



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

**WASTE LICENCE
Recommended Decision**

Licence Register Number:	W0032-03
Applicant/Licensee:	Waterford County Council
Location of Facility:	Dungarvan Waste Disposal Site, Ballynamuck Middle, Dungarvan, County Waterford.

INTRODUCTION

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

The facility comprises a closed and capped landfill with a constructed wetlands system built on top of the landfill, a waste transfer station, a civic amenity and a green waste area. The constructed wetlands system treats landfill leachate and leachate generated in the waste transfer station and civic amenity. Waste from local waste collections is deposited at the transfer station for collection by contractors.

The landfill was capped in 2008 and is being managed in the aftercare phase.

This licence authorises Waterford County Council to discharge treated leachate from the constructed wetlands system to the adjacent waterbody, the Colligan Estuary.

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

Table of Contents

	Page No
Glossary of Terms	1
Decision & Reasons for the Decision	6
Part I Schedule of Activities Licensed.....	7
Part II Schedule of Activities Refused.....	8
Part III Conditions	9
Condition 1. Scope	9
Condition 2. Management of the Facility.....	10
Condition 3. Infrastructure and Operation	12
Condition 4. Interpretation	17
Condition 5. Emissions	19
Condition 6. Control and Monitoring.....	20
Condition 7. Resource Use and Energy Efficiency.....	24
Condition 8. Materials Handling.....	25
Condition 9. Accident Prevention and Emergency Response	26
Condition 10. Closure, Restoration and Aftercare Management	27
Condition 11. Notification, Records and Reports	28
Condition 12. Financial Charges and Provisions	30
SCHEDULE A: Limitations.....	32
SCHEDULE B: Emission Limits.....	33
SCHEDULE C: Control & Monitoring.....	35
SCHEDULE D: Specified Engineering Works	46
SCHEDULE E: Annual Environmental Report	47

Glossary of Terms

All terms in this licence should be interpreted in accordance with the definitions in the Environmental Protection Agency Acts 1992 as amended / Waste Management Acts 1996 as amended, 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.
BAT	Best Available Techniques.
Biannually	At approximately six – monthly intervals.
Biennially	Once every two years.
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.
Bio-stabilised residual waste	Residual biodegradable municipal waste that has been treated to achieve an EPA-approved biodegradability stability standard (as defined in this licence) prior to landfilling or alternative use agreed.
BOD	5 day Biochemical Oxygen Demand (without nitrification suppression).
CBOD	5 day Carbonaceous Biochemical Oxygen Demand (with 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.
COD	Chemical Oxygen Demand.

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.
Compliance Point	The point (location, depth) at which a compliance value should be met. Generally it is represented by a borehole or monitoring well from which representative groundwater samples can be obtained.
Compliance Value	The concentration of a substance and associated compliance regime that, when not exceeded at the compliance point, will prevent pollution and/or achieve water quality objectives at the receptor.
Construction and demolition waste	Wastes that arise from construction, renovation and demolition activities: Chapter 17 of the EWC or as otherwise may be agreed.
Containment boom	A boom that can contain spillages and prevent them from entering drains or watercourses or from further contaminating watercourses.
Daily	During all days of plant operation and, in the case of emissions, when emissions are taking place; with at least one measurement on any one day.
Day	Any 24 hour period.
Daytime	0700 hrs to 1900 hrs.
dB(A)	Decibels (A weighted).
DO	Dissolved oxygen.
Documentation	Any report, record, results, data, drawing, proposal, interpretation or other document in written or electronic form which is required by this licence.
Drawing	Any reference to a drawing or drawing number means a drawing or drawing number contained in the application, unless otherwise specified in this licence.
Emission limits	Those limits, including concentration limits and deposition rates, established in <i>Schedule B: Emission Limits</i> , of this licence.
EMP	Environmental Management Programme.
Environmental damage	As defined in Directive 2004/35/EC.
EPA	Environmental Protection Agency.
European Waste Catalogue (EWC)	A harmonised, non-exhaustive list of wastes drawn up by the European Commission and published as Commission Decision 2000/532/EC and any subsequent amendment published in the Official Journal of the European Community.
Evening Time	1900 hrs to 2300 hrs.
Facility	Any site or premises used for the purpose of the recovery or disposal of waste.
Fortnightly	A minimum of 24 times per year, at approximately two week intervals.

Gas Oil	Gas Oil as defined in Council Directive 1999/32/EC and meeting the requirements of S.I. No. 119 of 2008.
GC/MS	Gas chromatography/mass spectroscopy.
Green Waste	Waste wood (excluding timber), plant matter such as grass cuttings, and other vegetation.
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 facility is authorised to be operational.
Hours of waste acceptance	The hours during which the facility is authorised to accept waste.
ICP	Inductively coupled plasma spectroscopy.
Incident	The following shall constitute as incident for the purposes of this licence: <ul style="list-style-type: none"> (i) an emergency; (ii) any emission which does not comply with the requirements of this licence; (iii) any exceedance of the daily duty capacity of the waste handling equipment; (iv) any trigger level specified in this licence which is attained or exceeded; and, (v) any compliance value specified in this licence which is attained or exceeded; and, (vi) any indication that environmental pollution has, or may have, taken place.
IPPC	Integrated Pollution Prevention & Control.
Irish Water	Irish Water, Colvill House, 24/26 Talbot Street, Dublin 1.
K	Kelvin.
kPa	Kilopascals.
$L_{Aeq,T}$	This is the equivalent continuous sound level. It is a type of average and is used to describe a fluctuating noise in terms of a single noise level over the sample period (T).
Landfill Directive	Council Directive 1999/31/EC.
$L_{Ar,T}$	The Rated Noise Level, equal to the L_{Aeq} during a specified time interval (T), plus specified adjustments for tonal character and/or impulsiveness of the sound.
Licence	A Waste Licence issued in accordance with the Waste Management Acts 1996 as amended.
Licensee	Waterford County Council, Civic Offices, Dungarvan, County Waterford.

Local Authority	Waterford County Council.
Maintain	Keep in a fit state, including such regular inspection, servicing, calibration and repair as may be necessary to perform its function adequately.
Monthly	A minimum of 12 times per year, at intervals of approximately one month.
Municipal waste	As defined in Section 5(1) of the Waste Management Acts 1996 as amended.
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.
Night-time	2300 hrs to 0700 hrs.
Noise-sensitive location (NSL)	Any dwelling house, hotel or hostel, health building, educational establishment, place of worship or entertainment, or any other facility or area of high amenity which for its proper enjoyment requires the absence of noise at nuisance levels.
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).
PRTR	Pollutant Release and Transfer Register.
Priority Substances	Those substances or groups of substances, identified by the Commission in accordance with Article 16(2) of the Water Framework Directive and listed in Tables 11 and 12 of Schedule 6 of the European Communities Environmental Objectives (Surface Waters) Regulations, 2009, as amended, that have been prioritised for action by the setting of environmental quality standards at Community level.
Quarterly	At approximately three – monthly intervals.
Recyclable materials	Waste types, such as cardboard, batteries, gas cylinders etc, may be recycled.
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.
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.
Temporary storage	In relation to waste is a period of less than six months as defined in the Waste Management Acts 1996 as amended.
The Agency	Environmental Protection Agency.
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.
Water Services Authority	Waterford County Council.
Weekly	During all weeks of plant operation and, in the case of emissions, when emissions are taking place; with at least one measurement in any one week.
WEEE	As defined in the European Communities (WEEE) Regulations, 2011 (S.I. No. 355 of 2011).

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 as amended.

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

A screening for Appropriate Assessment was undertaken to assess, in view of best scientific knowledge and the conservation objectives of the site, if the activity, individually or in combination with other plans or projects is likely to have a significant effect on a European Site(s). In this context, particular attention was paid to the European site at **Dungarvan Harbour SPA (site code: 4032)** and the Agency considered, for the reasons set out below, that the activity is not directly connected with or necessary to the management of the site as a European Site and that it cannot be excluded, on the basis of objective scientific information following screening under this Regulation, that the activity, individually or in combination with other plans or projects, will have a significant effect on a European site and accordingly determined that an Appropriate Assessment of the activity is required, and for this reason determined to require the applicant to submit a Natura Impact Statement.

The Appropriate Assessment was considered necessary due to the fact that mitigation measures to control leachate effluent into the Colligan Estuary were considered by the applicant as determining that there will be no significant adverse impacts on the SPA and the conservation status of the wintering bird species for which the site has been designated. The mitigation measures cannot be considered when undertaking screening for Appropriate Assessment, however they can be considered at Appropriate Assessment stage where they can be used as detailed reasons for determining that there is not likely to be any significant effects of a protected site.

