

Register No. – W0270-03

**FURTHER INFORMATION SUBMISSION TO SUPPORT INDUSTRIAL EMISSIONS LICENCE
REVIEW APPLICATION (REG. No. W0270-03)**

Submission By: Milltown Composting Systems Ltd.,
Milltownmore,
Fethard,
Co. Tipperary.

Submission To: Environmental Protection Agency.
Office of Climate Licensing & Resource Use,
PO Box 3000,
Johnstown Castle Estate,
Co. Wexford



DOCUMENT CONTROL SHEET

Applicant	Milltown Composting Systems Ltd.
Project	Further Information Submission
Document Title	Further Information Submission to Support Industrial Emissions Licence Review Application (Reg. No. W0270-03)

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00	Draft 1	JR	JR	JR	26/09/2024
01	Final	JR	JR	JR	30/09/2024

INTRODUCTION

The Agency contacted Milltown Composting Systems Ltd. on September 5th, 2024 requesting additional information in accordance with Regulation 10(2)(b)(ii) of the EPA (Industrial Emissions) (Licencing) Regulations 2013.

The request from the Agency included a schedule of queries that required clarification and for clarity the headings and numbering used in the request letter from the Agency will be used in this response document. Each query will be included in italics and the response provided below each query.

1. Odour Dispersion Model (Regulation 9(2)(k))

- (a) It is noted that Section 7.4.1 of the application form proposes an emission limit value of 750 OuE/m³ for odour concentration for the three biofilters (emissions points: A2-1, A2-2 and A2-3). However, the odour dispersion model received by the Agency on 5 October 2023 used an odour concentration of 350 OuE/m³ for the biofilters. Confirm that an emission limit value of 350 OuE/m³ is proposed for odour concentration for the three biofilters. The licensee is required to submit an up-to-date odour dispersion model that assesses the impact of odour emission from the installation if the proposal is to have an emission limit value of 750 OuE/m³ for odour concentration for the biofilters.**

The proposed emission limit of 750 OuE/m³ put forward in Section 7.4.1 of the application was based on the limit included in Schedule B.1.1 of the current site licence (W0270-02). As part of the odour dispersion model assessment the modellers reviewed previous odour monitoring results and due to the low odour concentrations identified from historic monitoring they considered 350 OuE/m³ to be a conservative worst case concentration. Based on previous odour monitoring results for the biofilters A2-1 and A2-2 Milltown Composting Systems Ltd. (Milltown) would be agreeable to changing the proposed odour emission Limit in Table 7.4.1 to 350 OuE/m³ in line with the Odour Dispersion Model. A copy of the revised Table 7.4.1. is with the revised odour emission limit included is included in Attachment 1 of this response.

- (b) The current licence W0270-02 specifies a maximum volumetric flow of 41,884 m³/hr and 80,865 m³/hr for emission points A2-1 and A2-2 respectively. The odour dispersion model submitted to the Agency on 05 October 2023 used maximum volumetric flows of 31,884 m³/hr, 70,865 m³/hr and 71,600 m³/hr for emission points A2-1, A2-2 and A2-3 respectively. Attachment 4 of the response submitted on 12 July 2023 to the EPA's Regulation 10(2)(b)(ii) request for further information issued on 21 May 2023 refers to a maximum volumetric flow rate of 81,600 m³/hr for A2-3. Clarify the maximum rate per hour (Nm³/hr) of volumetric flow to be emitted from emissions points: A2-1, A2-2 and A2-3. The licensee is required to submit an up-to-date odour dispersion model to include the proposed maximum volumetric flows (Nm³/hr) if it not the same as the maximum volumetric flow rates used in the odour dispersion model submitted on 5 October 2023**

As outlined in section 10.4.1 of the EIAR, "Operational experience of the facility has found that it has not been necessary to continuously operate at maximum capacity, and an air change rate of 1 volume per hour has been effective in controlling odour emissions and allows for a longer residence time for exhausted air in the biofilter media". The exhaust fans can be controlled and are typically run at 1 building volume air exchanges pe hour for A2-1 and A2-2.

Intermittently the air extraction rate may be increased to 1.5 building volumes per hour for a short period to clear condensation emanating from the compost piles, but this would be irregular and only for a short period. To allow for typical highest extraction rate based on production experience the odour dispersion model initially calculated 1.5 air changes per hour for the sheds based on the volume of the existing and proposed building volumes, see below.

