

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

# WASTE LICENCE PROPOSED DECISION

Waste Licence 120-1

**Register Number:** 

**Applicant:** Kabeyun Limited

**Location of Facility:** Foxfield Mushrooms, Compost Yard,

Kilnaleck, 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 operation of a composting facility at Foxfield Mushrooms, Compost Yard, Kilnaleck, County Cavan. The facility will accept up to 13,200 tonnes of chicken litter and 1,100 tonnes of gypsum per annum and produces about 37,000 tonnes of Phase II mushroom compost per annum. Waste chicken litter shall only be accepted in fully enclosed containers. The licence requires that all waste storage and composting areas be fully enclosed, with air extraction and abatement systems put in place to minimise nuisances from odour, noise, dust and vermin. Surfacewater and process water management infrastructure are also required to be put in place. The licence sets out relevant timeframes for provision of the required infrastructure.

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

The licence sets out in detail the conditions under which Kabeyun Limited will operate and manage this facility.

# Table of Contents

	Page No.
REASONS FOR THE DECISION	1
PART I ACTIVITIES LICENSED	1
INTERPRETATION	2
PART II CONDITIONS	4
CONDITION 1 SCOPE OF THE LICENCE	4
CONDITION 2 MANAGEMENT OF THE FACILITY	5
CONDITION 3 FACILITY INFRASTRUCTURE	6
CONDITION 4 FACILITY OPERATIONS	11
CONDITION 5 EMISSIONS	13
CONDITION 6 NUISANCES	13
CONDITION 7 MONITORING	14
CONDITION 8 CONTINGENCY ARRANGEMENTS	15
CONDITION 9 RECORDS	16
CONDITION 10 REPORTS AND NOTIFICATIONS	17
CONDITION 11 CHARGES AND FINANCIAL PROVISIONS	19
SCHEDULE A: Waste Types and Quantities	21
SCHEDULE B: Specified Engineering Works	21
SCHEDULE C: Process Control	21
SCHEDULE D: Emission Limits	23
SCHEDULE E: Monitoring	23
SCHEDULE F: Recording and Reporting to the Agency	26
SCHEDITE G · Content of the Annual Environmental Report	27

## **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 Act, 1996 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 received from other parties and the report of its inspector.

## Part I Activities Licensed

In pursuance of the powers conferred on it by the Waste Management Act, 1996, the Environmental Protection Agency (the Environmental Protection Agency) proposes, under Section 40(1) of the said Act to grant this Waste Licence to Kabeyun Limited. to carry on the waste activity listed below at Foxfield Mushrooms, Compost Yard, Kilnaleck, 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
Act 1996

Class 2. Recycling or reclamation of organic substances which are not used as solvents (including composting and other biological transformation processes):

This activity is limited to the storage and composting of chicken litter waste intended for the production of mushroom growing compost.

## INTERPRETATION

All terms in this licence should be interpreted in accordance with the definitions in the Waste Management Act, (the Act), unless otherwise defined in this section.

**Adequate lighting** 20 lux measured at ground level.

**Aerosol** A suspension of solid or liquid particles in a gaseous medium.

**Agreement** Agreement in writing.

**Annually** At approximately twelve monthly intervals.

**Application** The application by the licensee for this waste licence.

Appropriate facility A waste management facility, duly authorised under relevant law and

technically suitable.

**Attachment** Any reference to Attachments in this licence refers to attachments submitted

as part of the waste licence application.

**Bi-annually** A minimum of 2 times per year, at approximately six-monthly intervals.

Clamp A mixture of the composting raw materials collected in a heap (similar to a

windrow) at the start of Phase I composting.

**Condition** A condition of this licence.

**Containment boom** A boom which can contain spillages and prevent them from entering drains

or watercourses.

**Daytime** 8.00 a.m. to 10.00 p.m.

**Documentation** Any report, record, result, data, drawing, proposal, interpretation or other

document in written or electronic form which is required by this licence.

**Drawing** Any reference to a drawing or drawing number means a drawing or drawing

number contained in the application, unless otherwise specified in this

licence.

