

**LICENCE REG No. W0117-01 HAS BEEN SURRENDERED.**

Please note that licence Reg No. W0117-01 was Surrendered on 07/07/2009.

**Amendment Under S42B(1) of the Waste Management Acts 1996 to 2003**

This licence was amended on 18<sup>th</sup> May 2005 under Section 42B(1) of the Waste Management Acts 1996 to 2003. The details of the amendment must be read in conjunction with this licence and are attached to the end of this licence. The amendment document is entitled Amendment A.



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

**WASTE LICENCE**

<b>Waste Licence</b>	117-1
<b>Register Number:</b>	
<b>Licensee:</b>	Greenhills Compost Limited
<b>Location of Facility:</b>	Carnagh Upper, Kilcogy, County Cavan

# 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 continued operation of a composting facility at Carnagh Upper, Kilcogy, County Cavan for the purposes of the production of compost to be used as a medium for the cultivation of mushrooms. Greenhills Compost Limited will be permitted to accept waste poultry litter and waste gypsum at the facility for the production of mushroom compost. This licence requires Greenhills Compost Limited to implement a series of odour reduction measures at the facility. In the case where the said measures are not successful in sufficiently reducing odours the licensee will be required to enclose the composting process and to install odour control technologies at the facility over a specific timeframe. The licensee is also required to provide suitable measures at the facility for the control of surface water, foul water and noise emissions from the facility.

This licensee must manage and operate the facility to ensure that the Activities do not cause environmental pollution. This 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.

This licence sets out in detail the conditions under which Greenhills Compost Limited will operate and manage the facility.

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# ***DECISION & REASONS FOR THE DECISION***

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

The Agency is satisfied, on the basis of the information available, that the requirements of Section 40(4) of the Waste Management Acts, 1996 to 2003 have been complied with in respect of the application for a waste licence for the Activities listed hereunder in Part I.

In reaching this decision the Agency has considered the application and supporting documentation received from the applicant, all submissions and objections received and the reports of its inspectors.

## ***Part I Activities Licensed***

In pursuance of the powers conferred on it by the Waste Management Acts, 1996 to 2003, the Environmental Protection Agency (the Agency), under Section 40(1) of the said Acts hereby grants this Waste Licence to Greenhills Compost Limited to carry on the waste Activity listed below at Carnagh Upper, Kilcogy, County Cavan subject to conditions, with the reasons therefor and the associated schedules attached thereto set out in the licence.

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

<b>Class 2.</b>	<b>Recycling or reclamation of organic substances which are not used as solvents (including composting and other biological transformation processes) :</b>
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This Activity is limited to the production of mushroom compost at the facility.

# INTERPRETATION

All terms in this licence should be interpreted in accordance with the definitions in the Waste Management Acts, (the Acts), 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>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 the waste licence application.
<b>Application</b>	The application by the licensee for this waste licence.
<b>Appropriate facility</b>	A waste management facility, duly authorised under relevant law and technically suitable.
<b>Bi – Annual</b>	Twice per year at intervals of 6 months.
<b>Clamp</b>	A mixture of the composting raw materials collected in a heap (similar to a windrow) at the start of Phase I composting.
<b>Condition</b>	A condition of this licence.
<b>Containment boom</b>	A boom which can contain spillages and prevent them from entering drains or watercourses.
<b>Daytime</b>	8.00 a.m. to 10.00 p.m.
<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>Emergency</b>	Those occurrences defined in Condition 8.4.
<b>Emission Limits</b>	Those limits, including concentration limits and deposition levels established in <i>Schedule D: Emissions Limits</i> , of this licence.
<b>European Waste Catalogue (EWC)</b>	A harmonised, non-exhaustive list of wastes drawn up by the European Commission and published as Commission Decision 94/3/EC and any subsequent amendment published in the Official Journal of the European Community.
<b>Incident</b>	The following shall constitute an incident for the purposes of this licence: <ul style="list-style-type: none"><li>a) an emergency;</li><li>b) any emission which does not comply with the requirements of this licence;</li><li>c) any trigger level specified in this licence which is attained or exceeded; and</li><li>d) any indication that environmental pollution has, or may</li></ul>

have, taken place.

<b>Intermediate Compost</b>	The compost material formed at the blending line and up to the final product is produced at the end of Phase II.
<b>Licence</b>	A Waste Licence issued in accordance with the Acts.
<b>Licensee</b>	Greenhills Compost Limited.
<b>Liquid Waste</b>	Any waste in liquid form and containing less than 2% dry matter. Any waste tankered to the facility.
<b>Maintain</b>	Keep in a fit state, including such regular inspection, servicing and repair as may be necessary to adequately perform its function.
<b>Mobile Plant</b>	Self-propelled machinery used for the emplacement of wastes or for the construction of specified engineering works.
<b>Monthly</b>	A minimum of 12 times per year, at approximately monthly intervals.
<b>Night-time</b>	10.00 p.m. to 8.00 a.m.
<b>Phase I Composting</b>	The phase of compost production that commences with the breaking of straw bales through to when the intermediate compost is placed into a pasteurisation tunnel. The pre-wetting of straw bales is not considered part of the Phase I composting process.
<b>Phase II Composting</b>	The phase of compost production that commences when the intermediate compost is placed into a pasteurisation tunnel through to its removal from the pasteurisation tunnel and inoculation with mushroom spawn.
<b>Process Water / Goodie Water</b>	Water that has been used in the composting process and for washing or flushing at the facility.
<b>Recyclable Materials</b>	Those waste types, such as cardboard, plastics, batteries, gas cylinders, etc, which may be recycled.
<b>Quarterly</b>	At approximately three monthly intervals.
<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 between 2% and 14% dry matter.
<b>Specified Emissions</b>	Those emissions listed in <i>Schedule D: Emission Limits</i> , of this licence.
<b>Specified Engineering Works</b>	Those engineering works listed in <i>Schedule B: Specified Engineering Works</i> , of this licence.
<b>Trigger Level</b>	A parameter value specified in the licence, the achievement or exceedance of which requires certain Actions to be taken by the licensee.
<b>EPA Working Day</b>	Refers to the following hours: 9.00 a.m. to 5.30 p.m. Monday to Friday inclusive.