- Biofilter A2-1 – air flow to biofilter at 1.5 air changes per hour would be approx. 26,561m³ per hour
- Biofilter A2-2 - air flow to biofilter at 1.5 air changes per hour would be approx. 55,950m³ per hour
- Biofilter A2-3 - air flow to biofilter at 1.5 air changes per hour would be approx. 48,960m³ per hour

To allow for an extended worst-case scenario the modellers calculated the maximum air flows to the biofilters (i.e., A2-1, A2-2 and A2-3) that would ensure that the odour concentrations modelled would still be below the acceptable limit of 1.5 OuE/m³ at the closest sensitive receptor. The calculated maximum air flows that can be exhausted through each biofilter to ensure compliance with the odour model are:

- A2-1 – 31,884m³/hr (maximum of 1.8 air changes per hour)
- A2-2 – 70,865m³/hr (maximum of 1.9 air changes per hour)
- A2-3 – 71,600m³/hr (maximum of 2.2 air changes per hour)

The revised air flows to the biofilters are well above the existing operational air exhaust flows (i.e., 1 air exchange per hour) to the biofilters that provide good abatement of odour from the facility sheds. The maximum air flows outlined above (i.e., 31,884m³/hr for A2-1, 70,865m³/hr for A2-2 and 71,600m³/hr for A2-3) will be the final maximum volumes exhausted to the biofilter units.

(c) Submit an up-to-date odour dispersion model to include a cumulative assessment of the impact of industrial installations/waste facilities emissions sources in the region or justify why a cumulative assessment is not required.

There are no waste or industrial facilities located within the immediate vicinity of the Milltown Composting facility. The odour modellers have provided the following statements in relation to cumulative assessment;

As there are no clear guidelines on what should trigger the requirement for a cumulative odour assessment, it has been screened out based on the following factors:

- EPA Guidance on Air Dispersion Modelling (AG4) states that “the “impact area” for the cumulative assessment is defined by the USEPA as a circular area with a radius extending from the source to the most distant point where dispersion modelling predicts a “significant” ambient impact (i.e. >5% of an AQS) will occur irrespective of pockets of insignificant impact occurring within it. Within this impact area, all nearby sources should be modelled, where “nearby” is defined as any point source expected to cause a significant concentration gradient in the vicinity of the proposed new installation.” – according to the air dispersion model within the Odour Emissions Assessment Report, there will be no significant impact at any sensitive receptor as a result of the subject facility, therefore the impact area does not extend to any sensitive receptor;
- As presented in the Odour Emissions Assessment Report, the prevailing wind direction in this area is from the south, therefore, any odour from the EPA licensed facility P0512 (Castleblake Piggery) would consistently be carried to the north/northwest and thus away from the sensitive receptors identified in the Odour Emissions Assessment Report. The odour contours presented in Figure 6 of the Odour Emissions Assessment Report, show that the odour from the subject site (Milltown Composting) is being carried north/north-westward with no significant impacts beyond 640m north/northwest of the site

boundary. The highest concentration is 1.45ou at SR3 and beyond this, concentrations are significantly below the threshold (ranging from 0.54ou – 0.68ou at SR4 – SR9 – which are all located to the north/northwest);

- In terms of receptor proximity to the EPA licensed facility (P0512), SR1, SR2 and SR15 are the closest sensitive receptors to this facility. Modelled odour concentrations from the subject site (Milltown Composting) at each of these receptors are significantly below the threshold (0.25ou at SR1, 1.0ou at SR2 and 0.08ou at SR15);
- In relation to the other identified EPA licensed facilities (P0311 – Outrath Quarries, P0847 – Abbott Ireland and P1032 – Mile Tree farms), these have been screened out based on odour emitting potential (two of the facilities are non-odorous) and distance/direction (they are located significantly outside the impact area).

(d) Clarify whether emissions points A2-1, A2-2 and A2-3 have appropriate access for monitoring

The biofilter A2-1 is low and has access by stepladder for accessing the surface of the biofilter for monitoring. Due to health and safety concerns by the insurance company an access ladder was not installed on Biofilter A2-2 but the surface can be accessed by use of a closed cage lifted on a teleporter. Biofilter A2-3 will be designed with access included as part of the biofilter construction.

2. The applicant has outlined that in-vessel composting is to be undertaken on-site.

(a) Provide further details regarding which list of waste (LoW) codes will serve as inputs to the in-vessel composting [Regulation 9(2)(g)].

The LoW codes that will serve as inputs to the in-vessel composting system are the same as those listed in Schedule A-2 of Waste Licence W0270-02, see table below.

