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Ireland

**WASTE LICENCE
Recommended Decision**

Licence Register Number:	W0244-01
Applicant:	Waterford City Council
Location of Facility:	Waterford Wastewater Treatment Plant, Springfield House, Gorteens, Co. Kilkenny.

INTRODUCTION

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

The facility is a wastewater treatment plant for Waterford City and its Environs to cater for domestic and industrial wastewater. It is located approximately 3km east of Waterford City in the townland of Gorteens, Co. Kilkenny. The facility will be operated by Celtic Anglian Water on behalf of Waterford City Council and will operate 24 hours/day and 365 days/year.

The wastewater treatment process consists of inlet screening, grit and grease removal, primary settlement, activated sludge process and final settlement. The facility includes infrastructure for the treatment of excess sludge generated by the wastewater treatment process. The maximum tonnage of sewage sludge to be treated is 95,100 tonnes per annum. No sludges or other wastes are permitted to be imported for treatment.

The sludge arising from wastewater treatment is thickened, pasteurised, treated in two anaerobic digesters and dewatered. Biogas from the digestion process is used for the on-site boilers, with any excess gas being flared. The wastewater preliminary treatment works and sludge dewatering works are located indoors, in the inlet works building and sludge building respectively. These areas are to be operated under negative air pressure with odours extracted to two odour control units for treatment.

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 2007 / Waste Management Acts 1996 to 2008, 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	Biological degradation (treatment) of products undertaken under anaerobic conditions.
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	All or part of a period of six consecutive months.
Biennially	Once every two years.
Biodegradable waste	Any waste that is capable of undergoing anaerobic or aerobic decomposition, such as food, garden waste, sewage sludge, paper and paperboard.
Biogas	A mixture of methane and carbon dioxide, which is produced by bacterial degradation of organic matter under anaerobic conditions.
Biological treatment	Biological treatment involves composting, anaerobic digestion, mechanical biological treatment or any other process for stabilising biodegradable waste.
Bimonthly	A minimum of 2 times per month, at intervals of approximately two weeks.
BOD	5 day Biochemical Oxygen Demand.
Buffer zone	Area excluded from landspreading of sludge.
CEN	Comité Européen De Normalisation – European Committee for Standardisation.
Client List	A list of farmers and associated farmlands used for the landspreading of sludge from the facility.
COD	Chemical Oxygen Demand.
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.
Daylight hours	Lighting-up time plus an hour.
Daytime	0800 hrs to 2200 hrs.

dB(A)	Decibels (A weighted).
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.
Domestic Waste Water	Waste water from residential settlements and services that originates predominantly from human metabolism and from household activities.
EMP	Environmental Management Programme.
Emission limits	Those limits, including concentration limits and deposition rates, established in <i>Schedule B: Emission Limits</i> of this licence.
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.
Facility	Any site or premises used for the purpose of the recovery of 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.
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.
HFO	Heavy Fuel Oil as defined in Council Directive 1999/32/EC and meeting the requirements of S.I. No. 119 of 2008.
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.
Industrial waste	As defined in Section 5(1) of the Waste Management Acts 1996 to 2008.
Industrial waste water	Any waste water that is discharged from premises used for carrying on any trade or industry or other non-domestic use and excludes run-off rain water.
IPPC	Integrated Pollution Prevention & Control.
K	Kelvin.
kPa	Kilopascals.
Landfill Directive	Council Directive 1999/31/EC.
Landspreading	The application of sludge to farmland.
L_{eq}	Equivalent continuous sound level.
Licence	A Waste Licence issued in accordance with the Waste Management Acts 1996 to 2008.
Licensee	Waterford City Council, Wallace House, Maritana Gate, Canada Street, Waterford.
Liquid waste	Any waste in liquid form and containing less than 2% dry matter.
List I	As listed in the EC Directives 76/464/EEC and 80/68/EEC and amendments.
List II	As listed in the EC Directives 76/464/EEC and 80/68/EEC and amendments
Local Authority	Kilkenny County 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.
Mobile plant	Self-propelled machinery used for the emplacement of wastes or for the construction of specified engineering works.
Monthly	A minimum of 12 times per year, at intervals of approximately one month.
Night-time	2200 hrs to 0800 hrs.
Noise-sensitive location (NSL)	Any dwelling house, hotel or hostel, health building, educational establishment, place of worship or entertainment, or any other facility or area of high amenity which for its proper enjoyment requires the absence of noise at nuisance levels.
NMP	Nutrient Management Plan.
Odour-sensitive location	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 odour at nuisance levels.
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).
Primary Discharge	The discharge with the largest volume being discharged from the waste water works.
PRTR	Pollutant Release and Transfer Register.

Quarterly	At approximately three – monthly intervals.
Recyclable materials	Waste types, such as cardboard, batteries, gas cylinders etc, which may be recycled.
Regional Fisheries Board	Southern Regional Fisheries Board.
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.
Sludge	Residual sludge from sewage plants treating domestic or urban waste waters and from other sewage plants treating waste waters of a composition similar to domestic and urban waste waters.
SOP	Standard operating procedure.
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.
Temporary storage	In relation to waste is a period of less than six months as defined in the Waste Management Acts 1996 to 2008.
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.
Waste Water	Domestic waste water or the mixture of domestic waste water with industrial waste water.
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 2008.

