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Ireland

**WASTE LICENCE  
Proposed Decision**

<b>Licence Register Number:</b>	W0234-01
<b>Applicant:</b>	Waterford City Council
<b>Location of Facility:</b>	Waterford City Composting Facility Green Road Waterford City County Waterford

# ***INTRODUCTION***

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

Waterford City Composting Facility is an existing waste composting facility and is currently operated by a private contractor on behalf of Waterford City Council. Waterford City Council is the owner of the site and equipment. The facility was constructed in 2003 and the operations began in January 2004. The site has operated under a Certificate of Registration (Register No. R1600) which was granted by the agency on the 30<sup>th</sup> of September 2005. The site is located approximately 5 km from Waterford City, in the townland of Ballybeg. The site is located in an industrial zone, adjacent to an industrial estate (Six Cross Roads Business Park) and adjacent to a Waste Transfer Station.

The facility accepts source separated household and commercial organic waste along with green waste from householders, landscapers and the Parks Department of the City and County Councils.

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 range of reports on the operation and management of the facility to the Agency.

The licence sets out in detail the conditions under which Waterford City Council will operate and manage this facility.

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## *Glossary of Terms*

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

<b>Aerosol</b>	A suspension of solid or liquid particles in a gaseous medium.
<b>Adequate lighting</b>	20 lux measured at ground level.
<b>AER</b>	Annual Environmental Report.
<b>Agreement</b>	Agreement in writing.
<b>Annually</b>	At approximately twelve monthly intervals.
<b>Attachment</b>	Any reference to Attachments in this licence refers to attachments submitted as part of this licence application.
<b>Application</b>	The application by the licensee for this licence.
<b>Appropriate facility</b>	A waste management facility, duly authorised under relevant law and technically suitable.
<b>BAT</b>	Best Available Techniques.
<b>Bi-annually</b>	All or part of a period of six consecutive months.
<b>Biennially</b>	Once every two years.
<b>Bioaerosol</b>	An aerosol of biological particles.
<b>Biodegradable waste</b>	Any waste that is capable of undergoing anaerobic or aerobic decomposition, such as food, garden waste, sewage sludge, paper and paperboard.
<b>BOD</b>	5 day Biochemical Oxygen Demand.
<b>CEN</b>	Comité Européen De Normalisation – European Committee for Standardisation.
<b>COD</b>	Chemical Oxygen Demand.
<b>Compost</b>	Stable, sanitised and humus like material rich in organic matter and free from offensive odours resulting from composting, of separately collected biowaste which complies with the environmental quality classes outlined in <i>Schedule F: Standards for Compost Quality</i> of this licence.
<b>Construction and Demolition Waste</b>	Wastes that arise from construction, renovation and demolition activities: Chapter 17 of the EWC or as otherwise may be agreed.
<b>Containment boom</b>	A boom which can contain spillages and prevent them from entering drains or watercourses or from further contaminating watercourses.
<b>Daily</b>	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.
<b>Day</b>	Any 24 hour period.
<b>Daytime</b>	0800 hrs to 2200 hrs.

<b>DB(A)</b>	Decibels (A weighted).
<b>DO</b>	Dissolved Oxygen.
<b>Documentation</b>	Any report, record, result, data, drawing, proposal, interpretation or other document in written or electronic form which is required by this licence.
<b>Drawing</b>	Any reference to a drawing or drawing number means a drawing or drawing number contained in the application, unless otherwise specified in this licence.
<b>EMP</b>	Environmental Management Programme.
<b>Emergency</b>	Those occurrences defined in Condition 9.4.
<b>Emission Limits</b>	Those limits, including concentration limits and deposition rates established in <i>Schedule B: Emission Limits</i> of this licence.
<b>Environmental Damage</b>	Has the meaning given it in Directive 2004/35/EC.
<b>EPA</b>	Environmental Protection Agency.
<b>European Waste Catalogue (EWC)</b>	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.
<b>Facility</b>	Any site or premises used for the purposes of the recovery or disposal of waste.
<b>Forced aeration</b>	The supply of air to a compost pile, by pumping (positive pressure) or by sucking air through the composting material (negative pressure).
<b>Fortnightly</b>	A minimum of 24 times per year, at approximately two week intervals.
<b>GC/MS</b>	Gas Chromatography/Mass Spectroscopy.
<b>Green waste</b>	Waste wood (excluding timber), plant matter such as grass cuttings, and other vegetation.
<b>Heavy Metals</b>	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.
<b>Hours of Operation</b>	The hours during which the facility is authorised to be operational.
<b>Hours of Waste Acceptance</b>	The hours during which the facility is authorised to accept waste.
<b>ICP</b>	Inductively Coupled Plasma Spectroscopy.
<b>Incident</b>	The following shall constitute an incident for the purposes of this licence: <ul style="list-style-type: none"><li>(i) an emergency;</li><li>(ii) any emission which does not comply with the requirements of this licence;</li><li>(iii) any exceedence of the daily duty capacity of the waste handling equipment;</li><li>(iv) any trigger level specified in this licence which is attained or exceeded;</li></ul>

	and,
	(v) any indication that environmental pollution has, or may have, taken place.
<b>Industrial Waste</b>	As defined in Section 5(1) of the Waste Management Acts 1996 to 2005.
<b>Inert waste</b>	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.
<b>In-vessel composting</b>	Different composting methods in which material for composting is contained in a building, reactor or vessel.
<b>K</b>	Kelvin.
<b>kPa</b>	Kilo Pascals.
<b>Landfill Directive</b>	Council Directive 1999/31/EC.
<b>Leq</b>	Equivalent continuous sound level.
<b>Licence</b>	A Waste Licence issued in accordance with the Acts.
<b>Licensee</b>	Waterford City Council, Planning Culture and HR, Wallace House, Maritana Gate, Canada Street, Waterford.
<b>Liquid Waste</b>	Any waste in liquid form and containing less than 2% dry matter.
<b>List I</b>	As listed in the EC Directives 76/464/EEC and 80/68/EEC and amendments.
<b>List II</b>	As listed in the EC Directives 76/464/EEC and 80/68/EEC and amendments.
<b>Local Authority</b>	Waterford City Council.
<b>Maintain</b>	Keep in a fit state, including such regular inspection, servicing, calibration and repair as may be necessary to adequately perform its function.
<b>Mass Flow Limit</b>	An Emission Limit Value which is expressed as the maximum mass of a substance which can be emitted per unit time.
<b>Mass Flow Threshold</b>	A mass flow rate, above which, a concentration limit applies.
<b>Monthly</b>	A minimum of 12 times per year, at approximately monthly intervals.
<b>Municipal waste</b>	As defined in Section 5(1) of the Acts.
<b>Night-time</b>	2200 hrs to 0800 hrs.
<b>NMP</b>	Nutrient Management Plan.
<b>Noise Sensitive Location (NSL)</b>	Any dwelling house, hotel or hostel, health building, educational establishment, place of worship or entertainment, or any other facility or area of high amenity, which for its proper enjoyment requires the absence of noise at nuisance levels.

