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Ms Aisling Connolly,
Environmental Licensing Programme,
Office of Environmental Sustainability,
Environmental Protection Agency,
Headquarters PO Box 3000,
Johnstown Castle Estate.
County Wexford.

11th September 2019

Re: Application for Licence Reg No: W0291-02

Dear. Ms Connolly,

I refer the Agency's letter dated 29th August in accordance with Regulation 10(2)(b)(ii) of the EPA (Industrial Emissions) (Licensing) Regulations 2013 in respect of a licence application from Forge Hill Recycling Unlimited Company for an installation located at Forge Hill, Cork, T12 AK44. The requested information is set out herein. The EPA's requests are set out in italics followed by the response.

1. *Section 4.3 Waste Activities, of the submitted Application Form provides a table of List of Wastes by R&D Code and Treatment Type, proposed for acceptance at the installation.*

    a. *LoW code 20 03 01 refers to mixed municipal waste. Confirm if this refers to black bin waste. Provide detail of the treatment process to be applied to this waste. It is noted that Attachment 1.2 Non Technical Summary states that mixed dry recyclables (paper, plastics, cardboard, metal cans) are proposed to be treated at the installation.*

FHR does not and will not accept residual black bin waste. LoW 20 03 01 also applies to the source segregated mixed dry municipal waste, which is recorded on-site as LoW 20 03 01 MDR.

    b. *In the context of the table, state why waste types accepted under LoW codes 15 01 02 plastic packaging and 20 01 39 Plastics, would be subject to Treatment Type; Other recycling or reclamation of organic substances which are not used as solvents (to end-of-waste). Confirm if this is the correct treatment type to be applied and if these waste types are organic in nature.*

Plastics are manufactured from petroleum hydrocarbons which are organic and was included in Class 3 in the application for the current licence; however FHR will be guided by the Agency as to the appropriate treatment category. 15 01 02 refers to single stream commercial backdoor waste that FHR occasionally accept directly for baling

c. *LoW code 15 01 09 textile packaging, is not permitted in the existing licence (W0291-01). It has been stated in the application that "the composition of the additional wastes will be the same as those already accepted" therefore, please state whether LoW code 15 01 09 is proposed to be accepted at the installation. If yes, describe the nature of the waste and the proposed treatment*.

Textile packaging will not be accepted at the installation

2. *Prepare and submit an assessment against the BAT conclusions contained in Commission Implementing Decision (EU) 2018/1147 of 10 August 2018 for waste treatment. Describe how each BAT conclusion applies or not and provide information on compliance with the requirement.*

The assessment against BAT conclusions is in Attachment 1.

3. *In relation to the fully enclosed trailer which is proposed to store non-recyclable residues externally, clarify the following:*
   a. *Is the trailer designed to prevent leachate from the materials contained within.*
   b. *What is the nature of the underlying surface where the trailer is stored and is the surface impermeable, and;*
   c. *Provide an updated Waste Storage Plan Map (Drawing No. 14/4347-PL-04) showing the location of the trailer.*

The trailer is indoors and fully enclosed. It is used to store predominantly dry material fines, such as small grade paper and plastic. The trailer is designed to prevent leachate from the materials contained within it. The building where the trailer is parked has a paved impermeable floor. An updated Waste Storage Plan (Drawing No. 4348-WL-08) showing the location of the trailer is in Attachment 2 and supersedes Drawing No. 4348-WL-04).

4. *Section 4.7.2 Proposed System of the EIAR submitted states "rainwater run-off from the new paved area in the east of the site will be collected and connected to the drainage system that discharges to the Irish Water foul sewer." Additionally, in a document submitted to Cork County Council planning department titled; Response to Request for FI/Clarification (15/08/2018) associated with planning application 185176, it is stated in Item 5 – Storage of Waste, that "Although the risk of contaminated rainwater run-off from the baled metals is low….the proposed storage area drains to the foul sewer, thus eliminating the risk to off-site water courses." These statements do not appear to align with submitted drawing number 14/437-PL-03 which indicates that the new paved area in the east will drain to the surface water body located to the west of the site.*
   a. *Confirm if the proposed external metals storage area drains to the foul sewer.*
   b. *Confirm if the new paved area drains to the foul sewer.*
   c. *If yes, revise and re-submit Foul Drainage Layout Drawing No. 14/4347-PL-02 and Surface Drainage Layout Drawing No. 14/4347-PL-03 to correctly reflect foul and surface water discharges.*
   d. *Confirm if the roof overhang entirely covers the proposed metal storage area.*

The paved metals storage area and new paved area east of the extension drain to foul sewer. The as-built foul water drainage system is shown on Drawing No. 4348-WL-03 R4 in Attachment 3 and this

supersedes Drawing No. 14/4347-PL-02. The as-built surface water drainage system is shown on Drawing No. 434-WL-04 R4 in Attachment C and this supersedes Drawing No. 14/4347-PL-03. The roof overhang entirely covers the metal storage area.

5. State the nature and confirm if the surfacing area outside extension 1, where the baled metals are proposed to be stored, is impervious.

The yard where the baled metals will be stored is concrete paved and impervious.

6. It is stated on page 4 of the submitted Fire Water Risk Assessment, that "an engineered depression in the yard north of Building 1 that is filled with water is used, if required, as a wheel wash for trucks leaving the site." State where the wheel wash water drains to on site and where is the sediment disposed.

The wheel wash is only used as required and, if used, the wash water drains to foul sewer system. Significant amounts of sediment are not generated due to the generally clean nature of the site and this arrangement has been previously approved by OEE.

In addition to the above, please also provide an updated non-technical summary (Application Form and EIAR) to reflect the information provided in your reply, insofar as that information impinges on the non-technical summary.

The updated Application non-technical summary is in Attachment 4. The information provided in the response does not impinge on the EIAR non-technical summary.

