



Administration,
Environmental Licensing Programme,
Office of Climate, Licensing & Resource Use,
EPA Headquarters,
PO Box 3000,
Johnstown Castle Estate,
Co. Wexford.

9th of September

Reg. No. W00271-01

Dear Sir/Madam

In reply to correspondence received from the EPA dated the 10th of August regarding the application for a waste licence relating to the Greenport facility, Durnish, Harbour Rd, Foynes I wish to submit the following information:

1. Having regard to the recently updated legislation, and in order to incorporate the requirements of the amended Waste Management Acts 1996 to 2011 and the European Communities (Waste directive) Regulations 2011, please find attached a revised Table B.7.1 (appendix 1), and a revised Table H.1 (A) (appendix 2), based on the revised descriptions/classes in the Third and Fourth Schedules.
2. With regard to the requirements of article 12(1)(V) of the Waste Management (Licensing) Regulations, 2004, as amended in relation to a description of how the waste hierarchy in section 21A of the amended Waste Management Acts 1996 to 2011 is applied, and having regard to the requirements of section 29(2A) of the amended Acts the proposed Greenport Environmental development will be a waste recycling, waste recovery and energy recovery facility and the amendments to the legislation further strengthen the requirement for such a facility in order to provide alternatives to disposal. This fully enclosed facility will ensure organic waste is diverted from disposal to landfill and the organic waste will be anaerobically digested and aerobically composted to produce compost, stabilised biowaste and electricity and heat energy. In addition, there will be no process effluent discharges as the water will be reused within the process, thereby preventing waste generation. The facility will be a net generator of electricity to the national grid and the heat energy produced will also be harnessed for reuse within the

process. Such a facility is required in the Region in accordance with the Regional Waste Management Plan and will ensure the general environmental protection principles of precaution and sustainability, technical feasibility and economic viability, protection of resources as well as the overall environmental human health, economic and social impacts are considered in accordance with Article 1 of the Waste Directive and Section 32(1). Information regarding sources of feedstock and infrastructure which covers the amended regulations was submitted as part of the original application in the non technical summary and EIS.

3. To reflect the changes in information supplied find attached a revised Non-technical summary (Appendix 3)

If you require any further information please do not hesitate to contact me.

Yours sincerely

PP. Peter Murphy

Seamus Leahy
Environmental Manager

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APPENDIX 1

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TABLE B.7.1 THIRD AND FOURTH SCHEDULES OF THE WASTE MANAGEMENT ACTS 1996 TO 2010

Waste Management Acts 1996 to 2010					
Third Schedule Waste Disposal Operations		Y/N	Fourth Schedule Waste Recovery Operations		Y/N
D 1	Deposit into or on to land (e.g. including landfill, etc.).		R 1	<p>Use principally as a fuel or other means to generate energy: This includes incineration facilities dedicated to the processing of municipal solid waste only where their energy efficiency is equal to or above:</p> <ul style="list-style-type: none"> - 0.60 for installations in operation and permitted in accordance with applicable Community acts before 1 January 2009, - 0.65 for installations permitted after 31 December 2008, <p>using the following formula, applied in accordance with the reference document on Best Available Techniques for Waste Incineration: Energy efficiency = $(E_p - (E_f + E_i)) / (0.97 \times (E_w + E_f))$ where—</p> <p>‘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),</p> <p>‘Ef’ means annual energy input to the system from fuels contributing to the production of steam (GJ/year),</p> <p>‘Ew’ means annual energy contained in the treated waste calculated using the net calorific value of the waste (GJ/year),</p> <p>‘Ei’ means annual energy imported excluding Ew and Bf(GJ/year),</p> <p>‘0.97’ is a factor accounting for energy losses due to bottom ash and radiation.</p>	
D 2	Land treatment (e.g. biodegradation of liquid or sludgy discards in soils, etc.).		R 2	Solvent reclamation/regeneration.	
D 3	Deep injection (e.g. injection of pumpable discards into wells, salt domes or naturally occurring repositories, etc.).		R 3	Recycling /reclamation of organic substances which are not used as solvents (including composting and other biological transformation processes), which includes gasification and pyrolysis using the components as chemicals.	P
D 4	Surface impoundment (e.g. placement of liquid or sludgy discards into pits, ponds or lagoons, etc.).		R 4	Recycling/reclamation of metals and metal compounds.	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.).		R 5	Recycling/reclamation of other inorganic materials, which includes soil cleaning resulting in recovery of the soil and recycling of inorganic construction materials.	Y

