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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.

27<sup>th</sup> September 2019

Re: Application for Licence Reg No: W0291-02

Dear Ms Connolly,

I refer to the surface water drainage system in the vicinity of the area where the baled metals will be stored. To further minimise the risk of contamination of storm water emissions it has been decided to disconnect the surface water gully that is to the south of the external metals storage area from the surface water drainage system, as shown on Drawing No. 4348-WL-04 in Attachment 1. All rainwater run-off from this area will discharge to the foul sewer, as shown on Drawing No. 4348-WL-03 in Attachment 1.

Sections 4.7 and 4.8 of the Environmental Impact Assessment Report have been updated and are in Attachment 2. An updated Application non-technical summary is in Attachment 3. The information provided in the response does not impinge on the EIAR non-technical summary.

Yours Sincerely

  
Jim O' Callaghan

ATTACHMENT 1

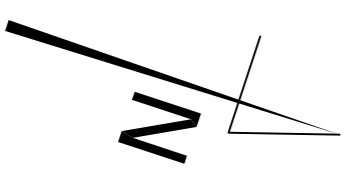
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**FOUL DRAINAGE LEGEND**  
 DRAINAGE AFTER INTERCEPTOR

YARD GULLIES

MANHOLE

F.W.G.



**SITE BOUNDARY IN RED**  
**NEW EXTENSION OUTLINED IN BLUE**

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



<p><b>BRIAN O KENNEDY &amp; ASSOCIATES LTD</b>          Consulting Engineers</p> <p>Shannon House,          Church Road,          Douglas,          Co. Cork</p> <p>Tel: 021-4899854          Fax: 021-4899464          Email: info@bok.ie          Web: www.bok.ie</p>	<p><b>Project:</b>          EXTENSIONS TO EXISTING MATERIALS RECYCLING FACILITY AT FORGE HILL, CO. CORK</p> <p><b>Client:</b>          FORGE HILL RECYCLING LTD</p>	<p><b>Drawing Title:</b>          SITE LAYOUT PLAN AS-BUILT FOUL DRAINAGE LAYOUT</p> <p><b>Scale:</b>          1:250 @A1</p> <p><b>Drawn By:</b>          G. Forde</p> <p><b>Date:</b>          Sept. 2019</p> <p><b>Checked By:</b>          G. Forde</p> <p><b>Revision:</b>          R4</p>	<table border="1"> <tr> <td>64</td> <td>NEW ROAD EXTENSION ADDED</td> <td>06-06-2019</td> </tr> <tr> <td>65</td> <td>START OF WORK SHOWN</td> <td>22-09-2019</td> </tr> <tr> <td>66</td> <td>DESIGN/IMPLEMENTATIONS</td> <td>02-06-2020</td> </tr> <tr> <td>67</td> <td>Final Comments</td> <td>08-06-2020</td> </tr> </table>	64	NEW ROAD EXTENSION ADDED	06-06-2019	65	START OF WORK SHOWN	22-09-2019	66	DESIGN/IMPLEMENTATIONS	02-06-2020	67	Final Comments	08-06-2020
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- SURFACE DRAINAGE LEGEND**
- UNDERGROUND ROOF DRAINAGE
  - UNDERGROUND YARD DRAINAGE
  - SURFACE WATER MONITORING LOCATIONS
  - YARD GULLIES
  - S.W.G.
  - MANHOLE
  - RAIN WATER DOWN PIPES (storm water from roof)
  - R.W.P.



