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Ireland

**WASTE LICENCE
Recommended Decision**

Licence Register Number:	W0234-02
Applicant/Licensee:	Waterford City Council
Location of Facility:	Green Road Kilbarry Six Cross Roads Business Park Waterford City County Waterford

INTRODUCTION

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

Waterford City Composting Facility initiated operations at Green Road, Kilbarry, Six Cross Roads Business Park, Waterford City, County Waterford in 2005 under a Certificate of Registration (Register No. R1600). The Agency issued a waste licence (W0234-01) in December 2007 in order to facilitate an increase in the waste acceptance limit at the facility. Operations ceased in 2009.

Waterford City Council will redevelop the facility as the Waterford City Anaerobic Digestion Facility. The quantity of waste to be accepted at this facility is limited to 22,000 tonnes per annum. Only non-hazardous biodegradable wastes (household and commercial organic solids, and industrial organic liquids) can be accepted for anaerobic digestion at this facility.

Waste activities authorised to take place at the facility include the anaerobic digestion of biodegradable waste and the operation of a combined heat and power plant.

Wastes must only be received at the facility in fully covered vehicles and can only be unloaded inside the appropriate reception building. All waste processing and storage will occur indoors. The waste reception building will be maintained under negative air pressure. Extracted air will be treated before discharge to atmosphere.

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

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

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Glossary of Terms

All terms in this licence should be interpreted in accordance with the definitions in the Environmental Protection Agency Acts 1992 to 2013 / Waste Management Acts 1996 to 2013, unless otherwise defined in the section.

Adequate lighting	20 lux measured at ground level.
AER	Annual Environmental Report.
Aerosol	A suspension of solid or liquid particles in a gaseous medium.
Agreement	Agreement in writing.
Anaerobic digestion	The biological decomposition of biodegradable waste in the absence of oxygen and under controlled conditions by the action of micro-organisms in order to produce digestate and a combustible biogas.
Annually	At approximately twelve-monthly intervals.
Application	The application by the licensee for this 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 this licence application.
BAT	Best Available Techniques.
Biannually	At approximately six – monthly intervals.
Biennially	Once every two years.
Bioaerosol	An aerosol of biological particles.
Biodegradable waste	Any waste that is capable of undergoing anaerobic or aerobic decomposition, such as food, garden waste, sewage sludge, paper and paperboard, including biowaste.
Biodegradable municipal waste (BMW)	The biodegradable component of municipal waste, typically composed of food and garden waste, wood, paper, cardboard and textiles.
Biogas	Combustible gas generated during the anaerobic digestion of waste and typically containing 50-75% methane, 30-45% carbon dioxide as well as other contaminants such as hydrogen sulphide, oxygen, nitrogen and ammonia.

Biological Treatment	Composting, anaerobic digestion, mechanical-biological treatment or any other biological treatment process for stabilising and sanitising biodegradable waste, including pre-treatment processes.
Bio-waste	Biodegradable garden and park waste, food and kitchen waste from households, restaurants, caterers and retail premises and comparable waste from food processing plants.
BOD	5 day Biochemical Oxygen Demand (without nitrification suppression).
CEN	Comité Européen De Normalisation – European Committee for Standardisation.
COD	Chemical Oxygen Demand.
Commercial waste	As defined in Section 5(1) of the Waste Management Acts 1996 to 2013.
Construction and demolition (C&D) waste	Wastes that arise from construction, renovation and demolition activities: Chapter 17 of the EWC or as otherwise may be agreed.
Containment boom	A boom that can contain spillages and prevent them from entering drains or watercourses or from further contaminating watercourses.
Daily	During all days of plant operation and, in the case of emissions, when emissions are taking place; with at least one measurement on any one day.
Day	Any 24 hour period.
Daytime	0700 hrs to 1900 hrs.
dB(A)	Decibels (A weighted).
Digestate	The treated output, sanitised and free from offensive odours, from anaerobic digestion of biodegradable waste including, whether combined or separated, the solid/fibrous and liquid/liquor fractions.
Digestate liquor	Any liquid resulting from the anaerobic digestion process, whether drawn directly from the digestion chamber or resulting from post-digestion separation.
DO	Dissolved oxygen.
Documentation	Any report, record, results, 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.
Emission limits	Those limits, including concentration limits and deposition rates, established in <i>Schedule B: Emission Limits</i> , of this licence.
Emergency	Those occurrences defined in Condition 9.4.

EMP	Environmental Management Programme.
Environmental damage	As defined in Directive 2004/35/EC.
EPA	Environmental Protection Agency.
European Waste Catalogue (EWC)	A harmonised, non-exhaustive list of wastes drawn up by the European Commission and published as Commission Decision 2000/532/EC and any subsequent amendment published in the Official Journal of the European Community.
Evening Time	1900hrs to 2300hrs
Facility	Any site or premises used for the purpose of the recovery or disposal of waste.
Fortnightly	A minimum of 24 times per year, at approximately two week intervals.
Gas Oil	Gas Oil as defined in Council Directive 1999/32/EC and meeting the requirements of S.I. No. 119 of 2008.
GC/MS	Gas chromatography/mass spectroscopy.
Green Waste	Waste wood (excluding timber), plant matter such as grass cuttings, and other vegetation.
ha	Hectare.
Heavy metals	This term is to be interpreted as set out in “Parameters of Water Quality, Interpretation and Standards” published by the Agency in 2001. ISBN 1-84095-015-3.
Hours of operation	The hours during which the facility is authorised to be operational.
Hours of waste acceptance	The hours during which the facility is authorised to accept waste.
ICP	Inductively coupled plasma spectroscopy.

Incident	The following shall constitute as incident for the purposes of this licence: <ul style="list-style-type: none">(i) an emergency;(ii) any emission which does not comply with the requirements of this licence;(iii) any exceedance of the daily duty capacity of the waste handling equipment;(iv) any trigger level specified in this licence which is attained or exceeded; and,(v) any indication that environmental pollution has, or may have, taken place.
Inert waste	Waste that does not undergo any significant physical, chemical or biological transformations. Inert waste will not dissolve, burn or otherwise physically or chemically react, biodegrade or adversely affect other matter with which it comes into contact in a way likely to give rise to environmental pollution or harm human health. The total leachability and pollutant content of the waste and the ecotoxicity of the leachate must be insignificant, and in particular not endanger the quality of surface water and/or groundwater.
Industrial waste	As defined in Section 5(1) of the Waste Management Acts 1996 to 2013.
K	Kelvin.
kPa	Kilopascals.
$L_{Aeq,T}$	This is the equivalent continuous sound level. It is a type of average and is used to describe a fluctuating noise in terms of a single noise level over the sample period (T).
Landfill Directive	Council Directive 1999/31/EC.
$L_{Ar,T}$	The Rated Noise Level, equal to the L_{Aeq} during a specified time interval (T), plus specified adjustments for tonal character and/or impulsiveness of the sound.
Licence	A Waste Licence issued in accordance with the Acts.
Licensee	Waterford City Council, City Hall, The Mall, Waterford.
Liquid waste	Any waste in liquid form and containing less than 2% dry matter.
List I	As listed in the EC Directives 2006/11/EC and 80/68/EEC and amendments.
List II	As listed in the EC Directives 2006/11/EC and 80/68/EEC and amendments.

Local Authority	Waterford City Council.
Maintain	Keep in a fit state, including such regular inspection, servicing, calibration and repair as may be necessary to perform its function adequately.
Mass flow limit	An emission limit value expressed as the maximum mass of a substance that can be emitted per unit time.
Mass flow threshold	A mass flow rate above which a concentration limit applies.
Monthly	A minimum of 12 times per year, at intervals of approximately one month.
Municipal waste	As defined in section 5(1) of the Acts.
Night-time	2300 hrs to 0700 hrs.
Noise-sensitive location (NSL)	Any dwelling house, hotel or hostel, health building, educational establishment, place of worship or entertainment, or any other facility or area of high amenity which for its proper enjoyment requires the absence of noise at nuisance levels.
NMP	Nutrient Management Plan.
Oil separator	Device installed according to the International Standard I.S. EN 858-2:2003 (Separator system for light liquids, (e.g. oil and petrol) – Part 2: Selection of normal size, installation, operation and maintenance).
Organic waste	Waste that is capable of undergoing anaerobic or aerobic decomposition through a biological treatment process, such as food and garden waste.
PRTR	Pollutant Release and Transfer Register.
Quarterly	At approximately three – monthly intervals.
Sample(s)	Unless the context of this licence indicates to the contrary, the term samples shall include measurements taken by electronic instruments.
Sanitary effluent	Wastewater from facility toilet, washroom and canteen facilities.
Separate collection	The collection of biowaste separately from other kinds of waste in such a way as to avoid the different waste fractions or waste components from waste being mixed, combined or contaminated with other potentially polluting wastes, products or materials.
Sludge	The accumulation of solids resulting from chemical coagulation, flocculation and /or sedimentation after water or wastewater treatment, with greater than 2% dry matter.
SOP	Standard operating procedure.

Source segregated waste	Waste which is separated at source; meaning that the waste is sorted at the point of generation into a recyclable fraction(s) for separate collection (e.g., paper, metal, glass, plastic, bulk dry recyclables, biodegradables, etc.) and a residual fraction. The expression 'separate at source' shall be construed accordingly.
Specified emissions	Those emissions listed in <i>Schedule B: Emission Limits</i> , of this licence.
Standard method	A National, European or internationally recognised procedure (e.g. I.S. EN, ISO, CEN, BS or equivalent); or an in-house documented procedure based on the above references; a procedure as detailed in the current edition of "Standard Methods for the Examination of Water and Wastewater" (prepared and published jointly by A.P.H.A., A.W.W.A. & W.E.F.), American Public Health Association, 1015 Fifteenth Street, N.W., Washington DC 20005, USA; or an alternative method as may be agreed by the Agency.
Storm water	Rain water run-off from roof and non-process areas.
The Agency	Environmental Protection Agency.
TA Luft	Technical Instructions on Air Quality Control – TA Luft in accordance with art. 48 of the Federal Immission Control Law (BImSchG) dated 15 March 1974 (BGBl. I p 721). Federal Ministry for Environment, Bonn 1986, including the amendment for Classification of Organic Substances according to section 3.1.7 TA. Luft, published in July 1997.
TOC	Total organic carbon.
Trade effluent	Trade effluent has the meaning given in the Water Services Act, 2007.
Trigger level	A parameter value, the achievement or exceedance of which requires certain actions to be taken by the licensee.
Water Services Authority	Waterford City Council.
Weekly	During all weeks of plant operation and, in the case of emissions, when emissions are taking place; with at least one measurement in any one week.
WWTP	Waste water treatment plant.

Decision & Reasons for the Decision

The Environmental Protection Agency is satisfied, on the basis of the information available, that subject to compliance with the conditions of this licence, any emissions from the activity will comply with and will not contravene any of the requirements of Section 40(4) of the Waste Management Acts 1996 to 2013.

