

Attachment A1 Non Technical Summary

Greenport Environmental Ltd. propose to construct a fully enclosed anaerobic digestion and in-vessel composting facility, capable of receiving up to 50,000 tonnes of organic waste per annum, at Durnish, Foynes, Co. Limerick. Given the anticipated efficiency of the proposed facility, which will incorporate the use of the Best Available Technology (BAT), it is envisaged that the plant may be capable of processing up to 50,000 tonnes of material per annum. This material will comprise source separated organic waste (household brown bin waste) and mechanically separated organic fines from mixed municipal solid waste. Each of the waste streams will be separately processed at all stages. As the source-separated collection of organic waste increases, the facility will dedicate more capacity to the separate treatment of this material.

Applicant's Details

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The facility is located at Greenport Environmental Ltd, Durnish, Harbour Road, Foynes, Co. Limerick, nation grid reference R 126067.91 E, R 151834.62 N, under the planning authority of Limerick County Council. In accordance with the Waste Management Acts 1996-2003 the Principal Activity will be carried out under Fourth Schedule, Paragraph 2- Recycling or reclamation of organic substances which are not used as solvents (including composting and other biological processes). Other activities will be carried out under the:

- Fourth Schedule, Paragraph 3- Recycling or reclamation of metals and metal compounds.
- Fourth Schedule, Paragraph 4 - Recycling or reclamation of other inorganic materials.
- Fourth Schedule, Paragraph 13 - Storage of waste intended for submission to any activity referred to in a preceding paragraph of this Schedule, other than temporary storage, pending collection, on the premises where such waste is produced.
- Third Schedule, Paragraph 6 - Biological treatment not referred to elsewhere in this Schedule which results in final compounds or mixtures which are disposed of by means of any activity referred to in paragraphs 1 to 5 or paragraphs 7 to 10 of this Schedule.
- Third Schedule, Paragraph 13 - Storage prior to submission to any activity referred to in a preceding paragraph of this Schedule, other than temporary storage, pending collection, on the premises where the waste concerned is produced.

The proposed Hours of Operation are as follows:

(a) Proposed Hours of Operation

Monday to Sunday: 0.00a.m. to 12.00.p.m.

(Composting process is a continuous operation conducted over a number of weeks so the facility is required to operate 24hours per day, 7 days per week).

(b) Proposed hours of waste acceptance

Monday to Saturday: 7.30a.m. to 6.00p.m.

Sundays and Bank holidays: 7.30a.m. to 6.00p.m. (when necessary, to accommodate exceptional waste collections – e.g. St Patricks Day Parade may prevent collections in particular areas on scheduled collection day, Christmas Day, etc). Material suitable for composting must be delivered to the facility as soon as possible to ensure optimum recycling. The sources of this material may

be operating during these hours, therefore similar waste acceptance hours are proposed.

The following waste types will be accepted at the facility:

Waste material	EWC Code	Main source
Plant-tissue waste	02 01 03	Wastes from agriculture, horticulture & forestry
Sludges from washing and cleaning	02 02 01	Wastes from the preparation and processing of meat, fish and other foods of animal origin
Materials unsuitable for consumption or processing	02 02 03	Wastes from the preparation and processing of meat, fish and other foods of animal origin
Waste not otherwise specified	02 02 99	Wastes from the preparation and processing of meat, fish and other foods of animal origin
Sludges from washing, cleaning, peeling, centrifuging and separation	02 03 01	Wastes from fruit, vegetable & cereal processing
Materials unsuitable for consumption or processing	02 03 04	Wastes from fruit, vegetable & cereal processing
Materials unsuitable for consumption or processing	02 05 01	Wastes from the dairy products industry
Wastes not otherwise specified	02 05 99	Wastes from the dairy products industry
Materials unsuitable for consumption or processing	02 06 01	Wastes from the baking and confectionery industry
Wastes from spirits distillation	02 07 02	Wastes from the production of alcoholic and non-alcoholic beverages
Materials unsuitable for consumption or processing	02 07 04	Wastes from the production of alcoholic and non-alcoholic beverages
Waste not otherwise specified	02 07 99	Wastes from the production of alcoholic and non-alcoholic beverages
Wood	19 12 07	Wastes from the mechanical treatment of waste
Organic fraction of mechanically treated waste	19 12 12	Wastes from the mechanical treatment of waste
Biodegradable kitchen and canteen waste	20 01 08	Municipal wastes including separately collected fractions
Edible oil and fat	20 01 25	Municipal wastes including separately collected fractions
Biodegradable waste	20 02 01	Garden and park wastes