## ***PART II CONDITIONS***

### **CONDITION 1 SCOPE OF THE LICENCE**

- 1.1. Waste Activities at the facility shall be restricted to those listed and described in Part I: Activities Licensed and authorised by this licence.
- 1.2. The licensed Activity is limited to the production of mushroom compost at the facility.
- 1.3. For the purposes of this licence, the facility is the area of land outlined in red on the Site Plan (1:2500) as submitted in May 2001 as part of the application. Any reference in this licence to “facility” shall mean the area thus outlined in red.
- 1.4. On-site and off-site deliveries of wastes, raw materials or product shall be confined to the hours of 08.00 and 19.00 hours Monday to Friday, and between 08.00 and 13.00 hours on Saturday. There shall be no on-site or off-site deliveries of wastes, raw materials or product on Sundays or Bank Holidays. Unless otherwise agreed by the Agency the use of noise generating mobile plant and equipment shall be restricted to the hours referred to in this Condition.
- 1.5. This licence is for the purposes of waste licensing under the Waste Management Acts 1996 to 2003 only and nothing in this licence shall be construed as negating the licensee’s statutory obligations or requirements under any other enactments or regulations.
- 1.6. Only waste used for the production of Mushroom Compost may be recovered at the facility subject to the maximum quantities and other constraints listed in *Schedule A: Waste Types & Quantities*, of this licence.
- 1.7. Where the Agency considers that a non-compliance with any condition of this licence has occurred, it may serve a notice on the licensee specifying:
  - 1.7.1 That only those wastes as specified, if any, in the notice are to be accepted at the facility after the date set down in the notice.
  - 1.7.2 That the licensee shall undertake the works stipulated in the notice, and/or otherwise comply with the requirements of the notice as set down therein, within the time-scale contained in the notice.
  - 1.7.3 That the licensee shall carry out any other requirement specified in the notice.
  - 1.7.4 When the notice has been complied with, the licensee shall provide written confirmation that the requirements of the notice have been carried out. No waste, other than that which is stipulated in the notice, shall be accepted at the facility until written permission is received from the Agency.
- 1.8. Every plan, programme or proposal submitted to the Agency for its agreement pursuant to any Condition of this licence shall include a proposed timescale for its implementation. The Agency may modify or alter any such plan, programme or proposal in so far as it considers such modification or alteration to be necessary and shall notify the licensee in writing of any such modification or alteration. Every such plan, programme or proposal shall be carried out within the timescale fixed by the Agency but shall not be undertaken without the agreement of the Agency. Every such plan, programme or proposal agreed by the Agency shall be covered by the conditions of 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 between the hours specified in Condition 1.4, unless otherwise agreed 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.

### **2.2    Management Structure**

2.2.1    Within three months from the date of grant of this licence, the licensee shall submit written details of the management structure of the facility to the Agency. Any proposed replacement in the management structure shall be notified in advance in writing to the Agency. Written details of the management structure shall include the following information.

- a)    the names of all persons who are to provide the management and supervision of the waste Activities authorised by the licence, in particular the name of the facility manager and any nominated deputies;
- b)    details of the responsibilities for each individual named under a) above; and
- c)    details of the relevant education, training and experience held by each of the persons nominated under a) above.

### **2.3    Environmental Management System (EMS)**

2.3.1    The licensee shall establish and maintain an EMS. Within eighteen months from the date of grant of this licence, the licensee shall submit to the Agency for its agreement a proposal for a documented Environmental Management System (EMS) for the facility. Following the agreement of the Agency, the licensee shall establish and maintain such a system. The EMS shall be updated on an annual basis with amendments being submitted to the Agency for its agreement.

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

#### **2.3.2.1    Schedule of Environmental Objectives and Targets**

The objectives should be specific and the targets measurable. The Schedule shall address a five-year period as a minimum. The Schedule shall include a time-scale for achieving the objectives and targets and shall comply with any other written guidance issued by the Agency.

#### **2.3.2.2    Environmental Management Plan (EMP)**

The EMP shall include, as a minimum, the following:

- (i)    methods by which the objectives and targets will be achieved and the identification of those responsible for achieving those objectives and targets;
- (ii)    any other items required by written guidance issued by the Agency.



#### 2.3.2.3 Corrective Action Procedures

The Corrective Action Procedures shall detail the corrective Actions to be taken should any of the procedures detailed in the EMS not be followed.

#### 2.3.2.4 Awareness and Training Programme

The Awareness and Training Programme shall identify training needs, for personnel who work in or have responsibility for the licensed facility.

### 2.4 Communications Programme

- 2.4.1 Within three months of the date of grant of this licence, the licensee shall establish and maintain a Communications Programme to inform and involve the local community and ensure that members of the public can obtain information at the facility, at all reasonable times, concerning the environmental performance of the facility.

**REASON:** To make provision for the proper 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 FACILITY INFRASTRUCTURE

- 3.1 The licensee shall establish all infrastructure referred to in this licence 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 B: Specified Engineering Works*, of this licence to the Agency for its agreement at least one month 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 include the following information;
- a) a description of the works;
  - b) as-built drawings of the works;
  - c) records and results of all tests carried out (including failures);
  - d) drawings and sections showing the location of all samples and tests carried out;
  - e) daily record sheets/diary;
  - f) name(s) of contractor(s)/individual(s) responsible for undertaking the specified engineering works;
  - g) name(s) of individual(s) responsible for supervision of works and for quality assurance validation of works;
  - h) records of any problems and the remedial works carried out to resolve those problems; and

- i) 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 name of the licence holder;
- c) an emergency out of hours contacts telephone number;
- d) the licence reference number; and
- e) where and when environmental information relating to the facility can be obtained.

### 3.4 Facility Security

3.4.1 The licensee shall install and maintain stockproof fencing along the boundary of the facility and shall provide security gates at all entrances to the facility.

### 3.5 Facility Roads/Surfaces

3.5.1 Within three months of the date of grant of this licence the licensee shall arrange for a suitably qualified independent engineer to complete a survey of all road/yard surfaces and drains at the facility and this survey shall include as a minimum the following details:

- (i) The integrity of all the hardstanding areas and drains.
- (ii) The slopes and drainage system for all roads/surfaces, drains and roofed areas.
- (iii) The delineation of road/yard surfaces where contaminated and uncontaminated water arises.
- (iv) The information derived above shall be clearly identified on a site map as per Condition 10.3.

3.5.2 Within twelve months of the date of grant of this licence, the licensee shall ensure that all surfaced areas where contaminated surface water or process water arise are impermeable.