In accordance with the European Communities (Birds and Natural Habitats) Regulations 2011 (S.I. No. 477 of 2011), pursuant to Article 6(3) of the Habitats Directive, the activity will not adversely affect the integrity of a European Site(s) in particular **Dungarvan Harbour SPA (site code: 4032)**, having regard to its conservation objectives and will not affect the preservation of that site at favourable conservation status.

In coming to this conclusion, the Agency is satisfied that it has identified all aspects of the activity which can, by themselves or in combination with other plans or projects, affect the conservation objectives of a European Site in particular **Dungarvan Harbour SPA (site code: 4032)**, and is certain, in the light of the best scientific knowledge in the field, that the proposed activity will not, if carried out in accordance with this Licence and the conditions attached hereto, have lasting adverse effects on the integrity of that site, will not hinder the preservation of that site at a favourable conservation status, and will not hinder the lasting preservation of the constitutive characteristics of that site that are connected to the presence of the habitat types, flora and fauna, whose preservation was the objective justifying the designation of that site, will respect the strict protection of animal types and plant types listed in Annex IV of Council Directive 92/43/EEC and will not cause any disturbance to those species or any deterioration in their conservation status.

The Agency is satisfied that no reasonable scientific doubt remains as to the absence of such effects for the following reasons:

- **This licence applies emission limit values to the discharge from the facility's wetland system to surface waters so that surface water quality standards will not be exceeded and favourable conditions for the qualifying interests of the Dungarvan Harbour SPA (site code: 4032) will be maintained.**
- **This licence includes measures for protection of shellfish.**
- **This licence applies measures for control and effective operation of the wetland system and the remaining part of the facility.**

Part I Schedule of Activities Licensed

In pursuance of the powers conferred on it by the Waste Management Acts 1996 as amended, the Environmental Protection Agency (the Agency) proposes, under Section 46(8) of the said Acts to grant this Waste Licence to **Waterford County Council, Civic Offices, Dungarvan, County Waterford** to carry on the waste activities listed below at **Dungarvan Waste Disposal Site, Ballynamuck Middle, Dungarvan, County Waterford** subject to conditions, with the reasons therefor 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 as amended

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

Licensed Waste Recovery Activities, in accordance with the Fourth Schedule of the Waste Management Acts 1996 as amended

Class R 3.	Recycling /reclamation of organic substances which are not used as solvents (including composting and other biological transformation processes), which includes gasification and pyrolysis using the components as chemicals.
Class R 4.	Recycling/reclamation of metals and metal compounds.
Class R 5.	Recycling/reclamation of other inorganic materials, which includes soil cleaning resulting in recovery of the soil and recycling of inorganic construction materials.
Class R 11.	Use of waste obtained from any of the operations numbered R 1 to R 10.
Class R 13.	Storage of waste pending any of the operations numbered R 1 to R 12 (excluding temporary storage (being preliminary storage according to the definition of 'collection' in section 5(1)), pending collection, on the site where the waste is produced).

Part II Schedule of Activities Refused

On the basis of the information before it, the Environmental Protection Agency (the Agency), pursuant to its powers under Section 46(8) of the Waste Management Acts 1996 as amended, proposes to refuse the following classes of activity.

Refused waste recovery activities, in accordance with the Fourth Schedule of the Waste Management Acts 1996 as amended

Class R 1. Use principally as a fuel or other means to generate energy: This includes incineration facilities dedicated to the processing of municipal solid waste only where their energy efficiency is equal to or above:

- 0.60 for installations in operation and permitted in accordance with applicable Community acts before 1 January 2009,
- 0.65 for installations permitted after 31 December 2008,

using the following formula, applied in accordance with the reference document on Best Available Techniques for Waste Incineration:

$$\text{Energy efficiency} = (E_p - (E_f + E_i)) / (0.97 \times (E_w + E_f))$$

Where -

‘E_p’ means annual energy produced as heat or electricity and is calculated with energy in the form of electricity being multiplied by 2.6 and heat produced for commercial use multiplied by 1.1(GJ/year),

‘E_f’ means annual energy input to the system from fuels contributing to the production of steam (GJ/year),

‘E_w’ means annual energy contained in the treated waste calculated using the net calorific value of the waste (GJ/year),

‘E_i’ means annual energy imported excluding E_w and B_f(GJ/year),

‘0.97’ is a factor accounting for energy losses due to bottom ash and radiation.

Reason: No such activity takes place at the facility. The landfill gas is being flared off and no proposals for its utilisation were presented in the licence review application.

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 colour red on *Drawing No. MDR0350/DG0501 dated April 2008* of the application. Any reference in this licence to “facility” shall mean the area thus outlined in colour 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 as amended 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 This licence is being granted in substitution for the waste licence granted to the licensee on 6 March 2005 (Register No: W0032-02). The previous waste licence (Register No: W0032-02) is superseded by this licence.
- 1.8 Waste Acceptance Hours and Hours of Operation
- 1.8.1 With the exception of emergencies or as may be agreed by the Agency, waste shall be accepted at or dispatched from the **Waste Transfer Station** and Civic Waste **Area** only between the hours of 9:00 to 17:00 Monday to Friday inclusive and from 9:00 to 13:00 on Saturdays.
- 1.8.2 The facility shall be operated only during the hours of 8:30 to 18:00 Monday to Friday inclusive and 8:30 to 14:00 on Saturdays.
- 1.8.3 The facility shall not operate or accept/dispatch waste on Sundays or on Public Holidays without the agreement of the Agency.

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

Condition 2. Management of the Facility

2.1 Facility Management

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

2.1.2 The licensee shall ensure that personnel performing specifically assigned tasks shall be qualified on the basis of appropriate education, training and experience as required and shall be aware of the requirements of this licence.

2.2 Environmental Management System (EMS)

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

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

2.2.2.1 Management and Reporting Structure.

2.2.2.2 Schedule of Environmental Objectives and Targets.

The licensee shall 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, and the prevention, reduction and minimisation of waste for disposal. The schedule shall include time frames for the achievement of set targets and shall address a five year period as a minimum. In relation to waste recovery the schedule shall include an initial waste recovery target of waste throughput, as well as time frames for achieving higher recovery targets. As a minimum this shall include specific objectives for the control and minimisation as well as an annual review of the dust and noise nuisance potential of the site activities. The schedule shall be reviewed annually and amendments thereto notified to the Agency for agreement as part of the Annual Environmental Report (AER).

2.2.2.3 Environmental Management Programme (EMP)

The licensee shall, maintain an EMP, including a time schedule, for achieving the Environmental Objectives and Targets prepared under Condition 2.2.2.2. Once agreed the EMP shall be maintained by the licensee. It shall include:

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

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

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

2.2.2.4 Documentation

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

2.2.2.6 Awareness and Training

The licensee shall 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 establish and maintain within six months of the date of grant of this licence a structured programme for maintenance and service of all plant, vehicles and equipment based on the instructions issued by the manufacturer/supplier or installer of the **plant, vehicles and** equipment. Appropriate record keeping and diagnostic testing shall support this maintenance programme. The licensee shall clearly allocate responsibility for the planning, management and execution of all aspects of this programme to appropriate personnel (see Condition 2.1 above).