**Emergency** Those occurrences defined in Condition 8.4.

Emission Limits Those limits, including concentration limits and deposition levels established

in Schedule D: Emission Limits, of this licence.

EPA Working Day Refers to the following hours; 9.00 a.m. to 5.30 p.m. Monday to Friday

inclusive.

**European Waste** A harmonised, non-exhaustive list of wastes drawn up by the European Catalogue (EWC) Commission and published as Commission Decision 94/3/EC and any

Commission and published as Commission Decision 94/3/EC and any subsequent amendment published in the Official Journal of the European

Community.

Hardstanding Impermeable surfaces constructed from concrete or similar material which

allow for the movement of vehicles or the storage or containment of

materials.

Hours of Waste Acceptance The hours during which the facility is authorised to accept waste.

Intermediate Compost The compost material formed when raw materials are mixed at the blending line and up until the final product is produced (i.e. at the end of Phase II).

**Licence** A Waste Licence issued in accordance with the Act.

Licensee Kabeyun Limited.

**Liquid Waste** Any waste in liquid form and containing less than 2% dry matter. Any waste

tankered to the facility.

**Maintain** Keep in a fit state, including such regular inspection, servicing and repair as

may be necessary to adequately perform its function.

Mobile Plant Self-propelled machinery used for the emplacement/movement of

wastes/intermediate compost or for the construction of specified engineering

works.

**Monthly** A minimum of 12 times per year, at approximately monthly intervals.

**Night-time** 10.00 p.m. to 8.00 a.m.

**Phase I Composting** 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 a part

of the Phase I composting process.

Phase II Composting 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 innoculation with mushroom spawn.

Process Water / Goodie Water Water that has been used in the composting process or which has been used

for washing or flushing.

**Quarterly** At approximately three monthly intervals.

Recyclable Materials Those waste types, such as cardboard, plastics, batteries, gas cylinders, etc.,

which may be recycled.

Sample(s) Unless the context of this licence indicates to the contrary, samples shall

include measurements by electronic instruments.

**Sludge** The accumulation of solids resulting from chemical coagulation, flocculation

and/or sedimentation after water or wastewater treatment with between 2%

and 14% dry matter.

**Specified Emissions** Those emissions listed in *Schedule D: Emission Limits*, of this licence.

Specified

Those engineering works listed in Schedule B: Specified Engineering Works,

**Engineering Works** of this licence.

**Trigger Level** A parameter value specified in the licence, the achievement or exceedance of

which requires certain actions to be taken by the licensee.

## 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. For the purposes of this licence, the facility is the area of land outlined in red on Drawing No. 6048/99/01 entitled "Foxfield Compost Yard Site Plan" of the application. Any reference in this licence to "facility" shall mean the area thus outlined in red.
- 1.3. Unless otherwise agreed by the Agency, all waste and raw materials shall only be accepted at the facility between the hours of 8.00am and 5.00pm, Monday to Friday inclusive. There shall be no on-site delivery of wastes or raw materials on Sundays or Bank Holidays.
- 1.4. This licence is for the purposes of waste licensing under the Waste Management Act 1996 only and nothing in this licence shall be construed as negating the licensee's statutory obligations or requirements under any other enactments or regulations.
- 1.5. 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 and Quantities*, of this licence.
- 1.6. The following shall constitute an incident for the purposes of this licence:
  - a) an emergency;
  - b) any emission which does not comply with the requirements of this licence;
  - c) any trigger level specified in this licence which is attained or exceeded; and
  - d) any indication that environmental pollution has, or may have, taken place.
- 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; and
  - 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.

## 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.
- 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;
  - c) details of the relevant education, training and experience held by each of the persons nominated under a) above;
  - d) contingency arrangements for the absences of the named persons from the facility; and
  - e) appropriate personnel for dealing with emergency situations both within and outside normal working hours.

