ENVIRONMENTAL BALANCE IN DESIGN AND CONSTRUCTION

INDUSTRIAL EMISSION ACTIVITIES LICENCE REVIEW APPLICATION FOR POWERSTOWN LANDFILL

November 2014

CARLOW COUNTY COUNCIL
COMHAIRLE CHONTAE CHEATHARLOCHA

FEHILY TIMONEY & COMPANY

INDUSTRIAL EMISSION ACTIVITIES LICENCE REVIEW APPLICATION FOR POWERSTOWN LANDFILL

User is Responsible for Checking the Revision Status of This Document

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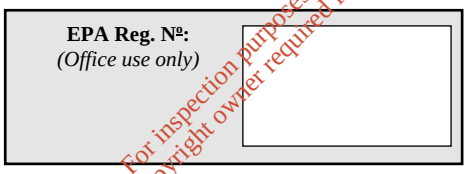
Industrial Emissions Activities Licence

Application Form



Environmental Protection Agency

P.O. Box 3000, Johnstown Castle Estate, Co. Wexford

Lo Call: 1890 335599 Telephone: 053-9160600 Fax: 053-9160699

Web: www.epa.ie Email: Industrial_Emissions_Licensing_Queries@epa.ie

Tracking Amendments to Application Form

Version No.	Date	Amendment since previous version	Reason
V.1.0	June 2013	N/A	Introduction of IE (Licensing) Regulations 2013
V.2.0	March 2014	Amendments to Section A, B and I.	Further clarification of IE (Licensing) Regulations 2013

CONTENTS

ABOUT THIS APPLICATION FORM

This form is for the purpose of making an application for an Industrial Emissions Activity Licence under the Environmental Protection Agency Act, 1992, as amended. There is a separate application form for applicants who wish to apply for Classes 6.1 or 6.2 Intensive Agriculture.

The Application Form **must** be completed in accordance with the instructions included in this form and available on the EPA website. A valid application for an Industrial Emissions Activity (IEA) licence must contain the information prescribed in the Environmental Protection Agency (Industrial Emissions)(Licensing) Regulations, 2013. Regulation 9 of the Regulations sets out the statutory requirements for information to accompany a licence application. The application form is designed in such a way as to set out these questions in a structured manner and not necessarily in the order presented in Regulation 9. In order to ensure a legally valid application in respect of Regulation 9 requirements, please complete the Regulation 9 Checklist provided in Annex 2.

This Application Form does not purport to be and should not be considered a legal interpretation of the provisions and requirements of the Environmental Protection Agency Act, 1992, as amended, and the Environmental Protection Agency (Industrial Emissions)(Licensing) Regulations 2013. While every effort has been made to ensure the accuracy of the material contained in the Application Form, the EPA assumes no responsibility and gives no guarantees, undertakings and warranties concerning the accuracy, completeness or up-to-date nature of the information provided herein and does not accept any liability whatsoever arising from any errors or omissions.

Should there be any contradiction between the information requirements set out in the Application Form and any clarifying explanation on the EPA website then the requirements in this Application Form shall take precedence. The requirements of the 2013 Regulations, referenced above, shall take precedence over any considerations mentioned in this Application Form or on the website.

SECTION A: NON-TECHNICAL SUMMARY

A non-technical summary of the application is to be included here. The summary should identify all environmental impacts of significance associated with the carrying on of the activity/activities and describe mitigation measures proposed or existing to address these impacts. This description should also indicate the normal operating hours and days per week of the activity.

The following information must be included in the non-technical summary:

- The relevant class or classes of activity in the First Schedule of the EPA Act 1992 as amended,
- Indication of whether EIS and planning permission documents are included,
- Indicate relevant BAT guidance documents or BAT Conclusions decisions,
- The title of the relevant BREF document
- Information on how the emission levels have been determined,
- Indication if EC (Control of Major Accident Hazards involving Dangerous Substances) Regulations 2006 apply,
- If a derogation under Section 86A(6) is being sought and the specific reasons for such derogation,
- A description of:

– the installation (plant, methods, processes, abatement, recovery and treatment systems and operating procedures for the activity), with emphasis on the main measures to avoid , reduce and, if possible offset the major adverse effects on the environment

– the raw and auxiliary materials, substances, preparations, fuels and energy which will be produced by or utilized in the activity,

– the sources of emissions from the installation,

– the environmental conditions of the site of the installation (e.g. soil and groundwater, air, noise, surface water) including reference to a Baseline Report where applicable,

– the nature and quantities of existing and proposed emissions from the installation into each medium as well as a summary of the assessment of the effects of the emissions on the environment as a whole,

– the proposed technology and other techniques to prevent or eliminate, or where this is not practicable, limit, reduce or abate emissions from the installation,

– summary of the quantity and nature of wastes which may be produced or accepted at the installation,

– measures to ensure that waste production is avoided in accordance with the waste hierarchy in Council Directive 98/2008/EC on waste and section 21A of the Waste Management Act 1996, as amended; where waste is generated, it is prepared for re-use, recycled or recovered or, where that is technically and economically impossible, it is disposed of while avoiding or reducing any impact on the environment (applicants should provide this information in the context of the Waste Management Act 1996, as amended);

- all the appropriate preventive measures are taken against pollution, in particular through application of the Best Available Techniques (BAT) or BAT Conclusions Decision;
- the necessary measures are to be taken under abnormal operating conditions, including start up, shutdown, leaks, malfunctions, breakdowns and momentary stoppages;
- the necessary measures to be taken on and following permanent cessation of activities to avoid any risk of environmental pollution and return the site of the activity to a satisfactory state or the state established in the baseline report if required;
- measures planned to monitor emissions into the environment,
- measures to comply with an environmental quality standard,
- measures to comply with Council Directive 80/68/EEC and 2006/118/EC in relation to the protection of groundwater,
- measures to be taken for minimizing pollution over long distances or outside the territory of Ireland,
- the main alternatives to the proposed technology, techniques and measures studied by the applicant.

Supporting information should form **Attachment № A.2**

SECTION B: GENERAL

B.1. Owner/Operator

Name*:	Carlow County Council
Address:	County Buildings
	Athy Road
	Carlow Town
Tel:	059 9170300
Fax:	059 9141503
e-mail:	pconnoll@carlowcoco.ie

* This should be the name of the applicant which is current on the date this Licence Application is lodged with the Agency. It should be the name of the legal entity (which can be a limited company or a sole trader). A trading/business name is **not acceptable**.

Name and Address for Correspondence
Only application documentation submitted by the applicant and by the nominated person will be deemed to have come from the applicant.

Name:	Carlow County Council
Address:	County Buildings
	Athy Road
	Carlow Town
Tel:	059 9170300
Fax:	059 9141503
e-mail:	pconnoll@carlowcoco.ie

CRO No. and address of registered or principal office of Body Corporate

CRO No.	Not Applicable
Address:	
Tel:	
Fax:	
e-mail:	

If the applicant is a body corporate, the following information must be attached as **Attachment B1**:

a) a Certified Copy of the Certificate of Incorporation under the Companies Act.
b) the Company's Registration Number from the Companies Registration Office.
c) Particulars of Registered Office of the Company.

Name and address of the proprietor(s) of the land on which the activity is situated (if different from applicant named above):

Proprietor's Name:	Not Applicable
Address:	
Tel:	
Fax:	
e-mail:	

Name and address of the owner(s) of the building and ancillary plant in which the activity is situated (if different from applicant named above):

Name:	Not Applicable
Address:	
Tel:	
Fax:	
e-mail:	

Name and address of the primary installation contact for enforcement purposes, where a licence is granted (if different from applicant named above):

Name:	Not Applicable
Position in organisation:	
Address:	
Tel:	
Fax:	
e-mail:	

B.2. Location of Activity

Name:	Powerstown Landfill & Recycling Centre
Address*:	Kilkenny Road,
	Carlow
Tel:	059 9172406
Fax:	059 9136231
Contact Name:	Mr. Pat Connolly
Position:	Landfill Manager
e-mail:	pconnoll@carlowcoco.ie

* Include any townland.

National Grid Reference (12 digit 6E,6N)	E271 000 N168 800

Location maps (≤A3), appropriately scaled, with legible grid references should be enclosed in **Attachment B.2.** The site boundary must be outlined on the map in colour.

Geo-referenced digital drawing files (e.g. AutoCAD files) in Irish Grid projection of the site boundary and overall site plan, including labelled emission, monitoring and sampling points, are also required. This data should be provided to the Agency on a separate CD-Rom containing sections B.2, E.6 and F.3.

Name of geo-referenced digital drawing files	LW14-120-02-001 Rev A Existing Site Layout LW14-120-02-002 Rev A Environmental Monitoring Locations & Emission Points
Name of CD-Rom with digital drawing files	LW14-120-02-Powerstown IE Licence Review Application - CD Rom with Drawings, B.2, E.6 and F.3

B.3. Class of Activity

Identify the relevant activities in the First Schedule of the EPA Act 1992, as amended, to which the activity relates:

Class	Description
11.1	The recovery or disposal of waste in a facility, within the meaning of the Act of 1996, which facility is connected or associated with another activity specified in this Schedule in respect of which a licence or revised licence under Part IV is in force or in respect of which a licence under the said Part is or will be required. The recovery of waste at the civic amenity facility on site.
11.5	Landfills, within the meaning of section 5 (amended by Regulation 11(1) of the Waste Management (Certification of Historic Unlicensed Waste Disposal and Recovery Activity) Regulations 2008 (S.I. No. 524 of 2008)) of the Act of 1996, receiving more than 10 tonnes of waste per day or with a total capacity exceeding 25,000 tonnes, other than landfills of inert waste.

B.3A Classes of Waste Activity

If a waste activity is proposed, i.e. if any First Schedule of the EPA Act 1992, as amended class 11 activity is specified in section B.3 above, identify the relevant activities as listed in Annex I and Annex II of the Waste Framework Directive (2008/98/EC). Complete table B.3A provided in Annex 1 of this application form.

TABLE B.3A Classes of Waste Activity
Waste Framework Directive 2008/98/EC

Annex I Disposal Operations		Y/N
D 1	Deposit into or on to land (e.g. including landfill, etc.).	Y
D 2	Land treatment (e.g. biodegradation of liquid or sludgy discards in soils, etc.).	N
D 3	Deep injection (e.g. injection of pumpable discards into wells, salt domes or naturally occurring repositories, etc.).	N
D 4	Surface impoundment (e.g. placement of liquid or sludgy discards into pits, ponds or lagoons, etc.).	Y
D 5	Specially engineered landfill (e.g. placement into lined discrete cells which are capped and isolated from one another and the environment, etc.).	Y
D 6	Release into a water body except seas/oceans.	N
D 7	Release to seas/oceans including sea-bed insertion.	N
D 8	Biological treatment not specified elsewhere in this Annex which results in final compounds or mixtures which are discarded by means of any of the operations numbered D 1 to D 12.	Y
D 9	Physico-chemical treatment not specified elsewhere in this Annex which results in final compounds or mixtures which are discarded by means of any of the operations numbered D 1 to D 12 (e.g. evaporation, drying, calcinations, etc.).	Y
D 10	Incineration on land.	N
D 11	Incineration at sea.[1]	N
D 12	Permanent storage (e.g. emplacement of containers in a mine, etc.).	N
D 13	Blending or mixing prior to submission to any of the operations numbered D 1 to D 12.[2]	Y
D 14	Repackaging prior to submission to any of the operations numbered D 1 to D 13.	Y
D 15	Storage pending any of the operations numbered D 1 to D 14 (excluding temporary storage, pending collection, on the site where the waste is produced).[7]	Y

[1] This operation is prohibited by EU legislation and international conventions.

[2] If there is no other D code appropriate, this can include preliminary operations prior to disposal including pre-processing such as, inter alia, sorting, crushing, compacting, pelletising, drying, shredding, conditioning or separating prior to submission to any of the operations numbered D1 to D12.

Annex II **Recovery Operations**		**Y/N**
R 1	Use principally as a fuel or other means to generate energy.[3]	N
R 2	Solvent reclamation/regeneration.	N
R 3	Recycling /reclamation of organic substances which are not used as solvents (including composting and other biological transformation processes).[4]	Y
R 4	Recycling/reclamation of metals and metal compounds.	Y
R 5	Recycling/reclamation of other inorganic materials.[5]	Y
R 6	Regeneration of acids or bases.	N
R 7	Recovery of components used for pollution abatement.	N
R 8	Recovery of components from catalysts.	N
R 9	Oil re-refining or other reuses of oil.	N
R 10	Land treatment resulting in benefit to agriculture or ecological improvement.	N
R 11	Use of waste obtained from any of the operations numbered R 1 to R 10.	Y
R 12	Exchange of waste for submission to any of the operations numbered R 1 to R 11.[6]	Y
R 13	Storage of waste pending any of the operations numbered R 1 to R 12 (excluding temporary storage, pending collection, on the site where the waste is produced).[7]	Y

[3] 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 legislation before 1 January 2009,
- 0.65 for installations permitted after 31 December 2008,

using the following formula:
Energy efficiency = (Ep - (Ef + Ei)/ (0.97x(Ew+Ef)
In which:
'Ep' means annual energy produced as heat or electricity and is calculated with energy in the form of electricity being multiplied by 2.6 and heat produced for commercial use multiplied by 1.1(GJ/year),
'Ef' means annual energy input to the system from fuels contributing to the production of steam (GJ/year),
'Ew' means annual energy contained in the treated waste calculated using the net calorific value of the waste (GJ/year),
'Ei' means annual energy imported excluding Ew and Ef(GJ/year),
'0.97' is a factor accounting for energy losses due to bottom ash and radiation.
This formula shall be applied in accordance with the reference document on Best Available Techniques for waste incineration.

[4] This includes gasification and pyrolisis using the components as chemicals.

[5] This includes soil cleaning resulting in recovery of the soil and recycling of inorganic construction materials.

[6] If there is no other R code appropriate, this can include preliminary operations prior to recovery including pre-processing such as, inter alia, dismantling, sorting, crushing, compacting, pelletising, drying, shredding, conditioning, repackaging, separating, blending or mixing prior to submission to any of the operations numbered R1 to R11.

B.4 Industrial Emissions Directive

Specify which category/categories of industrial activity referred to in Annex I of the Industrial Emissions Directive (2010/75/EU) is/are to be carried out at the installation.