2.2.2.9 Efficient Process Control

The licensee shall establish and maintain a programme to ensure there is adequate control of processes under all modes of operation. The programme shall identify the key indicator parameters for process control performance, as well as identifying methods for measuring and controlling these parameters. 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 as required by the conditions of this licence.
- 3.2 Facility Notice Board
- 3.2.1 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.
- 3.2.2 The board shall clearly show:
- (i) the name and telephone number of the facility;
 - (ii) the normal hours of opening;
 - (iii) the name of the licence holder;
 - (iv) an emergency out of hours contact telephone number;
 - (v) the licence reference number; and
 - (vi) where environmental information relating to the facility can be obtained.
- 3.2.3 A plan of the facility clearly identifying the location of each storage and treatment area shall be displayed as close as is possible to the entrance to the facility. The plan shall be displayed on a durable material such that is legible at all times. The plan shall be replaced as material changes to the facility are made.
- 3.3 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.
- 3.4 Sampling equipment shall be operated and maintained such that sufficient sample is collected to meet both internal monitoring requirements and those of the Agency. A separate composite sample or homogeneous sub-sample (of sufficient volume as advised) should be retained as required for EPA use.
- 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 **for 48 hours** 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 contaminated unless it can be demonstrated to be otherwise. All drainage from bunded areas shall be diverted for collection and safe disposal, unless it can be deemed uncontaminated and does not exceed the trigger levels set for storm water emissions under Condition 6.15.
- 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
- The licensee shall maintain silt traps and oil separators at the facility:
- (i) Silt traps to ensure that all storm water discharges, other than from roofs **and restored areas of the landfill**, from the facility pass through a silt trap in advance of discharge;
 - (ii) An oil separator on the storm water discharge from yard areas. The separator shall be a Class I full retention separator.
- The silt traps and separator shall be in accordance with I.S. EN-858-2: 2003 (separator systems for light liquids).
- 3.10 Fire-water Retention
- 3.10.1 The licensee shall carry out a risk assessment to determine if the activity should have a fire-water retention facility. The licensee shall submit the assessment and a report to the Agency on the findings and recommendations of the assessment within six months of the date of grant of this licence.
- 3.10.2 In the event that a significant risk exists for the release of contaminated fire-water, the licensee shall, based on the findings of the risk assessment, prepare and implement, with the agreement of the Agency, a suitable risk management programme. The risk management programme shall be fully implemented within three months of date of notification by the Agency.
- 3.10.3 In the event of a fire or a spillage to storm water, the site storm water shall be diverted for collection. The licensee shall examine, as part of the response programme in Condition 3.10.2 above, the provision of automatic diversion of storm water for collection. 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 pump sumps, storage tanks **or** lagoons 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).
- 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. of this licence for the reduction in fugitive emissions.
- 3.13 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.
- 3.14 The licensee shall provide and 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.
- 3.15 Natural gas or biodiesel meeting CEN standard EN14214 shall be used in the boilers on site. In the event of an interruption to the supply of natural gas or biodiesel, an alternative fuel such as gas oil may be used with the prior written agreement of the Agency.
- 3.16 Specified Engineering Works
- 3.16.1 The licensee shall submit proposals for all Specified Engineering Works, as defined in *Schedule D: Specified Engineering Works*, of this licence, to the Agency for its agreement at least two months in advance of the intended date of commencement of

any such works. No such works shall be carried out without the prior agreement of the Agency.

3.16.2 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.

3.16.3 Following the completion of any 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.

3.17 Facility Security

3.17.1 Security and stockproof fencing and gates shall be installed and maintained **at all operational waste activities**. 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 site security at the closed landfill may be removed.

3.17.2 The licensee shall install a CCTV system which records all truck movement into and out of the facility; the CCTV system shall be operated at all times and copies of recording kept on site and made available to the Agency on request.

3.17.3 Gates shall be locked shut when the facility is unsupervised.

3.17.4 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.

3.18 Facility Roads and Site Surfaces

3.18.1 Effective site roads shall be provided and maintained to ensure the safe and nuisance-free movement of vehicles within the facility.

3.18.2 The licensee shall provide and maintain an impermeable concrete surface in all areas of the **Waste Transfer Station and Civic Amenity**; 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 Facility Office

3.19.1 **Unless otherwise agreed by the Agency**, 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.

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

3.20 Operational Controls

The licensee shall provide and use adequate lighting during the operation of the facility in hours of darkness.

- 3.21 Weighbridge and Wheel Cleaners
- 3.21.1 The licensee shall provide and maintain a weighbridge and wheel cleaners at the facility.
- 3.21.2 The wheel cleaners shall be used by all **goods** vehicles leaving the facility as required to ensure that no trade effluent/storm water or waste is carried off-site. All water from the wheel cleaning area shall be directed to the trade effluent drainage network.
- 3.21.3 The wheel-wash shall be inspected on a daily basis and drained as required. Silt, stones and other accumulated material shall be removed as required from the wheel-wash and disposed of appropriately.
- 3.22 Landfill Gas Management
- 3.22.1 Infrastructure for the active collection and flaring of landfill gas shall be **maintained** at the facility. The flare shall be of an enclosed type design.
- 3.22.2 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.
- 3.23 Leachate Management Infrastructure
- 3.23.1 Structures for the storage and treatment of leachate shall be lined.**
- 3.23.2 Leachate management infrastructure at the facility shall provide for the collection and abstraction of leachate from the landfill, the collection of leachate and run-off from the Waste Transfer Station and Civic Amenity area and its storage pending treatment at the facility or transport off-site.
- 3.23.3 Unless treated at the facility, leachate **collected** from the facility shall be tankered off-site in fully enclosed road tankers to an agreed disposal plant and disposed of there.
- 3.23.4 The licensee shall submit to the Agency for approval, evidence to demonstrate that an agreement is in place regarding leachate removal as **referred to in Condition 3.23.3**.
- 3.24 Groundwater Management
- Effective groundwater management infrastructure shall be provided and maintained at the facility during operation, restoration and aftercare of the facility. As a minimum, the infrastructure shall protect the groundwater resources from contamination by **ongoing** waste activities and the storage **and treatment** of leachate and contaminated surface water at the facility.
- 3.25 Waste handling, ventilation and processing plant
- 3.25.1 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.
- 3.25.2 Within three months from the date of grant of this licence, the licensee shall provide a report for the agreement of the Agency detailing the duty and standby capacity in tonnes per day, of all waste handling and processing equipment to be used at the facility. These capacities shall be based on the licensed waste intake, as per *Schedule A: Limitations*, of this licence.
- 3.25.3 The quantity of waste to be accepted at the facility on a daily basis shall not exceed the duty capacity of the equipment at the facility. Any exceedance of this intake shall be treated as an incident.

3.26 Civic Amenity

- 3.26.1 The licensee shall maintain the Civic Amenity infrastructure.
- 3.26.2 The licensee shall provide and maintain appropriate receptacles at the Civic Amenity for the storage of various waste types.
- 3.26.3 The Civic Amenity shall be used only by private vehicles. The Civic Amenity shall not be used as a transfer station for disposal of waste by commercial waste disposal contractors or local authority waste collection vehicles.
- 3.26.4 All waste deposited in the Civic Amenity shall be either:
- (i) into a skip;
 - (ii) into the hopper of the compactor for disposal;
 - (iii) into a receptacle for recovery; or
 - (iv) in the case where inspection is required, into a designated inspection area.
- 3.26.5 The licensee shall assign and clearly label each container/bay at the Civic Amenity to indicate its contents.
- 3.26.6 At the end of the working day the floor of the Civic Amenity, the hopper and the compactor shall be cleared of waste.
- 3.26.7 No individual waste material deposited at the CA shall be stored there for longer than four months.
- 3.26.8 The licensee may accept:
- (i) Household hazardous waste
 - (ii) Hazardous waste from business customers and other non-household sources including farms that, because of its nature or composition, is similar to household hazardous waste
- at the civic amenity site. The licensee shall have regard to any relevant guidance published by the Agency under the National Hazardous Waste Management Plan.

3.27 Waste Transfer Station

Appropriate infrastructure for the storage and transfer of waste shall be maintained at the facility. This infrastructure shall at a minimum comprise the following:

- (i) A drainage infrastructure that can contain all possible contaminated run-off from the storage area;
- (ii) A dedicated area for quarantine of unacceptable wastes.

3.28 Waste Inspection and Quarantine Areas

- 3.28.1 A Waste Inspection Area and a Waste Quarantine Area shall be provided and maintained at the facility.
- 3.28.2 These areas shall be constructed and maintained in a manner suitable, and be of a size appropriate, for the inspection of waste and subsequent quarantine if required. The waste inspection area and the waste quarantine area shall be clearly identified and segregated from each other.
- 3.28.3 Drainage from the quarantine area shall be directed to the leachate management system.

3.29 Constructed wetlands system

- 3.29.1 The constructed wetlands system shall be maintained according to industry best practice and its operation shall have regard to any relevant guidance published by the Agency.**
- 3.29.2 Within six months of the date of grant of this licence the licensee shall construct a discharge pipe for treated effluent from the constructed wetland system to the Colligan Estuary.**

3.29.3 Trigger levels for removal of sediment from the wetland ponds shall be established based on the sampling required in Schedule C.2.1.

3.30 Monitoring Infrastructure for Groundwater/gas

3.30.1 All wellheads shall be adequately protected to prevent contamination or physical damage.

3.30.2 Groundwater/gas monitoring wells/boreholes shall be constructed having regard to the guidance given in the Agency's landfill manual "Landfill Monitoring" **and must be repaired as soon as practicable if damaged.**

3.31 Dust/Odour Control

Within nine months of the date of grant of this licence, the licensee shall install and provide adequate measures for the control of odours and dust emissions, including fugitive dust emissions, from the facility. Installation of an odour-management system shall at a minimum include the following:

3.31.1 Dust curtains (or equivalent approved by the Agency) shall be maintained on the entry/exit points from the waste transfer building; all other doors in this building shall be kept closed where possible.