**SITE BOUNDARY IN RED**  
**NEW EXTENSIONS OUTLINED IN BLUE**

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

NO. 1	EXISTING MATERIALS RECYCLING FACILITY	19/09/2019
NO. 2	NEW MATERIALS RECYCLING FACILITY	19/09/2019
NO. 3	AS-BUILT SURFACE DRAINAGE LAYOUT	19/09/2019
NO. 4	DESIGN DEVELOPMENT	19/09/2019
NO. 5	DESIGN DEVELOPMENT	19/09/2019
NO. 6	DESIGN DEVELOPMENT	19/09/2019
NO. 7	DESIGN DEVELOPMENT	19/09/2019
NO. 8	DESIGN DEVELOPMENT	19/09/2019
NO. 9	DESIGN DEVELOPMENT	19/09/2019
NO. 10	DESIGN DEVELOPMENT	19/09/2019
NO. 11	DESIGN DEVELOPMENT	19/09/2019
NO. 12	DESIGN DEVELOPMENT	19/09/2019
NO. 13	DESIGN DEVELOPMENT	19/09/2019
NO. 14	DESIGN DEVELOPMENT	19/09/2019
NO. 15	DESIGN DEVELOPMENT	19/09/2019
NO. 16	DESIGN DEVELOPMENT	19/09/2019
NO. 17	DESIGN DEVELOPMENT	19/09/2019
NO. 18	DESIGN DEVELOPMENT	19/09/2019
NO. 19	DESIGN DEVELOPMENT	19/09/2019
NO. 20	DESIGN DEVELOPMENT	19/09/2019
NO. 21	DESIGN DEVELOPMENT	19/09/2019
NO. 22	DESIGN DEVELOPMENT	19/09/2019
NO. 23	DESIGN DEVELOPMENT	19/09/2019
NO. 24	DESIGN DEVELOPMENT	19/09/2019
NO. 25	DESIGN DEVELOPMENT	19/09/2019
NO. 26	DESIGN DEVELOPMENT	19/09/2019
NO. 27	DESIGN DEVELOPMENT	19/09/2019

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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 SURFACE DRAINAGE LAYOUT

Scale: 1:250 @A1

Drawn By: G. Forde

Check: S. Forde

Date: Sept. 2019

Revision: R5

ATTACHMENT 2

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## 4.5 Site Security

There is a palisade fence around the southern, eastern and western boundary of the operational area with fencing, a block wall and two security gates (north and south) on the western boundary. There is a CCTV surveillance and a monitored alarm system.

## 4.6 Services

The site has connections to the mains water supply, the municipal foul sewer and telecom services. There is an electricity substation at the western boundary and a ring main fitted with 4 No. fire hydrants around the existing processing building.

## 4.7 Foul Water Drainage

### 4.7.1 Existing System

Sanitary wastewater from the toilets and waste water from the staff welfare facilities discharge directly to the Irish Water foul sewer. As part of the redevelopment of the site in 2005 three separate surface water drainage systems were installed, one of which collects run-off from areas of the site, which due to the operations and waste types that were carried out at the time were susceptible to contamination and directs it to the municipal foul sewer via a Class 1 Oil Interceptor. There is a manual shut-off valve on the foul sewer line just outside the northern exit gate.

### 4.7.2 Proposed System

The drainage layout is shown on Drawing No. 4348-WL-03. The new intake building will enclose the drains serving the apron in front of the access door on the eastern side Building 2 and the truck/bin wash area. These drains will be sealed. Rainwater run-off from the new paved area in the east of the site and from the area around the external metal storage area, will be collected and connected to the drainage system that discharges to the Irish Water foul sewer.

## 4.8 Surface Water Drainage

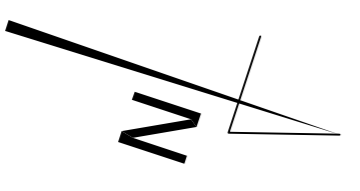
### 4.8.1 Existing System

The drainage system is shown on Drawing No. 14/4347/PL-02. Rainwater run-off from the paved open yard areas that are not connected to the foul water sewer is directed to a Class I Full Retention Oil interceptor, fitted with an oil alarm, from where it flows to an underground two chamber tank located in the north west of the site. The water enters the tank's western chamber (82m<sup>3</sup>).

Rainwater run-off from the building roofs is piped directly to the western chamber and does not pass through the interceptor. The water in the western chamber is kept at a high level for use for fire-fighting by means of a high level overflow pipe into the eastern chamber (90m<sup>3</sup>). This chamber is used for flow attenuation and also serves as a firewater retention facility.