Category	Description
5.4	Landfills, as defined in Article 2(g) of Council Directive 1999/31/EC of 26 April 1999 on the landfill of waste (1) OJ L 182, 16.7.1999, p. 1., receiving more than 10 tonnes of waste per day or with a total capacity exceeding 25 000 tonnes, excluding landfills of inert waste.

State whether the installation falls under the scope of Chapters III, IV, V and/or VI of the Industrial Emissions Directive (2010/75/EU) and if yes specify the relevant sections and Annex.

IED Chapter(s) and relevant Annex(es)
Not Applicable

Supporting information should be included in **Attachment Nº B.4**.

B.5. Employees / Capital Cost

Give-

(i) In the case of an established activity, the number of employees and other persons working or engaged in connection with the activity on the date after which a licence is required and during normal levels of operation, or

(ii) In any other case, the gross capital cost of the activity to which the application relates.

Number of Employees (existing facilities):	10
Gross Capital Cost (new proposals) €	€ Not Applicable

B.6. Relevant Planning Authority and / or Public Authority

Give the name of the planning authority in whose functional area the activity is or will be carried out.

[7] Temporary storage means preliminary storage according to point (1) of Article 3 [of the Waste Framework Directive 2008/98/EC].

Name:	Carlow County Council
Address:	County Buildings,
	Athy Road,
	Carlow Town
Tel:	059 9170300
Fax:	059 9141503

Planning Permission relating to this application:

B.6.(a) is not required	
B.6.(b) has been obtained	x
B.6.(c) is being processed	

Local Authority Planning File Reference Nº:	Not Applicable
An Bord Pleanála Planning File Reference No:	01.JA 0032

The following should be addressed in **Attachment B.6**.

B.6(a) Planning permission not required

Where **the new activity or changes to the existing activity which require this licence / review application** does not require a grant of planning permission, the following should be included in **Attachment Nº B.6**:

- Confirmation in writing from the planning authority or An Bord Pleanála, as the case may be, that a grant of permission is not required,

AND

- Details of previous planning permissions granted for the development comprising the activity, including a copy of the grant of permission and a copy of all conditions.

AND EITHER

(a) Where the planning authority or An Bord Pleanála accepted or required the submission of a copy of an EIS under the Planning and Development Act 2000, as amended, for a previous planning permission application, the required number of copies of the most recent EIS should be submitted. A copy of the planning inspector's report associated with that EIS should also be submitted.

OR

(b) Where an EIS was not required for any previous planning permissions granted for the development comprising the activity, submit confirmation in writing from the planning authority or An Bord Pleanála that an environmental impact assessment was not required for the development by or under the Planning and Development Act 2000, as amended.

- Where a grant of planning permission has never been required for the site of the activity, submit confirmation in writing from the planning authority or An Bord Pleanála, as the case may be, of same.

B.6(b) Planning permission already granted

Where **the new activity or changes to the existing activity which require this licence / review application** has already been granted planning permission by a planning authority or An Bord Pleanála, the following should be included in **Attachment № B.6**:

- a copy of the grant of permission and either:

  (a) where the planning authority or An Bord Pleanála accepted or required the submission of a copy of an EIS under the Planning and Development Act 2000, as amended, the required number of copies of that EIS;

  OR

  (b) confirmation in writing from the planning authority or An Bord Pleanála that an environmental impact assessment was not required for the development by or under the Planning and Development Act 2000, as amended.

- A summary of all previous planning permissions granted for the site of the activity should be provided.

B.6(c) Planning permission under consideration

Where **the new activity or changes to the existing activity which require this licence / review application** involves development or proposed development that requires a grant of planning permission, and the relevant planning application is under consideration by the planning authority or An Bord Pleanala, the following should be included in **Attachment № B.6**:

- confirmation in writing from a planning authority or An Bord Pleanála, as the case may be, that an application for permission comprising or for the purposes of the activity to which the application for a licence relates, is currently under consideration, and either:

  (a) the required number of copies of the EIS relating to that application for permission, where one is required by or under the Planning and Development Act 2000, as amended;

  OR

  (b) confirmation in writing from the planning authority or An Bord Pleanála that an environmental impact assessment is not required by or under the Planning and Development Act 2000, as amended.

- A summary of all previous planning permissions granted for the site of the activity should be provided.

For B.6(b) and B.6(c) above, please note that in accordance with Section 87(1C) of the EPA Act 1992, as amended, the Agency shall ***refuse to consider*** the licence application if the applicant does not comply with the requirements of Section 87(1B).

Appropriate Assessment

Where applicable, provide a copy of any screening for Appropriate Assessment report and Natura Impact Statement (NIS) that was prepared for consideration by any planning/public authority as defined in Regulation 2(1) of the European Communities (Birds and Natural Habitats) Regulations 2011 (S.I. No. 477 of 2011) in relation to the activity.

Where a determination that an Appropriate Assessment is required has been made by any planning/public authority in relation to the activity, a copy of that determination and any screening report and Natura Impact Statement (NIS), and any supplemental information furnished in relation to any such report or statement, which has been provided to the planning/public authority for the purposes of the Appropriate Assessment shall be included in **Attachment Nº B.6.**

Licences and permits

For existing activities, **Attachment Nº B.6** should also contain a table of references to all licences and permits past and present, including those in force at the time of submission. This should include, but is not limited to, any permits/licenses or registration under GHG Emissions Trading Regulations and GMO Regulations.

B.7. Relevant Water Services Authority

In the case of a discharge of any trade effluent or other matter to a sewer of a Water Services Authority, give the name of the Water Services Authority in which the sewer is vested or by which it is controlled.

Leachate is tankered to Mortarstown WWTP and is discharged to a leachate tank in the WWTP facility.

Name:	Irish Water
Address:	Mortarstown Wastewater Treatment Plant
	Mortarstown
	Co. Carlow
Tel:	
Fax:	

In the case of a discharge of any trade effluent or other matter to a sewer not vested by a Water Services Authority, the applicant must supply as **Attachment Nº B.7**;
(a) the name and address of the owner(s) of the sewer and the waste water treatment plant to which the sewer discharges (e.g. IDA, SFADCo or private undertaker) and who are responsible for the quality of the treated effluent discharging to waters and
(b) a copy of the effluent regulations and the agreement between the applicant and the aforementioned.

Details of owner(s) of a sewer and waste water treatment plant not vested in a Water Services Authority

Name:	Not Applicable
Address:	
Tel:	
Fax:	

B.8. Relevant Regional Health Service Executive

The applicant should indicate the Regional Health Service Executive where the activity is or will be located.

Name:	HSE South
Address:	HSE Offices
	Model Business Park
	Model Farm Road
	Cork
Tel:	021 4928530
Fax:	021 4928529

B.9 Site Notice, Newspaper Advertisement and Planning Authority Notice.

Attachment № B.9 should contain a copy of the text of the site notice, a map (no larger than A3) showing its location on site (in accordance with Article 6 of the Regulations) and a copy of the newspaper advertisement. A copy of the notice given to the Planning Authority should also be included.

B.10 Seveso II Regulations

State whether the activity is an establishment to which the EC (Control of Major Accident Hazards involving Dangerous Substances) Regulations (S.I. No. 74 of 2006) apply.

If yes, outline how the process comes under these regulations.

Supporting information should be included in **Attachment № B.10**.

B.11 Mercury Regulation

State whether the activity is one to which the following apply:

- European Communities Mercury (Export Ban and Safe Storage) Regulations (S.I. No. 27 of 2012),

- Regulation (EC) No 1102/2008 of the European Parliament and of the Council of 22 October 2008 on the banning of exports or metallic mercury and certain mercury compounds and mixtures and the safe storage of metallic mercury.

☐ Yes ☒ No

If yes, outline in **Attachment № B.11** how the activity comes under these Regulations.

B.12 Regulations Controlling Fluorinated Greenhouse Gases and Ozone Depleting Substances

State whether the installation is one to which the following apply:

– Operator of equipment and systems containing ozone depleting substances, in accordance with Regulation (EC) No. 1005/2009 on substances that deplete the ozone layer.

☐ Yes ☒ No

–

– Operator of equipment and systems containing fluorinated greenhouse gases, in accordance with Regulation (EC) No. 842/2006 on certain fluorinated greenhouse gases.

☐ Yes ☒ No

If yes, outline in **Attachment Nº B.12** how the activity comes under these regulations.

More information and guidance is available on the EPA website:

http://www.epa.ie/air/airenforcement/ozone/guidanceanddownloads/

B.13 Review of a licence

State the grounds on which an application for a review of a licence is being made and give the reference number to the relevant licence in the register.

Provide, where appropriate, a copy of the Office of Environmental Enforcement (OEE) correspondence that indicates that the reason for the review cannot be accommodated within the scope of the existing licence.

Include results of emission monitoring and other data, that enables a comparison of the operation of the installation with the best available techniques described in the applicable BAT conclusions and with the emission levels associated with the best available techniques in accordance with Section 86A(9) of the Act of 1992 as amended.

Where the OEE has agreed any variations or adjustments to the conditions or schedules of the existing licence, the licensee must provide details of these agreed variations and adjustments to the existing licence conditions. An updated, scaled drawing of the site layout (no larger than A3) providing visual information on such adjustments or variations where appropriate should be included.

In the case of once-off assessments/ reports required under conditions/ schedules of the existing licence the licensee must provide details of those assessments/ reports that have been completed and agreed with the OEE or as otherwise agreed.

Attachment Nº B.13 shall include the schedule of variations and/or adjustments together with the updated drawing.

Condition / Schedule No.	Existing Condition	OEE Agreement Reference	Description

Supporting information should be included in **Attachment Nº B.13**.

SECTION C: MANAGEMENT OF THE INSTALLATION

C.1 Site Management & Control

Details should be provided on the management structures for the activity. Organisational charts and all relevant environmental management policy statements, including provisions for on-going assessment of environmental performance, are required.

C.2 Environmental Management System (EMS)

Indicate whether an Environmental Management System has been developed for the installation. If yes, specify which standard and include a copy of the accreditation certificate.

C.3 Hours of Operation

Provide details of the hours of operation for the installation, including:
(a) Proposed hours of operation.
(b) Proposed hours of construction and development works and timeframes.
(c) For waste activities, the proposed hours of waste acceptance.
(d) Any other relevant hours of operation expected.

C.4 Fit and Proper Person

The EPA Act in Section 83(5)(xi) specifies that the Agency shall not grant a licence unless it is satisfied that the applicant or licensee or transferee as the case may be is a fit and proper person. Section 84(4) of the EPA Act specifies the information required to enable a determination to be made by the Agency.

- Indicate whether the applicant or other relevant person has been convicted under the Environmental Protection Agency Act 1992, as amended, the Waste Management Act 1996, as amended, the Local Government (Water Pollution) Acts 1997 and 1990, the Air Pollution Act 1987 and the Air Pollution Act 1987 (Environmental Specifications for Petrol and Diesel Fuels)(Amendment) Regulations 2004.
- Provide details of the applicant's technical knowledge and/or qualifications, along with that of other relevant employees.
- Provide information to show that the person is likely to be in a position to meet any financial commitments or liabilities that may have been or will be entered into or incurred in carrying on the activity to which the application relates or in consequence of ceasing to carry out that activity.

This information should form **Attachment Nº C**.

SECTION D: INFRASTRUCTURE & OPERATION

D.1. Operational Information Requirements

Describe the plant, methods, processes, ancillary processes, abatement, recovery and treatment systems, and operating procedures for the activity, to include a copy of such plans, drawings or maps, (site plans and location maps, process flow diagrams), and such other particulars, reports and supporting documentation as are necessary to describe all aspects of the activity. Maps and drawings must be no larger than A3 size.

A development and operational history of the site should be included here.

Attachment Nº D should contain a list of all unit operations (processes) to be carried out, including flow diagrams of each with any relevant additional information.

D.2 Additional requirements for waste Activities (not covered above or elsewhere) (All Class 11 of the First Schedule of the EPA Act 1992, as amended)

This section D.2 of the application form should be completed only by applicants applying for classes 11.1, 11.2, 11.3, 11.4, 11.5, 11.6 and 11.7 (i.e. waste activities) of the First Schedule to the EPA Acts 1992, as amended.

D.2.1 Wastes to be accepted

State what wastes will be accepted at the installation for recovery or disposal. Complete table Table D.2(i) and include in **Attachment No. D.2** of the application. The following general guidelines may assist in containing the size of Table D.2(i) where there is a long list of EWC codes proposed.

- For any individual waste stream, described by EWC code or main waste description (e.g. municipal solid waste, mixed recyclables, C&D waste), comprising more than 5% of total intake, complete a single row in table D.2(i).
- For every hazardous waste stream, describe by EWC code, complete a single row in table D.2(i).
- Other waste streams, where the list of waste is long, may be aggregated, according to a waste category, with each relevant EWC code provided.

An EWC code should be provided for every waste proposed for acceptance at the installation.

State whether any wastes to be accepted are classified as animal by-products in accordance with Regulation 1069/2009 and identify the relevant wastes.

The maximum annual tonnage of waste to be handled at the site should be indicated and the year to which the quantity relates indicated.

Maximum Annual Tonnage (tonnes)	50,000
Year	2015

It should be noted that an applicant may be issued with a licence which restricts the type and quantity of wastes which may be accepted.

D.2.2 Waste Acceptance Procedures

Provide a copy of the waste acceptance procedures employed or to be employed. Describe procedures for checking waste loads as they arrive at the installation. Describe procedures to be implemented in the event of a load of waste arriving at the installation that does not conform to waste acceptance procedures. The location of a quarantine area for handling suspect or non-compliant loads should be described and illustrated on a suitable site drawing.

For landfills and relevant incineration activities, describe how the requirements of *Municipal Solid Waste – Pre-treatment and Residuals Management: An EPA Technical Guidance Document* (EPA, 2009) will be implemented.

For landfills, the applicant should ensure that the requirements of Council Decision 2003/33/EC are addressed in waste acceptance procedures.

D.2.3 Waste and material outputs from waste activities

Describe the waste and material outputs from the installation resulting from the treatment of waste. If no treatment is carried out on the waste, the waste outputs will be the same as the inputs.

If waste is treated, describe the nature and quantity of the treated waste and its onward fate/destination, and in particular whether it is sent for onward recovery or disposal operations.

If waste is treated and a material is produced that is no longer a waste, provide the rationale for such classification. The requirements of article 28 of the European Communities (Waste Directive) Regulations 2011 should be addressed in any such rationale.