Recommended Determination

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

Part I Schedule of Activities Licensed

In pursuance of the powers conferred on it by the Waste Management Acts 1996 to 2013, the Environmental Protection Agency (the Agency) proposes, under Section 46(8) of the said Acts to grant this Waste Licence to **Waterford City Council, City Hall, The Mall, Waterford** to carry on the waste activities listed below at **Green Road, Kilbarry, Six Cross Roads Business Park, Waterford City, County Waterford** subject to conditions, with the reasons therefor and the associated schedules attached thereto set out in the licence.

Licensed Waste Disposal Activities, in accordance with the Third Schedule of the Waste Management Acts 1996 to 2013

Class D 4.	Surface impoundment (e.g. placement of liquid or sludgy discards into pits, ponds or lagoons, etc.).
Class D 13.	Blending or mixing prior to submission to any of the operations numbered D 1 to D 12 (if there is no other D code appropriate, this can include preliminary operations prior to disposal including pre-processing such as, amongst others, sorting, crushing, compacting, pelletising, drying, shredding, conditioning or separating prior to submission to any of the operations numbered D1 to D12).
Class D 15	Storage pending any of the operations numbered D 1 to D 14 (excluding temporary storage (being preliminary storage according to the definition of “collection” in section 5(1), pending collection on the site where the waste is produced.

Licensed Waste Recovery Activities, in accordance with the Fourth Schedule of the Waste Management Acts 1996 to 2013

Class R 1.	<p>Use principally as a fuel or other means to generate energy: This includes incineration facilities dedicated to the processing of municipal solid waste only where their energy efficiency is equal to or above:</p> <ul style="list-style-type: none"> - 0.60 for installations in operation and permitted in accordance with applicable Community acts before 1 January 2009, - 0.65 for installations permitted after 31 December 2008, <p>using the following formula, applied in accordance with the reference document on Best Available Techniques for Waste Incineration:</p> $\text{Energy efficiency} = (E_p - (E_f + E_i)) / (0.97 \times (E_w + E_f))$ <p style="text-align: center;">where—</p> <p>‘Ep’ means annual energy produced as heat or electricity and is calculated with energy in the form of electricity being multiplied by 2.6 and heat produced for commercial use multiplied by 1.1(GJ/year),</p> <p>‘Ef’ means annual energy input to the system from fuels contributing to the production of steam (GJ/year),</p> <p>‘Ew’ means annual energy contained in the treated waste calculated using the net calorific value of the waste (GJ/year),</p> <p>‘Ei’ means annual energy imported excluding Ew and Bf(GJ/year),</p> <p>‘0.97’ is a factor accounting for energy losses due to bottom ash and radiation.</p>
Class R 3.	Recycling /reclamation of organic substances which are not used as solvents (including composting and other biological transformation processes), which includes gasification and pyrolysis using the components as chemicals.
Class R 12.	Exchange of waste for submission to any of the operations numbered R 1 to R 11 (if there is no other R code appropriate, this can include preliminary operations prior to recovery including pre-processing such as, amongst others, dismantling, sorting, crushing, compacting, pelletising, drying, shredding, conditioning, repackaging, separating, blending or mixing prior to submission to any of the operations numbered R1 to R11).

Class R 13.	Storage of waste pending any of the operations numbered R 1 to R 12 (excluding temporary storage (being preliminary storage according to the definition of 'collection' in section 5(1)), pending collection, on the site where the waste is produced).
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Part II Schedule of Activities Refused

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

Part III Conditions

Condition 1. Scope

- 1.1 Waste activities at this facility shall be restricted to those listed and described in *Part I Schedule of Activities Licensed*, and shall be as set out in the licence application or as modified under Condition 1.4 of this licence and subject to the conditions of this licence.
- 1.2 Activities at this facility shall be limited as set out in *Schedule A: Limitations*, of this licence.
- 1.3 For the purposes of this licence, the facility authorised by this licence is the area of land outlined in red on Drawing No. **LW12-193-01-200-002** of the application. Any reference in this licence to “facility” shall mean the area thus outlined in red. The licensed activities shall be carried on only within the area outlined.
- 1.4 No alteration to, or reconstruction in respect of, the activity, or any part thereof, that would, or is likely to, result in
- (i) a material change or increase in:
 - the nature or quantity of any emission;
 - the abatement/treatment or recovery systems;
 - the range of processes to be carried out;
 - the fuels, raw materials, intermediates, products or wastes generated, or
 - (ii) any changes in:
 - site management, infrastructure or control with adverse environmental significance;
- shall be carried out or commenced without prior notice to, and without the agreement of, the Agency.
- 1.5 Waste Acceptance Hours
- 1.5.1 Waste shall be accepted at or dispatched from the facility only between the hours of 0800 and 2000 Monday to Friday inclusive and 0800 to 1800 on Saturdays, unless otherwise agreed by the Agency.
- 1.5.2 The facility shall not operate or accept/dispatch waste on Sundays or on Public Holidays unless agreed by the Agency.
- 1.5.3 **Waste recovery and wood drying activities** shall be operated only during **daytime** hours during **Monday to Saturday, inclusive**.
- 1.5.4 **Biological treatment activities (inclusive of the combined heat and power plant) may be operated continuously, 24 hours per day, 7 days per week.**
- 1.6 The facility shall be controlled, operated and maintained, and emissions shall take place as set out in the licence. All programmes required to be carried out under the terms of this licence become part of this licence.
- 1.7 The licensee shall satisfy the Agency that it has obtained the written consent of the Department of Agriculture, Food and the Marine to treat animal by-products at the facility. A copy of the consent shall be submitted to the Agency and a copy shall be made available for inspection by authorised persons of the Agency.
- 1.8 This licence is for purposes of waste licensing under the Waste Management Acts 1996 to 2013 only and nothing in this licence shall be construed as negating the licensee’s statutory obligations, or requirements under any other enactments or regulations.
- 1.9 This licence is being granted in substitution for the waste licence granted to the licensee on **20 December 2007 (Register No: W0234-01)**. The previous waste licence (Register No: **W0234-01**) is superseded by this licence.

Reason: To clarify the scope of this licence.

Condition 2. Management of the Facility

2.1 Facility Management

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

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

2.2 Environmental Management System (EMS)

2.2.1 The licensee shall establish and maintain an Environmental Management System (EMS) **before commencement of waste acceptance**. The EMS shall be updated on an annual basis.

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

2.2.2.1 Management and Reporting Structure.

2.2.2.2 Schedule of Environmental Objectives and Targets.

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

2.2.2.3 Environmental Management Programme (EMP)

The licensee shall, not later than six months from the date of grant of this licence, submit to the Agency for agreement an EMP, including a time schedule, for achieving the Environmental Objectives and Targets prepared under Condition 2.2.2.2. Once agreed the EMP shall be established and maintained by the licensee. It shall include:

- designation of responsibility for targets;
- the means by which they may be achieved;
- the time within which they may be achieved.

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

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

2.2.2.4 Documentation

- (i) The licensee shall establish and maintain an environmental management documentation system which shall be to the satisfaction of the Agency.
- (ii) The licensee shall issue a copy of this licence to all relevant personnel whose duties relate to any condition of this licence.

2.2.2.5 Corrective Action

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

2.2.2.6 Awareness and Training

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

2.2.2.7 Communications Programme

The licensee shall establish and maintain a Public Awareness and Communications Programme to ensure that members of the public can obtain information at the facility, at all reasonable times, concerning the environmental performance of the facility.

2.2.2.8 Maintenance Programme

The licensee shall establish and maintain a programme for maintenance of all plant and equipment based on the instructions issued by the manufacturer/supplier or installer of the equipment. The programme shall include procedures for on-going detection and repair of air leaks in the odour management system and in the areas where waste is processed under negative pressure. Appropriate record keeping and diagnostic testing shall support this maintenance programme. The licensee shall clearly allocate responsibility for the planning, management and execution of all aspects of this programme to appropriate personnel (see Condition 2.1 above).

2.2.2.9 Efficient Process Control

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

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

Condition 3. Infrastructure and Operation

- 3.1 The licensee shall establish and maintain, for each component of the facility, all infrastructure referred to in this licence in advance of the commencement of the licensed activities in that component, or as required by the conditions of this licence. Infrastructure specified in the application that relates to the environmental performance of the installation and is not specified in the licence, shall be installed in accordance with the schedule submitted in the application.

- 3.2 Facility Notice Board
- 3.2.1 The licensee shall, within one month of the date of grant of this licence, provide an 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. The notice board shall be maintained thereafter.
- 3.2.2 The board shall clearly show:
- (i) the name and telephone number of the facility;
 - (ii) the normal hours of opening;
 - (iii) the name of the licence holder;
 - (iv) an emergency out of hours contact telephone number;
 - (v) the licence reference number; and
 - (vi) where environmental information relating to the facility can be obtained.
- 3.2.3 A plan of the facility clearly identifying the location of each storage and treatment area shall be displayed as close as is possible to the entrance to the facility. The plan shall be displayed on a durable material such that is legible at all times. The plan shall be replaced as material changes to the facility are made.
- 3.3 Specified Engineering Works
- 3.3.1 The licensee shall submit proposals for all Specified Engineering Works, as defined in *Schedule D: Specified Engineering Works*, of this licence, to the Agency for its agreement at least two months in advance, of the intended date of commencement of any such works. No such works shall be carried out without the prior agreement of the Agency.
- 3.3.2 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.
- 3.3.3 Following the completion of all specified engineering works, the licensee shall complete a construction quality assurance validation. The validation report shall be made available to the Agency on request. The report shall, as appropriate, include the following information:-
- (i) A description of the works;
 - (ii) As-built drawings of the works; and
 - (iii) Any other information requested in writing by the Agency.
- 3.4 Facility Security
- 3.4.1 Security and stockproof fencing and gates shall be installed and maintained. The base of the fencing shall be set in the ground. Subject to the implementation of the **Decommissioning Management Plan** and to the agreement of the Agency, the requirement for such site security may be removed.
- 3.4.2 The licensee shall install a CCTV system which records all truck movement into and out of the facility; the CCTV system shall be operated at all times and copies of recording kept on site and made available to the Agency on request.
- 3.4.3 Gates shall be locked shut when the facility is unsupervised.
- 3.4.4 The licensee shall remedy any defect in the gates and/or fencing as follows:
- (i) A temporary repair shall be made by the end of the working day; and
 - (ii) A repair to the standard of the original gates and/or fencing shall be undertaken within three working days.
- 3.5 Facility Roads and Site Surfaces
- 3.5.1 Effective site roads shall be provided and maintained to ensure the safe movement of vehicles within the facility.