3.31.2 Unless otherwise agreed by the Agency, all buildings processing putrescible waste shall be maintained at negative air pressure with ventilated gases being subject to appropriate treatment as may be agreed or specified by the Agency.

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

Condition 4. Interpretation

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

4.1.1 Continuous Monitoring

(i) No 24 hour mean value shall exceed the emission limit value.

(ii) 97% of all 30 minute mean values taken continuously over an annual period shall not exceed 1.2 times the emission limit value.

(iii) No 30 minute mean value shall exceed twice the emission limit value.

4.1.2 Non-Continuous Monitoring

(i) For any parameter where, due to sampling/analytical limitations, a 30 minute sample is inappropriate, a suitable sampling period should be employed and the value obtained therein shall not exceed the emission limit value.

(ii) For flow, no hourly or daily mean value, calculated on the basis of appropriate spot readings, shall exceed the relevant limit value.

(iii) For all other parameters, no 30 minute mean value shall exceed the emission limit value.

4.2 The concentration and volume flow limits for emissions to atmosphere specified in this licence shall be achieved without the introduction of dilution air and shall be based on gas volumes under standard conditions of:

4.2.1 In the case of landfill gas flare:

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

- 4.3 Emission limit values for emissions to waters in this licence shall be interpreted in the following way:
- 4.3.1 Continuous Monitoring
- (i) No flow value shall exceed the specific limit.
 - (ii) No pH value shall deviate from the specified range.
 - (iii) No temperature value shall exceed the limit value.
- 4.3.2 Composite Sampling
- (i) No pH value shall deviate from the specified range.
 - (ii) For parameters other than pH and flow, eight out of ten consecutive composite results, based on flow proportional composite sampling, shall not exceed the emission limit value. No individual results similarly calculated shall exceed 1.2 times the emission limit value.
- 4.3.3 Discrete Sampling
- For parameters other than pH and temperature, no grab sample value shall exceed 1.2 times the emission limit value.
- 4.4 Where the ability to measure a parameter is affected by mixing before emission, then, with agreement from the Agency, the parameter may be assessed before mixing takes place.
- 4.5 Noise
- Noise from the facility shall not give rise to sound pressure levels ($L_{Aeq, T}$) measured at the boundary of the facility which exceed the limit value(s).
- 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).

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 There shall be no emissions to groundwater.
- 5.6 Unless otherwise agreed by the Agency, no trade effluent, **untreated** leachate and/or contaminated storm water shall be discharged to surface water drains and surface water courses.
- 5.7 **No treated leachate shall be discharged from the wetland system to the lagoon marsh or the Colligan Estuary until such time as the pipeline required under Condition 3.29 is constructed. This condition may not apply during periods of rainfall when discharge from the wetland system is required to prevent overflow or flooding of the facility. The dates, periods and extent of such events shall be reported in the AER.**
- 5.8 **The licensee shall take such measures as are necessary, in respect of the discharges from the facility, to ensure that designated shellfish waters in Dungarvan Harbour (waterbody code: IE_SE_140_000) comply with the quality standards specified in Schedule 2 of the European Communities (Quality of Shellfish Waters) Regulations, 2006 (S.I. 268 of 2006) as amended.**

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

Condition 6. Control and Monitoring

- 6.1 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:
- 6.1.1 Analysis shall be undertaken by competent staff in accordance with documented operating procedures.
- 6.1.2 Such procedures shall be assessed for their suitability for the test matrix and performance characteristics determined.
- 6.1.3 Such procedures shall be subject to a programme of Analytical Quality Control using control standards with evaluation of test responses.
- 6.1.4 Where analysis is sub-contracted it shall be to a competent laboratory.
- 6.2 Test Programme - **Constructed Wetlands**
- 6.2.1 The licensee shall prepare, to the satisfaction of the Agency, a test programme for the operation of the proposed constructed wetland. This programme shall be submitted to the Agency prior to the commencement of discharge of treated leachate from the constructed wetland. The criteria for the operation of the constructed wetland as determined by the test programme shall be incorporated into the standard operating procedures and *Schedule C.2.1 Control of Emissions to Water* of this licence.**
- 6.2.2 The licensee shall ensure that each pond is performing as designed and to specification. The licensee shall investigate the causes for any unexpected increase in the concentration of any parameter across any single pond. The report on any investigation and execution of remedial measures shall be submitted as part of the AER.**
- 6.3 The licensee shall ensure that:
- (i) sampling and analysis for all parameters listed in the Schedules to this licence; and
- (ii) any reference measurements for the calibration of automated measurement systems;
- shall be carried out in accordance with CEN-standards. If CEN standards are not available, ISO, national or international standards that will ensure the provision of data of an equivalent scientific quality shall apply.
- 6.4 All automatic monitors and samplers shall be functioning at all times (except during maintenance and calibration) when the activity is being carried on unless alternative sampling or monitoring has been agreed in writing by the Agency for a limited period. In the event of the malfunction of any continuous monitor, the licensee shall contact the Agency as soon as practicable, and alternative sampling and monitoring facilities shall be put in place. The use of alternative equipment, other than in emergency situations, shall be as agreed by the Agency.
- 6.5 Monitoring and analysis equipment shall be operated and maintained as necessary so that monitoring accurately reflects the emission/discharge (or ambient conditions where that is the monitoring objective).
- 6.6 The licensee shall ensure that groundwater monitoring well sampling equipment is available/installed on-site and is fit for purpose at all times. The sampling equipment shall be to Agency specifications.
- 6.7 All treatment/abatement and emission control equipment shall be calibrated and maintained in accordance with the instructions issued by the manufacturer/supplier or installer.
- 6.8 The frequency, methods and scope of monitoring, sampling and analyses, as set out in this licence, may be amended with the agreement of the Agency following evaluation of test results.

- 6.9 The licensee shall prepare a programme, to the satisfaction of the Agency, for the identification and reduction of fugitive emissions using an appropriate combination of best available techniques. This programme shall be included in the Environmental Management Programme.
- 6.10 The integrity and water tightness of all underground pipes, tanks, bunding structures and containers and their resistance to penetration by water or other materials carried or stored therein shall be tested and demonstrated by the licensee within six months of the date of grant of this licence. This testing shall be carried out by the licensee at least once every three years thereafter and reported to the Agency on each occasion. This testing shall be carried out in accordance with any guidance published by the Agency. A written record of all integrity tests and any maintenance or remedial work arising from them shall be maintained by the licensee.
- 6.11 The drainage system (i.e., gullies, manholes, any visible drainage conduits and such other aspects as may be agreed) and bunds, silt traps and oil separators shall be inspected weekly and desludged as necessary. All sludge and drainage from these operations shall be collected for safe disposal. The drainage system, bunds, silt traps and oil interceptors shall be properly maintained at all times.
- 6.12 Process Effluent
- 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. Such screening shall be repeated at intervals as requested by the Agency thereafter.
- 6.13 Emissions to Water
- The licensee shall carry out analysis of heavy metals in the sediment of a representative stretch of the receiving waters. The range of heavy metals for analysis shall be agreed by the Agency. The licensee shall within six months of the date of grant of this licence submit for agreement by the Agency a proposal for the sediment sampling programme. The sediment sampling and analysis shall be carried out once every five years or more frequently if directed by the Agency. Results shall be included in the AER.**
- 6.14 An inspection system for the detection of leaks on all flanges and valves on over-ground pipes used to transport materials other than water shall be developed and maintained **within six months of the date of grant of this licence.**
- 6.15 Storm Water
- 6.15.1 A visual examination of the storm water discharges shall be carried out daily. A log of such inspections shall be maintained.
- 6.15.2 A licensee shall, within six months of **the date of grant of this licence**, establish suitable trigger levels for **suspended solids, total organic carbon (TOC) and ammonia**, or other parameters as may be agreed or directed by the Agency, in storm water discharges, such that storm waters exceeding these levels will be diverted for retention and suitable disposal. The licensee shall have regard to the Environmental

Protection Agency “Guidance on the setting of trigger values for storm water discharges to off-site surface waters at EPA IPPC and Waste licensed facilities” when establishing the suitable trigger levels

6.16 Ground Water

- 6.16.1 Within eighteen months of the date of this licence, the licensee shall carry out a risk screening and where necessary a technical assessment in accordance with the Guidance on the Authorisation of Discharges to Groundwater, published by the Environmental Protection Agency. A report on the outcome of the screening and where relevant the recommendations of the technical assessment in relation to the setting of groundwater compliance points and values, shall be included in the next AER. Any actions required to demonstrate compliance with the European Communities Environmental Objectives (Groundwater) Regulations 2010, shall be agreed by the Agency and implemented before 22nd December 2015. Groundwater monitoring results shall be submitted annually or as required in the Schedules to this licence.
- 6.16.2 Within three months of the date of this licence, the licensee shall submit to the Agency for its agreement, groundwater monitoring trigger levels that will indicate a significant change in groundwater quality.
- 6.16.3 The trigger levels as specified in Condition 6.16.2 for groundwater shall be measured at monitoring boreholes listed in *Schedule C.6* of this licence.