Yours Sincerely

Jim O' Callaghan

ATTACHMENT 1

BAT 1. In order to improve the overall environmental performance, BAT is to implement and adhere to an environmental management system (EMS). The scope (e.g. level of detail) and nature of the EMS (e.g. standardised or non-standardised) will generally be related to the nature, scale and complexity of the installation, and the range of environmental impacts it may have (determined also by the type and amount of wastes processed).

Condition 2 of the current licence specifies the scope of the EMS that must be implemented at the facility. In addition FHR is certified to ISO 14001.

BAT 2. In order to improve the overall environmental performance of the plant, BAT is to use all of the techniques given below.

(a) Set up and implement waste characterisation and pre-acceptance procedures

(b) Set up and implement waste acceptance procedures

Waste characterisation, supplier screening and pre-acceptance procedures are in place, as required by Condition 8.9 of the current licence.

(c) Set up and implement a waste tracking system and inventory

Condition 11.9 of the current licence requires FHR to maintain detailed records of each waste load accepted and dispatched from the installation.

(d) Set up and implement an output quality management system

FHR ensures that all the wastes accepted and processed at the installation meet the input requirements of the facilities to which the materials are consigned.

(e) Ensure waste segregation

(f) Ensure waste compatibility prior to mixing or blending of waste

(g) Sort incoming solid waste

Upon arrival all wastes are inspected and then directed to designated processing/storage areas. Operational procedures have been prepared to ensure that appropriate compatibility, blending and sorting requirements are implemented.

BAT 3. In order to facilitate the reduction of emissions to water and air, BAT is to establish and to maintain an inventory of waste water and waste gas streams, as part of the environmental management system (see BAT 1).

The scope (e.g. level of detail) and nature of the inventory is generally related to the nature, scale and complexity of the installation, and the range of environmental impacts it may have (determined also by the type and amount of wastes processed).

An inventory of all emissions is included in the licence review application.

BAT 4. In order to reduce the environmental risk associated with the storage of waste, BAT is to use all of the techniques given below*:*

(a) Optimised storage location
(b) Adequate storage capacity
(c) Safe storage operation
(d) Separate area for storage and handling of packaged hazardous waste.

FHR has prepared a Waste Storage Plan for the installation and this is subject to review and update as required..

BAT 5. In order to reduce the environmental risk associated with the handling and transfer of waste, BAT is to set up and implement handling and transfer procedures.

FHR has prepared handling and transfer procedures and these are part of the certified EMS.

BAT 6. For relevant emissions to water as identified by the inventory of waste water streams (see BAT 3), BAT is to monitor key process parameters (e.g. waste water flow, pH, temperature, conductivity, BOD) at key locations (e.g. at the inlet and/or outlet of the pre-treatment, at the inlet to the final treatment, at the point where the emission leaves the installation).

The current licence (Condition 6) specifies the monitoring requirements, both the process parameters and the location, for the discharge to foul sewer.

BAT 7. BAT is to monitor emissions to water with at least the frequency given below, and in accordance with EN standards. If EN standards are not available, BAT is to use ISO, national or other international standards that ensure the provision of data of an equivalent scientific quality.

The current licence (Schedule C) specifies the monitoring frequencies and standards that apply.

BAT 8. BAT is to monitor channelled emissions to air with at least the frequency given below, and in accordance with EN standards. If EN standards are not available, BAT is to use ISO, national or other international standards that ensure the provision of data of an equivalent scientific quality.

There are no current channelled emissions to air.

BAT 9. BAT is to monitor diffuse emissions of organic compounds to air from the regeneration of spent solvents, the decontamination of equipment containing POPs with solvents, and the physico-chemical treatment of solvents for the recovery of their calorific value, at least once per year using one or a combination of the techniques given below.

Solvents are not regenerated or treated at the installation.

BAT 10. BAT is to periodically monitor odour emissions.

The applicability is restricted to cases where an odour nuisance at sensitive receptors is expected and/or has been substantiated. IN such instances, assessments in accordance with EPA Odour Impact Assessment Guidance for EPA Licenced Sites are activated.

The current licence (Schedule C.2.3) requires daily monitoring for odours.

BAT 11. BAT is to monitor the annual consumption of water, energy and raw materials as well as the annual generation of residues and wastewater, with a frequency of at least once per year.

The annual consumption of water, raw material as well as the generation of residues and wastewater is monitored annually and reported in the Annual Environmental Report (AER).

BAT 12. In order to prevent or, where that is not practicable, to reduce odour emissions, BAT is to set up, implement and regularly review an odour management plan as part of the environmental management system (see BAT 1).

The applicability is restricted to cases where an odour nuisance at sensitive receptors is expected and/or has been substantiated.

FHR has an ISO 14001 Odour Management Procedure/Plan that sets out the steps and escalation processes for managing odour issues. FHR also has a complaints procedure in place that identifies the actions taken in response to odour complaints.

BAT 13. In order to prevent or, where that is not practicable, to reduce odour emissions, BAT is to use one or a combination of the techniques given below

(a) Minimising residence times
(b) Using chemical treatment
(c) Optimising aerobic treatment

While the wastes accepted are not significantly odorous it is an objective to consign the processed wastes within 48 hours of receipt. Longer residence times of up to a week may be necessary during periods of high demand such as Christmas. Given the nature of the waste accepted and the waste activities chemical treatment and aerobic treatments are not required.

BAT 14. In order to prevent or, where that is not practicable, to reduce diffuse emissions to air, in particular of dust, organic compounds and odour, BAT is to use an appropriate combination of the techniques given below.

FHR carries out routine cleaning of the waste processing area daily for dust.

***BAT 15. BAT is to use flaring only for safety reasons or for non-routine operating conditions (e.g. start-ups, shutdowns) by using both of the techniques given below*.**

Not Applicable.

