

# **CORBY ENERGY FROM WASTE FACILITY PERMIT APPLICATION**

**EPR/LP3644QK/A001**

**Appendix D – Fire Prevention Plan**

**Encyclis Limited**

JER9793  
Fire Prevention Plan  
1  
2  
20 January 2022

## Quality Management

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# 1 INTRODUCTION

1.1.1 This fire prevention plan (FPP) has been produced for Encyclis Limited (Encyclis) to support the Corby Energy from Waste (EfW) facility permit application. During the production of this document consideration has been given to the relevant requirements detailed within the Environment Agency (EA) Guidance on fire prevention<sup>1</sup> and the Environment Agency FPP template<sup>2</sup>.

1.1.2 The purpose of this FPP is to detail the current measures that are planned to reduce the risk of a fire starting and to ensure that should a fire occur appropriate measures are in place so that it is identified and managed effectively. It should be recognised that this document has been prepared at an early stage of the project and prior to full details on the final proposals being available. Of note a site-specific fire strategy and insurers requirements are not yet confirmed for the project. Whilst full details for all aspects of fire prevention and management are not confirmed the plant will need to meet both the EA and insurers requirements and implement equipment and systems designed to the appropriate recognised industry standards (such as NFPA, BS, UKAS etc.). Once full details are available this FPP will be updated.

## 1.2 Site Details

**Operator Name:** Encyclis Limited

**Site Name:** Corby EfW

**Site Address:** Shelton Road, Willowbrook East Industrial Estate, Corby NN17 5XH

1.2.1 The Site is located within a light industrial setting and c. 2.2 km north-east of Corby Town Centre. The closest residential property is approximately 750 m from the site boundary.

1.2.2 The Site comprises an approximate rectangular plot measuring c. 2.4 hectares. To the north the site is bound by the Northern Stream, green space and woodlands, to the east by Shelton Road, to the south by industrial units and to the west by car/vehicle storage.

## 1.3 Description of Permitted Activities

1.3.1 The Corby EfW will include the following activities:

- Waste reception, handling and storage.
- A single moving grate furnace.
- Electricity generation, with the potential for heat generation should a suitable heat offtake is found.
- Flue gas treatment, including selective non-catalytic reduction (SNCR), dry acid gas abatement and injection of activated carbon and a bag filler.
- Storage, handling and removal of residues from the site.
- Standby/auxiliary diesel generator

1.3.2 The EfW will be capable of processing circa 357,408 tpa of non-hazardous waste per annum, generating circa 30.76 MW of electricity.

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<sup>1</sup> Environment Agency, Fire prevention plans: environmental permits, updated 11 January 2021. Available online: <https://www.gov.uk/government/publications/fire-prevention-plans-environmental-permits>

<sup>2</sup> Environment Agency, Template for fire prevention plan: environmental permits, updated 11 January 2021. Available online: <https://www.gov.uk/government/publications/fire-prevention-plans-environmental-permits>

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- 1.3.3 The waste fuel will be transported by road to the EfW. The tipping hall will be enclosed with access via a single automatic roller shutter door which will remain shut other than for access. The tipping hall floor will be concrete, suitable for HGVs.
- 1.3.4 Waste will be combusted in a moving grate furnace at a high temperature. The furnace will be designed to achieve a minimum temperature of 850°C for 2 seconds. White diesel will be used to start and shutdown the plant but once operating temperatures are reached, waste will normally be burned without the need for any auxiliary fuel.
- 1.3.5 Heat from the hot flue gases leaving the furnace will be recovered as steam. This steam will be used to generate electricity in a single steam turbine and generator. A small amount of electricity will be used to meet the parasitic load of the facility with the majority being distributed to the national grid. Although at the time of this application the facility is expected to generate electricity only the EfW will be capable of combined heat and power (CHP) operation should a heat user be secured in the future.
- 1.3.6 Steam will be exhausted at low pressure from the turbine and condensed back into water. The water will then be pumped back into the boiler.
- 1.3.7 A flue gas treatment system will be provided to clean the gases prior to discharge. The abatement systems to be provided will include NOx abatement using ammonia; acid gas abatement using lime, dioxins, furans and volatile heavy metals abatement using activated carbon and a bag filter for abatement of particulates (including particulate phase heavy metals).
- 1.3.8 Cleaned flue gases will be discharged from a single 75 m high flue stack. Emissions from the stack will be monitored in line with the BAT requirements.
- 1.3.9 Bottom ash produced from the combustion process will be sent offsite to a third party ash processing plant for recovery.
- 1.3.10 APC residues will be recirculated into the flue gas treatment process and any surplus sent for treatment at a suitably permitted facility.

## 1.4 Site plans

- 1.4.1 The plans included within the FPP are as follows:
- Drawing 1 – Drainage Plan
  - Drawing 2 – Site Sensitivity Plan
  - Drawing 3 – Layout Plan including Fire Prevention Detail
  - Drawing 4 – Tipping Hall Layout Plan including Fire Prevention Detail

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## 2 USING THIS FIRE PREVENTION PLAN

### 2.1 Location of FPP

2.1.1 The current FPP will be stored in the site office in hard copy form. A digital copy will also be kept as part of the environmental management system (EMS).