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

Part I Scheduled of Activities Licensed

In pursuance of the powers conferred on it by the Waste Management Acts 1996 to 2008, the Environmental Protection Agency (the Agency) proposes, under Section 40(1) of the said Acts to grant this Waste Licence to **Waterford City Council, Wallace House, Maritana Gate, Canada Street, Waterford** to carry on the waste activities listed below at **Waterford Wastewater Treatment Plant, Springfield House, Gorteens, Co. Kilkenny** 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 2008

Class 6.	Biological treatment not referred to elsewhere in this Schedule which results in final compounds or mixtures which are disposed of by means of any activity referred to in paragraphs 1 to 5 or paragraphs 7 to 10 of this Schedule. [Principal Activity]
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Licensed Waste Recovery Activities, in accordance with the Fourth Schedule of the Waste Management Acts 1996 to 2008

Class 2.	Recycling or reclamation of organic substances which are not used as solvents (including composting and other biological processes).
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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 is the area of land outlined in red on **Figure B.2 (2)** 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 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.
- 1.6 This licence is for purposes of waste licensing under the Waste Management Acts 1996 to 2008 only and nothing in this licence shall be construed as negating the licensee's statutory obligations, or requirements under any other enactments or regulations.

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

Condition 2. Management of the Facility

2.1 Facility Management

- 2.1.1 The licensee shall employ a suitable 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 the FAS waste management training programme or equivalent agreed by the Agency.

2.2 Environmental Management System (EMS)

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

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

2.2.2.1 Management and Reporting Structure.

2.2.2.2 Schedule of Environmental Objectives and Targets.

The licensee shall prepare and maintain a Schedule of Environmental Objectives and Targets. The schedule shall, as a minimum, provide for a review of all operations and processes, including an evaluation of practicable options, for energy and resource efficiency, the use of cleaner technology, cleaner production, and the prevention, reduction and minimisation of waste and shall include waste reduction targets. The schedule shall 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 and maintain 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. 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. **The programme shall include in particular the anaerobic digesters.** 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 four months of the date of grant of this licence, provide a Facility Notice Board on the facility so that it is legible to persons outside the main entrance to the facility. The minimum dimensions of the board shall be 1200 mm by 750 mm. 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 operation;
 - (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 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 Facility Security

- 3.3.1 Security and stockproof fencing and gates shall be installed and maintained. The base of the fencing shall be set in the ground.
- 3.3.2 Gates shall be locked shut when the facility is unsupervised.
- 3.3.3 The licensee shall remedy any defect in the gates and/or fencing as follows:
- (i) A temporary repair shall be made by the end of the working day; and
 - (ii) A repair to the standard of the original gates and/or fencing shall be undertaken within three working days.
- 3.3.4 The licensee shall provide and use adequate lighting during the operation of the facility in hours of darkness.

3.4 Facility Roads and Site Surfaces

- 3.4.1 Effective site roads shall be provided and maintained to ensure the safe and nuisance-free movement of vehicles within the facility.
- 3.4.2 The licensee shall provide and maintain an impermeable concrete surface in the areas of the facility shown on **Drawing No. D.k.1.2**; 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 Facility Office

- 3.5.1 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.
- 3.5.2 The licensee shall provide and maintain a working telephone and a method for electronic transfer of information at the facility.

3.6 Waste handling, Ventilation and Processing Plant

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

- 3.6.3 **The licensee shall maintain such available capacity within the waste water works, sludge treatment works or an individual process stage, as is necessary to ensure that there is no environmental risk posed to the receiving environment as a consequence of overloading.**
- 3.6.4 The quantity of **sludge to be transferred to the sludge treatment area** on a daily basis shall not exceed the duty capacity of the equipment. Any exceedance of the **duty capacity** shall be treated as an incident.
- 3.7 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.
- 3.8 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.
- 3.9 The licensee shall clearly label and provide safe and permanent access to all on-site sampling and monitoring points and to off-site points as required by the Agency.
- 3.10 The licensee shall install and maintain a water meter on all water supplies serving the facility within six months from the date of grant of this licence. Records of water usage shall be maintained on site and a summary records report shall be submitted annually as part of the AER.
- 3.11 Tank, Container and Drum Storage Areas
- 3.11.1 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).
- 3.11.2 All tank and drum storage areas shall, as a minimum, be bunded, either locally or remotely, to a volume not less than the greater of the following:
- (i) 110% of the capacity of the largest tank or drum within the bunded area; or
 - (ii) 25% of the total volume of substance that could be stored within the bunded area.
- 3.11.3 All drainage from bunded areas shall be treated as hazardous waste unless it can be demonstrated to be otherwise. All drainage from bunded areas shall be diverted for collection and safe disposal.
- 3.11.4 All inlets, outlets, vent pipes, valves and gauges must be within the bunded area.
- 3.11.5 All tanks, containers and drums shall be labelled to clearly indicate their contents.
- 3.11.6 **The licensee shall maintain an impermeable surface within the sludge treatment area to ensure that any spillages do not enter the soil or groundwater beneath or adjacent to the site.**
- 3.12 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.
- 3.13 Silt Traps and Oil Separators
- The licensee shall **within six months of grant of this licence** install and maintain silt traps and oil separators at the facility to ensure that all storm water discharges from the facility pass through a silt trap and oil separator in advance of discharge. The separator shall be a **Class I bypass separator** and the silt traps and separator shall be in accordance with I.S. EN-858-2: 2008 (separator systems for light liquids).

3.14 Fire-water Retention

3.14.1 The licensee shall carry out a risk assessment to determine if the activity should have a fire-water retention facility. The licensee shall submit the assessment and a report to the Agency on the findings and recommendations of the assessment within **six months** of the date of grant of this licence.

