



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

**WASTE LICENCE
Recommended Decision**

Licence Register Number:	W0012-03
Applicant:	Cork City Council
Location of Facility:	Kinsale Road Landfill, Ballyphehane, Curraghconway, Inchisarsfield, South Link Road, Cork.

INTRODUCTION

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

This licence review is for the purpose of permitting Cork City Council to develop and operate a Waste Transfer Station at the Kinsale Road Landfill facility site at Ballyphehane, Curraghconway, Inchisarsfield, South City Link Road, Cork. This licence restricts the amount of waste to be accepted at the Waste Transfer Station to 22,000 tonnes per annum.

This licence also addresses the cessation of landfilling at the Kinsale Road Landfill site, in accordance with the requirements of the Landfill Directive for this facility. The total volume of waste that has been landfilled at the facility is approximately 4,000,000m³.

The licence allows for the continued operation of a Civic Waste Facility, a green waste composting area and the operation of a new construction and demolition waste recovery area. It also requires the continuation of utilisation of landfill gas as an energy source from all landfilled areas, where feasible, and amends the final pre-settlement contour of the landfill to reflect the proposed final capping contour.

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

For the purposes of the IPPC Directive (91/61/EC), the landfill activity carried on by Cork City Council at the Kinsale Road Landfill site is included under Category 5.4 of Annex I of the Directive.

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

Table of Contents

	Page No
Glossary of Terms.....	1
Decision & Reasons for the Decision.....	8
Part I Schedule of Activities Licensed.....	9
Part II Schedule of Activities Refused.....	10
Part III Conditions	11
Condition 1. Scope.....	11
Condition 2. Management of the Facility.....	12
Condition 3. Infrastructure and Operation	14
Condition 4. Interpretation	22
Condition 5. Emissions	23
Condition 6. Control and Monitoring.....	24
Condition 7. Resource Use and Energy Efficiency	32
Condition 8. Materials Handling.....	32
Condition 9. Accident Prevention and Emergency Response	34
Condition 10. Closure, Restoration and Aftercare Management	35
Condition 11. Notification, Records and Reports	36
Condition 12. Financial Charges and Provisions	40
SCHEDULE A: Limitations	42
SCHEDULE B: Emission Limits	44
SCHEDULE C: Control & Monitoring	46
SCHEDULE D: Annual Environmental Report	55
SCHEDULE E: Reporting	56
SCHEDULE F: Standards for Compost Quality.....	57
SCHEDULE G: Annual Environmental Report.....	59

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 2010, unless otherwise defined in the section.

Adequate lighting	20 lux measured at ground level.
AER	Annual Environmental Report.
Agreement	Agreement in writing.
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.
Biodegradable waste	Any waste that is capable of undergoing anaerobic or aerobic decomposition, such as food, garden waste, sewage sludge, paper and cardboard.
Biodegradable municipal waste (BMW)	The biodegradable component of municipal waste, not including bio-stabilised residual waste. Biodegradable municipal waste is typically composed of food and garden waste, wood, paper, cardboard and textiles.
Biological Treatment	Biological Treatment involves composting, anaerobic digestion, mechanical-biological treatment or any other process for stabilising biodegradable waste.
Bio-stabilised residual waste	Residual biodegradable municipal waste that has been treated to achieve an EPA-approved biodegradability stability standard prior to landfilling or alternative use agreed. Not a compost product standard as understood by EU 1774/2002.
BOD	5 day Biochemical Oxygen Demand (without nitrification suppression).
CEN	Comité Européen De Normalisation – European Committee for Standardisation.
Characterisation of waste	The sampling and analysis of waste to determine, amongst other things, its nature and composition, including the proportions of biodegradable, recyclable and other materials in the waste.
Classification of waste	The classification of waste as inert, non-hazardous or hazardous for the purpose of article 4 of Council Directive (1999/31/EC) on the landfill of waste.
Coding of waste	The allocation of a European Waste Catalogue/Hazardous Waste List code and a concise/standardised description of the waste, including information on the source of the waste, e.g. municipal, industrial, construction and demolition, etc.
COD	Chemical Oxygen Demand.

Commercial Waste	As defined in Section 5(1) of the Waste Management Acts 1996 to 2010.
Compost	Stable, sanitised and humus like material rich in organic matter and free from offensive odours resulting from composting, of separately collected biowaste which complies with the compost quality standards outlined in <i>Schedule F: Standards for Compost Quality</i> of this licence.
Composting	The autothermic and thermophilic biological decomposition of separately collected biowaste in the presence of oxygen and under controlled conditions by the action of micro-organisms and macro-organisms in order to produce compost.
Condition	A condition of this licence.
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.
Cover Material	Bricks, crushed concrete, tarmac, earth, soil, sub-soil, stone, rock or other similar natural materials; or other cover material the use of which has been agreed with the Agency.
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	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.
Emergency	Those occurrences defined in Condition 9.4.
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 Council Directive 2004/35/EC on environmental liability with regard to the prevention and remedying of environmental damage.
EPA	Environmental Protection Agency.
EPA Working Day	Refers to the following hours: 0900 hrs to 1730 hrs Monday to Friday inclusive.
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 or disposal of waste.
Fortnightly	A minimum of 24 times per year, at approximately two week intervals.
GC/MS	Gas chromatography/mass spectroscopy.
Green Waste	Waste wood (excluding timber), plant matter such as grass cuttings, and other vegetation.
Groundwater	All water which is below the surface of the ground in the saturation zone and in direct contact with the ground or subsoil.
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. Different activities within the facility, such as the Waste Transfer Station and the Civic Waste Facility, have different hours of waste acceptance.
ICP	Inductively coupled plasma spectroscopy.
Incident	The following shall constitute an 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 or action level specified in this licence which is attained or exceeded;(v) any indication that environmental pollution has, or may have, taken place;(vi) the by-passing of the reedbeds from the storm water retention pond in storm events; and(vii) any breakdown in the landfill gas utilisation plant or enclosed landfill gas flare.
Industrial waste	As defined in Section 5(1) of the Waste Management Acts 1996 to 2010.
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.
Initial development works	Such works, actions or constructions as may be specified, which for the purposes of environmental protection and safe construction and operation of the facility, have to be carried out in the initial stages of site development,

	and in any case in advance of the commencement of construction of the landfill cells.
Intermediate Cover	Refers to placement of suitable, adequate and stable material (minimum of 300mm if soil is used) over deposited waste for a period of time prior to temporary capping in uncapped areas other than daily cover.
IPPC	Integrated Pollution Prevention & Control.
K	Kelvin.
kPa	Kilopascals.
Landfill	Refers to the area of the facility where the waste is disposed of by placement on the ground or on other waste.
Landfill Directive	Council Directive 1999/31/EC.
Landfill Footprint	The area of the facility where waste is deposited.
Landfill Gas	Gases generated from the landfilled waste.
LEL (Lower Explosive Limit)	The lowest percentage concentration by volume of a mixture of flammable gas with air which will propagate a flame at 25°C and atmospheric pressure.
L_{eq}	Equivalent continuous sound level.
LEMP	Landfill Environmental Management Plan.
Licence	A Waste Licence issued in accordance with the Waste Management Acts 1996 to 2010.
Licensee	Cork City Council, City Hall, Cork.
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.
LLDPE	Linear low-density polyethylene.
Local Authority	Cork 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.
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.

Municipal solid waste (MSW)	Household waste as well as commercial and other waste which, because of its nature or composition, is similar to household waste. Excluding municipal sludges and effluents.
Municipal waste	As defined in Section 5(1) of the Waste Management Acts 1996 to 2010.
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.
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).
OMP	Odour Management Plan.
ppmv	Parts per million by volume.
PRTR	Pollutant Release and Transfer Register.
Quarterly	At approximately three - monthly intervals.
Recyclable Materials	Waste types, such as cardboard, batteries, gas cylinders, etc., may be recycled.
Residual Municipal Waste	The fraction of collected municipal solid waste (MSW) remaining after a treatment or diversion step, which generally requires further treatment or disposal.
Residual Waste	The fraction of collected waste remaining after a treatment or diversion step, which generally requires further treatment or disposal.
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.
SCADA system	Supervisory Control and Data Acquisition system.
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.
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.

Specified Engineering Works	Engineering works listed in <i>Schedule D: Specified Engineering Works</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.
Temporary Capping	Refers to provision of a temporary capping system, of at least 0.5m thick and including a gas barrier membrane, to allow for settlement prior to the installation of the final capping system. A sacrificial gas barrier membrane should also be laid on the interfaces between the cell being capped and future cells. [The application of the sub-soil/top soil layers to such interfaces is not considered necessary by the Agency].
Temporary Storage	In relation to waste is a period of less than six months as defined in the Waste Management Acts 1996 to 2010.
TOC	Total Organic Carbon.
Trade Effluent	Trade effluent has the meaning given in the Water Services Act, 2007.
Treatment/pre-treatment	In relation to waste, any manual, thermal, physical, chemical or biological processes that change the characteristics of waste in order to reduce its volume or hazardous nature or facilitate its handling, disposal or recovery.
Trigger level	A parameter value, the achievement or exceedance of which requires certain actions to be taken by the licensee.
VOC	Volatile Organic Compounds.
Waste Transfer Station	The building where waste is re-loaded, compacted or baled, with the intention of making savings on the cost of transport to a disposal or treatment facility as well as the cost of disposal itself, and the associated hardstanding areas.
Water Services Authority	Cork County Council.
WEEE	Waste Electrical and Electronic Equipment, as defined in S.I. No. 340 of 2005.
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.
White Goods	Refrigerators, cookers, ovens and other similar appliances.
Windrow	An elongated pile of composting material that is periodically turned.
Working Face	The area of the site in which waste other than cover material or material for the purposes of the construction of specified engineering works is being deposited.

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 2010.

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 2010, the Environmental Protection Agency (the Agency) proposes, under Section 46(8) of the said Acts to grant this Waste Licence to **Cork City Council, Kinsale Road Landfill, Ballyphehane, Curraghconway, Inchisarsfield, South Link Road, Cork** to carry on the waste activities listed below at **Kinsale Road Landfill, Ballyphehane, Curraghconway, Inchisarsfield, South Link Road, Cork** subject to conditions, with the reasons therefore and the associated schedules attached thereto set out in the licence. For the purpose of Article 48 of the Waste Management Licensing Regulations 2004 (S.I. No 395) this facility is classed as a non-hazardous waste landfill.

Licensed Waste Disposal Activities, in accordance with the Third Schedule of the Waste Management Acts 1996 to 2010

Class 1.	Deposit on, in or under land (including landfill) [Principal Activity].
Class 2.	Land treatment, including biodegradation of liquid or sludge discards in soils
Class 4.	Surface impoundment, including placement of liquid or sludge discards into pits, ponds or lagoons.
Class 5.	Specially engineered landfill, including placement into lined discrete cells which are capped and isolated from one another and the environment.
Class 7.	Physico-chemical 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 8 to 10 of this Schedule (including evaporation, drying and calcination).
Class 11.	Blending or mixture prior to submission to any activity referred to in a preceding paragraph of this Schedule.
Class 12.	Repacking prior to submission to any activity referred to in a preceding paragraph of this Schedule.
Class 13.	Storage prior to submission to any activity referred to in a preceding paragraph of this Schedule, other than temporary storage, pending collection, on the premises where the waste concerned is produced.

Licensed Waste Recovery Activities, in accordance with the Fourth Schedule of the Waste Management Acts 1996 to 2010

Class 2.	Recycling or reclamation of organic substances which are not used as solvents (including composting and other biological processes).
Class 3.	Recycling or reclamation of metals and metal compounds.
Class 4.	Recycling or reclamation of other inorganic materials.
Class 10.	The treatment of any waste on land with a consequential benefit for an agricultural activity or ecological system.
Class 11.	Use of waste obtained from any activity referred to in a preceding paragraph of this Schedule.
Class 12.	Exchange of waste for submission to any activity referred to in a preceding paragraph of this Schedule.
Class 13.	Storage of waste intended for submission to any activity referred to in a preceding paragraph of this Schedule, other than temporary storage, pending collection, on the premises where such waste is produced.

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. CE08-011-05-002 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 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 **2010** only and nothing in this licence shall be construed as negating the licensee’s statutory obligations, or requirements under any other enactments or regulations.
- 1.7 Residual municipal waste, commercial waste and industrial waste may be recovered or disposed of at the facility subject to the maximum quantities and other constraints listed in Schedule A.2: Waste Acceptance of this licence, Condition 1.9 and Condition 8.2.**
- 1.8 No waste shall be accepted for landfilling at this facility.**
- 1.9 Waste Acceptance Hours**
- 1.9.1 Waste may be accepted at or dispatched from the facility, excluding the Waste Transfer Station, only between the hours of 8.00am and 6.00pm Monday to Friday inclusive; 8.00am to 5.00pm on Saturdays; and 7.00am to 9.00am on Sundays and Public Holidays, unless otherwise agreed by the Agency.**
 - 1.9.2 With the exception of emergencies or as may be agreed by the Agency, waste may be accepted at or dispatched from the Waste Transfer Station between the hours of 8.00am to 6.00pm Monday to Friday inclusive and 8.00am to 5.00pm on Saturdays only.**
- 1.10 Hours of Operation**
- 1.10.1 The facility, with the exception of the Civic Waste Facility, Construction and Demolition Waste Recovery Area and Waste Transfer Station, may be operated only between the hours of 6.45am to 7.00pm Monday to Friday inclusive; 6.45am to 6.00pm on Saturday; and 7.00am to 10.00am on Sunday and Public Holidays.**
 - 1.10.2 The Civic Waste Facility and Construction and Demolition Waste Recovery Area may be operated only between the hours of 8.00am to 6.00pm Monday to Friday inclusive; 8.00am to 5.00pm on Saturday; and 7.00am to 9.00am on Sunday and Public Holidays.**

1.10.3 The Waste Transfer Station may be operated only between the hours of 7.30am to 6.30pm Monday to Friday inclusive; and 8.00am to 5.30pm on Saturdays.