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 ‘Guidance Note for Noise: Licence Applications, Surveys and Assessments in Relation to Scheduled Activities (NG4)’ 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. 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 A continuous monitoring system shall be **operated and** maintained at the facility. All facility operations linked to the telemetry system shall also have a manual control which will be reverted to in the event of break in power supply or during maintenance.

- 6.20 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.

6.21 Litter Control

- 6.21.1 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.
- 6.21.2 The licensee shall ensure that all vehicles delivering waste to and removing waste and materials from the facility are appropriately covered.

6.22 Dust/Odour Control

- 6.22.1 All **odour-forming** waste stored overnight at the facility shall be stored in suitably covered and enclosed containers, and shall be removed from the facility within 48 hours, except at Public Holiday weekends. At Public Holiday weekends, **odour-forming** waste shall be removed within 72 hours of its arrival on site.

6.22.2 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.

6.22.3 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.

6.23 Operational Controls

6.23.1 The floor of the waste transfer building shall be cleaned on a weekly basis and on a daily basis where putrescible waste is handled. The floor of the storage bays for recovered wastes shall be washed down and cleaned on each occasion such bays are emptied, or as a minimum on a weekly basis.

6.23.2 Scavenging shall not be permitted at the facility.

6.23.3 All tanks and drums shall be labelled to clearly indicate their contents.

6.23.4 **Notwithstanding the public rights of way at the facility**, there shall be no unauthorised public access to the facility.

6.23.5 There shall be no animal grazing permitted at the facility.

6.24 Nuisance Monitoring

The licensee shall, on a daily basis, 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.

6.25 Monitoring Locations

Within three months of the date of grant of this licence, the licensee shall submit to the Agency an appropriately scaled drawings showing all the monitoring locations that are stipulated in this licence including any noise-sensitive locations and private wells to be monitored. The drawing shall include the eight-digit national grid reference of each monitoring point.

6.26 The licensee shall conduct continuous gas monitoring in any enclosed structures at the facility for methane (CH₄) % v/v, carbon dioxide (CO₂) % v/v and oxygen (O₂) % v/v.

6.27 Stability Assessment

The licensee shall carry out a stability assessment of the side slopes of the facility **once every three** years. The results of this assessment shall be reported as part of the AER.

<p>Reason: <i>To provide for the protection of the environment by way of treatment and monitoring of emissions.</i></p>
--

Condition 7. Resource Use and Energy Efficiency

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

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

Condition 8. Materials Handling

- 8.1 Disposal or recovery of waste on-site shall only take place in accordance with the conditions of this licence and in accordance with the appropriate National and European legislation and protocols.
- 8.2 Waste sent off-site for recovery or disposal shall be transported only by an authorised waste contractor. The waste shall be transported from the site of the activity to the site of recovery/disposal only in a manner that will not adversely affect the environment and in accordance with the appropriate National and European legislation and protocols.
- 8.3 The licensee shall ensure that, in advance of transfer to another person, waste shall be classified, packaged and labelled in accordance with National, European and any other standards which are in force in relation to such labelling.
- 8.4 The loading and unloading of materials shall be carried out in designated areas protected against spillage and leachate run-off.
- 8.5 Waste shall be stored in designated areas, protected as may be appropriate against spillage and leachate run-off. The waste shall be clearly labelled and appropriately segregated.
- 8.6 No waste classified as green list waste in accordance with the EU Shipment of Waste Regulations (Council Regulation EEC No. 1013/2006, as may be amended) shall be consigned for recovery without the agreement of the Agency.
- 8.7 Waste for disposal/recovery off-site shall be analysed in accordance with *Schedule C: Control & Monitoring*, of this licence.
- 8.8 Unless approved in writing, in advance, by the Agency the licensee is prohibited from mixing a hazardous waste of one category with a hazardous waste of another category or with any other non-hazardous waste.
- 8.9 The licensee shall neither import waste into the State nor export waste out of the State except in accordance with the relevant provisions of Regulation (EC) No 1013/2006 of the European Parliament and of the Council of 14th June 2006 on shipments of waste and associated national regulations.
- 8.10 Unless otherwise agreed by the Agency, all waste processing shall be carried out inside the waste transfer building.
- 8.11 Waste Acceptance and Characterisation Procedures
- 8.11.1 Waste shall only be accepted at the facility from Local Authority waste collection or transport vehicles or holders of waste permits, unless exempted or excluded, issued under the Waste Management Acts 1996 as amended. Copies of these waste collection permits must be maintained at the facility.
- 8.11.2 The licensee shall maintain detailed written procedures for the acceptance and handling of wastes.
- 8.11.3 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 Amenity sites and WEEE collection centres 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.
- 8.11.4 Waste arriving at the facility shall have its documentation checked at the point of entry to the facility and subject to this verification, weighed, documented and directed to the Waste Transfer Station. Each load of waste arriving at the Waste Transfer Building shall be inspected upon tipping within this building. Only after such inspections shall the waste be processed for disposal or recovery.
- 8.11.5 Any waste deemed unsuitable for processing at the facility and/or in contravention of this licence shall be immediately separated and removed from the facility at the earliest possible time. Temporary storage of such wastes shall be in a designated

Waste Quarantine Area. Waste shall be stored under appropriate conditions in the quarantine area to avoid putrefaction, odour generation, the attraction of vermin and any other nuisance or objectionable condition.

8.11.6 Waste arriving at the facility shall be inspected at the point of entry to the facility and subject to this inspection, weighed, documented and directed to the Waste Transfer Station. Each load of waste arriving at the Waste Transfer Station shall be inspected upon tipping within this building. Only after such inspections shall the waste be processed for disposal or recovery.

8.11.7 A record of all inspections of incoming waste loads shall be maintained.

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 ensure that a documented Accident Prevention Procedure is in place that addresses the hazards on-site, particularly in relation to the prevention of accidents with a possible impact on the environment. This procedure shall be reviewed annually and updated as necessary.

9.2 The licensee shall ensure that a documented Emergency Response Procedure is in place that addresses any emergency situation which may originate on-site. This procedure shall include provision for minimising the effects of any emergency on the environment. This procedure shall be reviewed annually and updated as necessary.

9.3 Incidents

9.3.1 In the event of an incident the licensee shall immediately:

- (i) carry out an investigation to identify the nature, source and cause of the incident and any emission arising therefrom;
- (ii) isolate the source of any such emission;
- (iii) evaluate the environmental pollution, if any, caused by the incident;
- (iv) identify and execute measures to minimise the emissions/malfunction and the effects thereof;
- (v) identify the date, time and place of the incident;
- (vi) notify the Agency and other relevant authorities.

9.3.2 The licensee shall provide a proposal to the Agency for its agreement within one month of the incident occurring or as otherwise agreed by the Agency, to:

- (i) identify and put in place measures to avoid recurrence of the incident; and
- (ii) identify and put in place any other appropriate remedial actions.

9.4 Emergencies

9.4.1 In the event of a breakdown of equipment or any other occurrence which results in the closure of the 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 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.

- 9.4.2 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.
- 9.4.3 No waste shall be burnt within the boundaries of the facility. A fire at the facility shall be treated as an emergency and immediate action shall be taken to extinguish it and notify the appropriate authorities.
- 9.4.4 In the event that monitoring of local wells indicates that the facility is having a significant adverse effect on the quantity and/or quality of the water supply this shall be treated as an emergency and the licensee shall provide an alternative supply of water to those affected.