BAT 16. In order to reduce emissions to air from flares when flaring is unavoidable, BAT is to use both of the techniques given below.

Not Applicable.

BAT 17. In order to prevent or, where that is not practicable, to reduce noise and vibration emissions, BAT is to set up, implement and regularly review a noise and vibration management plan, as part of the environmental management system (see *BAT 1)*

The applicability is restricted to cases where a noise or vibration nuisance at sensitive receptors is expected and/or has been substantiated.

Not Applicable.

BAT 18. In order to prevent or, where that is not practicable, to reduce noise and vibration emissions, BAT is to use one or a combination of the techniques given below.

(a) Appropriate location of equipment and buildings

All waste processing is carried out inside the buildings.

BAT 19. In order to optimise water consumption, to reduce the volume of waste water generated and to prevent or, where that is not practicable, to reduce emissions to soil and water BAT is to use an appropriate combination of techniques.

All operational areas are paved. Rainwater from areas where there is the potential for contamination to occur is diverted to the foul sewer.

BAT 20. In order to reduce emissions to water, BAT is to treat waste water using an appropriate combination of techniques.

The current licence (Condition 3.9) requires the provision of silt traps and oil interceptors on the foul and surface water drains and these are in place.

- ***Table 6.1* BAT-associated emission levels (BAT-AELs) for direct discharges to a receiving water body**

The current licence does no specify emission limit values for the storm water discharge.

- **Table 6.2: BAT-associated emission levels (BAT-AELs) for indirect discharges to a receiving water body**

Not applicable, as no indirect discharge to a receiving water body.

BAT 21. In order to prevent or limit the environmental consequences of accidents and incidents, BAT is to use all of the specified techniques as part of the accident management plan (see BAT 1)

(a) Protection measures
(b) Management of incidental/accidental emissions
(c) Incident/accident registration and assessment system.

The current licence (Condition 3) specifies the protection measures that must be provided and maintained at the site to prevent/control emissions in the event of the accident/incident. Condition 9 specifies the contingency arrangement that must be in place to manage incidents/accident and Condition 12.3.2 requires the completion of an Environmental Liability Risk Assessment (ELRA) that identifies and describes time impacts of accidents/incidents. An ELRA that addresses the proposed increases in the annual waste acceptance rates was submitted with the licence review application.

BAT 22. In order to use materials efficiently, BAT is to substitute materials with waste.

Not applicable

BAT 23. In order to use energy efficiently, BAT is to use both of the following techniques

(a) Energy efficiency plan

(b) Energy balance record

FHR has commissioned an energy efficiency audit and will implement the findings.

BAT 24. In order to reduce the quantity of waste sent for disposal, BAT is to maximise the reuse of packaging as part of the residues management plan (see BAT 1).

Some applicability restrictions derive from the risk of contamination of the waste posed by the reused packaging.

Given the nature of the activity opportunities to re-use packaging is restricted.

ATTACHMENT 2

EXISTING WEIGH-OUT BRIDGE

EXISTING DOCKING RAMP

EXISTING MATERIALS RECOVERY FACILITY

EXTENSION

Paper & Plastic Bales Storage 15m long x 3m wide = 45m²

Paper & Plastic Bales Storage 5m long x 6m wide = 30m²

14.13m long x 2.86m wide x 2.90m deep = 117.2m³

Mixed Dry Recyclables 20m long x 12.5m wide = 250m²

Concrete wall 5m high

Mixed Dry Recyclables 20m long x 12.5m wide = 250m²

300mm Reinforced Concrete wall 5m high

Paper Bale Storage 300t Capacity (11.1m x 13m x 4m high = 577m³

Paper & Plastic Bales Storage 10m long x 3m wide = 30m²

Metal Can Bale Storage 70t capacity (3.5m x 10m x 4m high = 140m³)

Plastic Bale Storage 160t capacity (8m x 12.5m x 4m high = 400m³)

39.36m long x 3.17m wide x 1.64m deep = 204.6m³

29.10m long x 2.75m wide x 1.61m deep = 128.8m³

STAIRS A TO PICKING AREA

STAIRS B

STAIRS C

FINES TRAILER BAY (Non-recyclable residues)

METAL STORAGE

E.S.B. SUB-STATION

82 CUBIC METER FIRE EXTINGUISHING WATER STORAGE TANK

220 cu.m SURFACE WATER ATTENUATION TANK

OIL INTERCEPTOR

DESIGNATED FIRE QUARANTINE AREA 125m²

SOIL EMBANKMENT

Mechanics Shed

Timber 9m³

Scrap metal 9m³

Hard plastic 9m³

5 Diesel storage shed 600L waste oil / solid oily waste

EXISTING FIRE DOOR RS03 Roller Shutter FD60s rated 4700mm clear

EXISTING RS04 3600mm Clear

Existing Dock Leveler

RS01 7300mm Clear

RS05 4100mm Clear

RS07 4200mm Clear

NEW RS09 8000mm clear

NEW RS10 9000mm clear

Encase in concrete up to 5m high

DR01 850mm Clear

DR02 850mm Clear

DR03 850mm

DR04 850mm Clear

DR05 850mm Clear

DR06 850mm Clear

DR07 850mm Clear

DR09 750mm

DR10 850mm

DR12 850mm

DR13 850mm Clear

DR14 850mm

DR15 850mm

DR28 850mm Clear

FD60s

FH

F.W.G.

01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24

1 2 3 4

1070 3200 815 1490

FOUL DRAINAGE LEGEND

DRAINAGE BEFORE INTERCEPTOR

FOUL WATER MONITORING LOCATIONS FW

YARD GULLIES F.W.G.

