent approved Pumps/engines |
| **Aeration** | Continuous | Oxygen probe |
| **Temperature control of compost** | Continuous | Temperature probe |

**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 from Biofilters*

**Emission Point Reference No.:** **Monitoring point(s) to be agreed by the Agency**

| Parameter [Note 1] | Monitoring Frequency | Analysis Method/Technique |
|---|---|---|
| **Dust (mg/m$^2$/day)** | Quarterly [Note 1] | Standard Method [Note 2] |
| **Odour** | Quarterly [Note 3] | See [Note 3] |
| **Bacteria** | Annually | Grab sample [Note 4] |
| **Aspergillus fumigatus** | Annually | Grab sample [Note 4] |

**Note 1:** Twice during the period May to September, or as otherwise specified in writing by the Agency.
**Note 2:** Standard method VDI2119 (Measurement of Dustfall, Determination of Dustfall using Bergerhoff Instrument (Standard Method) German Engineering Institute).
**Note 3:** Odour measurements shall be by olfactometric measurement and analysis for mercaptans, hydrogen sulphide, ammonia, and amines.
**Note 4:** Enumeration of colonies to be carried out as described in 'Standardised Protocol for the Sampling and Enumeration of Airborne Micro-organisms at composting Facilities' the Composting Association 1999.

## *C.1.3 Monitoring of Biofilter(s)* [Note 1]

**Emission Point Reference No.:** **To be agreed by the Agency**

| Parameter | Monitoring Frequency | Analysis Method/Technique |
|---|---|---|
| **Bed Media** | | |
| Odour assessment [Note 2] | Daily | Subjective Inspection |
| Condition and depth of biofilter [Note 3] | Daily | Visual Inspection |
| Moisture content | Bi-annually | Standard laboratory method |
| PH | Bi-annually | pH probe |
| Ammonia | Bi-annually | Standard laboratory method |
| Total viable counts | Bi-annually | Standard laboratory method |
| **Inlet and Outlet Gas** | | |
| Ammonia | Bi-annually | Colourimetric Indicator Tubes |
| Hydrogen sulphide | Bi-annually | Colourimetric Indicator Tubes |
| Mercaptans | Bi-annually | Colourimetric Indicator Tubes |

**Note 1:** Where appropriate analyses shall be carried out by a competent laboratory using standard and internationally acceptable techniques. The testing laboratory and the testing technique shall be agreed with the Agency in advance.
**Note 2:** This subjective assessment should be carried out by a staff member immediately upon arriving on-site.
**Note 3:** The biofilter shall be examined to ensure that no channelling is evident, and that moisture content is adequate. Watering, turning, restructuring and the addition of supplementary bed materials, or total bed replacement shall be carried out, as required, subject to bed performance.

## C.1.4 Monitoring of Landfill Gas Emissions

**Location:** **GS-01, GS-02, GS-05, GS-06, GS-07, GS-08, GS-09, P-GS-10, GS-11, BH-5, P-BH-6, BH-7, L-01, L-02, L-03 as shown on Drawing No. 03072-01 Rev. A *Existing & Proposed Monitoring Locations***
And
Other selected locations as may be specified [Note 1]

| 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** | | 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*

**There are no Emissions to Water of environmental significance.**

### *C.2.2 Monitoring of Emissions to Water*

**There are no Emissions to Water of environmental significance.**

## C2.3 LEACHATE MONITORING

**Location:** Leachate Monitoring Points L-01, L-02 and L-03 as shown on Drawing No. 03072-01 Rev. A *Existing & Proposed Monitoring Locations*.

| PARAMETER[Note 1] | LEACHATE [Note 2] Monitoring Frequency |
|---|---|
| **Visual Inspection/Odour** | Weekly |
| **Leachate Level** | Monthly |
| **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. Leachate composition to be monitored at one leachate monitoring point to be agreed by the Agency.
**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*