<b>Oil Separator</b>	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.
<b>PRTR</b>	Pollutant Release and Transfer Register.
<b>Quarterly</b>	All or part of a period of three consecutive months beginning on the first day of January, April, July or October.
<b>Regional Fisheries Board</b>	Southern Regional Fisheries Board.
<b>Sanitary Effluent</b>	Waste water from facility toilet, washroom and canteen facilities.
<b>Sample(s)</b>	Unless the context of this licence indicates to the contrary, samples shall include measurements by electronic instruments.
<b>Sludge</b>	The accumulation of solids resulting from chemical coagulation, flocculation and/or sedimentation after water or wastewater treatment, with greater than 2% dry matter.
<b>SOP</b>	Standard Operating Procedure.
<b>Specified Emissions</b>	Those emissions listed in <i>Schedule B: Emission Limits</i> of this licence.
<b>Stabilised Biowaste</b>	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 <i>Schedule F: Standards for Compost Quality</i> of this licence.
<b>Standard Method</b>	A National, European or internationally recognised procedure (e.g., I.S. EN, ISO, CEN, BS or equivalent) or 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.
<b>Storm Water</b>	Rain water run-off from roof and non-process areas.
<b>The Agency</b>	Environmental Protection Agency.
<b>TA Luft</b>	Technical Instructions on Air Quality Control - TA Luft in accordance with art. 48 of the Federal Immission Control Law (BImSchG) dated 15 March 1974 (BGBl. 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.
<b>TOC</b>	Total Organic Carbon.
<b>Trade Effluent</b>	Trade Effluent has the meaning given in the Water Pollution Acts 1977 and 1990.
<b>Trigger Level</b>	A parameter value, the achievement or exceedance of which requires certain actions to be taken by the licensee.
<b>Water Services Authority</b>	Waterford City Council.
<b>Weekly</b>	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.

**Windrow**            An elongated pile of composting material.

**WWTP**             Waste Water Treatment Plant.



## ***Decision & Reasons for the Decision***

The Environmental Protection 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, 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 40(1) of the said Act to grant this Waste Licence to Waterford City Council, Planning Culture and HR, Wallace House, Maritana Gate, Canada Street, Waterford to carry on the waste activities listed below at Waterford City Composting Facility, Green Road, Waterford City, County Waterford 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***

<b>Class 13.</b>	<b>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.</b>
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### ***Licensed Waste Recovery Activities, in accordance with the Fourth Schedule of the Waste Management Acts 1996 to 2005***

<b>Class 2.</b>	<b>Recycling or reclamation of organic substances which are not used as solvents (including composting and other biological processes).</b>
<b>Class 13.</b>	<b>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.</b>

## ***Part II Schedule of Activities Refused***

On the basis of the information before it, the Environmental Protection Agency (the Agency), pursuant to its powers under Section 40(1) of the Waste Management Acts 1996 to 2005, proposes to refuse the following classes of activity.

### ***Refused waste disposal activities, in accordance with the Third Schedule of the Waste Management Acts 1996 to 2005***

<b>Class 7.</b>	<b>Physico-chemical treatment not referred to elsewhere in this Schedule (including evaporation, drying and calcination) which results in final compounds or mixtures which are disposed of by means of any activity referred to in paragraphs 1 to 10 of this Schedule. Reason: Leachate treatment is an integrated element of the approved activities at the facility and is not an independent waste activity.</b>
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## ***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 The facility shall be controlled, operated, and maintained and emissions shall take place as set out in this licence. All programmes required to be carried out under the terms of this licence, become part of this licence.
- 1.4 Waste Acceptance Hours
- 1.4.1 Waste shall be accepted at the facility only between the hours of 0700 and 2030 Monday to Friday inclusive and 0700 and 1730 on Saturdays and Bank Holidays.
- 1.4.2 Waste shall not be accepted at the facility on Sundays.
- 1.4.3 The facility shall be operated only during the hours of 0700 to 2200 Monday to Friday inclusive and 0700 to 1800 on Saturdays and Bank Holidays.
- 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. 2006-289-01-Figure B.1.1 of the application. Any reference in this licence to “facility” shall mean the area thus outlined in red. The licensed activity/activities shall be carried on only within the area outlined.
- 1.6 Unless otherwise agreed by the Agency, wastes as outlined in *Schedule A: Limitations* of this licence and as listed under Annex 1 of the EC Working Document ‘Biological Treatment of Biowaste’ (2nd draft) shall only be accepted at the facility.
- 1.7 No alteration to, or reconstruction in respect of, the activity or any part thereof which would, or is likely to, result in
- (i) A material change or increase in:
- The nature or quantity of any emission,
  - The abatement/treatment or recovery systems,
  - The range of processes to be carried out,
  - The fuels, raw materials, intermediates, products or wastes generated, or
- (ii) Any changes in:
- Site management infrastructure or control with adverse environmental significance,
- shall be carried out or commenced without prior notice to, and without the agreement of, the Agency.
- 1.8 The licensee shall submit to the Agency, on an annual basis and as part of the AER for the facility, written confirmation of 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.

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

## Condition 2. Management of the Facility

### 2.1 Facility Management

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

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

### 2.2 Environmental Management System (EMS)

2.2.1 The licensee shall establish and maintain an Environmental Management System (EMS) within six months of the date of grant of this licence. The EMS shall be updated on an annual basis.

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

2.2.2.1 Management and Reporting Structure.

2.2.2.2 Schedule of Environmental Objectives and Targets.

The licensee shall prepare and 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 also provide for the minimisation of oversized, undecomposed materials and inert contaminants ('overs') from the process. 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 an EMP, including a time schedule, for achieving the Environmental Objectives and Targets prepared under Condition 2.2.2.2. Once agreed the EMP shall be established and maintained by the licensee. It shall include:

- (i) Designation of responsibility for targets;
- (ii) The means by which they may be achieved;
- (iii) The time within which they may be achieved.

The EMP shall be reviewed annually and amendments thereto notified to the Agency for agreement as part of the Annual Environmental Report (AER) (Condition 11.8).

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.

#### 2.2.2.8 Maintenance Programme

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

#### 2.2.2.9 Efficient Process Control

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

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

### Condition 3. Infrastructure and Operation

- 3.1 The licensee shall establish all infrastructure referred to in this licence in advance, of the commencement of the licensed activities or as required by the conditions of this licence. Infrastructure specified in the application which relates to the environmental performance of the installation and is not specified in the licence, shall be installed in accordance with the schedule submitted in the application.
- 3.2 Facility Notice Board
- 3.2.1 The licensee shall, within four months of the date of grant of this licence, 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.
- 3.2.2 The board shall clearly show:-
- (i) The name and telephone number of the facility;
  - (ii) The normal hours of opening and of waste acceptance;
  - (iii) The name of the licence holder;
  - (iv) An emergency out of hours contact telephone number;
  - (v) The licence reference number; and
  - (vi) Where environmental information relating to the facility can be obtained.
- 3.2.3 A plan of the facility clearly identifying the location of each storage and treatment area shall be displayed as close as is possible to the entrance to the facility. The plan shall be displayed on a durable material such that it is legible at all times. The plan shall be replaced as material changes to the facility are made.
- 3.3 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.
- 3.4 In the case of composite sampling of aqueous emissions from the operation of the facility a separate composite sample or homogeneous sub-sample (of sufficient volume as advised) should be refrigerated immediately after collection and retained as required for EPA use.
- 3.5 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.
- 3.6 Tank, Container and Drum Storage Areas
- 3.6.1 All tank, container and drum storage areas shall be rendered impervious to the materials stored therein. Bunds should be designed having regard to Agency guidelines 'Storage and Transfer of Materials for Scheduled Activities' (2004).
- 3.6.2 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.