1.11 This licence is being granted in substitution for the waste licence granted to the licensee on **29th December 2002** (Register No: **W0012-02**). The previous waste licence (Register No: **W0012-02**) 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 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 FAS waste management training programme or equivalent agreed by the Agency.

2.1.3 The Civic Waste Facility shall be supervised by an appropriately qualified and competent person at all times when waste is being accepted.

2.1.4 The Waste Transfer Station shall be supervised by an appropriately qualified and competent person at all times during operation.

2.2 Environmental Management System (EMS)

2.2.1 The licensee shall **maintain** an Environmental Management System (EMS). The EMS shall be reviewed annually and updated as necessary.

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 **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 (including emissions prevention/reduction), and the beneficial re-use (recovery) of waste in landfill engineering operations. 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 **Landfill Environmental Management Programme (LEMP)**

Within 12 months from the date of grant of this licence, the licensee shall, prepare and maintain an LEMP, including a time schedule, for achieving the Environmental Objectives and Targets prepared under Condition 2.2.2.2. **The LEMP shall have regard to the guidance set out in the EPA Manual on Landfill Operational Practices. The LEMP shall replace any existing EMP and shall include:**

- designation of responsibility for targets;

- the means by which they may be achieved;
- the time within which they may be achieved.

The LEMP shall be reviewed annually **and take into account operational experiences at the facility, the stage of development of the facility (closure, aftercare), evolving legislation and BAT requirements, as well as any Agency instructions that may be issued.** Amendments shall be 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 **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. **Records of corrective actions shall be maintained.**

2.2.2.6 Awareness and Training

The licensee shall **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 **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 **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 **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 facility and is not specified in the licence, shall be installed in accordance with the schedule submitted in the application.
- 3.2 Specified Engineering Works (SEW)
- 3.2.1 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 prior to the intended date of commencement of any such works. No such works shall be carried out without the prior agreement of the Agency.
- 3.2.2 All specified engineering works shall be supervised by a competent person(s) and that person, or persons, shall be present at all times during which relevant works are being undertaken.
- 3.2.3 Following the completion of all specified engineering works, the licensee shall complete a construction quality assurance validation. The validation report shall be made available to the Agency on request. The report shall, **as appropriate**, include the following information: -
- (i) A description of the works;
 - (ii) As-built drawings of the works;
 - (iii) Records and results of all tests carried out (including failures);
 - (iv) Drawings and sections showing the location of all samples and tests carried out;
 - (v) Name(s) of contractor(s)/individual(s) responsible for undertaking the specified engineering works;
 - (vi) Records of any problems and the remedial works carried out to resolve those problems; and
 - (vii) Any other information requested in writing by the Agency.
- 3.3 Facility Notice Board
- 3.3.1 The licensee shall maintain a Facility Notice Board on the facility so that it is legible to persons outside the main entrance to the facility. The minimum dimensions of the board shall be 1200 mm by 750 mm. The notice board shall be maintained thereafter.
- 3.3.2 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.
- 3.3.3 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.

- 3.4 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.
- 3.5 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.
- 3.6 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.
- 3.7 Tank, Container and Drum Storage Areas
- 3.7.1 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).
- 3.7.2 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.
- 3.7.3 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.
- 3.7.4 All inlets, outlets, vent pipes, valves and gauges must be within the bunded area.
- 3.7.5 All tanks, containers and drums shall be labelled to clearly indicate their contents.
- 3.8 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.
- 3.9 Silt Traps and Oil Separators
- 3.9.1 **The licensee shall maintain silt traps and oil separators at the facility to ensure that all storm water discharges from: (i) the WEEE slab, and (ii) the access road to the north of the facility, pass through a separator and silt trap in advance of discharge to the leachate treatment plant. The WEEE slab separator shall be a Class II by-pass separator and the silt trap and separator shall be in accordance with I.S. EN-858-2: 2003 (separator systems for light liquids). The access road separator shall be a Class I full retention separator and the silt trap and separator shall be in accordance with I.S.EN 858-2:2003 (separator systems for light liquids)**
- 3.9.2 **The licensee shall install and maintain a silt trap and oil separator at the facility to ensure that all run off/leachate generated inside the Waste Transfer Station building passes through a separator and silt trap in advance of discharge to the leachate treatment plant. The separator shall be a Class II by-pass separator and the silt trap and separator shall be in accordance with I.S. EN-858-2: 2003 (separator systems for light liquids).**
- 3.10 Firewater Retention
- 3.10.1 The licensee shall carry out a **revised** risk assessment **that includes the proposed Waste Transfer Station**, to determine if the facility should have a firewater 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.

- 3.10.2 In the event that a significant risk exists for the release of contaminated firewater, 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.
- 3.10.3 In the event of a fire or a spillage to storm water, the site storm water shall be diverted to the containment pond or leachate management system. The licensee shall examine, as part of the response programme in Condition 3.10.2 above, the provision of automatic diversion of storm water to the containment pond or leachate management system. The licensee shall have regard to any guidelines issued by the Agency with regard to firewater retention.**
- 3.10.4 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 3.10.1 and 3.10.2 above.
- 3.11 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 six months of the date of grant of this licence.**
- 3.12 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 2.2.2.2 of this licence for the reduction in fugitive emissions.
- 3.13 Groundwater
- 3.13.1 All wells & boreholes shall be adequately sealed to prevent surface contamination and, as may be appropriate, decommissioned according to the UK Environment Agency guidelines “Decommissioning Redundant Boreholes and Wells” (or as otherwise may be agreed by the Agency).
- 3.13.2 Groundwater monitoring wells shall be constructed having regard to the guidance given in the Agency’s landfill manual “Landfill Monitoring”.
- 3.14 The licensee shall **maintain** 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.
- 3.15 The licensee shall operate a weather monitoring station on the site at a location agreed by the Agency, which records conditions of wind speed and wind direction.
- 3.16 Phased **Capping Plan**
- 3.16.1 Phasing plans shall have regard to the following timeframes:
- (i) All completed (filled) parts of cells, side slopes and cell interfaces shall be capped with a temporary capping system. **The licensee shall maintain the temporary capping system prior to final capping.**
- (ii) The permanent capping (final capping system as per **Condition 10.5**) of **Area 10A shall be completed by 1st March 2011 and Area 10B by 1st February 2012 as per drawing LW09-011-04-001 Proposed Future Capping Area of the application.**
- 3.17 The licensee shall have regard to the guidance given in the Environmental Protection Agency Landfill Manuals (Site Design, Operational Practices, Monitoring, Site Investigations, and Restoration and Aftercare), as may be relevant, in the development, operation and closure of the facility.
- 3.18 Facility Security
- 3.18.1 Security and stockproof fencing and gates shall be installed and maintained. The base of the fencing shall be set in the ground. Subject to the implementation of the restoration and aftercare plan and to the agreement of the Agency, the requirement for such site security may be removed.

- 3.18.2 The licensee shall maintain 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.
- 3.18.3 Gates shall be locked shut when the facility is unsupervised.
- 3.18.4 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.
- 3.19 Facility Roads and Hardstanding
- 3.19.1 Effective site roads shall be provided and maintained to ensure the safe movement of vehicles within the facility.
- 3.19.2 The facility entrance and hardstanding areas shall be appropriately paved and maintained in a fit and clean condition.
- 3.19.3 The licensee shall provide and maintain an impermeable concrete surface in the area of the Waste Transfer Station, as shown on Drawing No. CE08-011-05-010; 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.**
- 3.19.4 Kerbing shall be used to prevent direct run-off from the hardstanding areas to permeable areas of the facility.**
- 3.20 Facility Office
- 3.20.1 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.
- 3.20.2 The licensee shall provide and maintain a working telephone and a method for electronic transfer of information at the facility.
- 3.21 Waste Inspection and Quarantine Areas
- 3.21.1 A Waste Inspection Area and a Waste Quarantine Area shall be maintained for **C&D waste arriving** at the facility.
- 3.21.2 The licensee shall, prior to the commencement of the waste transfer activity, provide and maintain a dedicated Waste Inspection Area and Waste Quarantine Area within the Waste Transfer Station building.**
- 3.21.3 These **areas** shall be constructed and maintained in a manner suitable, and be of a size appropriate, for the inspection of waste and subsequent quarantine if required. The waste inspection area and the waste quarantine area shall be clearly identified and segregated from each other.
- 3.21.4 The waste inspection and quarantine **areas** shall be secured and rendered impervious to the material inspected and stored therein.
- 3.21.5 Drainage from **these areas** shall be directed to the leachate collection system.
- 3.22 Weighbridge and Vehicle Wash
- 3.22.1 The licensee shall provide and maintain a weighbridge and vehicle wash at the facility.
- 3.22.2 The vehicle wash 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 vehicle wash area shall be directed to the leachate management system.
- 3.22.3 The vehicle 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 vehicle wash and disposed of appropriately.

- 3.23 Waste Water Treatment
- 3.23.1 The licensee shall maintain a wastewater treatment plant at the facility for the treatment of sanitary effluent arising on-site. Any waste water treatment system and percolation area shall satisfy the criteria set out in the *Code of Practice: Wastewater Treatment and Disposal Systems Serving Single Houses (p.e ≤ 10)*, published by the Environmental Protection Agency.
- 3.24 Leachate Management Infrastructure
- 3.24.1 Leachate management infrastructure consisting of the following shall be maintained at the facility:
- i) A leachate collection system for the collection of leachate generated at the facility which shall incorporate a leachate collection drain, sheet pile wall, a spur line on the eastern section of the collection drain, a series of leachate pump sumps and any other works agreed by the Agency.
 - ii) A leachate conditioning plant and associated works.
 - iii) Connection pipework to the Tramore River Valley sewer.
 - iv) A compartmentalised leachate/contaminated storm water storage lagoon for the storage of leachate/contaminated storm water collected from the facility. The section of the lagoon storing leachate shall be covered with a floating cover capable of containing gases and odours.
 - v) SCADA system for the monitoring and management of leachate at the facility.
- 3.24.2 All tanks for the storage and/or treatment of leachate shall be fully enclosed except for inlet and outlet piping.
- 3.24.3 The boreholes/sump pumps specified in Schedule C.3.1 - Leachate Monitoring only shall be used for the abstraction of leachate, unless otherwise agreed by the Agency. All leachate abstracted shall be directed to the leachate collection and treatment system.**
- 3.25 Landfill Gas Management.
- 3.25.1 Landfill gas management infrastructure consisting of the following shall be provided and maintained at the facility:
- i) A system for the collection of **all landfill gas generated at the facility and its utilisation as an energy source.**
 - ii) All landfill gas generated at the facility shall either be utilised (if feasible) or flared.
 - iii) 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 1,000°C and 0.3 seconds retention time at this temperature.
 - iv) The design and operation of the landfill gas flare shall be agreed in advance by the Agency.
- 3.25.2 All buildings constructed on the facility shall have regard to the guidance given in the Department of Environment 1994 publication “Protection of New Buildings and Occupants from Landfill Gas” and any subsequent revisions.
- 3.25.3 The licensee shall maintain all gas wells, pipework, **manifolds**, valves, pumps, flares and other infrastructure that form part of the landfill gas management scheme in a safe and fully operational manner.
- 3.25.4 Condensate Management
- The licensee shall implement a landfill gas condensate management plan at the facility and this shall include, as a minimum, the following:
- (i) Identification of all areas of the landfill gas extraction system where condensate is likely to accumulate;
 - (ii) Daily maintenance schedule to provide for the inspection and removal of condensate from landfill gas extraction pipework; and

- (iii) The rationalisation/elimination of narrow diameter pipework (i.e. 50mm I.D. or less) at the facility.

3.26 Surface Water Management

3.26.1 Effective surface water management infrastructure shall be provided and maintained at the facility during construction, operation, restoration and aftercare of the facility. As a minimum, the infrastructure shall consist of the following: -

- i) A system for the collection and diversion of run-off arising from capped and restored areas such that contaminated water is prevented from discharging into surface water courses. This run-off shall be diverted to a storm water retention pond and a reed bed system.
- ii) Control measures shall be incorporated into the design of the storm water retention pond such that, if necessary, its contents can be isolated and discharged to the leachate management infrastructure or tankered off-site.

3.26.2 The licensee shall maintain a management programme for the control of surface water runoff from the facility. This management programme shall be reviewed annually and updated as necessary.