### 2.2 Who this plan is for

2.2.1 This plan should be made available to and read by the following people:

- site staff;
- contractors working on site; and
- local fire officers.

### 2.3 Testing the plan and staff training

2.3.1 Awareness of the FPP such as where it is located and when to use it will be included in staff inductions. Toolbox talks will take place regularly and will

2.3.2 include a refresher regarding the FPP content and details of any updates to it. Every 6 months a fire drill will be conducted. These exercises will include but not be limited to testing:

- actions required of staff to prevent a fire occurring;
- what to do during a fire if one breaks out; and
- any site-specific detail that is required.

2.3.3 Exercises will be designed to fully test this FPP.

2.3.4 Personnel will be assigned and trained to ensure the following duties are covered:

- safe evacuation of buildings to muster points in the event of a fire alarm;
- a final check of building areas to ensure no one remains;
- to ensure all site persons are accounted for, e.g. by taking a register of persons on site;
- collating and recording information on the incident;
- liaison with external firefighting teams;
- communicating with Senior Management, External Communications, other Regulators,
- neighbours and media, as required.

2.3.5 Key operational staff will be trained in the appropriate use of firefighting systems and when and how these should be used, and equally importantly when they need to put their own safety ahead of fighting a fire (i.e. when the operator should not use the firefighting systems). Note that this applies particularly to the use of manual firefighting systems. Specific training of staff tasked to assist with fire evacuations is also required to ensure that correct actions are taken in an emergency and that efficient evacuation, shutting down of equipment and first aid firefighting can be carried out.

2.3.6 Training will be carried out on induction with refresher training given to key staff on a 12 monthly basis. Training records will be stored and maintained. As a minimum, records will include details relating to the date, type of training and training provider.

2.3.7 All contractors and visitors to the site will be given a fire safety briefing, confirming the actions to take in the event that they identify a fire, as well as the actions to follow should a fire alarm sound.

2.3.8 All staff, contractors and visitors will be encouraged to report any potential safety risk, including an incident that had the potential to cause a fire. Records will be made of any such report, and appropriate follow-up action carried out.

## 3 TYPES OF COMBUSTIBLE MATERIALS

### 3.1 Combustible Waste

3.1.1 The main focus of this FPP is the principal combustible material stored at the facility, namely wastes, consisting of residual non-hazardous municipal solid waste and similar commercial and industrial wastes.

3.1.2

3.1.3 Table 3-1 details the European Waste Catalogue (EWC) codes accepted at the site and their descriptions. Only wastes detailed in the table below are accepted at the site.

**Table 3-1. European Waste Catalogue Codes accepted at Corby EfW**

<b>Waste Code</b>	<b>Description</b>
<b>02</b>	<b>Wastes from agriculture, horticulture, aquaculture, forestry, hunting and fishing and food preparation and processing</b>
	<b>Wastes from agriculture, horticulture, aquaculture, forestry, hunting and fishing</b>
02 01 03	Plant-tissue waste
02 01 04	Waste plastics (except packaging)
02 01 10	Waste metal
	<b>Wastes from the preparation and processing of meat – fish and other foods of animal origin</b>
02 02 03	Materials unsuitable for consumption or processing
	<b>Wastes from the baking and confectionary industry</b>
02 06 01	Materials unsuitable for consumption or processing
<b>03</b>	<b>Wastes from wood processing and the production of panels and furniture, pulp, paper and cardboard</b>
	<b>Wastes from wood processing and the production of panels and furniture</b>
03 01 01	Waste bark and cork
03 01 05	Sawdust, shavings, cuttings, wood, particle board and veneer other than those mentioned in 03 01 04
	<b>Wastes from pulp, paper and cardboard production and processing</b>
03 03 07	Mechanically separated rejects from pulping of wastepaper and cardboard
03 03 08	Wastes from sorting of paper and cardboard destined for recycling
<b>04</b>	<b>Wastes from the leather, fur and textile industries</b>
	<b>Wastes from the textile industry</b>
04 02 10	Organic matter from natural products (for example grease, wax)
04 02 21	Wastes from unprocessed textile fibres
04 02 22	Wastes from processed textile fibres
<b>15</b>	<b>Waste packaging; absorbents, wiping cloths, filter materials and protective clothing not otherwise specified</b>
	<b>Waste packaging (including separately collected municipal packaging waste)</b>
15 01 01	Paper and cardboard packaging
15 01 03	Wooden packaging
15 01 04	Metallic packaging
15 01 05	Composite packaging
15 01 06	Mixed packaging
15 01 09	Textile packaging
<b>17</b>	<b>Construction and demolition waste (including excavated soil from contaminated sites).</b>
	<b>Wood, glass and plastic</b>
17 02 01	Wood