- 3.6.3 All drainage from bunded areas shall be treated as hazardous waste unless it can be demonstrated to be otherwise. All drainage from bunded areas shall be diverted for collection and safe disposal.
- 3.6.4 All inlets, outlets, vent pipes, valves and gauges must be within the bunded area.
- 3.6.5 All tanks, containers and drums shall be labelled to clearly indicate their contents.
- 3.7 The licensee shall have in storage an adequate supply of containment booms and/or suitable absorbent material to contain and absorb any spillage at the facility. Once used the absorbent material shall be disposed of at an appropriate facility.
- 3.8 Silt Traps and Oil Separators
- The licensee shall, within twelve months of grant of this licence, install and maintain silt traps and oil separator at the facility to ensure that all storm water discharges from the facility pass through a silt trap and oil separator in advance, of discharge. Unless otherwise agreed by the Agency the separator shall be a Class I full retention separator and the silt traps and separator shall be in accordance with I.S. EN 858-2:2003 (separator systems for light liquids).
- 3.9 Firewater Retention
- 3.9.1 The licensee shall carry out a risk assessment to determine if the activity should have a fire-water retention facility. The licensee shall submit the assessment and a report to the Agency on the findings and recommendations of the assessment within six months from the date of grant of this licence.
- 3.9.2 In the event that a significant risk exists for the release of contaminated fire-water, the licensee shall, based on the findings of the risk assessment, prepare and implement, with the agreement of the Agency, a suitable risk management programme. The risk management programme shall be fully implemented within three months from date of notification by the Agency.
- 3.9.3 The licensee shall have regard to the Environmental Protection Agency Draft Guidance Note to Industry on the Requirements for Fire-Water Retention Facilities when implementing Conditions 3.9.1 and 3.9.2 above.
- 3.10 All pump sumps, storage tanks, lagoons or other treatment plant chambers from which spillage of environmentally significant materials might occur in such quantities as are likely to breach local or remote containment or separator, shall be fitted with high liquid level alarms (or oil detectors as appropriate) within six months from the date of grant of this licence.
- 3.11 The provision of a catchment system to collect any leaks from flanges and valves of all over ground pipes used to transport material other than water shall be examined. This shall be incorporated into a schedule of objectives and targets set out in Condition 2.2.2.2 of this licence for the reduction in fugitive emissions.
- 3.12 All wellheads, shall be adequately protected to prevent contamination or physical damage within three months from the date of grant of this licence.
- 3.13 The licensee shall, within three months of the date of grant of this licence, install in a prominent location on the site a wind sock, or other wind direction indicator, which shall be visible from the public roadway outside the site.

### 3.14 Waste Water Treatment Plant

3.14.1 The licensee shall, within three months of date of grant of license submit a proposal, for the agreement of the Agency, for the provision and maintenance of a Wastewater Treatment plant at the facility for the treatment of sanitary effluent arising on-site. Upon receipt of agreement from the Agency the Wastewater treatment plant shall be installed in line with the programme of works as agreed by the Agency. The licensee shall have regard to the criteria set out in the *Wastewater Treatment Manual, Treatment Systems for Single Houses*, published by the Environmental Protection Agency.

3.14.2 A maintenance, control and monitoring programme for this waste water treatment plant shall be established on commissioning of this plant and included as part of the EMP for the site.

3.15 The licensee shall, within three months of date of grant of this licence, submit a detailed odour management plan for the approval of the Agency. This plan shall, as a minimum, include procedures for:

- (i) Acceptance and management of odorous waste deliveries;
- (ii) Minimisation of odour from leachate collection and treatment system;
- (iii) Investigation of odour complaints;
- (iv) Day-to-day operational practices to minimise odorous emissions;
- (v) Operator training in relation to odour management;
- (vi) Standard operating procedures for the operation of odour abatement equipment.

This plan shall be updated on an annual basis or as required by the Agency.

### 3.16 Specified Engineering Works

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

3.16.2 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.

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

- (i) A description of the works;
- (ii) As-built drawings of the works; and
- (iii) Any other information requested in writing by the Agency.

### 3.17 Facility Security

3.17.1 Security and stockproof fencing and gates shall be installed and maintained. The base of the fencing shall be set in the ground. Subject to the implementation of the restoration and aftercare plan and to the agreement of the Agency, the requirement for such site security may be removed.

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

3.17.3 The licensee shall remedy any defect in the gates and/or fencing as follows:



- (i) A temporary repair shall be made by the end of the working day;  
and
- (ii) A repair to the standard of the original gates and/or fencing shall be undertaken within three working days.

3.18 Facility Roads and Site Surfaces

- 3.18.1 Effective site roads shall be provided and maintained to ensure the safe movement of vehicles within the facility.
- 3.18.2 The licensee shall provide and maintain an impermeable concrete surface in the areas of the facility shown on Drawing No. 2006-289-01-301; the surfaces shall be concreted and constructed to British Standard 8110 or an alternative as agreed by the Agency.

3.19 Facility Office

- 3.19.1 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.
- 3.19.2 The licensee shall provide and maintain a working telephone and a method for electronic transfer of information at the facility.

3.20 Compost facility

- 3.20.1 The licensee shall, before commencement of the licensable activity, provide a composting area and associated infrastructure at the location shown on Drawing 2006-289-01-301 of the application or as otherwise agreed in writing by the Agency. Appropriate infrastructure for the composting of waste shall be established and maintained at the facility before commencement of the licensable activity.
- 3.20.2 To provide for aerobic composting (indoor or outdoor), the licensee shall provide the composting material with: a 5% minimum concentration of oxygen within the pore spaces, appropriate moisture levels, pH 6.0-9.0, appropriate C:N ratio.
- 3.20.3 The licensee shall, prior to accepting greater than 5,000 tonnes of waste per annum, submit a report for the agreement of the Agency demonstrating that there is sufficient capacity and that the appropriate infrastructure is in place on site to appropriately manage the increased waste intake.

3.21 Waste Inspection and Quarantine Areas

- 3.21.1 A Waste Inspection Area and a Waste Quarantine Area shall be provided and maintained at the facility.
- 3.21.2 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.
- 3.21.3 Drainage from the quarantine area shall be directed to the process effluent management system.
- 3.21.4 The licensee shall provide on-site storage tanks for the collection and temporary storage of roof water from any site-buildings. This water shall be re-used in the process where possible.