D.2.4 Principles of self-sufficiency and proximity

Describe how the proposed waste activities will contribute to the State's obligation to establish an integrated and adequate network of waste disposal installations and of installations for the recovery of mixed municipal waste collected from private households, including where such collection also covers such waste from other producers. Describe how the proposed waste activities will enable the State to move towards being more self-sufficient in the management of these wastes.

Supporting information should form **Attachment Nº D.**

D.3 Additional Requirements for landfills (not covered above or elsewhere) (Class 11.5 of the First Schedule of the EPA Act 1992, as amended)

This section D.3 of the application form should be completed only by applicants applying for classes 11.5 and 11.7 (landfills and underground storage facilities) of the First Schedule to the EPA Acts 1992, as amended. This includes landfills that are associated with other industrial activities.

All landfills must comply with the requirements of the Landfill Directive (1999/31/EC). It is the applicant's responsibility to ensure that all relevant requirements of the Directive are addressed and information provided in **Attachment D.3** of the application.

For wastes to be disposed of by landfilling on-site at industrial installations, full details of the disposal site should be submitted (to include *inter alia*, site selection procedures, location maps, (no larger than A3) geology, hydrogeology, operational plan, containment, gas and leachate management, post-closure care).

Applicants should have regard to the requirements of the Landfill Manuals published by the Environmental Protection Agency.

D.3.1 Class of landfill

Complete Table D.3(i) and include in Attachment D.3 of the application. State which of the categories in Table D.3(i) is relevant to the current application.

Table D.3(i) Class of landfill

(a) landfill for hazardous waste	☐
(b) landfill for non-hazardous waste	☒
(c) landfill for inert waste	☐

D.3.2 Scale of waste deposition

Complete Table D.3(ii) and include in Attachment D.3 of the application. State the total quantity of waste for which authorisation is sought to be deposited in the landfill.

Table D.3(ii) Scale of waste deposition at the landfill

Total quantity of waste to be deposited at the landfill	Tonnes*	Void in cubic metres (m^3)
(a) Waste deposited to date	800,000	680,000
(b) Total waste to be deposited over the lifetime of the development (including deposited to date)	962,270	817,929

* Explain any conversion/density factors used in calculating the tonnage from the void, or vice versa.

Approximately 800,000 tonnes placed 1975 to 2013. The remaining void as end of 2013, is estimated to be 162,270 tonnes.

Current density factors are estimated to be approximately 0.85 tonnes per cubic meter.

D.3.3 Liner System

Complete Table D.3(iii) and include in Attachment D.3 of the application. Table D.3(iii) provides a checklist of items that should be described in greater detail in Attachment D.3.

D.3.4 Leachate Management

Complete Table D.3(iv) and include in Attachment D.3 of the application. Table D.3(iv) provides a checklist of items that should be described in greater detail in Attachment D.3. Provide a list and illustrate on a site drawing the location of all leachate monitoring, extraction and lead detection boreholes or installations.

D.3.5 Landfill Gas Management

Complete Tables D.3(v)a to D.3(v)d and include in Attachment D.3 of the application. The tables provide a checklist of items that should be described in greater detail in Attachment D.3. Provide an estimate of the volume of landfill gas which will be produced by the waste for the next 20 years.

D.3.6 Capping System

Complete Table D.3(vi) and include in Attachment D.3 of the application. Table D.3(vi) provides a checklist of items that should be described in greater detail in Attachment D.3.

D.3.7 Meteorological Data

State in Attachment D.3 what arrangements are proposed for the measurement of meteorological data at the landfill installation, or for the collation of relevant meteorological information from nearby facilities.

D.3.8 Cost of the landfill of waste

Describe in Attachment D.3 how all of the costs involved in the setting up and operation of the landfill, including the cost of financial provision, and the estimated cost of the closure and aftercare of the site for a period of at least 30 years will be covered by the gate fee to be charged for the disposal of waste.

SECTION E: EMISSIONS

E.1. Emissions to Atmosphere

E.1.A. Details of all point emissions to atmosphere

Details of all point emissions to atmosphere should be supplied. Complete Table E.1(i) for Boiler Emissions and Table E.1(ii) and E.1(iii) for all other main emission points. Complete Table E.1(iv) for minor emission points and provide results of emission monitoring where available.

A summary list of the emission points, together with maps and/or drawings (no larger than A3), and supporting documentation should be included as **Attachment № E.1**. Plans of emission elevations, relevant roof heights, etc., should also be included, as should detailed descriptions and schematics of all abatement systems.

The applicant should address in particular any emission point where the substances listed in the Schedule of EPA (Industrial Emissions)(Licensing) Regulations 2013, S.I. No. 137 of 2013, are emitted.

For emissions outside the BAT guidance limit or BAT Conclusions levels, a full evaluation of the existing abatement/treatment system must be provided. A planned programme of improvement towards meeting upgraded standards is required. This should highlight specific goals and a time scale, together with options for modification, upgrading or replacement as required to bring the emissions within the limits as set out in the BAT guidance note(s). These notes can be found on the EPA website at www.epa.ie.

E.1.B. Fugitive and Potential emissions

Give summary details of fugitive and potential emissions in Table E.1(v).

In relation to activities listed in the Schedule of Council Directive 2010/75/EU (on Industrial Emissions) S.I. No.565 of 2012 on installations and activities using organic solvents;

- specify the relevant category of activity in the Schedule
- specify how the requirements in relation to fugitive emissions will be met.

For waste activities, dust and odour emissions should be described under the headings in this section.

Full details and any supporting information should form **Attachment E.1.**

E.2 Emissions to Surface Waters

Tables E.2(i) and E.2(ii) should be completed and provide results of emission monitoring where available.

A summary list of the emission points, together with maps/drawings (no larger than A3) and supporting documentation should be included as **Attachment Nº E.2**.

The applicant should address in particular any emission point where the substances listed in the Schedule of EPA (Industrial Emissions) (Licensing) Regulations 2013 S.I. No. 137 of 2013, are emitted.

Details of all substances listed in the European Communities Environmental Objectives (Surface Waters) Regulations 2009, contained in any emission must be presented. All surface water runoff and storm water drains discharging to surface water bodies must be included. A National Grid Reference (12 digit, 6E, 6N) must be given for all discharge points the identity and type of receiving water (river, ditch, estuary, lake, etc.) must be stated.

Where relevant, describe proposed measures or controls that have been identified in a pollution reduction plan for the river basin district prepared in accordance with Part V of the EC Environmental Objectives (Surface Waters) Regulations 2009 for the reduction of pollution by priority substances or the ceasing or phasing out of emissions, discharges and losses of priority hazardous substances.

For emissions outside the BAT guidance limit or BAT Conclusions levels, a full evaluation of the existing abatement/treatment system must be provided. A planned programme of improvement towards meeting upgraded standards is required. This should highlight specific goals and a time scale, together with options for modification, upgrading or replacement as required to bring the emissions within the limits as set out in the BAT guidance note(s).

E.3 Emissions to Sewer

Tables E.3(i) and E.3(ii) should be completed and provide results of emission monitoring where available.

A summary list of the emission points, together with maps and/or drawings (no larger than A3) and supporting documentation should be included as **Attachment Nº E.3**. Details of all List I and List II substances listed in the Annex to EU Directive 2006/11/EC (as amended), contained in any emission must be presented. All relevant information on the receiving sewer**,** including any effluent treatment/abatement systems, not already described, with schematics as appropriate should also be included in **Attachment NºE.3**.

For emissions outside BAT guidance limit (where given), a full evaluation of the existing abatement/treatment system must be provided. A planned programme of improvement towards meeting upgraded standards is required. This should highlight specific goals and a time scale, together with options for modification, upgrading or replacement as required to bring the emissions within any limits set out in the BAT guidance note(s).

E.4 Emissions to Ground

Describe in **Attachment Nº E.4** the existing or proposed arrangements necessary to give effect to Council Directive 2006/118/EC on the protection of groundwater against pollution and deterioration and Council Directive 80/68/EEC on the protection of groundwater against pollution by certain dangerous substances.

The applicant should supply details of the nature and quality of any substance (agricultural and non-agricultural waste) to be land spread (slurry, effluent, sludges etc.) as well as the proposed application rates, periods of application and mode of application (e.g., pipe discharge, tanker) having regard to the European Communities (Good Agricultural Practice for Protection of Waters) Regulations 2010, S.I. No 610 of 2010.

For emissions outside the BAT guidance limit, a full evaluation of the existing abatement/treatment system must be provided. A planned programme of improvement towards meeting upgraded standards is required. This should highlight specific goals and a time scale, together with options for modification, upgrading or replacement as required to bring the emissions within the limits as set out in the BAT guidance note(s).

E.5 Noise Emissions

Give particulars of the source, location, nature, level, and the period or periods during which the noise emissions are made or are to be made.

Table E.5 (i) should be completed, as relevant, for each source.

Supporting information should form **Attachment Nº E.5**.

The Agency's *Guidance Note for Noise: Licence Applications, Surveys and Assessments in Relation to Scheduled Activities (NG4)* (2012) should be consulted (available on www.epa.ie) where a noise impact assessment is required. A planned programme of improvement towards meeting upgraded standards is required and should have due regard to the noise control and mitigation measures outlined in section 8 and appendix (IX) of the *Guidance Note.* This programme should highlight specific goals and a time scale, together with options for modification, upgrading or replacement, as required, to bring the emissions within the limits as set out in the *Guidance Note*.

E.6 Tabular Data on Emission Points

Applicants should submit the following information for each emission point:

Point Code	Point Type	Easting	Northing	Verified	Emission
Provide label ID's assigned in section E	A=Atmospheric SW=Surface Water SE = Sewer GW=Groundwater N = Noise SL=Soil/Ground WS=Waste	6E-digit GPS Irish National Grid Reference	6N-digit GPS Irish National Grid Reference	Y = GPS used N = GPS not used	e.g. SO_2, HCl, NH_3

An individual record (i.e. row) is required for each emission point. Acceptable file formats include Excel, Access or other upon agreement with the Agency. A standard Excel template can be downloaded from the EPA website at www.epa.ie. This data should be submitted to the Agency on a separate CD-Rom containing sections B.2, E.6 and F.3.

SECTION F: CONTROL & MONITORING

Describe the proposed technology and other techniques for preventing or, where this is not possible, reducing emissions from the installation.

Describe the measures to be taken under abnormal operating conditions, including start-up, shutdown, leaks, malfunctions, breakdowns and momentary stoppages.

Describe the measures to be taken to prevent or eliminate emissions and/or avoid pollution.

Describe what appropriate measures are to be taken where an Environmental Quality Standard requires stricter conditions than would be determined with reference to BAT

F.1: Treatment, Abatement and Control Systems

Details of treatment/abatement systems (air and effluent emissions) should be included, together with schematics as appropriate.

For each Emission Point identified complete Table F.1(i) and include detailed descriptions and schematics of all abatement systems.

Attachment Nº F.1 should contain any supporting information.

F.2: Emissions Monitoring and Sampling Points

Identify monitoring and sampling points and outline proposals for monitoring **emissions**. Table F.2(i) should be completed (where relevant) for air emissions, emissions to surface waters, emissions to sewer, emissions to ground and waste emissions. Where **ambient** environment monitoring is carried out or proposed, Table F.2 (ii) should be completed as relevant for each environmental medium.

Include details of monitoring/sampling locations and methods.

Attachment Nº F.2 should contain any supporting information.

F.3: Tabular Data on Monitoring and Sampling Points

Applicants should submit the following information for each monitoring and sampling point:

Point Code	Point Type	Easting	Northing	Verified	Pollutant
Provide label ID's assigned in section F3	M=Monitoring S=Sampling	6E-digit GPS Irish National Grid Reference	6N-digit GPS Irish National Grid Reference	Y = GPS used N = GPS not used	e.g. SO_2, HCl, NH_3

An individual record (i.e. row) is required for each monitoring and sampling point. Acceptable file formats include Excel, Access or other upon agreement with the Agency. A standard Excel template can be downloaded from the EPA website at www.epa.ie. This data should be submitted to the Agency on a separate CD-Rom containing sections B.2, E.6 and F.3.

Point source monitoring/sampling refers to monitoring from specific emission points (e.g. from a boiler stack or outlet from a wastewater treatment plant). Examples of ambient monitoring includes monitoring of ambient air quality (e.g. boundary or off-site) or monitoring of river quality upstream/downstream of an effluent discharge.

SECTION G: RESOURCE USE AND ENERGY EFFICIENCY

G.1 Give a list of the raw and ancillary materials, substances, preparations, fuels and energy which will be produced by or utilised in the activity.

The list(s) given should be very comprehensive, all materials used, fuels, intermediates, laboratory chemicals and product should be included.

Particular attention should be paid to materials and product consisting of, or containing, dangerous substances as described in the EU (Classification, Packaging, Labelling and Notification of Dangerous Substances) Regulations 2003 [SI 116/2003] and Regulation (EC) No. 1272/2008. The list must classify these materials in accordance with both of these Regulations, and must specify the designated Risk Phrases (R-Phrases) and Hazard Statements. R-Phrases for each substance should be in accordance with Article 21 of the S.I 1272/2008.

Tables G.1 (i) and G.1(ii) must be completed. Copy as required.

Supporting information should be given in **Attachment Nº G.**

For waste activities (class 11 of the First Schedule to the EPA Acts 1992, as amended), do not include here the list of wastes to be accepted for recovery and disposal. This should be described in section D.2 of the application.

G.2 Energy Efficiency

A description of the energy used in or generated by the activity must be provided in **Attachment Nº G**. Outline the measures taken to ensure that energy is used efficiently having regard to the relevant decision on BAT conclusions and/or BAT guidance and where appropriate, an energy audit with reference to the EPA Guidance document on Energy Audits should be carried out.

SECTION H: MATERIALS HANDLING

H.1 Raw Materials, Intermediates and Product Handling

All materials will have been listed in Tables G.1 (i) and G.(ii) of **Section G**.

Details of the storage conditions, location within the site, segregation system used and transport systems within the site should be outlined here in **Attachment Nº H.1**. In addition, information relating to the integrity, impermeability and recent testing of pipes, tanks and bund areas should be outlined.

H.2 Waste Prevention

Describe in **Attachment Nº H.2** the arrangements for the prevention of waste in accordance with Part III of the Waste Management Acts 1996 to 2013. Describe what measures will be taken to prevent the generation of waste to the extent possible.