- 3.5.2 The licensee shall provide, and maintain an impermeable concrete surface in the areas of the facility associated with the movement, processing, storage and handling of waste, digestate and emissions. The surfaces shall be concreted and constructed to British Standard 8110 or an alternative as agreed by the Agency. The licensee shall remedy any defect in concrete surfaces within five working days.
- 3.5.3 Any drainage points or collection channels at the facility which are no longer required shall be sealed.**
- 3.6 Facility Office
- 3.6.1 The licensee shall provide and maintain an office at the facility. The office shall be constructed and maintained in a manner suitable for the processing and storing of documentation.
- 3.6.2 The licensee shall provide and maintain a working telephone and a method for electronic transfer of information at the facility.
- 3.7 Waste Inspection and Quarantine Areas
- 3.7.1 A Waste Inspection Area and a Waste Quarantine Area shall be provided and maintained at the facility.
- 3.7.2 These areas shall be constructed and maintained in a manner suitable, and be of a size appropriate, for the inspection of waste and subsequent quarantine if required. The waste inspection area and the waste quarantine area shall be clearly identified and segregated from each other.
- 3.7.3 Drainage from the quarantine area shall be directed for collection and safe disposal.
- 3.8 Weighbridge and Wheel Cleaning
- 3.8.1 The licensee shall provide and maintain a weighbridge and wheel cleaners at the facility.
- 3.8.2 The wheel cleaner shall be used by all vehicles leaving the facility as required to ensure that no process water or waste is carried off-site. All water from the wheel cleaning area shall be directed to the trade effluent drainage network.
- 3.8.3 The wheel-wash shall be inspected on a daily basis and drained as required. Silt, stones and other accumulated material shall be removed as required from the wheel-wash and disposed of appropriately.
- 3.9 Biological treatment facility
- 3.9.1 The biological treatment facility shall at a minimum comprise the following:
- (i) Indoor waste acceptance, inspection and storage areas;
 - (ii) Curing and storage areas;
 - (iii) An indoor waste quarantine area;
 - (iv) Air handling and odour abatement equipment including bio-filter volume/capacity and odour abatement equipment provided on the basis of 100% standby capacity;
 - (v) Digestate, digestate liquor and biogas management infrastructure, as appropriate.
- 3.9.2 The CHP plant shall be suitable for biogas and shall be protected against the corrosive properties of biogas. In the event of an interruption to the supply of biogas, an alternative fuel such as gas or gas oil may be used if agreed by the Agency.
- 3.9.3 The biogas flare shall be of an enclosed type design and the combustion air supply shall be controlled so as to achieve a minimum temperature of 900°C with 0.3 seconds retention time at this temperature.
- 3.10 Waste handling, ventilation and processing plant
- 3.10.1 Items of plant deemed critical to the efficient and adequate processing of waste at the facility shall be provided on the following basis:-

- (i) 100% duty capacity;
 - (ii) 20% standby capacity available on a routine basis; and
 - (iii) Provision of contingency arrangements and/or back up and spares in the case of breakdown of critical equipment.
- 3.10.2 Within three months from the date of commencement of the activity, the licensee shall provide a report for the agreement of the Agency detailing the duty and standby capacity in tonnes per day, of all waste handling and processing equipment to be used at the facility. These capacities shall be based on the licensed waste intake, as per *Schedule A: Limitations*, of this licence.
- 3.10.3 The quantity of waste to be accepted at the facility on a daily basis shall not exceed the duty capacity of the equipment at the facility. Any exceedance of this intake shall be treated as an incident.
- 3.10.4 If sludges/slurry are being accepted the licensee must ensure that an enclosed tank be provided for storage of sludge/slurry to ensure safe coupling system for loading/unloading from road tankers.
- 3.10.5 The licensee shall provide shut-off valves on any surface/wastewater discharge lines.
- 3.11 Dust/Odour Control
 - 3.11.1 The licensee shall install and provide adequate measures for the control of odours and dust emissions, including fugitive dust emissions, from the facility. Installation of an odour-management system shall at a minimum include the following:
 - (i) Dust curtains (or equivalent approved by the Agency) shall be maintained on the entry/exit points from the waste reception, **digestate storage/wood drying and separation** buildings; all other doors in these buildings shall be kept closed where possible.
 - (ii) Unless otherwise agreed by the Agency, all buildings for processing **or storing** putrescible waste shall be maintained at negative air pressure with ventilated gases being subject to treatment as specified in this licence or otherwise by the Agency.
 - (iii) **Air extracted from the wood drying and storage area shall be vented through an appropriate filtration system for the control of dust and odour emissions.**
- 3.12 Surface Water Management

Surface water management infrastructure shall be provided and maintained at the facility during construction works, operation, closure, restoration or aftercare of the facility. As a minimum, the infrastructure shall be capable of the following:-

 - a) the prevention of discharge of contaminated water, process effluent and/or leachate into surface water drains and courses; and
 - b) the collection/diversion of run-off arising from paved areas.
- 3.13 The licensee shall provide and use adequate lighting during the operation of the facility.
- 3.14 The licensee shall install on all emission points such sampling points or equipment, including any data-logging or other electronic communication equipment, as may be required by the Agency. All such equipment shall be consistent with the safe operation of all sampling and monitoring systems.
- 3.15 In the case of composite sampling of aqueous emissions from the operation of the facility, a separate composite sample or homogeneous sub-sample (of sufficient volume as advised) shall be refrigerated immediately after collection and retained as required for EPA use.
- 3.16 The licensee shall clearly label and provide safe and permanent access to all on-site sampling and monitoring points and to off-site points as required by the Agency. The requirement with regard to off-site points is subject to the prior agreement of the landowner(s) concerned.
- 3.17 Tank, Container and Drum Storage Areas

- 3.17.1 All tank, container and drum storage areas shall be rendered impervious to the materials stored therein. Bunds shall be designed having regard to Agency guidelines 'Storage and Transfer of Materials for Scheduled Activities' (2004).
- 3.17.2 All tank and drum storage areas shall, as a minimum, be bunded, either locally or remotely, to a volume not less than the greater of the following:
- (i) 110% of the capacity of the largest tank or drum within the bunded area; or
 - (ii) 25% of the total volume of substance that could be stored within the bunded area.
- 3.17.3 All drainage from bunded areas shall be treated as contaminated unless it can be demonstrated to be otherwise. All drainage from bunded areas shall be diverted for collection and safe disposal, unless it can be deemed uncontaminated and does not exceed the trigger levels set for storm water emissions under condition 5.7.1.
- 3.17.4 All inlets, outlets, vent pipes, valves and gauges must be within the bunded area.
- 3.17.5 All tanks, containers and drums shall be labelled to clearly indicate their contents.
- 3.17.6 **Liquid wastes and** residues from the anaerobic digestion process shall be stored in sealed tanks or vessels that are vented through biofilters or by other means agreeable to the Agency in order to avoid the emission of odorous head gases.
- 3.18 The licensee shall have in storage an adequate supply of containment booms and/or suitable absorbent material to contain and absorb any spillage at the facility. Once used, the absorbent material shall be disposed of at an appropriate facility.
- 3.19 Silt Traps and Oil Separators
- The licensee shall install and maintain silt traps and oil separators at the facility:
- (i) Silt traps to ensure that all storm water discharges, other than from roofs, from the facility pass through a silt trap in advance of discharge;
 - (ii) An oil separator on the storm water discharge from yard areas. The separator shall be a Class I full retention separator.
- Unless otherwise agreed by the Agency the separator shall be a Class I full retention separator and the silt traps and separator shall be in accordance with I.S. EN-858-2: 2003 (separator systems for light liquids).
- 3.20 Fire-water Retention
- 3.20.1 The licensee shall carry out a risk assessment to determine if the activity should have a fire-water retention facility. The licensee shall submit the assessment and a report to the Agency on the findings and recommendations of the assessment **prior to the commencement of waste acceptance**.
- 3.20.2 In the event that a significant risk exists for the release of contaminated fire-water, the licensee shall, based on the findings of the risk assessment, prepare and implement, with the agreement of the Agency, a suitable risk management programme. The risk management programme shall be fully implemented within three months of date of notification by the Agency.
- 3.20.3 In the event of a fire or a spillage to storm water, the site storm water shall be diverted to the containment pond. The licensee shall examine, as part of the response programme in Condition 3.20.2 above, the provision of automatic diversion of storm water to the containment pond. The licensee shall have regard to any guidelines issued by the Agency with regard to firewater retention.
- 3.20.4 The licensee shall have regard to the Environmental Protection Agency Draft Guidance Note to Industry on the Requirements for Fire-Water Retention Facilities when implementing Conditions 3.20.1 and 3.20.2 above.
- 3.21 All pump sumps, storage tanks, lagoons or other treatment plant chambers from which spillage of environmentally significant materials might occur in such quantities as are likely to breach

- local or remote containment or separators, shall be fitted with high liquid level alarms (or oil detectors as appropriate) **within six months of the date of commencement of activities.**
- 3.22 The provision of a catchment system to collect any leaks from flanges and valves of all over-ground pipes used to transport material other than water shall be examined. This shall be incorporated into a Schedule of Environmental Objectives and Targets set out in Condition 2. of this licence for the reduction in fugitive emissions.
- 3.23 Groundwater
- All wellheads shall be adequately protected to prevent contamination or physical damage.
- 3.24 The licensee shall install in a prominent location on the site a wind sock, or other wind direction indicator, which shall be visible from the public roadway outside the site.
- 3.25 The licensee shall operate a weather monitoring station on the site at a location agreed by the Agency, which records conditions of wind speed, wind direction, temperature and rainfall.

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

Condition 4. Interpretation

- 4.1 Emission limit values for emissions to atmosphere in this licence shall be interpreted in the following way:
- 4.1.1 Continuous Monitoring
- (i) No 24 hour mean value shall exceed the emission limit value.
 - (ii) 97% of all 30 minute mean values taken continuously over an annual period shall not exceed 1.2 times the emission limit value.
 - (iii) No 30 minute mean value shall exceed twice the emission limit value.
- 4.1.2 Non-Continuous Monitoring
- (i) For any parameter where, due to sampling/analytical limitations, a 30 minute sample is inappropriate, a suitable sampling period should be employed and the value obtained therein shall not exceed the emission limit value.
 - (ii) For flow, no hourly or daily mean value, calculated on the basis of appropriate spot readings, shall exceed the relevant limit value.
 - (iii) For all other parameters, no 30 minute mean value shall exceed the emission limit value.
- 4.2 The concentration and volume flow limits for emissions to atmosphere specified in this licence shall be achieved without the introduction of dilution air and shall be based on gas volumes under standard conditions of:
- 4.2.1 From non-combustion sources:
- Temperature 273K, Pressure 101.3 kPa (no correction for oxygen or water content).
- 4.2.2 From combustion sources (other than gas compression engine and flare):
- Temperature 273K, Pressure 101.3 kPa, dry gas; 3% oxygen for liquid and gas fuels, 6% oxygen for solid fuels.
- 4.2.3 In the case of combustion gases (gas compression engine and flare):
- Temperature 273K, Pressure 101.3kPa, dry gas; 5% oxygen.
- 4.3 Emission limit values for emissions to sewer and waters in this licence shall be interpreted in the following way:
- 4.3.1 Continuous Monitoring

- (i) No flow value shall exceed the specific limit.
- (ii) No pH value shall deviate from the specified range.
- (iii) No temperature value shall exceed the limit value.

4.3.2 Composite Sampling

- (i) No pH value shall deviate from the specified range.
- (ii) For parameters other than pH and flow, eight out of ten consecutive composite results, based on flow proportional composite sampling, shall not exceed the emission limit value. No individual results similarly calculated shall exceed 1.2 times the emission limit value.

4.3.3 Discrete Sampling

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

4.4 Digestate Quality Test Results

The digestate quality standard set out in *Schedule E: Standards for Digestate Quality* of this licence shall apply to digestate after the anaerobic digestion phase and prior to mixing with other materials.