**FOUL DRAINAGE LEGEND**  
 DRAINAGE AFTER INTERCEPTOR

YARD GULLIES   
 MANHOLE



**SITE BOUNDARY IN RED**  
**NEW EXTENSION OUTLINED IN BLUE**

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



Rev	Description	Date
01	NEW ROAD EXTENSION ADDED	06-06-2019
02	SHED TYPE VALUE SHOWN	22-06-2019
03	DESIGN/AMENDMENTS	02-06-2019
04	REVISIONS	02-06-2019

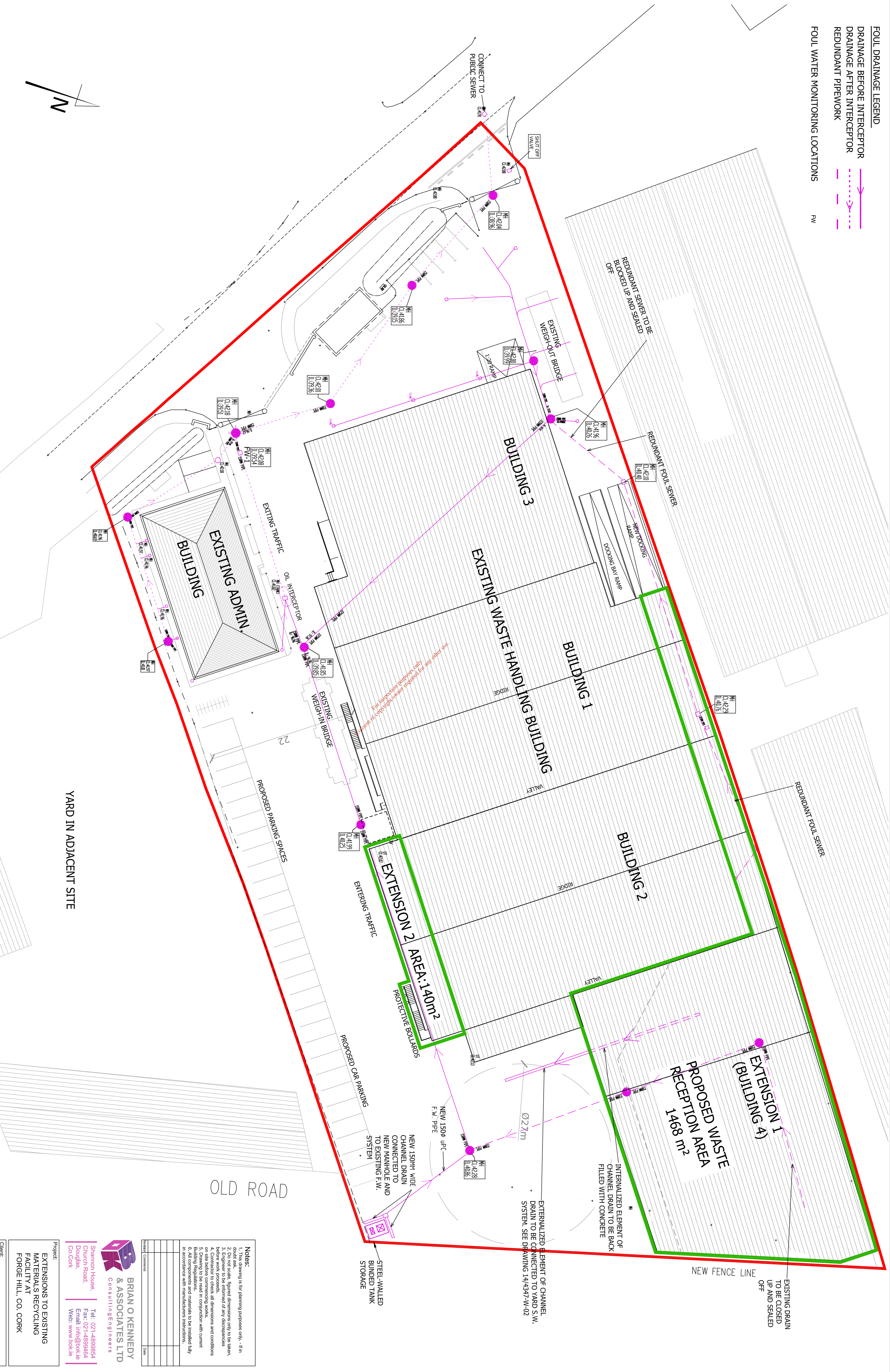
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**Project:**  
 EXTENSIONS TO EXISTING MATERIALS RECYCLING FACILITY AT FORGE HILL, CO. CORK  
**Client:**  
 FORGE HILL RECYCLING LTD