LoW Code	Waste Description
02 01 - wastes from agriculture, horticulture, aquaculture, forestry, hunting and fishing	
020103	plant-tissue waste
020106	animal faeces, urine and manure (including spoiled straw), effluent, collected separately and treated off-site
020107	waste from forestry
020199	wastes not otherwise specified
020101	sludges from washing and cleaning
02 03 - Wastes from fruit, vegetables, cereals, edible oils, cocoa, coffee, tea and tobacco preparation and processing; conserve production; yeast and yeast extract production, molasses preparation and fermentation	
020399	wastes not otherwise specified
020301	sludges from washing, cleaning, peeling, centrifuging and separation
020304	materials unsuitable for consumption or processing
020305	sludges from on-site effluent treatment
02 04 - wastes from sugar processing	
020499	wastes not otherwise specified
020403	sludges from on-site effluent treatment
02 05 - wastes from the dairy products industry	

020501	materials unsuitable for consumption or processing
020599	wastes not otherwise specified
020502	sludges from on-site effluent treatment
02 06 - wastes from the baking and confectionery industry	
020601	materials unsuitable for consumption or processing
020699	wastes not otherwise specified
020603	sludges from on-site effluent treatment
02 07 - wastes from the production of alcoholic and non-alcoholic beverages (except coffee, tea and cocoa)	
020701	wastes from washing, cleaning and mechanical reduction of raw materials
020702	wastes from spirits distillation
020704	materials unsuitable for consumption or processing
020799	wastes not otherwise specified
020705	sludges from on-site effluent treatment
03 03 - wastes from pulp, paper and cardboard production and processing	
030311	sludges from on-site effluent treatment other than those mentioned in 03 03 10
19 08 - wastes from waste water treatment plants not otherwise specified	
190801	Water Treatment screenings
190802	waste from de-sanding
190809	grease and oil mixture from oil/water separation containing only edible oil and fats
190899	wastes not otherwise specified
190812	sludges from biological treatment of industrial waste water other than those mentioned in 19 08 11
190814	sludges from other treatment of industrial waste water other than those mentioned in 19 08 13
190805	sludges from treatment of urban waste water
19 12 - wastes from the mechanical treatment of waste (for example sorting, crushing, compacting, pelletising) not otherwise specified	
191207	wood other than that mentioned in 19 12 06
191212	other wastes (including mixtures of materials) from mechanical treatment of wastes other than those mentioned in 19 12 11
20 01 - separately collected fractions (except 15 01)	
200101	paper and cardboard
200108	biodegradable kitchen and canteen waste
200125	edible oil and fat
20 02 - garden and park wastes (including cemetery waste)	
200201	biodegradable waste
20 03 - other municipal wastes	
200303	street-cleaning residues
200306	waste from sewage cleaning
200304	septic tank sludge
200301	mixed municipal waste
200302	waste from markets

(b) Provide details of the intended LoW codes for outputs from the in- vessel composting excluding the compost product. [Regulation 9(2)(t)].

The outputs from the composting facility will be dependent on the feedstock that is used. At present the facility is used solely for the biostabilisation of organic fines material that is produced from the physical processing of municipal solid waste. As a result, the output material is a biostabilised material but is still classified as a waste material and has a LoW code of 19 05 99. The output material is used as landfill cover.

The only other potential waste output would be screened plastics removed from the biostabilised material prior to transfer from site. This material would have a LoW code of 19 12 04. The plastic can also be used as a bulking agent in the organic fines to allow airflow through the material.

3. Provide details on what are the main waste sources, including list of waste codes to be accepted at the installation. [Regulation 9(2)(t)]

At present, and into the near future, the Milltown Compost facility is engaged solely in biostabilising organic fines material by treating it through the aerobic composting process. The company has contracts in place that will ensure that this material will be processed on site for the next number of years. The main waste sources related to the biostabilisation process are from licensed waste treatment facilities that physically process (i.e., trommel screen) municipal solid waste to remove the fine organic fraction. The organic fines fraction is then brought to Milltown Composting as LoW 19 12 12 as it is the result of a physical waste processing activity. The 19 12 12 material is currently the main waste that is aerobically treated at the Milltown Compost facility. Over the past few years the site has experienced a high demand for processing organic fines at the facility and Milltown have adhered to the Type 8 processing standard which negates the requirement for pasteurisation because the material would still be considered waste and could only be used at licensed waste facilities as landfill cover. The Type 8 process allows for an efficient composting and biostabilization regimen which results in full maturation of the material prior to transfer off site. A list of the inputs to the organic waste biostabilisation end of the facility is outlined below

LoW Code	Waste Description
19 12 - wastes from the mechanical treatment of waste (for example sorting, crushing, compacting, pelletising) not otherwise specified	
191207	wood other than that mentioned in 19 12 06
191212	other wastes (including mixtures of materials) from mechanical treatment of wastes other than those mentioned in 19 12 11
20 03 - other municipal wastes	
200303	street-cleaning residues
200301	mixed municipal waste
200302	waste from markets (municipal non-food waste)

In the event that the Milltown site was to complete composting of source separated brown bin and other appropriate organic waste for the production of compost material as well as biostabilising organic fines then the facility operations would be changed so that the biostabilising of organic fines and the composting of

source separated organic waste for compost production would be divided into separated areas within the licence site to avoid potential cross contamination.