- 3.21.5 While awaiting collection, mature compost shall be stored in areas protected against uncontrolled run-off and nuisance formation.
- 3.22 Waste handling, ventilation and processing plant
- 3.22.1 Items of plant deemed critical to the efficient and adequate processing of waste at the facility shall be provided on the following basis:
- (i) 100% duty capacity;
  - (ii) 20% standby capacity available on a routine basis; and
  - (iii) Provision of contingency arrangements and/or back up and spares in the case of breakdown of critical equipment.
- 3.22.2 Within three months from the date of grant of this licence, the licensee shall provide a report for the agreement of the Agency detailing the duty and standby capacity in tonnes per day, of all waste handling 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.
- 3.22.3 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.
- 3.22.4 If sludges/slurry are being accepted the licensee must ensure that an enclosed tank is provided for storage of sludge/slurry to ensure a safe coupling system for loading/unloading from road tankers.
- 3.22.5 The licensee shall provide shut-off valves on any surface/wastewater discharge lines.
- 3.23 Weighbridge and Wheel Cleaning
- 3.23.1 The licensee shall provide and maintain a weighbridge and access to appropriate wheel cleaning equipment at the facility.
- 3.23.2 The wheel cleaner shall be used by all vehicles leaving the facility as required, to ensure that no process water or waste is carried off-site. All water from the wheel cleaning area shall be directed to the trade effluent drainage network.
- 3.23.3 The wheel-wash shall be inspected on a daily basis and drained as required. Silt, stones and other accumulated material shall be removed as required from the wheel-wash and disposed of appropriately.
- 3.24 Leachate Management Infrastructure
- 3.24.1 The licensee shall, before commencement of the licensable activity, install and maintain an appropriately sized leachate holding tank on site.
- 3.24.2 Leachate management infrastructure shall be provided and maintained at the facility as described in Attachment D.1 of the Application documentation, or as may be varied by a licence condition.
- 3.24.3 All structures for the storage and/or treatment of leachate shall be fully enclosed except for inlet and outlet piping.
- 3.24.4 Headspace gases from the leachate holding tank shall be vented to an appropriate treatment system prior to release to the atmosphere. The proposed treatment method shall be agreed, in advance, by the Agency.

### 3.25 Groundwater

The licensee shall, within three months of date of grant of this license, submit a proposal to the Agency for the location of a groundwater monitoring well for regular monitoring of groundwater quality as required in *Schedule C.6 Groundwater Monitoring*, of this licence. Groundwater monitoring wells shall be constructed having regard to the guidance given in the Agency's landfill manual "Landfill Monitoring".

### 3.26 Continuous Monitoring System

Within nine months of the date of grant of this licence a continuous monitoring system shall be installed and maintained at the facility which shall as a minimum record and relay the temperature and oxygen content of the compost at all stages during its production. 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.

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

## Condition 4. Interpretation

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

#### 4.1.1 Continuous Monitoring:

- (i) No 24 hour mean value shall exceed the emission limit value;
- (ii) 97% of all 30 minute mean values taken continuously over an annual period shall not exceed 1.2 times the emission limit value;
- (iii) No 30 minute mean value shall exceed twice the emission limit value.

#### 4.1.2 For Non-Continuous Monitoring

- (i) For any parameter where, due to sampling/analytical limitations, a 30 minute sample is inappropriate, a suitable sampling period should be employed and the value obtained therein shall not exceed the emission limit value;
- (ii) For flow, no hourly or daily mean value, calculated on the basis of appropriate spot readings, shall exceed the relevant limit value;
- (iii) For all other parameters, no 30 minute mean value shall exceed the emission limit value.

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

#### 4.2.1 In the case of non-combustion gases:

Temperature 273K, Pressure 101.3 kPa (no correction for oxygen or water content).

#### 4.2.2 In the case of combustion gases:

Temperature 273K, Pressure 101.3 kPa, dry gas; 3% oxygen for liquid and gas fuels; 6% oxygen for solid fuels.

- 4.3 Emission limit values for emissions to sewer/waters in this licence shall be interpreted in the following way:-
- 4.3.1 Continuous monitoring:
- (i) No flow value shall exceed the specified limit;
  - (ii) No pH value shall deviate from the specified range;
  - (iii) No temperature value shall exceed the limit value.
- 4.3.2 Composite Sampling:
- (i) No pH value shall deviate from the specified range;
  - (ii) For parameters other than pH and flow, eight out of ten consecutive composite results, based on flow proportional composite sampling, shall not exceed the emission limit value. No individual result similarly calculated shall exceed 1.2 times the emission limit value.
- 4.3.3 Discrete Sampling
- For parameters other than pH and temperature, no grab sample value shall exceed 1.2 times the emission limit value.
- 4.4 Where the ability to measure a parameter is affected by mixing before emission, then, with agreement from the Agency, the parameter may be assessed before mixing takes place.
- 4.5 Noise
- Noise from the facility shall not give rise to sound pressure levels (Leq,T) measured at noise sensitive locations of the facility which exceed the limit value(s).
- 4.6 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 No emissions, including odours, from the activities carried on at the site shall result in an impairment of, or an interference with amenities or the environment beyond the facility boundary or any other legitimate uses of the environment beyond the facility boundary.
- 5.3 No substance shall be discharged in a manner, or at a concentration that, following initial dilution, causes tainting of fish or shellfish.
- 5.4 Trade effluent, leachate and/or contaminated storm water shall be discharged to the on site waste water treatment plant and the leachate holding tank. No trade effluent, leachate and/or contaminated storm water shall be discharged to surface water drains and courses, unless otherwise agreed by the Agency.
- 5.5 There shall be no direct emissions to groundwater.

- 5.6 There shall be no clearly audible tonal component or impulsive component in the noise emissions from the activity at the noise-sensitive locations.
- 5.7 The licensee shall ensure that all or any of the following:–
- vermin
  - birds
  - flies
  - mud
  - dust
  - litter,

associated with the activity do not result in an impairment of, or an interference with amenities or the environment at the facility or beyond the facility boundary or any other legitimate uses of the environment beyond the facility boundary. Any method used by the licensee to control or prevent any such impairment/interference shall not cause environmental pollution.

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

## Condition 6. Control and Monitoring

- 6.1 The licensee shall carry out such sampling, analyses, measurements, examinations, maintenance and calibrations as set out below and as in accordance with *Schedule C: Control & Monitoring*, of this licence:
- 6.1.1 Analysis shall be undertaken by competent staff in accordance with documented operating procedures;
- 6.1.2 Such procedures shall be assessed for their suitability for the test matrix and performance characteristics determined;
- 6.1.3 Such procedures shall be subject to a programme of Analytical Quality Control using control standards with evaluation of test responses;
- 6.1.4 Where analysis is sub-contracted it shall be to a competent laboratory.
- 6.2 The licensee shall ensure that:
- (i) Sampling and analysis of all parameters listed in the Schedules to this licence; and
- (ii) Any reference measurement methods to calibrate automated measurement systems;
- shall be carried out in accordance with CEN-standards. If CEN standards are not available, ISO, national or international standards which will ensure the provision of data of an equivalent scientific quality shall apply.
- 6.3 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.
- 6.4 Monitoring and analysis equipment shall be operated and maintained as necessary so that monitoring accurately reflects the emission or discharge.