#### 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; and
- (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*, 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 contact 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 Within six months of the date of grant of the licence, 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:
  - a) The integrity of all drains, sumps and hardstanding areas;
  - b) The slopes and drainage system for all roads/hardstanding surfaces (including roofed areas) and drains;
  - c) The delineation of road/yard surfaces where contaminated and uncontaminated water arises; and
  - d) The information derived above shall be clearly identified on a site map of suitable scale to be submitted to the Agency in accordance with Condition 10.3.
- 3.5.2 Within nine months of the date of grant of this licence, the licensee shall ensure that all hardstanding areas where contaminated surface water or process water arises are impervious.
- 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 concrete kerb around the areas where contaminated surfacewater or process water arise. The kerb shall be constructed so as to prevent any emissions to ground or surface water, and shall as a minimum be 150mm in height.

## 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 Chicken Litter and Gypsum
  - 3.7.1 Within nine months of the date of grant of this licence, the licensee shall provide fully enclosed structures which shall be constructed and maintained in a manner suitable, and be of appropriate size, for the storage of Chicken Litter and Gypsum being held on-site.
- 3.8 Weighbridge
  - 3.8.1 The licensee shall provide and maintain a 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 be directed to the process water collection system.
- 3.10 Tank and Drum Storage Areas
  - 3.10.1 All tank and drum storage areas shall be rendered impervious to the materials stored therein.
  - 3.10.2 With the exception of clean water storage tanks, 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 within six months of the date of grant of this licence. This confirmation shall be completed 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:
  - a) Within twelve months of the date of grant of this licence, the bale breaking line, blending line and any chicken litter shredding shall take place within a fully enclosed building.
  - b) Within twelve months of the date of grant of this licence the licensee shall provide appropriate odour filtration systems placed at outlet vents of all process/goodie water storage tanks and a system of aeration shall be installed into each process water storage tank on-site.
  - c) Within eighteen months of the date of grant of this licence, all of the Phase I and Phase II compost production process shall be carried out within fully enclosed buildings.
  - d) Within twenty four months of the date of grant of this licence, the licensee shall provide a system for the collection of all air emissions from each Phase of the production process. Negative air pressure shall be maintained throughout all areas where the compost process occurs to ensure that there is no significant escape of fugitive odours.
  - e) Within thirty six months of the date of grant of this licence, the licensee shall ensure that all air emissions arising from the composting process are passed through an appropriate abatement system to be agreed with the Agency.
- 3.11.2 Within twelve months of the completion of the odour control works as per Condition 3.11.1 of this licence, the licensee shall submit a report assessing the effectiveness of the completed works on the reduction of odour impact in the vicinity of the facility (any methods/models used shall be agreed in advance with the Agency).
- 3.11.3 Following the completion of the report as per Condition 3.11.2, the licensee shall assess the necessity for the installation of additional odour control measures at the facility. The licensee shall agree a timeframe for the completion of such works where necessary.
- 3.11.4 All structures used for the storing of raw materials shall be constructed so that all doors shall be close fitting and personnel doors shall be fitted with self-closing mechanisms. All doors, other than personnel doors, shall have closing mechanisms fitted such that collection/delivery vehicles or personnel cannot over-ride them and leave the 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 nine 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 separate surfacewater collection and drainage system to allow for the discharge of uncontaminated rainwater arising from all building rooftops and all clean yard areas of the site;
  - b) the system shall be designed so as to ensure that no contaminated or process water may enter the surface water drainage system; and
  - c) the system may be designed so as to allow for the diversion of rainwater into the onsite water storage tanks for use in the composting process.

3.12.2 Within nine months of the date of grant of this licence, the existing sluice/baffle structure which separates the surfacewater and process water drainage system shall be modified, replaced or decommissioned so as to ensure that the requirements of Condition 3.12.1 are met.

## 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.
- 3.13.2 Unless otherwise agreed with the Agency, and within twelve months of the date of grant of this licence, the licensee shall ensure that all process water storage tanks are fully enclosed.

## 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 operated in accordance with the Agency's *Wastewater Treatment Manual: Treatment Systems for Single Houses*. A report on this shall be submitted as part of the AER.