<b>Waste Code</b>	<b>Description</b>
<b>18</b>	<b>Wastes from human or animal health care and/or related research (except kitchen and restaurant wastes not arising from immediate health care)</b>
	<b>Wastes from natal care, diagnosis, treatment or prevention of disease in humans</b>
18 01 04	Wastes whose collection and disposal is not subject to special requirements in order to prevent infection (for example dressings, plaster casts, linen, disposable clothing, diapers)
<b>19</b>	<b>Wastes from waste management facilities, off-site waste water treatment plants and the preparation of water intended for human consumption and water for industrial use</b>
	<b>Wastes from physico/chemical treatment of waste</b>
19 02 03	Premixed wastes composed only of non-hazardous wastes
	<b>Wastes from aerobic treatment of solid wastes</b>
19 05 01	Non-composted fraction of municipal and similar wastes
19 05 02	Non-composted fraction of animal and vegetable waste
19 05 03	Off-specification compost
	<b>Wastes from anaerobic treatment of waste</b>
19 06 04	Digestate from the anaerobic treatment of municipal waste
19 06 06	Digestate from anaerobic treatment of animal and vegetable waste
	<b>Wastes from the mechanical treatment of waste</b>
19 12 01	Paper and cardboard (only if contaminated and unsuitable for recycling at the paper mill)
19 12 07	Wood not containing dangerous substances
19 12 08	Textiles
19 12 10	Combustible waste (refuse derived fuel)
19 12 12	Other wastes from mechanical treatment of wastes not containing dangerous substances
<b>20</b>	<b>Municipal wastes (household waste and similar commercial, industrial and institutional wastes) including separately collected fractions</b>
	<b>Separately collected fractions (except 15 01)</b>
20 01 01	Paper and cardboard
20 01 10	Clothes
20 01 11	Textiles
20 01 38	Wood other than that containing dangerous substances
20 01 39	Plastics
	<b>Garden and park wastes (including cemetery waste)</b>
20 02 01	Biodegradable waste
	<b>Other municipal wastes</b>
20 03 01	Mixed municipal waste
20 03 02	Waste from markets
20 03 06	Waste from sewage cleaning
20 03 07	Bulky waste

3.1.4 See Sections 5 and 6 for further detail regarding management of combustible waste.

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### 3.3 Other Combustible (Non-waste) Materials

3.3.1 Table 3-2 provides details of the other combustible (non-waste) materials that are stored on site and provides an indication of the total amounts and form of material stored, as well as the method for management.

**Table 3-2 Other combustible and/or flammable materials**

Combustible material	How the material is stored	Volume stored on site
White diesel	In oil tanks designed for outdoor installation with rain protected oil catch basin and rainwater drainage	250m <sup>3</sup>
Powdered activated carbon	1 storage silo	50m <sup>3</sup>
Hydrated lime	2 storage silos	330m <sup>3</sup>

3.3.2 Smaller quantities of boiler water treatment chemicals will also be stored onsite in proximity to the water treatment plant. Similarly hydraulic oils, lubricating oils and other maintenance materials will be stored on site in smaller quantities. The precise location of the storage area for these oils and maintenance materials is not confirmed however it is likely to be in proximity to the maintenance workshop which is at distance (>6m) from the waste bunker.

3.3.3 Diesel oil is classified as flammable however, it is not likely to self-combust under ambient storage conditions.

3.3.4 Gas cylinders (for the continuous emissions monitoring system, fire protection etc.) will be stored within purpose-built dedicated storage facilities that will be kept locked/secured. Areas for the storage of gas cylinders are yet to be confirmed however they will be located away from the waste bunker (>6m).

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## **4 MANAGE COMMON CAUSES OF FIRE**

### **4.1 Arson**

- 4.1.1 The site boundary is secured within a 2m fence that is constructed around the site boundary. Intruder alarms and CCTV cameras are in place around the site. A gate house is in place at the site and all vehicles that access the site will pass the gate house. Access to the site is limited to specified entry point as shown in Drawing 3.
- 4.1.2 The site is manned 24 hours per day all year.
- 4.1.3 Further, the waste bunker (the primary source of combustible waste) is located within a building away from the site boundary.

### **4.2 Plant and Equipment**

- 4.2.1 Fires may be caused at the site by the failure of plant and equipment in proximity to the waste bunker. Regular maintenance, checks and inspections are undertaken on static and mobile plant and equipment. This ensures that they are functioning correctly and their potential for fire initiation is minimised. Site maintenance schedules will include details the periodicity of the maintenance and inspection and records of completed maintenance and checks will be kept on file.
- 4.2.2 When not in use mobile plant (including vehicles) will be parked a safe distance away from waste storage and processing areas. The majority of mobile plant will be external delivery vehicles and it will be a general provision that all vehicles delivering or recovering waste from the site must be kept in good working order.
- 4.2.3 Vehicles and mobile plant will have fire extinguishers fitted provided.
- 4.2.4 Mobile plant will be maintained in accordance with the maintenance procedures as outlined in Encyclo Policies and Procedures. This will include daily vehicle pre-use inspection checks, reporting of all defects to site management and regular clearing of detritus from around the mobile plant. All mobile plant will be subject to regular service inspections in accordance with manufacturer's recommendations. Daily inspections of the exhaust will check for blockages or excess build-up of material such as dust.
- 4.2.5 When not in use mobile plant will be stored away from the waste bunker. The location of the mobile plant storage is indicated on Drawing 3

### **4.3 Electrical Faults Including Damaged or Exposed Electrical Cables**

- 4.3.1 Electricians at the site are certified and regularly maintained by a qualified electrician.
- 4.3.2 Inspections of electrical equipment will be carried out in accordance with the inspection frequency detailed within the maintenance schedules. These inspections will be recorded. The prevention of fire will be considered when setting these maintenance frequencies.