- 6.5 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.
- 6.6 All treatment/abatement and emission control equipment shall be calibrated and maintained, in accordance with the instructions issued by the manufacturer/supplier or installer.
- 6.7 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.
- 6.8 The licensee shall prepare a programme, to the satisfaction of the Agency, for the identification and reduction of fugitive emissions using an appropriate combination of best available techniques. This programme shall be included in the Environmental Management Programme.
- 6.9 The integrity and water tightness of all underground pipes, tanks, bunding structures and containers and their resistance to penetration by water or other materials carried or stored therein shall be tested and demonstrated by the licensee. This testing shall be carried out by the licensee at least once every three years and reported to the Agency on each occasion. This testing shall be carried out in accordance with any guidance published by the Agency. A written record of all integrity tests and any maintenance or remedial work arising from them shall be maintained by the licensee.
- 6.10 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.
- 6.11 Storm water
- A visual examination of the storm water discharge shall be carried out daily. A log of such inspections shall be maintained.
- 6.12 Noise
- The licensee shall carry out a noise survey of the site operations annually. The survey programme shall be undertaken in accordance with the methodology specified in the 'Environmental Noise Survey Guidance Document' as published by the Agency.
- 6.13 Pollutant Release and Transfer Register (PRTR)
- The licensee shall prepare and report a PRTR for the site. The substances and/or waste to be included in the PRTR shall be agreed by the Agency each year by reference to EC Regulation No.166/2006 concerning the establishment of the European Pollutant Release and Transfer Register and amending Council Directives 91/689/EEC and 96/61/EC. The PRTR shall be prepared in accordance with any relevant guidelines issued by the Agency and shall be submitted electronically in specified format and as part of the AER.
- 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 Dust/Odour Control
- 6.15.1 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.
- 6.15.2 The licensee shall, prior to commencement of licensable activities, install and provide adequate measures for the control of odours and dust emissions, including fugitive dust emissions, from the facility. Such measures shall at a minimum include the following:

- (i) Fast-action doors (or equivalent as agreed by the Agency) shall be installed and maintained on all entry/exit points of the waste reception building. These doors where possible, shall be kept shut;
- (ii) Installation of an appropriate air extraction and abatement system in the waste reception building, this shall include maintaining the waste reception building under negative air pressure;
- (iii) Installation of appropriately sized biofilters for the in-vessel composting units, the windrow composting pads, leachate holding tank and the waste reception building. Biofilter operation shall be optimised in line with the recommendations in the report 'Odour Impact Assessment of the current Celtic Composting System located in Waterford City, County Waterford' submitted to the Agency as part of the licence application;
- (iv) Installation of forced aeration pads for all windrow composting;
- (v) Preparation and maintenance of a Biofilter Management Plan;
- (vi) Design of odour abatement submitted to the Agency for approval prior to installation.

#### 6.16 Litter Control

- 6.16.1 All loose litter or other waste, placed on or in the vicinity of the facility, other than in accordance with the requirements of this licence, shall be removed, subject to the agreement of the landowners, immediately and in any event by 10.00am of the next working day after such waste is discovered.
- 6.16.2 With the exception of green waste the licensee shall ensure that all vehicles delivering waste to and removing waste and materials from the facility are appropriately covered.

#### 6.17 Operational Controls

- 6.17.1 There shall be no unauthorised public access to the facility operations.
- 6.17.2 The licensee shall provide and use adequate lighting during the operation of the facility in hours of darkness.
- 6.17.3 Fuels shall be stored only at appropriately bunded locations on the facility.
- 6.17.4 All wastewater from composting operations shall be collected and re-used in the composting process where possible. Any wastewater from the composting operations that is not re-used shall be discharged to the process wastewater drainage system.
- 6.17.5 All leachate from the composting operations shall be collected and reused in the composting process where possible.
- 6.17.6 Any biowaste accepted at the facility for composting (other than bulking agents, e.g. woodchip, cardboard) shall be processed and put into the aerated composting area within twelve hours of its arrival at the facility.
- 6.17.7 The licensee shall ensure that the doors to the waste reception building remain closed at all times other than to facilitate the delivery/removal of wastes from the building.
- 6.17.8 The licensee shall on a daily basis monitor and record the temperature and the moisture content of the material at a number of locations to be agreed in advance by the Agency.

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

- 6.19 The green waste shredder shall be located indoor and shall only be operated indoors between the hours of 08:00 and 18:00.
- 6.20 Within three months of the date of grant of this licence, the following information shall be submitted to the Agency for its agreement: the names, qualifications and a summary of relevant experience of all persons that will carry out all sampling and monitoring as required by this licence and that carry out the interpretation of the results of such sampling and monitoring. Any proposed changes to the above shall be submitted in writing to the Agency for its agreement.
- 6.21 Nuisance Monitoring
- The licensee shall, on a daily basis, inspect the facility and its immediate surrounds for nuisances caused by vermin, birds, flies, mud, dust and odours. The licensee shall maintain a record of all nuisance inspections.
- 6.22 Bioaerosol Monitoring
- The licensee shall carry out the bioaerosol monitoring in accordance with *Schedule C: Control and Monitoring*, of this licence.
- 6.23 Monitoring Locations
- Within three months of the date of grant of this licence, the licensee shall submit to the Agency an appropriately scaled drawing(s) showing all the monitoring locations that are stipulated in this licence including any noise-sensitive locations and private wells to be monitored. The drawing shall include the eight-digit national grid reference of each monitoring point.
- 6.24 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.
- 6.25 Compost Quality
- 6.25.1 Compost quality monitoring shall be undertaken as set out in *Schedule F: Standards for Compost Quality*, of this licence.
- 6.25.2 Any compost not meeting any standard as per *Schedule F: Standards for Compost Quality*, of this licence may be reused in the process or handled as a waste and details recorded as per Waste Records condition.

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

## **Condition 7. Resource Use and Energy Efficiency**

- 7.1 The licensee shall carry out an audit of the energy efficiency of the site within one year of the date of grant of this licence. The audit shall be carried out in accordance with the guidance published by the Agency; “Guidance Note on Energy Efficiency Auditing”. The energy efficiency audit shall be repeated at intervals as required by the Agency.
- 7.2 The audit shall identify all opportunities for energy use reduction and efficiency and the recommendations of the audit will be incorporated into the Schedule of Environmental Objectives and Targets under Condition 2.2.2.2 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 the 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 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.
- 8.2 Waste sent off-site for recovery or disposal shall be transported only by an authorised waste contractor. The waste shall be transported from the site of the activity to the site of recovery/disposal only in a manner that will not adversely affect the environment and in accordance with the appropriate National and European legislation and protocols.
- 8.3 The licensee shall ensure that waste in advance, of 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.
- 8.4 The loading and unloading of materials shall be carried out in designated areas protected against spillage and leachate run – off.
- 8.5 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.
- 8.6 No waste classified as green list waste in accordance with the EU Transfrontier Shipment of Waste Regulations (Council Regulation EEC No.259/1993, as amended) shall be consigned for recovery without the agreement of the Agency.
- 8.7 Waste for disposal/recovery off-site shall be analysed in accordance with *Schedule C: Control & Monitoring* of this licence.
- 8.8 Hazardous waste shall not be accepted at the facility.
- 8.9 Waste Acceptance and Characterisation Procedures
- 8.9.1 Within six months of the date of grant of this licence, the licensee shall establish and maintain detailed written procedures for the acceptance and handling of wastes.
- 8.9.2 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 reception building. Each load of waste arriving at the Waste Compost facility shall be inspected upon tipping within this facility. Only after such inspections shall the waste be processed for recovery.
- 8.9.3 The licensee shall ensure that incoming waste (and intermediate compost) is stored in a manner to prevent nuisance from odour, dust, vermin, birds, etc.
- 8.9.4 No waste shall be stored overnight at the facility in other than designated storage areas in the waste reception buildings.
- 8.9.5 All waste processing shall occur inside an appropriate building, unless otherwise agreed by the Agency.