#### 3.15 Noise Control

3.15.1 Unless otherwise agreed with 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.

#### 3.16 Telemetry

- 3.16.1 Within nine months of the date of grant of this licence, a telemetry system shall be installed and maintained at the facility. All facility operations linked to the telemetry system shall also have a manual control, which will be reverted to in the event of a break in the power supply or during maintenance. As a minimum the system shall record and relay the following information:
  - a) temperature and Oxygen content of the compost at all stages (other than for Clamps of intermediate compost deposited in open yard areas) during its production;
  - b) the level of liquid in all of the on-site storage tanks/sumps;
  - c) dissolved Oxygen levels in process water storage tanks; and
  - d) odour abatement control parameters to be agreed with the Agency.

## 3.17 Monitoring Infrastructure

3.17.1 Groundwater

a) Within nine months from the date of grant of this licence, the licensee shall install one additional monitoring point downgradient of the site to allow for the sampling and analysis of groundwater.

### 3.17.2 Replacement of Infrastructure

a) 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 Acceptance

- 4.1.1 All wastes accepted at the facility shall be in fully enclosed 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 chicken litter so as to ensure that poultry carcasses or other foreign bodies are not present in the litter.
- 4.1.3 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.
- 4.1.4 Any waste deemed unsuitable for processing at the facility and/or in contravention of this licence shall be immediately separated and removed from the facility at the earliest possible time to an appropriate facility agreed with 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.
- 4.1.5 All waste imported into/exported from Ireland shall have the appropriate TFS documentation.
- 4.1.6 Waste shall only be accepted at the facility from customers who are holders of a waste collection permit issued under the Waste Management (Collection Permit) Regulations 2001, where required.

## 4.2 Composting Process

- 4.2.1 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.
- 4.2.2 All composting processes shall be executed in accordance with the treatment regime outlined in *Schedule C: Process Control*, of this licence.
- 4.2.3 Pending the completion of the odour abatement system referred to in Condition 3.11, all outdoor clamps of intermediate compost shall be mechanically turned at least every three days.
- 4.2.4 Composting operations, including the storage of any composted material, shall only be undertaken on impervious hardstanding.

#### 4.3 Landscaping

4.3.1 Within six months of the date of grant of this licence, the licensee shall submit to the Agency for agreement proposals for the screening of the site by means of a planting programme.

### 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 Fuels shall only be stored at appropriately bunded locations on the facility.
- 4.4.4 All tanks and drums shall be labelled to clearly indicate their contents.
- 4.4.5 The grazing of livestock shall not be permitted within the facility.
- 4.4.6 All process water storage tanks shall be aerated on a continuous basis.
- 4.4.7 All wastewater arising from vehicle cleaning at the facility shall be directed to the process water drainage system.

#### 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.

## 4.6 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 (including storage tanks) and surface water 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 drainage systems.
- 4.6.4 Within six months of the date of grant of this licence, all on-site groundwater wells which are no longer in use, or not intended for use, shall either be decommissioned or repaired so as to prevent any direct discharges of surfacewater run-off into the underlying groundwater aquifer.

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

## 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 sample 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.
    - (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 the discharge 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.
- 5.5. 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.

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

## 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 ensure that all vehicles delivering waste to, and removing waste and materials from the facility, are fully covered, clean and adequately secured to prevent spillage and shall not give rise to offensive odours, cause soiling of approaching roads or other nuisance.

#### 6.4 Dust Control

- 6.4.1 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.
- 6.4.2 Prior to the enclosure of the chicken litter storage area, the licensee shall maintain all stockpiles of chicken litter so as to minimise dust emissions.

#### 6.5 Vermin Control

6.5.1 The licensee shall implement a programme for the control and eradication of vermin at the facility.

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* 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 Usage

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.
- 7.6.2. Within six months of the date of grant of this licence, the licensee shall carry out a piezometric survey on any groundwater wells in the area to establish the direction of groundwater flow at the facility. For the purposes of this survey, all groundwater

abstraction pumps in use at the facility shall be shutdown for a minimum time period of 12 hours prior to the survey. The findings of this survey shall be included in the SEW proposal for the installation of additional groundwater monitoring locations.