3.14.2 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.

3.14.3 The licensee shall have regard to the Environmental Protection Agency Draft Guidance Note to Industry on the Requirements for Fire-Water Retention Facilities when implementing Conditions 3.14.1 and 3.14.2 above.

3.15 All pumps 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 **three months** from the date of grant of this licence. **In particular high-level alarms shall be fitted prior to utilisation of the picket fence thickener, sludge-blending tank, digesters, and sludge storage tanks. Where over ground storage facilities are utilised, the licensee shall with the agreement of the Agency:**

- (i) **provide tanks with lockable valves,**
- (ii) **provide external safety ladders and railed platform to facilitate inspection,**
- (iii) **undertake measures as necessary for the protection of tanks from damage by vehicles.**

3.16 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.

3.17 The licensee shall, within **three months** of the date of grant of this licence, install in a prominent location on the site a wind sock, or other wind direction indicator, which shall be visible from the public roadway outside the site.

3.18 **Biogas** shall be used in the boilers on site. In the event of an interruption to the supply of biogas, an alternative fuel such as gas oil may be used with the prior written agreement of the Agency. **The boilers shall be suitable for biogas and should be protected against the corrosive properties of the biogas.**

3.19 **Appropriate infrastructure for anaerobic digestion (as outlined in the application documentation) shall be established at the facility in advance of any sludge being digested.**

3.20 Biogas Infrastructure

3.20.1 **The gas flare shall be used as a by-pass facility to be employed only where there is excess biogas produced, during emergency situations and during periods of downtime for essential maintenance of the boilers.**

3.20.2 **The licensee shall ensure that sufficient flaring capacity is provided for and maintained at the facility to cater for the biogas generated.**

3.20.3 **The 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. The flare unit efficiency shall be tested annually.

3.20.4 When siting and operating biogas infrastructure, regard shall be had to the potential for, and mitigation of, odour and noise nuisance.

3.21 The licensee shall provide a weighbridge within a timeframe to be agreed by the Agency. The design and location of the weighbridge shall be agreed by the Agency in advance of its installation.

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 In the case of non-combustion gases:

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

4.2.2 In the case of combustion gases:

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

4.2.3 In the case of the gas flare:

Temperature 273K, Pressure 101.3 kPa, dry gas at 3% oxygen.

4.3 Emission limit values for emissions to 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 Where the ability to measure a parameter is affected by mixing before emission, then, with agreement from the Agency, the parameter may be assessed before mixing takes place.
- 4.5 Noise
- Noise from the facility shall not give rise to sound pressure levels (Leq, T) measured at the boundary of the facility which exceed the limit values.

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 The licensee shall ensure that all or any of the following:
- Vermin
 - Birds
 - Flies
 - Mud
 - Dust
 - Litter

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

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

Condition 6. Control and Monitoring

6.1 Test Programmes

- 6.1.1 The licensee shall prepare to the satisfaction of the Agency, a test programme for each of the following: **the wastewater treatment plant, anaerobic digesters, odour control units and associated equipment**. These programmes shall be submitted to the Agency in advance of implementation of each.
- 6.1.2 The programmes, 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 programmes, shall be incorporated into the standard operating procedures.
- 6.1.4 The test programmes 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 programmes shall be submitted to the Agency within one month of completion of **each test programme**.

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 (**including bioaerosols**) 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 (for newly installed equipment/structures)** or within **six months** of the date of grant of this licence. 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) 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 for leaks on all flanges and valves on over-ground pipes used to transport materials other than water shall be carried out weekly. A log of such inspections shall be maintained.
- 6.13 Storm Water
A visual examination of the storm water discharges shall be carried out daily. A log of such inspections, shall be maintained.
- 6.14 Groundwater
- 6.14.1 The licensee shall within **twelve months** of the date of grant of licence install a groundwater monitoring point down-gradient of the facility, **at a location to be agreed by the Agency.**
- 6.14.2 Groundwater monitoring points shall be adequately protected to prevent contamination or physical damage.
- 6.15 Noise
- 6.15.1 The licensee shall carry out a noise survey of the site operations annually. **The survey shall include a night-time survey.** The survey programme shall be undertaken in accordance with the methodology specified in the 'Environmental Noise Survey Guidance Document' as published by the Agency.
- 6.15.2 **The licensee shall put in place such measures as are necessary to ensure compliance with the noise limit values specified in this licence.**

6.16 Odour Control

- 6.16.1 The licensee shall ensure that all operations on-site shall be carried out in a manner such that air emissions and/or odours do not result in significant impairment of, or significant interference with amenities or the environment beyond the site boundary and at odour sensitive locations.
- 6.16.2 The licensee shall, within one year of the date of grant of licence, submit to the Agency for agreement a detailed odour management programme for minimisation of odour generation at the site. **The programme shall include procedures to address as a minimum:**
- (i) **Day-to-day operational practices to minimise odorous emissions;**
 - (ii) **Possible process or control failures likely to cause odour;**
 - (iii) **Actions to be taken in the event of an odour episode;**
 - (iv) **Operational control and maintenance of the odour abatement system;**
 - (v) **Operator training in relation to odour management;**
 - (vi) **Minimisation of odour from the gas collection and flaring system, including measures to be taken in the event of equipment failure;**
 - (vii) **Additional odour abatement requirements.**

The licensee shall implement this odour management programme with the agreement of the Agency, within a specified timeframe. The odour management programme 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 shall be prepared and submitted to the Agency as part of the AER.