MANHOLE

WASTE STORAGE PLAN
SCALE 1:200

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Project: EXTENSIONS TO EXISTING MATERIALS RECYCLING FACILITY AT FORGE HILL, CO. CORK

Client: FORGE HILL RECYCLING LTD

Drawing Title: WASTE STORAGE PLAN

Scale:	Date:	Revision
1:250 @A1	Sept. 2019	
Drawn By: G. Forde	Drawing Number: 4348-WL-08	

ATTACHMENT 3

FOUL DRAINAGE LEGEND

DRAINAGE BEFORE INTERCEPTOR

DRAINAGE AFTER INTERCEPTOR

YARD GULLIES ■ F.W.G.

MANHOLE □

INDUSTRIAL UNIT ON ADJACENT SITE

NEW FENCE LINE

Water Tank 220m³

5.251

4.59

EXTENSION

EXISTING MATERIALS RECYCLING FACILITY

+42.42

+42.38

+42.34

F.W.G.

DOCKING BAY RAMP

EXISTING WEIGH-OUT BRIDGE

Fence

1:20 RAMP

FFL: :42.27

5.823

9.425

FINES TRAILER BAY (Maximum Height 3m)

METAL STORAGE

DESIGNATED FIRE QUARANTINE AREA 125m²

22.306

EXISTING GATES

CONCRETE SURFACE

FFL: :42.46

E.S.B. SUB-STATION

GRASS AREA

FORGE HILL (PUBLIC ROAD)

9

EXISTING WEIGH-IN BRIDGE

CONCRETE YARD

Timber 9m³

Scrap metal 9m³

Hard plastic 9m³

1

2

3

4

Mechanics Shed

SOIL EMBANKMENT

5 Diesel storage shed 600L waste oil / solid oily waste

OIL INTERCEPTOR

TARMAC SURFACE

HYDRANT ALONG GREEN

TO STREAM

FFL: :42.19

EXISTING ADMIN. BUILDING

42.05

CAR PARKING

OLD ROAD

BUSINESS PARK ON ADJACENT SITE

N

SITE BOUNDARY IN RED

NEW EXTENSION OUTLINED IN BLUE

SITE LAYOUT PLAN - AS-BUILT FOUL DRAINAGE LAYOUT
SCALE 1:250

Revision	Comments	Date
R4	NEW REAR EXTENSION ADDED	09-09-2019
R3	SHUT OFF VALVE SHOWN	28-09-2016
R2	AS-BUILT SURVEY	19-09-2016
R1	DESIGN AMENDMENTS	05-08-2016

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Project:
EXTENSIONS TO EXISTING MATERIALS RECYCLING FACILITY AT FORGE HILL, CO. CORK

Client:
FORGE HILL RECYCLING LTD

Drawing Title:
SITE LAYOUT PLAN
AS-BUILT FOUL DRAINAGE LAYOUT

Scale:	Date:	Revision
1:250 @A1	Sept. 2019	R4
Drawn By: G. Forde	Drawing Number: 4348-WL-03	

SURFACE DRAINAGE LEGEND
UNDERGROUND ROOF DRAINAGE
UNDERGROUND YARD DRAINAGE

SURFACE WATER MONITORING LOCATIONS SW

YARD GULLIES S.W.G.
MANHOLE
RAIN WATER DOWN PIPES (storm water from roof) R.W.P.

INDUSTRIAL UNIT ON ADJACENT SITE

EXISTING MATERIALS RECYCLING FACILITY

EXTENSION

Water Tank 220m³

NEW FENCE LINE

DOCKING BAY RAMP

EXISTING WEIGH-OUT BRIDGE

1:20 RAMP

FFL: :42.27

CONCRETE SURFACE

EXISTING GATES

FFL: :42.46

E.S.B. SUB-STATION

GRASS AREA

FORGE HILL (PUBLIC ROAD)

FINES TRAILER BAY (Non-hazardous materials)

METAL STORAGE

DESIGNATED FIRE QUARANTINE AREA 125m²

SOIL EMBANKMENT

Mechanics Shed 4

Hard plastic 8m³ 3

Scrap metal 8m³ 2

Timber 8m³ 1

5 Diesel storage shed 600L waste oil / solid oily waste

CONCRETE YARD

CAR PARKING

CHANNEL DRAIN TO MANHOLES

EXISTING WEIGH-IN BRIDGE

OIL INTERCEPTOR

TARMAC SURFACE

ATTENUATED SURFACE WATER TO STREAM

SW-1

EXISTING ADMIN. BUILDING

OLD ROAD

BUSINESS PARK ON ADJACENT SITE

N

SITE BOUNDARY IN RED

NEW EXTENSIONS OUTLINED IN BLUE

SITE LAYOUT PLAN - AS-BUILT SURFACE DRAINAGE LAYOUT
SCALE 1:250

Revision	Comments	Date
R4	NEW REAR EXTENSION ADDED	09-09-2019
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Drawing Title:
SITE LAYOUT PLAN
AS-BUILT SURFACE DRAINAGE LAYOUT

Scale:	Date:	Revision
1:250 @A1	Sept. 2019	R4
Drawn By: G. Forde	Drawing Number: 4348-WL-04	

ATTACHMENT 4

NON-TECHNICAL SUMMARY

1.0 Introduction

Forge Hill Recycling Ltd (FHR) is one of the largest waste management companies in Munster and operates its waste management facility at Forge Hill under planning permission granted by Cork County Council and a Waste Licence granted by the Environmental Protection Agency (EPA).

2.0 Planning & Licensing History

The site was initially developed in 1969 and has been used for waste management activities since 1987. In 2003, the EPA granted a Waste Licence to the company that then operated the site, which authorised the acceptance, processing and transfer of 82,000 tonnes/year of household, commercial, industrial and construction & demolition waste.

A redevelopment of the site in 2005 involved the demolition of the original waste handling building, the construction of a new waste processing building, weighbridge and offices and the installation of new foul and surface water drainage systems. In 2008 the waste processing building was extended and a second weigh bridge was installed.