- 8.9.6 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.
- 8.9.7 A record of all inspections of incoming waste loads shall be maintained.
- 8.10 Prior written agreement shall be obtained from the Agency in respect of any arrangements for the transfer or disposal of liquid effluent/foul water to be sent to an off site waste water treatment plant.
- 8.11 Compost
- 8.11.1 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.
- 8.11.2 Compost not meeting the above standard will be regarded as waste and records shall be kept of such waste.
- 8.11.3 No waste shall be deposited outside the biodegradable waste composting area without the prior permission of the Agency.

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

## **Condition 9. Accident Prevention and Emergency Response**

- 9.1 The licensee shall, within six months of date of grant of this licence, ensure that a documented Accident Prevention Procedure 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, within six months of date of grant of this licence, ensure that a documented Emergency Response Procedure is in place, which shall address any emergency situation, which may originate on-site. This procedure shall include provision for minimising the effects of any emergency on the environment. This procedure shall be reviewed annually and updated as necessary.
- 9.3 Incidents
- 9.3.1 In the event of an incident the licensee shall immediately:-
- (i) Carry out an investigation to identify the nature, source and cause of the incident and any emission arising therefrom;
  - (ii) Isolate the source of any such emission;
  - (iii) Evaluate the environmental pollution, if any, caused by the incident;
  - (iv) Identify and execute measures to minimise the emissions/malfunction and the effects thereof;
  - (v) Identify the date, time and place of the incident;

- (vi) Notify the Agency and other relevant authorities.
- 9.3.2 The licensee shall provide a proposal to the Agency for its agreement within one month of the incident occurring or as otherwise agreed by the Agency to:-
- (i) Identify and put in place measures to avoid reoccurrence of the incident; and
- (ii) Identify and put in place any other appropriate remedial action.
- 9.4 Emergencies
- 9.4.1 In the event of a complete breakdown of equipment or any other occurrence which results in the closure of the waste reception 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 waste reception 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.
- 9.4.4 In the event that monitoring of local wells indicates that the facility is having a significant adverse effect on the quantity and/or quality of the water supply this shall be treated as an emergency and the licensee shall provide an alternative supply of water to those affected.

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

## **Condition 10. Closure and Decommissioning**

- 10.1 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.
- 10.2 Residuals Management Plan
- 10.2.1 The licensee shall prepare, to the satisfaction of the Agency, a fully detailed and costed plan for the decommissioning or closure of the site or part thereof. This plan shall be submitted to the Agency for agreement within six months of the date of grant of this licence.
- 10.2.2 The plan shall be reviewed annually and proposed amendments thereto notified to the Agency for agreement as part of the AER. No amendments may be implemented without the agreement of the Agency.
- 10.2.3 The licensee shall have regard to the Environmental Protection Agency Guidance on Environmental Liability Risk Assessment, Residuals Management Plans and Financial Provision when implementing Conditions 10.2.1 and 10.2.2 above.

- 10.3 The Residuals Management Plan shall include, as a minimum, the following:
- 10.3.1 A scope statement for the plan.
  - 10.3.2 The criteria that define the successful decommissioning of the activity or part thereof, which ensures minimum impact on the environment.
  - 10.3.3 A programme to achieve the stated criteria.
  - 10.3.4 Where relevant, a test programme to demonstrate the successful implementation of the decommissioning plan.
  - 10.3.5 Details of the costings for the plan and the financial provisions to underwrite those costs.
- 10.4 A final validation report to include a certificate of completion for the residuals management plan, 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 by both telephone and facsimile, if available, to the Agency's Office of Environmental Enforcement, EPA, PO Box 3000, Johnstown Castle Estate, County Wexford or to such other Agency office as may be specified by the Agency, as soon as practicable after the occurrence of any of the following:
- (i) Any release of environmental significance to atmosphere from any potential emission point including bypasses;
  - (ii) Any emission which does not comply with the requirements of this licence;
  - (iii) Any malfunction or breakdown of key control equipment or monitoring equipment set out in *Schedule C: Control & Monitoring* of this licence which is likely to lead to loss of control of the abatement system.
  - (iv) Any incident with the potential for environmental contamination of surface water or groundwater, or posing an environmental threat to air or land, or requiring an emergency response by the Local Authority.
- The licensee shall include as part of the notification, date and time of the incident, summary details of the occurrence, and where available, the steps taken to minimise any emissions.
- 11.2 In the event of any incident which relates to discharges to sewer, having taken place, the licensee shall notify the Local and Sanitary Authority as soon as practicable, after such an incident.
- 11.3 In the case of any incident which relates to discharges to water, the licensee shall notify the Local Authority and the Southern Regional Fisheries Board as soon as practicable after such an incident.

- 11.4 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.
- 11.5 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, (if provided), 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.
- 11.6 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.
- 11.7 The licensee shall as a minimum keep the following documents at the site:-
- (i) The licences relating to the facility;
  - (ii) The current EMS for the facility;
  - (iii) The previous year's AER for the facility;
  - (iv) Records of all sampling, analyses, measurements, examinations, calibrations and maintenance carried out in accordance with the requirements of this licence and all other such monitoring which relates to the environmental performance of the facility;
  - (v) Relevant correspondence with the Agency;
  - (vi) Up to date site drawings/plans showing the location of key process and environmental infrastructure, including monitoring locations and emission points;
  - (vii) Up to date Standard Operational Procedures for all processes, plant and equipment necessary to give effect to this licence or otherwise to ensure that standard operation of such processes, plant or equipment does not result in unauthorised emissions to the environment;
  - (viii) A copy of any licence application documentation or plans referenced in this licence;
- and this documentation shall be available to the Agency for inspection at all reasonable times.
- 11.8 The licensee shall submit to the Agency, by the 31<sup>st</sup> 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 E: Annual Environmental Report* of this licence and shall be prepared in accordance with any relevant guidelines issued by the Agency.
- 11.9 A full record, which shall be open to inspection by authorised persons of the Agency at all times, shall be kept by the licensee on matters relating to the waste management operations and practices at this site. This record shall be maintained on a monthly basis and shall as a minimum contain details of the following:
- (i) The tonnages and EWC Code for the waste materials imported and/or sent off-site for disposal/recovery;
  - (ii) 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);

- (iii) 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;
- (iv) Written confirmation of the acceptance and disposal/recovery of any hazardous waste consignments sent off-site;
- (v) 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;
- (vi) Details of any rejected consignments;
- (vii) Details of any approved waste mixing;
- (viii) The results of any waste analyses required under *Schedule C: Control & Monitoring*, of this licence;
- (ix) The tonnages and EWC Code for the waste materials recovered/disposed on-site.

#### 11.10 Waste Recovery Reports

The licensee shall as part of the AER submit a report on the contribution by this facility to the achievement of the recovery targets and strategy stated in national and European Union waste policies.

#### 11.11 The following records shall be maintained by the licensee:

- (i) All training undertaken by facility staff;
- (ii) Results from all integrity tests of bunds and other structures and any maintenance or remedial work arising from them;
- (iii) Details of all nuisance inspections; and
- (iv) The names and qualifications of all persons who carry out all sampling and monitoring as required by this licence and who carry out the interpretation of the results of such sampling and monitoring.