- The biostabilisation of organic fines would continue to be completed in the existing composting bays (i.e., shed 1) and maturation would take place in Sheds 2 and 3 with storage and transfer from shed 4. Waste for biostabilisation would continue to be received at the existing Waste Reception Shed
- Following appropriate decontamination of the bays and floors of new sheds 2B and 3B these could be used solely for the production of compost material following full clean-down and disinfection of the bays and maturation areas in Sheds 2B and 3B to meet the Department of Agriculture requirements under the Animal Byproducts Regulations. The bays in sheds 2B would have the capacity to provide for aerobic composting and pasteurisation of compost material and Shed 3B would have capacity for maturation to be completed on aerated floors. All organic waste intake, processing, maturation and storage of finished compost would take place inside sheds 2B and 3B and would be physically separated from any biostabilisation activities on site. Organic waste for the production of compost would be accepted through the doors on the western façade of Shed 2B and would be immediately . moved to the process bays in shed 2B.

By splitting the process areas it would allow flexibility within the Milltown site to process separate input waste materials and keep them physically separated to avoid potential cross contamination.

A list of the proposed inputs to the compost production end of the facility is outlined below:

LoW Code	Waste Description
02 01 - wastes from agriculture, horticulture, aquaculture, forestry, hunting and fishing	
020103	plant-tissue waste
020106	animal faeces, urine and manure (including spoiled straw), effluent, collected separately and treated off-site
020107	waste from forestry
020199	wastes not otherwise specified
020101	sludges from washing and cleaning
02 03 - Wastes from fruit, vegetables, cereals, edible oils, cocoa, coffee, tea and tobacco preparation and processing; conserve production; yeast and yeast extract production, molasses preparation and fermentation	
020399	wastes not otherwise specified
020301	sludges from washing, cleaning, peeling, centrifuging and separation
020304	materials unsuitable for consumption or processing
020305	sludges from on-site effluent treatment
02 04 - wastes from sugar processing	
020499	wastes not otherwise specified
020403	sludges from on-site effluent treatment
02 05 - wastes from the dairy products industry	
020501	materials unsuitable for consumption or processing
020599	wastes not otherwise specified

020502	sludges from on-site effluent treatment
02 06 - wastes from the baking and confectionery industry	
020601	materials unsuitable for consumption or processing
020699	wastes not otherwise specified
020603	sludges from on-site effluent treatment
02 07 - wastes from the production of alcoholic and non-alcoholic beverages (except coffee, tea and cocoa)	
020701	wastes from washing, cleaning and mechanical reduction of raw materials
020702	wastes from spirits distillation
020704	materials unsuitable for consumption or processing
020799	wastes not otherwise specified
020705	sludges from on-site effluent treatment
03 03 - wastes from pulp, paper and cardboard production and processing	
030311	sludges from on-site effluent treatment other than those mentioned in 03 03 10
19 08 - wastes from waste water treatment plants not otherwise specified	
190801	Water Treatment screenings
190802	waste from de-sanding
190809	grease and oil mixture from oil/water separation containing only edible oil and fats
190899	wastes not otherwise specified
190812	sludges from biological treatment of industrial waste water other than those mentioned in 19 08 11
190814	sludges from other treatment of industrial waste water other than those mentioned in 19 08 13
190805	sludges from treatment of urban waste water
20 02 - garden and park wastes (including cemetery waste)	
200201	biodegradable waste
20 01 - separately collected fractions (except 15 01)	
200101	paper and cardboard
200108	biodegradable kitchen and canteen waste
20 03 - other municipal wastes	
200306	waste from sewage cleaning
200304	septic tank sludge
200302	waste from markets (food waste)

4. **Waste processing [Regulation 9(2)(g)]**

(a) Clarify what is meant by the term 'process overs'.

Process overs are typically larger pieces of wood or other organic material that are screened out of the material following the composting process. Because these materials would be too large to be transferred off site with the composted material it may be recirculated through a new batch of composting material until it breaks down to the required size.

(b) Provide details on how waste accepted to make compost product is segregated from the waste accepted to make bio-stabilised waste.

At present, and for the immediate future, the Milltown facility is solely concentrated on the biostabilisation of organic fines material as it has contracts in place to process that material on behalf of waste management contractors that physically process MSW. For the next number of years it is envisaged that the Milltown facility (i.e., the existing facility sheds and the proposed new sheds 2B and 3B) would be used for processing and biostabilising organic fines waste only.

