

CORBY ENERGY FROM WASTE FACILITY PERMIT APPLICATION

EPR/LP3644QK/A001

Appendix I – Accident Management Plan

Encyclis Limited

JER9793

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Technical Director



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Prepared by:

RPS

Tom Hatch
Environmental Consultant

6-7 Lovers Walk
Brighton
East Sussex
BN1 6AH

T +44 1273 546 800
E thomas.hatch@rpsgroup.com

Prepared for:

Encyclis Limited

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(to be included once finalised)

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Appendix A Accident Risk Assessment

1 INTRODUCTION

1.1 Background

- 1.1.1 This Accident Management Plan (AMP) sets out the measures that will be in place to prevent and/or deal with accidents that may pose a risk to the environment. It applies to those activities undertaken by Encyclis Limited (Encyclis) at the Corby Energy from Waste (EfW) facility that will be covered within the scope of the sites Environmental Permit (EP) when issued. The AMP outlines arrangements for responding to accidents and should be clearly communicated to all employees, managers and contractors who work on the site.
- 1.1.2 This draft of the AMP has been prepared at an early stage to support the permit application for the EfW. Prior to operation the AMP will be reviewed against the final design to ensure that measures for accident management at the site remain appropriate.

1.2 Regulatory Context

- 1.2.1 The Environment Agency (EA) has produced guidance on the content and structure of AMPs. The plan must identify hazards from activities carried out that could damage the environment, assess how likely they are to happen, and identify how to minimise the consequences should such accidents occur.
- 1.2.2 This AMP has been prepared with regard to guidance documents published by the EA including:
- Environment Agency – Develop a management system:¹
 - Environment Agency – Risk assessments for specific activities:²
- 1.2.3 The ‘Develop a Management System’¹ guidance outlines the content for Accident Prevention and Management Plan, this includes;
- likelihood of the accident happening;
 - consequences of the accident happening;
 - measures taken to avoid the accident happening;
 - measures taken to minimise the impact if the accident does happen;
 - the date the accident plan was reviewed;
 - when it will next be reviewed;
 - a list of emergency contacts and how to reach them;
 - a list of substances stored at the site and storage facilities; and
 - forms to record accidents on.
- 1.2.4 Furthermore, EA² guidance provides a methodology for completing risk assessments across a range of environmental parameters including accidents. This requires consideration of the steps

¹ Environment Agency (2019) and DEFRA guidance: Develop a management system: Environmental Permits <https://www.gov.uk/guidance/develop-a-management-system-environmental-permits> (accessed 09/12/2022)

² Environment Agency (2019) and DEFRA guidance: Risk assessments for specific activities: Environmental Permits H1 overview document <https://www.gov.uk/government/collections/risk-assessments-for-specific-activities-environmental-permits> (accessed 09/12/2022)

taken to manage risk, the chances of causing harm and how serious that harm could be. This approach has informed the assessment of accidents in Appendix A.

- 1.2.5 The AMP includes reference to other site management plans and procedures where relevant to avoid duplication of information, for example the Fire Prevention Plan and incident procedures detailed operating and maintenance procedures.

2 IDENTIFICATION OF HAZARDS AND ASSESSMENTS OF RISK

2.1 Hazard Identification

2.1.1 The identification of hazards associated with the operational activities at the site draws from the experience of site personnel, professional experience and expertise but also guidance set out by the EA.

2.1.2 The hazard areas that have been considered include:

- loss of containment during storage or transfer of reagents, chemicals, fuel and oils;
- failure of chemical delivery vehicle;
- wrong connection of chemical deliveries;
- flue gas treatment equipment failure;
- loss of power;
- operator error;
- fire;
- vandalism; and
- flooding.

2.2 Risk Assessment

2.2.1 The assessment has considered the following in relation to each of the hazardous events identified:

- frequency of occurrence;
- nature and quantity of substance released;
- pathways and receptors involved;
- environmental consequence(s) of the event;
- overall risk and its significance to the environment; and
- control and mitigation measures in place to reduce the risk.

2.2.2 The risk assessment has been completed by scoring the hazard areas outlined above using a risk matrix as shown in Table 2-1.

2.2.3 Appendix A contains the accident risk assessment, this summarises the main controls and mitigation measures that have been put forward for each hazardous area identified. The control measures to reduce the risk are discussed further in section 3 of this document.

Table 2-1: Risk Matrix

Consequence	Probability			
	High	Medium	Low	Very Low
High	High	Medium	Low	Low
Medium	Medium	Medium	Low	Very Low
Low	Low	Low	Low	Very Low
Very Low	Low	Very Low	Very Low	Very Low

3 PREVENTATIVE MEASURES

3.1 Introduction

- 3.1.1 All identified hazards which could cause harm are subject to reasonably practicable preventative measures to minimise risk. The control measures identified in Appendix A need to be appropriately maintained along with monitoring of these control measures. A periodic review of these preventative measures should be undertaken, and remedial action taken to resolve deficiencies where necessary.
- 3.1.2 The operation of the site requires staff to be trained and kept aware of the procedures and processes in place to minimise the risk of accidents. Furthermore, good housekeeping checks help to ensure efficient running of the site.
- 3.1.3 This section outlines the approach to reduce and manage risks associated with on-site hazards.

3.2 Management System

- 3.2.1 Management procedures will be in place to minimise accident risks.

Roles and responsibilities/ lines of communication

NOTE the term Plant Manager & Facility Manager may be used interchangeably.