## 7.7 Meteorological Monitoring

- 7.7.1 Within six months of the date of grant of this licence, the licensee shall provide infrastructure at the facility which is capable of monitoring the parameters listed in *Schedule E.6: Meteorological 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 Nuisance Monitoring

7.8.1. The licensee shall, at a minimum of daily intervals, 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.

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; and
    - ii) identify and put in place any other appropriate remedial action.
- 8.2 The licensee shall, within six 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 or raw materials 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:
  - a) the current waste licence relating to the facility;
  - b) the current EMS for the facility;
  - c) the previous year's AER for the facility; and
  - d) 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 of waste arriving at and departing from the facility (including any contaminated/process water removed off-site). The licensee shall record the following:
  - a) the date;
  - b) the name of the carrier (including if appropriate, the waste carrier registration details);
  - c) the vehicle registration number;
  - d) the name of the producer(s)/collector(s) of the waste as appropriate;
  - e) a description of the waste including the associated EWC codes;
  - f) the quantity of the waste, recorded in tonnes;
  - g) the name of the person checking the load;
  - h) 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,
  - i) TFS documentation (where relevant).
- 9.3 Written Records

The following written records shall be maintained by the licensee:

a) the types and quantities of waste recovered at the facility each year. These records shall include the relevant EWC Codes;

- b) the quantities of Phase II (and Phase III if any) compost produced each year;
- c) copies of compost quality monitoring results for the facility for the preceding twelve month period;
- d) all training undertaken by facility staff;
- e) results from 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) the types and quantities 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) the mode, frequency, location and quantity of rodenticide 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 Administration, Waste Enforcement Section, at the Agency's headquarters;
  - b) comprise one original and three copies unless additional copies are required;
  - 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 to the Agency*, 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 8.1 (a-f), 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/sewer water, notify the Shannon 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, slopes and drainage system for all roads/surfaces, drains and roofed areas;
  - b) delineation of all road/yard surfaces where contaminated and uncontaminated water arises;
  - c) the location of all kerbing as required by Condition 3.5.4; and,
  - d) the location of all monitoring locations that are stipulated in this licence, including a national grid reference for each monitoring point.
- 10.4 Annual Environmental Report
  - a) The licensee shall submit to the Agency for its agreement an Annual Environmental Report (AER) by the 31<sup>st</sup> January each year. The AER shall be submitted on an annual basis thereafter.
  - b) 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 Copies of all environmental monitoring data obtained by the licensee which relates to the facility shall be forwarded to the Agency at the frequencies set out in *Schedule F: Recording and Reporting to the Agency*, of this licence.

## CONDITION 11 CHARGES AND FINANCIAL **PROVISIONS**

## 11.1 Agency Charges

- 11.1.1 The licensee shall pay to the Agency an annual contribution of €15,460.50 or such sum as the Agency from time to time determines, towards the cost of monitoring the activity or otherwise in performing any functions in relation to the activity, as the Agency considers necessary for the performance of its functions under the Waste Management Act, 1996. The licensee shall in 2004 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 2003, the licensee shall pay a pro rata amount from the date of this licence to 31st 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.
  - 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. proposal for such a revision shall be submitted to the Agency for its agreement.
  - The licensee shall within two weeks of purchase, renewal or revision of the financial 11.2.3 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:

$$Cost = (ECOST \times WPI) + CiCC$$

Where:

Cost = Revised restoration and aftercare cost

ECOST = Existing restoration and aftercare cost

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

= Change in compliance costs as a result of change in site conditions,

changes in law, regulations, regulatory authority charges, or other

significant changes.

CiCC

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)
Chicken Litter	13,200 Note 1

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

# **SCHEDULE B:** Specified Engineering Works

## **Specified Engineering Works**

Installation of air extraction and abatement systems.

Installation of surface/process water management infrastructure (including the provision of a 150mm kerb).

Installation of concrete surfaces or other site surfaces.

Any other works notified in writing by the Agency.