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

Condition 10. Closure, Restoration and Aftercare Management

- 10.1 Following termination, or planned cessation for a period greater than six months, of use or involvement of all or part of the site in the licensed activity, the licensee shall, to the satisfaction of the Agency, decommission, render safe or remove for disposal/recovery any soil, subsoil, buildings, plant or equipment, or any waste, materials or substances or other matter contained therein or thereon, that may result in environmental pollution.
- 10.2 Closure, Restoration and Aftercare Management Plan (CRAMP)
- 10.2.1 The licensee shall **maintain**, to the satisfaction of the Agency, a fully detailed and costed plan for the decommissioning or closure of the site or part thereof. This plan shall be submitted to the Agency for agreement within six months of the date of grant of the licence.
- 10.2.2 The plan shall be 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 written agreement of the Agency.
- 10.2.3 The licensee shall have regard to the Environmental Protection Agency's Guidance on Assessing and Costing Environmental Liabilities (2014) and, as appropriate, Guidance on Environmental Liability Risk Assessment, Residuals Management Plans and Financial Provision (2006) when implementing Condition 10.2.1 above.
- 10.3 The CRAMP shall include, as a minimum, the following:
- (i) a scope statement for the plan;
 - (ii) the criteria that define the successful closure and restoration 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 plan;
 - (v) details of the long-term supervision, monitoring, control, maintenance and reporting requirements for the restored facility; and
 - (vi) details of the costings for the plan and the financial provisions to underwrite those costs.

- 10.4 A final validation report to include a certificate of completion for the 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 by both telephone and either email or webform, to the Agency's headquarters in Wexford, or to such other Agency office as may be specified by the Agency, as soon as practicable after the occurrence of any of the following:
- (i) any release of environmental significance to atmosphere from any potential emission 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 & Monitoring*, of this licence which is likely to lead to loss of control of the abatement system; and
 - (iv) any incident with the potential for environmental contamination of surface water or groundwater, or posing an environment threat to air or land, or requiring an emergency response by the Local Authority.

The licensee shall include as part of the notification, date and time of the incident, summary details of the occurrence, and where available, the steps taken to minimise any emissions.

- 11.2 The following shall be notified, as soon as practicable after the occurrence of any incident which relates to a discharge to water:
- (i) Inland Fisheries Ireland **and/or** Department of Agriculture, Food and the Marine in the case of discharges to receiving waters.
- 11.3 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.
- 11.4 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.
- 11.5 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.
- 11.6 The licensee shall as a minimum ensure that the following documents are accessible at the site:
- (i) the licences relating to the facility;
 - (ii) the current EMS for the facility;
 - (iii) the previous year's AER for the facility;
 - (iv) records of all sampling, analyses, measurements, examinations, calibrations and maintenance carried out in accordance with the requirements of this licence and all other such monitoring which relates to the environmental performance of the facility;

- (v) relevant correspondence with the Agency;
- (vi) up-to-date site drawings/plans showing the location of key process and environmental infrastructure, including monitoring locations and emission points;
- (vii) up-to-date Standard Operational Procedures for all processes, plant and equipment necessary to give effect to this licence or otherwise to ensure that standard operation of such processes, plant or equipment does not result in unauthorised emissions to the environment;
- (viii) any elements of the licence application referenced in this licence.

This documentation shall be available to the Agency for inspection at all reasonable times.

- 11.7 The licensee shall submit to the Agency, by the 31st March of each year, an AER covering the previous calendar year. This report, which shall be to the satisfaction of the Agency, shall include as a minimum the information specified in *Schedule D: Annual Environmental Report*, of this licence and shall be prepared in accordance with any relevant guidelines issued by the Agency.
- 11.8 A full record, which shall be open to inspection by authorised persons of the Agency at all times, shall be kept by the licensee on matters relating to the waste management operations and practices at this site. This record shall be maintained on a monthly basis and shall as a minimum contain details of the following:
- (i) the tonnages and EWC Code for the waste materials imported and/or sent off-site for disposal/recovery;
 - (ii) the names of the agent and carrier of the waste, and their waste collection permit details, if required (to include issuing authority and vehicle registration number);
 - (iii) details of the ultimate disposal/recovery destination facility for the waste and its appropriateness to accept the consigned waste stream, to include its permit/licence details and issuing authority, if required;
 - (iv) written confirmation of the acceptance and disposal/recovery of any hazardous waste consignments sent off-site;
 - (v) details of all waste consigned abroad for Recovery and classified as 'Green' in accordance with the EU Shipment of Waste Regulations (Council Regulation EEC No. 1013/2006, as may be amended). The rationale for the classification must form part of the record;
 - (vi) details of any rejected consignments;
 - (vii) details of any approved waste mixing;
 - (viii) the results of any waste analyses required under *Schedule C: Control & Monitoring*, of this licence; and
 - (ix) the tonnage and EWC Code for the waste materials recovered/disposed on-site.
- 11.9 The licensee shall submit report(s) as required by the conditions of this licence to the Agency's Headquarters in Wexford, or to such other Agency office as may be specified by the Agency.
- 11.10 All reports shall be certified accurate and representative by the facility manager or a nominated, suitably qualified and experienced deputy.
- 11.11 A record shall be kept of each consignment of trade effluent, 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 trade effluent, leachate and/or contaminated storm water from the facility;
 - (iii) the volume of trade effluent, leachate and/or contaminated storm water, in cubic metres, removed from the facility on each occasion;
 - (iv) the name and address of the Wastewater Treatment Plant to which the trade effluent, leachate and/or contaminated storm water was transported; and

- (v) any incidents or spillages of trade effluent, leachate and/or contaminated storm water during its removal or transportation.

11.12 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 metals;
- (ii) the recovery of C & D derived waste materials;
- (iii) the recovery/treatment of biowaste (including contribution of facility to the pre-treatment targets in the EU Landfill Directive);
- (iv) the separation and recovery of other recyclable materials.

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

Condition 12. Financial Charges and Provisions

12.1 Agency Charges

12.1.1 The licensee shall pay to the Agency an annual contribution of **€14,433**, 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 as amended. 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 as amended, and all such payments shall be made within one month of the date upon which demanded by the Agency.

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

12.2 Environmental Liabilities

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

12.2.2 The licensee shall arrange for the completion, by an independent and appropriately qualified consultant, of a comprehensive and fully costed Environmental Liabilities Risk Assessment (ELRA) which addresses 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. Review results are to be notified as part of the AER.

- 12.2.3 As part of the measures identified in Condition 12.2.1, the licensee shall, to the satisfaction of the Agency, make financial provision to cover any liabilities associated with the operation (including closure, restoration and aftercare). The amount of indemnity held shall be reviewed and revised as necessary, but at least annually. Proof of renewal or revision of such financial indemnity shall be included in the annual 'Statement of Measures' report identified in Condition 12.2.1.
- 12.2.4 The licensee shall revise the cost of closure, restoration and aftercare annually and any adjustments shall be reflected in the financial provision made under Condition 12.2.3.
- 12.2.5 The licensee shall have regard to the Environmental Protection Agency's Guidance on Assessing and Costing Environmental Liabilities (2014) and, as appropriate, Guidance on Environmental Liability Risk Assessment, Residuals Management Plans and Financial Provision (2006) when implementing Conditions 12.2.2 and 12.2.3 above.

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

SCHEDULE A: Limitations

A.1

The following waste related processes are authorised:

- i. Crushing, screening, sorting, blending
- ii. Storage **and transfer** of waste
- iii. **Collection** of dry recyclables at the Civic Amenity site
- iv. **Surface impoundment by placement of leachate into constructed wetlands lagoons**

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



A.2 Waste Acceptance

Table A.1 Waste Categories and Quantities

WASTE TYPE ^{Note 1}	MAXIMUM (TONNES PER ANNUM) ^{Note 2}
Municipal Waste at Civic Amenity or for storage in Waste Transfer Station	10,000
Hazardous Municipal Waste at Civic Amenity (separately collected fractions including white goods and WEEE) ^{Note 3} : 20 01 21* 20 01 23* 20 01 33* 20 01 35*	400
Garden Waste at the Civic Amenity and Green Waste Area	1,120
Total	11,520

Note 1: Any proposals to accept other compatible non-hazardous waste types must be agreed in advance by the Agency and the total amount of waste must be within that specified.

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

Note 3: Subject to Condition 3.26.8 of this licence, the hazardous wastes acceptable at the civic amenity facility may be varied with the agreement of the Agency, subject to the overall limit for hazardous waste staying the same.



SCHEDULE B: Emission Limits

B.1 Emissions to Air

Landfill Derived Gas Concentration Limits:

(Measured in any building on or adjacent to the facility and perimeter boreholes).