3.5.3 The licensee shall ensure that all drains are suitable for use or decommissioned as soon as is practical.

3.5.4 Within nine months of the date of grant of this licence the licensee shall construct a minimum 150mm high kerb around the areas where contaminated surface water or process water arise. The kerb shall be constructed so as to prevent any emissions to ground or surface water.

3.5.5 The integrity of all hardstanding areas and drains shall be assessed by a suitably qualified independent engineer at least every three years and reported to the Agency on each occasion or following the installation of any new drains/areas of hardstanding and prior to their use.

### 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 Storage Areas for Poultry Litter, Gypsum and Urea (granular/prilled form)
- 3.7.1 Within nine months of the date of grant of this licence, the licensee shall provide an enclosed building or structure for the dry storage of poultry litter and gypsum.
- 3.7.2 The licensee shall provide a secure area for the dry storage of urea (granular/prilled form) to be agreed by the Agency within one month prior to the date of use of this product.
- 3.8 Weighbridge
- 3.8.1 The licensee shall maintain the existing weighbridge at the facility.
- 3.9 Wheel Cleaning
- 3.9.1 Within three months of the date of grant of this licence the licensee shall establish and maintain wheel-cleaning facilities at the facility. These facilities shall be used by all vehicles leaving the facility to ensure that no process water or waste is carried off-site.
- 3.9.2 All water from the wheel cleaning area shall drain to the process water system.
- 3.10 Tank and Drum Storage Areas
- 3.10.1 With the exception of water storage tanks, all tank and drum storage areas shall be rendered impervious to the materials stored therein.
- 3.10.2 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:
- (a) 110% of the capacity of the largest tank or drum within the bunded area; or
  - (b) 25% of the total volume of substance which could be stored within the bunded area.
- 3.10.3 All drainage from bunded areas shall be diverted for collection and safe disposal.
- 3.10.4 All inlets, outlets, vent pipes, valves and gauges must be within the bunded area.
- 3.10.5 The integrity and water tightness of all the storage tanks, sumps and bunds and their resistance to penetration by water or other materials stored therein shall be confirmed by the licensee and shall be reported to the Agency. This confirmation shall be completed within six months of the date of grant of this licence and at least once every three years thereafter and reported to the Agency on each occasion or following the installation of any new bunds and prior to their use as a storage area.
- 3.11 Odour Control Infrastructure
- 3.11.1 The licensee shall ensure that the following programme of works shall be carried out to minimise odour emissions from the facility. The programme of works shall proceed based on the following:
- (i) Within nine months of the date of grant of this licence, the licensee shall provide adequate aerated floor facilities for use in the Phase I and Phase II composting process.
  - (ii) Within twelve months of the date of grant of this licence, the bale breaking line and the blending line shall be enclosed.
  - (iii) Within one month of the date of grant of this licence a system of submerged aerator(s) shall be installed in each of the goodie/process water storage tanks at the facility.

- (iv) Unless otherwise agreed by the Agency, within twelve months of the date of grant of this licence the licensee shall enclose all goodie water storage tanks and provide appropriate odour filtration systems placed at outlet vents on all goodie/process water storage tanks.

3.11.2 Within eighteen months of the date of grant of this licence the licensee shall submit a report assessing the effectiveness of the odour control measures implemented at the facility.

3.11.3 Unless otherwise agreed by the Agency and taking account of the findings of the report under Condition 3.11.2 the licensee shall ensure that the following programme of works shall be carried out to minimise odour emissions from the facility. The programme of works shall proceed based on the following:

- (i) Within twenty four months of the date of grant of this license all of the Phase I production process shall be carried out in fully enclosed buildings.
- (ii) Within thirty months of the date of grant of this licence, the licensee shall provide a system for the collection of all air emissions from the following sources: (i) goodie/process water storage tanks, (ii) bale breaking/blending line, (iii) manure storage and (iv) Phase I process. Negative pressure shall be maintained throughout all areas where the compost process occurs to ensure that there is no significant escape of fugitive odours.
- (iii) Within forty two months of the date of grant of this licence the licensee shall ensure that all air emissions from the composting process are passed through an appropriate abatement system to be agreed by the Agency.

3.11.4 All structures used for storing raw materials shall be constructed so that all doors shall be close fitting and personnel doors shall be fitted with self-closing mechanisms. Doors other than personnel doors shall have closing mechanisms fitted such that collection/delivery vehicles or personnel cannot over-ride them and leave doors open during these services.

3.11.5 The licensee shall ensure that all doors of buildings/structures on-site remain shut where practically possible.

### 3.12 Surface Water Management

3.12.1 Within fifteen months of the date of grant of this licence effective surface water management infrastructure shall be provided and maintained at the facility. As a minimum, the infrastructure shall consist of the following:

- a) a rainwater collection and drainage system for all buildings on-site and this shall include the diversion of all roof water and run-off from all non-contaminated impervious areas of the site;
- b) the system shall be designed so as no contaminated water may enter the surface water drainage system;
- c) the system may be designed so as rainwater may be diverted to the on-site water storage tanks for use in the process;
- d) all clean surface water collected at the facility shall be discharged to the stream at locations to be agreed by the Agency;
- e) goodie water not used in the process shall not be discharged or transported off-site without the prior agreement of the Agency;
- f) surface water from the site may be used in the process only following its aeration/oxygenation; and

- g) The drainage system at the facility shall ensure that surface water run off liquid is drained by an effective drainage system to the 'goodie' water storage tank and surface water does not accumulate on the yard.

### 3.13 Process/Goodie Water Management

- 3.13.1 Effective process water management infrastructure shall be provided and maintained at the facility. As a minimum, the infrastructure shall be capable of the following:
  - a) the collection of all process water and any contaminated water which may arise at the facility and drainage to the on-site storage tanks/sumps;
  - b) The screening of all process water prior to entering any enclosed drain/pipe;
  - c) The maintenance of a freeboard of at least 1m on all process water storage tanks; and,
  - d) The installation of high level alarms on all of the process water storage tanks.
  - e) All dirty yard areas shall be cleaned at least twice daily & records maintained of such.

### 3.14 Septic Tanks

- 3.14.1 Within nine months of the date of grant of this licence, the licensee shall ensure that any septic tanks being used at the facility are in accordance with the Agency's Wastewater Treatment Manual "Treatment Systems for Single Houses".

### 3.15 Noise Control

- 3.15.1 Unless otherwise agreed by the Agency, the licensee shall ensure that all air ventilation systems and motors at the facility shall be designed, specified and enclosed, as appropriate, so as to minimise noise emissions.
- 3.15.2 Within nine months of the date of grant of this licence the licensee shall provide a noise attenuation barrier along the boundary of the facility and immediately adjacent to any private residences.