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

- (i) The date and time during which spraying of insecticide is carried out;
- (ii) Contractor details;
- (iii) Contractor logs and site inspection reports;
- (iv) Details of the rodenticide(s) and insecticide(s) used;
- (v) Operator training details;
- (vi) Details of any infestations;
- (vii) Mode, frequency, location and quantity of application; and,
- (viii) Measures to contain sprays within the facility boundary.

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

- (i) The name of the carrier;
- (ii) The date and time of removal of trade effluent, leachate and/or contaminated storm water from the facility;

- (iii) The volume of trade effluent, leachate and/or contaminated storm water, in cubic metres, removed from the facility on each occasion;
  - (iv) The name and address of the Wastewater Treatment Plant to which the trade effluent, leachate and/or contaminated storm water was transported; and
  - (v) Any incidents or spillages of trade effluent, leachate and/or contaminated storm water during its removal or transportation.
- 11.14 Where compost product intended for use on land contains sewage sludge, the licensee shall retain the following records on site:
- (i) A copy of the notifications to the Local Authority as required under Article 8 (1) and Article 8 (3) of SI 148 of 1998 (Waste Management (Use of sewage sludge in agriculture) Regulations, 1998);
  - (ii) This shall include, inter alia: sludge analysis, records of sludge quantities, sludge properties, treatment type and location/name of the recipient of the sludge (sludge meaning compost containing treated sludge).
- 11.15 The licensee shall submit report(s) as required by the conditions of this licence to the Office of Environmental Enforcement, EPA, PO Box 3000, Johnstown Castle Estate, County Wexford or to such other Agency office as may be specified by the Agency.
- 11.16 All reports shall be certified accurate and representative by the installation/facility manager or a nominated, suitably qualified and experienced deputy.

*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 €1,080, 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 Water Services Authority Charges

The licensee shall pay to the Water Services Authority 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 on demand.

12.3 Environmental Liabilities

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.

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



## SCHEDULE A: Limitations

### A.1 Waste Processes

The following waste related processes are authorised:

- i. Composting.
- ii. Shredding, crushing, mixing, repackaging processes.
- iii. Storage of waste for recovery.

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



### A.2 Waste Acceptance

TABLE A.1 WASTE CATEGORIES AND QUANTITIES

WASTE TYPE <sup>Note 1</sup>	Non-hazardous biodegradables (household and commercial organic waste and green waste)
Maximum (Tonnes per annum)	20,000 <sup>Note 2</sup>

**Note 1:** Or other compostable wastes to be agreed in advance by the Agency.

**Note 2:** Subject to the approval of infrastructure by the Agency and its implementation as per Condition 3.20.3 of this licence.



## SCHEDULE B: Emission Limits

### B.1 Emissions to Air

**Dust Deposition Limits:** (Measured at the monitoring points indicated in Drawing 2006-289-01-FIGURE E.1 and any point as may be specified by the Agency).

Level (mg/m <sup>2</sup> /day) <sup>Note 1</sup>
350

**Note 1:** 30 day composite sample with the results expressed as mg/m<sup>2</sup> perday.



### Emission Limits Values for Biofilters

Emission Point reference no: All Biofilters on site

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**

<b>Emission Point Reference No.:</b>	<b>Waste Water Treatment Plant - To be agreed by the Agency as per Condition 3.14</b>	
<b>Name of Receiving Waters:</b>	<b>St. Johns River (Via local authority sewer)</b>	
<b>Volume to be emitted:</b>	<b>Maximum in any one day:</b>	<b>To be agreed by the Agency</b>
	<b>Maximum rate per hour:</b>	
<b>Parameter</b>	<b>Emission Limit Value</b>	
	<b>mg/l</b>	
<b>BOD</b>	20	
<b>Suspended Solids</b>	30	



**B.3 Emission to Sewer**

**Unless otherwise agreed by the Agency there shall be no Process Effluent Emissions to Sewer.**



**B.4 Noise Emissions**

<b>Daytime dB(A) L<sub>Aeq</sub>(30 minutes)</b>	<b>Night-time dB(A) L<sub>Aeq</sub>(30 minutes)</b>
55 <sup>Note 1</sup>	45 <sup>Note 1</sup>

**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.:** Aerated Static Piles, In-vessel units and as may be required by the Agency

Control Parameter	Monitoring	Key Equipment <sup>Note 1</sup>
<b>Extraction</b>	Continuous with alarm/call-out	Pressure gauge or equivalent approved Pumps/engines
<b>Aeration</b>	Continuous	Oxygen probe
<b>Temperature control of compost</b>	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

#### **Air & Odour Monitoring** <sup>Note 1</sup>

##### Biofilters

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

Parameter	Monitoring Frequency	Analysis Method/Technique
<b>Bed Media</b>		
Odour assessment <sup>Note 2</sup>	Daily	Subjective inspection
Condition and depth of biofilter <sup>Note 3</sup>	Daily	Visual inspection
Moisture content	Biannually	Standard method
pH	Biannually	pH probe
Ammonia	Biannually	Standard Method
Total viable counts	Biannually	Standard Method
<b>Inlet and Outlet Gas</b>		
Ammonia	Biannually	Standard Method
Hydrogen sulphide	Biannually	Standard Method
Mercaptans	Biannually	Standard Method
Amines	Biannually	Standard Method

The test methods in the above schedule have been amended to include reference to Standard Method.

**Note 1:** Where appropriate all 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 by 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.2.1 Control of Emissions to Water**

As required under Condition 3.14.

**C.2.2 Monitoring of Emissions to Water (Via Local Authority Sewer)**

Emission Point Reference No.: SW1 (WWTP)

Parameter	Monitoring Frequency	Analysis Method/Technique
Chemical Oxygen Demand	Quarterly	Standard Method
Biochemical Oxygen Demand	Quarterly	Standard Method
Suspended Solids	Quarterly	Standard Method
Ammonia (as N)	Quarterly	Standard Method

**C.2.3 Monitoring of Storm Water Emission**

As per Schedule C.2.2 until separation of sanitary effluent and stormwater.

Thereafter:

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

Parameter	Monitoring Frequency	Analysis Method/Technique
Chemical Oxygen Demand	Quarterly	Standard Method
Suspended Solids	Quarterly	Standard Method
Ammonia (as N)	Quarterly	Standard Method
Visual Inspection	Daily	Sample and examine for colour and odour



## C.4 Waste Monitoring

Waste Class	Frequency	Parameter	Method
Trade Effluent	Quarterly	pH	Standard Method
	Quarterly	BOD	Standard Method
	Quarterly	COD	Standard Method
	Quarterly	Metals <sup>Note 1</sup>	Standard Method
	Annually	Organic Screen <sup>Note 2</sup>	Standard Method
	Quarterly	Ammonia	Standard Method
	Quarterly	Sulphate (SO <sub>4</sub> )	Standard Method
Other <sup>Note 3</sup>			

**Note 1:** Metals to include as a minimum: Mercury (Hg), Cadmium (Cd), Thallium (Tl), Arsenic (As), Lead (Pb), Chromium (Cr), Copper (Cu), Nickel (Ni) and Zinc (Zn).