## **SCHEDULE C: Process Control**

Table C.1 Compost Process Monitoring

Control Parameter	Frequency	Monitoring Equipment/Method
Process Water: Dissolved Oxygen (in storage tanks)		DO probe with recorder
Water Usage Note 1 Water Level in Storage Tanks and	Continuous Continuous Continuous	Flow meter/pump rate with recorder To be Agreed Note 3
Phase I / II Compost:	Continuous Note 2	
Oxygen Content Temperature	Continuous Note 2	Oxygen probe with recorder Temperature probe with recorder
Moisture Content	As necessary	Subjective by operator

- 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.

Table C.2 Compost Process Control Equipment

Control Parameter	Equipment	Back Up Equipment Note 1
Process Water:		
Dissolved Oxygen (in storage tanks)	Aerators	Spares
Water Usage	Pumps	Spares
Water Level in Storage Tanks and	Level Switches/Alarms	Standby pumps and spares
Sumps		
Phase I / II Compost:		
Oxygen Content	Aeration Pads/Air Fans	Standby Fans and spares Note 2
Temperature	Aeration Pads/Air Fans	Standby Fans and spares Note 2
Moisture Content	Suitable wetting apparatus	Spares Note 3

**Note 1:** Back up equipment to be held on-site.

- Pending the completion of the infrastructure required under Condition 3.11, temperature and oxygen content of the Phase I Clamps in the open yard will be controlled by the frequency of turning undertaken by mobile plant. The facility should have spares available for such mobile plant.

  The wetting apparatus used must satisfy the requirements of Condition 4.2.1. Note 2:
- Note 3:

## **SCHEDULE D:** Emission Limits

## **D.1** Noise Emissions: (Measured at the noise sensitive locations indicated in Table E.1.1).

Day dB(A) L <sub>Aeq</sub> (30 minutes)	Night dB(A) L <sub>Aeq</sub> (30 minutes)
55	45

## **D.2 Dust Deposition Limits:** (Measured at the boundary locations indicated in *Table E.1.1*).

Level (mg/m²/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

Monitoring is to be carried out as specified below.

## 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	GROUND WATER	AIRBORNE MICROBES
STATIONS Note 1	STATIONS Note 2	STATIONS Note 3	STATIONS Note 4	STATIONS Note 6
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 Note 5	AB-4

Note 1: Locations to be agreed with the Agency.

- **Note 2:** Noise monitoring to be done at four noise sensitive locations to be agreed with the Agency. One of these shall be at the dwelling located near the main entrance to the facility, one shall be located to the west, one to the northeast, and one to the east of the facility.
- Note 3: SW-1 to be located at the discharge point to the piped stream, and SW-2 and SW-3 to be upstream and downstream of the facility respectively (i.e. sampling the stream).
- **Note 4:** One location upgradient and two locations downgradient of the facility to be agreed with the Agency.
- Note 5: All private wells within 250m of the facility are to be monitored in accordance with Condition 7.6.1.
- Note 6: Four locations to be selected and three of these to be used during sampling one upwind and two downwind.

## E.2 Dust/Odour

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

Parameter	Monitoring Frequency	Analysis Method/Technique
Dust Deposition (mg/m²/day) Note 1	Three times a year Note 2	Standard Method Note 3
Odour	Daily Note 4	Subjective inspection by operator

Note 1: A wind rose, obtained from the meteorological station for the relevant sampling period, shall be submitted with each set of results.

Note 2: At least twice during the period May to September.

Note 3: Standard method VDI2119 (Measurement of Dustfall, Determination of Dustfall using Bergerhoff Instrument (Standard Method)
German Engineering Institute). Any modifications to eliminate interference due to algae growth in the gauge should be reported to the Agency.

Note 4: Subjective odour measurements shall be done by the site operator prior to arriving on-site (i.e. for off-site locations) or immediately upon arrival on-site (having been off-site for at least 30 minutes).

## E.3 Airborne Microbes

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

Parameter	Monitoring Frequency	Analysis Method/Technique
Airborne Micro-organisms (cfu/m³)	Annually	Grab sample using Standardised Protocol Note 1

Note 1: Enumeration of colonies to be carried out as described in: "Standardised Protocol for the Sampling and Enumeration of Airborne Micro-Organisms at Composting Facilities" by the UK Composting Association 1999.