### 3.16 Continuous Monitoring System

- 3.16.1 Within nine months of the date of grant of this licence a continuous monitoring system shall be installed and maintained at the facility. All facility operations linked to the telemetry system shall also have a manual control which will be reverted to in the event of break in power supply or during maintenance. 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;
  - (ii) the level of liquid in all of the on-site storage tanks/sumps;
  - (iii) dissolved oxygen levels in process water storage tanks; and
  - (iv) odour abatement control parameters to be agreed by the Agency to be measured following the installation of the odour abatement system.

### 3.17 Monitoring Infrastructure

#### 3.17.1 Groundwater

- (i) Within nine months from the date of grant of this licence, the licensee shall provide three monitoring point(s) (upgradient and downgradient of the facility) to allow for the sampling and analyses of groundwater as set out in *Schedule E: Monitoring*, of this licence.

#### 3.17.2 Replacement of Infrastructure

- (i) Monitoring infrastructure which is damaged or proves to be unsuitable for its purpose shall be replaced within three months of it being damaged or recognised as being unsuitable.

**REASON:** To provide appropriate infrastructure for the protection of the environment.

## CONDITION 4 FACILITY OPERATIONS

### 4.1 Waste / Raw Material Acceptance

4.1.1 All wastes accepted at the facility shall be in fully covered trailers/containers.

4.1.2 Within three months of the date of grant of this licence, the licensee shall implement procedures at the facility for the inspection of incoming poultry litter so as to ensure that poultry carcasses or other foreign bodies are not present in the litter.

4.1.3 Poultry litter

- a) with a moisture content of < 35% shall be only accepted at the facility.
- b) must be pre-mixed with gypsum in an enclosed building or structure and kept dry prior to its addition to straw.
- c) accepted at the facility shall be stored in an enclosed building or structure.

4.1.4 The licensee shall implement procedures to ensure that waste accepted at the facility is processed as soon as possible after its arrival at the facility.

4.1.5 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 to an appropriate facility agreed by the Agency. Temporary storage of such wastes shall be in fully enclosed containers to avoid putrefaction, odour generation, the attraction of vermin and any other nuisance or objectionable condition.

4.1.6 All waste imported into/exported from Ireland shall have the appropriate documentation.

4.1.7 Waste shall only be accepted at the facility, from customers who are holders of a Waste Permit under the Waste Management (Collection Permit) Regulations 2001 where required.

4.1.8 The source of the gypsum accepted at the facility must be agreed in advance with the Agency.

## 4.2 Composting Process

- 4.2.1 Within one month of the date of grant of this licence straw bales shall be wetted only by being 'dunked' in the recycled (aerated / oxygenated) goodie water. Fresh water should be added to the dunking tank if required, but not to goodie water storage tanks.
- 4.2.2 Within nine months of the date of grant of this licence, all Phase I and Phase II composting and intermediate compost storage shall take place on aerated pads/bunkers.
- 4.2.3 Recycled (aerated / oxygenated) goodie water shall not be applied in a fine spray to the straw bales or pre-wet material.
- 4.2.4 All bales shall be broken open and the material placed on aerated area within three (3) days of dunking.
- 4.2.5 All composting processes shall be executed in accordance with the treatment regime outlined in *Schedule C: Process Control*, of this licence.
- 4.2.6 Composting operations, including the storage of any composted material, shall only be undertaken on impervious hardstanding.
- 4.2.7 The licensee shall ensure that the moisture content of the compost material at the end of the pre-wetting and/or Phase I stages does not exceed 75%.
- 4.2.8 A minimum oxygen content of 5% shall be maintained in all Phase I and II compost.
- 4.2.9 The pre-wetting of all bales and the addition of process water to intermediate compost shall be completed in a manner which will not give rise to the generation of aerosols or odours, and which shall mitigate against any contaminated water entering the surface water drainage system.
- 4.2.10 Pending the completion of the odour abatement system referred to in Condition 3.11, all outdoor clumps of intermediate compost shall be mechanically turned at least every three days.
- 4.2.11 Poultry litter shall not be applied as a single application during pre-wetting. No more than 75% of the total poultry litter application (remaining following the substitution of fifteen percent by Urea), shall be applied in any three (3) day period. For each batch of compost material, records must be kept of the amounts of all poultry litter and urea used at this facility during each stage of the composting process.
- 4.2.12 Goodie water may only be applied to the composting process following its aeration / oxygenation. No goodie water should be added to the process other than for the dunking of bales.

## 4.3 Landscaping

- 4.3.1 Within six months of the date of grant of this licence, the licensee shall submit proposals for the effective screening of the facility. The proposals shall include a detailed plan and timeframes for planting along the boundary of the facility.
- 4.3.2 The licensee shall assess the need for additional screening around the facility on an annual basis. The assessment shall be completed during the winter period each year.

## 4.4 Facility Controls

- 4.4.1 Gates shall be locked shut when the facility is unsupervised.
- 4.4.2 The licensee shall provide and use adequate lighting during the operation of the facility in hours of darkness.

- 4.4.3 The licensee shall submit a report to the Agency within three months of date of grant of this licence on limiting the use of security lighting at night, and assessing alternative systems so as to avoid nuisance and visual intrusion. The findings of this report shall be implemented as agreed by the Agency.
- 4.4.4 Fuels shall only be stored at appropriately banded locations on the facility.
- 4.4.5 All tanks and drums shall be labelled to clearly indicate their contents.
- 4.4.6 All process water storage tanks shall be aerated on a continuous basis following the installation of aerators in the tanks.
- 4.5 Off-site Disposal and Recovery
  - 4.5.1 Waste sent off-site for recovery or disposal shall only be conveyed by a waste contractor agreed by the Agency.
  - 4.5.2 All waste transferred from the facility shall only be transferred to an appropriate facility agreed by the Agency.
  - 4.5.3 All wastes removed off-site for recovery or disposal shall be transported from the facility to the consignee in a manner which will not adversely affect the environment.
  - 4.5.4 Unless otherwise agreed by the Agency, all process water which is not re-used on-site shall be tankered off-site in fully enclosed road tankers to a wastewater treatment plant agreed in advance with the Agency.
  - 4.5.5 All goodie water storage tanks shall be aerated on a continuous basis following the installation of aerators in the tanks.
- 4.6 Maintenance
  - 4.6.1 All treatment/abatement and emission control equipment shall be calibrated and maintained, in accordance with the instructions issued by the manufacturer/supplier or installer. Written records of the calibrations and maintenance shall be made and kept by the licensee.
  - 4.6.2 The licensee shall maintain and clearly label and name all sampling and monitoring locations.
  - 4.6.3 The process water and surface drainage systems shall be inspected twice weekly and cleaned as required. Silt, stones and other accumulated material shall be removed as required to ensure the free movement of water in the systems.
- 4.7 Goodie Water Storage tank
  - 4.7.1 All liquid entering the storage tank shall be screened.
  - 4.7.2 The screens shall be cleaned on a daily basis and the screened material returned to the composting process.
  - 4.7.3 All solid matter shall be removed from the storage tank every four months or at such other intervals required by the Agency.
  - 4.7.4 Fresh water shall not be used to increase the volume of goodie water in the goodie water storage tank.
  - 4.7.5 The volume of water in the goodie water storage tank shall be the minimum to maintain a consistent throughput of compost.