- 6.16.3 The licensee shall implement measures for the control of odours from the facility. Measures shall include but not be limited to the following:
- (i) **Installation of an appropriately designed extraction and odour abatement system for the treatment of odorous air streams;**
 - (ii) **Maintenance of the inlet works building and sludge building under negative pressure with ventilated air passed through an appropriately designed biofilter;**
 - (iii) **Doors to the inlet building shall remain closed other than to facilitate vehicle movements;**
 - (iv) **The storm tanks shall be cleaned immediately after use;**
 - (v) **The digested sludge holding tank shall be covered if required by the Agency.**
- 6.16.4 The licensee shall undertake, **at a frequency as required by the Agency**, an odour assessment which shall include as a minimum the identification and quantification of all significant odour sources and an assessment of the suitability and adequacy of the odour abatement system(s) to deal with these emissions. Any recommendations arising from such an odour assessment shall be implemented following agreement with the Agency.

6.17 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 and amending Council Directives 91/689/EEC and 96/61/EC. The PRTR shall be prepared in accordance with any relevant guidelines issued by the Agency and shall be submitted electronically in specified format and as part of the AER.

- 6.18 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.

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

Condition 7. Resource Use and Energy Efficiency

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

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

Condition 8. Materials Handling

- 8.1 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 or an exempted person (S.I. No. 821 of 2007, and S.I. No. 87 of 2008). 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 Within six months of the date of grant of this licence, the licensee shall establish and maintain detailed written procedures for management of the sludge treatment process and the handling of sludges. These shall include procedures for the analysis of sludge and for the handling of contaminated sludges.
- 8.10 Any waste to be consigned from the facility direct to landfill is required to be pre-treated in accordance with the requirements of the Landfill Directive. Treatment shall, as a minimum, reflect any published EPA guidance in this matter.
- 8.11 For sludge bio-cake intended to be sent to landfill for disposal it shall be pre-treated/stabilised to the extent that Respiration Activity after four days (AT₄) is <10 mg O₂/g DM.
- 8.12 The sludge bio-cake shall be removed off-site daily, unless otherwise agreed by the Agency.
- 8.13 A system to prevent overflowing of the sludge bio-cake skips shall be installed within six months of the date of grant of this licence.
- 8.14 All grit and screenings from the inlet works shall be stored within the inlet works building prior to removal off-site.
- 8.15 The proposals for recovery or disposal of grease from the inlet works shall be submitted to the Agency for agreement within three months of grant of this licence.
- 8.16 The transport of sludge, grit, screenings and grease via the public road shall be carried out in sealed containers such that no spillage can occur.
- 8.17 Landspreading of sludge from the facility shall not be carried out without the prior agreement of the Agency. Where sludge is destined for landspreading the following conditions apply:
- 8.17.1 All landspreading activities shall be undertaken in accordance with a Nutrient Management Plan which must be agreed in advance with the Agency. The Nutrient Management Plan shall be submitted by the first of February annually. Thereafter, alterations to this must be as agreed in advance in writing by the Agency.
- 8.17.2 The management and testing of sludge shall be compliant with the requirements of the Use of Sewage Sludge in Agriculture Regulations (S.I. 148 of 1998 and S.I. 267 of 2001).
- 8.17.3 Soil monitoring shall be undertaken as outlined in *Schedule C.6 Ambient Monitoring Land Used for Landspreading* and a summary report included as part of the Nutrient Management Plan. Where lands are not used for landspreading due to heavy metal analysis these details shall be submitted to the Agency with the Nutrient Management Plan.
- 8.17.4 The licensee shall submit the details as required for the Local Authority Sludge Register. The licensee shall also notify Local Authorities in whose functional area the sludge is to be used, of the details as required for their Sludge Register.

- 8.17.5 The licensee shall not allow the removal of sludge from the installation unless satisfied that the recipient of the sludge is aware of the nutrient management plan, requirements of S.I. 378 of 2006 and the requirements for storage of the sludge.
- 8.17.6 Landspreading from this activity shall take place only on lands agreed in advance in writing by the Agency. Alterations to this landbank are subject to prior written agreement with the Agency.
- 8.17.7 Agreements between the licensee and recipients of wastes for landspreading shall not conflict with any conditions in this licence.
- 8.17.8 Landspreading shall be carried out in accordance with Articles 17, 18 and 19 of S.I. No. 378 of 2006 European Communities (Good Agricultural Practice for Protection of Waters) Regulations 2006. All landspreading activities shall be carried out in such a manner as to avoid contamination of surface waters and groundwaters, and so as to minimise odour nuisance from the activity.
- 8.17.9 Landspreading shall be undertaken using soil injection, bandspreading, or low trajectory splashplate methods. Any other method must receive prior agreement from the Agency.
- 8.17.10 The licensee shall provide a minimum of **16 weeks** storage for sludge on-site or at an agreed storage location **fit for the purpose of storing sludge and adequate for the protection of groundwater and surface water**. Proposals for storage capacity shall be agreed with the Agency in advance of implementation.

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, within six months of date of grant of this licence, 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, within six months of date of grant of this licence, 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.