In 2009, the waste business was acquired by Greenstar Environmental Services Limited (Greenstar). Greenstar suspended waste operations in September 2011, following which all wastes were removed and the site closed.

In 2015, the site was acquired by the current landowner and leased to FHR. Cork County Council granted FHR a Waste Permit to operate the site as a recycling and transfer facility. The annual tonnage was limited to 49,999 tonnes. In 2016, the waste processing building was extended to allow the internal storage of baled recyclables. In August 2017, the EPA granted FHR a Waste Licence, which authorised the acceptance and sorting of 82,000 tonnes of waste.

Mixed dry recyclables (paper, plastics, cardboard, metal cans) are separated before being sent to overseas recycling facilities. Non-recyclable residues, which are the result of inadvertent contamination by the waste producers, are sent to other waste processing facilities where they are used to produce solid recovered fuel, which is used as an alternative for fossil fuels (oil, coal and natural gas).

3.0 Existing Facility

The facility takes in mixed dry recyclables, segregates suitable materials into single waste streams and then bales and stores them prior to transfer to overseas recycling facilities. The processing is highly automated and manual picking is mostly limited to quality control. Non-recyclable residues are sent to other waste management facilities in Ireland for processing to produce Solid Recovered Fuel (SRF).

Waste acceptance hours are 06:30 to 23:30, Monday to Friday inclusive, 06:30 to 17:30 Saturdays and 08:30 to 17:30 Sundays and Bank Holidays. Operational hours are 06:00 to 24:00 Monday to Friday inclusive, 06:00 to 18:00 Saturdays and 08:00 to 18:00 Sundays and Bank Holidays.

4.0 Proposed Changes

The proposed development involves the expansion of waste activities from 82,000 tonnes/year to 100,000 tonnes/year and will involve the construction of two extensions (1468 m^2 and 140 m^2) to the existing waste processing building. There will be no significant changes to either the waste types or the processing plant and equipment and there will be no new emission points to atmosphere.

5.0 Classes of Activity

The classes of activities as listed in the First Schedule of the EPA Act as amended will be.

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.
11.4 (b)	Recovery, or a mix of recovery and disposal, of non-hazardous waste with a capacity exceeding 75 tonnes per day involving one or more of the following activities, (other than activities to which the Urban Water Treatment Regulations 2001 (SI No. 254 of 2001) apply): • Pre-treatment of waste for incineration or co-incineration.

6.0 BAT/BREF Documents

FHR assessed proposed development against the BAT Conclusions in the following guidance documents:

- Reference Document on Best Available Techniques for the Waste Treatments Industries August 2018
- Reference Document on Best Available Techniques for Energy Efficiency February 2009
- Reference Document on Best Available Techniques from Storage

An evaluation of how the facility will comply with the BAT Conclusions on Waste Treatment along with an analysis of the proposed development against the BAT Conclusions on Storage has been completed.

7.0 Waste Management Policies

The proposed changes are consistent with European Union, national and regional waste management policies and plans, the objective of which is to maximise the recovery/recycling of waste.

8.0 Raw & Auxiliary Materials and Energy Use

Operations involve the consumption of electricity and oils. The estimated quantities used in 2016 and 2017 are presented in Table 1.

Table 1 Estimates of Resources Used (2016-2017)

Resources	2016	2017
Light fuel oil	17,004 Litres	41,654 Litres
Electricity	96.96 MWh	318.02 MWh

9.0 Sources of Emissions

The actual and potential emissions from the installation are:

- Noise from plant and equipment used to process the wastes and the delivery/collection vehicles.
- Dust from waste processing and vehicle movements on yards during dry weather.
- Rainwater run-off from the yards and building roofs.
- Vehicle exhaust gases from the delivery and collection vehicles.
- Odours from the biodegradable wastes.

10.0 Site Location

The facility is located on the southern fringe of Cork City. It is accessed from the Forge Hill Road via a junction on the N27 National Primary Road (Kinsale Road) leading from the N40 Southern Ring Road to Cork Airport.

11.0 Existing Environment, Potential Impacts, Mitigation and Residual Impacts

11.1 *Climate*

The climate in the area can be described as mild and wet, with the prevailing wind direction from the west.

The acceptance and processing of the additional wastes will result in an increase in energy (diesel and electricity) consumption associated with their transport and processing, with a consequent increase in greenhouse gas emissions. All new developments that give rise to extra greenhouse gases are considered to have a negative effect on climate.

The current mitigation measures include the use of energy efficient equipment, energy audits and the implementation of an energy management plan.

The proposed development will, in conjunction with current operations, have an on-going, imperceptible, negative impact on climate.

11.2 Soils and Geology

The site is underlain by a layer of made ground, which is on top of approximately 3m of sandstone derived till. The underlying bedrock comprises sandstones, mudstones and siltstone.

The development involves the excavation of the made ground and subsoils for the foundations and formation level for the floors of the extensions and placing a concrete slab over the unpaved area in the east of the site.

The current prevention and mitigation measures include inspection and repair as required of the paved areas; the routine integrity surveys of the surface water and foul water drainage systems; the adoption of an emergency response procedure and staff training on appropriate spill response actions.

At present there are no direct or indirect emissions to ground and the proposed change will not give rise to any new discharges. The construction of the extensions will involve the excavation and removal of subsoils. Following the construction the entire site will effectively be either paved, or occupied by buildings that prevent accidental seepages to the soils.

The proposed development, in conjunction with current operations, will have a permanent slight, negative impact on the soils, but no impact on the bedrock.

11.3 Water

The site is in the catchment of the Tramore River. The Tramore River (Coastal) is designated as a Transitional Water Body (surface water in the vicinity of a river mouth that is partly saline, but which is substantially influenced by freshwater flows) under the Water Framework Directive (Directive 2000/60/EC).