D 6	Release into a water body except seas/oceans.		R 6	Regeneration of acids or bases.	
D 7	Release to seas/oceans including sea-bed insertion.		R 7	Recovery of components used for pollution abatement.	
D 8	Biological treatment not specified elsewhere in this Schedule which results in final compounds or mixtures which are discarded by means of any of the operations numbered D 1 to D 12.	Y	R 8	Recovery of components from catalysts.	
D 9	Physico-chemical treatment not specified elsewhere in this Schedule 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.).		R 9	Oil re-refining or other reuses of oil.	
D 10	Incineration on land.		R 10	Land treatment resulting in benefit to agriculture or ecological improvement.	
D 11	Incineration at sea (this operation is prohibited by EU legislation and international conventions).		R 11	Use of waste obtained from any of the operations numbered R 1 to R 10.	
D 12	Permanent storage (e.g. emplacement of containers in a mine, etc).		R 12	Exchange of waste for submission to any of the operations numbered R 1 to R 11 (if there is no other R code appropriate, this can include preliminary operations prior to recovery including pre-processing such as, amongst others, 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).	Y
D 13	Blending or mixing prior to submission to any of the operations numbered D 1 to D 12 (if there is no other D code appropriate, this can include preliminary operations prior to disposal including pre-processing such as, amongst others, sorting, crushing, compacting, pelletising, drying, shredding, conditioning or separating prior to submission to any of the operations numbered D1 to D12).	Y	R 13	Storage of waste pending any of the operations numbered R 1 to R 12 (excluding temporary storage (being preliminary storage according to the definition of 'collection' in section 5(1)), pending collection, on the site where the waste is produced).	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 (being preliminary storage according to the definition of 'collection' in section 5(1)), pending collection, on the site where the waste is produced).	Y			

Principal Activity

In accordance with the Fourth Schedule of the Waste Management Acts 1996-2003, the Principal Activity will be:

R3. Recycling or reclamation of organic substances which are not used as solvents (including composting and other biological processes), which includes gasification and pyrolysis using the components as chemicals.

The primary activity will be to anaerobically and aerobically digest organic waste for the purpose of recycling the material into useful materials – compost, stabilised biowaste for landfill capping/land remediation, biogas for electrical and heat energy generation, and residual materials for further treatment off-site.

Incoming material will be delivered to the reception area within the facility. It will be thoroughly homogenised, blended if required and then transferred immediately into one of the anaerobic processing tunnels.

The feedstock will first be treated biologically in a dry anaerobic digestion tunnel system in order to produce biogas which is converted to electrical and heat 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 maturation system.

The composted materials will be mechanically screened to produce a refined composted organic fraction (<12mm) which will undergo a further composting/pasteurisation step (70°C for 1 hour) prior to dispatch off-site.

The oversize materials will be screened further to separate materials such as plastics, metals, glass and stones for further treatment off-site.

Brief Technical description of Other Activities:

Fourth Schedule:

R4. Recycling/reclamation of metals and metal compounds.

Description: residual metals may be recovered from the organic materials during the screening process. Metals recovered from the process will be dispatched off-site for further recycling.

R5. Recycling/reclamation of other inorganic materials, which includes soil cleaning resulting in recovery of the soil and recycling of inorganic construction material.

Description: Residual inorganic materials including glass may be recovered during the screening process. It is expected that the majority of these will be suitable for further recycling off-site.

R12 Exchange of waste for submission to any of the operations numbered R 1 to R 11 (if there is no other R code appropriate, this can include preliminary operations prior to recovery including pre-processing such as, amongst others, 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)

Description: materials may be recovered during the screening process. It is expected that the majority of these will be suitable for further recycling off-site.

R13. Storage of waste pending any operations numbered R1 to R12 (excluding temporary storage (being preliminary storage according to the definition of 'collection' in section 5(1)) pending collection, on the site where the waste is produced).

Description: Upon acceptance at the facility all feedstock waste will be temporarily stored prior to processing

Third Schedule:

D8. Biological treatment not specified elsewhere in this Schedule which results in final compounds or mixtures which are discarded by means of any of the operations numbered D1 to D12

Description: In the unlikely event that the compost product or biowaste are not suitable for re-use the product may be sent to landfill for disposal. In the event that other residual materials generated from the process are unsuitable for recycling/recovery off-site, they will be sent offsite for disposal.