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

Condition 10. Decommissioning & Residuals 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 within six months of the date of grant of the licence.
- 10.2.2 The plan shall be reviewed annually and proposed amendments thereto notified to the Agency for agreement as part of the AER. No amendments may be implemented without the agreement of the Agency.
- 10.2.3 The licensee shall have regard to the Environmental Protection Agency Guidance on Environmental Liability Risk Assessment, Decommissioning Management Plans and Financial Provision when implementing Condition 10.2.1 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 the Scheduled Activity.
- 11.2 The licence shall notify the Agency by both telephone and facsimile, if available, to the Agency's headquarters in Wexford, or to such other Agency office as may be specified by the Agency, as soon as practicable after the occurrence of any of the following:
- (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* 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 Authorities 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 Authorities and the Southern Regional Fisheries Board as soon as practicable after such an incident.
- 11.5 The licensee shall make a record of any incident. This record shall include details of the nature, extent, and impact of, and circumstances giving rise to, the incident. The record shall include all corrective actions taken to manage the incident, minimise wastes generated and the effect on the environment, and avoid recurrence. The licensee shall, as soon as practicable following incident notification, submit to the Agency the incident record.
- 11.6 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 keep the following documents at the site:
- (i) the licences relating to the facility;
 - (ii) the current EMS for the facility;
 - (iii) the previous year's AER for the facility;
 - (iv) records of all sampling, analyses, measurements, examinations, calibrations and maintenance carried out in accordance with the requirements of this licence and all other such monitoring which relates to the environmental performance of the facility;
 - (v) relevant correspondence with the Agency;
 - (vi) up to date site drawings/plans showing the location of key process and environmental infrastructure, including monitoring locations and emission points;
 - (vii) up to date Standard Operational Procedures for all processes, plant and equipment necessary to give effect to this licence or otherwise to ensure that standard operation of such processes, plant or equipment does not result in unauthorised emissions to the environment; and

- (viii) any elements of the licence application or EIS documentation referenced in this licence.

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 imported and/or sent off-site for disposal/recovery;
 - (ii) the names of the agent and carrier of the waste, and their waste collection permit details, if required (to include issuing authority and vehicle registration number);
 - (iii) details of the ultimate disposal/recovery destination facility for the waste and its appropriateness to accept the consigned waste stream, to include its permit/licence details and issuing authority, if required;
 - (iv) written confirmation of the acceptance and disposal/recovery of any hazardous waste consignments sent off-site;
 - (v) details of all 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;
 - (vi) details of any rejected consignments;
 - (vii) details of any approved waste mixing;
 - (viii) details of quantity of sludges for treatment and quantity of treated sludges;**
 - (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 **Where sludge is to be landspread, a register of sludge that has been landspread, or transferred to off-site storage shall be maintained on site on a daily basis and shall be available for inspection by authorised personnel, including Agency personnel, at all reasonable times. This register shall include details of the following:**
- (i) Date of dispatch of sludge consignment;**
 - (v) The quantity of sludge in each consignment;**
 - (vi) A summary of analysis (% dry solids, nitrogen, phosphorus) per consignment;**
 - (ii) Name of person who transported the sludge;**
 - (ii) Location of off-site storage;**
 - (iv) Name of contractor/person who landspread the sludge, when landspread by or on behalf of the licensee;**
 - (iv) Name and address of farmer who received the sludge;**
 - (iv) Location of site where sludge is to be landspread.**

The details, from the register shall be reported to the Agency bi-monthly, and annually as part of the AER.

- 11.12 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.
- 11.13 All reports shall be certified accurate and representative by the facility manager or a nominated, suitably qualified and experienced deputy.
- 11.14 The licensee shall consult with the National Parks and Wildlife Service (NPWS) in advance of carrying out development works in the southern section of the site.

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 **€9,225**, 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 2008. 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 2008, 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 Environmental Liabilities

- 12.2.1 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.
- 12.2.2 The licensee shall arrange for the completion, by an independent and appropriate qualified consultant, of a comprehensive and fully costed Environmental Liabilities Risk Assessment (ELRA) to address the liabilities from past and present activities. 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 within twelve months of date of grant of this licence. The ELRA shall be reviewed as necessary to reflect any significant change on site, and in any case every three years following initial agreement. The results of the review shall be notified as part of the AER.
- 12.2.3 As part of the measures identified in Condition 12.2.1, the licensee shall, to the satisfaction of the Agency, make financial provision to cover any liabilities identified in Condition 12.2.2. The amount of indemnity held shall be reviewed and revised as necessary, but at least annually. Proof of renewal or revision of such financial indemnity shall be included in the annual 'Statement of Measures' report identified in Condition 12.2.1.
- 12.2.4 The licensee shall have regard to the Environmental Protection Agency Guidance on Environmental Liability Risk Assessment, Decommissioning Management Plans and Financial Provision when implementing Conditions 12.2.2 and 12.2.3 above.

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

SCHEDULE A: Limitations

A.1

The following waste related processes are authorised:

- Sludge treatment (Anaerobic Digestion)
- Recovery of energy from anaerobic digestion (also including flaring of biogas)

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

A.2 Waste Acceptance

Table A.2 Waste Categories and Quantities

Waste Type ^{Note 1}	Maximum (Tonnes Per Annum)
Sewage sludge (primary and secondary sludge) from the waste water treatment plant	95,100
Total	95,100

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

SCHEDULE B: Emission Limits

B.1. Emissions to Air

Emission Point Reference No:	OCU-1 (Odour Control Unit)	
Location:	Inlet Works	
Volume to be emitted:	Maximum in any one day:	331,560m ³
	Maximum rate per hour:	54,000 m ³
Minimum discharges height:	10m above ground	
Parameter	Emission Limit Value	
Ammonia	50 ppm (v/v)	
Amines	5 ppm (v/v)	
Hydrogen Sulphide	5 ppm (v/v)	
Mercaptans	5 ppm (v/v)	