### **4.4 Discarded Smoking Materials**

- 4.4.1 Smoking is only permitted at the site within designated smoking shelters which are provided for this purpose. Designated smoking areas are located a considerable distance (considerably more than 6 m) from the stored combustible waste and processing activities.

### **4.5 Hot Works Safe Working Practices**

- 4.5.1 Hot works are not generally carried out within the waste bunker area. If hot works were required, where possible these works would be completed in the Workshops which are located away from waste storage areas.

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- 4.5.2 A permit to work for hot works will be used if hot works are required in proximity to combustible waste storage areas which will consider appropriate preventative measures to minimise the risk of initiating a fire. A fire watch after any hot works will be included in the permit which will include details of when these should be undertaken. Only once the fire watch has been completed will the permit to work be returned and signed off by the site permit office. Appropriate measures will be recorded and those undertaking the work must comply with recommendations.

## **4.6 Industrial Heaters**

- 4.6.1 Industrial heaters will not be installed at the site.

## **4.7 Hot Exhausts and Engine Parts**

- 4.7.1 Mobile plant are subject to routine inspections (see Section 4.2). This includes checks for dust on mobile plant exhausts. Should dust accumulation be found, the plant will be cleaned following a safe system of work.

### **Fire Watch Procedures**

- 4.7.2 As detailed in section 4.2, mobile plant and other onsite vehicles are parked away from the waste storage bunker when not in use and measures are in place to prevent build-up of dust on hot parts including vehicle exhausts.
- 4.7.3 Prior to the end of each shift there is a final check of the mobile plant and other vehicles exhausts. Build-up of dust is prevented as set out in 4.11. The separation distance of at least 6 m between the stored wastes and any hot exhausts or engine parts minimises the chances of a fire occurring.

## **4.8 Ignition Sources**

- 4.8.1 Hot works, exhausts and engine parts are managed in sections 4.2, 4.5 and 4.7 above.
- 4.8.2 The furnace is physically separate from the bunker, with waste being fed by the operational overhead crane. The waste in the feed chute will act as a gas tight seal between the combustion chamber and the bunker.

## **4.9 Batteries**

- 4.9.1 Loads that consist mainly of batteries are not accepted, minimising the risk of ignition from batteries. End of Life Vehicles (ELVs) are not accepted at the site. Therefore, the risk of fire associated with ELV batteries is not applicable.

## **4.10 Leaks and Spillages**

- 4.10.1 Spill procedures will be in place and will cover immediate response to spills in terms of isolating the spill (from drainage, traffic etc.), using spill kits and cleaning the spill up as soon as practicable. Spill kits will be available in proximity to the storage tanks for liquid reagents and fuel oils.
- 4.10.2 The location of storage of liquid reagents is remote from the main source of combustible waste (the waste bunker). The main fuel oil storage tank will be protected by crash barriers.
- 4.10.3 All filling operations will be supervised by a trained Operator.
- 4.10.4 Vehicles at the site will consist of mainly waste delivery vehicles or vehicles that are delivering other raw materials. It will be a contractual requirement for haulage contractors to undertake preventative maintenance on vehicles used to deliver materials to the site. Vehicles that are owned by Encyclis are subject to routine planned maintenance schedules.

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## 4.11 Build-up of Loose Combustible Waste, Dust and Fluff

- 4.11.1 Operatives at the site undertake daily inspections to assist with maintaining a high standard of housekeeping and to avoid the build-up of combustible waste and dust in unsuitable areas.
- 4.11.2 General housekeeping will include a daily clean-up of the tipping hall.
- 4.11.3 The area around the waste feed chute (where accessible during operation) will be inspected for any fluff/ dust build-up on a weekly basis.
- 4.11.4 On a weekly basis mobile plant and waste cranes (including hydraulics and motors) will be inspected as part of the routine maintenance regime. Any fluff/dust and debris that is identified will be removed as required.
- 4.11.5 A clean-up of the tipping hall and the waste bunker will be undertaken during the annual shutdown. This will include the removal of full/dust build up from equipment and building structure that are not accessible during the operation of the plant. These inspections will be managed in accordance with site management system procedures for housekeeping.

## 4.12 Reactions between Wastes

- 4.12.1 Waste pre-acceptance and waste acceptance procedures will be in place and are designed to ensure that only waste that is suitable for acceptance at the site and accords with the permitted wastes in the permit are accepted.
- 4.12.2 Waste in the bunker will be visible to the Control Room operatives. In the event of any visible signs of heating, appropriate action would be taken.
- 4.12.3 Section 4.9 above confirms that loads consisting primarily of batteries are not accepted at the site. Similarly loads containing only oils or rags soaked in oils and chemicals will not be accepted. In the event that these materials are present in the waste delivered to the bunker management procedures will ensure the wastes are regularly mixed and waste storage times will ensure that as far as practicable wastes are not stored more than 5 days minimising, section 5 for further details.