**Note 2:** Samples screened for the presence of organic compounds using Gas Chromatography / Mass Spectrometry (GC/MS) or other appropriate techniques. Recommended analytical techniques include: volatiles (US Environmental Protection Agency method 524 or equivalent), semi-volatiles (USEPA method 525 or equivalent, and pesticides (USEPA method 608 or equivalent).

**Note 3:** Analytical requirements to be determined on a case by case basis.



## C.5 Noise Monitoring

### Noise Monitoring Frequency and Technique

Parameter	Monitoring Frequency	Analysis Method/Technique
L(A) <sub>EQ</sub> [30 minutes]	Quarterly	Standard <sup>Note 1</sup>
L(A) <sub>10</sub> [30 minutes]	Quarterly	Standard <sup>Note 1</sup>
L(A) <sub>90</sub> [30 minutes]	Quarterly	Standard <sup>Note 1</sup>
Frequency Analysis (1/3 Octave band analysis)	Quarterly	Standard <sup>Note 1</sup>

**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

**Ambient Monitoring Location:**

To be agreed by the Agency

Parameter	Monitoring Frequency	Analysis Method/Technique
Dust (mg/m <sup>2</sup> per day)	Quarterly <sup>Note 1</sup>	Standard Method <sup>Note 2</sup>
Odour Measurement	Quarterly <sup>Note 3</sup>	See Note 3
Odour Modelling	As may be required	Agreed Method
Bacteria	Annually	Grab sample <sup>Note 4</sup>
Aspergillus fumigatus	Annually	Grab sample <sup>Note 4</sup>
PM <sub>10</sub> (µg/m <sup>3</sup> )	Annually	See Note 5

**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", published by The Composting Association, 1999.

**Note 5:** As described in prEN12341 "Air Quality - field test procedure to demonstrate reference equivalence of sampling methods for PM10 fraction of particulate matter" or an alternative agreed in writing by the Agency.



### Groundwater Monitoring

**Location:**

To be agreed by the Agency as per Condition 3.25

Parameter	Monitoring Frequency	Analysis Method/Technique
pH	Annually	pH electrode/meter
COD	Annually	Standard Method
Total Ammonia	Annually	Standard Method
Conductivity	Annually	Standard Method
Chloride	Annually	Standard Method
Organic Compounds <sup>Note 1</sup>	Annually	Standard Method

The test method in the above schedule has been amended to include reference to Standard Method.

**Note 1:** Screening for priority pollutant list substances (such as US EPA volatile and/or semi-volatile compounds).



**C.7 Monitoring of Processes**

Parameter	Monitoring Frequency	Monitoring equipment/method
<ul style="list-style-type: none"><li>• <b>Composting piles</b> <i>Temperature vs. time</i> <i>Oxygen Content</i></li></ul>	Continuous Daily	Temperature probe/recorder Oxygen probe with recorder
<ul style="list-style-type: none"><li>• <b>Compost maturation (curing) piles</b> <i>Temperature</i> <i>Moisture</i></li></ul>	Continuous Daily	Temperature probe Subjective by operator



## **SCHEDULE D: Specified Engineering Works**

### **Specified Engineering Works**

Development of the facility including installation of waste handling, processing, recycling/recovery infrastructure as well as any abatement system(s).

Installation of drainage network including silt traps and oil interceptors etc.

Installation of compost area.

Any other works notified in writing by the Agency.



## SCHEDULE E: Annual Environmental Report

### Annual Environmental Report Content<sup>Note 1</sup>

Emissions from the facility.  
Waste management record.  
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.  
Pollutant release and transfer register – report for previous year.  
Pollutant release and transfer register - proposal for current year.  
Noise monitoring report summary.  
Ambient monitoring summary.  
Tank and pipeline testing and inspection report.  
Reported incidents summary.  
Energy efficiency audit report summary.  
Odour management plan.  
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.  
Closure, restoration & aftercare management plan.  
Statement of measures in relation to prevention of environmental damage and remedial actions (Environmental Liabilities).  
Quantity and composition of waste recovered, received and disposed of during the reporting period and each previous year (relevant EWC codes to be used).  
Waste recovery report.  
Full title and a written summary of any procedures developed by the licensee in the year, which relates to the facility operation.  
Review of nuisance controls.  
Volume of trade effluent/leachate produced and transported off-site.  
Any other items specified by the Agency.

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

## **SCHEDULE F: Standards for Compost Quality**

### **Compost Quality**

No sample shall exceed 1.2 times the quality limit values set.

[The following criteria (where they apply to compost) 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<sub>4</sub>-N, NO<sub>3</sub>-N, pH and dry matter content should also be measured.]

#### **1. Maturity (Compost)**

The state of the curing pile must be conducive to aerobic biological activity.

Compost shall be deemed to be mature if it meets two of the following groups of requirements or other maturity tests as may be agreed with the Agency:

1. Respiration activity after four days AT<sub>4</sub> is ≤10mg/O<sub>2</sub> perg dry matter or dynamic respiration index is ≤1,000mg O<sub>2</sub>/kg VS per h.
2. Germination of cress (*Lepidium sativum*) seeds and of radish (*Raphanus sativus*) seeds in compost must be greater than 90% 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% in comparison with the control sample.
3. Compost must be cured for at least 21 days; and  
Compost will not reheat upon standing to greater than 20°C above ambient temperature.

Or

Compost must be cured for a six month period and offensive odours from the compost shall be minimal for the compost to be deemed mature.

## 2. Trace Elements (Compost) <sup>Notes 1, 2 & 3</sup>

### Maximum Trace Element Concentration Limits <sup>Note 4</sup>

Parameter (mg/kg, dry mass)	Compost Quality Standards <sup>Note 5</sup>		Stabilised Biowaste <sup>Note 5</sup>
	Class 1	Class 2	
Cadmium (Cd)	0.7	1.5	5
Chromium (Cr)	100	150	600
Copper (Cu)	100	150	600
Mercury (Hg)	0.5	1	5
Nickel (Ni)	50	75	150
Lead (Pb)	100	150	500
Zinc (Zn)	200	400	1500
Polychlorinated Biphenyls (PCBs)	-	-	0.4
Polycyclic Aromatic Hydrocarbons (PAHs)	-	-	3
Impurities >2 mm <sup>Note 6</sup>	<0.5%	<0.5%	<3%
Gravel and Stones >5 mm <sup>Note 6</sup>	<5%	<5%	-

**Note 1:** These limits apply to the compost just after the composting phase and prior to mixing with any other materials.

**Note 2:** Incoming sludges (other than sewage sludges) shall be monitored quarterly (on a client by client basis) for the parameters outlined in this table in addition to selenium (Se) and molybdenum (Mo).

**Note 3:** Monitoring of arsenic (As) is required if waste timber is used in the composting process.

**Note 4:** 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.

**Note 5:** Normalised to 30% organic matter content.

**Note 6:** 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.

## 3. Pathogens (Compost)

Pathogenic organism content must not exceed the following limits:

<i>Salmonella spp.</i>	Absent in 50 g	n = 5
<i>Faecal coliforms</i>	≤1000 Most Probable Number (MPN) in 1g	n = 5

Where: n = Number of samples to be tested.

## 4. Monitoring (Compost)

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



Signed on behalf of the said Agency

on the 01<sup>st</sup> day of August, 2007

Dr. Tom McLoughlin, **Authorised Person**