#### 4.8 Urea Substitution Programme

4.8.1 The licensee shall introduce a programme for the part substitution of poultry litter with urea. The urea should be added to the pre-wet clamps and mixed into the clamps, at the commencement of the composting process.

4.8.2 The Urea substitution programme shall achieve:

- (i) a 5% reduction in the amount of poultry litter added within one month of the date of grant of this licence; and
- (ii) a substitution rate of at least 15% within six months of date of grant of this licence.

<b>REASON:</b> To provide for appropriate operation of the facility to ensure protection of the environment.
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## CONDITION 5 EMISSIONS

5.1. No specified emission from the facility shall exceed the emission limit values set out in *Schedule D: 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 do not result in significant impairment of, or significant interference with the environment beyond the facility boundary.

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

#### 5.3.1. Non-Continuous Monitoring

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

#### 5.4. Emissions to Surface Water

5.4.1. The trigger levels for surface water discharges from the facility measured at monitoring point SW-1 are:

- a) BOD 25mg/l
- b) Suspended Solids 35 mg/l

5.4.2. No process water or contaminated surface water shall be discharged to surface waters.

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

5.4.4. Following the completion of the surface water management infrastructure required by Condition 3.12, there shall, unless otherwise agreed by the Agency, only be one surface water discharge from the facility, i.e. SW-1.

5.5. Noise Emissions

5.5.1. There shall be no clearly audible tonal or impulsive component in the noise emissions from the facility at any noise sensitive location.

5.5.2. The licensee shall ensure that low noise emitting plant be used at the facility where possible and that all plant and machinery shall be maintained so as to minimise noise emissions.

5.6. Odour Trigger Levels

5.6.1 Within three months of the date of grant of this licence, and based on monitoring information from the facility the licensee shall agree trigger levels for Hydrogen Sulphide (H<sub>2</sub>S) and Dimethyl Sulphide (DMS) levels monitored at the Phase I clamps/bunkers and at the goodie water storage tanks.

5.6.2 In the event that monitoring in accordance with Schedule C: Process Control, of this licence, indicate a breach of the trigger levels as agreed under Condition 5.6.1 the licensee shall take the following remedial measures:

- a) avoid anaerobic compost conditions by reducing compost moisture, and/or poultry litter additions;
- b) increase the aeration of the compost by increased airflow and / or more frequent turning of the compost; and
- c) any other Actions that may be deemed necessary by the Agency.

<b>REASON:</b> To control emissions from the facility and provide for the protection of the environment.
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## CONDITION 6 NUISANCES

6.1 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.

6.2 The road network in the vicinity of the facility and all facility roads and surfaces 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.

6.3 The licensee shall implement a pest control programme at the facility for the control of birds, rats, insects at the facility.

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

6.5 No wastes shall be burnt at the facility.

6.6 Dust Control

6.6.1 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.

- 6.6.2 Prior to the enclosure of the poultry litter storage areas the licensee shall maintain all stocks of poultry litter so as to minimise dust emissions.

**REASON:** To provide for the control of nuisances.

## CONDITION 7 MONITORING

- 7.1. The licensee shall carry out such monitoring and at such locations and frequencies as set out in *Schedule E: Monitoring*, of this licence and as specified in this licence. Unless otherwise specified by this licence, all environmental monitoring shall commence no later than six months after the date of grant of this licence.
- 7.2. The licensee shall amend the frequency, locations, methods and scope of monitoring as required by this licence only upon the written instruction of the Agency and shall provide such information concerning such amendments as may be requested in writing by the Agency. Such alterations shall be carried out within any timescale nominated by the Agency.
- 7.3. Monitoring and analysis equipment shall be operated and maintained in accordance with the manufacturers' instructions (if any) so that all monitoring results accurately reflect any emission, discharge or environmental parameter.
- 7.4. The licensee shall provide safe and permanent access to all on-site sampling and monitoring points and to off-site points as required by the Agency.
- 7.5. Water Monitoring
- 7.5.1 The licensee shall monitor the volume of non-process water (e.g. clean rainwater, mains or abstracted surface/ground water) used on site each day and shall provide a daily break down of the source of the water used.
- 7.6. Groundwater Monitoring
- 7.6.1 Subject to the agreement of the well owners, all private wells within 250m of the facility shall be included in the monitoring programme set out in *Schedule E: Monitoring*, of this licence.
- 7.7. Meteorological Monitoring
- 7.7.1 Within six months of the date of grant of this licence, the licensee shall provide infrastructure facility capable of monitoring the parameters listed in *Schedule E: Monitoring*, of this licence.
- 7.7.2 Within one month of the date of grant of this licence the licensee shall provide a windsock at the facility for the purpose of indicating wind direction.
- 7.8. Biological Assessment
- 7.8.1 A biological assessment of stream that passes through the facility shall be undertaken within six months of the date of grant of this licence and every two years thereafter. This assessment shall use appropriate biological methods such as the EPA Q-rating system for the assessment of rivers and streams. The location of monitoring points shall be agreed by the Agency.

7.9. Nuisance Monitoring

7.9.1 The licensee shall, during the morning on daily basis, inspect the facility and its immediate surrounds for nuisances caused by litter, vermin, birds, flies, mud, dust and odours. Subjective daily odour assessments shall be carried out by site personnel either prior to, or immediately following their arrival on-site.

7.10 Poultry Litter Moisture Monitoring

7.10.1 A monitoring programme to be agreed by the Agency shall be put in place to measure the moisture content of poultry litter arriving at and being used at the facility.