## 4.13 Waste Acceptance and Deposited Hot Loads

- 4.13.1 Waste acceptance procedures will be in place and will include details relating to the management of hot loads. This will include procedures for checking for hot loads and management of any identified hot loads
- 4.13.2 If a hot load is identified whilst in the delivery vehicle, then it will be directed to the waste quarantine area. The quarantine area is located as shown on Drawing 3 and is located at least 6m from the site perimeter, any buildings and other combustible/ flammable materials. This area is labelled "HOT STAND" in the site layout plan.
- 4.13.3 Loads will be inspected by an Operator upon arrival at the tipping hall/ bays. As part of the waste reception and acceptance procedures (outlined in the site management system) hot loads will be identified. One of the waste bunker service bays will be dedicated for waste inspection. The purpose of these inspections is to avoid hot loads being deposited in the bunker. There is a dedicated quarantine area that is designed for a single waste delivery vehicle. In the event that a hot load arrives, the vehicle shall be directed to the quarantine area.
- 4.13.4 Hot loads being delivered into the bunker will be minimised through the use of the waste acceptance procedures. This will minimise the likelihood of self-combustion. Furthermore, fire detection and fire suppression systems as detailed within section 9 and 10 are installed in this area to ensure should a fire start that it is identified quickly, and firefighting measures automatically triggered.

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## 4.14 Hot and dry weather

- 4.14.1 The waste storage bunker is located within a building which will protect the waste from direct sunlight. Measures to minimise the build-up of heat are set out in Section 5. These measures are considered appropriate to minimise external heating even during hot and dry weather.

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## **5 PREVENT SELF-COMBUSTION**

### **5.1 Manage Storage Time**

- 5.1.1 Waste acceptance procedures require that all incoming waste deliveries to the waste bunker are recorded. The weighbridge will be used to record (in metric tonnes) quantities of incoming and outgoing material for the site. This means that accurate figure for waste accepted will be known. Records of all waste accepted will be recorded and kept electronically.
- 5.1.2 Waste may be present in the feed chute/hopper during unplanned outages. A fire watch will be deployed to monitor waste in the event of a short-term outage. This fire watch will be in place until the plant has re-started. In the event of a long-term shutdown waste will be removed.
- 5.1.3 Bunker management procedures are designed to regularly mix the waste and to also feed the waste feed chute.
- 5.1.4 The operational crane will take waste from the back of the bunker to the feed chute, ensuring older material is moved first. Whilst waste will build up during the week, over the weekend, waste levels in the bunker will drop to minimal levels, thereby minimising the potential for prolonged storage of waste.
- 5.1.5 The bunker design and management procedures are aimed at storing waste typically for no longer than 5days which is well below the maximum of 6 months or the limit of 3 months where additional measures are required.

### **5.2 Monitor and Control Temperature**

- 5.2.1 Temperature is controlled by regular mixing of waste within the bunker and maintaining relatively short storage times as set out in paragraph 5.1.5, and shielding combustible waste from sunlight by locating the waste bunker within a building (paragraph 4.14.1).
- 5.2.2 Site operatives are required to note any general observation of signs of material at the site heating as soon as they are identified.
- 5.2.3 The moisture content of the waste is likely to be high (typically around 20%) and as the waste is mixed in the bunker, waste that is drier, will be dampened through the mixing process.
- 5.2.4 The automatic fire detection system for the waste bunker will include a thermal imaging camera system which will trigger an alarm in the control room should pre-set temperature parameters be exceeded. Further details on the fire detection system are provided in Section 9. Alarm trigger temperatures will be set during the detailed design phase.
- 5.2.5 It is not expected that the waste accepted at the site (MSW and similar wastes) will have a high exposed metal content. Loads that comprise of only fine/dusty waste material or only of waste metal will be accepted.

### **5.3 Waste Bale Storage**

- 5.3.1 Baled waste will not be stored on site, therefore requirements for storage of waste bales are not applicable.

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## 6 MANAGEMENT OF WASTES

### 6.1 Managing Waste Piles

#### Maximum pile sizes for the waste on your site

- 6.1.1 FPP guidance relating to pile management (maximum volumes etc.) is not considered directly applicable to the storage of waste in bunkers.
- 6.1.2 Incoming waste as previously described in paragraph 3.1 will be stored in the waste bunker. The usable capacity of the waste bunker when fully stacked will hold circa 10,500 m<sup>3</sup> of waste (equivalent to 5,100t). It is expected that only circa 65% of the usable capacity of the waste storage volumes will be used during normal operation.
- 6.1.3 Whilst the volume of waste stored in the bunker is large, storage times are relatively short (see Section 5.1) and the bunker management procedures will minimise heat build-up. Upon delivery and prior to incineration, waste is tipped into the waste bunker. A waste mixing procedure is in place to ensure the grate is fed with a homogenized mix. This mixing reduces the likelihood of temperatures increasing and minimises standing time of waste by processing it in order of delivery.
- 6.1.4 Monitoring for heat build-up will be required as part of the waste bunker management procedures and will include the use of thermal imaging and visual monitoring for hotspots.

#### Storing waste materials in their largest form

- 6.1.5 Waste materials will be stored and processed as received



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## 7 PREVENT FIRE SPREADING

### 7.1 Separation Distances

7.1.1 The use of correct separation distances will prevent the spread of a fire. The waste will be stored within a single bunker rather than piles; therefore, the separation distance of 6 m between storage piles does not apply to the bunker. However, there is a separation distance of at least 6 m between the site perimeter the waste bunker and other combustible or flammable materials.