Incoming material will be delivered to the reception area within the facility. It will be thoroughly homogenised, and then transferred immediately into one of the processing tunnels. There will be no storage of incoming material onsite prior to its processing.

The feedstock will first be treated in a Dry Anaerobic Digestion tunnel system in order to produce electric energy. The material will be removed from the first stage vessel, mixed with a fraction of incoming fresh material and processed through the aerobic vessel composting and drying system. Retention time will be in the range of two to three weeks.

The composted product will be treated into a refining system where three fractions shall be separated:

- Refined compost fraction (<12 millimetres in size). This fraction shall undergo hygienisation at 70°C for one hour in order to comply with the requirements of the Animal By-Products Regulations.
- Two-dimensional materials, comprising mainly light plastics.
- Three-dimensional materials.

The final composition, quality and quantity of separated products and compost will depend of the quality and quantity of incoming waste streams. Primary materials produced will be Class 1 compost for re-use, stabilised bio-waste for re-use and residual oversize materials including plastics and inerts for example glass and stones and other residuals remaining after the process. It is expected that the majority of these will be suitable for further recycling off-site. Any materials not suitable for recycling will be sent for disposal off-site. Please see attached map 061-306-117 for the proposed layout of the facility.

The residual waste produced from the composting/biogas process will be classified under the European Waste Catalogue list codes:

19 05 wastes from aerobic treatment of solid wastes

19 05 01 non-composted fraction of municipal and similar wastes

19 05 02 non-composted fraction of animal and vegetable waste

19 05 03 off-specification compost

19 05 99 wastes not otherwise specified

19 06 wastes from anaerobic treatment of waste

19 06 03 liquor from anaerobic treatment of municipal waste

19 06 04 digestate from anaerobic treatment of municipal waste

19 06 05 liquor from anaerobic treatment of animal and vegetable waste

19 06 06 digestate from anaerobic treatment of animal and vegetable waste

19 06 99 wastes not otherwise specified

19 12 wastes from the mechanical treatment of waste (for example sorting, crushing, compacting, pelletising) not otherwise specified

19 12 02 ferrous metal

19 12 03 non-ferrous metal

19 12 04 plastic and rubber

19 12 05 glass

19 12 09 minerals (for example sand, stones)

The only raw materials proposed to be used are biodegradable waste as detailed in Section H. It is proposed to use steam cleaners for cleaning the facility and the vehicles before they leave the facility, where required. A 20,000lt diesel fuel storage tank and associated delivery system will be installed to supply fuel for the wheel loaders/Loadall on-site. The system, including the delivery nozzle, valves and pump will be fully banded

to 110% capacity with bund check sensor. Based on extensive experience with equipment used for similar purposes at other similar facilities, it is calculated that approximately 40,000litres of diesel per annum will be used. A 2,000lt banded fuel oil storage tank may be installed to provide central heating for the office area. It is anticipated that this tank will be filled once per annum.

Greenport Environmental in association with technology provider WTT, has designed a fully enclosed facility using the best available technology for treatment of air emissions from the building and the process. The composting technology selected is aerated in-vessel composting which will ensure potential odours will be minimized. As a back-up control measure, the extraction system and abatement technology selected will ensure all air within the building and from the tunnels will be fully treated prior to discharge ensuring there will be no significant impact on the external environment.