**REASON:** To ensure compliance with the conditions of this licence by provision of a satisfactory system of monitoring of emissions.

## CONDITION 8 CONTINGENCY ARRANGEMENTS

8.1. Unless otherwise notified in writing by the Agency, in the event that any monitoring, sampling or observations indicate that an incident has, or may have, taken place, the licensee shall immediately:

- a) identify the date, time and place of the incident;
- b) carry out an immediate investigation to identify the nature, source and cause of the incident and any emission arising therefrom;
- c) isolate the source of any such emission;
- d) evaluate the environmental pollution, if any, caused by the incident;
- e) identify and execute measures to minimise the emissions/malfunction and the effects thereof; and
- f) provide a proposal to the Agency for its agreement within one month of the incident occurring to:
  - i) identify and put in place measures to avoid reoccurrence of the incident.
  - ii) identify and put in place any other appropriate remedial Action.

8.2. The licensee shall, within twelve months of the date of grant of this licence, submit a written Emergency Response Procedure (ERP) to the Agency for its agreement. The ERP shall address any emergency situations which may originate on the facility and shall include provision for minimising the effects of any emergency on the environment. This shall include a risk assessment to determine the requirements at the facility for fire fighting and fire water retention facilities. The Fire Authority shall be consulted by the licensee during this assessment.

8.3 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.

8.4 Emergencies

8.4.1 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.

- 8.4.2 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.
- 8.4.3 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 ensure compliance with the conditions of this licence by provision of a satisfactory system of monitoring of emissions.

## **CONDITION 9 RECORDS**

- 9.1 The licensee shall keep the following documents at the facility office.
- the current waste licence relating to the facility;
  - the current EMS for the facility;
  - the previous year's AER for the facility; and
  - all written procedures produced by the licensee which relate to the licensed Activities.
- 9.2 The licensee shall maintain a written record for each load (including any contaminated/process water removed off-site) of waste arriving at and departing from the facility. The licensee shall record the following:
- the date;
  - the name of the carrier (including if appropriate, the waste carrier registration details);
  - the vehicle registration number;
  - the name of the producer(s)/collector(s) of the waste as appropriate;
  - a description of the waste including the associated EWC codes;
  - the quantity of the waste, recorded in tonnes;
  - the name of the person checking the load;
  - where loads or wastes are removed or rejected, details of the date of occurrence, the types of waste and the facility to which they were removed; and,
  - TFS documentation where relevant.
- 9.3 Written Records
- The following written records shall be maintained by the licensee:
- The types and quantities of waste recovered at the facility each year. These records shall include the relevant EWC Codes;
  - The quantities of Phase II compost produced each year;
  - copies of compost quality monitoring results for the facility for the preceding twelve months;
  - all training undertaken by facility staff;
  - results of all integrity tests of bunds and other structures and any maintenance or remedial work arising from them;

- f) details of all nuisance inspections;
- g) details of all surface water and process water system inspections;
- h) details of all process control parameters that are routinely monitored;
- i) details of all waste materials and finished product that are removed off-site; and
- j) 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.

9.4 The licensee shall maintain a written record of all complaints relating to the operation of the Activity. Each such record shall give details of the following:

- a) date and time of the complaint;
- b) the name of the complainant;
- c) details of the nature of the complaint;
- d) Actions taken on foot of the complaint and the results of such Actions; and,
- e) the response made to each complainant.

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

- a) details of the rodenticide(s) used;
- b) operator training details;
- c) details of any infestations; and,
- d) mode, frequency, location and quantity of application.

**REASON:** To provide for the keeping of proper records of the operation of the facility.

## **CONDITION 10 REPORTS AND NOTIFICATIONS**

10.1 Unless otherwise agreed by the Agency, all reports and notifications submitted to the Agency shall:

- a) be sent to Office of Environmental Enforcement, Environmental Protection Agency, McCumiskey House, Richview, Clonskeagh Road, Dublin 14;
- b) comprise one original and two copies unless additional copies are required;
- c) be formatted in accordance with any written instruction or guidance issued by the Agency;
- d) include whatever information as is specified in writing by the Agency;
- e) be identified by a unique code, indicate any modification or amendment, and be correctly dated to reflect any such modification or amendment;
- f) be submitted in accordance to the relevant reporting frequencies specified by this licence, such as in *Schedule F: Recording and Reporting*, of this licence;

- g) be accompanied by a written interpretation setting out their significance in the case of all monitoring data; and
- h) be transferred electronically to the Agency's computer system if required by the Agency.

10.2 In the event of an incident occurring on the facility, the licensee shall:

- a) notify the Agency as soon as practicable and in any case not later than 10.00 am the following working day after the occurrence of any incident;
- b) submit a written record of the incident, including all aspects described in Condition 10.1(a-e), to the Agency as soon as practicable and in any case within five working days after the occurrence of any incident;
- c) in the event of any incident which relates to discharges to surface water, notify the Northern Regional Fisheries Board as soon as practicable and in any case not later than 10:00am on the following working day after such an incident; and
- d) Should any further Actions be taken as a result of an incident occurring, the licensee shall forward a written report of those Actions to the Agency as soon as practicable and no later than ten days after the initiation of those Actions.

10.3 Within twelve months of the date of grant of the licence the licensee shall submit a map/drawing to the Agency which shall include the following:

- a) details of the layout and slopes and drainage system for all roads/surfaces, drains and roofed areas;
- b) delineation of road/yard surfaces where contaminated and uncontaminated water arises;
- c) location of all kerbing as required by Condition 3.5.4.
- d) all monitoring locations that are stipulated in this licence including a national grid reference for each monitoring point.

10.4 Annual Environmental Report

10.4.1 The licensee shall submit to the Agency for its agreement, within thirteen months from the date of grant of this licence, and within one month of the end of each year thereafter, an Annual Environmental Report (AER).

10.4.2 The AER shall include as a minimum the information specified in *Schedule G. Content of Annual Environmental Report*, of this licence and shall be prepared in accordance with any relevant written guidance issued by the Agency.

10.5 The licensee shall report to the Agency within nine months of the date of grant of this licence on the success in achieving the required level of urea substitution as required by Condition 4.8.