### 7.2 Fire Wall Construction Standards

7.2.1 The level of hazard from a fire can be reduced through the compartmentation in building. Walls and floor are provided to separate each fire area. Final details of fire wall construction standards will be available during the detailed design stage however this will include the following:

- The waste bunker will be fire segregated from other surrounding areas (except the tipping hall) by FR120 fire resistant construction.
- The bunker structure itself has a 120-minute fire rating.
- The glazing between the control room and the waste bunker will have at least 60minutes (integrity) glazing and will be provided with a sprinkler drencher system to wet the glazing in the event of a fire. Together these will achieve at least 120-minute fire rating.
- The general construction materials for the buildings, will be tested to high standards such that these materials will provide an equivalent, if not better level of safety than that required to comply with NFPA 8502 and the Building Regulations.

### 7.3 Storing Waste in Bays

7.3.1 This is not applicable; no waste is stored in bays at the site.

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## 8 QUARANTINE AREA

- 8.1.1 A Quarantine Area is a place at the site where burning waste can be isolated to extinguish them. The Quarantine Area is required to be within the boundary of the site for which a permit is held.
- 8.1.2 Any waste that is alit within the bunker would be managed with using the bunker fire suppression systems detailed in section 10.
- 8.1.3 The quarantine area will only be used for the segregation of incoming hot loads that are detected prior to offloading. The quarantine area is shown within Drawing 3 and is sized to allow quarantine of a single waste delivery vehicle. This area provides at least a 6 m separation distance from the site boundary and buildings.

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## 9 DETECTING FIRES

9.1.1 A detection and alarm system (see also section 5.2) will be installed in the tipping hall and waste bunker area. Final details of the systems to be installed will form part of the detailed design however the following will be provided as a minimum:

- A fire detection system will be in place within the tipping hall to quickly identify a fire and will be linked to the tipping hall suppression system (see section 10).
- A further fire detection system will be installed in the waste bunker area and will cover the waste bunker and the feed hoppers.
- A thermal imaging camera system will be provided for the waste bunker area. The system is connected to the Control Room and are displayed for Operators via control room monitors.
- Manual fire alarm buttons are provided in strategic position and along escape routes for alarm.

### 9.2 Certification for the systems

9.2.1 The design, installation and maintenance of the automatic fire detection systems will be covered by a third-party certification scheme such as UKAS or other appropriate recognised standard such as a British Standard. Once designed and installed supporting evidence of this accreditation will be incorporated within the FPP.

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## 10 SUPPRESSING FIRES

### 10.1 Suppression Systems in Use

- 10.1.1 Fire suppression be provided and will be automatically triggered by the fire detection system to aim to ensure that a fire is recognised as early as possible so it can be tackled quickly and with a view that where possible a fire would be extinguished within 4 hours.
- 10.1.2 The systems that will be in place at the site will be confirmed at the detailed design stage but are expected to include the following:
- Waste bunker sprinklers
  - Two automatic waste bunker water cannons are proposed. The quantity selected will be confirmed during the detailed design stage.
  - A dedicated water spray system over the feed chute opening
- 10.1.3 The tipping hall will be provided with automatic sprinkler protection throughout.
- 10.1.4 If smouldering waste is detected in the bunker, the bunker water cannons would be activated to eliminate smouldering in the identified area. Waste from the targeted area will be fed directly into the feed chute, once the smouldering is eliminated.
- 10.1.5 A further sprinkler system will protect the waste feed chute.
- 10.1.6 The plant is equipped with an emergency diesel generator that can provide essential power for the firefighting and protection systems in the unlikely event of loss of internal power from the plant.
- 10.1.7 In the very unlikely event that the emergency power would also be lost, then the Fire and Rescue Service will be contacted to provide onsite standby until such time as power is restored.

### 10.2 Certification for the systems

- 10.2.1 The design, installation and maintenance of the automatic fire suppression systems will be covered by a third party certification scheme such as UKAS or other appropriate recognised standard such as a British Standard. Once designed and installed supporting evidence of this accreditation will be incorporated within the FPP.

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# 11 FIREFIGHTING TECHNIQUES

## 11.1 Active Firefighting

- 11.1.1 The design of the site has allowed for active firefighting.
- 11.1.2 If any type of fire detector is activated or manual call point an initial first stage alarm will be triggered automatically. Visual and audible indication will be provided at the fire alarm panel including indication of the zone in which the detection has occurred.
- 11.1.3 The plant fire alarm sounders will also be activated with a distinctive first-stage intermittent warning sound and staff with no fire-fighting training will evacuate the buildings with the exception of staff manning the control room.
- 11.1.4 It is expected that the first-stage alarm duration will allow time for personnel to reach the area in alarm (Note; the duration is subject to further agreement with the approving bodies).
- 11.1.5 Trained personnel will investigate and determine the situation (the “early investigation” period). The investigating personal will have the following options during the early investigation period:
- If it is decided that it is a false alarm activation, the control room staff will be notified to cancel the first stage alarm.
  - Manage any fire if still in its initial stages and within their capabilities and then inform the control room staff to stop the first-stage alarm if they have effectively managed/ extinguished the fire; or
  - Manually trigger the second-stage alarm if it is decided that the fire is serious and/or outside their competences by pushing a call point within that fire zone whilst exiting the building. A manually activated push-button is also mounted on the fire alarm control panel in the control room which automatically puts the warning system into the evacuation mode
- 11.1.6 If, during the initial investigation period, the first-stage alarm timer expires or if a second detector in the same zone is triggered or a manual call point is triggered, the second-stage evacuation alarm will be automatically initiated providing a distinctive second-stage continuous warning sound.
- 11.1.7 The main fire alarm panel will be located in the control room with a repeater panel located in the reception lobby of the workshop/ admin building.
- 11.1.8 If it was obvious that site operatives would be unable to extinguish the fire immediately and the second-stage alarm was activated, a decision would be made by the appropriate person to also contact the Fire and Rescue Service (FRS) who would attend the site to carry out the fire fighting. There is access for emergency vehicles in the south-east corner of the site. The site road design will provide access for the fire and rescue service. Access routes for the FRS are shown in Drawing 3.
- 11.1.9 Emergency contact procedures are in place with the night security personnel and can have first responders on site within 10 minutes.
- 11.1.10 If it was determined that the fire could be mitigated by the site operatives there are various firefighting techniques that could be utilised.
- 11.1.11 If the FRS were required, fire water supplied from the water sources identified in the section 12 would then be used to extinguish the fire.