4.5 Where the ability to measure a parameter is affected by mixing before emission, then, with agreement from the Agency, the parameter may be assessed before mixing takes place.

4.6 Noise

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

4.7 Dust and Particulate Matter

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

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

Condition 5. Emissions

- 5.1 No specified emission from the facility shall exceed the emission limit values set out in *Schedule B: Emission Limits*, of this licence. There shall be no other emissions of environmental significance.
- 5.2 No emissions, including odours, from the activities carried on at the site shall result in an impairment of, or an interference with amenities or the environment beyond the facility boundary or any other legitimate uses of the environment beyond the facility boundary.
- 5.3 No substance shall be discharged in a manner, or at a concentration, that, following initial dilution, causes tainting of fish or shellfish.
- 5.4 There shall be no direct emissions to groundwater.
- 5.5 There shall be no clearly audible tonal component or impulsive component in the noise emissions from the activity at the noise-sensitive locations.
- 5.6 The licensee shall ensure that all or any of the following:
 - Vermin
 - Birds
 - Flies
 - Mud
 - Dust

- Litter

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

5.7 Emissions to Surface Water

5.7.1 Unless otherwise agreed by the Agency, the trigger levels for the surface water discharge to the stream on the facility's western boundary at location SW-1 are :-

- (i) Suspended Solids 35mg/l;
- (ii) BOD 2.6 mg/l; and**
- (iii) Total Ammonia (as N) 0.140 mg/l.**

5.8 Emissions to Sewer

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

Reason: *To provide for the protection of the environment by way of control and limitation of emissions and to provide for the requirements of the Water Services Authority in accordance with Section 52 of the Waste Management Acts 1996 to 2013.*

Condition 6. Control and Monitoring

6.1 Test Programme

6.1.1 The licensee shall prepare to the satisfaction of the Agency, a test programme for abatement equipment installed to abate emissions to atmosphere. This programme shall be submitted to the Agency in advance of implementation.

6.1.2 The programme, following agreement with the Agency, shall be completed within three months of the commencement of operation of the abatement equipment.

6.1.3 The criteria for the operation of the abatement equipment as determined by the test programme, shall be incorporated into the standard operating procedures.

6.1.4 The test programme shall as a minimum:

- (i) establish all criteria for operation, control and management of the abatement equipment to ensure compliance with the emission limit values specified in this licence; and
- (ii) assess the performance of any monitors on the abatement system and establish a maintenance and calibration programme for each monitor.

6.1.5 A report on the test programme shall be submitted to the Agency within one month of completion.

6.2 The licensee shall carry out such sampling, analyses, measurements, examinations, maintenance and calibrations as set out below and as in accordance with *Schedule C: Control & Monitoring*, of this licence.

6.2.1 Analyses shall be undertaken by competent staff in accordance with documented operating procedures.

- 6.2.2 Such procedures shall be assessed for their suitability for the test matrix and performance characteristics shall be determined.
- 6.2.3 Such procedures shall be subject to a programme of Analytical Quality Control using control standards with evaluation of test responses.
- 6.2.4 Where any analysis is sub-contracted it shall be to a competent laboratory.
- 6.3 The licensee shall ensure that:
- (i) sampling and analysis for all parameters listed in the Schedules to this licence; and
 - (ii) any reference measurements for the calibration of automated measurement systems;
- shall be carried out in accordance with CEN-standards. If CEN standards are not available, ISO, national or international standards that will ensure the provision of data of an equivalent scientific quality shall apply.
- 6.4 All automatic monitors and samplers shall be functioning at all times (except during maintenance and calibration) when the activity is being carried on unless alternative sampling or monitoring has been agreed in writing by the Agency for a limited period. In the event of the malfunction of any continuous monitor, the licensee shall contact the Agency as soon as practicable, and alternative sampling and monitoring facilities shall be put in place. The use of alternative equipment, other than in emergency situations, shall be as agreed by the Agency.
- 6.5 Monitoring and analysis equipment shall be operated and maintained as necessary so that monitoring accurately reflects the emission/discharge (or ambient conditions where that is the monitoring objective).
- 6.6 The licensee shall ensure that groundwater monitoring well sampling equipment is available/installed on-site and is fit for purpose at all times. The sampling equipment shall be to Agency specifications.
- 6.7 All treatment/abatement and emission control equipment shall be calibrated and maintained in accordance with the instructions issued by the manufacturer/supplier or installer.
- 6.8 The frequency, methods and scope of monitoring, sampling and analyses, as set out in this licence, may be amended with the agreement of the Agency following evaluation of test results.
- 6.9 The licensee shall prepare a programme, to the satisfaction of the Agency, for the identification and reduction of fugitive emissions using an appropriate combination of best available techniques. This programme shall be included in the Environmental Management Programme.
- 6.10 The integrity and water tightness of all underground pipes, tanks, bunding structures and containers and their resistance to penetration by water or other materials carried or stored therein shall be tested and demonstrated by the licensee prior to use. This testing shall be carried out by the licensee at least once every three years thereafter and reported to the Agency on each occasion. This testing shall be carried out in accordance with any guidance published by the Agency. A written record of all integrity tests and any maintenance or remedial work arising from them shall be maintained by the licensee.
- 6.11 The drainage system (i.e., gullies, manholes, any visible drainage conduits and such other aspects as may be agreed by the Agency) and bunds, silt traps and oil separators shall be inspected weekly and desludged as necessary. All sludge and drainage from these operations shall be collected for safe disposal. The drainage system, bunds, silt traps and oil interceptors shall be properly maintained at all times.
- 6.12 An inspection system for the detection of leaks on all flanges and valves on over-ground pipes used to transport materials other than water shall be developed and maintained prior to commencement of the activity.
- 6.13 Storm Water

- 6.13.1 A visual examination of the storm water discharges shall be carried out daily. A log of such inspections, shall be maintained.
- 6.13.2 The licensee shall, **prior to the commencement of waste acceptance**, develop and maintain to the satisfaction of the Agency a response programme to address instances where the trigger level values, as set in condition 5 of this licence, are exceeded. This response programme shall include actions designed to ensure that there will be no storm water emissions of environmental significance.
- 6.14 Litter Control
- 6.14.1 All loose litter or other waste, placed on or in the vicinity of the facility, other than in accordance with the requirements of this licence, shall be removed, subject to the agreement of the landowners, immediately and in any event by 10.00am of the next working day after such waste is discovered.
- 6.14.2 The licensee shall ensure that all vehicles delivering waste to and removing waste and materials from the facility are appropriately covered.
- 6.15 Dust/Odour Control
- 6.15.1 In dry weather, site roads and any other areas used by vehicles shall be sprayed with water as and when required to minimise airborne dust nuisance.
- 6.15.2 The licensee shall prepare and implement an odour management programme. The programme shall highlight specific goals and timescales, together with options for modification, upgrading or replacement of plant and equipment. The programme shall include but not be limited to the following:
- (i) identification and elimination of any externally detectable odours associated with the activity; and
 - (ii) process alterations to reduce odour emissions.
- The programme shall be reviewed annually.
- 6.16 Monitoring Locations
- Within three months of the date of grant of this licence, the licensee shall submit to the Agency an appropriately scaled drawings showing all the monitoring locations that are stipulated in this licence including any noise sensitive locations and private wells to be monitored. The drawing shall include the eight-digit national grid reference of each monitoring point.
- 6.17 Nuisance Monitoring
- The licensee shall, on a daily basis, inspect the facility and its immediate surrounds for nuisances caused by vermin, birds, flies, mud, dust and odours. The licensee shall maintain a record of all nuisance inspections.
- 6.18 Noise
- The licensee shall carry out a noise survey of the site operations annually. The survey programme shall be undertaken in accordance with the methodology specified in the 'Guidance Note for Noise: Licence Applications, Surveys and Assessments in Relation to Scheduled Activities (NG4)' as published by the Agency.
- 6.22 Pollutant Release and Transfer Register (PRTR)
- The licensee shall prepare and report a PRTR for the site. The substance and/or wastes to be included in the PRTR shall be as agreed by the Agency each year by reference to EC Regulations No. 166/2006 concerning the establishment of the European Pollutant Release and Transfer Register. The PRTR shall be prepared in accordance with any relevant guidelines issued by the Agency and shall be submitted electronically in specified format and as part of the AER.
- 6.23 The licensee shall, within six months of the date of grant of this licence, develop and establish a Data Management System for collation, archiving, assessing and graphically presenting the monitoring data generated as a result of this licence.

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

Reason: *To provide for the protection of the environment by way of treatment and monitoring of emissions and to provide for the requirements of the Water Services Authority in accordance with Section 52 of the Waste Management Acts 1996 to 2013.*

Condition 7. Resource Use and Energy Efficiency

- 7.1 The licensee shall carry out an audit of the energy efficiency of the site within one year of the date of grant of this licence. The audit shall be carried out in accordance with the guidance published by the Agency, “Guidance Note on Energy Efficiency Auditing”. The energy efficiency audit shall be repeated at intervals as required by the Agency.
- 7.2 The audit shall identify all practicable opportunities for energy use reduction and efficiency and the recommendations of the audit will be incorporated into the Schedule of Environmental Objectives and Targets under Condition 2 above.
- 7.3 The licensee shall identify opportunities for reduction in the quantity of water used on site including recycling and reuse initiatives, **rainwater harvesting and leak detection**, wherever possible. Reductions in water usage shall be incorporated into Schedule of Environmental Objectives and Targets.
- 7.4 The licensee shall undertake an assessment of the efficiency of use of raw materials in all processes, having particular regard to the reduction in waste generated. The assessment should take account of best international practice for this type of activity. Where improvements are identified, these shall be incorporated into the Schedule of Environmental Objectives and Targets.

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

Condition 8. Materials Handling

- 8.1 Disposal or recovery of waste on-site shall only take place in accordance with the conditions of this licence and in accordance with the appropriate National and European legislation and protocols.
- 8.2 Waste sent off-site for recovery or disposal shall be transported only by an authorised waste contractor. The waste shall be transported from the site of the activity to the site of recovery/disposal only in a manner that will not adversely affect the environment and in accordance with the appropriate National and European legislation and protocols.
- 8.3 The licensee shall ensure that, in advance of transfer to another person, waste shall be classified, packaged and labelled in accordance with National, European and any other standards which are in force in relation to such labelling.
- 8.4 The loading and unloading of materials shall be carried out in designated areas protected against spillage and leachate run-off.
- 8.5 Waste shall be stored in designated areas, protected as may be appropriate against spillage and leachate run-off. The waste shall be clearly labelled and appropriately segregated.
- 8.6 No waste classified as green list waste in accordance with the EU Shipment of Waste Regulations (Council Regulation EEC No. 1013/2006, as may be amended) shall be consigned for recovery without the agreement of the Agency.