Emission Point Reference No:	OCU-2 (Odour Control Unit)	
Location:	Sludge Treatment Area	
Volume to be emitted:	Maximum in any one day:	121,008 m ³
	Maximum rate per hour:	50,760 m ³
Minimum discharges height:	8m above ground	
Parameter	Emission Limit Value	
Ammonia	50 ppm (v/v)	
Amines	5 ppm (v/v)	
Hydrogen Sulphide	5 ppm (v/v)	
Mercaptans	5 ppm (v/v)	

Emission Point Reference No:	A-01(a) - Boiler 1, A-01(b) - Boiler 2	
Location:	Sludge Building	
Volume to be emitted for each:	Maximum rate per hour:	936m ³
Minimum discharges height:	14.3 m above ground	
Parameter	Emission Limit Value	
Nitrogen oxides (as NO ₂)	100mg/Nm ³	
Oxides of sulphur (as SO ₂)	350mg/Nm ³	
Carbon Monoxide (CO)	60mg/m ³	
Particulates	5mg/m ³	

B.2. Emissions to Water

Not applicable to this licence.

B.3. Emissions to Sewer

There shall be no process emissions to sewer.

B.4. Noise Emissions

Daytime dB(A) L _{Aeq} (30 minutes)	Night-time dB(A) L _{Aeq} (30 minutes)
55 ^{Note 1}	45 ^{Note 1}

Note: 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: OCU-1 and OCU-2
Description of Treatment: Biofilter followed by Carbon filter

Control Parameter	Monitoring	Key Equipment ^{Note 1}
H ₂ S: Inlet air and outlet Odourous air extraction	Continuous	Gas monitor Exhaust fans and motors
Air Handling Flow/Negative Air Pressure	Pressure gauge/flow	Fans/air pump/alarm

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: A-02 Gas flare (Enclosed)
Description of Treatment: Biogas Combustion

Control Parameter	Monitoring	Key Equipment ^{Note 1}
Temperature (biogas supply)	Continuous	Thermocouple /data logger
Pressure (combustion air)	Continuous	Pressure sensors or equivalent approved, air fans
Continuous burn	Continuous with alarm/call-out	Flame failure controller or equivalent approved

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.: OCU-1 and OCU-2 (Biofilters)

Parameter	Monitoring Frequency	Analysis Method/Technique ^{Note 1}
Bed Media		
Odour assessment ^{Note 2}	Daily	Subjective Inspection
Condition and depth of biofilter ^{Note 3}	Daily	Visual Inspection
Moisture content	Bi-annually	Standard method
pH	Bi-annually	pH probe
Ammonia	Bi-annually	Standard Method
Oils, fats and grease	Bi-annually	
Total viable counts	Bi-annually	Standard Method
Inlet and Outlet Gas		
Ammonia	Bi-annually	Standard Method
Hydrogen sulphide	Continuous	Standard Method
Mercaptans	Bi-annually	Standard Method
Amines	Bi-annually	Standard Method

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

Emission Point Reference No: A-01(a) - Boiler 1
A-01(b) - Boiler 2

Parameter	Monitoring Frequency	Analysis Method/Technique
Nitrogen oxides (as NO ₂)	Annually	Flue gas analyser
Oxides of sulphur (as SO ₂)	Annually	Standard Method
Carbon Monoxide (CO)	Annually	Flue gas analyser
Total Organic Carbon (TOC)	Annually	Standard Method
Particulates	Annually	Standard Method
Combustion Efficiency	Annually	Standard Method

Emission Point Reference No: A-02 - Gas flare (Enclosed)
Description of Treatment: Biogas Combustion

Parameter	Monitoring Frequency	Analysis Method/Technique
Inlet		
Methane, CO ₂ , O ₂ , H ₂ S	Annually	Flue gas analyser or equivalent approved
Process Parameters		
Combustion temperature	Continuous	To be Agreed
Residence Time	Annually	To be Agreed
Combustion efficiency	Annually	To be Agreed
Outlet		
Carbon Monoxide (CO)	Continuous	Flue gas analyser or equivalent approved
Nitrogen oxides (as NO ₂)	Annually	Flue gas analyser or equivalent approved
Sulphur Dioxide (as SO ₂)	Annually	Flue gas analyser or equivalent approved
Hydrogen Sulphide (H ₂ S)	Annually	Flue gas analyser or equivalent approved