3.26.3 There shall be no interference with, draining of, or culverting of, the Tramore River or its banks without prior consultation with the Southwestern Regional Fisheries Board and subject to agreement with the Agency.

3.26.4 Recirculation of leachate or other contaminated surface water shall not be undertaken at the facility, **except as specified under Condition 6.21.2.**

3.27 Construction and Demolition Waste Recovery Area

3.27.1 In advance of commencement of C&D waste recovery at a revised location at the facility, the licensee shall:

- i) **provide and maintain a Construction and Demolition Waste Recovery Area, in accordance with the Specified Engineering Works agreed under Condition 3.2;**
- ii) **submit an updated map identifying the Construction and Demolition Waste Recovery Area;**
- iii) **divert stormwater run-off from this area to a silt trap and oil interceptor prior to discharge from the facility;**
- iv) **install appropriate bunding to provide visual and noise screening.**

3.27.2 Only C&D waste or other inert material shall be accepted at this area. All loads shall be visually checked to ensure that no contamination exists. Materials that are capable of being recovered for reuse or recycling shall be extracted from the waste. Materials recovered in this way shall be stored temporarily in containers/designated areas prior to removal. **Material stockpiles shall be maintained so as to minimise dust generation.**

3.27.3 The licensee shall implement measures to minimise dust generation at this facility and shall as instructed by the Agency install a sprinkling irrigation system for the control of dust nuisance from the facility. Any remedial works necessary to control dust shall be implemented within a time-scale to be agreed by the Agency.

3.28 Civic Waste Facility

3.28.1 Unless otherwise agreed with the Agency, the licensee shall provide and maintain a Civic Waste Facility. All waste types collected shall be stored in appropriate containers, receptacles or in appropriately bunded storage areas as necessary.

3.28.2 The Civic Waste Facility shall be used by private vehicles only, or as specified by the conditions of this licence. The facility shall not be used as a transfer station for disposal of waste by commercial waste disposal contractors or local authority waste collection vehicles. Subject to the agreement of the Agency, skips shall be provided at an agreed location for the collection of waste from small litter bin collection and street cleaning vehicles.

- 3.28.3 Notwithstanding the requirements of any other condition of this licence the licensee may accept WEEE at the Civic Waste Facility delivered to the facility from commercial retail premises.
- 3.28.4 Waste to be accepted at the Civic Waste Facility shall be limited to domestic waste, glass, beverage cans, textiles, paper and cardboard, plastics, timber, metals, garden waste, WEEE, fluorescent tubes, waste oils, household hazardous waste, batteries, print/toner cartridges and other waste types subject to the prior written agreement of the Agency.
- 3.28.5 Hazardous waste of a similar nature to household hazardous waste may be accepted from business customers and other non-household sources. The licensee shall have regard to any guidance published by the Agency under the National Hazardous Waste Management Plan. The licensee shall be entitled to place a reasonable quantitative or volumetric cap on the acceptance of hazardous waste from non-household sources so as to avoid inappropriate use of the service.**
- 3.28.6 All waste deposited in the Civic Waste Facility shall be either: -
- (i) into a skip.
 - (iii) into a receptacle for recovery, or
 - (iv) in the case where inspection is required, into a designated inspection area.
- 3.28.7 **Domestic waste delivered to the Civic Waste Facility shall be deposited in skips for further transfer to an appropriate facility for recovery/disposal.**
- 3.28.8 Household hazardous wastes, batteries, waste oils and print/toner cartridges shall be stored in appropriately banded storage areas. Fluorescent tubes shall be stored in an enclosed container in such a manner to prevent breakage.
- 3.28.9 The licensee shall assign and clearly label each container at the Civic Waste Facility to indicate their contents.
- 3.28.10 At the end of the working day the floor of the Civic Waste Facility shall be cleared of waste.**
- 3.28.11 All mixed municipal waste and biodegradable or putrescible waste (other than green waste) deposited at the Civic Waste Facility shall be removed to an approved recovery/disposal facility within 48 hours of deposit, with the exception of Public Holidays when waste shall be removed within 72 hours. No other individual waste material deposited at the Civic Waste Facility shall be stored there for longer than four months.**
- 3.29 Compost Facility
- 3.29.1 Unless otherwise agreed with the Agency, the licensee shall provide and maintain appropriate infrastructure for the composting of green waste at the facility. This infrastructure shall at a minimum comprise the following:
- 3.29.1.1 Green Waste Composting
- (i) The licensee shall maintain a green waste composting area and associated infrastructure at the location shown on Drawing No. **CE08-011-05-014.**
 - (ii) An impermeable concrete slab **of 1,650m².**
 - (ii) All leachate and/or storm water run-off from composting operations shall drain to the leachate collection system.
- 3.29.2 While awaiting collection/removal, mature compost shall be stored in areas protected against uncontrolled run-off and nuisance formation.
- 3.30 Waste Transfer Station**
- 3.30.1 Items of plant deemed critical to the efficient and adequate processing of waste at the facility (including *inter alia* waste-loading vehicles and ejector trailers) 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.**
- 3.30.2** **Within three months from the date of commencement of the waste transfer activity at the facility, 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 Waste Transfer Station. These capacities shall be based on the licensed waste intake, as per *Schedule A: Limitations*, of this licence.**
- 3.30.3** **The quantity of waste to be accepted at the Waste Transfer Station building 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.**
- 3.30.4** **Waste arriving at the facility for bulking in the Waste Transfer Station shall be tipped inside Waste Transfer Building only.**
- 3.31** **The licensee shall install and provide adequate measures for the control of odours and dust emissions, including fugitive dust emissions, from the Waste Transfer Station. Such measures shall at a minimum include the following: -**
 - (i) **Prior to the acceptance of waste at the Waste Transfer Station, fast-action doors (or equivalent as agreed by the Agency) shall be installed and maintained on the entry/exit points of the Waste Transfer Station building. The licensee shall ensure that these and all other doors be kept closed except to allow for entry and exit.**
 - (ii) **Prior to the acceptance of waste at the Waste Transfer Station, the transfer building shall be fitted with an odour management system. This shall include a continuous negative air pressure system with ventilated gases being subject to treatment as agreed by the Agency under Condition 6.1. The licensee shall maintain the integrity and negative pressure throughout the building to ensure adequate containment of odours or dust.**
 - (iii) **The licensee shall, within nine months of the acceptance of waste at the Waste Transfer Station, prepare and submit a report on the effectiveness of the odour management system. This report shall cover the first six months operation of the system.**
 - (iv) **Provision of 100% duty capacity and 20% stand by capacity, backups and spares must be provided for the air handling, ventilation and abatement plant.**
- 3.32** **The licensee shall maintain a permanent landfill gas monitoring system at the facility.**
- 3.33** **Scavenging shall not be permitted at the facility.**
- 3.34** **The licensee shall provide and use adequate lighting during the operation of the facility in hours of darkness.**
- 3.35** **No smoking shall be allowed on the facility.**
- 3.36** **All lagoon structures on the facility shall be inspected and certified fit for purpose every three years by an independent and appropriately qualified chartered engineer.**
- 3.37** **Wood Shredding**

The shredding and storage of waste wood shall be carried out in accordance with the recommendations included in the assessment letter (dated 26th March 2008, Ref. 1290) and the licensee shall implement measures to mitigate noise and dust nuisances.

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

Condition 4. Interpretation

- 4.1 Emission limit values for landfill gas combustion product 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 landfill gas flare:
Temperature 273 K, pressure 101.3 kPa, dry gas at 3% oxygen; and
- 4.2.2 In the case of landfill gas combustion plant:
Temperature 273 K, pressure 101.3 kPa, dry gas; 5% oxygen.
- 4.3 Emission limit values for emissions to sewer/waters in this licence shall be interpreted in the following way:
- 4.3.1 Continuous Monitoring
- (i) No flow value shall exceed the specific limit.
 - (ii) No pH value shall deviate from the specified range.
- 4.3.2 Composite Sampling
- (i) For parameters other than pH, **temperature** 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 **noise sensitive locations** near the facility that exceed the limit value(s) specified in *Schedule B.7: Noise Emissions* of this licence.
- 4.6 Dust and Particulate Matter
Dust and particulate matters from the activity shall not give rise to deposition levels which exceed the limit value(s) specified in *Schedule B.4: Dust Emissions* of this licence.

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.
- 5.5 Disposal of Leachate
- 5.5.1 No leachate shall be discharged to surface water.**
- 5.5.2 Unless otherwise agreed in advance with the Agency and the Water Services Authority, **treated leachate shall be discharged only** via the leachate discharge point SD1 indicated on Drawing No. 9801127-06 Rev. F (received 8/03/02 as part of the response to the Agency's Article 14 notice of licence application W0012-02). There shall be no other discharge or emission to sewer of environmental significance.
- 5.6 Temporary Emissions of Dilute Leachate/Contaminated Storm Water to Sewer
- Discharge procedures for the discharge of dilute leachate or contaminated storm water to sewer shall be in accordance with any written requirements of the Water Services Authority.
- 5.7 No substance shall be present in emissions to sewer in such concentrations as would constitute a danger to sewer maintenance personnel working in the sewerage system, or as would be damaging to the fabric of the sewer, or as would interfere with the biological functioning of a downstream wastewater treatment works.
- 5.8 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.
- 5.9 Non-trade effluent wastewater (e.g. firewater, accidental spillage) that occurs on-site shall not be discharged to the sewer without the prior authorisation of the Agency and Water Services Authority.
- 5.10 The licensee shall submit monitoring results **of the emission to sewer, as specified in Schedule C.4.2: Monitoring of Emissions to Sewer**, to the Water Services Authority on an annual basis.
- 5.11 The licensee shall provide and maintain an inspection chamber in a suitable position in connection with each pipe through which the leachate is discharged. Each such inspection chamber or manhole shall be constructed and maintained by the licensee so as to permit the taking of samples of the discharge.

- 5.12 The road network in the vicinity of the facility shall be kept free from any debris caused by vehicles entering or leaving the facility. Any such debris or deposited materials shall be removed without delay.
- 5.13 There shall be no clearly audible tonal component or impulsive component in the noise emissions from the activity at the noise sensitive locations.

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 2010.*

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 odour/dust emissions to atmosphere from the Waste Transfer Station building**. This programme shall be submitted to **and agreed by** the Agency, **prior to** 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 **odour/dust** abatement equipment as determined by the test programme, shall be incorporated into the standard operating procedures.
- 6.1.4** **The test programme shall establish appropriate warning and action level values for the emissions to atmosphere from the Waste Transfer Station via emission point A2-1.**
- 6.1.5 The test programme shall as a minimum:
- (i) establish all criteria for operation, control, management **and maintenance** of the abatement equipment to ensure compliance **with the warning and action levels established under Condition 6.1.4; and**
 - (ii) assess the performance of any monitors on the abatement system and establish a maintenance and calibration programme for each monitor.
 - (iii) **establish a monitoring programme to assess the performance of the odour abatement system, by comparison of the odour levels, prior to and post abatement.**
- 6.1.6 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. The licensee shall keep written records of the calibrations **and maintenance checks**.
- 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, **sumps, lagoons**, tanks, bunding structures and containers and their resistance to penetration by water or other materials carried or stored therein shall be tested and demonstrated by the licensee. This testing shall be carried out by the licensee at least once every three years and reported to the Agency on each occasion. This testing shall be carried out in accordance with any guidance published by the Agency. A written record of all integrity tests and any maintenance or remedial work arising from them shall be maintained by the licensee.
- 6.11 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. **The licensee shall maintain a log of such inspections and maintenance.**
- 6.12 Discharge to Sewer
- 6.12.1 The acute toxicity of the undiluted final effluent to at least four aquatic species from different trophic levels shall be determined by standardised and internationally accepted procedures and carried out by a competent laboratory. The name of the laboratory and the scope of testing to be undertaken shall be submitted, in writing, to the Agency, within three months of the date of grant of this licence. Once the testing laboratory and the scope of testing have been agreed by the Agency, the Agency shall decide when this testing is to be carried out and copies of the complete reports shall be submitted by the licensee to the Agency within six weeks of completion of the testing.
- 6.12.2 Having identified the most sensitive species outlined in Condition 6.12.1, subsequent compliance toxicity monitoring on the two most sensitive species shall be carried out by the laboratory identified in Condition 6.12.1. The Agency shall decide when this

testing is to be carried out and copies of the complete reports shall be submitted by the licensee to the Agency within six weeks of completion of the testing.