Scale	Date	Revision
1:250 @A1	Sept. 2019	R4

Drawn By: G. Forde  
 Checked By: G. Forde

- FOUL DRAINAGE LEGEND**
- DRAINAGE BEFORE INTERCEPTOR
  - DRAINAGE AFTER INTERCEPTOR
  - REDUNDANT PIPEWORK
  - FOUL WATER MONITORING LOCATIONS



**SITE BOUNDARY IN RED**  
**NEW EXTENSIONS IN GREEN**

SITE LAYOUT PLAN - FOUL DRAINAGE LAYOUT  
 SCALE 1:250

**NOTES:**

1. Drawing is for planning purposes only. - It is not to be used for construction.
2. Do not scale, figured dimensions only to be taken.
3. Engineer to be informed of any discrepancies.
4. Contractor to check all dimensions and conditions on site before commencing works.
5. Drawing to be read in conjunction with current specifications.
6. All components and materials to be installed fully in accordance with manufacturers instructions.

**Client:** FORGE HILL RECYCLING LTD

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

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**Drawing Title:** SITE LAYOUT PLAN  
**FOUL DRAINAGE LAYOUT**

Scale: 1:250 @A1  
 Date: March 2018  
 Drawing Number: 14/4347-PL-02  
 Revision: R0



A float activated submersible pump is used to control the water level in the chamber by pumping it out via a rising main to an inspection chamber (SW-1) at the western boundary.

There is a pipe from SW-1, which is fitted with a manually operated shut-off valve, to an unnamed stream to the west of the site. This stream joins the Tramore River, approximately 370m to the north of the site. Both tank chambers are fitted with alarms that alert staff when the water level is either too low in the western chamber or too high in eastern one.

Under normal conditions the roof-water flows directly to the balancing tank, while run-off from the paved areas other than those connected to the foul sewer passes through the oil interceptor and into the western chamber. During a heavy rainfall event the water level in the eastern chamber will increase if the inflow rate is higher than the pump capacity. If the tank fills the water will enter an overflow pipe near the top of the chamber. This pipe connects to SW-1.

In the event of a fire the emergency response actions include switching off the pump in the balancing tank and closure of the valve at SW-1.

#### 4.8.2 Proposed System

Rainwater run-off from the roofs of the extensions will be collected in the surface water drainage system that connects to the flow balancing tank, as shown on Drawing No. 4348-WL-04.

### 4.9 Facility Management

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 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.

### 4.10 Traffic Management

Currently there is a one way traffic movement system around the site. All waste transport vehicles and private cars enter the site through the southern gate and leave via the northern one. There are car parking spaces to the west of the processing building and along the southern site boundary.

- SURFACE DRAINAGE LEGEND**
- UNDERGROUND ROOF DRAINAGE
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**SITE BOUNDARY IN RED**  
**NEW EXTENSIONS OUTLINED IN BLUE**

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

NO. 1	ESTABLISHED SURFACE WATER AT THE PROPERTY BOUNDARY	22/09/2019
NO. 2	NEW BOUNDARY EXTENSION APPROVED	22/09/2019
NO. 3	START OF VALUE SHOWN	22/09/2019
NO. 4	AS-BUILT SURVEY	19/09/2019
NO. 5	DESIGN APPROVALS	05/09/2019
Author	Comments	Date

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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 SURFACE DRAINAGE LAYOUT**

Scale:	1:250 @A1	Date:	Sept. 2019	Revision:	
Drawn By:	G. Forde	Checking Number:	4348-WI-04	Revision:	R5

ATTACHMENT 3

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## **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<sup>2</sup> and 140 m<sup>2</sup>) 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.

<b>Class</b>	<b>Description</b>
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): <ul style="list-style-type: none"> <li>• Pre-treatment of waste for incineration or co-incineration.</li> </ul>

#### **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<sup>2</sup>) 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 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 from 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.

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