In the event of a change in the market where the supply of brown bin organic material and other waste materials that can produce a usable compost product is increased, Milltown would change their material management system to ensure that if organic waste that can produce compost product and organic fines waste were being accepted on site at the same time they would be physically separated to avoid potential for cross contamination to occur. Any potential crossover areas that may exist (e.g., internal transfer area between the existing compost facility sheds and the proposed new sheds 2B and 3B) will be physically blocked and sealed to ensure complete separation of the two activities.

- The biostabilisation of organic fines would continue to be completed in the existing composting bays (i.e., shed 1) and maturation would take place in Sheds 2 and 3 with storage and transfer from shed 4. Organic fines waste for biostabilisation would continue to be received at the existing Waste Reception Shed.
- Following appropriate decontamination of the bays and floors of new sheds 2B and 3B these could be used for the production of compost material following full clean-down and disinfection of the bays and maturation areas in Sheds 2B and 3B to meet the Department of Agriculture requirements under the Animal Byproducts Regulations. The bays in sheds 2B would have the capacity to provide for in vessel aerobic composting and pasteurisation of compost material and Shed 3B would have capacity for maturation of the compost to be completed on aerated floors. All organic waste intake, processing, maturation and storage of finished compost would take place inside sheds 2B and 3B and would be physically separated from any biostabilised waste activities on site. Organic waste for the production of compost would be accepted through the doors on the western façade of Shed 2B and would be immediately transferred to the compost vessel bays.

(c) Provide further details regarding the storage facilities for the compost product to ensure the compost product remains segregated from waste awaiting collection.

In the event that the Milltown site begins the production of compost product the process, and finished compost product, will be physically separated from any biostabilised waste material. As outlined in response to question 4(b) above, in the event that there is compost and biostabilised waste material being processed on site at the same time the two processes will be physically separated from start to finish. Finished compost material will be stored in the new Shed 3B awaiting transfer from site and any biostabilised waste will continue to be stored in the existing Shed 4 at the opposite side of the facility.

(d) Provide details on the source of the oversize plastics and how the oversize plastics are processed/sent off-site for recovery or disposal.

Currently the facility operations are for the composting of organic fines material. This is organic material that has been screened from municipal solid waste (MSW) at a waste treatment facility. The screened MSW has organic fines material and may also have pieces of plastic included that came through the trommel screen. The material then arrives at the Milltown composting facility as organic fines with some plastics mixed through the material.

Following aerobic processing, if the batch has a visibly high amount of plastic mixed through the material it may be screened to remove that plastic prior to transfer off-site for recovery. The plastics are stored in a dedicated area beneath the screen in shed 4 for a short period only to avoid potential for the material to heat up and create fire issues. The screened plastic is transferred off site as 191204.

ATTACHMENT 1

Revised Licence Application Attachment 7.4.1

EPA Application Form

7.4.1 - Emissions to Atmosphere - Main and Fugitive Emissions - Attachment

Organisation Name: *

Miltown Composting Systems Limited

Application I.D.: *

LA010323

Authorisation Application Form

Amendments to this Application Form Attachment

Version No.	Date	Amendment since previous version	Reason
V.1.0	July 2017	N/A	Online application form attachment
As above	Mar 2017	Identification of required fields	Assist correct completion of attachment

Authorisation Application Form

EMISSIONS TO ATMOSPHERE

Emissions to air/atmosphere include the following:

Main Emissions

Main emissions include all emissions of environmental significance. Where a **mass emission threshold** is specified in a BAT document (BAT Conclusions, National BAT note or BREF), emissions which exceed this threshold prior to abatement are regarded as significant, i.e., 'main emissions'. (In some cases emissions below the threshold can still be significant and qualify as Main Emissions).

Minor Emissions

Emissions below the mass emission threshold may be considered minor emissions and therefore do not generally need to be specifically controlled by the conditions or schedules of the licence (i.e., setting of ELVs, abatement control measures, or monitoring requirements). Emissions may also be deemed minor by virtue of their source/nature (e.g., laboratory fume hoods, workspace extractions, passive vents from storage tanks, HVAC exhausts), or composition (e.g., water vapour emissions). For combustion plant such as boilers, these can be considered minor where the rated thermal input is < 1MW where natural gas is the main fuel, and for liquid and solid fuels where its < 250kW.

In completing the separate '*Emissions to Atmosphere - Minor and Potential*' attachment for minor emissions, the applicant should supply sufficient information to justify the determination of the emission as minor. Notwithstanding this guidance, the Agency may consider any emission to be significant (i.e., a main emission) on the basis of environmental impact.

Fugitive Emissions

Fugitive emissions include emissions from non-point sources and diffuse sources.

Potential Emissions

These are emissions which only operate under abnormal process conditions. Typical examples include bursting discs, pressure relief valves, and emergency generators. Bypasses and flares may also fall within this category, depending on how they are operated or designed to operate. Although the Agency does not normally set controls in licences for potential emissions, it may do so for the purposes of environmental protection.