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



Emission Limits Values for Landfill Gas Plant:

Emission Point Reference No.: Gas Flare 224588E 094605N

Minimum Discharge Height: 5m

Parameter	Flare (enclosed) Emission Limit Value ^{Note 1}
Nitrogen oxides (NO _x)	150 mg/m ³

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



Dust Deposition Limits:

Monitoring locations:

D1, D2 as per Drawing Number MDR0350/DG0505 Rev F01

D3 (opposite the entrance/exit from the Waste Transfer Building as agreed by the Agency)

D4 (at the Civic Amenity site to be agreed by the Agency)

Level (mg/m ² /day) ^{Note 1}
350

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



B.2 Emissions to Water

Emission Point Reference No: SWE6 (as per Drawing Number MDR0350/DG0706_R03)

Name of Receiving Waters: Colligan Estuary (TWB code: IE_SE_140_0100)

Location: E 224555 N 94681

Volume to be emitted: Maximum in any one day: 186 m³

Parameter	Emission Limit Value
Temperature	25 °C (max)
pH	6 - 9
	mg/l
BOD	25
COD	125
Orthophosphate (as P)	0.5
Ammonia (as N)	1
Suspended Solids	25
	µg/l
Arsenic	6
Cadmium	0.5
Chromium	5.5
Copper	0.065
Lead	7.5
Nickel	19.5
Mercury	0.1

B.3 Emissions to Sewer

There shall be no process effluent emissions to sewer.

B.4 Noise Emissions

Daytime dB L _{Ar,T} (30 minutes)	Evening time dB L _{Ar,T} (30 minutes)	Night-time dB L _{Aeq,T} (15-30 minutes)
55 ^{Note 1}	50 ^{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 at any noise-sensitive location.

SCHEDULE C: Control & Monitoring

C.1.1 Control of Emissions to Air

Emission Point Reference No.: Flare Stack

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 Pumps/engines
Extraction	Continuous with alarm/call-out	Pressure gauge or equivalent approved Pumps/engines

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 Stack

Parameter	Flare (enclosed) Monitoring Frequency	Analysis Method ^{Note 1} /Technique
Inlet		
Methane (CH ₄) % v/v	Continuous	Infrared analyser or equivalent approved
Carbon dioxide (CO ₂) % v/v	Continuous	Infrared analyser or equivalent approved
Oxygen (O ₂) % v/v	Continuous	Electrochemical or equivalent approved
Process Parameters		
Combustion Temperature	Continuous	Temperature Probe/datalogger
Residence Time	Quarterly	To be agreed
Outlet		
Carbon monoxide (CO)	Continuous	Flue gas analyser/datalogger or equivalent approved
Nitrogen Oxides (Nox)	Biannually	Flue gas analyser or equivalent approved
Sulphur dioxide (SO ₂)	Biannually	Flue gas analyser or equivalent approved
Particulates	Not applicable	Isokinetic/Gravimetric or equivalent approved

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



C.1.3 Monitoring of Landfill Gas Emissions

Location: Perimeter Landfill Gas boreholes and other selected locations as may be specified ^{Note 1}

Parameter	Monitoring Frequency	Analysis Method/Technique ^{Note 2}
Methane (CH ₄)	Monthly	InfraRed Analyser/FID
Carbon Dioxide (CO ₂)	Monthly	InfraRed
Oxygen (O ₂)	Monthly	Electrochemical Cell
Atmospheric pressure & Trend	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: Or other method agreed.



C.2.1 Control of Emissions to Water

Constructed Wetlands

Emission Point Reference No: SWE6

Emission Control Location: Constructed wetland ponds and Recycle Sump (as per Drawing Number MDR0350/DG0706_R03)

Description of Treatment: Constructed wetland

Control Parameter	Monitoring frequency	Key Equipment ^{Note 1}
Flow and flow patterns	Continuous for discharge flow and flow between ponds. Daily visual inspection for flow and flow patterns in the ponds.	Flow regulators/weirs Flow meters Shut-off valve at discharge Pond isolation valves
Bank inspection, water depth, turbidity in final segments	Weekly	Visual inspection and appropriate measuring equipment
Sediment depth and composition ^{Note 2} , vegetation and invertebrate monitoring	Quarterly	Visual inspection and appropriate measuring/monitoring equipment

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

Note 2: The sediment shall be sampled and analysed for heavy metals.



Oil interceptors/silt traps

Emission Control Location: Storm water discharge points

Description of Treatment: Oil interceptor/Silt trap

Control Parameter	Monitoring frequency	Key Equipment ^{Note 1}
Oil & sediment removal	Weekly	Shut-off valve

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



C.2.2 Monitoring of Emissions to Water

Emission Point Reference No: Recycle Sump (as per Drawing Number MDR0350/DG0706_R03)

SWE6 (as per Drawing Number MDR0350/DG0706_R03)

Description of Treatment: Constructed wetland

Control Parameter	Monitoring Frequency	Key Equipment/Technique
Flow	Continuous Daily ^{Note 1}	On-line flow meter with recorder
Temperature	Continuous	On-line temperature probe with recorder
Visual Inspection/Odour ^{Note 2}	Daily	Standard Method
Dissolved Oxygen	Weekly	Standard Method
Nitrates (as N)	Weekly	Standard Method
TOC	Weekly	On-line TOC meter with recorder
Chemical Oxygen Demand	Weekly ^{Note 3}	Standard Method
Biochemical Oxygen Demand	Weekly ^{Note 3}	Standard Method
Suspended Solids	Weekly ^{Note 3}	Standard Method
Total Dissolved Solids	Weekly ^{Note 3}	Standard Method
Total Phosphorus (as P)	Weekly ^{Note 3}	Standard Method
Metals ^{Note 4}	Weekly ^{Note 3}	Standard Method
Chloride	Monthly	Standard Method
Phenols	Monthly	Standard Method
Organic Compounds ^{Note 5}	Monthly	Standard Method
Sulphate (SO ₄)	Annually	Standard Method
Orthophosphate (as P)	Annually	Standard Method
pH	Continuous	pH electrode/meter with recorder
Electrical Conductivity	Continuous	Online conductivity meter with recorder
Ammonia (as N)	Continuous	Standard Method
Toxicity ^{Note 6}	As may be required	To be agreed by the Agency

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

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

Note 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, zinc, arsenic, mercury, aluminium and silver.

Note 5: Screening for priority pollutant list substances (such as US EPA volatile and/or semi-volatile compounds). This analysis shall include those organic solvents in use in the process, which are likely through normal process operators to be diverted to the wastewater streams.

Note 6: The number of toxic units (Tu) = 100/x hour EC/LC50 in percentage vol/vol so that higher Tu values reflect greater levels of toxicity. For test regimes where species death is not easily detected, immobilisation is considered equivalent to death.

C.2.3 Monitoring of Storm Water Discharges

Discharge Point Reference No.: SWE1, SWE2, SWE3^{Note 1}, SWE4, SWE5 & SWE7 (as per Drawing Number MDR0350/DG0505_R04)

Parameter	Monitoring Frequency	Analysis Method/Technique
pH	Weekly	Standard Method
COD	Weekly	Standard Method
Total Ammonia	Weekly	Standard Method
Conductivity	Weekly	Standard Method
Visual Inspection	Weekly	Sample and examine for colour and odour
Biochemical Oxygen Demand	Monthly	Standard Method
Oils, fats & greases ^{Note 2}	Monthly	Standard Method
Mineral Oils	Monthly	Standard Method
Suspended Solids	Monthly	Standard Method
Toxicity ^{Note 3}	As may be required	To be agreed by the Agency

Note 1: Monitoring shall take place at the last chamber of interceptor.

Note 2: **Monitoring for oil, fats & greases shall be conducted at SWE3 only.**

Note 3: The number of toxic units (Tu) = 100/x hour EC/LC₅₀ in percentage vol/vol so that higher Tu values reflect greater levels of toxicity. For test regimes where species death is not easily detected, immobilisation is considered equivalent to death.



C.2.4 Leachate Monitoring

Location: Leachate Sumps (**undiluted leachate**)

Lagoon Marsh ^{Note 1}

PARAMETER	LEACHATE ^{Note 2} Monitoring Frequency
Visual Inspection/Odour	Daily
BOD	Quarterly
COD	Quarterly
Chloride	Annually
Ammoniacal Nitrogen	Annually
Electrical Conductivity	Annually
pH	Annually
Metals / non metals ^{Note 3}	Annually
Cyanide (Total)	Annually
Fluoride	Annually
Mercury	Annually
Sulphate	Annually
Total P/orthophosphate	Annually
Total Oxidised Nitrogen	Annually
Leachate Level	Continuous

Note 1: The content of leachate in the Lagoon Marsh shall be monitored until a discharge pipe from the constructed wetland system is commissioned and operational.