State whether the installation has participated in any projects under the National Waste Prevention Programme.

H.3 Describe the arrangements for the recovery or disposal of solid and liquid wastes generated at the installation.

Applicants should ensure that information is provided for each waste generated at the installation under each of the following headings:

(a) Description & nature of waste
(b) Source
(c) European Waste Catalogue Code (Commission Decision 2000/532/EC, as amended)
(d) Animal by-product category per EC Reg. 1069/2009 where relevant
(e) Amount in tonnes per month
(f) Location and method of disposal or recovery (on-site or off-site)

The following information should also be provided where appropriate:
(g) Analysis of the waste (include test methods and Q.C.)
(h) Its location of storage and the manner by which the integrity/impermeability of storage areas is maintained
(i) Period or periods of generation of the waste

Where any waste would be classified as Hazardous Waste as defined in the Waste Management Act, 1996, as amended, this should be made clear in the information provided.

The Table H.3(i) should be completed with a single row for each waste generated at the installation. The table should be provided as part of **Attachment Nº H.3.**

For waste activities (class 11 of the First Schedule to the EPA Acts 1992, as amended), do not repeat the information already sought in section D.2.3 of the application form and presented in Attachment D.2 of the application.

H.4 Waste hierarchy

Where waste is generated by the installation, describe in **Attachment Nº H.4** how it will be in order of priority in accordance with section 21A of the Waste Management Acts 1996 to 2013, prepared for re-use, recycling, recovery or where that is not technically or economically possible, disposed of in a manner which will prevent or minimise any impact on the environment.

Section 29(2A) of the Waste Management Acts 1996 to 2013 states that it shall be the duty of waste producers and holders to ensure that waste undergoes recovery operations in accordance with sections 21A and 32(1) of the Acts.

Describe how the waste hierarchy specified in article 21A of the Waste Management Acts 1996 to 2013 will be implemented at the installation. Describe how the waste generated at the installation will be managed in accordance with the waste hierarchy.

For waste whose generation cannot be prevented, describe what measures will be in place to ensure that waste is collected separately (if technically, environmentally and economically practicable) and will not be mixed with other waste or other material with different properties.

H.5 Waste recycling and recovery

Describe how the activities at the installation contribute to national targets for the recycling and recovery of waste, not least:

- the preparing for reuse and the recycling of paper, metal, plastic and glass; and
- the preparing for reuse, recycling and other material recovery, including backfilling operations using waste to substitute other materials, of non-hazardous construction and demolition waste excluding naturally occurring material defined in category 17 05 04 in the list of waste.

State whether and describe how food waste will be managed in accordance with the requirements, as may be relevant, of the Waste Management (Food Waste) Regulations 2009.

Supporting information should form **Attachment Nº H.5**.

SECTION I: EXISTING ENVIRONMENT & IMPACT OF THE ACTIVITY

Describe the conditions of the site of the installation.

Provide an assessment of the effects of any emissions on the environment, including on an environmental medium other than that into which the emissions are made.

Describe, where appropriate, measures for minimising pollution over long distances or in the territory of other states.

I.1.Assessment of atmospheric emissions

Describe the existing environment in terms of air quality with particular reference to ambient air quality standards.

Provide a statement as to whether or not emissions of main polluting substances (as defined in the Schedule of EPA (Industrial Emissions)(Licensing) Regulations 2013, S.I. No. 137 of 2013) to the atmosphere are likely to impair the environment.

Give summary details and an assessment of the impacts of any existing or proposed emissions on the environment, including environmental media other than those into which the emissions are to be made.

Attachment Nº I.1 should also contain full details of any dispersion modelling of atmospheric emissions from the activity, where required. When carrying out dispersion modelling, regard should be had to the EPA "Air Dispersion Modelling from Industrial installations Guidance Note (AG4)" or similar guidelines from a recognised authority.

Describe, where appropriate, measures for minimising pollution over long distances or in the territory of other states.

I.2. Assessment of Impact on Receiving Surface Water

Describe the existing environment in terms of water quality with particular reference to environmental quality objectives and standards and any objectives and standards laid down for protected areas. Table I.2(i) should be completed

Provide a statement whether or not emissions of main polluting substances (as defined in the Schedule of EPA (Licensing)(Amendment) Regulations 2004, S.I. No. 394 of 2004) to water are likely to impair the environment.

Indicate whether or not the activity complies with the requirements of the EC Environmental Objectives (Surface Waters) Regulations 2009, S.I. No. 272 of 2009.

If the discharge is to water body that is already achieving high status, or if the discharge is to waters draining to the surface water bodies identified under the First Schedule of the *EC Environmental Objectives (Freshwater Pearl Mussel) Regulations 2009*, compliance must be with the 95%ile **high** status limits.

Give summary details and an assessment of the impacts of any existing or proposed emissions on the environment, including environmental media other than those into which the emissions are to be made.

Full details of the assessment and any other relevant information on the receiving environment should be submitted as **Attachment Nº I.2.**

For emissions outside emission limit established according to the combined approach, a full evaluation of the existing abatement/treatment system must be provided. A planned programme of improvement towards meeting the upgraded standards is required. This should highlight specific goals and a time scale, together with options for modification, upgrading or replacement as required to bring the emissions within the limits established in accordance with the combined approach.

I.3. Assessment of Impact of Sewage Discharge.

Give summary details and an assessment of the impacts of any existing or proposed emissions on the environment, including environmental media other than those into which the emissions are to be made.

With regard to Article 15 of the Industrial Emissions Directive (or Section 86A(8) of the EPA Act 1992, as amended), describe how the environment as a whole is provided an equivalent level of protection and will not lead to higher levels of pollution in the environment.

Full details of the assessment and any other supporting information should form **Attachment Nº I.3.**

I.4 Assessment of Impact of Ground/Groundwater Emissions

Baseline Report
In the case of an activity that involves the use, production or release of relevant hazardous substances (as defined in section 3 of the EPA Act 1992 as amended), and having regard to the possibility of soil and groundwater contamination at the site of the installation, provide a baseline report in accordance with section 86B of the EPA Act 1992 as amended. Has the Agency indicated in pre-application discussions that a baseline report is required?

A baseline report shall contain the information necessary to determine the state of contamination of soil and groundwater at the time the report is drawn up in order that a quantified comparison may be made to the state of the site upon the permanent cessation of the industrial emissions directive activity.

Guidance in relation to baseline reports is available on the EPA website at www.epa.ie.

The Baseline Report should be included in **Attachment I.4** and clearly labelled as such.

Describe the existing groundwater quality. Tables I.4 (i) should be completed.

Give summary details and an assessment of the impacts of any existing or proposed emissions on the ground (aquifers, soils, sub-soils and rock environment), including any impact on environmental media other than those into which the emissions are to be made. This includes landspreading, land injection etc.

Land on which material may be landspread shall be identified on a suitable scaled map (1:10,560 and 1:50,000) and submitted as no greater than A3 size. All vulnerable (as a result of ground emissions) surface water bodies must be identified on these maps. Additional information should be included in **Attachment Nº I.4**.

Attachment Nº I.4 should also contain full details of any modelling carried out of the potential impact of emissions from the activity on groundwater.

Landspreading of Agricultural/Non Agricultural Wastes

Tables I.4(ii) and I.4.(iii) should be complete where applicable. Further information is available in the Application Guidance Document.

I.5 Ground and/or Groundwater Contamination

Summary details of known ground and/or groundwater contamination, historical or current, on or under the site must be given.

Indicate whether or not compliance with the requirements of the EC Environmental Objectives (Groundwater) Regulations 2010, S.I. No. 9 of 2010 can be achieved.

Full details including all relevant investigative studies, assessments, or reports, monitoring results, location and design of monitoring installations, plans, drawings, documentation, including containment engineering, remedial works, and any other supporting information should be included in **Attachment Nº I.5**.

I.6 Assessment of the Environmental Impact of On-site Waste Recovery and/or Disposal.

Describe the arrangements for any on-site recovery and disposal of waste generated by the activity.

Give details and an assessment of the impact of any existing or proposed on-site waste recovery or disposal activities on the environment, including environmental media other than those into which the emissions are to be made.

This information should form **Attachment Nº I.6.**

I.7 Noise Impact

Give details and an assessment of the impacts of any existing or proposed noise emissions on the environment, including environmental media other than those into which the emissions are to be made.

Ambient noise measurements

Complete Table I.7 (i) in relation to the information required below:

(i) State the maximum Sound Pressure Levels which will be experienced at typical points on the boundary of the operation. (State sampling interval and duration)

(ii) State the maximum Sound Pressure Levels which will be experienced at typical noise sensitive locations, outside the boundary of the operation.
(iii) Give details of the background (or residual) noise levels experienced at the site in the absence of noise from this operation.

Prediction models, maps (no larger than A3), diagrams and supporting documents, including details of noise attenuation and noise proposed control measures to be employed, should form **Attachment № I.7.**

I.8 Environmental Considerations, Main alternatives and BAT

I.8a Describe in outline the main alternatives to the proposed technology, techniques and measures which were studied having regard to the reference document on Economic and Cross-media Effects.
I.8b Identify all relevant decisions on BAT Conclusions, BAT reference document(s) (BREFs) and BAT guidance document(s).

Title of Document
Final Draft BAT Guidance Note on Best Available Techniques for the Waste Sector: Landfill Activities, EPA 2011
BREF on Emissions from Storage, European Commission, 2006
BREF on Energy Efficiency, European Commission, 2009
Landfill Directive
Final Draft BAT Guidance Note on Best Available Techniques for the Waste Sector: Waste Transfer and Materials Recovery, EPA 2011. A separate table has not been created for this document as, upon review, all of the applicable BAT are listed in Table 7.2.

1.8c Identify the BAT measures proposed or in place having regard to the relevant decision on BAT Conclusions or where this has not been published the conclusions on BAT from the relevant BAT reference documents (BREF). Where BAT is not being proposed, provide reasons and a justification. The conclusions on BAT from all relevant TAB reference documents (BREF) should be tabulated in table I.8(i). These documents are available on the European IPPC bureau website at http://eippcb.jrc.ec.europa.eu/reference/.

Please note that other reference documents may be relevant such as:
(a) BREF on Common waste water and waste gas treatment/management systems in the Chemical Sector;
(b) BREF on Emissions from Storage;
(c) BREF on Energy Efficiency;
(d) BREF on Industrial Cooling Systems;

Other documents that may be relevant:
(a) REF on Economic and Cross-media Effects;
(b) REF on Monitoring of Emissions from IED installations;
(c) Landfill Directive 1999/31/EC etc.

I.8d Describe any proposal to test and use an 'emerging technique'.

I.8e Describe any environmental considerations which have been made with respect to the use of cleaner technologies, waste minimisation and raw material substitution.

I.8f Describe the measures proposed or in place to ensure that:

(a) The best available techniques are or will be used to prevent or eliminate or, where that is not practicable, generally reduce an emission from the activity;
(b) no significant pollution is caused;
(c) waste production is avoided in accordance with the waste hierarchy in Council Directive 98/2008/EC on waste and section 21A of the Waste Management Act 1996, as amended; where waste is produced, it is prepared for re-use, recycled or recovered or, where that is technically and economically impossible, it is disposed of while avoiding or reducing any impact on the environment (applicants should provide this information in the context of sections 29(2A), 32 and 38(5A) of the Waste Management Act 1996, as amended);
(d) energy and other resources are used efficiently;
(e) the necessary measures are taken to prevent accidents and limit their consequences;
(f) the necessary measures are taken upon definitive cessation of activities to avoid any pollution risk and return the site of operation to a satisfactory state.

Supporting information should form **Attachment Nº I.8.**

Table I.8 (i) CONCLUSIONS ON BAT (One table for each relevant BAT reference document)

Title of Document			
BAT reference Number	**BAT Statement**	**Applicability to installation**	**Proposed / in place**
e.g. BAT 1	*BAT is to implement and adhere to an environmental management system (EMS) that incorporates all of the following features:*	*Applicable*	*Standardised EMS in place*
Title of Document *e.g. Emissions from storage BREF*			
5.1.1.2	*BAT is to cover open top tank by applying a floating cover, flexible or tent cover or a rigid cover*	*One open top tank on-site*	*Proposed to cover with floating cover in 2015*

SECTION J: ACCIDENT PREVENTION & EMERGENCY RESPONSE

Describe the existing or proposed measures, including emergency procedures, to minimise the impact on the environment of an accidental emission or spillage.

Also outline what provisions have been made for response to emergency situations outside of normal working hours, i.e., during night-time, weekends and holiday periods.

Supporting information should form **Attachment Nº J.**

SECTION K: REMEDIATION, DECOMMISSIONING, RESTORATION & AFTERCARE

Describe the existing or proposed measures to minimise the impact on the environment after the activity or part of the activity ceases operation, including provision for post-closure care of any potentially polluting residuals.

There is an explicit requirement in EU and Irish law for financial provision for landfills and extractive waste facilities. For new activities subject to the requirements of the Landfill Directive (1999/31/EC) and the Extractive Waste Directive (2006/21/EC) that are not already licensed by the Agency, state whether the following have been prepared:

- an Environmental Liabilities Risk Assessment (ELRA);
- a Closure, Restoration and Aftercare Management Plan (CRAMP); and
- a proposal for Financial Provision that covers all liabilities identified in the ELRA and CRAMP.

Regard should be had by applicants to relevant Agency guidance on these matters.

Copies of any relevant documents and any supporting information should be included as Attachment No. K.

The Agency may prioritise other sectors (e.g. contaminated land, risk of waste facility closure liabilities, risk based on Seveso classification) and require the preparation of a proposal for financial provision before making a decision on a licence application. Applicants are advised to discuss the requirement for financial provision with the Agency prior to making an application.

Supporting information should be included as **Attachment No. K.**

SECTION L: STATUTORY REQUIREMENTS

Indicate how the requirements of Section 83(5)(a)(i) to (v) and (vii) to (x) of the EPA Act 1992, as amended, shall be met, having regard, where appropriate, to any relevant specification issued by the Agency under section 5 (3) of the Act and the reasons for the selection of the arrangements proposed.

Indicate whether or not the activity is carried out, or may be carried out, or is located such that it is liable to have an adverse effect on -
(a) a site placed on a list in accordance with Part 3 of S.I. 477 of 2011, or
(b) a site where consultation has been initiated in accordance with Article 5 of the EU Habitats Directive (92/43/EEC).