C.2.1. Control of Process Parameters

Description of Treatment		Wastewater Treatment Plant			
Control Parameter	Monitoring	Key Equipment ^{Note 5}			
Influent					
Main Inlet Channel Flow	Continuous, on-line flow meter with recorder	On-line flow meter with recorder, Inlet channel, flume. Inlet sump. Automatic sampler.			
Main inlet Volume	Continuous				
Temperature	Weekly, Standard Methods				
pH	Weekly, Standard Methods				
Chemical Oxygen Demand	Weekly ^{Note 2} , Standard Methods				
Biochemical Oxygen Demand	Monthly ^{Note 2} , Standard Methods				
Suspended Solids	Weekly ^{Note 2} , Standard Methods				
Belview Inlet Flow	Continuous, Flow meter				
Screenings & Grit Removal					
Screenings: % Total Dry Solids	Monthly, Standard Methods			Automatic screens (3), bypass screen, blowers, aerated grit separators, scrapers, grit traps, pumps, compactors, grit classifier.	
Grit: % Total Dry Solids	Monthly, Standard Methods				
% Volatile Solids	Monthly, Standard Methods				
Daily, manual checks of equipment					
Screened Sewage					
Flow (Post grit channel)	Continuous, on-line flow meter with recorder ^{Note 1}	Flow meter post grit channel, Automatic sampler.			
Temperature	Weekly, Standard Methods				
pH	Weekly, Standard Methods				
Chemical Oxygen Demand	5 times per week ^{Note 2, Note 3} , Standard Methods				
Biochemical Oxygen Demand	Weekly ^{Note 2, Note 3, Note 4} , Standard Methods				
Suspended Solids	Weekly ^{Note 2, Note 3} , Standard Methods				
Total Nitrogen (as N)	Weekly ^{Note 2, Note 3} , Standard Methods				
Total Phosphorus (as P)	Weekly ^{Note 2, Note 3} , Standard Methods				
Oils, Fats and Grease	Weekly, Standard Methods				
Storm Water					
Storm overflow: Flow	Continuous, on-line flow meter with recorder	Storm tanks (2), Jet mixers, Storm water return pumps. Automatic sampler.			
COD	Daily- when in operation, Standard Methods				
BOD	Daily- when in operation, Standard Methods				
Storm return: Flow	Continuous, on-line flow meter with recorder				
Total flow to Storm	Calculated from above storm flow meters				
Aeration Selector Tank					
Flow	Continuous, on-line flow meter with recorder			Selector tank mixer, Automatic sampler, flow meter at selector tank, Return Activated Sludge (RAS) Transfer pumps.	
Chemical Oxygen Demand	Weekly ^{Note 2} , Standard Methods				
Biochemical Oxygen Demand	Weekly ^{Note 2} , Standard Methods				
Suspended Solids	Weekly ^{Note 2} , Standard Methods				
RAS Flow to Selector Tank	Continuous, on-line flow meter with recorder				
Aeration Tanks					
Dissolved Oxygen (DO)	Continuous, DO in aeration tanks	Fixed DO meters, submerged diffusers, tank mixers.			
Suspended Solids	Five times per week, Standard Methods				
Settled Sludge Volume (SSV)	Daily, Standard Methods				
Sludge Settled Index (SSI)	Twice weekly, Standard Methods				
Sludge floc microscopy	Twice weekly, Standard Methods				
Mixed Liquor Suspended Solids	Continuous, Standard Methods				
F/M ratio	Calculation (weekly)				
Return Liquors					
Flow to PST splitter	Continuous (On-line flow meter & recorder)			Flow meter at PST splitter, Liquor returns sump (storage), Liquor returns pump station, pumps.	
At Liquor chamber:	Monthly, Standard Methods				
Chemical Oxygen Demand	Monthly, Standard Methods				
Biochemical Oxygen Demand	Monthly, Standard Methods				
Suspended Solids	Monthly, Standard Methods				
In Sludge building:	Twice weekly, Standard Methods				
pH Liquor from GBT 1 & GBT2	Weekly, Standard Methods				

Note 1: Total effluent volume over the 24-hour period in which the composite sample is collected shall be recorded.

Note 2: The licensee shall install a composite sampler within three months of date of grant of this licence. All samples thereafter shall be collected on a 24-hour flow proportional composite sampling basis.

Note 3: Mass loadings and removal efficiencies for BOD, COD, SS, TN and TP shall be calculated monthly or as agreed by the Agency.

Note 4: A BOD: COD ratio shall be established and submitted to the Agency for agreement. This shall be used to calculate daily BOD.

Note 5: The licensee shall maintain appropriate access to standby and/or spares to ensure the operation of the abatement system.

Description of Treatment Control Parameter	Sludge Treatment (including Anaerobic Digestion)	
	Monitoring	Key Equipment ^{Note 1}
Sludge Thickening		
Primary Sludge to PFT: Flow % Total Dry Solids at PFT	Continuous, On-line flow meter & recorder Monthly, Standard Methods	SCADA Control system Distribution chamber, Primary sludge pumps, Picket Fence Thickener (PFT) Sludge pumps, duty and standby thickeners
SAS to Gravity Belt (GBT): Flow % Total Dry Solids at GBT	Continuous, On-line flow meter & recorder Monthly, Standard Methods	
GBT to Sludge Blending Tank Flow % Total Dry Solids at Blending	Continuous, On-line flow meter & recorder Monthly, Standard Methods	Gravity Belt Thickener (GBT) SAS Pumps. FST distribution chamber
Blended Sludge to Pasteuriser Flow to Pasteuriser pH Alkalinity (mg CaCO ₃ /l) % Total Dry Solids % Volatile Solids FE return from Pasteuriser Cooler	Continuous, On-line flow meter & recorder Monthly, Standard Methods Monthly, Standard Methods Weekly, Standard Methods Monthly, Standard Methods Continuous, On-line flow meter & recorder	Pumps to pasteurisation system/Pasteuriser feed pumps (2).
Pasteurised Sludge pH Alkalinity (mg CaCO ₃ /l) % Total Dry Solids % Volatile Solids	Continuous, On-line probe with recorder Monthly, Standard Methods Monthly, Manual samples Monthly, Manual samples	Pasteuriser feed pumps, heat exchangers (heating), pasteurisation tanks (3), pasteurised sludge pumps, heat exchangers (cooling).
Anaerobic Digesters (2 no.) Flow at Inlet and Outlet Sludge Level Temperature (mesophilic) Gas pressure	Continuous, Flow meters in pipework Continuous, in-tank sludge level Continuous, temperature probe high/low levels Continuous, Pressure probes	Temperature controls, Heat exchangers, pumps, digester tank mixer, digester plant pressure relief valves.
Control System in Gas holder Biogas production	Continuous, Gas meter	Gas holder and equipment, ultrasonic monitor.
Digested Sludge % Total Dry Solids % Volatile Solids Flow to Dewaterers	Monthly, Standard Methods Monthly, Standard Methods Continuous, On-line flow meter & recorder	Flow meter in sludge building. Digested sludge tank, Dewatering feed pumps (2) Dewaterers (2)
Polyelectrolyte Dosing Polymer use: Mixed Polymer to GBT 1802A Mixed Polymer to GBT 1802B Mixed Polymer to dewaterer 1 Mixed Polymer to dewaterer 2	Dose per tonne of dry solids Continuous, flow rate Continuous, flow rate Continuous, flow rate Continuous, flow rate	Sludge dewaterer feed pumps, Belt presses, polymer storage, polymer preparation plant.
Dewatered (Final) Sludge % Total Dry Solids % Volatile Solids	Weekly, Standard Methods Weekly, Standard Methods	