This attachment collects information on main and fugitive emissions to atmosphere. Waste gas means the final gaseous emission from a stack or abatement equipment.

For minor and potential emissions to atmosphere, complete the separate '*Emissions to Atmosphere - Minor and Potential*' attachment.

Authorisation Application Form

Main Emissions to Atmosphere - Waste Gas Emission Point Details - one row per emission point *

Complete the following table with summary details for all main emission points to atmosphere.

(Guidance on completing the table is included in **Note i** at the end of this attachment)

The applicant should address in particular any emissions which may contain the principal polluting substances listed in the First Schedule of Environmental Protection Agency (Integrated Pollution Control) (Licensing) Regulations 2013/ (Industrial Emissions)(Licensing) Regulations 2013.

Please note that the determination of any emission limit values and monitoring requirements in a proposed licence if granted will be based on the information supplied hereunder.

Emission Point Code	Emission Point Grid Ref.		Typical Days Usage/ Year	Measures to reduce /minimise / prevent emissions (list techniques) ¹ <i>Where EQS considerations require measures stricter than BAT, highlight these measures in bold</i>	Source of Waste Gases ²	Minimum Discharge Height Above Ground (m)	Reference Conditions			
	Easting ³	Northing ⁴					Pressure ₅	Temp. ₆	% Oxygen ₇	Moisture ₈
A2-1	215769	133395	365	Biofilter System to treat odorous air from reception shed and shed 1	Outlet from Biofilter treating air from composting shed and reception shed	1m	No Correction	No Correction	No Correction	Wet
A2-2	215849	133474	365	Biofilter System to treat odorous air from sheds 2, 3 and 4	Outlet from Biofilter treating air from maturation sheds	3m	No Correction	No Correction	No Correction	Wet
A2-3	215713	133394	365	Biofilter System to treat odorous air from proposed maturation sheds 2B and 3B	Outlet from Biofilter treating air from proposed maturation sheds	2m	No Correction	No Correction	No Correction	Wet

¹ Detailed descriptions and schematics of all abatement systems should be included in the Operational Report (Tab 4.8 – ‘Reports’).

² **Options:** Boiler, Gas Turbine, Incineration, Co-Incineration, CHP, Kiln, Engine, Indirect drying activity (e.g. milk drying), Other Combustion activity (e.g., oven), Distillation/Chemical reaction, Solvent based coating activity, Other coating activity (provide description), Composting Tunnels, General extraction from buildings or Other (provide a description if ‘Other’ is selected).

³ **Six Digit GPS Irish National Grid Reference.**

⁴ **Six Digit GPS Irish National Grid Reference.**

⁵ **Options:** 101.325kPa or No correction.

⁶ **Options:** 273.15K or No correction.

⁷ **Options:** 3%, 6%, 10%, 11%, 15%, 18% or No correction.

⁸ **Options:** Wet or Dry.



Authorisation Application Form

Emission Point Code	Emission Point Grid Ref.		Typical Days Usage/Year	Measures to reduce /minimise / prevent emissions (list techniques) ¹ <i>Where EQS considerations require measures stricter than BAT, highlight these measures in bold</i>	Source of Waste Gases ²	Minimum Discharge Height Above Ground (m)	Reference Conditions			
	Easting ³	Northing ⁴					Pressure ₅	Temp. ₆	% Oxygen ₇	Moistur e ₈

*add rows to the table as necessary



Authorisation Application Form

Emission Points from Combustion, Incineration or Co-incineration Sources Only

Complete the table below for each emission point to atmosphere from a combustion source, waste incineration or co-incineration plant

Emission Point Code	Primary Fuel Type ⁹ (where applicable)	Secondary Fuel Type ¹⁰ (where applicable)	LCP Plant Reference (where applicable)	Waste incineration or co- incineration plant reference (where applicable)

N/A

*add rows to the table as necessary

⁹ Options: Coal, Lignite, Heavy Fuel Oil, Other Fuel Oil, Peat, Natural Gas, Biogas, Solid Biomass, Waste, Gas Oil, Other or None

¹⁰ Options: Coal, Lignite, Heavy Fuel Oil, Other Fuel Oil, Peat, Natural Gas, Biogas, Solid Biomass, Waste, Gas Oil, Other or None

Authorisation Application Form

Emission Points with Solvent Emissions Only

Complete the table below for each emission point associated with a solvent activity

Emission Point Code	Are specific Hazardous Substances ¹¹ Emitted?	Mass Flow of Emitted Hazardous Substances (g/hour)	Halogenated VOCs ¹² Emitted?	Mass Flow of Emitted Halogenated VOCs (g/hour)
		N/A		

*add rows to the table as necessary

¹¹ Emissions of volatile organic compounds referred to in Article 58 (Substances or mixtures which, because of their content of volatile organic compounds classified as carcinogens, mutagens, or toxic to reproduction under Regulation (EC) No. 1272/2008, are assigned or need to carry the hazard statements H340, H350, H350i, H360D or H360F) of the Industrial Emissions Directive.