- 6.12.3 A representative sample of effluent shall be screened for the presence of organic compounds **within six months of the grant of licence**. Such screening shall be repeated at intervals as required by the Agency thereafter.
- 6.13 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.
- 6.14 Storm Water
A visual examination of the storm water discharges shall be carried out weekly. A log of such inspections shall be maintained.
- 6.15 Emissions to Surface Water
- 6.15.1 **No leachate or other contaminated surface water shall be discharged to the Tramore River or Trabeg Rivers. No storm water shall be discharged to the Tramore River or Trabeg Rivers when its quality indicates that it exceeds the trigger level values established under Condition 6.15.4 or action level values established under Condition 6.15.5.**
- 6.15.2 No substance shall be discharged in a manner, or at a concentration which, following initial dilution causes tainting of fish or shellfish.
- 6.15.3 **The licensee shall, within three months of the date of grant of licence, install and maintain a flow measurement device on the Tramore River upstream of the reed bed discharge.**
- 6.15.4 **The licensee shall, within three months of the date of grant of licence, submit to the Agency for its agreement trigger levels for TOC, conductivity and pH for the water entering the storm water retention pond (SRP1) prior to reed bed treatment (using the methodology outlined in *Kinsale Road Landfill - Target Levels for Surface Water: Attachment 8 of Article 14(2)(b)(ii) information - 13th May 2009*). The proposal shall include:**
- (i) **trigger levels which when exceeded shall require the licensee to divert the storm water to the sewer via SD1.**
- In the intervening period the following trigger levels for diversion of storm water to sewer shall apply at SRP1: Conductivity: >1,750µS/cm; TOC: >75mg/l, and; pH: <6 or >9.**
- 6.15.5 **The licensee shall, within three months of the date of grant of licence, submit to the Agency for its agreement, Ammonia warning and action level values for: (a) storm water entering the storm water retention pond (SRP1), prior to reed bed treatment, and (b) the storm water discharge from the reed bed treatment system to the receiving water (SRP5).**
- 6.15.5.1 **The Ammonia warning and action level value for SRP1 shall be determined having regard to the Ammonia removal efficiency of the reed bed system. The proposal shall include:**
- (i) **a warning level value which when exceeded shall require the licensee to increase the frequency of Ammonia monitoring to daily at monitoring points SRP1 and SRP5; and**
- (ii) **an action level value which when exceeded shall require the licensee to cease the storm water discharge to the reed bed and divert the storm water to the sewer discharge via emission point SD1.**
- 6.15.5.2 **The Ammonia warning and action level value for SRP5 shall be determined having regard to the European Communities Environmental Objectives (Surface Water) Regulations (S.I. No. 272 of 2009). The proposal shall include:**
- (i) **a warning level value which if exceeded shall require the licensee to increase the monitoring frequency at SRP5 to daily; and**

- (ii) **action level values which if exceeded shall require the licensee to cease the storm water discharge to the receiving water, and either (a) re-circulated storm water through the reed bed, or (b) divert storm water to sewer discharge via emission point SD1.**

6.15.6 The licensee shall, within three months of the date of grant of this licence, submit to the Agency for its agreement a response programme for the exceedance of a trigger, warning or action level value. This response programme shall include such actions as are necessary to ensure there will be no emissions to surface water of environmental significance.

6.16 Groundwater

6.16.1 Within three months of the date of grant of this licence, the licensee shall submit to the Agency for its agreement revised groundwater monitoring trigger levels in accordance with the requirements of Council Directive 1999/31/EC and the European Communities Environmental Objectives (Groundwater) Regulations, 2010 (S.I. No. 9 of 2010).

6.16.2 The trigger levels agreed under Condition 6.16.1 shall apply to, and be measured at, monitoring boreholes NW3, NW4, NW6 and NW7, and any other location as may be required by the Agency.

6.16.3 The licensee shall identify and analyse the trend in the groundwater monitoring results for the monitoring carried out under *Schedule C.8.2 Groundwater Monitoring*. The trend information shall be maintained in a format as agreed by the Agency and shall be updated at least quarterly.

6.16.4 The licensee shall within three months of the date of grant of this licence, submit to the Agency for its agreement a detailed programme of measures to be undertaken to remediate the elevated concentrations of groundwater contaminants identified to the east and south-east of the landfill. The programme of measures shall have the objective of:

- (i) **limiting the input of pollutants into groundwater;**
- (ii) **preventing the deterioration of groundwater; and**
- (iii) **enhancing and restoring the quality of the groundwater body, with the aim of achieving good status by December 2015.**

The licensee shall implement all measures within a timeframe as agreed or as instructed by the Agency. The trigger levels agreed under Condition 6.16.1 may be revised on completion of the remediation measures, subject to the agreement of the Agency.

6.16.5 The licensee shall, within three months of the date of grant of this licence, submit to the Agency for its agreement a revised groundwater conceptual model for the facility, in accordance with BS 10175:2001 or ASTM E1689-95(2008), which identifies potential contaminants, pathways, receptors and includes contour plots (vertical and horizontal) for all identified contaminant plumes. The revised model shall be used to assist in the determination of the Programme of Measures specified in Condition 6.16.4 and shall be updated upon completion of the remediation measures and thereafter as required by the Agency.

6.17 Noise

The licensee shall carry out a noise survey of the site operations annually. The survey programme shall be undertaken in accordance with the methodology specified in the 'Environmental Noise Survey Guidance Document' as published by the Agency.

6.18 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.

- 6.19 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.
- 6.20 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.
- 6.21 Compost
- 6.21.1 The licensee shall, on a daily basis, monitor and record the temperature and the moisture content of the composting material at a number of locations to be agreed in advance by the Agency. **The licensee shall, within three months of the date of grant of licence, submit the location of the compost monitoring points for agreement by the Agency.**
- 6.21.2 All leachate arising from composting operations shall be collected and re-used in the composting process where possible. Leachate from the composting operations that is not re-used shall be either discharged to the leachate collection system or tankered off-site for treatment at a location to be agreed in advance by the Agency.
- 6.21.3 Compost Quality
- (i) In order not to be considered a waste, compost produced by the facility shall comply with the quality standards established in *Schedule F: Standards for Compost Quality* of this licence. Analysis of the compost shall be in accordance with the requirements of that Schedule.
- (ii) Any compost not meeting any standard as per *Schedule F* may be reused in the process or handled as a waste and details recorded as per Waste Records condition.
- 6.22 Leachate Management
- 6.22.1 **All leachate collected at the facility shall be adequately managed to ensure that it is prevented from contaminating stormwater, surface water or groundwater.**
- 6.22.2 The frequency of leachate removal/discharge from the leachate lagoon shall be such that a minimum freeboard of 0.75m shall be maintained in the leachate lagoon at all times. The required freeboard shall be clearly indicated in the lagoon.
- 6.22.3 The level of leachate in the pump sumps shall be monitored as outlined in *Schedule C3.1: Leachate Monitoring*, of this licence.
- 6.22.4 The licensee shall retain evidence to demonstrate that an agreement is in place regarding leachate removal (from the facility) and treatment. No alternative leachate removal and treatment arrangements shall be used unless agreed in advance by the Agency.
- 6.22.5 Unless treated at the facility and discharged to sewer, leachate removed from the facility shall be tankered off-site in fully enclosed road tankers to a facility agreed under Condition 6.22.4.
- 6.22.6 **Notwithstanding the requirements of Condition 6.22 generally and Condition 5.5.2, the licensee shall, within two years of the date of grant of this licence, carry out and submit to the Agency an independently verified economic, technical and environmental assessment of the feasibility of providing onsite treatment of the leachate generated at the facility. The assessment shall consider the provision of treatment during the closure and post closure phases. Recommendations shall be implemented according to a schedule as may be agreed with or specified by the Agency.**
- 6.23 Landfill Gas
- 6.23.1 The licensee shall conduct continuous gas monitoring in the site office and any other enclosed structures at the facility for Methane (CH₄) % v/v, Carbon dioxide (CO₂) % v/v and Oxygen (O₂) % v/v.
- 6.23.2 In relation to landfill derived gases the following shall constitute a trigger level:-

- (i) Methane, greater than or equal to 1.0% v/v; or
 - (ii) Carbon dioxide, greater than or equal to 1.5% v/v,
- measured in any monitoring borehole, building on or adjacent to the facility, service duct, manhole or other point as may be specified, located external to the body of waste.
- 6.23.3 All landfill gas monitoring equipment, other than permanent monitoring systems within buildings, shall be certified as being intrinsically safe.
 - 6.23.4 Unless where otherwise agreed by the Agency, all landfill gas **generated at the facility shall be** collected and flared in an enclosed flare or landfill gas utilisation plant. The use of open flares is only acceptable as an interim measure on a temporary basis and with prior Agency agreement.
 - 6.23.5 In order to minimise release of untreated landfill gas at nuisance forming concentrations/volumes, the landfill gas flare shall be capable of operating with a gas support fuel (e.g. natural gas) to allow effective treatment of landfill gas in the event that the landfill gas itself cannot support combustion. Alternative appropriate treatment techniques may be employed with the written prior approval of the Agency.
 - 6.23.6 The licensee shall ensure that measures are in place to ensure the continuous operation of the required landfill gas management infrastructure at all times.
 - 6.23.7 The landfill gas flaring/utilisation plant shall be designed, managed and operated to ensure the optimum collection of gas irrespective of the quality of the gas. At least one on-site staff member shall have adequate knowledge and training on the operation of the landfill gas management system and balancing of the gas fields to maximise landfill gas control. The licensee shall ensure that regular (daily/weekly routines) assessment of the operation of the landfill gas management system, e.g. field balancing and control of condensate, is carried out and that records of these assessments are maintained on site.
 - 6.23.8 **The licensee shall, within six months of the date of grant of licence, complete and submit an assessment of the performance and effectiveness of the landfill gas interceptor trench installed to control the potential migration of landfill gas, located towards the north easterly boundary of the site. The report on this assessment shall include recommendations, where applicable. The licensee shall implement all recommendations within a timeframe as agreed or as instructed by the Agency.**
 - 6.23.9 **The licensee shall arrange for an annual independent assessment of the landfill gas management system, unless otherwise agreed by the Agency. The licensee shall undertake all recommendations as specified in a report on this independent assessment, in a timeframe as agreed by the Agency.**
 - 6.23.10 **The licensee shall carry out routine monitoring of the landfill gas management system in accordance with *Schedule C1.4: Monitoring of Landfill Gas Emissions*.**
- 6.24 Litter Control
- 6.24.1 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 10.00 am of the next working day after such waste is discovered.
 - 6.24.2 The licensee shall ensure that all vehicles delivering waste to and removing waste and materials from the facility are appropriately covered.
- 6.25 Dust/Odour Control
- 6.25.1 All waste **accepted at the Waste Transfer Station** that is stored overnight, shall be stored in suitably covered and enclosed containers **in the Waste Transfer Station building**. This waste shall be removed from the facility within 48 hours, except at Public Holiday weekends. At Public Holiday weekends **this waste** shall be removed within 72 hours of its arrival at the facility.
 - 6.25.2 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.

6.25.3 The vehicle wash shall be used by all vehicles leaving the facility as required to ensure that no trade effluent/storm water or waste is carried off-site. All water from the vehicle wash shall be directed to the leachate management system.

6.26 Odour Control & Monitoring

6.26.1 The licensee shall, within six months of the date of grant of this licence, submit to the Agency for agreement, an Odour Management Plan (OMP) for the facility. The plan, as agreed, shall be implemented from the time of commencement of waste activities unless otherwise agreed by the Agency.

6.26.2 The OMP referred to in 6.26.1 shall include measures to control potential sources of odour nuisance, including inter alia, provisions regarding:

- (i) Requirements of relevant conditions of this licence;
- (ii) Adequate resources and training on-site to provide for the maintenance, monitoring and operation of the landfill gas extraction system;
- (iii) Acceptance and management of odorous waste deliveries;
- (iv) Arrangements for the bi-annual preparation of an independent assessment and report on surface VOC emissions at the facility following completion of waste acceptance in any cell/sub-cell;
- (v) Phased capping of the waste body;
- (vi) Landfill gas collection:- locations of infrastructure including access/haul roads, well design and density, monitoring, condensate management, field balancing, flare/combustion plant operation;
- (vii) Identification of fugitive sources of landfill gas emissions (e.g. from leachate management infrastructure);
- (viii) Monitoring: - VOC surface emissions from capped areas, odour checks off- and on-site, receipt and evaluation/verification of odour complaints received.

6.26.3 To meet the requirements of the OMP, the licensee shall carry out a monthly review of control measures in place at the facility and maintain findings in a monthly report. This review shall include:

- (i) Consideration of odour complaints received during period (including details and nature of complaints, times and weather conditions, any unusual circumstances, problems, etc.);
- (ii) Review of any monitoring carried out (including investigation of complaints and actions taken where relevant);
- (iii) An update on the existing landfill gas control infrastructure (including operational status, number of wells & vents connected and unconnected to the landfill gas collection system, quantity of gas collected and flared/utilised, estimated quantity of landfill gas being produced, details of any problems with equipment during period);
- (iv) Details of any remedial/corrective actions taken, where relevant, including actions taken on foot of recommendations from previous report; and
- (v) Recommendations.

The licensee shall maintain these reports on site and forward them to the Agency on request.

6.26.4 The OMP shall be reviewed annually and any updates/amendments submitted to the Agency as part of the Annual Environmental Report.