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

C.2.2. Monitoring of Emissions to Water

Not applicable to this licence.

C.2.3. Monitoring of Storm Water Emissions

Emission Point Reference No: SW-01

Location: Stream at southeast corner of site (NGR 265022 112153)

Parameter	Monitoring Frequency	Analysis Method/Technique
pH	Weekly	Standard method
Chemical Oxygen Demand	Weekly	Standard method
Suspended Solids	Weekly	Standard method
Total Phosphorus (as P)	Weekly	Standard method
Total Ammonia (as N)	Weekly	Standard method
Conductivity	Weekly	Standard method
Visual Inspection / Odour	Daily	Sample and examine for colour and odour.

C.3.1. Control of Emissions to Sewer

There shall be no process emissions to sewer.

C.3.2. Monitoring of Emissions to Sewer

There shall be no process emissions to Sewer.

C.4 Waste Monitoring

Waste Class	Parameter	Frequency	Method
Sludge Bio-cake	Weight/ volume	Per consignment	To be Agreed by the Agency
	Temperature, % Dry Solids, % Volatile Solids, Faecal Coliforms	Weekly	Standard Methods
	Respiration Activity (for bio-cake to landfill only)	Quarterly	To be Agreed by the Agency
Sludge Bio-cake to be landspread Note 1	% Dry Solids, % Volatile Solids, Organic matter, pH, Total Nitrogen, Ammonium-N, Total Phosphorus, Total Potassium, Magnesium, Faecal Coliforms. <i>Salmonella sp.</i> , Zinc, Copper, Nickel, Cadmium, Lead, Mercury, Chromium.	Biannually	Standard Methods
	Polychlorinated biphenyls (PCB), Polychlorinated dibenzodioxins/ dibenzofurans (PCDD/F), Polyaromatic hydrocarbons (PAH), Nonylphenol.	Annually	Standard Methods
	Available storage capacity	Annually	To be Agreed by the Agency
Other Note 2			

Note 1: Monitoring of sludge shall be in accordance with the Waste Management (Use of Sewage Sludge in Agriculture) Regulations, S.I. No.148 of 1998 and S.I. No. 267 of 2001.

Note 2: Analytical requirements to be determined on a case by case basis.

C.5 Noise Monitoring

Location ^{Note 1}	Measurement ^{Note 2}	Frequency
Noise Sensitive Locations: NM-01, NM-02, NM-03, NM-04, NM-05. Boundary Locations: NM-06, NM-07, NM-08, NM-09, NM-10, NM-11, NM-12.	L(A) _{EO} [30 minutes] L(A) ₁₀ [30 minutes] L(A) ₉₀ [30 minutes] Frequency analysis (1/3 octave band analysis)	Annually

Note 1: Locations shown on Figure A.5.5 of the licence application documentation.

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

C.6 Ambient Monitoring

Land used for Landspreading

Monitoring Location: All lands included in the landbank^{Note 1}

Parameters ^{Note 2}	Monitoring Frequency ^{Note 3}	Analysis Method/Techniques ^{Note 4}
Organic matter, pH, Clay content, Total phosphorus, Total potassium	Prior to the preparation of an NMP Every 2 years thereafter	Standard Methods
Cadmium, Copper, Nickel, Lead, Zinc, Mercury	Prior to the preparation of an NMP Every 5 years thereafter	Standard Methods

Note 1: Each sample should be representative of a maximum area of 4 ha except where uniform cropping and land use has been in place for the previous five years or more. In the latter situation a sample of 12 ha is acceptable.

Note 2: Soil sampling and analysis shall be carried out in accordance with the Waste Management (Use of Sewage Sludge in Agriculture) Regulations, S.I. No.148 of 1998 and S.I. No. 267 of 2001.

Note 3: For lands which have been agreed by the Agency as suitable for landspreading.

Note 4: Soil analysis shall only be conducted by Department of Agriculture and Food approved laboratories.

SCHEDULE D: Annual Environmental Report

Annual Environmental Report Content ^{Note 1}
<p>Emissions from the facility</p> <p>Waste management record.</p> <p>Resource consumption 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>Odour Management Programme summary.</p> <p>Sludge Register.</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>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>Any other items specified by the Agency.</p>

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

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