**Emission Point Reference No.:** **SE-1**

**Equipment:**

| Control Parameter | Monitoring | Key Equipment[Note 1] |
|---|---|---|
| **Oil Removal** | Mineral Oil concentration in water at discharge point | Class II Full Retention Oil Separators |
| **Suspended Solids** | Suspended Solids concentration in water at discharge point | Silt trap |

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

## *C.3.2 Monitoring of Emissions to Sewer*

**Emission Point Reference No.:** **SE-1**

| Parameter | Monitoring Frequency | Analysis Method/Technique |
|---|---|---|
| **Flow** | Monthly | Standard Method [Note 1] |
| **Temperature** | Quarterly | Standard Method [Note 1] |
| **pH** | Monthly | pH electrode/meter and recorder [Note 1] |
| **Chemical Oxygen Demand** | Quarterly | Standard Method [Note 1] |
| **Biochemical Oxygen Demand** | Monthly | Standard Method [Note 1] |
| **Suspended Solids** | Quarterly | Gravimetric [Note 1] |
| **Sulphates (as $SO_4$)** | Quarterly | Standard Method [Note 1] |
| **Oils, fats & greases** | Quarterly | Standard Method [Note 1] |
| **Mineral Oils** | Quarterly | Standard Method [Note 1] |
| **Detergent** | Quarterly | Standard Method [Note 1] |

**Note 1:** All parameters except flow to be sampled by grab, unless otherwise specified.

## *C.4 Waste Monitoring*

**No waste monitoring is required**

## *C.5 Noise Monitoring*

**Emission Point Reference No.:** **N1, N2, N3, N4, NSL1, NSL2 and any additional noise sensitive locations in accordance with Condition 6.8.2.**

**Location:** **Location of monitoring points as shown on Drawing No. 03072-01 Rev. A Existing & Proposed Monitoring locations, unless otherwise indicated or agreed by the Agency**

| Parameter | Monitoring Frequency | Analysis Method/Technique |
|---|---|---|
| **$L(A)_{EQ}$ [30 minutes]** | **Quarterly** | Standard Note 1 |
| **$L(A)_{10}$ [30 minutes]** | **Quarterly** | Standard Note 1 |
| **$L(A)_{90}$ [30 minutes]** | **Quarterly** | Standard Note 1 |
| **Frequency Analysis(1/3 Octave band analysis)** | **Quarterly** | Standard Note 1 |

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

## *C.6 Ambient Monitoring*

### *Air Monitoring*

**Emission Point Reference No.:** **DS-01, DS-02, DS-03, DS-04 and additional dust monitoring points in accordance with Condition 6.7.**

**Location:** **Location of monitoring points as shown on Drawing No. 03072-01 Rev. A Existing & Proposed Monitoring locations, unless otherwise indicated or agreed by the Agency.**

| Parameter | Monitoring Frequency | Analysis Method/Technique |
|---|---|---|
| **Dust deposition** | **Monthly**Note 1 | Bergerhoff Note 2 |

**Note 1:** Twice during the period May to September, or as otherwise specified in writing by the Agency.

**Note 2:** Standard method VDI2119 (Measurement of Dustfall, Determination of Dustfall using Bergerhoff Instrument (Standard Method) German Engineering Institute).

## *Groundwater Monitoring*

**Emission Point Reference No.:** **BH-02, BH-5, P-BH-6, BH-7**

**Location:** **Location of monitoring points as shown on Drawing No. 03072-01 Rev. A Existing & Proposed Monitoring locations**

| PARAMETER[Note 1] | Monitoring Frequency |
|---|---|
| **Visual Inspection/Odour** [Note 2] | Monthly |
| **Groundwater Level (wells)** | Monthly |
| **Dissolved Oxygen** | Monthly |
| **Electrical Conductivity** | Monthly |
| **Ammoniacal Nitrogen** | Monthly |
| **Chloride** | Monthly |
| **pH** | Monthly |
| **Sulphate ($SO_4$)** | Annually |
| **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** | Annually |
| **Total Coliforms** | Annually |