Undertake a screening for Appropriate Assessment and state whether the activity, individually or in combination with other plans or projects, is likely to have a significant effect on a European Site(s), in view of best scientific knowledge and the conservation objectives of the site(s). Where it cannot be excluded, on the basis of objective scientific information, following screening for Appropriate Assessment, that an activity, either individually or in combination with other plans or projects, will have a significant effect on a European Site, provide a Natura Impact Statement, as defined in Regulation 2(1) of the European Communities (Birds and Natural Habitats) Regulations (S.I. No. 477 of 2011). Where based on the screening it is considered that an Appropriate Assessment is not required, provide a reasoned response.

Indicate whether or not the activity is liable to have an adverse effect on water quality in light of the European Communities Environmental Objectives (Surface Water) Regulations 2009 (S.I. No. 272 of 2009).

Indicate whether or not the activity is liable to have an adverse effect on water quality in light of the European Communities Environmental Objectives (Ground Water) Regulations 2010 (S.I. No. 9 of 2010).

Indicate whether any of the substances specified in the Schedule of the EPA (Industrial Emissions)(Licensing) 2013, S.I. No. 137 of 2013, are discharged by the activity to the relevant medium.

Indicate if the best environmental practices are in place for control of diffuse emissions from the installation as set out in the following legislation:

(a) a BAT Conclusions Implementing Decision published by the EC.

(b) a specification prepared by the Agency in accordance with Section 5 of the *Environmental Protection Agency Act 1992* as amended;

(c) the *Urban Waste Water Treatment Regulations 2001 (S.I. No. 254 of 2001)* as amended by the *Urban Waste Water Treatment (Amendment) Regulations 2004 (S.I. No. 440 of 2004)* or any future amendment thereof;

(d) the *European Communities (Good Agricultural Practice for Protection of Waters) Regulations 20 (S.I. No. 610 of 2010)* or any future amendment thereof;

(e) the *Local Government (Water Pollution) Act, 1977 (Control of Cadmium Discharges) Regulations 1985 (S.I. No. 294 of 1985)*;

(f) the *Local Government (Water Pollution) Act, 1977 (Control of Hexachlorocyclohexane and Mercury Discharges) Regulations 1986 (S.I. No. 55 of 1986)*;

(g) the *Local Government (Water Pollution) Acts, 1977 and 1990 (Control of Carbon Tetrachloride, DDT and Pentachlorophenol Discharges) Regulations 1994 (S.I. No. 43 of 1994)*; and,

(h) measures or controls identified in a pollution reduction plan for the river basin district prepared in accordance with Part V of the *EC Environmental Objectives (Surface Waters) Regulations 2009 S.I. No. 272 of 2009* for the reduction of pollution by priority substances or the ceasing or phasing out of emissions, discharges and losses of priority hazardous substances.

Supporting information should be included as **Attachment Nº L** with reference to where the information can be found in the application.

SECTION M: DECLARATION

Declaration

I hereby make application for a licence / revised licence, pursuant to the provisions of the Environmental Protection Agency Act, 1992, as amended, and Regulations made thereunder.

I certify that the information given in this application is truthful, accurate and complete.

I give consent to the EPA to copy this application for its own use and to make it available for inspection and copying by the public, both in the form of paper files available for inspection at EPA and local authority offices, and via the EPA's website. This consent relates to this application itself and to any further information, submission, objection, or submission to an objection whether provided by me as Applicant or any person acting on the Applicant's behalf.

Signed by: _____ **Date:** 25/11/14
(on behalf of the organisation)

Print signature name: JERRY Crowley

Position in organisation: A/Senior Executive Officer

Company stamp or seal:

ANNEX 1: TABLES / ATTACHMENTS

TABLE D.2(i) Waste Acceptance (type and quantities)
Rows should be added to the table as necessary.

EWC Code	Waste description (the actual description of the waste, not the text accompanying the EWC code)	Tonnes per annum (existing)	Tonnes per annum (proposed)
Recycling Centre			
13 02 05	waste oils at recycling centre		
15 01 02	plastics (packaging including polystyrene) at recycling centre		
15 01 04	metallic packaging, aluminium and steel cans/tins		
15 01 05	composite packaging, e.g. tetrapak		
15 01 07	glass bottles and jars at civic amenity	75	75
16 01 03	tyre	1	6
16 01 07	oil filters at civic amenity	1	0.6
16 06 01	lead batteries at recycling centre	6	12
16 06 04	alkaline batteries at recycling centre	2	3
17 08 02	gypsum C&D at recycling centre	8	20
20 01 01	paper and cardboard at recycling centre	200	200
20 01 02	flat glass at recycling centre	35	31
20 01 08	separately collected organic waste	30	30
20 01 11	textiles at recycling centre	7	10
20 01 21	fluorescent tubes at recycling centre	1	1
20 01 25	edible waste oils at recycling centre	3	2.5
20 01 27	waste paint at recycling centre	13	13
20 01 35	WEEE containing hazardous substances at recycling centre	140	150
20 01 36	WEEE non- hazardous at recycling centre	36	50
20 01 38	waste wood at recycling centre	125	175
20 01 40	waste metals at recycling centre	115	170
20 02 01	green waste at recycling centre	270	270
20 01 23	waste white goods at recycling centre	21	21
Sub-total at recycling centre		**1,159**	**1,350**
Cover and Restoration Materials			
10 01 01	bottom ash	2,731	2500
17 01 07	rubble for internal roads	3,786	3,500
17 05 04	clay, soil and stones for cover material	7,340	10,000
17 09 04	construction and demolition wastes		
19 05 01	Compost	112	100
19 12 09	inorganic fines from the mechanical treatment of wastes, minerals, e.g. soil and stones		
20 02 02	soil and stone from garden and parks	1,073	1,000
17 02 01	Wood		500
20 01 38	Wood		400
Sub-total restoration materials		**15,042**	**18,000**

Waste materials for disposal			
19 05 03	off-spec compost		
19 08 01	waste from wastewater plants - screenings (industrial non-hazardous)	920	47,150
19 08 02	waste from wastewater plants -from desanding (industrial non-hazardous)		
19 09 02	sludge's from water treatment (industrial non-hazardous)		
19 12 10	refuse derived fuel		
19 12 12	wastes from the mechanical treatment of waste, i.e. tromelled MSW		
20 02 01	green waste	21,113	
20 02 03	non-biodegradable garden and park waste		
20 03 01	mixed MSW		
20 03 02	wastes from markets		
20 03 03	street sweepings		
20 03 07	bulky waste		
17 01 07	Concrete and bricks		1,000
19 08 05	treated sewage sludge	280	500
Sub-total materials for deposition		**22,313**	**48,650**
Total Waste Acceptance		**23,472**	**50,000**

TABLE D.3(III) LINER SYSTEM

	y/n
Provide information in Attachment D.3 to fulfil Annex 1 of the Landfill Directive	Y
Is the type of liner system specified?	Y
Has a Quality Control Plan been specified?	Y
Has a Quality Assurance Plan been specified?	Y
Has independent, third-party supervision, testing and controls been specified?	Y
Have basal gradients for all cells and access ramps to the cells been designed?	Y
Has a leak detection system been specified?	Y

TABLE D.3(IV) LEACHATE MANAGEMENT ARRANGEMENTS

	y/n
Is there a Leachate Management Plan?	y
Have annual quantities of leachate been calculated?	Y
Has the total quantity of leachate been calculated?	Y
Has the size of the cells been specified taking account of the water balance calculations?	Y
Has a leachate collection system been specified?	Y
Has a leachate storage system been specified?	Y
Has a system for monitoring the level of leachate in the waste been designed?	Y
Is leachate recirculation proposed/practised?	N
Has leachate treatment on-site been specified?	N
Has leachate removal been specified?	Y

Table D.3(v)a. Landfill Gas Management

	y/n
Is there a Landfill Gas Management Plan?	Y
Is there a passive venting system?	N
Does the passive system cover all of the filled area?	N/A
Have gas alarm systems been installed in the site buildings?	Y
Have measures been installed to prevent landfill gas migration (e.g. barriers)?	Y
Has a time-scale been proposed for the installation of landfill gas infrastructure?	N/A
Is gas flaring undertaken at the site?	Y
Is there an active (i.e., pumped) landfill gas extraction system?	Y
Does the active system cover all of the filled area?	Y
Is landfill gas used to generate energy at the site?	N
Have emissions from the flarestack and utilisation plant been assessed for source, composition, quantity and level and rate? See section F of the application form for requirements.	Y
Has a maintenance programme for the control system been specified?	Y
Has a condensate removal system been designed?	Y

Table D.3(v)b Landfill Gas Monitoring for existing landfill gas flares and utilisation plants

CCC does not propose any changes to the existing monitoring which is as per licence W0025-03, Schedule D.7.

Parameter	Concentration (mg/Nm^3)	Frequency of Analysis	Method of Analysis
Inlet			
Methane (CH_4) % v/v	29	Continuous	Infrared analyser/flame ionisation detector
Carbon dioxide (CO_2) %v/v	30.1	Continuous	Flue gas analyser
Oxygen (O_2) % v/v	2	Continuous	Flue gas analyser
Total Sulphur Note 1	6	Annually	Ion chromatography
Total Chlorine Note 1	5 (Total chloride)	Annually	Ion chromatography
Total Fluorine Note 1	<3 (Total Fluoride)	Annually	Ion Selective Electrode
Outlet			
Volumetric Flow Rate	144.96	Note 2	Pitot
SO_2	32.7	Annually	Flue gas analyser
NOx	67.21	Annually	Flue gas analyser
CO	6.58	Continuous	Flue gas analyser
Particulates	Not Applicable	Not Applicable	Not Applicable
TA Luft Class I, II, III organics	Not Applicable	Not Applicable	Not Applicable
Hydrochloric acid	0.2 (Av Hydrogen Chloride)	Annually	Impinger
Hydrogen Fluoride	2.6	Annually	Impinger
TOC Note 1	3.33	Annually	TOC Analyser

Note 1: An additional row has been added to this table as it appeared in the licence application form, as additional parameters are included in the licence.

Note 2: This parameter is not included in the licence, but is monitored annually.

Table D.3(v)c Landfill Gas Monitoring

CCC does not propose any changes to the existing monitoring which is as per licence W0025-03, Schedule D.2.

Parameter	Proposed Frequency of Analysis		Method of Analysis
	Gas boreholes, vents, wells and perimeter locations	**Installation Office**	
Methane (CH_4) % v/v	Monthly	Weekly	Infrared/Flame ionisation detector
Carbon Dioxide (CO_2) % v/v	Monthly	Weekly	Infrared/ Flame ionisation detector
Oxygen (O_2) % v/v	Monthly	Weekly	Electrochemical cell
Atmospheric Pressure	Monthly	Weekly	Standard
Temperature	Monthly	Weekly	Standard

Table D.3(v)d Landfill Gas Infrastructure

Equipment	Monitoring Frequency	Monitoring Action
Gas Collection System	Weekly As required	Dip liquid levels in condensate pots Dewatering will be carried out as required
	Monthly	Landfill gas field balancing as per OMP. Visual audit of manifolds and wells heads to check to check state of repair
	Annual	Independent audit of gas collection system
Gas Control System	Daily	Visual inspection of flare. Check gas quality, flow rate & temperature at flare
	Weekly	Review flare data from SCADA

Table D.3(vi) Capping System	y/n
Has the daily cover been specified?	Y
Has the intermediate cover been specified?	N
Has the temporary capping been specified?	N
Has the Capping System been designed and does it meet the requirements of the Landfill Directive Annex 1 (3.3)?	Y
Does the Capping System include a flexible membrane liner?	Y for Phases 1-2 Will be for Phase 3 in future
Have all capping materials been specified?	
Has a Method Statement for construction been produced?	
Has a Quality Control Plan been produced?	
Has a Quality Assurance Plan been produced?	
Has a programme for monitoring landfill stability been developed?	Y
Has a programme for monitoring landfill settlement been developed?	Y

Table E.1 (i) BOILER EMISSIONS TO ATMOSPHERE (1 Page for each emission point)

Emission Point:

Emission Point Ref. Nº:	**Not Applicable, no boiler emissions**	
Location:		
Grid Ref. (12 digit, 6E,6N):		
Vent Details	Diameter:	Height above Ground(m):
Date of commencement of emission:		

Characteristics of Emission:

Boiler rating Steam Output: Thermal Input:			kg/hr MW
Boiler fuel Type: Maximum rate at which fuel is burned % sulphur content:			kg/hr
NOx			mg/Nm^3 0ºC. 3% O_2(Liquid or Gas), 6% O_2(Solid Fuel)
Maximum volume* of emission			m^3/hr 0ºC, 3 % O_2 (liquid or gas), 6 % O_2 (solid fuel)
Minimum efflux velocity			m.sec^{-1}
Temperature	ºC(max)	ºC(min)	ºC(avg)

* Volume flow limits for emissions to atmosphere shall be based on Normal conditions of temperature and pressure, (i.e. 0ºC,101.3kPa), dry gas; 3% oxygen for liquid and gas fuels; 6% oxygen for solid fuels.

(i) Period or periods during which emissions are made, or are to be made, including daily or seasonal variations (*start-up/shutdown to be included):*

Periods of Emission (avg)	_____min/hr _____hr/day _____day/yr

TABLE E.1(ii) MAIN EMISSIONS TO ATMOSPHERE (1 Page for each emission point)

Emission Point Ref. №:	LFGF1
Source of Emission:	Enclosed landfill gas flare
Location:	Landfill Gas Flare Compound See Drawing LW14-120-02-002 Rev A in Attachment D.1
Grid Ref. (12 digit, 6E,6N):	E 270 937 N 168 777
Vent Details Diameter: Height above Ground(m):	7 m above ground
Date of commencement:	September 2008

Characteristics of Emission:

(i) Volume to be emitted:			
Average/day	4,080 ~~N~~m^3/d	Maximum/day	24,000 Nm^3/d
Maximum rate/hour	1,000 ~~N~~m^3/h	Min efflux velocity	m.sec^{-1}
(ii) Other factors			
Temperature	n/a °C(max)	1,000 °C(min)	1,000 °C(avg)
For Combustion Sources: Volume terms expressed as : ☐ wet. ☐ ~~dry.~~ _____ %O_2			

Normalised dry flow data is not available for the average data for the flare.