The subsoils at the site are not significantly water bearing. The bedrock aquifer is classified as a locally important aquifer, which is only moderately productive in local zones

Rainwater run-off from the building roofs and sections of the yard where the risk of contamination is low discharges to a tributary stream of the Tramore River. The flow rate is regulated by an underground balance tank located in the north-west corner of the site. Run-off from yard areas, where there is the potential for contamination, discharges to the foul sewer.

The proposed development requires minor alterations to the existing foul and surface water drainage layout, which will result in an increase in the volumes of roof water going to the stream and a reduction in the volume of yard run-off going to sewer, but there will be no change to the quality of either discharge. There are no current direct or indirect emissions to groundwater and the proposed development will not result in any new emissions.

There is the potential for oil leaks from the mobile plant and firewater run-off in the event of a fire. The potential pathways to the stream is the surface water drainage system. The pathways to groundwater are infiltration through damaged paving and leaks from the storm and foul water drains.

The current mitigation measures include the provision of an oil interceptor on the surface water drains that discharge to the stream; the provision of a flow balance tank to regulate the flow to the stream; the installation of shut off valves on the surface water and foul water drains; impermeable paving across the operational areas; routine integrity surveys of the surface water and foul water drains; the provision of firewater retention capacity and the adoption of an emergency response procedure.

The proposed development will not result in any change to the quality of the surface water discharge. Although the total volume of rainwater run-off to the stream will increase, there will be no change to the flow rate as this will be controlled by the balance tank.

The development will not give rise to any new emission to ground and ground water and will have no discernible impact on groundwater quality. Paving the open area in the east of the site will reduce groundwater recharge within the site boundary.

The proposed development, in conjunction with the current operations, will have no impact on surface water and groundwater quality and will have an imperceptible, permanent, negative impact on the quantitative status of the bedrock aquifer.

11.4 Biodiversity

Within the site the habitat classification for the buildings and yards is BL3 -buildings and artificial surfaces, which includes buildings roads, car parks, pavements, runways, yards, and some tracks, paths, driveways and sports grounds. These habitats are typically not species diverse.

The area between the boundary fence at the eastern side of the operational area and the landholding boundary (ca 450m^2) includes a fragmented linear treeline (ca 70m), along the outside of the fence, with disturbed ground further east. The treeline comprises predominantly common ash with ivy and bramble undergrowth. The habitat classification for the treeline is WL2 Treeline and the disturbed ground is ED3.

Outside the site the land use is a mix of commercial and industrial operations and are classified as BL3 Buildings and artificial surfaces. There are hedgerows (WL1) and planting along both sides of Forge Hill Road, immature trees in plantings outside the northern and southern side boundaries and a small landscaped grassed area (GA2) with a short line of laurel outside the western boundary and at the southern boundary.

To the east of the landholding boundary, between it and the N27, is a an earthen mound that is naturally recolonising (BL2) and a field that had formerly been used for agricultural purposes, but is now deteriorating to scrub (WS1).

A small area of Japanese knotweed was identified in the south-east corner of the site. FHR commissioned a specialist contractor to eradicate the plants and three treatments have been carried out, with further treatments planned in 2018 to ensure complete eradication.

Given the facility layout and operations the likelihood of the presence of protected species within the site is very low; however there is the potential for the treeline in the east of the site to serve as a roost for bats.

The site is not in either a Special Area of Conservation (SAC), or a Special Protection Area (SPA). The closest sites are Cork Harbour SPA (Site Code 004030) and Great Island Channel SAC (Site Code 001058) which are 3.5km to the east. Rainwater run-off from the facility discharges to a tributary of the Tramore River, which flows into Lough Mahon, part of Cork Harbour.

The proposed development will result in the loss of the treeline in the east of the site and the paving of the area of disturbed ground. It will not result in any loss of habitat outside the site boundary, nor will it result in any change to the surface water discharge to the tributary of the Tramore River.

The mitigation measures in place to protect surface water and groundwater apply equally to the protection of biodiversity. Before the fence on the eastern boundary of the operational area is moved the specialist contractor appointed to eradicate the Japanese knotweed will advise the fencing contractor on the actions to ensure that any soils excavated in the treated area remain in that area so that the accidental movement of the knotweed is avoided.

Prior to the removal of the treeline in the east of the site, a bat survey will be conducted by an ecologist. Should bats be identified the removal of the trees will be carried out in accordance with the ecologist's recommendations.

The proposed development will not result in any changes to the current emissions to surface water and will have no discernible impact on surface water and ground water quality. It will

result in the removal of the treeline in the east of the site, which is potential roosting site for bats. It will have no impacts on habitats outside the boundary and will have no significant effect on any Natura 2000 Site.

The proposed development will have an imperceptible, permanent, negative impact on the treeline habitat within the site, but will not give rise to any impacts on habitats outside the boundary.

11.5 Air Quality

The facility is on the eastern side of Forge Hill Road and the surrounding land use is primarily commercial, with industrial estates/business parks to the north and south and other commercial developments on the western side to the road. The closest residences are approximately 80m to the north-west and 120m to the east. The EPA ambient air quality databases and monitoring carried out by FHR indicate the air quality in the vicinity of the site is good.

The impacts on air quality associated with the operation of waste management sites include, depending on the nature of waste accepted and the processes carried out, odours, particulates (dust) and exhaust gases from vehicles and mobile plant.

The Construction Environmental Management Plan, which will be prepared before construction starts, will include all of the mitigation measures set out in this EIAR, including dust prevention and control and any additional measures required by the conditions attached to planning permission.

FHR implements the control measures specified in the EPA licence that are designed to ensure waste activities do not give rise to adverse impacts on air quality or nuisance and impairment of amenity outside the site boundary. All waste reception, processing and storage, with the exception of a small amount of baled metal wastes continue to be carried out inside the waste processing building.