- 8.7 Waste for disposal/recovery off-site shall be analysed in accordance with *Schedule C: Control & Monitoring*, of this licence.
- 8.8 Unless approved in writing, in advance, by the Agency the licensee is prohibited from mixing a hazardous waste of one category with a hazardous waste of another category or with any other non-hazardous waste.
- 8.9 The licensee shall ensure that incoming waste is stored in a manner to prevent nuisance from odour, dust vermin birds etc.
- 8.10 Waste Acceptance and Characterisation Procedures
- 8.10.1 Waste shall only be accepted at the facility from local authority waste collection or transport vehicles or holders of waste permits, unless exempted or excluded, issued under the Waste Management Acts 1996 to 2013. Copies of these waste collection permits shall be maintained at the facility.
- 8.10.2 Waste shall be accepted at the facility only from known customers or new customers subject to initial waste profiling and waste characterisation off-site. The written records of this off-site waste profiling and characterisation shall be retained by the licensee for all active customers and for a two year period following termination of licensee/customer agreements.
- 8.10.3 The licensee shall develop and maintain detailed written procedures for the acceptance, characterisation and treatment of all wastes arriving at the facility.
- 8.10.4 Waste accepted for biological treatment at the facility shall be conducive to biological treatment, facilitate the achievement of the output quality standards specified in this licence and be compatible with the appropriate end-use for the biologically treated material.
- 8.10.5 Waste arriving at the facility shall be inspected and have its documentation checked at the point of entry to the facility and, subject to this inspection, weighed, documented and directed to the appropriate waste transfer/treatment or quarantine area. Each load of waste arriving at the facility shall be inspected upon tipping within the facility. Only after such inspection shall the waste be processed for disposal or recovery.
- 8.10.6 Any waste deemed unsuitable for processing at the facility and/or in contravention of this licence shall be immediately separated and removed from the facility at the earliest possible time. Temporary storage of such wastes shall be in a designated Waste Quarantine Area. Waste shall be stored under appropriate conditions in the quarantine area to avoid putrefaction, odour generation, the attraction of vermin and any other nuisance or objectionable condition.
- 8.10.7 No hazardous waste shall be accepted at the facility.
- 8.10.8 Any waste wood which may contain halogenated organic compounds or heavy metals as a result of treatment with wood preservatives or coating and which includes, in particular, such wood waste originating from construction and demolition waste shall not be used in the biological treatment process.
- 8.11 Operational Controls
- 8.11.1 All biodegradable and odour-forming waste stored overnight at the facility shall be stored in suitably covered and enclosed containers, and shall be treated or removed from the facility within 48 hours, except, in the case of waste to be removed from the facility, at Public Holiday weekends. At Public Holiday weekends, such waste shall be removed within 72 hours of its arrival or generation on site.
- 8.11.2 All waste handling/processing plant shall be cleared of all waste and washed down on a weekly basis.
- 8.11.3 All debris and organic matter shall be cleaned from the surface of the waste reception hall floor at the end of each day's acceptance of waste.
- 8.11.4 Biogas that cannot be utilised due to exceptional circumstances shall be automatically routed to the flare stack for treatment.

- 8.11.5 Biogas that can neither be utilised nor flared shall be discharged via biofilter to emission point **A-3**.
- 8.11.6 Unless otherwise agreed by the Agency, all waste storage and treatment shall be carried out inside a building or in an appropriately enclosed or covered area.
- 8.11.7 Recovered, marketable waste/materials produced at the facility may be stored outdoors under conditions that will not diminish the integrity or value of the recovered waste/materials or lead to nuisance emissions including dust and odour.
- 8.11.8 While awaiting collection, digestate and any residual waste generated from the **treatment** process shall be stored in areas protected against uncontrolled run-off and nuisance formation.
- 8.11.9 There shall be no casual public access to the facility.**
- 8.12 Quality of Digestate
- 8.12.1 Digestate shall comply with the quality standard as set out in *Schedule E: Standards for Digestate Quality* of this licence or an alternative quality standard.
- 8.12.2 An alternative quality standard for digestate may be used, subject to the agreement of the Agency. The use of any agreed alternative quality standard for digestate shall not cause direct or indirect adverse impacts on human animal or plant health and shall not cause environmental pollution.
- 8.12.3 Treated waste that fails to meet the quality standard for digestate as set out Tables E.1 Maximum Respiration Activity, E.3 Pathogenic Organism Content Limits, E.4 Impurity Content Limits and E.5 Organic Matter Content Limit of *Schedule E: Standards for Digestate Quality* of this licence may be reused in the process or treated as waste. Treated waste that fails to meet the quality standard for compost as set out Table E.2 Maximum Metal Concentration Limits of *Schedule E: Standards for Compost and Digestate Quality* of this licence shall be handled as waste and shall not be reused in the process. A record shall be kept on site of all batches that do not meet the relevant quality standard. Where handled as a waste details shall be recorded as per Condition 11.9 of the licence.
- 8.12.4 Digestate shall be suitable for agricultural/horticultural improvement or ecological benefit without causing direct or indirect adverse impacts on human, animal or plant health and without causing environmental pollution.
- 8.12.5 Where an alternative digestate quality standard is agreed by the Agency, in accordance with Condition 8.12.2 above, the digestate monitoring programme associated with the agreed alternative digestate quality standard may be employed in lieu of the digestate quality monitoring requirements of this licence provided that details and results of the alternative monitoring programme are maintained on-site for inspection by the Agency and are reported to the Agency in accordance with the reporting requirements of this licence.
- 8.12.6 In the event of failure to achieve a quality standard parameter for digestate as set out in *Schedule E: Standards for Digestate Quality* of this licence:
- (i) The licensee shall evaluate any feedstock and/or process changes relevant to the sampled batch of material prior to the sampling date and specify the corrective actions taken including any re-sampling or reuse of the failed material back into the anaerobic digestion process.
 - (ii) Subsequent batches of treated waste shall be tested against all parameters in *Schedule E: Standards for Digestate Quality* in order to re-validate the process. Only following the pass of three successive batches through the process can the process be deemed to be stable and the normal compliance monitoring programme re-instated. The licensee shall notify the Agency when the process has been re-validated and deemed to comply with the requirements of this condition.
 - (iii) A test failure shall be treated as an incident.

- 8.13 Digestate Monitoring
- 8.13.1 Digestate quality monitoring shall be undertaken to demonstrate compliance with the quality standard as set out in *Schedule E: Standards for Digestate Quality* of this licence.
- 8.13.2 Digestate analysis shall be carried out at the frequency specified below, unless otherwise agreed or instructed by the Agency.
- (a) Every six months where more than 500 and up to 1,000 tonnes of digestate is produced per year.
- (b) At intervals of at least every 1,000 tonnes of digestate produced or every 3 months, whichever comes first, where more than 1,000 and up to 10,000 tonnes of digestate is produced per year.
- (c) Every month where more than 10,000 tonnes of digestate is produced per year.
- 8.13.3 If the composition of the feedstock changes significantly or if significant modifications are made to the process, the process shall be re-validated by testing batches until three successive batches achieve the relevant standard.
- 8.14 Unless agreed by the Agency the licensee shall not dispose to landfill any waste that has been accepted at the facility for the purpose of a recovery activity.**
- 8.15 The licensee shall neither import waste into the State nor export waste out of the State except in accordance with the relevant provisions of Regulation (EC) No 1013/2006 of the European Parliament and of the Council of 14th June 2006 on shipments of waste and associated national regulations.

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

Condition 9. Accident Prevention and Emergency Response

- 9.1 The licensee shall, **in advance of the commencement of waste acceptance**, ensure that a documented Accident Prevention Procedure is in place that addresses the hazards on-site, particularly in relation to the prevention of accidents with a possible impact on the environment. This procedure shall be reviewed annually and updated as necessary.
- 9.2 The licensee shall, **in advance of the date of commencement of waste acceptance**, ensure that a documented Emergency Response Procedure is in place that addresses any emergency situation which may originate on-site. This procedure shall include provision for minimising the effects of any emergency on the environment. This procedure shall be reviewed annually and updated as necessary.
- 9.3 Incidents
- 9.3.1 In the event of an incident the licensee shall immediately:
- (i) carry out an investigation to identify the nature, source and cause of the incident and any emission arising therefrom;
- (ii) isolate the source of any such emission;
- (iii) evaluate the environmental pollution, if any, caused by the incident;
- (iv) identify and execute measures to minimise the emissions/malfunction and the effects thereof;
- (v) identify the date, time and place of the incident;
- (vi) notify the Agency and other relevant authorities.

- 9.3.2 The licensee shall provide a proposal to the Agency for its agreement within one month of the incident occurring or as otherwise agreed by the Agency, to:
- (i) identify and put in place measures to avoid recurrence of the incident; and
 - (ii) identify and put in place any other appropriate remedial actions.
- 9.4 Emergencies
- 9.4.1 In the event of a complete breakdown of equipment or any other occurrence which results in the closure of the **anaerobic digestion system**, any waste arriving at or already collected at the facility shall be transferred directly to appropriate landfill sites or any other appropriate facility until such time as the **facility** is returned to a fully operational status. Such a breakdown event will be treated as an emergency and rectified as soon as possible.
- 9.4.2 All significant spillages occurring at the facility shall be treated as an emergency situation and immediately cleaned up and dealt with so as to alleviate their effects.
- 9.4.3 No waste shall be burnt within the boundaries of the facility. A fire at the facility shall be treated as an emergency and immediate action shall be taken to extinguish it and notify the appropriate authorities.
- 9.4.4 In the event that monitoring of local wells indicates that the facility is having a significant adverse effect on the quantity and/or quality of the water supply this shall be treated as an emergency and the licensee shall provide an alternative supply of water to those affected.

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

Condition 10. Closure, Restoration and Aftercare Management

- 10.1 Following termination, or planned cessation for a period greater than six months, of use or involvement of all or part of the site in the licensed activity, the licensee shall, to the satisfaction of the Agency, decommission, render safe or remove for disposal/recovery any soil, subsoil, buildings, plant or equipment, or any waste, materials or substances or other matter contained therein or thereon, that may result in environmental pollution.
- 10.2 Decommissioning Management Plan (DMP)
- 10.2.1 The licensee shall prepare, to the satisfaction of the Agency, a fully detailed and costed plan for the decommissioning or closure of the site or part thereof. This plan shall be submitted to the Agency **for agreement prior to commencement of waste acceptance at the facility.**
- 10.2.2 The plan shall be reviewed annually and proposed amendments thereto notified to the Agency for agreement as part of the AER. No amendments may be implemented without the agreement of the Agency.
- 10.2.3 The licensee shall have regard to the Environmental Protection Agency Guidance on Environmental Liability Risk Assessment, Residuals Management Plans and Financial Provision when implementing Condition 10.2.1 and Condition 10.2.2 above.
- 10.3 The Decommissioning Management Plan shall include, as a minimum, the following:
- (i) a scope statement for the plan;
 - (ii) the criteria that define the successful decommissioning of the activity or part thereof, which ensures minimum impact on the environment;
 - (iii) a programme to achieve the stated criteria;

- (iv) where relevant, a test programme to demonstrate the successful implementation of the decommissioning plan; and
 - (v) details of the costings for the plan and the financial provisions to underwrite those costs.
- 10.4 A final validation report to include a certificate of completion for the Decommissioning Management Plan, for all or part of the site as necessary, shall be submitted to the Agency within three months of execution of the plan. The licensee shall carry out such tests, investigations or submit certification, as requested by the Agency, to confirm that there is no continuing risk to the environment.