(iii) Period or periods during which emissions are made, or are to be made, including daily or seasonal variations (*start-up /shutdown to be included):*

Periods of Emission (avg)	60 min/hr 24 hr/day 365 day/yr

TABLE E.1(iii): MAIN EMISSIONS TO ATMOSPHERE - Chemical characteristics of the emission (1 table per emission point)

Emission Point Reference Number: LFGF1

Monitoring is carried out post treatment (flaring), therefore as discharged.

Parameter	Prior to treatment(1)				Brief description of treatment	As discharged(1)					
	mg/Nm^3		kg/h			mg/Nm^3		kg/h.		kg/year^2	
	Avg	Max	Avg	Max		Avg	Max	Avg	Max	Avg	Max
NOx					Combustion of landfill gas	67.21		0.01		83.86	
CO						6.58		0.001		8.38	
TOC						3.33		0.001		8.38	
Average HCL						0.2		0.0004		3.35	
Average HF						2.6		0.0001		0.84	
SO_2						32.7		-		-	
Volumetric Airflow						144.96		-		-	
Cl	5					-		-		-	
F	<3					-		-		-	
S	6					-		-		-	

1. Concentrations should be based on Normal conditions of temperature and pressure, (i.e. 0^{o}C,101.3kPa). Wet/dry should be the same as given in Table E.1(ii) unless clearly stated otherwise.
2. The flare ran for 8,386 hour in 2013

TABLE E.1(iv): EMISSIONS TO ATMOSPHERE - Minor atmospheric emissions

Emission point Reference Numbers	Description	Emission details[1]				Abatement system employed
		material	mg/Nm 3(2)	kg/h.	kg/year	
Not Applicable						

1 The maximum emission should be stated for each material emitted, the concentration should be based on the maximum 30 minute mean.
2 Concentrations should be based on Normal conditions of temperature and pressure, (i.e. 0°C101.3kPa). Wet/dry should be clearly stated. Include reference oxygen conditions for combustion sources.

TABLE E.1(v): EMISSIONS TO ATMOSPHERE – Fugitive and Potential atmospheric emissions

Emission point ref. no. (as per flow diagram)	Description	Malfunction which could cause an emission	Emission details (Potential max. emissions)[1]		
			Material	mg/Nm^3	kg/hour
Not Applicable	Dust	Malfunction of dust suppression equipment (wheelwash, road cleaners, bowser)	Dust/particulate matter	350	N/A
Not Applicable	Odour	Flare shutdown Malfunction in landfill gas collection system e.g. condensate or blockage Insufficient daily cover at active face Leaking wellheads (Please refer to OMP, pg 3 for detailed list of potential odour sources)	N/A	N/A	N/A
Various	VOC (surface emissions)	As per list above for odour	VOC	3,000 ppm	N/A

[1] Estimate the potential maximum emission for each malfunction identified.

TABLE E.2(i): EMISSIONS TO SURFACE WATERS (One page for each emission)

Emission Point:

Emission Point Ref. №:	SWLO
Source of Emission:	Surface water pond
Location of discharge :	From surface water pond to Powerstown Stream on Northern boundary of the site.
Grid Ref. (12 digit, 6E,6N):	E 270 894 N 169 094
Name of receiving waters and water body code:	Powerstown Stream (a tributary of the River Barrow)
Flow rate in receiving waters:	Not available $m^3.sec^{-1}$ Dry Weather Flow Not available $m^3.sec^{-1}$ 95%ile flow
Available assimilative capacity:	Not available kg/day

Emission Details:

(i) Volume to be emitted			
Normal/day	691 m^3	Maximum/day	1,382m^3
Maximum rate/hour	57.6 m^3		

(ii) Period or periods during which emissions are made, or are to be made, including daily or seasonal variations (*start-up /shutdown to be included):*

Periods of Emission (avg)	60 min/hr 24 hr/day 365 day/yr

TABLE E.2(ii): EMISSIONS TO SURFACE WATERS - Characteristics of the emission (1 table per emission point)

Emission point reference number: ***SWLO***

Continuous monitoring is not carried out for the same parameters at the inlet and outlet of the pond. Results below have been calculated from discrete quarterly event averages for the year (2013).

Parameter	Prior to treatment				As discharged				% Efficiency
	Max. hourly average (mg/l)	Max. daily average (mg/l)	kg/day	kg/year	Max. hourly average (mg/l)	Max. daily average (mg/l)	kg/day	kg/year	
Total Ammonia as N				4.2				1.64	
Chloride				2296				1206	
Suspended Solids				12,751				1801	

TABLE E.3(i): EMISSIONS TO SEWER (One page for each emission)

Emission Point:

Emission Point Ref. №:	Not Applicable, there is no emission to sewer
Location of connection to sewer:	
Grid Ref. (12 digit, 6E,6N):	
Name of sewage undertaker:	

Emission Details:

(i) Volume to be emitted			
Normal/day	m^3	Maximum/day	m^3
Maximum rate/hour	m^3		

(ii) Period or periods during which emissions are made, or are to be made, including daily or seasonal variations (*start-up /shutdown to be included):*

Periods of Emission (avg)	_____min/hr _____hr/day _____day/yr

TABLE E.3(ii): EMISSIONS TO SEWER - Characteristics of the emission (1 table per emission point)

Emission point reference number: ***n/a***

Parameter	Prior to treatment				As discharged				% Efficiency
	Max. hourly average (mg/l)	Max. daily average (mg/l)	kg/day	kg/year	Max. hourly average (mg/l)	Max. daily average (mg/l)	kg/day	kg/year	

TABLE E.4(i): EMISSIONS TO GROUND (1 Page for each emission point)

Emission Point or Area:

Emission Point/Area Ref. Nº:	Not Applicable, no emissions to ground
Emission Pathway: (borehole, well, percolation area, soakaway, landspreading, etc.)	
Location :	
Grid Ref. (12 digit, 6E,6N):	
Elevation of discharge: (relative to Ordnance Datum)	
Aquifer classification for receiving groundwater body:	
Groundwater vulnerability assessment (including vulnerability rating):	
Identity and proximity of groundwater sources at risk (wells, springs, etc):	
Identity and proximity of surface water bodies at risk:	

Emission Details:

(i) Volume to be emitted			
Normal/day	m^3	Maximum/day	m^3
Maximum rate/hour	m^3		

(ii) Period or periods during which emissions are made, or are to be made, including daily or seasonal variations (*start-up /shutdown to be included):*

Periods of Emission (avg)	_____min/hr _____hr/day _____day/yr

TABLE E.4(ii): EMISSIONS TO GROUND - Characteristics of the emission (1 table per emission point)

Emission point/area reference number: ***N/A***

Parameter	Prior to treatment				As discharged				% Efficiency
	Max. hourly average (mg/l)	Max. daily average (mg/l)	kg/day	kg/year	Max. hourly average (mg/l)	Max. daily average (mg/l)	kg/day	kg/year	

Table E.5(i): NOISE EMISSIONS - Noise sources summary sheet

Not Applicable, no specific noise sources/emissions have been identified on site. Monitoring is carried out to measure noise levels at various points around the facility and at noise sensitive locations.

Source	Emission point Ref. No	Equipment Ref. No	Sound Pressure[1] dBA at reference distance	Octave bands (Hz) Sound Pressure[1] Levels dB(unweighted) per band									Impulsive or tonal qualities	Periods of Emission[2]
				31.5	63	125	250	500	1K	2K	4K	8K		

1. For items of plant, sound power levels may be used.
2. Periods of emission should state if the plant item in question operates on a continuous or intermittent basis. If intermittent then further details of the hours of operation and any potential impulsive components associated with the source should be clearly identified.

TABLE F.1(i): ABATEMENT / TREATMENT CONTROL

Emission point reference number: *LFGF1*

Control[1] parameter	Monitoring to be carried out[2]	Equipment [3]	Equipment back-up
Methane content	Methane (continuous)	Infrared sensor	Equipment spares
Oxygen content	Oxygen (continuous)	Oxygen sensor	Equipment spares
Temperature	Temperature (continuous)	Temperature probe	Equipment spares
Gas Flow	Flow (continuous)	Orifice plate	Equipment spares

[1] List the operating parameters of the treatment / abatement system which control its function.
[2] List the monitoring of the control parameter to be carried out.
[3] List the equipment necessary for the proper function of the abatement / treatment system.

TABLE F.2(i): EMISSIONS MONITORING AND SAMPLING POINTS (1 table per monitoring point)

Emission Point Reference No. : LFGF1

Monitoring is and will continue to be carried out annually in accordance with Schedule D.7 of the licence W0025-03. CCC does not propose any changes to the monitoring

Parameter	Monitoring frequency	Accessibility of Sampling Points	Sampling method	Analysis method/ technique
List as per Schedule D.7	As per Schedule D.7	Good	Manual or automated if continuous	As per Schedule D.7

Emission Point Reference No. : SWLO

Monitoring is and will continue to be carried out annually in accordance with Schedule D.5.1 of the licence W0025-03. In addition there is a requirement to continually monitor the flow at the outlet (Condition 3.22.1.) CCC does not propose any changes to the monitoring. (Continuous monitoring is carried out at the inlet to the surface water pond (SWLI) and in the event of a breach of trigger levels, the outlet is closed as per Condition 6.5.3. Permission is sought to change the frequency of monitoring for trigger level parameters from continuous to monthly – please refer to Attachment B.13.)

Parameter	Monitoring frequency	Accessibility of Sampling Points	Sampling method	Analysis method/ technique
List as per Schedule D.5.1	As per schedule D.5.1	Good	For laboratory parameters, manual sampling– direct to bottlewear. For in-situ parameters, use of hand held pH, DO and conductivity meters.	As per Note 1 of Schedule D.5.1
Flow (as per Condition 3.22.1)	Continuous	Good	Automated flow meter	Velocity measurement

TABLE F.2(ii): AMBIENT ENVIRONMENT MONITORING AND SAMPLING POINTS (1 table per monitoring point)

Monitoring Point Reference No: Dust, Odour and VOC Monitoring

Dust is and will continue to be monitoring in accordance with Schedule D.3.1 and Schedule C.3.
Odour is and will continue to be monitored in accordance with Schedule D.3.1 & Condition 8.14 (VOCs) and Schedule D.10 (ambient odour) which was subsequently specified by the Odour Management Plan as previously approved by the Agency.

Parameter	Monitoring frequency	Accessibility of Sampling point	Sampling method	Analysis method / technique
Dust	See Schedule D.3.1	Good	See Schedule D.3.1	See Schedule D.3.1
Odour (VOCs)	See Schedule D.3.1 & Condition 8.14	Good	See Schedule D.3.1 & Condition 8.14	See Schedule D.3.1 & Condition 8.14
Ambient Odour	Daily	Good	As per AG5[8]	Smell

[8] Air Guidance Note 5 (AG5) Odour Impact Assessment Guidance for EPA Licensed Sites, EPA 2010

Table G.1(i) Details of Process related Raw Materials, Intermediates, Products, etc., used or generated on the site

Ref. Nº or Code	Material / Substance[1]	CAS Number	Danger[2] Category	Amount Stored (tonnes)	Annual Usage (tonnes)	Nature of Use	R[3] - Phrase	S[3] - Phrase	Hazard Statement [4]
1	Diesel	068334-30-5	Xn, N	0	55	Site machinery	R40, R51/53	S2, S36/37, S61	H226, H304, H315, H332, H351, H373, H411
2	Diesel	068334-30-5	Xn, N	1	2	Site generator	R40, R51/53	S2, S36/37, S61	H226, H304, H315, H332, H351, H373, H411
3	Petrol	86290-81-5	F, F+, T, T+, Xn, N	0.1	0.5	Lawnmower	R11, R12, R19, R22, R26/27/28, R33, R36/38 R45, R46, R48/20, R48/23/24/25, R51/53 R62, R65, R66, R67	S2, S7, S16, S23, S24, S43, S61	
4	Kerosene Heating Oil	8008-20-6	N, Xn	1	2	Central Heating	R10, R38, R51/53, R65	S23, S24, S61, S62, S43	H226, H304, H315, H336, H411
5	Leachate			710	15,000	Landfill byproduct			
6	K-Othrine	52918-63-5 57-55-6 50-00-0	T, N	0	0.1	Insecticide	R23/24/25, R34, R40 R43, R50/53		
7	Raco Grain	56073-07-5	T, N, T+	0	0.1	Rat Poison	R28, R48/25, R50/53 R83		
8	Raco Paste	56073-07-5	T, N, T+	0	0.1	Rat Poison	R28, R48/25, R50/53 R83		
9	BioKill	52645-53-1	Xn, Xi, N	0.02	0.1	Insecticide	R22, R50, R53,	S24, S26,	

Ref. Nº or	Material / Substance[1]	CAS Number	Danger[2] Category	Amount Stored	Annual Usage	Nature of Use	R[3] - Phrase	S[3] - Phrase	Hazard Statement [4]
		78330-12-8					R36/38	S37/39	
10	Ambush	52645-53-1 64742-95-6		0.02	0.1	Insecticide	R22, R43, R45, R46, R65	S2, S53, S45	
11	Defy	7664-38-2 68989-03-7	Xi	0.05	0.2	Surfactant	R37, R36/38	S2, S26, S28. S36/37/38	
12	Roundup	38641-94-0		0.02	0.2	Herbicide	R36/38, R52/53	S25, S26, S29, S37, S61	
13	Nitric Acid	7732-18-5 7697-37-2		0	0.005	Reagent	R8, R35	S23, S26, S36, S45	
14	Sodium Persulphate	7775-27-1		0	0.005	Reagent	R22, R36/37/38, R42/43, R8	S17, S26, S36/37/38, S45	

Notes:
1. In cases where a material comprises a number of distinct and available dangerous substances, please give details for each component substance.
2. Article 2(2) of S.I. No. 116/2003
3. Schedules 9 and 10 of S.I. No. 62/2004 (as amended by S.I. No. 271/2008)
4. EC Regulation 1272/2008 (Chemicals Act 2008 (13 of 2008) and 2010)

Table G.1(ii) Details of Process related Raw Materials, Intermediates, Products, etc., used or generated on the site

Ref. № or Code	Material / Substance[(1)]	Odour			Pollutants (Tick and specify Group / Family Number)			
		Odourous Yes/No	Description	Threshold µg/m^3	EC EO (Surface Waters) Regulations 2009		EC EO Groundwater) Regulations 2010	
					Specific pollutants	Priority (hazardous) substances	Hazardous[1]	Non-hazardous[1]
1	Diesel Fuel Machines	Yes	Hydrocarbon		Yes	Yes	Yes	
2	Diesel Generator	Yes	Hydrocarbon		Yes	Yes	Yes	
3	Petrol	Yes	Hydrocarbon		Yes	Yes	Yes	
4	Kerosene Heating Oil	Yes	Hydrocarbon		Yes	Yes	Yes	
5	Leachate	Yes	Landfill gas		Yes	Yes	Yes	
6	K-Othrine	Slight	Characteristic		No	No	Yes	
7	Raco Grain	Yes	Characteristic		No	No		
8	Raco Paste	Yes	Characteristic		No	No		
9	BioKill	Yes	Characteristic		No	No	Yes	
10	Ambush	Yes	Aromatic		No	No	Yes	
11	Defy	Yes	Acidic		No	No		No
12	Roundup	No			Yes			No
13	Nitric Acid	Yes	Acrid		No	No		No
14	Sodium Persulphate	No			No	No		No

Note 1: The EPA Classification of Hazardous and Non-Hazardous Substances in Groundwater, December 2010

TABLE H.3(i): Generation of waste at the installation and its management

Not required, please refer to Attachment D.2. 3

Waste description	EWC Code (use asterisk to indicate whether hazardous waste or not)	Category per Animal By-products Regulation 1069/2009	Source of waste	Quantity generated (tonnes per month)	Location of recovery of disposal (on-site, off-site, exported)	Method of recovery or disposal (e.g. recycling, energy recovery, other incineration, landfill)

Table I.2(i) SURFACE WATER QUALITY

There are 4 no. surface water monitoring points on site, one at the inlet to the attenuation pond and one at the outlet, one upstream of the outlet in the stream and one downstream of the outlet in Powerstown Stream. Results are shown here for the annual monitoring event for the past 4 years at ST2 and ST1, the two points in the Powerstown Stream, up and downstream of the outlet. Monitoring results for all 4 points are submitted to the EPA on a quarterly basis.