6.26.5 In relation to surface emissions from the waste body and identified features, the following shall constitute a trigger level:

- (i) VOC greater than or equal to 50ppmv as methane average over capped area; or

- (ii) **VOC greater than or equal to 100ppmv as methane instantaneous reading on open surfaces within the landfill footprint; or**
 - (iii) **VOC greater than or equal to 500ppmv as methane around all identified features**
- 6.26.6 **Leachate holding tanks/lagoons shall be covered, and head gases vented to treatment as may be required by the Agency.**
- 6.26.7 **When siting and operating landfill gas infrastructure, regard shall be had to the potential for, and mitigation of, odour nuisance.**
- 6.27 Trigger Level for PM₁₀
 - 6.27.1 The trigger level for PM₁₀ from the facility measured at any location on the boundary of the facility is: -
 - (i) PM₁₀ greater than 50µg/m³ for a daily sample.
- 6.28 Bird Control
 - 6.27.1 Birds shall be prevented from gathering on and feeding at the facility by the use of birds of prey and/or other bird scaring techniques. The birds of prey and/or other techniques shall be in operation every day, from before dawn to after dark, until **the entire waste landfill footprint is capped to the written satisfaction of the Agency**. The use of gas operated bird scaring devices is prohibited at the facility.
- 6.29 **Topographical Survey**
 - 6.29.1 **A topographical survey shall be carried out within twelve months of the date of the grant of this licence and annually thereafter unless otherwise agreed with the Agency. The survey shall be in accordance with any written instructions issued by the Agency.**
- 6.30 Stability Assessment
 - 6.30.1 The licensee shall carry out a stability assessment of the side slopes of the facility annually, **unless otherwise agreed by the Agency**. The results of this assessment shall be reported as part of the Annual Environmental Report (AER).
- 6.31 Nuisance Monitoring
 - 6.31.1 The licensee shall, at a minimum of **weekly** intervals, inspect the facility and its immediate surrounds for nuisances caused by litter, vermin, birds, flies, mud, dust and odours. **The licensee shall maintain a record of all nuisance inspections and any action taken as a result of these inspections.**
- 6.32 Capping Materials Stockpile
 - 6.32.1 Within **three months** of the date of grant of this licence, the licensee shall provide a report to the Agency on the quantity of capping materials stockpiled at the facility. In the event that the stockpile fails to contain the requisite volume of capping materials for **final** capping of the landfill, **the licensee shall provide** a proposal for the Agency's agreement for alternative sources of capping materials or for the utilisation of geosynthetic materials.
- 6.33 **Waste Transfer Station**
 - 6.33.1 **No waste accepted at the Waste Transfer Station shall be stored outdoors, without the prior agreement of the Agency.**
 - 6.33.2 **The floor of the Waste Transfer Station building shall be cleaned on a regular basis and at least weekly.**
 - 6.33.3 **All waste handling plant shall be cleared of all waste daily and washed down on a weekly basis.**
- 6.34 **The licensee shall monitor meteorological conditions as specified in *Schedule C.8.5 Meteorological Monitoring*, of this licence.**

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 2010.*

Condition 7. Resource Use and Energy Efficiency

- 7.1 The licensee shall carry out an audit of the energy efficiency of the site within twelve months 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 2.2.2.2 above.
- 7.3 The licensee shall identify opportunities for reduction in the quantity of water used on site including recycling and reuse initiatives, wherever possible. Reductions in water usage shall be incorporated into 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 **under Condition 2.2.2.2 above.**

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

Condition 8. Materials Handling

- 8.1 **All waste unloading and handling associated with the Waste Transfer Station activity shall be carried out inside the Waste Transfer Station building.**
- 8.2 **The licensee shall not accept residual municipal waste at the facility, other than that received at the Civic Waste Facility from members of the public, until such time as the Waste Transfer Station has been installed to the satisfaction of the Agency. Subject to the agreement of the Agency, the licensee shall be permitted to accept a maximum of 22,000 tonnes of residual municipal waste at the Waste Transfer Station, as specified in Schedule A.2: *Waste Acceptance.***
- 8.3 Waste Acceptance and Characterisation Procedures
- 8.3.1 Waste shall be accepted at the facility only 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 2010. Copies of these waste collection permits must be maintained at the facility.
- 8.3.2 The licensee shall maintain detailed written procedures at the facility for the acceptance of waste (to distinguish between inert, non-hazardous and hazardous wastes) and for the handling of wastes.
- 8.3.3 **Prior to the acceptance and handling of wastes at the Waste Transfer Station or Construction and Demolition Waste Recovery Area, the licensee shall establish and maintain detailed written procedures for the acceptance and handling of wastes at these facilities.**
- 8.3.4 **Waste shall be accepted at the facility only from known customers or new customers subject to initial waste profiling and waste characterisation off-site (Civic Waste Facility and WEEE collection excepted). 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.

- 8.3.5 Waste arriving at the facility shall have its documentation checked at the point of entry to the facility (Civic Waste Facility and WEEE collection excepted), and subject to this verification, weighed, documented and directed to the Waste Transfer Station building or Construction and Demolition Waste Recovery Area.**
- 8.3.6 Each load of waste arriving at the Waste Transfer Station building or Construction and Demolition Waste Recovery Area shall be inspected upon tipping to ensure that it complies with the requirements of this licence.**
- 8.3.7 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 the appropriate 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.
- 8.4 Wastes once deposited and covered shall not be excavated, disturbed or otherwise picked over with the exception of works associated with the construction and installation of the final cap, leachate collection system, landfill gas collection systems **and necessary infrastructure and only** with the prior **written** agreement of the Agency.
- 8.5 Any cover material at any location within the facility that is eroded, washed off or otherwise removed shall be replaced by the end of the working day.
- 8.6 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.
- 8.7 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.
- 8.8 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.
- 8.9 The loading and unloading of materials shall be carried out in designated areas protected against spillage and leachate run-off.
- 8.10 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.
- 8.11 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.
- 8.12 Waste for disposal/recovery off-site shall be analysed in accordance with *Schedule C: Control & Monitoring* of this licence.
- 8.13 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.
- 8.14 Fuels shall be stored only at appropriately bunded locations on the facility.
- 8.15 Waste Dispatched**
- 8.15.1 Only waste that has been subject to treatment may be dispatched for disposal at a landfill facility. Treatment shall reflect published EPA technical guidance as set out in *Municipal Solid Waste – Pre-treatment and Residuals Management*, EPA, 2009. With the agreement of the Agency, this condition shall not apply to:**
- (i) inert wastes for which treatment is not technically feasible; and**

- (ii) other waste for which such treatment does not contribute to the objectives of the Landfill Directive as set out in Article 1 of the Directive by reducing the quality of the waste or the hazards to human health or the environment.

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 maintain a documented Accident Prevention Procedure 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 maintain a documented Emergency Response Procedure that addresses any emergency situation that 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) isolate the source of any such emission;
 - (ii) identify and execute measures to minimise the emissions/malfunction and the effects thereof;
 - (iii) evaluate the environmental pollution, if any, caused by the incident;
 - (iv) identify the date, time and place of the incident;
 - (v) carry out an investigation to identify the nature, source and cause of the incident and any emission arising therefrom;
 - (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 Emergency
- 9.4.1 All significant spillages occurring at the facility shall be treated as an emergency and immediately cleaned up and dealt with so as to alleviate their effects.
- 9.4.2 In the event of a complete breakdown of equipment or any other occurrence which results in the closure of the Waste Transfer Station building, any waste arriving at or already collected at the facility shall be transferred directly to appropriate landfill sites or any other appropriate facility until such time as the Waste Transfer Station building is returned to a fully operational status. Such a breakdown event will be treated as an emergency and rectified as soon as possible.**
- 9.4.3 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.
- 9.4.5 In the event that monitoring of the side slopes of the facility indicates that there may be a risk of slope failure this will be treated as an emergency.

Reason: To provide for the protection of the environment.

Condition 10. Closure, Restoration and Aftercare Management

- 10.1 The licensee shall restore the facility on a phased basis **in accordance with the Closure, Restoration and Aftercare Management Plan as agreed under Condition 10.10.1**. Unless otherwise agreed, **all uncapped areas of the landfill footprint shall** be permanently capped by **1st February 2012**.
- 10.2 Completed areas of the landfill shall be profiled so that no depressions exist in which water may accumulate. Any depressions arising after profiling shall be rectified by the emplacement of suitable capping or restoration materials.
- 10.3 The landfill final pre-settlement contours shall be in accordance with Drawing No. LW09-011-05-SEW-003 Final Capping Contours (Pre-Settlement Levels) of the application.**
- 10.4 Final contours and landscaping should be such that the finished slopes of the facility are structurally stable and resistant to erosion **so as to protect the integrity** of pollution control and monitoring infrastructure.
- 10.5 Final Capping
- Unless otherwise agreed by the Agency, the final capping shall consist of the following:
- (i) Top soil (150–300 mm);
 - (ii) Subsoils, such that total thickness of top soil and subsoils is at least 1m (gas collection pipework above the gas barrier membrane (paragraph (iv) below) shall remain exposed for at least twenty-four months prior to covering);
 - (iii) Drainage layer of 0.5 m thickness having a minimum hydraulic conductivity of 1×10^{-4} m/s or a geosynthetic material that provides equivalent transmissivity;
 - (iv) Compacted mineral layer of a minimum 0.6 m thickness with a permeability of less than 1×10^{-9} m/s or a geosynthetic material (e.g. LLDPE) or similar that provides equivalent protection; and
 - (v) Gas collection layer of natural material (minimum 0.3 m) or a geosynthetic layer.
 - (vi) Where tree planting is to be carried out above waste-filled areas, a synthetic barrier shall be used to augment the clay cap.
- 10.6 Reprocessed construction and demolition material may be used in the capping system as sub-soil, free-draining material and in the gas collection layer. The licensee shall submit evidence to the Agency that the reprocessed waste material is fit for the purpose that it is intended and this shall include references to any specific reference standards (e.g. BS, CEN, DETR) or guidance produced by the Agency. Following agreement with the Agency, this reprocessed waste material may be used in the capping system.
- 10.7 No material or object that is incompatible with the proposed restoration of the facility shall be present within 1m of the final soil surface levels.
- 10.8 All soils shall be stored to preserve the soil structure for future use.
- 10.9 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.
- 10.10 Closure, Restoration and Aftercare Management Plan (CRAMP)
- 10.10.1 The licensee shall prepare, to the satisfaction of the Agency, a fully detailed and costed plan for the closure, restoration and long-term aftercare of the site or part thereof. This plan shall have regard to the commitments given in the application

documentation for Licence Register Number **W0012-03** (as may be varied herein, or otherwise amended as notified in the AER and approved in writing by the Agency). This plan shall be submitted to the Agency for agreement within six months of the date of grant of this licence.

- 10.10.2 The plan shall be maintained and reviewed annually and proposed amendments thereto notified to the Agency for agreement as part of the AER. No amendments may be implemented without the prior agreement of the Agency.
- 10.10.3 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 10.10.1** above.
- 10.11 The CRAMP 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 long-term supervision, monitoring, control, maintenance and reporting requirements for the restored facility.
 - (vi) Details of the costings for the plan and the financial provisions to underwrite those costs.
- 10.12 A final validation report to include a certificate of completion for the CRAMP, 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 acceptance of waste at the Waste Transfer Station or the Construction and Demolition Waste Recovery Area.**
- 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 Agency, Local Authority 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 submit monitoring results of the emissions to sewer to the Water Services Authority on an annual basis.**
- 11.9 The licensee shall as a minimum keep the following documents at the site:
- (i) the licences relating to the facility;
 - (ii) the current EMS for the facility;
 - (iii) the previous year's AER for the facility;
 - (iv) records of all sampling, analyses, measurements, examinations, calibrations and maintenance carried out in accordance with the requirements of this licence and all other such monitoring which relates to the environmental performance of the facility;
 - (v) relevant correspondence with the Agency;
 - (vi) up to date site drawings/plans showing the location of key process and environmental infrastructure, including monitoring locations and emission points;
 - (vii) up to date Standard Operational Procedures for all processes, plant and equipment necessary to give effect to this licence or otherwise to ensure that standard operation of such processes, plant or equipment does not result in unauthorised emissions to the environment;
 - (viii) the current **Landfill** Environmental Management Plan (**LEMP**); and
 - (ix) 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.
- 11.10 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 G: Annual Environmental Report* of this licence and shall be prepared in accordance with any relevant guidelines issued by the Agency.
- 11.11 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 **in a format as agreed by the Agency** and shall as a minimum contain details of the following:
- (i) the tonnages, **waste categories** 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) the results of any waste analyses required under *Schedule C: Control & Monitoring*, of this licence; and
 - (ix) the tonnage, **description** and EWC Code for the waste materials recovered/disposed on-site.
- 11.12 The licensee shall maintain a written record for each load of waste arriving at, or leaving the facility (**including C&D waste, green waste for composting, waste for the transfer station and waste topsoils/subsoils**), **excluding the waste arriving at the Civic Waste Facility**. The licensee shall record the following:
- (vi) the date and time;
 - (vii) the name of the carrier (including if appropriate, the waste carrier registration details);
 - (viii) the vehicle registration number;
 - (ix) **the trailer, skip or other container unique identification number (where relevant)**;
 - (x) the name of the producer(s)/collector(s) of the waste as appropriate;
 - (xi) the name of the waste facility (if appropriate) from which the load originated including the waste licence or waste permit register number;
 - (xii) the destination of the waste, if appropriate (including the facility name and waste licence/permit number as appropriate).
 - (xiii) a description of the waste including the associated EWC/HWL codes;
 - (xiv) the quantity of the waste, recorded in tonnes;
 - (xv) **the classification and coding of the waste, including whether MSW or otherwise**;
 - (xvi) **whether the waste is for disposal or recovery and if recovery for what purpose**;
 - (xvii) the name of the person checking the load; and
 - (xviii) 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.
- 11.13 The licensee shall submit report(s) as required by the conditions of this licence to the **Environment Protection Agency, Regional Inspectorate, Inniscarra, County Cork**, or to such other Agency office as may be specified by the Agency.
- 11.14 All reports shall be certified accurate and representative by the facility manager or a nominated, suitably qualified and experienced deputy.
- 11.15 Waste Recovery Reports
- The licensee shall as part of the Annual Environmental Report for the site submit a report on the contribution by this facility to the achievement of the waste recovery objectives stated in Condition 2.2.2.2 and as otherwise may be stated in National and European Union waste policies and shall, as a minimum, include the following:
- (i) the recovery of C&D Waste;
 - (ii) the recovery of other waste in landfill operations and restoration;
 - (iii) the recovery of energy through landfill gas combustion;
 - (iv) **the recovery/treatment of biowaste (including contribution of facility to the pre-treatment targets in the EU Landfill Directive)**;
 - (v) **the separation and recovery of other recyclable materials.**
- 11.16 A full record shall be kept of each consignment of leachate and/or contaminated storm water removed from the facility. The record shall include the following: -
- (i) The name of the carrier.