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

Condition 11. Notification, Records and Reports

- 11.1 The licensee shall notify the Agency, in writing, one month in advance of the intended date of commencement of **anaerobic digestion at the facility**.
- 11.2 The licensee shall notify the Agency by both telephone and either email or webform, to the Agency's headquarters in Wexford, or to such other Agency office as may be specified by the Agency, as soon as practicable after the occurrence of any of the following:
- (i) any release of environmental significance to atmosphere from any potential emissions point including bypasses;
 - (ii) any emission that does not comply with the requirements of this licence;
 - (iii) any malfunction or breakdown of key control equipment or monitoring equipment set out in *Schedule C: Control and Monitoring*, of this licence which is likely to lead to loss of control of the abatement system; and
 - (iv) any incident with the potential for environmental contamination of surface water or groundwater, or posing an environment threat to air or land, or requiring an emergency response by the Local Authority.
- The licensee shall include as part of the notification, date and time of the incident, summary details of the occurrence, and where available, the steps taken to minimise any emissions.
- 11.3 In the event of any incident which relates to discharges to sewer having taken place, the licensee shall notify the Local and Water Services Authority as soon as practicable after such an incident.
- 11.4 In the case of any incident relating to discharges to water, the licensee shall notify the Local and Water Services Authority and Inland Fisheries Ireland as soon as practicable after such an incident.
- 11.5 The licensee shall make a record of any incident. This record shall include details of the nature, extent, and impact of, and circumstances giving rise to, the incident. The record shall include all corrective actions taken to manage the incident, minimise wastes generated and the effect on the environment, and avoid recurrence. The licensee shall, as soon as practicable following incident notification, submit to the Agency the incident record.
- 11.6 The licensee shall record all complaints of an environmental nature related to the operation of the activity. Each such record shall give details of the date and time of the complaint, the name of the complainant (if provided), and give details of the nature of the complaint. A record shall also be kept of the response made in the case of each complaint.
- 11.7 The licensee shall record all sampling, analyses, measurements, examinations, calibrations and maintenance carried out in accordance with the requirements of this licence and all other such monitoring which relates to the environmental performance of the facility.
- 11.8 The licensee shall as a minimum ensure that the following documents are accessible at the site:

- (i) the licences relating to the facility;
- (ii) the current EMS for the facility;
- (iii) the previous year's AER for the facility;
- (iv) records of all sampling, analyses, measurements, examinations, calibrations and maintenance carried out in accordance with the requirements of this licence and all other such monitoring which relates to the environmental performance of the facility;
- (v) relevant correspondence with the Agency;
- (vi) up-to-date site drawings/plans showing the location of key process and environmental infrastructure, including monitoring locations and emission points;
- (vii) up-to-date Standard Operational Procedures for all processes, plant and equipment necessary to give effect to this licence or otherwise to ensure that standard operation of such processes, plant or equipment does not result in unauthorised emissions to the environment;
- (viii) any elements of the licence application or EIS documentation referenced in this licence;
- (ix) all training undertaken by facility staff;
- (x) results from all integrity tests of bunds and other structures and any maintenance or remedial work arising from them;
- (xi) details of all nuisance inspections;
- (xii) 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. Any proposed changes to the above shall be submitted in writing to the Agency for its agreement; and

a detailed drawing indicating all drainage arrangements at the facility. This documentation shall be available to the Agency for inspection at all reasonable times.

- 11.9 The licensee shall submit to the Agency, by the 31st March of each year, an AER covering the previous calendar year. This report, which shall be to the satisfaction of the Agency, shall include as a minimum the information specified in *Schedule D: Annual Environmental Report*, of this licence and shall be prepared in accordance with any relevant guidelines issued by the Agency.
- 11.10 A full record, which shall be open to inspection by authorised persons of the Agency at all times, shall be kept by the licensee on matters relating to the waste management operations and practices at this site. This record shall be maintained on a monthly basis and shall as a minimum contain details of the following:
- (i) the tonnages and EWC Code for the waste materials **accepted** and/or sent off-site for disposal/recovery;
 - (ii) the names of the agent and carrier of the waste, and their waste collection permit details, if required (to include issuing authority and vehicle registration number);
 - (iii) details of the ultimate disposal/recovery destination facility for the waste and its appropriateness to accept the consigned waste stream, to include its permit/licence details and issuing authority, if required;
 - (iv) **details of the destination of digestate batches;**
 - (v) written confirmation of the acceptance and disposal/recovery of any hazardous waste consignments sent off-site;
 - (vi) details of all waste consigned abroad for Recovery and classified as 'Green' in accordance with the EU Shipment of Waste Regulations (Council Regulation EEC No. 1013/2006, as may be amended). The rationale for the classification must form part of the record;
 - (vii) details of any rejected consignments;
 - (viii) details of any approved waste mixing;
 - (ix) the results of any waste analyses required under *Schedule C: Control & Monitoring*, of this licence; and
 - (x) the tonnage and EWC Code for the waste materials recovered/disposed on-site.

- 11.11 The licensee shall maintain a written record for each load of waste arriving at and departing from the facility. The licensee shall record the following:
- (i) the date and time;
 - (ii) the name of the carrier (including if appropriate, the waste carrier registration details);
 - (iii) the vehicle registration number;
 - (iv) the trailer, skip or other container unique identification number (where relevant);
 - (v) the name of the producer(s)/collector(s) of the waste as appropriate;
 - (vi) the name of the waste facility (if appropriate) from which the load originated including the waste licence or waste permit register number;
 - (vii) a description of the waste including the associated EWC/HWL codes;
 - (viii) the quantity of the waste, recorded in tonnes;
 - (ix) details of the treatment(s) to which the waste has been subjected;
 - (x) the classification and coding of the waste, including whether MSW or otherwise;
 - (xi) whether the waste is for disposal or recovery and if recovery for what purpose;
 - (xii) the name of the person checking the load; and 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.
- 11.12 Waste Recovery Reports
- The licensee shall as part of the AER submit a report on the contribution by this facility to the achievement of the recovery targets and strategy stated in national and European Union waste policies and shall include the following:-
- (i) the recovery/treatment of biowaste (including contribution of facility to the pre-treatment targets in the EU Landfill Directive); and
 - (ii) **the recovery of energy through biogas combustion.**
- 11.13 A record shall be kept at the facility of the programme for the control and eradication of vermin and fly infestations at the facility. These records shall include as a minimum the following:-
- (i) the date and time during which spraying of insecticide is carried out;
 - (ii) contractor details;
 - (iii) contractor logs and site inspection reports;
 - (iv) details of the rodenticide(s) and insecticide(s) used;
 - (v) operator training details;
 - (vi) details of any infestations;
 - (vii) mode, frequency, location and quantity of application; and,
 - (viii) measures to contain sprays within the facility boundary.
- 11.14 A record shall be kept of each consignment of trade effluent, leachate, **digestate liquor** and/or contaminated storm water removed from the facility. The record shall include the following:-
- (i) the name of the carrier;
 - (ii) the date and time of removal of trade effluent, **or other liquid waste** and/or contaminated storm water from the facility;
 - (iii) the volume of trade effluent, **or other liquid waste** and/or contaminated storm water, in cubic metres, removed from the facility on each occasion;
 - (iv) the name and address of the Waste Water Treatment Plant to which the **trade effluent, or other liquid waste** and/or contaminated storm water was transported; and
 - (v) any incidents or spillages of trade effluent, **or other liquid waste** and/or contaminated storm water during its removal or transportation.

- 11.15 The licensee shall submit report(s) as required by the conditions of this licence to the Agency's Headquarters in Wexford, or to such other Agency office as may be specified by the Agency.
- 11.16 All reports shall be certified accurate and representative by the facility manager or a nominated, suitably qualified and experienced deputy.

Reason: *To provide for the collection and reporting of adequate information on the activity.*

Condition 12. Financial Charges and Provisions

12.1 Agency Charges

12.1.1 The licensee shall pay to the Agency an annual contribution of **€11,935**, or such sum as the Agency from time to time determines, having regard to variations in the extent of reporting, auditing, inspection, sampling and analysis or other functions carried out by the Agency, towards the cost of monitoring the activity as the Agency considers necessary for the performance of its functions under the Waste Management Acts 1996 to 2013. The first payment shall be a pro-rata amount for the period from the date of grant of this licence to the 31st day of December, and shall be paid to the Agency within one month from the date of grant of the licence. In subsequent years the licensee shall pay to the Agency such revised annual contribution as the Agency shall from time to time consider necessary to enable performance by the Agency of its relevant functions under the Waste Management Acts 1996 to 2013, and all such payments shall be made within one month of the date upon which demanded by the Agency.

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

12.2 Water Services Authority Charges

The licensee shall pay to the Water Services Authority such sum as may be determined from time to time, having regard to the variations in the cost of providing drainage and the variation in effluent reception and treatment costs. Payment to be made on demand.

12.3 Environmental Liabilities

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

12.3.2 The licensee shall arrange for the completion, by an independent and appropriately qualified consultant, of a comprehensive and fully costed Environmental Liabilities Risk Assessment (ELRA) which addresses the liabilities from past and present activities including those authorised under this licence. The assessment shall include those liabilities and costs identified in Condition 10 for execution of the DMP. A report on this assessment shall be submitted to the Agency for agreement in advance of the commencement of **waste acceptance**. The ELRA shall be reviewed as necessary to reflect any significant change on site, and in any case every three years following initial agreement. Review results are to be notified as part of the AER.

12.3.3 As part of the measures identified in Condition 12.3.1, the licensee shall, to the satisfaction of the Agency and prior to the commencement of **waste acceptance**, make financial provision to cover any liabilities associated with the operation (including closure). The amount of indemnity held shall be reviewed and revised as necessary, but at least annually. Proof of renewal or revision of such financial

indemnity shall be included in the annual 'Statement of Measures' report identified in Condition 12.3.1.

12.3.4 The licensee shall revise the cost of closure annually and any adjustments shall be reflected in the financial provision made under Condition 12.3.3.

12.3.5 The licensee shall have regard to the Environmental Protection Agency Guidance on Environmental Liability Risk Assessment, Residuals Management Plans and Financial Provision when implementing Conditions 12.3.2 and 12.3.3 above.

Reason: To provide for adequate financing for monitoring and financial provisions for measures to protect the environment and to provide for the requirements of the Water Services Authority in accordance with Section 52 of the Waste Management Acts 1996 to 2013.

SCHEDULE A: Limitations

A.1 Authorised Processes

The following processes are authorised:

- (i) **Recovery of materials from waste prior to anaerobic digestion;**
- (ii) **Mixing of waste prior to anaerobic digestion;**
- (iii) **Anaerobic digestion of waste;**
- (iv) **Combustion of biogas in a combined heat and power plant and flare;**
- (v) **Drying of wood; and**
- (vi) Storage of waste.

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



A.2 Waste Acceptance

The list of waste in the following table is without prejudice to any restrictions placed on the activity by the Department of Agriculture, Food and the Marine in relation to the acceptance and processing of waste comprising or containing animal by-products.

A.2 Waste Accepted

Non-Hazardous Waste Types ^{Note 1}	Maximum ^{Note 2 & 3} (Tonnes Per Annum)
Biowaste	13,500.
Industrial non-hazardous organic liquids	8,500.
Total	22,000.