<b>REASON:</b> To provide for proper report to and notification of the Agency.
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## **CONDITION 11 CHARGES AND FINANCIAL PROVISIONS**

11.1 Agency Charges

11.1.1 The licensee shall pay to the Agency an annual contribution of €15,438 or such sum as the Agency from time to time determines, towards the cost of monitoring the Activity or otherwise in performing any functions in relation to the Activity, as the Agency considers necessary for the performance of its functions under the Waste Management Acts, 1996 to 2003. The licensee shall in 2005 and subsequent years, not later than January 31 of each year, pay to the Agency this amount updated in accordance with

changes in the Public Sector Average Earnings Index from the date of the licence to the renewal date. The updated amount shall be notified to the licensee by the Agency. For 2004, the licensee shall pay a pro rata amount from the date of this licence to 31<sup>st</sup> December. This amount shall be paid to the Agency within one month of the date of grant of this licence.

- 11.1.2 In the event that the frequency or extent of monitoring or other functions carried out by the Agency needs to be increased the licensee shall contribute such sums as determined by the Agency to defraying its costs.

11.2 Financial Provision for Closure, Restoration and Aftercare

- 11.2.1 Within twelve months of the date of grant of this licence, the licensee shall arrange for an independent third party risk assessment of the facility to be carried out. The risk assessment shall have particular regard to any accidents, emergencies, or other incidents, which might occur at the facility and their effect on the environment. The risk assessment shall include a comprehensive and fully costed Environmental Liabilities Risk Assessment for the facility together with a proposal for Financial Provision arising from the carrying on of the Activities to which this licence relates including the restoration of the facility as required by this licence.

- 11.2.2 The amount of financial provision, held under Condition 11.2.1 shall be maintained by the licensee and be reviewed and revised as necessary, but at least annually. Any proposal for such a revision shall be submitted to the Agency for its agreement.

- 11.2.3 The licensee shall within two weeks of purchase, renewal or revision of the financial provision required under Condition 11.2.1, forward to the Agency written proof of such indemnity.

- 11.2.4 Unless otherwise agreed any revision to the fund shall be computed using the following formula:-

$$\text{Cost} = (\text{ECOST} \times \text{WPI}) + \text{CiCC}$$

Where:-

Cost = Revised restoration and aftercare cost

ECOST = Existing restoration and aftercare cost

WPI = Appropriate Wholesale Price Index [Capital Goods, Building & Construction (i.e. Materials & Wages) Index], as published by the Central Statistics Office, for the year since last closure calculation/revision.

CiCC = Change in compliance costs as a result of change in site conditions, changes in law, regulations, regulatory authority charges, or other significant changes.

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



## SCHEDULE A : Waste Types and Quantities

Waste Type	Maximum (Tonnes per Annum)
Poultry Litter <sup>Note 2</sup>	6,000 <sup>Note 1</sup>

**Note 1:** The waste types and quantities may be altered subject to the agreement of the Agency.

**Note 2:** Such other alternatives as agreed by the Agency in the event of an outbreak of disease on poultry farms.

## SCHEDULE B : Specified Engineering Works

Specified Engineering Works
Installation of Air Extraction and Abatement systems.
Installation of Surface/Process Water Management Infrastructure (including provision of 150mm kerb).
Installation of noise control infrastructure.
Enclosure of poultry litter storage areas and various elements of process.
Any other works notified in writing by the Agency.

## SCHEDULE C : Process Control

Monitoring (where relevant):

Control	Frequency	Monitoring Equipment/Method
<b>Process Water:</b> Dissolved Oxygen Water Usage <sup>Note 1</sup> Water Level in Tanks	Continuous Continuous Continuous	DO Probe with Recorder Flow meter/Pump rate over time To be Agreed <sup>Note 3</sup>
<b>Phase I / II:</b> Moisture content of Compost Oxygen Content Temperature  Hydrogen Sulphide Dimethyl Sulphide	Daily  Continuous <sup>Note 2</sup> Continuous <sup>Note 2</sup>  Daily Daily	To be agreed by the Agency  Oxygen Probe with recorder Temperature Probe with recorder  Gas detector tubes with appropriate sampling pumps

**Note 1:** The quantity of non-process water used on-site is to be monitored (e.g. clean rainwater, mains or abstracted surface/ground water).

**Note 2:** Pending the completion of the infrastructure required under Condition 3.11, the monitoring frequency for Clamps of intermediate compost deposited in open yard areas shall be daily.

**Note 3:** To be included in the telemetry system required under Condition 3.16.

Equipment:

Control Parameter	Equipment	Back Up Equipment
<b>Process Water:</b> Dissolved Oxygen Water Level in Tanks Process Water Usage	Aerators Level Switches/Alarms Pumps	Spares held on-site Spares held on-site Standby pumps and spares held on-site
<b>Phase I / II:</b> Oxygen Content Temperature	Aeration Pads/Air Fans Aeration Pads/Air Fans	Standby Fans and spares held on-site Standby Fans and spares held on-site

## SCHEDULE D : Emission Limits

**D.1 Noise Emissions:** (Measured at the noise sensitive locations indicated in Table E.1).

Day dB(A) $L_{Aeq}$ (30 minutes)	Night dB(A) $L_{Aeq}$ (30 minutes)
55	45

**D.2 Dust Deposition Limits:** (Measured at the monitoring points indicated in Table E.1).

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> /day.

## SCHEDULE E : Monitoring

### E.1 Monitoring Locations

Monitoring locations shall be those as set out in Table E.1.1

Table E.1.1 Monitoring Locations

DUST	NOISE	SURFACE WATER	GROUNDWATER	AIRBORNE MICROBES <sup>Note 1</sup>
STATIONS <sup>Note2</sup>	STATIONS <sup>Note2</sup>	STATIONS <sup>Note 3</sup>	STATIONS <sup>Note4</sup>	STATIONS <sup>Note2</sup>
D1	NSL1	SW-1	GW-1	AB-1
D2	NSL2	SW-2	GW-2	AB-2
D3	NSL3	SW-3	GW-3	AB-3
D4	NSL4		Private Wells <sup>Note 5</sup>	AB-4

**Note 1:** Four locations to be selected and three to be used during sampling, one upwind and two downwind.

**Note 2:** Locations to be agreed by the Agency.

**Note 3:** Any other discharges from the facility shall be labelled and monitored in accordance with Table E.5.1.

**Note 4:** Two locations downgradient and one location upgradient to be agreed by the Agency.

**Note 5:** All private wells within 250m of the facility are to be monitored in accordance with Condition 7.6.1.

## E.2 Dust

Table E.2.1 Dust Monitoring, Frequency, Parameters and Technique

Parameter	Monitoring Frequency	Analysis Method/Technique
Dust (mg/m <sup>2</sup> /day)	Three times a year <sup>Note 2</sup>	Standard Method <sup>Note 1</sup>
Odour	Daily	Subjective inspection by operator

**Note 1:** Standard method VDI2119 (Measurement of Dustfall, Determination of Dustfall using Bergerhoff Instrument (Standard Method) German Engineering Institute). A modification (not included in the standard) which 2 methoxy ethanol may be employed to eliminate interference due to algae growth in the gauge.