¹² Halogenated volatile organic compounds which are assigned or need to carry the hazard statements H341 or H351.

Waste Gas Emission Monitoring Points

Complete the table below for each emission point, by entering the Emission Point Code, the associated Monitoring Point Code and the grid reference of the Monitoring Point. *

Emission Point Code	Monitoring Point Code ¹³	Monitoring Point Grid Reference	
		Easting ¹⁴	Northing ¹⁵
A2-1	A2-1	215769	133395
A2-2	A2-2	215849	133474
A2-3	A2-3	215713	133394

*add rows to the table as necessary

¹³ To include monitoring and sampling points

¹⁴ Six Digit GPS Irish National Grid Reference

¹⁵ Six Digit GPS Irish National Grid Reference

Authorisation Application Form

Waste Gas - Abatement /Treatment Control

Complete the table below for each emission point with an abatement/treatment system (one table per emission point)

Emission Point Code: A2-1, A2-2 & A2-3

Control¹⁶ parameter	Monitoring to be carried out ¹⁷	Additional notes (where relevant)
Biofilter Medium to treat exhaust air from sheds	Ammonia, H2S, mercaptans and amines	Air samples from Inlet and outlet of biofilters on a monthly basis as outlined in Schedule C.1.1 of Licence
To ensure bed media is operating efficiently	pH, ammonia, total viable counts	Biannual testing of Bed Media as outlined in Schedule C.1.1 of Licence
To ensure bed media is operating efficiently	Odour	Quarterly at agreed locations as outlined in Schedule C.1.2 of Licence

*add rows to the table as necessary

¹⁶ List the operating parameters of the treatment/abatement system which control its function.

¹⁷ List the monitoring of the control parameter to be carried out.

Authorisation Application Form

Waste Gas Emissions

Complete the table below for all main emission points to atmosphere (include one row for each identified parameter) *

Emission Point Code	Parameter	Monitoring Point Code	Proposed Emission Limits ¹⁸					BAT Associated Emission Range (if applicable)	Sampling / Monitoring EPA Guidance for Monitoring - AG2 Index of Preferred Methods		
			Max. Hourly ¹⁹	Max. Daily ²⁰	Average Month ²¹	Average Annual ²²	How was the Proposed Emission Limit Derived?		Proposed Monitoring Frequency	Proposed Monitoring and Analysis Method ²³	Compliant with BAT Monitoring Requirement?
A2-1, A2-2 & A2-3	Hydrogen Sulphide	A2-1, A2-2 & A2-3				5ppm	EPA Site Licence	n/a	Quarterly	Colorimetric Indicator Tubes	Yes
	Ammonia					50ppm	EPA Site Licence	n/a	Quarterly	Colorimetric Indicator Tubes	Yes
	Mercaptans					5ppm	EPA Site Licence	n/a	Quarterly	Colorimetric Indicator Tubes	Yes
	Amines					-	EPA Site Licence	n/a	Quarterly	Colorimetric Indicator Tubes	Yes
	Odour					350 Oue/m ³	EPA Site Licence	n/a	Quarterly		Yes

¹⁸ For emissions outside the BAT Conclusion, BREF or 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 emissions within the limits set out in the BAT Conclusion(s), BREF(s) or BAT guidance note(s). These notes can be found on the EPA website at www.epa.ie.

¹⁹ Specify the proposed limit **and** the units.

²⁰ Specify the proposed limit **and** the units.

²¹ Specify the proposed limit **and** the units.

²² Specify the proposed limit **and** the units.

²³ For continuous monitoring 'EN15267 approved CEMS' is the standard method. For periodic monitoring please refer to the EPA guidance document '[AG2 Index of Preferred Methods](#)'.



Authorisation Application Form

Emission Point Code	Parameter	Monitoring Point Code	Proposed Emission Limits ¹⁸					BAT Associated Emission Range (if applicable)	Sampling / Monitoring EPA Guidance for Monitoring - AG2 Index of Preferred Methods		
			Max. Hourly ¹⁹	Max. Daily ²⁰	Average Month ²¹	Average Annual ²²	How was the Proposed Emission Limit Derived?		Proposed Monitoring Frequency	Proposed Monitoring and Analysis Method ²³	Compliant with BAT Monitoring Requirement?