#### 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]	Quarterly Note 1	Standard Note 2
L(A) <sub>10</sub> [30 minutes]	Quarterly Note 1	Standard Note 2
L(A) <sub>90</sub> [30 minutes]	Quarterly Note 1	Standard Note 2
Frequency Analysis (1/3 Octave band analysis)	Quarterly Note 1	Standard Note 2

Note 1: At least one monitoring event to be carried out during night-time operations.

Note 2: "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 Note 1	Monitoring Frequency	Analysis Method/Technique
Visual Inspection	Weekly	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
Biochemical Oxygen Demand	Annually	Standard Methods Note 2
Chemical Oxygen Demand	Annually	Standard Methods Note 2
Nitrates	Annually	Standard Methods Note 2
Total Phosphorus (as P)	Annually	Standard Methods Note 2
Ammonia	Annually	Standard Methods Note 2
Sulphate (as SO <sub>4</sub> )	Annually	Standard Methods Note 2
Suspended Solids	Annually	Standard Methods Note 2

Note 1: All analyses to be carried out by a competent laboratory using standard and internationally accepted techniques.

Note 2: "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.) 20<sup>th</sup> ed., American Public Health Association, 1015 Fifteenth Street, Washington DC 20005, USA.

## E.6 Meteorological Monitoring

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

Table E.6.1 Meteorological Monitoring Frequency, Parameters and Technique

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 Note 1	Monitoring Frequency	Analysis Method/Technique
Groundwater level	Bi-annually	Dip Meter
рН	Bi-annually	pH Probe
COD	Bi-annually	Standard Methods
Ammonia	Bi-annually	Standard Methods
Nitrates	Bi-annually	Standard Methods
Sulphate	Bi-annually	Standard Methods
Total Coliforms	Bi-annually	Method to be agreed with the Agency
Faecal Coliforms	Bi-annually	Method to be agreed with the Agency

Note 1: All analyses to be carried out by a competent laboratory using standard and internationally accepted techniques.

## E.8 Treated Sewage Monitoring

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

Parameter	Monitoring Frequency Note 1	Analysis Method Technique
pH	Annual	pH Probe
BOD	Annual	Standard Methods
Suspended Solids	Annual	Standard Methods
Total Ammonia as (as N)	Annual	Standard Methods

**Note 1:** Results to be included in the AER.

# SCHEDULE F: Recording and Reporting to the Agency

Report	Reporting Frequency Note 1	Report Submission Date
Environmental Management System Updates	Annually	One month after the end of the year reported on.
Annual Environment Report (AER)	Annually	By the 31st January of each 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 quarter 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.
<b>Dust Deposition Monitoring</b>	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	Quarterly	Ten days after end of the quarter being reported on.
Environmental Liabilities Risk Assessment Report	Once Off	Within six months of the date of grant of the licence.
Any other monitoring	As they occur	Within ten days of obtaining results.

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

# SCHEDULE G: Content of the Annual Environmental Report

## **Annual Environmental Report Content**

Reporting Period.

Waste activities carried out at the facility.

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

Summary report on emissions.

Summary of results and interpretation of environmental monitoring, including a location plan of all monitoring locations.

Summary of compost quality monitoring results.

Resource and energy consumption summary.

Report on the quantity of water used at the facility, including details of the source of the water used.

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.

Report on the performance and compatibility of the septic tank (and associated percolation area) with the Agency's Wastewater Treatment manual: "Treatment Systems for Single Houses" (also to include treated sewage monitoring results).

Reported incidents and Complaints summaries.

Quantity of types of waste sent off-site for disposal/recovery, including any process water tankered off-site.

Energy Audit of the Facility.

Review of Nuisance Controls.

Proposal for a Decommissioning and aftercare Plan for the facility.

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

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.

Signed on behalf of the said Agency	
on the 14th day of May, 2003	Ray Cullinane, <b>Authorised Person</b>