Note 1: Any proposals to accept other compatible non-hazardous waste types must be agreed in advance by the Agency.

Note 2: The limitation on individual non-hazardous waste types may be varied with the agreement of the Agency subject to the total limit for non-hazardous waste staying the same.

Note 3: The capacity of the anaerobic digestion process shall not exceed 100 tonnes per day.



SCHEDULE B: Emission Limits

B.1 Emissions to Air

B.1.1 Emission Limits Values for Biofilters:

Emission Point reference no:	A-3 Biofilter.
Location:	Odour Abatement Unit.
Minimum stack discharge height:	15m above ground.
Minimum stack diameter:	1.1m.
Maximum flow volume:	24,840 m³/hr

Parameter	Emission Limit Value
Ammonia	50 mg/m ³
Hydrogen sulphide	0.9 mg/m ³ ^{Note 1}
Mercaptans	5 mg/m ³
Amines	5 mg/m ³
Odour	1,000 Ou _E /m ³

Note 1: Except as may be varied by agreement with the Agency.



B.1.2 Emission Limits Values for other filters:

Emission Point reference no:	A-4 Dust filter ^{Note 1}
Location:	Wood drying and storage area.

Parameter	Emission Limit Value
Dust	20 mg/m ³

Note 1: Filter type to be agreed by the Agency.

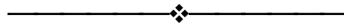


B.1.3 Emission Limit Values for Biogas Utilisation

Emission Point Reference No.: Gas utilisation engine A-1
Location: As may be agreed by the Agency.
Minimum stack discharge height: 10m above ground
Minimum stack diameter: 0.35m

Parameter	Emission Limit Value ^{Note 1}
Particulates	50mg/m ³
NOx	500 mg/m ³
SO ₂	350 mg/m ³
CO	650 mg/m ³
H ₂ S	5 mg/m ³
HCl	30 mg/m ³
HF	5 mg/m ³

Note 1: Except as may be varied by agreement with the Agency.

**B.1.4 Dust Deposition Limits**

Monitoring Point Reference No.: D1, D2, D3 and D4.
Location: To be agreed.

Level (mg/m ² /day) ^{Note 2}
350

Note 1: Monitoring at points D1, D2 and D3 shall take place at the same locations as N1, N2 and N3 on drawing no. LW12-193-01-200-006 unless otherwise agreed by the Agency. Monitoring point D4 shall be located on the eastern boundary of the facility at a location agreed by the Agency.

Note 2: 30 day composite sample with the results expressed as mg/m²/day.



B.2 Emissions to Water

There shall be no emissions to water of environmental significance.

B.3 Emissions to Sewer

Emission Point Reference No: FW1^{Note 1}
Location: As per drawing No. LW12-193-01-200-006 (Revision A).
Volume to be emitted: Maximum in any one day: 63 m³
 Maximum rate per hour: 2.2 m³

Parameter	Emission Limit Value	
	mg/l	kg/day
Temperature	<30°C	
pH	6 – 9	
BOD	20,000	1,260
COD	65,000	4,036
Suspended Solids	500	31.5
Total Nitrogen	100	6.3
Ammonia (as N)	250	15.75
Oils, Fat & Grease	80	5
Mineral oils	20	1.26
Sulphates	100	6.3
Cadmium	0.0045	0.0003
Chromium (total)	0.30	0.019
Copper	0.60	0.038
Lead	1.00	0.063
Mercury	0.003	0.0002
Nickel	0.15	0.0095
Zinc	1.20	0.0756

Note 1: The licensee shall inform Waterford City Council immediately of any unforeseen discharges.

B.4 Noise Emissions

Monitoring Point Reference No.: N1, NS1, N2, NS2 and N3.
Location: As per drawing No. LW12-193-01-200-006 (Revision A).

Daytime dB L _{Ar,T} (30 minutes)	Evening time dB L _{Ar,T} (30 minutes)	Night-time dB L _{Aeq,T} (15-30 minutes)
55	50	45 ^{Note 1}

Note 1: There shall be no clearly audible tonal component or impulsive component in the noise emission from the activity at any noise-sensitive location.

SCHEDULE C: Control & Monitoring

C.1.1. Control of Emissions to Air

Emission Point Reference No: A-3 Biofilter (Odour Abatement System)
Description of Treatment: Biofiltration

Control Parameter	Monitoring	Key Equipment ^{Note 1}
Air Management and Treatment		
Air extraction	Continuous with alarm/call-out	Pumps/ engines Pressure gauges
Bio-filters		
Ammonia	Monthly (at inlet and outlet)	Colorimetric indicator tubes ^{Note 2}
Hydrogen sulphide	Monthly (at inlet and outlet)	Colorimetric indicator tubes ^{Note 2}
Mercaptans	Monthly (at inlet and outlet)	Colorimetric indicator tubes ^{Note 2}
Amines	Monthly (at inlet and outlet)	Colorimetric indicator tubes ^{Note 2}
Bed Media ^{Note 3}		
Odour assessment	Daily	Subjective impression
Condition and depth of bed media	Daily	Visual inspection
Moisture content	Monthly	Agreed method
pH	Bi-annually	Agreed method
Ammonia	Bi-annually	Agreed method
Total viable counts	Bi-annually	Agreed method
General		
Fan	Daily visual check	System is operational
Negative pressure across biofilter	Monthly	Air current tubes

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

Note 2: Or an alternative method agreed by the Agency.

Note 3: The biofilter shall be examined to ensure that no channelling is evident. Turning, restructuring and the addition of supplementary bed materials or total replacement of bed materials shall be carried out as required subject to bed performance.



Emission Point Reference No: A-4 Filter (Wood Drying and Storage Area)

Description of Treatment: Filtration ^{Note 1}

Control Parameter	Monitoring	Key Equipment ^{Note 2}
Extraction	Continuous with alarm/call-out	Pressure gauge or equivalent approved Pumps/engines
Other parameters ^{Note 3}		

Note 1: Type of filtration to be agreed by the Agency.

Note 2: The licensee shall maintain appropriate access to standby and/or spares to ensure the operation of the abatement system.

Note 3: As agreed by the Agency.

Emission Point Reference No:

Gas utilisation engine: A-1

Description of Treatment:

Combined heat and power plant - biogas combustion

Control Parameter	Monitoring	Key Equipment ^{Note 1}
Biogas intake flow	Continuous with alarm/call-out	Flow detector
Fuel loading	Continuous monitoring of biogas levels	Storage tank and level monitor
Pressure in gas system	Continuous with alarm/call-out	Pressure gauge or equivalent approved Standby flare
Continuous burn	Continuous with alarm/call-out	Flame detector or equivalent approved Pumps/engines Standby flare
Stack temperature	Continuous with alarm/call-out	Temperature probe
Stack efflux velocity	Continuous with alarm/call-out	Standard equipment
Maximum emission flow volume	Continuous with alarm/call-out	Standard equipment
Gas engine operation	Continuous with alarm/call-out	Standard equipment
Quality of biogas	Concentration of total halogenated hydrocarbons and sulphur compounds.	Standard sampling and analytical equipment

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



Emission Point Reference No:

Bypass Flare: A-2

Description of Treatment:

Biogas Combustion

Control Parameter	Monitoring	Key Equipment ^{Note 1}
Automatic ignition	Continuous monitoring of biogas levels	Gas storage tank level monitoring
Automatic temperature/pressure	Flow pressure and temperature	Pressure indicator/temperature switch
Flare unit efficiency	Annual testing	Appropriate equipment
Flue gas outlet temperature (at least 900°C at all times)	Continuous with alarm/call-out	Standard equipment
Flue gas residence time (at least 0.3 seconds at all times)	Continuous with alarm/call-out	Standard equipment

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



C.1.2. Monitoring of Emissions to Air**Emission Point Reference No:** Biofilter: A-3

Parameter	Monitoring Frequency	Analysis Method/Technique
Odour	Bi-annual ^{Note 1}	See Note 1
Ammonia	Monthly (at outlet of Biofilter)	Colorimetric indicator tubes ^{Note 2}
Hydrogen sulphide	Monthly (at outlet of Biofilter)	Colorimetric indicator tubes ^{Note 2}
Mercaptans	Monthly (at outlet of Biofilter)	Colorimetric indicator tubes ^{Note 2}
Amines	Monthly (at outlet of Biofilter)	Colorimetric indicator tubes ^{Note 2}

Note 1: Odour measurements shall be by olfactometric measurement and analysis shall be for mercaptans, hydrogen sulphide, ammonia, and amines.

Note 2: Or an alternative method agreed by the Agency.

Emission Point Reference No: A-4 Filter

Parameter	Monitoring Frequency	Analysis Method/Technique
Dust (mg/m³/day)	Quarterly	Standard Method
Other Parameters ^{Note 1}		

Note 1: As agreed by the Agency.

Emission Point Reference No: A-1**Description of Treatment:** Combined heat and power plant - biogas combustion

Parameter	Monitoring	Analysis Method/Technique
Dust	Monthly for first twelve months of operation and quarterly thereafter	To be agreed with the Agency
NO_x (asNO₂)		
SO_x (as SO₂)		
CO		
H₂S		
HCl		
HF		

C.2.2 Monitoring of Biological Treatment Processes

Parameter	Monitoring Frequency	Monitoring equipment/method
• Anaerobic digestion process		
Temperature	Continuous	Temperature probe and recorder
pH in digesters	Daily	pH probe
Pressure relief valve status (open/closed)	Continuous on each valve	Event and time recorder
Biogas flow	Continuous	Flow meter and recorder
Biogas pressure in digester system	Continuous	Pressure gauge and recorder
Biogas pressure in storage system	Continuous	Pressure gauge and recorder
Biogas pressure in CHP and flare systems	Continuous	Pressure gauge and recorder
CHP runtime	Continuous	Time recorder
Flare runtime	Continuous	Time recorder
• Biogas analysis from anaerobic digestion		
CH ₄	Continuous	Probe with recorder
CO ₂	Continuous	Probe with recorder
Total halogenated hydrocarbons	Monthly	To be agreed
H ₂ S	Monthly	To be agreed
• General		
Liquid level in percolate and liquor tanks	Continuous	Probe with recorder

C.3.1. Control of Emissions to Water

There shall be no emissions to water of environmental significance.

C.3.2. Monitoring of Emissions to Water

There shall be no emissions to water of environmental significance.

C.4.1. Control of Storm Water Emissions

Emission Point Reference No: SW1
Emission Point Location: As per drawing no. LW12-193-01-200-006 (Revision A)

Control Parameter	Monitoring	Key Equipment ^{Note 1}
Oil removal	Mineral oil concentration in water at discharge point	Class I full retention oil separators. Shut-off valve.
Suspended solids	Suspended solids concentration in water at discharge point	Silt trap.

**C.4.2. Monitoring of Storm Water Emissions**

Emission Point Reference No: SW1.
Emission Point Location: As per drawing no. LW12-193-01-200-006 (Revision A).