- (ii) The date and time of removal of leachate and/or contaminated storm water from the facility.
 - (iii) The volume of leachate 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 leachate and/or contaminated storm water was transported.
 - (v) Any incidents or spillages of leachate and/or contaminated storm water during its removal or transportation.
- 11.17 Vermin and Flies
- The licensee shall, within three months of **the date of grant of this licence**, submit to the Agency for its agreement a proposal for the control and eradication of vermin and fly infestations at the facility. This proposal should include as a minimum, operator training, details on the rodenticide(s) and insecticide(s) to be used, mode and frequency of application and measures to contain sprays within the facility boundary
- 11.18 A **full** 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.
 - (viii) Measures to contain sprays within the facility boundary.
- 11.19 The licensee shall submit reports in accordance with *Schedule E: Reporting* of this licence.
- 11.20 The licensee shall maintain a record of the total quantity of green waste/compost stored at the facility in the Green Waste Composting Area at any one time which shall be open to inspection by authorised persons of the Agency at all times. This record shall be updated daily.**
- 11.21 The licensee shall maintain an up to date drainage survey and site drainage system map that shall be available for inspection at the facility.**
- 11.22 Each load of waste dispatched to landfill shall be accompanied by documentation verifying, where required, the type of treatment carried out on the waste and, in the case of MSW, its biodegradable content.**
- 11.23 Where an alternative use of any area of the facility is proposed, prior to change of use the licensee shall demonstrate to the satisfaction of the Agency that the change will not impact on the integrity of the environmental controls of the facility or this licence.**

Reason: <i>To provide for the collection and reporting of adequate information on the activity.</i>
--

Condition 12. Financial Charges and Provisions

12.1 Agency Charges

12.1.1 The licensee shall pay to the Agency an annual contribution of **€9,442**, 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 2010. 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 2010, 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, **within three months of the date of grant of license and thereafter**, 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 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 CRAMP. 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.

12.3.3 As part of the measures identified in Condition 12.3.1, the licensee shall, to the satisfaction of the Agency, make financial provision to cover any liabilities identified in Condition 12.3.2. 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 12.3.1.

12.3.4 Unless otherwise agreed, any revision to that part of the indemnity dealing with restoration and aftercare liabilities (refer to Condition 10.10.1) shall be computed using the following formula:

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

Where:

Cost	=	Revised restoration and aftercare cost
ECOST	=	Existing restoration and aftercare cost
WPI	=	Appropriate Wholesale Price Index [Capital Goods, Building & Construction (i.e. Materials & Wages) Index], as published by the Central Statistics Office, for the year since last closure calculation/revision.
CiCC	=	Change in compliance costs as a result of change in site conditions, changes in law, regulations, regulatory authority charges, or other significant changes

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

12.4 Cost of Landfill of Waste

In accordance with the provisions of Section 53A of the Waste Management Acts 1996 to 2010, the licensee shall ensure the costs involved in the setting up and operation of the facility, as well as the costs of closure and after-care (including cost of provision of financial security) for a period of at least 30 years (post closure) shall be covered by the price to be charged for the disposal of waste at the facility. The statement required under Section 53A(5) of said Acts is to be included as part of the AER.

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 2010.*

SCHEDULE A: Limitations

The following waste related processes are authorised:

- i. Management of leachate and surface water at the facility;
- ii. Management and utilisation of landfill gas at the facility;
- iii. Non-hazardous C&D waste recovery (incl. crushing, screening, sorting, blending, use);
- iv. Storage of waste, including temporary storage of unacceptable waste in the quarantine area;
- v. Timber shredding;
- vi. Acceptance, bulking and transfer of waste including crushing, baling, repackaging processes;
- vii. Green waste composting;
- viii. Use of compost & inert waste for land improvement;
- ix. Acceptance, sorting, storage, packaging and transfer of waste for recovery or disposal (Civic Waste Facility); and
- x. Acceptance and storage of WEEE at the Civic Waste Facility delivered from commercial retail premises.

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



A.2 Waste Acceptance

Table A.2.1 Waste Categories and Quantities:

Waste Type			Maximum ^{Note 2} (Tonnes Per Annum)
Non-Hazardous Wastes <small>Note 1</small>	Mixed Municipal Waste for recovery/disposal off-site <i>Accepted at Civic Waste Facility</i>		5,000
	Storage of Waste prior to Recovery <i>(including glass, beverage/food cans, textiles, paper and cardboard, plastics, timber, metals, non-hazardous batteries, non-hazardous WEEE accepted at the Civic Waste Facility)</i>		
	Construction & Demolition Waste <i>Accepted at the facility for recovery and use in site construction works and landfill restoration.</i>		300,000 ^{Note 3}
	Residual Municipal Waste for off-site recovery and/or disposal <i>Accepted at Waste Transfer Station</i>		22,000 ^{Note 4}
	Green Waste (for Composting) <i>Accepted at Civic Waste Facility</i>		Note 5
	Inert Waste - Imported for restoration purposes		Note 6
Non-Hazardous Waste Total			327,000
Hazardous Wastes <small>Note 7</small>	20 01 21	Fluorescent Tubes and other mercury-containing waste	6
	20 01 27	Paints, inks, adhesives and resins containing dangerous substances	20
	16 05 04	Gases in pressure containers (including halons) containing dangerous substances)	
	20 01 34	Batteries and accumulators other than those mentioned in 20 01 33	12
	All Chapter 13 Wastes ^{Note 8}	Waste Oils	12
	20 01 35	Discarded electrical and electronic equipment other than those mentioned in 20 01 21 & 20 01 23 containing hazardous components.	1,000
Hazardous Waste Total			1,050
TOTAL INCLUDING DISPOSAL AND RECOVERY			328,050

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 maximum tonnage to be processed at the Construction and Demolition Waste Recovery Area shall not exceed 2,000 tonnes per day, unless subject to the prior agreement of the Agency, subject to Condition 3.27.

Note 4: Acceptance of Residual Municipal Waste at the facility for off-site disposal, other than that received at the Civic Waste Facility from members of the public, shall not take place until such time as the Waste Transfer Station infrastructure has been installed to the satisfaction of the Agency in accordance with Condition 8.2 of this licence.

Note 5: Quantity of Green Waste/ Compost at the facility is limited to a maximum of 2,400m³ at any one time.

Note 6: Quantity of waste imported for restoration purposes is limited to 100,000 tonnes per annum for a period of two years from the date of grant of licence, unless otherwise agreed by the Agency.

Note 7: Hazardous waste types as detailed, or as may otherwise be agreed in advance by the Agency.

Note 8: All Chapter 13 wastes: *Oil Wastes and Wastes of Liquid Fuels* (except, 13 01 01, 13 03 01, 13 05 01, 13 05 02, 13 05 03, 13 07 01, 13 07 02, 13 07 03 and 13 08 01) of the *European Waste Catalogue and Hazardous Waste List*.

SCHEDULE B: Emission Limits

B.1 Emissions to Air

Emission Limits Values for Landfill Gas Plant:

Emission Point Reference No.: TV01 and outlet of enclosed gas flare
Location: Utilisation Plant (TV01) and Landfill Gas Flare (enclosed)
Volume to be emitted: Maximum rate per hour: 3,000 m³
Minimum Discharge Height: 5m

Parameter	Flare (enclosed) Emission Limit Value ^{Note 1}	Utilisation Plant (TV01) Emission Limit Value ^{Note 1}
Nitrogen oxides (NO _x)	150 mg/m ³	500 mg/m ³
Particulates	Not applicable	130 mg/m ³
Carbon Monoxide (CO)	50 mg/ m ³	1,400 mg/m ³
TA Luft Organics Class I ^(Note 2)	Not applicable	20 mg/m ³ (at mass flows >0.1 kg/hr)
TA Luft Organics Class II ^(Note 2)	Not applicable	100 mg/m ³ (at mass flows >2 kg/hr)
TA Luft Organics Class III ^(Note 2)	Not applicable	150 mg/m ³ (at mass flows >3 kg/hr)
Total Organic Carbon (TOC)	10 mg/m ³	Not applicable
Hydrogen Chloride	50 mg/m ³ (at mass flows >0.3 kg/hr)	50 mg/m ³ (at mass flows >0.3 kg/hr)
Hydrogen Fluoride	5 mg/m ³ (at mass flows >0.05 kg/hr)	5 mg/m ³ (at mass flows >0.05 kg/hr)

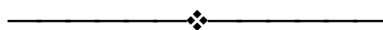
Note 1: Dry gas referenced to 5% oxygen by volume for utilisation plants and 3% oxygen by volume for flares.

Note 2: In addition to the above individual limits, the sum of the concentrations of Class I, II and III shall not exceed the Class III limits.



B.2 Emissions to Water

There shall be no Emissions to Water of environmental significance.



B.3 Landfill Derived Gas Concentration Limits:

Locations: As specified under Condition 6.23.2.

Methane	Carbon Dioxide
20% LEL (1% v/v)	1.5% v/v



B.4 Dust Deposition Limits:

Locations: Measured at monitoring locations D1 - D5 as shown on Drawing No. CE08-011-05-013 of the application.

Level (mg/m ² /day) ^{Note 1}
350

Note 1: 30 day composite sample with the results expressed as mg/m²/day.

B.5 Emissions to Surface Water

Emission Point Reference No: SRP5
Name of Receiving Waters: Tramore River
Location: Outlet from Reedbed No.2

Parameter	Emission Limit Value
Suspended Solids	35 mg/l

B.6 Emissions to Sewer

Emission Point Reference No: SD1 (Discharge to sewer from leachate conditioning plant and contaminated storm water conditioning plant)
Name of Receiving Waters: Cork County Council Sewer
Location: Leachate discharge to sewer located close to southern boundary of landfill
Volume to be emitted: Maximum in any one day: 600 m³
Maximum rate per hour: 25 m³

Parameter	Emission Limit Value	
Temperature (Maximum)	30°C	
pH	6 - 9	
	mg/l	kg/day
BOD	100	60
Ammonia (as N)	410	248
Suspended Solids	70	42
Sulphates (as SO ₄)	150	90
Dissolved Methane	0.2	0.12

B.7 Noise Emissions

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

Note 1: There shall be no clearly audible tonal component or impulsive component in the noise emission from the activity of any noise-sensitive location (monitoring points A1 to A4 identified on Drawing No. CE08-011-05-013).



B.8 Emissions to Groundwater

No deliberate emissions to groundwater are authorised by this licence.



SCHEDULE C: Control & Monitoring

C.1.1 Control of Emissions to Air

Emission Point Reference No.: Flare Stacks & Generation Plant

Description of Treatment: Gas Extraction & Combustion

Control Parameter	Monitoring	Key Equipment ^{Note 1}
Continuous burn	Continuous with alarm/call-out	Flame detector or equivalent approved
Extraction	Continuous with alarm/call-out	Pressure gauge 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.: Flare Stacks & Generation Plant

Parameter	Flare (enclosed) Monitoring Frequency	Utilisation Plant (TV01) Monitoring Frequency	Analysis Method ^{Note 1} /Technique ^{Note 2}
Inlet			
Methane (CH ₄) % v/v	Continuous	Weekly	Infrared analyser or equivalent approved
Carbon Dioxide (CO ₂) % v/v	Continuous	Weekly	Infrared analyser or equivalent approved
Oxygen (O ₂) % v/v	Continuous	Weekly	Electrochemical or equivalent approved
Total Sulphur	Annually	Annually	Ion chromatography
Total Chlorine	Annually	Annually	Ion chromatography
Total Fluorine	Annually	Annually	Ion Selective Electrode
Process Parameters			

Combustion temperature	Continuous	Quarterly	Temperature probe/datalogger
Residence time	Annually	Annually	To be agreed.
Outlet			
Volumetric Flow Rate	Continuous	Continuous	Standard Method
Carbon Monoxide (CO)	Continuous	Continuous	Flue gas analyser/datalogger or equivalent approved
Nitrogen Oxides (NO_x)	Annually	Annually	Flue gas analyser or equivalent approved
Sulphur Dioxide (SO₂)	Annually	Annually	Flue gas analyser or equivalent approved
Particulates	Not applicable	Annually	Isokinetic/Gravimetric or equivalent approved
TA Luft Class I, II, III organics	Not applicable	Annually	Adsorption/Desorption/GC /GCMS ^{Note 3}
TOC	Annually	Not applicable	Flame ionisation
Hydrochloric acid	Annually	Annually	Impinger / Ion Chromatography
Hydrogen fluoride	Annually	Annually	Impinger / Ion Chromatography

Note 1: All monitoring equipment used should be intrinsically safe.