* For continuous monitoring 'EN15267 approved CEMS' is the standard method. For periodic monitoring please refer to the EPA guidance document 'AG2 Index of Preferred Methods' linked above

*add rows to the table as necessary



Authorisation Application Form

Minor and/or Potential Emissions to Atmosphere²⁴

Are there any minor or potential emission point(s) to atmosphere at the installation/facility?
(Yes/No) *

No

If 'Yes' complete and upload the **Emissions to Atmosphere – Minor and Potential Emissions** template with details of minor and potential emissions (select Document Type: '**Minor - Potential Emissions**' in the application form)

Emissions to Atmosphere - Minor - Potential Emissions file name:

²⁴ Refer to page 3 for guidance on what constitutes a minor or potential emission.

Authorisation Application Form

Fugitive Emission to Atmosphere

Fugitive emissions must be controlled by way of appropriate controls and techniques to minimise emissions.

(Additional information on fugitive emission is included in **Note ii** at the end of this attachment)

Are there any sources of fugitive emissions at the installation/facility?²⁵ **(Yes/No)** *

If 'Yes' provide summary details of the fugitive emissions in the table below:

Type of Fugitive Emission	Emission Type Applicable? (Yes/No)	Description of fugitive emissions source(s)	Maximum Level	Units	Descriptor/Location
Dust	Yes	Dust from Dry yard conditions	350	mg/m ² /day	Dust deposition
VOC ²⁶	No			%	of solvent input
Ammonia	No			ug/m ³	at the nearest European Site
Nitrogen	No			kgN/ha/yr	at the nearest European Site
Odour	Yes	Potential when doors open to receive loads	10	Odour Units	at boundary of installation

²⁵ For waste activities, dust and odour emissions should be considered and described in the table below where applicable.

²⁶ In relation to activities listed in Chapter V (for installations using Organic Solvents) of the Industrial Emissions Directive (2010/75/EU):

- specify how the requirements in relation to fugitive emissions will be met.

Authorisation Application Form

Provide details of the techniques to be used to reduce / minimise / prevent fugitive emissions in text box below

The on-site bowser will be used to dampen site surfaces during dry weather to reduce fugitive dust emissions
The use of the rapid close door at the waste reception building will mitigate against odours during deliveries. The extraction fan system in the sheds is designed to provide negative pressure in the sheds to reduce fugitive emissions from the sheds

Note i Complete the table for each emission point having regard to the guidance hereunder.

The following convention should be observed when labelling emission points:

Boiler Emissions A1-1, A1-2, A1-3,...etc.

Main Emissions A2-1, A2-2, A2-3,...etc.

Minor Emissions A3-1, A3-2, A3-3,...etc. (NOTE: Minor emission points are to be included in the '*Emissions to Atmosphere - Minor and Potential*' attachment)

Potential Emissions A4-1, A4-2, A4-3,...etc. (NOTE: Potential emission points are to be included in the '*Emissions to Atmosphere - Minor and Potential*' attachment)

A National Grid Reference (12 digit, 6E, 6N) must be provided for each emission point.

Measures are usually required to reduce, minimise or prevent emissions from occurring. They may involve the application of a single technique or a combination of techniques including process integrated, recovery, abatement and treatment techniques. List all techniques proposed/employed. Technique(s) employed must comply with BAT. Highlight additional measures required for the purposes of protecting the environment i.e. AQS considerations. The measures or techniques to be taken must be capable of complying with the proposed/known emission level(s).

The measures required shall be informed by the following:

1. BAT techniques with BAT-AEL
2. BAT techniques without BAT-AEL
3. Stricter measures/techniques than BAT (due to AQS)
4. BAT determined by competent authority in consultation with the applicant
5. Measures to minimise pollution over long distances or in the territory of other states.
6. Emerging techniques
7. Less strict measures than BAT (due to derogation)
8. Other measures

Select from the drop down list the source of the emission as it helps explain the nature of the emission.

Particular attention should be paid to ensuring that emissions data (volumetric flow and pollutant concentrations) are presented at the required reference conditions for oxygen, temperature, pressure and moisture.

Note ii Fugitive emissions include the following:

- Dust from area sources such as a quarry.
- Odour from volume sources such as a pig unit, waste water treatment plant, waste handling etc.
- VOCs from processes using solvent not captured in waste gases.
- Ammonia and nitrogen from pig and poultry units.

Processes that can give rise to fugitive emissions include:

- o Leaks from valve seals, pump seals and flanges;
- o Breathing and working losses from liquid storage facilities;
- o Dust emissions from solids stored in the open;
- o Loading and unloading operations;
- o Cleaning operations; and,
- o Emissions from waste water treatment (e.g. volatile organics).

The measures taken to reduce/ prevent fugitive emissions to atmosphere must be addressed, and the facilities and operations required to control emissions must be detailed.