D13. Blending or mixing prior to submission to any of the operations numbered from D 1 to 12 (if there is no other D code appropriate, this can include preliminary operations prior to disposal including pre-processing such as, amongst others, sorting, crushing, compacting, pelletising, drying, shredding, conditioning or separating prior to submission to any of the operations numbered D1 to D12).

D14 Repackaging prior to submission to any of the operations numbered D 1 to D 13.

Description: In the event that residual materials generated during the screening process are unsuitable for recycling/recovery off-site, they will be sent offsite for disposal.

D15 Storage pending any of the operations numbered D 1 to D 14 (excluding temporary storage (being preliminary storage according to the definition of 'collection' in section 5(1)), pending collection, on the site where the waste is produced).

Description: Residual materials or rejected materials unsuitable for recovery/recycling off-site will be stored temporarily in the dispatch area prior to dispatch off-site for disposal.

APPENDIX 2

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TABLE H.1 (A). QUANTITIES OF WASTE IN RELATION TO EACH CLASS OF ACTIVITY APPLIED FOR

Waste Management Acts 1996 to 2010 3rd Schedule (Disposal) Operations			Waste Management Acts 1996 to 2010 4th Schedule (Recovery) Operations		
Class of Activity Applied For		Quantity (tpa)*	Class of Activity Applied For		Quantity (tpa)*
Class D 1			Class R 1		
Class D 2			Class R 2		
Class D 3			Class R 3	x	50,000
Class D 4			Class R 4	x	0-2,500
Class D 5			Class R 5	x	0-10,000
Class D 6			Class R 6		
Class D 7			Class R 7		
Class D 8	x	0-25,000	Class R 8		
Class D 9			Class R 9		
Class D 10			Class R 10		
Class D 11			Class R 11		
Class D 12			Class R 12		0-10,000
Class D 13	x	0-25,000	Class R 13	x	0-50,000
Class D 14	x	0-25,000			
Class D 15	x	0-25,000			

*Indicative values

APPENDIX 3

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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 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 may dedicate more capacity to the separate treatment of this material.

Applicant's Details

Name: Greenport Environmental Ltd.

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Name and Address for Correspondence

Name: Seamus Leahy

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Grange,
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Tel: 061 359053

Fax: 061359044

e-mail: Seamus.Leahy@mrbinman.com

Address of registered or principal office of Body Corporate

Name: Greenport Environmental Ltd.

Address: The Red Church
Henry Street
Limerick

Tel: 061 359053

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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 1996-2011 and the European Communities (Waste Directive) Regulations 2011, the Principal Activity will be carried out under Fourth Schedule.

R3 - Recycling or reclamation of organic substances which are not used as solvents (including composting and other biological processes), which includes gasification and pyrolysis using the components as chemicals.

Other Activities carried out on site:

R4. Recycling/reclamation of metals and metal compounds.

R5. Recycling/reclamation of other inorganic materials, which includes soil cleaning resulting in recovery of the soil and recycling of inorganic construction material.

R12 Exchange of waste for submission to any of the operations numbered R 1 to R 11 (if there is no other R code appropriate, this can include preliminary operations prior to recovery including pre-processing such as, amongst others, 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).

R13. Storage of waste pending any operations numbered R1 to R12 (excluding temporary storage (being preliminary storage according to the definition of 'collection' in section 5(1)) pending collection, on the site where the waste is produced).

D8. Biological treatment not specified elsewhere in this Schedule which results in final compounds or mixtures which are discarded by means of any of the operations numbered D1 to D12

D13. Blending or mixing prior to submission to any of the operations numbered from D 1 to 12 (if there is no other D code appropriate, this can include preliminary operations prior to disposal including pre-processing such as, amongst others, sorting, crushing, compacting, pelletising, drying, shredding, conditioning or separating prior to submission to any of the operations numbered D1 to D12).

D14 Repackaging prior to submission to any of the operations numbered D 1 to D 13.

D15 Storage pending any of the operations numbered D 1 to D 14 (excluding temporary storage (being preliminary storage according to the definition of 'collection' in section 5(1)), pending collection, on the site where the waste is produced).

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.

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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 bunded 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 bunded 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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