Note 2: Or other method agreed in advance by the Agency.

Note 3: Test method should be capable of detecting acetonitrile, dichloromethane, tetrachloroethylene and vinyl chloride as a minimum.



C.1.3 Control and Monitoring of Emissions to Air

The control and monitoring of emission point reference number A2-1 (from the Waste Transfer Station odour/dust abatement system) shall be as determined under Condition 6.1.



C.1.4 Monitoring of Landfill Gas Emissions

Locations: Perimeter landfill gas boreholes (LG2, LG3, LG4, LG5, LG5A, LG6, LG6A, LG 7, LG7A, LG8, LG8A, LG 12-LG19) ^{Note 1}, as shown on Drawing CE08-011-05-013 of the application

And Boreholes 137-146, 172-175, DP3 and DP4.

And other selected location(s) as may be specified by the Agency, including Site Office

Parameter	Monitoring Frequency		Analysis Method ^{Note 2} /Technique ^{Note 3}
	Gas Boreholes/ Vents/Wells	Facility Office	
Methane (CH₄)	Monthly	Continuous	Infrared analyser/FID
Carbon dioxide (CO₂)	Monthly	Continuous	Infrared analyser/FID
Oxygen (O₂)	Monthly	Continuous	Standard method
Atmospheric pressure & Trend	Monthly	-	Standard method
Temperature	Monthly	-	Standard method

Note 1: All perimeter monitoring boreholes must be installed to the standards specified in the Agency Guidance on Landfill Monitoring.

Note 2: All monitoring equipment used should be intrinsically safe.

Note 3: Or other method agreed by the Agency.

C.1.5 Monitoring of Capped Areas

Surface VOC emission monitoring of all capped areas of the landfill to be carried out biannually in accordance with Condition 6.26, unless otherwise agreed by the Agency.

C.2.1 Control of Emissions to Water

There shall be no process emissions to receiving water.

C.2.2 Monitoring of Emissions to Water

There shall be no process emissions to receiving water.

C.2.3 Control of Storm Water Emissions

Emission Control Location: SRP5 outlet from Storm Water Retention Pond/Reed Bed system to Tramore River (168758E 069210N)

Description of Treatment: Reed Bed

Control Parameter	Monitoring	Key Equipment ^{Note 1}
Residence time & flow restriction	Flow rate, depth	Flow meter, overflow alarm, emergency storage

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

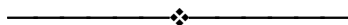
C.2.4. Monitoring of Storm Water Emissions

Emission Point Reference No.: SRP1 (Inlet to Storm Water Retention Pond/Reed bed system)

PARAMETER ^{Note 1}	Monitoring Frequency	Analysis Method/Technique
Flow	Continuous	Flow meter/recorder
Total Organic Carbon (TOC)	Continuous	TOC meter/recorder
pH	Continuous	pH meter/recorder
Electrical Conductivity	Continuous	Conductivity meter/recorder
Visual Inspection/Odour ^{Note 2}	Weekly	Visual/olfactory
Ammonia	Weekly ^{Note 3}	Standard method
Total Suspended Solids	Monthly	Gravimetric
Total P/orthophosphate	Annually	Standard method
Metals / non metals ^{Note 4}	As required	Standard method
List I/II organic substances (Screen) ^{Note 5}	As required	Standard method

Note 1: All the analysis shall be carried out by a competent laboratory using standard and internationally accepted procedures.

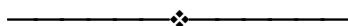
- Note 2:** Where there is evident gross contamination, additional samples should be analysed and the full suite of parameters shown tested.
- Note 3:** Frequency to be increased to daily in the event that the warning level, as agreed under Condition 6.15.5, is exceeded.
- Note 4:** Metals and elements to be analysed by AA/ICP should include as a minimum: boron, cadmium, calcium, chromium (total), copper, iron, lead, magnesium, manganese, nickel, potassium, sodium and zinc.
- Note 5:** Samples screened for the presence of organic compounds using Gas Chromatography / Mass Spectrometry (GC/MS) or other appropriate techniques and using the list I/II Substances from EU Directive 76/464/EEC and 80/68/EEC as a guideline. Recommended analytical techniques include: volatiles (US Environmental Protection Agency method 524 or equivalent), semi-volatiles (USEPA method 525 or equivalent, and pesticides (USEPA method 608 or equivalent).



Emission Point Reference No.: SRP4 (Overflow outlet from stormwater retention pond)

PARAMETER ^{Note 1}	Monitoring Frequency	Analysis Method/Technique
Flow	Continuous (When in operation)	Flow meter/recorder
Suspended Solids	Weekly (When in operation)	Gravimetric

Note 1: All the analysis shall be carried out by a competent laboratory using standard and internationally accepted procedures.



Emission Point Reference No.: SRP5 outlet from Storm Water Retention Pond/Reed Bed system to Tramore River

PARAMETER ^{Note 1}	Monitoring Frequency	Analysis Method/Technique
Flow	Continuous	Flow meter/recorder
Visual Inspection/Odour ^{Note 2}	Daily	Visual/olfactory
Lagoon Level	Daily	Visual check
Ammonia (as N) ^{Note 3}	Weekly ^{Note 4}	Standard method
Total Suspended Solids	Monthly	Gravimetric
pH	Quarterly	pH meter/recorder
BOD	Quarterly	Standard method
Nitrate	Annually	Standard method
Total P/orthophosphate	Annually	Standard method
Additional parameters ^{Note 5}	As required	Standard method

- Note 1:** All the analysis shall be carried out by a competent laboratory/person using standard and internationally accepted procedures.
- Note 2:** Where there is evident gross contamination, additional samples should be analysed and the full suite of parameters shown tested.
- Note 3:** The licensee shall determine the Ammonia removal efficiency of the reed bed treatment system, based on the monitoring results of SRP1 and SRP5, on a quarterly basis to be reported as part of the AER.
- Note 4:** Frequency to be increased to daily in the event that the warning level value, as determined under Condition 6.15.5, is exceeded.
- Note 5:** Any additional parameter as may be specified by the Agency due to an increased concentration as measured at the inlet to the Storm Water Retention Pond (SRP1).



C.3.1 Leachate Monitoring

Locations: Leachate Holding Tank, Leachate Sumps and Leachate Monitoring Pump Sumps in the Cells (to include PS1, PS2, PS3, PS4, PS5, PS5A, PS6, PS7, PS8, PS9 and any other leachate monitoring point as specified by the Agency).

PARAMETER ^{Note 1}	LEACHATE ^{Note 2} Monitoring Frequency
Leachate level	Continuous
Visual inspection/odour ^{Note 3}	Quarterly
Temperature	Quarterly
BOD	Annually
COD	Annually
Chloride	Annually
Ammonia (as N)	Annually ^{Note 4}
Electrical conductivity	Annually ^{Note 4}
pH	Annually ^{Note 4}
Metals/non-metals ^{Note 5}	Annually
Cyanide (Total)	Annually
Fluoride	Annually
List I/II organic substances ^{Note 6}	Once off
Mercury	Annually
Sulphate	Annually
Total P/orthophosphate	Annually
Total oxidised nitrogen	Annually

Note 1: All the analysis shall be carried out by a competent laboratory using standard and internationally accepted procedures.

Note 2: Visual inspection and leachate levels to be monitored at all leachate monitoring points in the cells, collection sumps and holding tank. Leachate composition to be monitored at the leachate holding tank.

Note 3: Where there is evident gross contamination, additional samples should be analysed and the full suite of parameters shown tested.

Note 4: For leachate pump sumps monitoring shall be for these parameters on a quarterly basis.

Note 5: Metals and elements to be analysed by AA/ICP should include as a minimum: boron, cadmium, calcium, chromium (total), copper, iron, lead, magnesium, manganese, nickel, potassium, sodium and zinc.

Note 6: Samples screened for the presence of organic compounds using gas chromatography/mass spectrometry (GC/MS) or other appropriate techniques and using the list I/II Substances from EU Directive 76/464/EEC and 80/68/EEC as a guideline. Recommended analytical techniques include: volatiles (US Environmental Protection Agency method 524 or equivalent), semi-volatiles (US EPA method 525 or equivalent), and pesticides (US EPA method 608 or equivalent).

C.4.1 Control of Emissions to Sewer

Emission Point Reference No:	SD1
Description of Treatment:	Leachate Conditioning
Equipment:	Leachate collection (primary and secondary) and leachate treatment plant

Control Parameter	Monitoring	Key Equipment ^{Note 1}
Leachate Transfer	Pump operation manual or automatic	Feed-forward pump Leachate level monitor
Aeration	Air blower operation (continuous automatic)	Disc membranes Air blowers (x2)
Solids build-up/blockage	Solids level (Quarterly visual)	Gravel trap

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

C.4.2 Monitoring of Emissions to Sewer

Emission Point Reference No:	SD1
-------------------------------------	-----

Parameter	Monitoring Frequency	Analysis Method /Technique
Flow	Continuous	On-line flow meter with recorder
pH	Continuous	pH electrode/meter and recorder
Temperature	Weekly	Thermometer/Temperature probe
Dissolved Methane	Weekly ^{Note 1}	Standard Method
BOD	Monthly ^{Note 1}	Standard Method
Suspended Solids	Monthly ^{Note 1}	Standard Method
Sulphate (as SO₄)	Monthly ^{Note 1}	Standard Method
Ammonia (as N)	Monthly ^{Note 1}	Standard Method

Note 1: All samples shall be collected on a 24 hour flow proportional composite sampling basis.

C.5 Waste Monitoring

Waste Class	Frequency	Parameter	Method
Municipal waste dispatched to landfill	As may be specified by the Agency	BMW content	Waste characterisation or other methods as may be specified by the Agency
Waste sent off-site for Disposal/Recovery ^{Note 1}			

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

C.6 Noise Monitoring

Table C.6.1 Noise Monitoring Frequency and Technique

Parameter	Monitoring Frequency	Analysis Method/Technique
L(A) _{EQ} [30 minutes]	Annual	Standard ^{Note 1}
L(A) ₁₀ [30 minutes]	Annual	Standard ^{Note 1}
L(A) ₉₀ [30 minutes]	Annual	Standard ^{Note 1}
Frequency Analysis(1/3 Octave band analysis)	Annual	Standard ^{Note 1}

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



C.7 Monitoring of Composting Process

Table C.7.1 Monitoring of Compost Process

Parameter	Monitoring Frequency ^{Note1}	Analysis Method/Technique
Moisture Content	Weekly	Standard
Temperature (min/max.)	Daily	Standard
Oxygen	Daily	Standard

Note 1: Unless otherwise agreed by the Agency



C.8 Ambient Monitoring

C.8.1 Dust/PM₁₀/Odour Monitoring

Location: Dust Monitoring	D1 to D5, inclusive, as shown on Drawing Ref: CE08-011-05-013 - <i>Existing Environmental Monitoring Locations</i> . D6 to be monitored at the specified frequency, following commencement of the Waste Transfer Station activity. (Drawing Ref: CE08-011-05-014 - <i>Proposed Environmental Monitoring Location for Waste Transfer Station</i>).
PM₁₀ Monitoring	S1 to S4, inclusive, as shown on Drawing Ref: CE08-011-05-013 - <i>Existing Environmental Monitoring Locations</i> .
Odour Monitoring	O1 to O5, inclusive, O6 and O7 as shown on Drawing Ref: CE08-011-05-013 - <i>Existing Environmental Monitoring Locations</i> . O10 to be monitored at the specified frequency, following commencement of the Waste Transfer Station activity. (Drawing Ref: CE08-011-05-014 - <i>Proposed Environmental Monitoring Location for Waste Transfer Station</i>).

Parameter	Monitoring Frequency	Analysis Method/Technique
Dust deposition	Quarterly	Bergerhoff ^{Note 1}
PM ₁₀	Quarterly (S1,S2 and S4), Continuous (S3) ^{Note 2}	See Note 3
Odour	Quarterly	See Note 4

Note 1: Standard method VDI2119 (Measurement of Dustfall, Determination of Dustfall using Bergerhoff Instrument (Standard Method) German Engineering Institute). Any modifications to eliminate interference due to algae growth in the gauge should be reported to the Agency.

Note 2: Continuous PM₁₀ monitor at S3 may be relocated with prior agreement of the Agency.

Note 3: As described in prEN12341 or an equivalent agreed by the Agency.