Parameter	Monitoring Frequency	Analysis Method/Technique
pH	Weekly	Standard method
Temperature	Quarterly	Standard method
COD	Quarterly	Standard method
BOD	Quarterly	Standard method
Suspended Solids	Quarterly	Standard method
Total Ammonia	Quarterly	Standard method
Total Nitrogen	Quarterly	Standard method
Conductivity	Quarterly	Standard method
Mineral Oil	Quarterly	Standard method
Sulphate	Quarterly	Standard method
Visual Inspection	Daily	Sample and examine for colour and odour ^{Note 1} .

Note 1: Where there is evidence of contamination, additional samples should be analysed and the full suite of parameters shown tested.



C.5.1. Monitoring of Emissions to Sewer

Emission Point Reference No: FW1

Parameter	Monitoring Frequency ^{Note 1}	Analysis Method /Technique ^{Note 2}
Flow	Continuous	On-line flow meter with recorder
Temperature	Continuous	Temperature probe with recorder
pH	Continuous	pH electrode/meter and recorder
Chemical Oxygen Demand	Weekly	Standard Method
Biochemical Oxygen Demand	Fortnightly	Standard Method
Suspended Solids	Weekly	Gravimetric
Total Nitrogen	Fortnightly	Standard Method
Sulphates	Fortnightly	Standard Method
Mineral Oils	Quarterly	Standard Method
Ammonia (as N)	Fortnightly	Standard Method
Metals (specify)	Quarterly	Standard Method
Oils, fats and greases	Fortnightly	Standard Method

Note 1: Results of monitoring to be submitted to Waterford City Council on a monthly basis in excel format.

Note 2: A continuously recording flow meter shall be installed and maintained on the discharge to the public sewer. Flows shall be recorded and stored on site. The meter shall be calibrated on an annual basis.

**C.6 Tankered Effluent and Waste Analysis**

Waste Class	Frequency	Parameter	Method
Trade effluent sent off-site for disposal	Quarterly	BOD COD Metals Mineral oils Chloride Ammonia (as NH ₄) Sulphate Suspended solids pH	Standard Method
Municipal waste dispatched to landfill	As may be specified by the Agency	BMW content	Waste characterisation or other methods as may be specified.
Other ^{Note 1}			

Note 1: Analytical requirements to be determined on a case by case basis.



C.7 Noise Monitoring

Location	Measurement	Frequency
N1, NS1, N2, NS2 and N3. Other noise sensitive locations within the vicinity of the facility or as may be otherwise agreed/directed, or as may be amended under Condition 6.8	Daytime dB L _{Ar, T} (30 minutes) Evening dB L _{Ar, T} (30 minutes) Night-time dB L _{Aeq, T} (15 – 30 minutes)	Quarterly
Period	Minimum Survey Duration	
Daytime	4 hour survey with a minimum of 3 sampling periods at each noise monitoring location. Note 2	
Evening-time	2 hour survey with a minimum of 1 sampling period at each noise monitoring location.	
Night-time ^{Note 1}	3 hour survey with a minimum of 2 sampling periods at each noise monitoring location.	

Note 1: Night-time measurements should be made between 2300hrs and 0400hrs, Sunday to Thursday, with 2300hrs being the preferred start time.



C.8 Ambient Monitoring

Ambient Air Monitoring

Location: Dust - monitoring stations D1, D2, D3, D4
Micro-organisms - at upwind and downwind locations to be agreed by the Agency or at any other locations as may be required by the Agency

Parameter	Monitoring Frequency	Analysis Method/Technique
Dust deposition	Quarterly ^{Note 1}	VDI 2119 (Bergerhoff method)
Bacteria	Quarterly	Grab sample ^{Note 2}
Aspergillus fumigatus	Quarterly	Grab sample ^{Note 2}

Note 1: Twice during the period May to September concurrently with all of the above.

Note 2: Enumeration of colonies to be carried out as described in 'Standardised Protocol for the Sampling and Enumeration of Airborne Micro-organisms at Composting Facilities' - The Composting Association (1999) or alternative method and/or frequency as may be agreed by the Agency.



Groundwater Monitoring

Monitoring point reference no.: BH1 (258393 109643) and BH2 (258208 109579)

Location: As per drawing No. LW12-193-01-200-006 (Revision A)

Parameter	Monitoring Frequency	Analysis Method/Techniques
pH	Biannually	pH electrode/meter
COD	Biannually	Standard Method

Nitrate	Biannually	Standard Method
Total Ammonia	Biannually	Standard Method
Total Nitrogen	Biannually	Standard Method
MRP	Biannually	Standard Method
Conductivity	Biannually	Standard Method
Chloride	Biannually	Standard Method
Fluoride	Biannually	Standard Method
Hazardous Compounds ^{Note1}	Annually	Standard Method

Note 1: The relevant hazardous substances for monitoring in groundwater shall be identified by the licensee by undertaking a risk based assessment. The licensee shall have regard to the 'Classification of Hazardous and Non-Hazardous Substances in Groundwater' issued by the Agency.



Receiving Water Monitoring

Monitoring Point Reference No.: SW2 - upstream monitoring location
SW3 - downstream monitoring location

Location: At locations, to be agreed by the Agency, on the stream adjacent to the western boundary of the facility

Parameter	Monitoring Frequency ^{Note 1}	Analysis Method/Techniques
Biological Quality (Q) Rating/Q Link	Annually	To be agreed by the Agency

Note 1: Monitoring period – June to September.



Schedule D: Specified Engineering Works

Specified Engineering Works

Development of the facility including installation of waste-handling, processing, recycling/recovery infrastructure and installation of increased waste processing capacity as well as any abatement systems.

Installation of drainage network including silt traps and oil interceptors.

Installation of dust/odour control systems.

Installation of an anaerobic digestion facility and combined heat and power plant.

Installation of storm water settlement pond.

Any other works notified in writing by the Agency.

Schedule E: Standards for Digestate Quality.

Digestate Quality

The following criteria are deemed a quality standard for the use of digestate as a soil improver if applied to land in accordance with statutory obligations and requirements under any other enactments or regulations. The following criteria should not be deemed as criteria for fertiliser. Digestate for other end uses may require stricter and/or additional criteria to be achieved.

N, P, K, NH₄-N, NO₃-N, pH and dry matter content shall be measured and reported upon in digestate quality reports in order to facilitate the end use of the digestate.

The criteria apply to the digestate just after the final phase/treatment and prior to mixing with any other materials.

1. Stability

Table E.1- Maximum Respiration Activity

Parameter	Quality Limit
Stability	Oxygen Uptake Rate (OUR), ≤ 13 mmol O ₂ /kg organic solids/hour



2. Metals ^{Note 1, 2 & 3}

Table E.2 – Maximum Metal Concentration Limits

Parameter (mg/kg, dry mass)	Digestate Limit (mg/kg dry matter)
Cadmium (Cd)	1.5
Chromium (Cr)	150
Copper (Cu)	150
Mercury (Hg)	1
Nickel (Ni)	75
Lead (Pb)	150
Zinc (Zn)	400

Note 1: These limits should not be taken as an indication of suitability for addition to soil as the cumulative metal additions to soil should be first calculated.

Note 2: Incoming sludges (other than sewage sludges) shall be monitored quarterly (on a client by client basis) for the parameters outlined in this table and also for Selenium (Se) and Molybdenum (Mo).

Note 3: Monitoring of Arsenic (As) is required if waste timber is used in the anaerobic digestion process.



3. Pathogens

If this facility is regulated by the Department of Agriculture, Food and the Marine under the Animal By-products Regulation and the digestate has been sanitised in accordance with that Department's requirements, there is no requirement for further testing, provided that records of the testing form part of the digestate quality records maintained in accordance with this licence.

If the above does not apply the pathogenic organism content shall not exceed the limits for the following indicator species:

Table E.3 – Pathogenic Organism Content Limits

Species	Limit	Sample Number (n)
Salmonella spp.	Absent in 25g	n=5
Escherichia coli	≤ 1000 CFU per gram of fresh mass	n=5

Where n = Number of samples to be tested.



4. Impurities

Table E.4 – Impurity Content Limits

Parameter	Digestate Limit
Impurities ^{Note 1} > 2 mm	< 0.5%
Gravel and Stones > 5 mm	< 5%
Sharps	Digestate shall not any sharp impurity measuring over a 2 mm dimension that could cause damage or injury to humans, animals or plant during, or resulting from, its intended use

Note 1: Impurities generally refer to macroscopic fragments of glass, metals, plastics or similar non-biodegradable materials.



5. Organic Matter

Table E.5 – Organic Matter Content Limit

Parameter	Digestate Limit
Organic Matter	≥ 20%



6. Miscellaneous

Table E.6 – Maturity Test

Parameter	Digestate Limit
Viable Weed Seeds	< 3 viable weed seed per litre
Other	As may be agreed by the Agency

SCHEDULE F: Annual Environmental Report

Annual Environmental Report Content ^{Note 1}
<p>Reporting Period.</p> <p>Waste activities carried out at the facility.</p> <p>Quantity and Composition of waste recovered, received and disposed of during the reporting period and each previous year (relevant EWC codes to be used).</p> <p>Emissions from the facility</p> <p>Waste management record.</p> <p>Waste recovery report.</p> <p>Full title and a written summary of any procedures developed by the licensee in the year which relates to the facility operation.</p> <p>Amount of digestate produced per annum.</p> <p>Review of Nuisance Controls.</p> <p>Resource consumption summary.</p> <p>Energy and heat generation summary.</p> <p>Use of biogas flare and biogas venting summary.</p> <p>Complaints summary.</p> <p>Schedule of Environmental Objectives and Targets.</p> <p>Environmental management programme – report for previous year.</p> <p>Environmental management programme – proposal for current year.</p> <p>Pollutant Release and Transfer Register – report for previous year.</p> <p>Pollutant Release and transfer Register – proposal for current year.</p> <p>Noise monitoring report summary.</p> <p>Ambient monitoring summary.</p> <p>Tank and pipeline testing and inspection report.</p> <p>Reported incidents summary.</p> <p>Energy efficiency audit report summary.</p> <p>Report on the assessment of the efficiency of use of raw materials in processes and the reduction in waste generated.</p> <p>Report on progress made and proposals being developed to minimise water demand and the volume of trade effluent discharges.</p> <p>Volume of trade effluent/leachate and/or contaminated storm water produced and volume transported off-site.</p> <p>Development/Infrastructural works summary (completed in previous year or prepared for current year).</p> <p>Reports on financial provision made under this licence, management and staffing structure of the facility, and a programme for public information.</p> <p>Review of decommissioning management plan.</p> <p>Statement of measures in relation to prevention of environmental damage and remedial actions (Environmental Liabilities).</p> <p>Environmental Liabilities Risk Assessment Review (every three years or more frequently as dictated by relevant on-site change including financial provisions).</p> <p>Destination and uses of digestate produced.</p> <p>Any other items specified by the Agency.</p>

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

[Sign off for Proposed Determinations/Decisions](#)

Signed on behalf of the said Agency _____
 On the xx day of xxxxx, 200X xxxxxxxxxxxx **Authorised Person**

Sign Off for Final Licences/Decisions

Sealed by the seal of the Agency on this the ** day of ** 201* .

PRESENT when the seal of the Agency
Was affixed hereto:

XXXX Director/Authorised Person