**Note 1:** Where appropriate all the analyses 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).

## *Surface Water Monitoring*

**Monitoring Point:** **SW-1, SW-2, SW-3 and SW-4**

**Location:** **Location of monitoring points as shown on Drawing No. 03072-01 Rev. A Existing & Proposed Monitoring locations**

| Parameter [Note 1] | Monitoring Frequency | Analysis Method/Technique |
|---|---|---|
| **Visual Inspection/Odour** Note 2 | Weekly | Standard Method |
| **Ammoniacal Nitrogen** | Quarterly | Standard Method |
| **BOD** | Quarterly | Standard Method |
| **COD** | Quarterly | Standard Method |
| **Chloride** | Quarterly | Standard Method |
| **Dissolved Oxygen** | Quarterly | Standard Method |
| **Electrical Conductivity** | Quarterly | Standard Method |
| **pH** | Quarterly | Standard Method |
| **Total Suspended Solids** | Quarterly | Standard Method |
| **Temperature** | Quarterly | Standard Method |
| **Metals/non metals** [Note 3] | Annually | Standard Method |
| **List I/II organic substances** Note 4 | Annually | Standard Method |
| **Mercury** | Annually | Standard Method |
| **Sulphate ($SO_4$)** | Annually | Standard Method |
| **Total P/orthophosphate** | Annually | Standard Method |
| **Nitrate** | Annually | Standard Method |
| **Faecal Coliforms**<br>**Total Coliforms** | Annually<br>Annually | Standard Method |
| **Biological Quality (Q) Rating/Q Index** | Biennial[Note 5] | To be agreed by the Agency |

**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 (US Environmental Protection Agency method 525 or equivalent, and pesticides (US Environmental Protection Agency method 608 or equivalent).

**Note 5:** Monitoring period - June to September.

**Monitoring of Composting process**

| Parameter | Monitoring Frequency | Monitoring equipment/method |
|---|---|---|
| • **In-vessel Units** | | |
| Temperature vs. time | Continuous | Temperature probe/recorder |
| Oxygen Content | Continuous | Oxygen Probe with recorder |
| • **Aerated Static Piles (ASP)** | | |
| Temperature | Continuous | Temperature probe |
| Moisture | Daily | Subjective by operator. |

# SCHEDULE D: Specified Engineering Works

| Specified Engineering Works |
|---|
| Development of the facility including installation of waste handling, processing, recycling/recovery infrastructure and installation of increased waste processing capacity as well as any abatement system(s). |
| Installation drainage network including silt traps and oil interceptors. |
| Installation of dust/odour management system. |
| Installation of Biowaste Treatment Facility including proposed gas proofing measures. |
| Installation of enclosed wood shredding unit, including proposed gas proofing measures. |
| Any other works notified in writing by the Agency.Any other works notified in writing by the Agency. |

# SCHEDULE E: Reporting

Completed reports shall be submitted to:

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

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

| Report | Reporting Frequency Note1 | Report Submission Date |
|---|---|---|
| **Annual Environment Report (AER)** | Annually | By 31st March of each year. |
| **Record of incidents** | As they occur | Within five days of the incident. |
| **Specified Engineering Works reports** | As they arise | Prior to the works commencing. |
| **Monitoring of Trade Effluent** | 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. |
| **Monitoring of landfill gas** | Quarterly | Ten days after end of the quarter being reported on. |
| **Biological Monitoring** | Biennial | Submit as part of AER |
| **Dust Monitoring** | Quarterly | Ten days after end of the quarter being reported on. |
| **Noise Monitoring** | Quarterly | Ten days after end of the quarter being reported on. |
| **Drawing with Monitoring locations** | - | Any amendments to be submitted as part of the AER. |
| **Any other monitoring** | As they occur | Within ten days of obtaining results. |

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

# SCHEDULE F: Standards for Compost Quality

The following criteria are deemed a quality standard for the use of compost as a soil improver and should not be deemed as criteria for fertiliser. In addition N, P, K, $NH_4$-N, $NO_3$-N, pH and dry matter content should also be measured.

Compost shall be deemed unsatisfactory if more than 10% of samples fail the criteria below. No sample shall exceed 1.2 times the quality limit values set.