(Sheet 1 of 2) Monitoring Point/ Grid Reference: ___ST2_____

Parameter	Results (mg/l unless noted otherwise)				Sampling method[2] (grab, drift etc.)	Normal Analytical Range[2]	Analysis method / technique
	Q1 2011	Q3 2012	Q2 2013	Q2 2014			
pH (pH units)	8.1	7.9	7.6	7.7	field		F
Temperature	7.9	18	12.3	12.1	field		F
Electrical conductivity EC uS/cm	816	853	781	750	field		F*
Total Ammonia as N	0.02	0.03	0.02	NR	grab		EPA Method W07
Chemical oxygen demand	<20	<20	<20	<20	grab		EPA Method W01
Biochemical oxygen demand	0.6	<1.0	1.3	<1.0	grab		EPA Method W04
Dissolved oxygen DO % sat	113	76	94.2	114	field		F*
Orthophosphate as P	0.02	<0.01	<0.01	<0.010	grab		EPA Method W07
Nitrate as N	NR	NR	NR	NR			
Nitrite as N	NR	NR	0.008	0.007	grab		L
Calcium Ca	130	110	120	120	grab		L*
Cadmium Cd ug/l	<0.5	<0.5	<0.5	0.03	grab		EPA Method W05
Chromium Cr ug/l	<0.5	0.7	<0.5	<1.0	grab		EPA Method W05
Chloride Cl	23	22	23	30	grab		EPA Method W07
Copper Cu ug/l	<0.5	0.8	0.7	<1.0	grab		L*
Iron Fe ug/l	33	<25	39	16	grab		EPA Method W05
Lead Pb ug/l	<0.5	<0.5	<0.5	<1.0	grab		
Magnesium Mg	29	22	22	21	grab		
Manganese Mn ug/l	<25	<25	<25	16	grab		
Mercury Hg ug/l	<0.5	<0.5	<0.5	<.50	grab		

Surface Water Quality (Sheet 2 of 2) ST2

Parameter	Results (mg/l)				Sampling method (grab, drift etc.)	Normal Analytical Range	Analysis method / technique
	Date	Date	Date	Date			
Nickel Ni ug/l	4.8	5.7	3.4	3.7	grab		EPA Method W05
Potassium K	2.7	2.7	2.2	2.5	grab		L*
Sodium Na	13	8.7	9.5	14	grab		L*
Sulphate SO_4	95	160	98	92	grab		L
Zinc Zn ug/l	22	<3	7	12	grab		EPA Method W05
Total alkalinity (as $CaCO_3$)	253	251	269	239	grab		L*
Total organic carbon TOC	NR	NR	NR	NR			
Total oxidised nitrogen TON	8.67	5.27	6.72	NR	grab		EPA Method W07
Nitrite NO_2	NR	NR	NR	NR			
Nitrate NO_3	NR	NR	NR	NR			
Faecal coliforms (/100mls)	NR	NR	NR	NR			
Total coliforms (/100mls)	NR	NR	NR	NR			
Phosphate PO_4	NR	NR	NR	NR			
Aluminium mg/l	<25	<25	<25	26	grab		
Antimony mg/l	<0.5	1.2	<0.5	<1.0	grab		
Arsenic ug/l	0.7	1	<0.5	<1.0	grab		
Barium ug/l	17	32	20	19	grab		
Beryilium ug/l	<0.5	<0.5	<0.5	<1.0	grab		EPA Method W05
Boron ug/l	82	53	58	54	grab		
Cobalt ug/l	<0.5	<0.5	<0.5	<1.0	grab		
Molybdenum ug/l	2.1	3.4	1.9	1.6	grab		
Selenium mg/l	2.2	1.5	1.1	1.4	grab		
Suspended Solids mg/l	9	<5	19	5	grab		EPA Method W03
Thallium ug/l	<0.5	0.6	<0.5	<1.0	grab		
Tin ug/l	<1	<1	NR		grab		
Uranium ug/l	9.2	5	<13	10	grab		
Vanadium ug/l	<0.5	<0.5	<0.5	<1.0	grab		EPA Method W05

F Field accredited. F* Field non accredited. L Laboratory accredited. L* Laboratory non accredited. EPA Methods as per Attachment I. 2.

Table I.2(i) SURFACE WATER QUALITY
(Sheet 1 of 2) Monitoring Point/ Grid Reference: ___ST1_____

Parameter	Results (mg/l unless noted otherwise)				Sampling method[2] (grab, drift etc.)	Normal Analytical Range[2]	Analysis method / technique
	Q1 2011	Q3 2012	Q2 2013	Q2 2014			
pH (pH units)	7.8	7.6	7.8	7.1			
Temperature	8.7	15.1	11.9	11.2			
Electrical conductivity EC uS/cm	811	822	806	776			
Total Ammonia as N	0.09	0.04	0.07	NR			
Chemical oxygen demand	<20	<20	<20	<20			
Biochemical oxygen demand	0.5	<1.0	1	<1.0			
Dissolved oxygen DO % sat	102	58	83	80			
Orthophosphate as P	0.02	<0.01	<0.01	<0.011			
Nitrate as N	NR	NR	NR	NR			
Nitrite as N	NR	NM	0.015	NR			
Calcium Ca	130	110	120	130			
Cadmium Cd ug/l	<0.5	<0.5	<0.5	0.02			
Chromium Cr ug/l	1.3	0.9	<0.5	1.9			
Chloride Cl	26	23	27	29			
Copper Cu ug/l	<0.5	0.8	0.5	<1.0			
Iron Fe ug/l	<25	<25	32	16			
Lead Pb ug/l	<0.5	<0.5	<0.5	<1.0			
Magnesium Mg	26	20	19	19			
Manganese Mn ug/l	<25	<25	26	15			
Mercury Hg ug/l	<0.5	<0.5	<0.5	<.50			

Surface Water Quality (Sheet 2 of 2) ST1

Parameter	Results (mg/l)				Sampling method (grab, drift etc.)	Normal Analytical Range	Analysis method / technique
	Date	Date	Date	Date			
Nickel Ni ug/l	3.9	4.9	2.5	2.5	All methods as described in the table above		
Potassium K	2.7	3.1	2.3	2.5			
Sodium Na	15	10	12	14			
Sulphate SO_4	91	130	76	77			
Zinc Zn ug/l	18	<3	7	9.8			
Total alkalinity (as $CaCO_3$)	260	248	283	260			
Total organic carbon TOC	NR	NR	NR	NR			
Total oxidised nitrogen TON	8.96	5.65	8.2	NM			
Nitrite NO_2	NR	NR	NR	NR			
Nitrate NO_3	NR	NR	NR	NR			
Faecal coliforms (/100mls)	NR	NR	NR	NR			
Total coliforms (/100mls)	NR	NR	NR	NR			
Phosphate PO_4	NR	NR	NR	NR			
Aluminium mg/l	<25	<25	<25	18			
Antimony mg/l	<0.5	1.2	<0.5	<1.0			
Arsenic ug/l	0.5	0.9	<0.5	<1.0			
Barium ug/l	18	33	20	22			
Beryilium ug/l	<0.5	<0.5	<0.5	<1.0			
Boron ug/l	85	56	61	60			
Cobalt ug/l	<0.5	<0.5	<0.5	<1.0			
Molybdenum ug/l	1.7	3.2	1.3	1.2			
Selenium mg/l	1.6	1.3	0.9	1.2			
Suspended Solids mg/l	<5	<5	15	8			
Thallium ug/l	<0.5	<0.5	<0.5	<1.0			
Tin ug/l	<1	<1	NR				
Uranium ug/l	7.9	4.6	10	9			
Vanadium ug/l	<0.5	<0.5	<0.5	<1.0			

Table I.4(i) GROUNDWATER QUALITY Groundwater is monitored at 8 groundwater wells and at 2 private wells. One upgradient and one downgradient well have been selected for entry into Tables I.4(i). The annual event for the last 4 years was selected for the longer parameter list. Monitoring results for each of the 11 wells are submitted to the EPA on a quarterly basis.

(Sheet 1 of 2) Monitoring Point/ Grid Reference: **RAC2** (UPGRADIENT)

Parameter	Results (mg/l unless stated otherwise)				Sampling method (composite etc.)	Normal Analytical Range	Analysis method / technique
	Mar-11	Jul-12	May-13	Jun-14			
pH pH units	7.3	7.3	7.2	7.6	Pumped and purged		All analysis methods are as described for surface water in Table I.2 (i)
Temperature oC	10.6	11.2	11	14.6			
Electrical conductivity EC µS/cm	757	827	780	674			
Total Ammonium as N	0.01	0.19	0.05	<0.10			
Nitrite as N	NR	NR	NR	NR			
Nitrate as N	NR	NR	NR	NR			
Orthphosphate as P	*0.03*	0.03	0.02				
Dissolved oxygen DO %	76	78	76	91			
Residue on evaporation (180ºC)	NM	NM	NM	NM			
Aluminium µg/l	270	3400	350	-			
Arsenic µg/l	1	3.7	0.9	-			
Boron µg/l	100	83	73	58			
Calcium Ca	140	190	140	47			
Cadmium µg/l	<0.5	0.8	<0.5	<0.03			
Chromium µg/l	<0.5	5.8	<0.5	<0.05			
Chloride Cl	17	19	16	20			
Copper µg/l	0.9	9.7	2.2	<0.05			
Total Cyanide	<0.05	NM	NR	<0.01			
Iron µg/l	580	4700	850	0.8			
Lead µg/l	<0.5	5.5	1.2	<0.2			
Magnesium Mg	17	17	14	14			
Manganese µg/l	35	410	47	0.15			
Mercury µg/l	<0.5	<0.5	<0.5	<0.01			
Nickel µg/l	1.2	13	1.1	<0.10			

Groundwater Quality (sheet 2 of 2) RCA2 (UPGRADIENT)

Parameter	Results (mg/l)				Sampling method (composite, dipper etc.)	Normal Analytical Range	Analysis method / technique
	Date	Date	Date	Date			
Potassium K	2.2	2.2	1.5	1			
Sodium Na	9.8	8.7	7.6	8			
Sulphate SO_4	37	57	40	25			
Phosphate PO_4	NR	NR	NR	NR			
Zinc µg/l	22	23	12	0.02			
Total alkalinity (as $CaCO_3$)	317	393	325	560			
Total organic carbon TOC	NM	2	3.4	3			
Total oxidised nitrogen TON	9.5	8.97	10.42	11			
Barium µg/l	15	39	20	-			
Fluoride F	<0.25	<0.25	<0.25	<0.0001			
Phenol							
Phosphorus P	NR	NR	NR	NR			
Selenium µg/l	1.5	1.5	1.4	-			
Silver Ag	NR	NR	NR	NR			
Nitrite NO_2	NR	NR	NR	NR			
Nitrate NO_3	NR	NR	NR	NR			
Faecal coliforms (/100mls)	NR	NR	NR	NR			
Total coliforms (/100mls)	NR	NR	NR	NR			
Water level (m OD)	5.3	3.9	4.5	4.5			
Antimony µg/l	<0.5	1.1	<0.5	-			
Beryllium µg/l	<0.5	<0.5	<0.5	-			
Cobalt µg/l	0.5	4.7	0.9	-			
Molybdenum µg/l	<0.5	1.3	<0.5	-			
Thallium µg/l	<0.5	<0.5	<0.5	-			
Tin µg/l	<1	<1	NR	-			
Uranium µg/l	6	4.7	9.1	-			
Vanadium µg/l	0.8	6.6	1.3	-			
Toluene µg/l	-	0.6	0.6	-			

Table I.4(i) GROUNDWATER QUALITY
(Sheet 1 of 2) Monitoring Point/ Grid Reference: GW8 (DOWNGRADIENT)