The yards are regularly cleaned using the on-site road sweeper. The vehicles that deliver the wastes are typically fitted with Selective Catalytic Reduction to reduce the nitrous oxide levels in the exhaust gases. It is FHR policy not to allow engine idling.

FHR only accepts dry recyclables predominantly from source segregated collections; however a level of contamination with organic/putrescible matter is unavoidable and this gives rise to the potential for odours. A detailed assessment of the likelihood of the site operations being a source of odour nuisance has established that the risk is negligible.

Most of the dust generated in the construction stage is deposited close to the source and any impacts are typically within 100m of the construction area. Any impacts will be short term. There will be additional vehicle exhaust emissions associated with the increased traffic; however traffic associated with FHR's activities contributes less than 1% to the overall traffic in the area and the additional movements, 1 truck movement during peak period, will have no discernible impact on local air quality.

The proposed development, in conjunction with the current operations, will have an on-going imperceptible, negative impact on air quality.

11.6 Noise

The surrounding land use is primarily commercial, with industrial estates/business parks to the north and south and other commercial developments on the western side to the road. The closest residential properties are approximately 80m to the north-west and 120m to the east.

The sources of noise emissions are staff vehicles, waste transport vehicles and the waste processing and handling equipment. Emissions only occur during the waste acceptance and operational periods.

All construction will be carried out in accordance with the measures specified in the Construction Environmental Management Plan. All waste reception, processing and storage will, with the exception of the storage of a small amount of baled metal wastes outside the new large extension, will continue to be carried out inside buildings. There is acoustic cladding on the southern and eastern walls of Building 2. The building doors are typically only opened to allow vehicles to enter and exit the buildings.

The noise monitoring carried out in compliance with the EPA licence requirements has confirmed that noise emission from the current operations are not a source of off-site nuisance. The noise emissions associated with the proposed development will be consistent with those from the current activities and will not give rise to nuisance or impairment of amenities at off-noise sensitive locations.

The proposed development will, in conjunction with the current operations, have an on-going, imperceptible, neutral impact.

11.7 Landscape

The facility is located within an established and developed industrial zone, is not in an area designated as highly sensitive and is not overlooked by any designated views or prospect areas. On a site specific level, the buildings are consistent with other commercial and industrial buildings in the area.

The development involves the construction of extensions to an existing warehouse type building. The small extension to the southern elevation of the existing building and the loading dock on north-western side of the main extension will be visible from the southern and northern site entrances respectively. The baled metal waste storage area will not be visible from public viewing points.

Given the location and scale of the development, prevention and mitigation measures, including a landscaping plan, are not required.

The FHR facility is in an area already extensively developed for commercial and industrial use and is not in a location of scenic value or outstanding natural beauty. The design of the buildings, while functional, is consistent with the existing buildings and surrounding developments.

The north-western docking bay of the main extension and the western elevation of the smaller extension will be visible from the site entrances. The proposed development is not visually intrusive and does not negatively affect the local landscape character.

The proposed development will have long term, slight, neutral impact on the existing landscape character and visual amenity.

11.8 Traffic

Forge Hill Road links Pouladuff Road to the N27 Airport Road. The staggered signalised junction between Forge Hill Road and the N27 (known locally as the Bull McCabe's junction) is the main access route to the site. At the junction between Forge Hill and the Pouladuff Road to the north of FHR there are significant delays during the evening peak traffic periods.

Traffic counts at Bull McCabe's junction carried out over three days in January 2018 established that the highest flows occurred on Thursday 18th January and that there were three peak periods 7.30am to 9.30am, 1pm to 2pm and 4.30pm to 6pm. The peak period for traffic generation from the site coincides with the morning and mid-day peak periods and the morning peak is the critical time for Bull McCabe's junction.

The proposed development does not require the recruitment of additional staff and there will be no change to the number of staff car movements. There will be one additional daily truck movement.

The visibility splays at the entrances will be maintained and kept free of all obstacles that might cause a visual obstruction. Waste delivery and consignment times will be scheduled to avoid periods of peak traffic. All drivers will be instructed to access the site via Bull McCabe's junction. Additional street lighting, tactile paving and pedestrian crossings will be provided at the site entrances to enhance pedestrian safety on Forge Hill Road.

The existing local and regional road networks have the capacity to accommodate the slight increase in traffic associated with the proposed development.

The proposed development, in conjunction with current operations, will have an on-going, slight, negative, impact on the road network, but the ability to schedule waste deliveries and consignments outside peak traffic period could have an on-going slight, positive impact on junction capacity.

11.9 Cultural Heritage

There is no record of any archaeological feature, protected structure, or cultural heritage feature within the site boundary and it is not in a designated Architectural Conservation Area. As the proposed development will not have any impact on any archaeological, architectural or cultural feature, mitigation measures are not required. The development will not have any impact on any archaeological, architectural or cultural heritage features.

11.10 Population and Human Health

The surrounding land use is primarily commercial, with the lands to the north and south comprising industrial estates/business parks and other commercial developments on the western side to the road. The closest residential properties are approximately 80m to the north-west and 120m to the east, with a large residential estate approximately 270m to the west.

In the 2016 Census, the population of Cork City and Suburbs was 208,689. The daytime working population of the city and suburbs exceeded 100,000 in April 2016. Of those, 60,706 resided and worked in the area, with 41,433 travelling into the city and suburbs. The majority of those who commuted into the city and suburbs came from Cork County (91%), followed by Waterford City and County (2%) and Kerry (2%).

Waste management facilities, depending on the types of waste accepted, are potential sources of odours, dust, noise, vermin and pests. While odours do not present a direct risk to health, they can be a significant nuisance and cause of discomfort that can indirectly affect human health. Traffic associated with a waste activity can, depending on the size, location and capacity of the local road network, be a cause of congestion that affects local residents.

An incident at the site, for example a fire, presents a risk to site staff and there is the potential, depending on the weather conditions, for smoke to affect occupants of the nearby commercial and residential properties.