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## 12 WATER SUPPLIES

- 12.1.1 A single above ground firewater storage tank will supply water for firefighting with a capacity of at least 900m<sup>3</sup>.
- 12.1.2 Fire water will be supplied by a fire water main ring, fed with water from the fire water tank via the fire water pumps. The pumps are expected to include a combination of electrically driven and one diesel engine driven pumps to ensure firewater supply in the event of a power outage.
- 12.1.3 Fire hydrants will be located across the whole plant area. Details of the location of fire hydrants will be confirmed during the detailed design. Once confirmed this information will be included within the FPP.
- 12.1.4 The buildings are also protected with hose reels located indoors and connected to the firewater main ring, where deemed necessary.

### 12.2 Water Supply Required Calculation

- 12.2.1 The requirements for water supplies for waste piles do not directly apply to this operation as waste is stored in a bunker. The bunker design and management which includes the provision of firewalls, thermal imaging of waste in the bunker alongside detection and suppression systems provides robust systems to prevent a fire in the first place, allow fast detection and initial suppression should a fire start and subsequently minimise the fire-fighting water requirements in the event of a fire occurring.
- 12.2.2 As stated in Section 6, the largest amount of waste that will be stored within the waste bunker is 10,482m<sup>3</sup> (when fully stacked). Following the FPP requirements the site would require 12,584,689 litres.
- 12.2.3 However, due to the measures mentioned in section 12.1.1 a water supply of at least 900m<sup>3</sup> (900,000litres) is provided at the site and will provide sufficient supplies to manage a fire incident.

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## **13 MANAGING FIRE WATER**

### **13.1 Containing the run-off from fire water**

- 13.1.1 Wastewaters generated from firefighting will be retained within the EfW facility.
- 13.1.2 The waste bunker itself is water tight and can hold water from fire-fighting up to the tipping hall floor level. Full details on the capacity of the collection system will be subject to confirmation during the detailed design, however it will be a requirement that all water from firefighting can be held within the site. Details to support this will be incorporated as an update to this FPP.
- 13.1.3 The waste bunker, settling basin, attenuation basins, attenuation pond and the oily water separator can all be used for fire water retention. A penstock valve on the exit from the attenuation pond will be closed in the event of a fire that requires active fire fighting with water.

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## 14 DURING AND AFTER AN INCIDENT

### 14.1 Dealing with issues During a Fire

- 14.1.1 If a fire were to occur, the duty first responder would complete an initial assessment period. A decision would then be made about the firefighting strategy that would be most appropriate to implement. An assessment would be undertaken on the associated risks and a decision would then be made on whether operation could continue on site.
- 14.1.2 Processing would immediately stop if it was judged that it was not safe to continue operations. No deliveries of additional unprocessed material would be permitted to the site. No deliveries would be received until the position was assessed by the responders to be safe again.
- 14.1.3 In the case of such an emergency notification of persons and organisations will be carried out in the following order:

**Table 14-1 Emergency Communications Actions**

Action Order	Communication Actions
1	Contact the emergency services FIRST
2	Contact all relevant Encyclis personnel using the Internal Encyclis contacts list in <b>Appendix C</b> . This will be a time-consuming process so allocate this task to another employee (or more than one). If a Encyclis person on the list does not reply to you <b>MUST</b> leave a message <b>NOTE</b> - for major fires you <b>MUST</b> ensure that Encyclis Management are also informed
3	Contact relevant external persons/organisations as relevant (see contacts list Appendix A). Note - the site permit or other systems may require a fire incident to be reported to EA, HSE or similar.
4	Repeat contacting internal Encyclis persons if there is a significant change or development in the emergency, such as fire starting to run out of control, the spread of a fire etc
5	Repeat contacting internal Encyclis persons when the emergency is over.
6	If an emergency means that the site is closed, allocate a Encyclis person to communicate with all of your employees to ensure they do not attend site. And inform them once the site is open again so that they can return to work

- 14.1.4 The main access to the site is via the main access road with entrance off Shelton Road Drawing 3 identifies the vehicle access route for external fire services that can be used in the event of a fire.
- 14.1.5 A list of emergency contacts is provided in Appendix A.