## 1. Maturity

Compost shall be deemed to be mature if it meets two of the following requirements:

- C/N ratio ≤ 25
- oxygen uptake rate ≤ 150 mg $O_2$/kg volatile solids per hour; and
- germination of cress (Lepidium sativum) seeds and of radish (Raphanus sativus) seeds in compost must be greater than 90 percent of the germination rate of the control sample, and the growth rate of plants grown in a mixture of compost and soil must not differ more than 50 percent in comparison with the control sample.
- Elimination of the following test organisms (used to evaluate composting system efficiency in removing plant pathogens and weed seeds during the composting process): Plasmodiophora brassicae, tobacco-mosaic-virus (TMV) and tomato seeds.

Guidance on test may be obtained from the German document LAGA M10 'Quality Criteria and Application Recommendations for Compost'.

## 2. Foreign Matter

Compost must not contain any sharp foreign matter measuring over a 2 mm dimension that may cause damage or injury to humans, animals and plants during or resulting from its intended use.

| | |
|---|---|
| Foreign matter content as a percentage of oven-dried mass | ≤1.5% |
| Foreign matter, maximum dimensions, in mm | 25 mm |

## 3. Trace Elements

Maximum Trace Element Concentration Limits for Compost[Note 2]

| Trace Elements | (mg/kg, dry mass) |
|---|---|
| Arsenic (As) [Note 1] | 15 |
| Cadmium (Cd) | 1.5 |
| Chromium (Cr) | 100 |
| Copper (Cu) | 100 |
| Mercury (Hg) | 1 |
| Molybdenum (Mo) [Note 1] | 5 |
| Nickel (Ni) | 50 |
| Lead (Pb) | 150 |
| Selenium (Se) [Note 1] | 2 |
| Zinc (Zn) | 350 |

**Note 1:** Monitoring of these parameters required if waste from an industrial source.
**Note 2:** The above alone should not be taken as an indication of suitability for addition to soil as the cumulative metal additions to soil should be first calculated.

## 4. Pathogens

Pathogenic organism content must not exceed the following limits:

- Escherichia coli ≤1,000 CFU/g
- Salmonella species absent in 25 g sample.

## 5. Monitoring

The licensee shall submit to the Agency for its agreement, prior to commencement of compost operations, details of methods of analyses, methods of sampling and sample numbers.

The analyses shall be carried out:

(a) every six months for plants producing more than 500 and up to 1 000 tonnes of treated biowaste per year;

(b) at intervals of at least every 1 000 tonnes of treated biowaste produced or every 3 months, whichever comes first, for plants producing more than 1 000 and up to 10 000 tonnes of treated biowaste per year;

(c) every month for plants producing more than 10 000 tonnes of treated biowaste per year.

# SCHEDULE G: Annual Environmental Report

| **Annual Environmental Report Content**[Note 1] |
|---|
| Waste activities carried out at the facility. |
| Quantity and Composition of waste recovered, received and disposed of during the reporting period and each previous year (relevant EWC codes to be used). |
| Full title and a written summary of any procedures developed by the licensee in the year which relates to the facility operation. |
| Waste Recovery Report. |
| Review of Nuisance Controls. |
| Volume of trade effluent/leachate and/or contaminated stormwater produced and volume transported off-site. |
| Emissions from the facility. |
| 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 |
| Biological Monitoring report summary. |
| Ambient monitoring summary |
| Drawing of monitoring locations (if amended) |
| Tank and pipeline testing and inspection report |
| Reported incidents summary |
| Energy efficiency audit report summary |
| Report on the assessment of the efficiency of use of raw materials in processes and the reduction in waste generated. |
| Report on progress made and proposals being developed to minimise water demand and the volume of trade effluent discharge. |
| Development / Infrastructural works summary (completed in previous year or prepared for current year). |
| Reports on financial provision made under this licence, management and staffing structure of the facility, and a programme for public information |
| Review of and any amendments of Closure, Restoration & Aftercare management Plan |
| 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 7th day of February, 2005 Dr. Jonathan Derham, **Authorised Person**