There will be no process discharges to sewer from this development. There will be no emissions to groundwater from this development. The facility will not have a noise impact of significance on the nearest noise sensitive locations. The development is designed as a fully enclosed facility with all process operations conducted in fully enclosed areas which will ensure all potential noise sources will not have an impact outside the site boundary. The development is located in an industrial area surrounded by engineering companies, open coal and clinker storage, fuel depots and a vibrant port.

In the event of a shutdown of the facility, there will be no impacts on the environment. The following steps will be taken over a 2-3 month period:

- Greenport Environmental Ltd will immediately cease accepting further raw materials at the facility.
- Any remaining materials will be processed over a period and removed from the facility within a two month period. All wastewater will be used within the process. Any residual wastewater will be removed from site and will be sent for further treatment at an approved wastewater treatment facility.
- The biofilter will be decommissioned and the biofilter media will be sent for composting or disposal at an approved facility.
- All machinery or equipment can be sold immediately.
- The oil interceptor will be maintained following the removal of all vehicles from the facility.
- The building will remain in place for other industrial or port uses. The facility would be suitable as a warehousing/storage facility.
- If required, an environmental monitoring programme will be put in place to monitor any potential environmental impacts for a specified period of time after shutdown, as agreed with the EPA.

Greenport Environmental Ltd. will ensure that:

(a) any emissions from the development activity in question ("the activity concerned") will not result in the contravention of any relevant standard, including any standard for an environmental medium, or any relevant emission limit value, prescribed under any other enactment,

(b) the activity concerned, carried on in accordance with such conditions as may be attached to the licence, will not cause environmental pollution,

(c) the best available technology not entailing excessive costs will be used to prevent or eliminate or, where that is not practicable, to limit, abate or reduce an emission from the activity concerned,

(d) if the applicant is not a local authority, the corporation of a borough that is not a county borough, or the council of an urban district, subject to *subsection (8)*, he or she is a fit and proper person to hold a waste licence,

by implementing the following design and control measures proposed in this application including:

- There will be no process discharges to sewer of environmental significance as all process wastewater will be contained within the facility and will be recycled in the process. The foul sewer from the office area will discharge via an upgraded "Envirocare" unit or equivalent. This is best available technology for such purpose.
- There will be no discharges of environmental significance to surface water from the development as the process is fully enclosed including delivery and dispatch areas. Stormwater discharges from any external hardstanding areas will discharge via a Class 1 oil interceptor, attenuation and controlled discharge valve.
- There will be no air emissions of environmental significance. Significant additional capital will be invested to ensure all operations are conducted indoors and the process is fully contained within sealed in-vessel tunnels within the building. The process technology and control system are incorporating best available technologies and will ensure optimum control conditions are provided. The air extraction system will be directed to a scrubber/humidifier/biofilter abatement equipment to fully treat the air emissions and prevent emissions of potential odours, dust or bioaerosols. The technology provided is best available technology and is used extensively throughout the EU and elsewhere.
- Greenport will install AD technology for the purpose of generating electricity and heat energy which will be used to operate the facility. Any excess electricity will be fed into the National Grid. The facility itself will have a carbon neutral footprint and the excess electricity generated will replace any electricity generated from

fossil fuels such as coal, gas or oil resulting in a significant reduction of pollution from power stations.

- This process technology will help the Limerick/Kerry/Clare Waste Region meet the objectives of diverting of biodegradable waste from landfill.
- Noise emissions from the facility will be controlled as the facility and all ancillary equipment will be fully enclosed. It should be noted that the facility is located in an industrial area.
- An Environmental Management Programme will be put in place to ensure there are no emissions of environmental significance and to ensure full compliance with all relevant regulatory requirements.
- A Management Team with extensive qualifications, training and experience in the waste industry is in place to operate this facility.

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