**Note 2:** At least twice between the months of May and September.

## E.3 Airborne Microbes

Table E.3.1: Airborne Micro-Organism Monitoring, Frequency, Parameters and Technique

Parameter (cfu/m <sup>3</sup> )	Monitoring Frequency	Analysis Method/Technique
Airborne Micro-Organisms	Annual	Standardised Protocol <sup>Note 1</sup>

**Note 1:** Monitoring to be completed as per “The Composting Association” publication “Standardised Protocol for the Sampling and Enumeration of Airborne Micro-Organisms at Composting Facilities”.

## E.4 Noise

Table E.4.1 Noise Monitoring, Frequency, Parameters and Technique

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

**Note 1:** “International Standards Organisation. ISO 1996. Acoustics - Description and Measurement of Environmental Noise. Parts 1, 2 and 3.”

## E.5 Surface Water

Table E.5.1: Surface Water Monitoring, Frequency, Parameters and Technique

Parameter	Monitoring Frequency <sup>Note 1</sup>	Analysis Method/Technique
Visual Inspection	Weekly	Sample and examine colour and odour of water
PH	Annually	PH electrode/meter and recorder
Electrical Conductivity	Annually	Conductivity Probe
Dissolved Oxygen	Annually	DO meter/recorder
Temperature (°C)	Annually	Temperature probe with recorder
Suspended Solids	Annually	Standard Methods
Biochemical Oxygen Demand	Annually	Standard Methods
Chemical Oxygen Demand	Annually	Standard Methods
Nitrates	Annually	Standard Methods
Total Phosphorus (as P)	Annually	Standard Methods
Ammonia	Annually	Standard Methods
Sulphate (as SO <sub>4</sub> )	Annually	Standard Methods

## E.6 Meteorological Monitoring

Table E.6.1 Meteorological Monitoring:

Data to be obtained from a location on the facility to be agreed in advance with the Agency.

Parameter	Monitoring Frequency	Analysis Method/Technique
Temperature (min/max.)	Daily	To be agreed
Wind Direction	Daily	Windsock
Wind Speed	Daily	To be agreed
Atmospheric Pressure	Daily	To be agreed

## E.7 Groundwater Monitoring

Table E.7.1 Groundwater Monitoring, Frequency, Parameters and Technique.

Parameter	Monitoring Frequency	Analysis Method/Technique
Groundwater Level	Quarterly	Method to be agreed by the Agency
PH	Quarterly	pH Probe
COD	Quarterly	Standard Methods
Ammonia	Quarterly	Standard Methods
Nitrates	Quarterly	Standard Methods
Sulphate	Quarterly	Standard Methods
Total Coliforms	Quarterly	Method to be agreed by the Agency
Faecal Coliforms	Quarterly	Method to be agreed by the Agency

## E.8 Treated Sewage Monitoring

Table E.8.1 Treated Sewage Monitoring Frequency, Parameters and Technique

Parameter	Monitoring Frequency	Analysis Method Technique
PH	Annual	pH Probe
BOD	Annual	Standard Methods
Suspended Solids	Annual	Standard Methods
Total Ammonia as (as N)	Annual	Standard Methods

## SCHEDULE F : Recording and Reporting to the Agency

Report	Reporting Frequency	Report Submission Date
Environmental Management System Updates	Annually	One month after the end of the year reported on.
Annual Environment Report (AER)	Annually	One month after the end of each calendar year.
Record of incidents	As they occur	Within five days of the incident.
Bund, tank and container integrity assessment	Every three years	Six months from the date of grant of licence and one month after the end of the three year period being reported on (or prior to the use of new structures).
Specified Engineering Works reports	As they arise	Prior to the works commencing.
Monitoring of Surface Water Quality	Quarterly	Ten days after end of the period being reported on.
Monitoring of Groundwater Quality/Levels	Bi-annually	Ten days after end of the six-month period being reported on.
Meteorological Monitoring	Annually	One month after end of the year being reported on.
Dust Deposition Monitoring	Three times a year	Ten days after the period being reported on
Airborne Micro-organisms Monitoring	Annually	One month after end of the year being reported on.
Noise Monitoring	Bi-annually	Ten days after end of the quarter being reported on.
Odour monitoring Hydrogen Sulphide Dimethyl Sulphide	Monthly	Within five days after the end of each month.
Environmental Liabilities Risk Assessment Report	Once Off	Within six months of the date of grant of the licence.
Facility Yard and Drains Integrity Report	Every three years	Within three months from the date of grant of licence and one month after the end of the three year period being reported on (or prior to the use of new structures).
Effectiveness of odour control measures	Once Off	Within eighteen months from the date of grant of licence
Report on urea substitution	Once Off	Within nine months from the date of grant of licence
Any other monitoring	As they occur	Within ten days of obtaining results.

# **SCHEDULE G:           Content of the Annual Environmental Report**

## **Annual Environmental Report Content**

Reporting Period.

Waste Activities carried out at the facility.

Proposal for a decommissioning and aftercare plan for the facility.

Report on the capacity of the facility in terms of compost production and air/water handling infrastructure.

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

Report on the compatibility of the on-site sewage treatment systems with the Agency's document entitled "Treatment Systems for Single Houses".

Report on the quantity of water used at the facility including details of the source of the water used and an assessment of the use of alternative water sources where feasible (e.g. grey water use).

Summary report on emissions.

Summary of results and interpretation of environmental monitoring.

Resource and energy consumption summary.

Proposed development of the facility and timescale of such development.

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

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

Schedule of Environmental Objectives and Targets for the forthcoming year.

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

Tank, pipeline and bund testing and inspection report.

Reported incidents and Complaints summaries.

Energy Audit of the Facility.

Review of Nuisance Controls.

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

Report on training of staff.

Any other items specified by the Agency.

Sealed by the seal of the Agency on this the 4th day of November, 2004

PRESENT when the seal of the Agency  
was affixed hereto:

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**Padraic Larkin, Director/Authorised Person**