Note 4: Odour measurements shall be olfactometric measurement or as agreed by the Agency.



C.8.2 Groundwater Monitoring

Location: Groundwater Wells: - MWBR1, MWBR2, MWBR3, MWBR7, OB1, OB2, OB3, KC8, and NW1-NW9, (or alternative groundwater well(s) as otherwise agreed by the Agency).

And,

Pump sump location(s) as agreed by the Agency from the groundwater interceptor trench, located towards the north-easterly boundary of the facility.

PARAMETER ^{Note 1}	GROUNDWATER Monitoring Frequency
Visual inspection/odour ^{Note 2}	Quarterly
Groundwater level (wells)	Monthly
Ammonia (as N)	Quarterly ^{Note 3}
Dissolved oxygen	Quarterly
Electrical conductivity	Quarterly ^{Note 3}
Chloride	Quarterly
pH	Quarterly ^{Note 3}
Temperature	Quarterly
Sulphate (SO ₄)	Annually
Metals/non-metals ^{Note 4}	Annually
Cyanide (total)	Annually
Fluoride	Annually
List I/II organic substances (Screen) ^{Note 5}	Annually
Mercury	Annually
Total Alkalinity	Annually
Total Oxidised Nitrogen (as N)	Quarterly
Total Organic Carbon	Quarterly ^{Note 3}
Total P/Orthophosphate (as P)	Annually
Residue on evaporation	Annually

Note 1: Where appropriate all the analyses shall be carried out by a competent laboratory using standard and internationally accepted procedures.

Note 2: Where there is evident gross contamination, additional samples should be analysed and the full suite of parameters shown tested.

Note 3: For groundwater monitoring locations NW1-NW5, NW8 & NW9 down-gradient of the leachate collection drain, monitoring for these parameters shall be on a monthly basis.

Note 4: Metals and elements to be analysed by AA/ICP should include as a minimum: boron, cadmium, calcium, chromium (total), copper, iron, lead, magnesium, manganese, nickel, potassium, sodium and zinc.

Note 5: Samples screened for the presence of organic compounds using gas chromatography/mass spectrometry (GC/MS) or other appropriate techniques and using the list I/II Substances from EU Directive 76/464/EEC and 80/68/EEC as a guideline. Recommended analytical techniques include: volatiles (US Environmental Protection Agency method 524 or equivalent), semi-volatiles (US EPA method 525 or equivalent), and pesticides (US EPA method 608 or equivalent).



C.8.3 Receiving Water Monitoring – Ecological Monitoring Locations

Locations: Tramore and Trabeg Rivers - Ecological Monitoring Locations A,B,C,D,E and F on Drawing CE08-011-05-013, or as otherwise agreed by the Agency

Parameter	Monitoring Frequency	Analysis Method/Technique
Biological quality (Q) Rating/Q index	Annually ^{Note 1}	To be agreed by the Agency
Flow ^{Note 2}	Continuous	Flow meter and recorder
All additional parameters included in Schedule C.8.4	Frequency as specified	Standard Method

Note 1: Monitoring period - June to September.

Note 2: Flow to be measured continuously at one location in receiving water, upstream of discharge point SRP1. This location shall be agreed by the Agency prior to installation of the flow measurement device. Data to be reported as part of the AER.



C.8.4 Receiving Water Monitoring – Surface Water Monitoring Locations

Locations: Tramore and Trabeg Rivers – Surface Water Monitoring Locations EM0, EM1, EM2, EM6 to EM11, inclusive, on Drawing CE08-011-05-013, or as otherwise agreed by the Agency

Parameter	Monitoring Frequency	Analysis Method/Technique
Visual Inspection/Odour ^{Note 1}	Monthly	Visual/olfactory
Ammonia (as N)	Quarterly	Standard Method
BOD	Quarterly	Standard Method
COD	Quarterly	Standard Method
Chloride	Quarterly	Standard Method
Dissolved Oxygen	Quarterly	Standard Method
Electrical Conductivity	Quarterly	Standard Method
pH	Quarterly	pH electrode/meter
Total Suspended Solids	Quarterly	Standard Method
Temperature	Quarterly	Thermometer/Temperature probe
Cadmium and other metals/elements ^{Note 2}	Annually	Standard Method
Mercury	Annually	Standard Method
Sulphate	Annually	Standard Method
Total Alkalinity	Annually	Standard Method
Total P/Orthophosphate	Annually	Standard Method
Total Oxidised Nitrogen	Annually	Standard Method
Biological Monitoring ^{Note 3}	Annually	To be agreed by the Agency
List I/II organic substances (Screen) ^{Note 4}	As required by the Agency	Standard Method

Note 1: Where there is evident gross contamination of leachate, additional samples should be analysed.

Note 2: Metals and elements to be analysed by AA/ICP should include as a minimum: boron, calcium, chromium (total), copper, iron, lead, magnesium, manganese, nickel, potassium, sodium and zinc.

Note 3: Appropriate biological methods (such as EPA Q-Rating System) to be used for the assessment of rivers and streams. Monitoring period - June to September,

Note 4: Samples screened for the presence of organic compounds using Gas Chromatography / Mass Spectrometry (GC/MS) or other appropriate techniques and using the list I/II Substances from EU Directive 76/464/EEC and 80/68/EEC as a guideline. Recommended analytical techniques include: volatiles (US Environmental Protection Agency method 524 or equivalent), semi-volatiles (USEPA method 525 or equivalent, and pesticides (USEPA method 608 or equivalent).



C.8.5 Meteorological Monitoring

Location: Data to be obtained from Cork Airport monitoring station.

Parameter	Monitoring Frequency	Analysis Method/Technique
Precipitation volume	Daily	Standard Method
Evaporation	Daily	Standard Method
Evapotranspiration ^{Note 1}	Daily	Standard Method
Atmospheric humidity (14.00h CET)	Daily	Standard Method
Temperature (min./max.)	Daily	Standard Method
Wind direction	Daily	Standard Method
Wind Force ^{Note 1}	Daily	Standard Method
Atmospheric Pressure ^{Note 1}	Daily	Standard Method

Note 1: Monitoring frequency for these parameters may be decreased with the agreement of the Agency.



SCHEDULE D Specified Engineering Works

Specified Engineering Works

Development of the Waste Transfer Station facility including installation of waste-handling transfer infrastructure as well as odour/dust abatement system(s).

Final capping. ^{Note 1}

Installation of additional Landfill Gas Management, Leachate Management, Groundwater Control and /or Surface Water Management Infrastructure.

Development of a Construction and Demolition Waste Recovery Area.

Any other works notified in writing by the Agency.

Note 1: Subject to the requirements specified in letter W0012-02/AP09SMcD.doc (dated 19/02/2010) and any additional requirements as may be specified by the Agency.



SCHEDULE E: Reporting

Completed reports shall be submitted to:

The Environmental Protection Agency
Office of Environmental Enforcement
Regional Inspectorate
Inniscarra
County Cork **or** Any other address as may be specified by the Agency

Reports are required to be forwarded as required in the licence and as may be set out below:

Report	Reporting Frequency ^{Note 1}	Report Submission Date
Environmental Management Systems Updates	Annually	By 31 st March of each year.
Annual Environment Report (AER)	Annually	By 31 st March of each year.
Record of incidents	As they occur	Within five days of the incident.
Specified Engineering Works reports	As they arise	In advance of the works commencing.
Bund, tank and container integrity assessment	Every three years	As part of AER
Monitoring of landfill gas	Biannually	Ten days after end of the period being reported on.
Surface emissions (capped areas)	Annually	As part of AER
Landfill gas combustion products	Biannually	Ten days after end of the period being reported on.
Monitoring of surface water/groundwater/leachate quality	Biannually	Ten days after end of the period being reported on.
Monitoring of compost quality	Biannually	Ten days after end of the period being reported on.
Monitoring of emissions to sewer	Biannually	Ten days after end of the period being reported on.
Dust/PM ₁₀ /Odour	Biannually	Ten days after end of the period being reported on.
Meteorological monitoring	Annually	As part of AER
Capping material stockpiles	Biannually ^{Note 2}	Ten days after end of the period being reported on.
Slope stability monitoring	Annually ^{Note 2}	Ten days after end of the period being reported on.
Topographical survey	Annually	Ten days after end of the period being reported on.
Noise monitoring	Annually	As part of AER
Biological and estuarine monitoring	Annually	As part of AER
Phased Construction Plan	-	In advance of commencement of development & any updates thereafter.
Closure Plan (CRAMP)	Annually	Six months from the date of grant of licence; thereafter as part of the AER.
Leachate Disposal Agreement	-	In advance of any updated arrangements for disposal.
Any other monitoring	As they occur	Within ten days of obtaining results.

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

Note 2: Reporting frequency may be amended with the prior agreement of the Agency.



SCHEDULE F: Standards for Compost Quality

Compost Quality

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

[The following criteria (where they apply to compost) are deemed a quality standard for the use of compost as a soil improver and should not be deemed as criteria for fertiliser. In addition N, P, K, NH_4-N , NO_3-N , pH and dry matter content should also be measured].

1. Maturity (Compost)

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

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

1. Respiration activity after four days AT_4 is $\leq 10\text{mg}/\text{O}_2/\text{g}$ dry matter or Dynamic Respiration Index is $\leq 1,000\text{mg}/\text{O}_2/\text{kg VS}/\text{h}$.
2. Germination of cress (*Lepidium sativum*) seeds and of radish (*Raphanus sativus*) seeds in compost must be greater than 90 percent of the germination rate of the control sample, and the growth rate of plants grown in a mixture of compost and soil must not differ more than 50 percent in comparison with the control sample.
3. Compost must be cured for at least 21 days; and Compost will not reheat upon standing to greater than 20°C above ambient temperature.

Or

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

2. Trace Elements (Compost) ^{Note 1}

Maximum Trace Element Concentration Limits ^{Note 2}

Parameter (mg/kg, dry mass)	Compost Quality Standards ^{Note 3}	
	Class 1	Class 2
Cadmium (Cd)	0.7	1.5
Chromium (Cr)	100	150
Copper (Cu)	100	150
Mercury (Hg)	0.5	1
Nickel (Ni)	50	75
Lead (Pb)	100	150
Zinc (Zn)	200	400
Polychlorinated Biphenyls (PCB's)	-	-
Polycyclic Aromatic Hydrocarbons (PAH's)	-	-
Impurities $>2\text{mm}$ ^{Note 4}	$<0.5\%$	$<0.5\%$
Gravel and Stones $>5\text{mm}$ ^{Note 4}	$<5\%$	$<5\%$

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

Note 2: The above alone should not be taken as an indication of suitability for addition to soil as the cumulative metal additions to soil should be first calculated.

Note 3: Normalised to 30% organic matter content.

Note 4: Compost must not contain any sharp foreign matter measuring over a 2 mm dimension that may cause damage or injury to humans, animals and plants during or resulting from its intended use.

3. Pathogens (Compost)

Pathogenic organism content must not exceed the following limits:

<i>Salmonella spp.</i>	Absent in 50g	n=5
<i>Faecal Coliforms</i>	≤ 1,000 Most Probable Number (MPN) in 1g	n=5

Where: n = Number of samples to be tested.

4. Monitoring (Compost)

The licensee shall monitor the compost/digestate product at least biannually and in the case of pathogens on a once-off basis. The licensee shall carry out the sampling protocol, methods of analyses and number of samples as agreed by the Agency.

The analyses shall be carried out:

- (a) every six months for plants producing more than 500 and up to 1 000 tonnes of treated biowaste per year;
- (b) at intervals of at least every 1 000 tonnes of treated biowaste produced or every three months, whichever comes first, for plants producing more than 1 000 and up to 10 000 tonnes of treated biowaste per year;
- (c) every month for plants producing more than 10 000 tonnes of treated biowaste per year.



SCHEDULE G: Annual Environmental Report

Annual Environmental Report Content ^{Note 1}
<p>Emissions from the facility.</p> <p>Waste management record.</p> <p>Total consented landfill void (m³) used.</p> <p>Average compaction/fill densities achieved.</p> <p>Topographical Survey (including comparison with previous year survey results).</p> <p>Updates to Landfill Environmental Management Plan (LEMP).</p> <p>Waste Recovery Report.</p> <p>Resource consumption summary.</p> <p>Statement of compliance of facility with any update of the relevant Waste Management Plan.</p> <p>Complaints summary.</p> <p>Reported incidents 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>Meteorological data summary.</p> <p>Noise monitoring report summary.</p> <p>Ambient monitoring summary (surface water, groundwater, dust, noise, odour).</p> <p>Current monitoring location reference drawing.</p> <p>Tank and pipeline testing and inspection report (as necessary).</p> <p>Energy efficiency audit report summary.</p> <p>Resource consumption summary.</p> <p>Report on progress made and proposals being developed to minimise generation of leachate for disposal.</p> <p>Development/Infrastructural works summary (completed in previous year or prepared for current year).</p> <p>Report on management and staffing structure of the facility.</p> <p>Report on the programme for public information.</p> <p>Reports on financial provision made under this licence.</p> <p>Review of Closure, restoration & aftercare 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>Statement on the costs of landfill (including Landfill Levy).</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 Decision

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