Note 2: Visual Inspection and Leachate Levels to be monitored at all leachate monitoring points, collection sumps and leachate dilution tank. Leachate composition to be monitored at the leachate dilution tank or based on a composite of collected undiluted leachate samples.

Note 3: 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, zinc, arsenic, mercury, aluminium and silver.

C.2.5 Monitoring of Constructed Wetland System

Monitoring Location: Inlet of Pond 1a, Pond 1b, Pond 2, Pond 3, Pond 4, Pond 5 ^{Note 1}

Parameter	Monitoring Frequency	Analysis Method/Technique
Total Ammonia	Monthly	Standard Method
pH	Monthly	Standard Method
Conductivity	Monthly	Standard Method
BOD	Monthly	Standard Method
COD	Monthly	Standard Method
Metals ^{Note 2}	Monthly	Standard Method
Heavy metals in sediment of each pond	Quarterly	Standard Method
Other ^{Note 3}		

Note 1: The monitoring shall take place on inlet and outlet of each Pond.

Note 2: 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, zinc, arsenic, mercury, aluminium and silver.

Note 3: As might be required by the Agency.



C.3.1 Control of Emissions to Sewer

There shall be no process effluent emissions to sewer.

**C.3.2 Monitoring of Emissions to Sewer**

There shall be no process effluent emissions to Sewer.

**C.4 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
Other ^{Note 1}			

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

**C.5 Noise Monitoring**

No additional noise monitoring is required in this schedule.



C.6 Ambient Monitoring

Groundwater Monitoring

Location: Groundwater Boreholes/Wells GW1; GW2A; RC3A; RC4; RC6A and RC7 as specified in Drawing Number MDR0350/DG0505_R04;

RC8a as specified in Drawing Number MDR0350/DG0706_R03; and

any other locations as might be specified by the Agency

Parameter	Monitoring Frequency	Analysis Method/Techniques
Groundwater Level	Monthly	Standard Method
Visual Inspection/Odour ^{Note 1}	Quarterly	Standard Method
Ammoniacal Nitrogen	Quarterly	Standard Method
Chloride	Quarterly	Standard method
Conductivity	Quarterly	Standard method
Total Oxidised Nitrogen	Quarterly	Standard Method
pH	Quarterly	pH electrode/meter
Temperature	Quarterly	Standard Method
Iron	Quarterly	Standard Method
Dissolved Oxygen	Annually	Standard method
Cadmium	Annually	Standard Method
Chromium (Total)	Annually	Standard Method
Copper	Annually	Standard Method
Cyanide (Total)	Annually	Standard Method
Lead	Annually	Standard Method
Magnesium	Annually	Standard Method
Manganese	Annually	Standard Method
Mercury	Annually	Standard Method
Nickel	Annually	Standard Method
Potassium	Annually	Standard Method
Sulphate	Annually	Standard Method
Total Alkalinity	Annually	Standard Method
Total Phosphorus (as P)	Annually	Standard Method
Orthophosphate (as P)	Annually	Standard Method
Zinc	Annually	Standard Method
Phenols	Annually	Standard Method
COD	Biannually	Standard Method
Nitrate	Biannually	Standard Method
Total Ammonia	Biannually	Standard Method
Total Nitrogen	Biannually	Standard Method
Fluoride	Biannually	Standard Method
Hazardous Compounds ^{Note 2}	Biannually	Standard Method

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

Note 2: The relevant hazardous substances for monitoring in groundwater shall be identified by the licensee by undertaking a risk based assessment. The Licensee shall have regard to the 'Classification of Hazardous and Non-hazardous Substances in Groundwater' issued by the Agency. Monitoring for the identified hazardous substances shall be carried out at least annually, unless a case for less frequent monitoring is agreed by the Agency.



C.7 Receiving Water Monitoring

Locations:

Upstream of facility ^{Note 1}

Downstream of facility ^{Note 1}

Parameter	Monitoring Frequency	Analysis Method/Techniques
Visual Inspection	Weekly	Sample and examine for colour and odour
pH	Quarterly	pH electrode/meter with recorder
TOC	Quarterly	On-line TOC meter with recorder
Total Ammonia (as N)	Quarterly	Standard Method
Total Nitrogen	Quarterly	Standard Method
Chemical Oxygen Demand	Quarterly	Standard Method
Suspended Solids	Quarterly	Standard Method
Biochemical Oxygen Demand	Quarterly	Standard Method
Orthophosphate (as P)	Quarterly	Standard Method
Conductivity	Quarterly	Standard Method
Oils, fats & greases/Mineral Oils	Quarterly	Standard Method
Biological Quality (Q) Rating/Q Link	Annually ^{Note 2}	To be agreed by the Agency
Priority Substances ^{Note 3}	As required by the Agency	Standard Method
Toxicity ^{Note 4}	As required by the Agency	To be agreed by the Agency

Note 1: The monitoring location to be submitted for the Agency's agreement within six months of grant of this licence.

Note 2: Monitoring period – June to September.

Note 3: The relevant priority substances or pollutants for monitoring shall be identified by the licensee by undertaking a risk based assessment. The Licensee shall have regard to "Guidance on the Screening for Priority Substances for Waste Water Discharge Licences" issued by the Agency.

Note 4: The number of toxic units (Tu) = 100/x hour EC/LC₅₀ in percentage vol/vol so that higher Tu values reflect greater levels of toxicity. For test regimes where species death is not easily detected, immobilisation is considered equivalent to death.



C.8 Ambient monitoring

Air Monitoring

Location:

Civic Amenity^{Note 1}

Waste Transfer Station (Opposite the entrance to the building)^{Note 1}

D1 & D2A (as per Drawing Number MDR0350/DG0706_R03)

Parameter	Monitoring Frequency	Analysis Method/Technique
Dust deposition	Monthly	Bergerhoff

Note 1: Grid reference of the monitoring location shall be submitted to the Agency within six months of grant of this licence.



SCHEDULE D: Specified Engineering Works

Specified Engineering Works

Construction of a discharge pipe for treated effluent from the constructed wetland system.

Installation of dust/odour control systems.

Installation of landfill gas infrastructure.

Installation of leachate management infrastructure.

Installation of Groundwater Control Infrastructure.

Installation of Surface Water Management Infrastructure.

Any other works notified in writing by the Agency.



SCHEDULE E: Annual Environmental Report

Annual Environmental Report Content ^{Note 1}
<p>Emissions from the facility</p> <p>Waste management record.</p> <p>Waste activities carried out at the facility.</p> <p>Quantity and composition of waste recovered, received and disposed of during the reporting period and each previous year (relevant EWC codes to be used).</p> <p>Full title and a written summary of any procedures developed by the licensee in the year which relates to the facility operation.</p> <p>Waste (sludge) analysis.</p> <p>Waste Recovery Report.</p> <p>Review of nuisance controls.</p> <p>Resource consumption summary.</p> <p>Complaints summary.</p> <p>Schedule of Environmental Objectives and Targets.</p> <p>Environmental management programme – report for previous year.</p> <p>Environmental management programme – proposal for current year.</p> <p>Pollutant Release and Transfer Register – report for previous year.</p> <p>Pollutant Release and Transfer Register – proposal for current year.</p> <p>Summary report on ambient water quality of Colligan Estuary and Dungarvan Harbour, pursuant to the requirements of the Shellfish Directive (2006/113/EC).</p> <p>Noise monitoring report summary.</p> <p>Ambient monitoring summary.</p> <p>Current monitoring locations reference drawing.</p> <p>Tank and pipeline testing and inspection report.</p> <p>Reported incidents summary.</p> <p>Energy efficiency audit report summary.</p> <p>Report on the assessment of the efficiency of use of raw materials in processes and the reduction in waste generated.</p> <p>Report on progress made and proposals being developed to minimise water demand.</p> <p>Volume of trade effluent/leachate and/or contaminated stormwater produced and volume transported off-site.</p> <p>Report on progress made and proposals being developed to minimise generation of leachate/trade effluent for disposal.</p> <p>Development/Infrastructural works summary (completed in previous year or prepared for current year).</p> <p>Reports on financial provision made under this licence, management and staffing structure of the facility, and a programme for public information.</p> <p>Review of 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>Any other items specified by the Agency.</p>

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

Sign off for Proposed Determinations/Decisions

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