### 14.2 Notifying Residents and Businesses

- 14.2.1 Given the proximity of adjacent sites and neighbours, there will be arrangements in place to inform nearby receptors as to the progression of the fire event where it is deemed that the adjacent industrial facilities or residential properties nearby may be affected.
- 14.2.2 The nearest business and residential receptor are directly adjacent and 750m from the site. Corby Business Academy is c1.5km from the site.
- 14.2.3 Nearby business and residents will be notified of a major fire via the rolling routes:
- Press release
  - Website updates
  - Face-to-face communication (where possible)
  - Social media updates.
- 14.2.4 The criteria for a major fire would be agreed in conjunction with the FRS.



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## 14.3 Clearing and Decontamination after a Fire

14.3.1 After a fire, the facility will be cleaned and decontaminated. Any contaminated fire water removed by a specialist contractor to a suitably licensed facility.

14.3.2 Procedures will be in place for sampling and testing of the water and suitable disposal arrangements will be in place. The process for handling, testing and disposal of fire waters is:

- It will be tested for pH and COD.
- An appropriate removal route will then be determined (if water is clean it can be pumped out and into the normal site drainage system). If water is determined to require further testing / treatment before disposal then it will be pumped out and removed by a specialist contractor.
- Any remaining waste in the waste bunker will be incinerated.

14.3.3 Details of specialist contractors who can provide clean-up services following fire incident will be added to the emergency contacts in Appendix A. Once the drainage system has been confirmed as clear of contaminated fire water, the penstock valves will be re-opened. Any affected waste remaining in the bunker will either be removed off site for treatment or disposal by a third party or where deemed suitable will be incinerated.

## 14.4 Making the Site Operational after a Fire

14.4.1 After a fire, the following steps must be taken before the site can become operational again:

- Removal of all burnt materials. These would be taken off-site for landfill.
- Clean the Quarantine Area (if used) and ensure all unburnt combustibles are removed.
- Investigate the cause of the fire.
- Once the cause of the fire is discovered, dissipate this information to staff members to minimise the potential for the incident to reoccur.
- Check all equipment and make sure it is undamaged and is working appropriately.
- Dispose of the fire water (see also Section 14.3).

14.4.2 A full review of the FPP will be carried out in conjunction with the FRS to ensure any lessons learned are carried forward.

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## 15 REVIEW, REPORTING AND RECORD KEEPING

- 15.1.1 This FPP will be under regular review and may be revised if required. A review will be undertaken at least every 4 years and could be required more frequently where:
- there is reason to suspect it no longer meets the objectives of the guidance;
  - there has been a fire or a near miss of a fire has been identified;
  - the activities at the site change;
  - the surrounding environment changes, for example a school or residential development is built nearby; and
  - the EA ask for it to be revised.
- 15.1.2 Any significant changes to the FPP as a result of a review will be communicated to all relevant staff.
- 15.1.3 As part of the site management systems this FPP is incorporated within the audit programme. The frequency of audits is set within the site audit programme. A record of any audit is made and kept. Should non-conformances be identified these are handled in accordance with the site non-conformance procedure which includes appropriate follow-up and a record of the outcome alongside any improvements identified. Where improvements are identified a programme of action with detailed responsibilities and timescale are set.
- 15.1.4 Reporting requirements are defined within incident reporting procedures. These requirements incorporate reporting requirements to the EA (as specified within the permit), to the HSE and other interested parties.
- 15.1.5 The management systems include procedures for record keeping. Any record generated in relation to this plan is held in accordance with this procedure.

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## Drawings

**Drawing 1** Drainage Plan

**Drawing 2** Site Sensitivity Plan

**Drawing 3** Layout Plan including Fire  
Prevention Detail

**Drawing 4** Tipping Hall Layout Plan including  
Fire Prevention Detail

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# Appendices

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## Appendix A

# Emergency Contacts

## Emergency Contacts

This Appendix will be updated prior to the EfW coming into operation.

Contacts		
Individual/Organisation		Contact Details
Internal emergency contacts		
Plant Manager	TBC	TBC
Operations Manager	TBC	TBC
H&S Manager	TBC	TBC
Compliance Manager	TBC	TBC
External emergency contacts		
Fire	Emergency number	999
	Non-emergency number	
Police (if necessary)	Emergency number	999
	Non-emergency number	101
Nearest hospitals	Corby Community Hospital Kettering General Hospital Peterborough City Hospital Leicester General Hospital	08435 158203 01536 492000 01733 678000 03003031573
Site Clean Up	TBC	TBC
HSE		TBC
UK Power Networks		0800 31 63 105
Local Authority:	North Northamptonshire Council	0300 126 3000
Environment Agency		03708 506 506
Environment Agency (24hr incident line)		0800 807060
Willowbrook Industrial Estate (Neighbouring Sites)	iFoodsUK	TBC
	Fast Turbo	01536601020
	CWG Choices Corby	01536271940
	Choices Online	01536271940
	PDI (EMEA) Ltd	01536408085
	Benteler Automotive	01536272802
	Keencut Ltd	01536263158
	Corby Mechanical Services - Conveyor Belt & Fabrication Engineers	01536408866
	Insignia Manufacturing Ltd	01536204923
	Jackson's Bakery	01482 224 131
	BakeAway	01536263663
BCA Automotive Corby	01536443161	
Corby Business Academy	Educational Facility	01536303120