Parameter	Results (mg/l unless stated otherwise)				Sampling method (composite etc.)	Normal Analytical Range	Analysis method / technique
	Mar-11	Jul-12	May-13	May-14			
Ph pH units	7.3	7.1	7.1	7.1			
Temperature oC	11.4	12	11.8	11.9			
Electrical conductivity EC µS/cm	746	742	713	705			
Total Ammonium as N	0.91	0.38	0.06	NR			
Nitrite as N	NR	NR	NR	NR			
Nitrate as N	NR	NR	NR	NR			
Orthphosphate as P	0.03	0.02	0.02				
Dissolved oxygen DO %	16	21	24.6	20			
Residue on evaporation (180°C)	NM	NM	NM	NM			
Aluminium µg/l	42	160	71	120			
Arsenic µg/l	<0.5	0.9	<0.5	<1			
Boron µg/l	96	85	74	76			
Calcium Ca	120	120	110	102			
Cadmium µg/l	<0.5	<0.5	<0.5	0.02			
Chromium µg/l	<0.5	1.1	<0.5	<1			
Chloride Cl	22	22	20	22			
Copper µg/l	<0.5	1.1	0.7	<1			
Total Cyanide	<0.05	NM	NR	<0.05			
Iron µg/l	87	220	120	76			
Lead µg/l	<0.5	<0.5	<0.5	<1			
Magnesium Mg	18	13	14	16			
Manganese µg/l	<25	<25	<25	7.2			
Mercury µg/l	<0.5	<0.5	<0.5	<0.5			
Nickel µg/l	2.3	2.4	<0.5	<1			

Groundwater Quality (sheet 2 of 2) GW8 (DOWNGRADIENT)

Parameter	Results (mg/l unless stated otherwise)				Sampling method (composite, dipper etc.)	Normal Analytical Range	Analysis method / technique
	Mar -11	Jul-12	May-13	May-14			
Potassium K	4.6	4	3.1	4			
Sodium Na	13	10	9.5	11			
Sulphate SO_4	37	38	39				
Phosphate PO_4	NR	NR	NR	NR			
Zinc µg/l	18	<3	11	11			
Total alkalinity (as $CaCO_3$)	291	307	285				
Total organic carbon TOC	NM	<1.0	1.2	<1.0			
Total oxidised nitrogen TON	9.03	9.74	8.65				
Barium µg/l	29	36	28	28			
Fluoride F	<0.25	<0.25	<0.25				
Phosphorus P	NR	NR	NR	NR			
Selenium µg/l	0.9	1.2	0.9	1			
Silver Ag	NR	NR	NR	NR			
Nitrite NO_2	NR	NR	NR	NR			
Nitrate NO_3	NR	NR	NR	NR			
Faecal coliforms (/100mls)	NR	NR	NR	NR			
Total coliforms (/100mls)	NR	NR	NR	NR			
Water level (m OD)	8.3	8.2	8.1	8.5			
Antimony µg/l	<0.5	1	<0.5	<1			
Beryllium µg/l	<0.5	<0.5	<0.5	<1			
Cobalt µg/l	<0.5	<0.5	<0.5	<1			
Molybdenum µg/l	<0.5	1.4	<0.5	<1			
Thallium µg/l	<0.5	<0.5	<0.5	<1			
Tin µg/l	<1	<1	NR	-			
Uranium µg/l	3.8	2.4	6.1	5.1			
Vanadium µg/l	<0.5	0.9	<0.5	<1			
Toluene µg/l			1	0.6			
Ethylbenzene ug/l			0.7	<0.5			

TABLE I.4(ii): LIST OF OWNERS/FARMERS OF LAND

Land Owner	Townlands where landspreading	Map Reference	Fertiliser P requirement for each farm
	Not applicable		*NMP must take account of on-farm slurry

Total P requirement of the client List _____

TABLE I.4(ii): LANDSPREADING (not applicable)

Land Owner/Farmer_____

Map Reference_____

Field ID	Total Area (ha)	(a) Usable Area (ha)	Soil P Test Mg/l	Date of P test	Crop	P Required (kg P/ha)	Volume of On-Farm Slurry Returned (m^3/ha)	Estimated P in On-Farm Slurry (kg P/ha)	(b) Volume to be Applied (m^3/ha)	P Applied (kg P/ha)	Total Volume of imported slurry per plot (m^3)

TOTAL VOLUME THAT CAN BE IMPORTED ON TO THE FARM:

Concentration of P in landspread material	- kg P/m^3
Concentration of N in landspread material	- kg N/m^3

Table I.7(i): AMBIENT & BACKGROUND NOISE ASSESSMENT
Need to carry out an assessment for tonal and impulsive noise[1]
Daytime noise monitoring was carried out on the 18th and 19th of December 2013. Tonal noise was identified at N4 and a tonal penalty was applied. Noise from the landfill site was audible along with off-site noise at one location, N5.

	National Grid Reference (6N, 6E)	Sound Pressure Levels (dB) December 2013					
		L_{Aeq}		L_{A10}		L_{A90}	
		Ambient	Background[2]	Ambient	Background[2]	Ambient	Background[2]
1. SITE BOUNDARY[3]							
N4	N270 592 E168 822		66		64		52
2. NOISE SENSITIVE LOCATIONS[3]							
N5	N271 145 E168 629		51		51		45
N6	N271 505 E168 851		53		52		45
S1	N270 525 E168 919		71		75		59
S2	N270 692 E168 445		59		59		49

1. Refer to section 5 of the Agency's *Guidance Note for Noise: Licence Applications, Surveys and Assessments in Relation to Scheduled Activities (NG4)* (2012).
2. Background noise levels should be determined in the absence of site specific noise. Where an installation is operational on a 24hr basis, estimates may be given for background noise levels, but this should be noted.
3. All locations should be identified on accompanying drawings.

ANNEX 2: CHECKLIST FOR Regulation 9 COMPLIANCE

Regulation 9 of the Environmental Protection Agency (Industrial Emissions)(Licensing) Regulations, 2013 sets out the statutory requirements for information to accompany a licence application. The Application Form is designed in such a way as to set out these questions in a structured manner and not necessarily in the order presented in Regulation 9. In order to ensure a legally valid application in respect of Regulation 9 requirements, all Applicants should complete the following checklist and submit it with the completed Application Form.

Regulation 9(2)		**Section in Application**	**Checked by Applicant ✓**
(a)	Give: *(i)* the name, address and telephone number of the applicant and, if different, any address to which correspondence relating to the application should be sent and, if the applicant is a body corporate, the address of its registered or principal office,	*Section B.1*	✓
	(ii) The location or postal address (including, where appropriate, the name of the relevant townland or townlands) of the premises to which the activity relates,	*Section B.1*	✓
	(iii) The name of the planning authority in whose functional area the activity is or will be carried on, and	*Section B.6*	✓
	(iv) In the case of a discharge of any trade effluent or other matter (other than domestic sewage or storm water) to a sewer of a sanitary authority, give the name of the sanitary authority in which the sewer is vested or b which it is controlled	*Section B.7*	✓
(b)	give - (i) in the case of an established activity, the number of employees and other persons working or engaged in connection with the activity on the date after which a licence is required and during normal levels of operation, or	*Section B.5*	✓

Regulation 9(2)		**Section in Application**	**Checked by Applicant ✓**
	(ii) in any other case, the gross capital cost of the activity to which the application relates,	*Not applicable*	✓
(c)	specify the relevant class or classes in the First Schedule to the Act to which the industrial emissions directive activity relates,	*Section B.3A*	✓
(d)	In accordance with Section 87(1B)(a) of the EPA Acts of 1992 to 2013 in the case where an application for permission for the development comprising or for the purposes of the industrial emissions directive activity to which the application for the licence relates is currently under consideration by the planning authority concerned or An Bord Pleanála, a written confirmation from the planning authority or An Bord Pleanála, as appropriate, of that fact together with either: (i) a copy of the environmental impact statement, 2 hard copies and 2 electronic copies or in such form as may be specified by the Agency, that was required to be submitted with the application for planning permission, or	*Not applicable*	✓
	(ii) a written confirmation from the planning authority or An Bord Pleanála that an environmental impact assessment is not required by or under the Act of 2000,	*Not applicable*	✓
(e)	In accordance with section 87(1B)(b) of the EPA Acts of 1992 to 2013 in the case where permission for the development comprising or for the purposes of the industrial emissions directive activity to which the application for the licence relates has been granted, a copy of the grant of permission together with either: (i) a copy of the environmental impact statement, 2 hard copies and 2 electronic copies or in such form as may be specified by the Agency, that was required to be submitted with the application for permission, or	*Appendix B.6.2 (separate hard copy file and separate CD-Rom*	✓
	(ii) a written confirmation from the planning authority or An Bord Pleanála that an environmental impact assessment was not required by or under the Act of 2000,	*Not applicable*	✓

Regulation 9(2)		**Section in Application**	**Checked by Applicant ✓**
(f)	specify the raw and ancillary materials, substances, preparations, fuels and energy which will be produced by or utilised in the activity,	*Attachment G.1 and Tables G.1(i) and G.1(ii) of application form*	✓
(g)	describe the plant, methods, processes, ancillary processes, abatement, recovery and treatment systems, and operating procedures for the activity,	*Attachment D.1*	✓
(h)	indicate how the requirements of section 83(5)(a)(i) to (v) and (vii) to (xa) of the Act shall be met, having regard, where appropriate, to any relevant specification issued by the Agency under section 5(3)(b) of that Act or any applicable best available techniques (BAT) conclusions adopted in accordance with Article 13(5) of the Industrial Emissions Directive and the reasons for the selection of the arrangements proposed,	*Attachment I.8*	✓
(i)	give particulars of the source, nature, composition, temperature, volume, level, rate, method of treatment and location of emissions, and the period or periods during which the emissions are, or are to be, made,	*Attachment E and Attachment F*	✓
(j)	identify monitoring and sampling points and outline proposals for monitoring emissions and the environmental consequences of any such emissions,	*Attachment F*	✓
(k)	provide: (i) details, and an assessment, of the impacts of any existing or proposed emissions on the environment as a whole, including on an environmental medium other than that or those into which the emissions are, or are to be, made, and	*Attachment I.1 to I.7*	✓

Regulation 9(2)		**Section in Application**	**Checked by Applicant ✓**
	(ii) details of the proposed measures to prevent or eliminate, or where that is not practicable, to limit, reduce or abate emissions,	*Attachment F*	✓
(l)	describe in outline the main alternatives to the proposed technology, techniques and measures which were studied by the applicant,	*Attachment I.8.1*	✓
(m)	describe the condition of the site of the installation,	*Attachments I.1 to I.7*	✓
(n)	Provide, when requested by the Agency, in the case of an activity that involves the use, production or release of relevant hazardous substances (as defined in section 3 of the Act of 1992) and having regard to the possibility of soil and groundwater contamination at the site of the installation, a baseline report in accordance with section 86B of the Act of 1992,	*Attachment I.4*	✓
(o)	specify the measures to be taken to comply with an environmental quality standard where such a standard requires stricter conditions to be attached to a licence than would otherwise be determined by reference to best available techniques,	*Not applicable*	✓
(p)	describe the measures to be taken for minimising pollution over long distances or in the territory of other states,	*Not applicable*	✓
(q)	describe the measures to be taken under abnormal operating conditions, including start-up, shutdown, leaks, malfunctions, breakdowns and momentary stoppages,	*Attachment F*	✓
(r)	describe the measures to be taken on and following the permanent cessation of the activity or part of the activity to avoid any risk of environmental pollution and to return the site of the activity to a satisfactory state or the state established in the baseline report if such is required under section 86B of the Act of 1992,	*Attachment K*	✓

Regulation 9(2)		**Section in Application**	**Checked by Applicant ✓**
(s)	describe the arrangements for the prevention of waste in accordance with Part III of the Act of 1996, and where waste is generated by the installation, how it will be in order of priority in accordance with section 21A the Act of 1996, prepared for re-use, recycling, recovery or where that is not technically or economically possible, disposed of in a manner which will prevent or minimise any impact on the environment,	*Attachment H*	✓
(t)	specify, by reference to the relevant European Waste Catalogue codes as prescribed by Commission Decision 2000/532/EC of 3 May 2000, the quantity and nature of the waste or wastes produced or to be produced by the activity, or the quantity and nature of waste or waste accepted or to be accepted at the installation,	*Table D.2.(i) of application form (waste acceptance), Attachment D. 1 (waste generation)*	✓
(u)	state whether the activity consists of, comprises, or is for the purposes of an establishment to which the European Communities (Control of Major Accident Hazards involving Dangerous Substances) Regulations, 2006(S.I. No. 74 of 2006) apply,	*No, Section B.10*	✓
(v)	describe, in the case of an activity which gives rise, or could give rise, to an emission containing a hazardous substance which is discharged to an aquifer and is specified in the Annex to Council Directive 80/68/EEC of 17 December 1979 on the protection of groundwater against pollution caused by certain dangerous substances, the arrangements necessary to comply with said Council Directive,	*Attachment I.4*	✓
(w)	include a non-technical summary of information provided in relation to the matters specified in subparagraphs (c) to (x) of this paragraph ,	*Attachment A*	✓
(x)	include any other information required under Article 11 of the Industrial Emissions Directive.		✓

Regulation 9(4) An application for a licence shall be accompanied by -		**Section in Application**	**Checked by Applicant ✓**
(a)	a copy of the relevant page of the newspaper in which the notice in accordance with Regulation 5 has been published,	*Attachment B.6*	✓
(b)	a copy of the text of the site notice erected or fixed on the land or structure in accordance with Regulation 6,	*Attachment B.6*	✓
(c)	a copy of the notice given to the planning authority under section 87(1)(a) of the EPA Acts of 1992 to 2013,	*Attachment B.6*	✓
(d)	a copy of such plans, including a site plan and location map, and such other particulars, reports and supporting documentation as are necessary to identify and describe -		
	(i) the activity	*Attachment D.1 Drawing No. LW14-120-02-001 Rev A Site Layout*	✓
	(ii) the position of the site notice in accordance with Regulation 6,	*As above*	✓

Regulation 9(4) An application for a licence shall be accompanied by -		**Section in Application**	**Checked by Applicant ✓**
	(iii) the point or points from which emissions are made or are to be made, and	*Attachment E, Drawing No. LW14-120-02-002 Rev A Environmental Monitoring Locations and Emission Points*	✓
	(iv) monitoring and sampling points, and	*As above*	✓
(e)	a fee specified in accordance with section 99A of the EPA Acts of 1992 to 2013.		✓

Regulation 9(5)		**Checked by Applicant ✓**
	A signed original and 1 hardcopy and 2 electronic copies of the application as required under paragraphs (1) and (2) or under paragraphs (1) and (3), where the application concerns a review of a licence, and the accompanying documents and particulars as required under paragraph (4) shall be submitted to the headquarters of the Agency. The 2 electronic copies of all application documentation and particulars must be in searchable PDF format on CD Rom.	✓
	Hardcopies submitted.	✓
	CD version submitted.	✓