FHR already implements the control measures specified in the EPA Licence that are designed to ensure waste activities are not a cause of odour, noise, dust and pest nuisance. All waste reception and processing is and will continue to be carried out inside the building. The roller shutter doors are typically only opened to allow vehicles to enter and exit the buildings. Although the wastes do not contain significant amounts of materials that are attractive to bird, vermin and insects, FHR has contracted a specialist pest and vermin control contractor who visits the site regularly.

While the annual waste intake will increase there will be no change to either the types of waste accepted or the method of processing. Odours have never been a significant source of impairment of the amenity outside the facility and the EPA has never identified odours form the site as being matter of concern.

Noise emissions from the operations have also never been a source of impairment of the amenity outside the facility. The proposed development will include for occasional waste

acceptance and operation 24/7. The night time noise surveys have established that noise from site operations are not audible at the nearest noise sensitive locations.

The traffic assessment has confirmed that the local road network and key junction have the capacity to accommodate the movement of the additional 18,000 tonnes of waste without causing congestion.

The proposed development will, in conjunction with current operations, have an on-going imperceptible, negative impact on human beings associated with noise emissions and traffic movements.

11.11 Material Assets

Land use in the immediate vicinity is predominantly commercial and does not have any significant amenity value for members of the general public.

There will be a slight increase in traffic movements and energy consumption. There will be no change to the nature of the emissions. Increasing the recycling/recovery rate will contribute to the achievement and maintenance of regional and national waste management targets. The development will contribute to maintaining employment levels at the facility.

FHR implements the nuisance control measures specified in the EPA Licence and also applies resource consumption control measures to minimise usage.

The proposed development will not have any adverse impact on amenity values and socio-economic activities in the locality. It will have a slight negative impact in relation to the consumption of fossil fuels, but will have a slight positive local economic benefit in maintaining employment levels.

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

The design and method of operation of the existing facility are based on the requirements of the European Commission's Reference Document on Best Available Techniques for the Waste Treatment Industries 2018 (BREF), which specifies the Best Available Techniques (BAT) for Waste Management Facilities.

The current licence specifies the manner in which the facility must operate so as to ensure that pollution and or nuisance to neighbours and the general public is prevented. The licence conditions require the site management team to have the appropriate training and qualifications; they specify the types of wastes and processes that can be carried out; stipulate how wastes and raw materials that have the potential to cause pollution are handled and stored; describe the control measures that must be applied to prevent nuisance, for example odour and dust control, and require appropriate emergency response procedures to be in place.

13.0 Measures to Comply with Waste Management Hierarchy

The existing operation and the proposed development are consistent with the national and regional waste policy objectives, which are based on the Waste Management Hierarchy, as they contribute to the national pre-treatment capacity to get the maximum value from the waste, and to the achievement and maintenance of national and regional recycling and recovery targets.

14.0 Environmental Management System

The Facility Manager has completed the FAS Training Programme and has 11 years' work experience in the waste industry. Facility staff include general operatives, plant drivers, and maintenance and office staff.

Condition 2 of the EPA licence requires FHR to adopt an Environmental Management System (EMS). FHR has prepared a documented EMS which comprises an Environmental Manual and a series of EMS Procedures (EP01 to EP18) and EMS Records (ER01 to ER15).

The EMS requires the implementation of an Environmental Management Programme and the development of a Schedule of Environmental Objectives and Targets that provides for a review of all operations and processes, including environmental training and awareness and emergency response actions.

15.0 Abnormal Operating Conditions

FHR has adopted a General Emergency Response Procedure (ERP) that specifies the roles, responsibilities and actions required to deal quickly and efficiently with an emergency.

16.0 Avoidance of the Risk of Environmental Pollution due to Closure of the Facility

FHR has prepared an Environmental Liability Risk Assessment (ELRA) and Decommissioning Management Plan (DMP) for the facility and these, along with a proposal for Financial Provision, have been submitted to the Agency.

17.0 Environmental Monitoring

FHR currently conducts storm water, groundwater, noise emissions, air emissions and dust monitoring.

18.0 Measures to Comply with an Environmental Quality Standard

The emission limit values set in the current Licence are based on achieving compliance with the relevant EQS. The measures also effectively minimise the risk of pollution over long distances.

The environmental quality standards that are relevant to the overall assessment for the licence application are those specified in:

- European Communities Environmental Objectives (Surface Water) Regulations S.I. No 272 of 2009;
- European Communities Environmental Objectives (Groundwater) Regulations S.I. No 9 of 2010;
- Air Quality Standards Regulations (S.I. No 271 of 2002);
- Directive 2008/50 EC on ambient air quality and cleaner air for Europe.

19.0 Measures to comply with Council Directive 80/68/EEC and 2006/118/EC in relation to the protection of groundwater.

There are no direct discharges to groundwater and the entire licensed area will be covered by buildings and paved yards.

20.0 The Main Alternatives to the Proposed Technology, Techniques and Measures

The installation is a key element of the FHR waste management infrastructure in the Southern Region. The facility is specifically designed and has established use for waste activities and it has the capacity to accommodate the proposed increase in annual waste inputs. The features that render it suitable for the proposed development are:

- Existing authorisations to accept and process solid non-hazardous waste;
- Readily accessible location for FHR's existing and target customer base;
- Existing ground conditions (soil type/geology/hydrology) and distances from sensitive environmental receptors minimise the risk of unexpected emissions give rise to pollution.

The only alternative to the proposed development is to construct a new waste management facility at a different location. This would require the acquisition of land, the construction of new waste processing buildings and supporting infrastructure (offices, maintenance workshops, weighbridge) and the provision of new site services (surface water, foul water, power, water supply and security).

The development of a new facility offers no environmental advantages compared to the proposed expansion of waste acceptance rates at the existing facility, which has an established commercial/industrial use.