- 3.2.2 **Incident controller** – the person responsible for co-ordinating the actions of the personnel dealing with the incident. This will usually be the Shift Team Leader, or in the absence Shift Team Leader, the Operations Manager, Maintenance Manager or Facility Manager as appropriate. To assume this role the person must be familiar with the operation of the plant and the detail of this procedure.
- 3.2.3 **Muster Point Co-Ordinator** - Facility Manager (or nominated deputy). The person responsible for carrying out the roll call at Muster Point. The location of the muster point will be confirmed following the final design.
- 3.2.4 **Emergency Services Liaison** - The person appointed by the Incident Controller. Availability for receiving emergency services (Emergency vehicle will be met at the main gate by designated personnel who will always issue emergency pack and remain with emergency services incident controller). The emergency pack will be located in the control room.
- 3.2.5 **Fire Warden** - Suitably trained staff responsible for ensuring all personnel are evacuated from the facility.
- 3.2.6 It is the responsibility of any member of the **site staff** to report any emergency to the Control Room.
- 3.2.7 It is the responsibility of the operations staff on duty in the control room to immediately notify the Shift Team Leader (or person who can assume the role of Incident Controller) of any emergency reported.
- 3.2.8 When dealing with any incident the actions of the Incident Controller should be made with respect to the following priorities:
1. Safety of Personnel.
 2. Minimisation of any unauthorised release of pollution to the Environment.
 3. Safety of Plant.
- 3.2.9 It is the responsibility of the Facility Manager to organise suitable training and drills to deal with foreseeable incidents.

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- 3.2.10 It is the responsibility of the Facility Manager (or nominated deputy) to ensure that the contractors and visitors signing in and out books are brought to the muster point so that a roll call can be conducted.
- 3.2.11 The Incident Controller will use the “Incident Control Action Sheets” forming parts of this AMP as a guide to their priorities. If any other form of incident occurs then the Incident Controller is to use the action sheets as a guidance for their priorities.
- 3.2.12 If the fire alarm is sounded then the Incident Controller will ensure all vehicles access gates are open (as required).
- 3.2.13 Action should be taken to contain damage to plant, property and the Environment using emergency appliances without a risk to personnel.

Initial Staff responsibilities

- 3.2.14 If deemed appropriate by the Incident Controller:
- All Administration staff to exit the building by the nearest emergency exit route and proceed to the muster point.
 - All Engineering staff to exit building by the nearest emergency exit route and proceed to the muster point.
 - All Contractors to exit the building by the nearest emergency exit route and proceed to the muster point.
 - All Visitors will be escorted by their recipients to exit the building by the nearest emergency exit route and proceed to the muster point.
- 3.2.15 Shift Operation staff are to remain in or report to, the control room and take instructions from the Incident Controller.
- 3.2.16 If the nature of the emergency means that increased risks are introduced by staff leaving the building, a decision may be made to keep everyone inside.
- 3.2.17 Facility Manager (or nominated deputy) to collect the contractors and visitors signing in sheets from the reception and take them to the muster point so that a roll call can be conducted.
- 3.2.18 Day Operations staff: to escort all delivery drivers to the muster point by the nearest exit route and report to the Incident Controller that the waste reception area is clear.
- 3.2.19 Chemical Delivery and Collection Areas: immediately shut down all extraction/delivery systems, then escort any collection and delivery vehicle drivers to the muster point and report to the **Incident Controller** that the areas are clear.
- 3.2.20 On receipt of a fire or evacuation alarm a First Aid tabard will be collected by a First Aider from the reception area, they will then report to the control room. All other First Aiders will congregate at the nominated Evacuation point until called upon by the Incident Controller.

Training

- 3.2.21 Training is carried out in accordance with a Training Procedure as defined within the EMS. This system identifies those individuals for which training in the following is required:
- environmental awareness;
 - operational control in accordance with procedures;
 - emergency procedures; and
 - accident and incident reporting.

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- 3.2.22 Records of training is provided within personnel files with copies for operational staff held by the Office Administrator.
- 3.2.23 The AMP requires staff to be aware of and trained in the procedures outlined within the AMP so that they are able to:
- identify an accident;
 - know what to do and who to contact;
 - locate plans for emergency equipment;
 - identify and implement operational contingencies;
 - be aware of the procedure to close or isolate part of the facility;
 - adequately document and assess the response; and
 - implement a programme of inspection, maintenance and monitoring.
- 3.2.24 First responders should be fully trained in First Aid treatment.

Operating and Maintenance Procedures

- 3.2.25 Documented procedures will be in place to control activities which may have an adverse effect on the environment and/or human health. The Plant Manager and Operations Manager will be responsible for ensuring that operational staff carry out their activities in accordance with defined operating procedures.
- 3.2.26 A planned maintenance schedule is in place for critical plant. The Maintenance Manager will be responsible for completing risk assessments to identify critical plant for which a planned maintenance schedule is required.

Incident Investigation and Reporting

- 3.2.27 A procedure will be place which documents the process for incident investigation and reporting. The Compliance Manager and Health and Safety Manager are responsible for implementation of this procedure.
- 3.2.28 The scope of the incident investigation and reporting procedure includes all incidents with the potential to cause damage to the environment including near miss events and environmental complaints.
- 3.2.29 The incident investigation and reporting procedure includes the requirement to review the AMP as part of the follow-up actions where appropriate and where required that this is completed as soon as practicable after the event.

Emergency Response

- 3.2.30 An emergency response procedure will be established for the site and is discussed in more detail within Section 4.3.

Auditing

- 3.2.31 An audit schedule will be established and is reviewed annually to monitor implementation of the above procedures. Audits are then carried out in accordance with the agreed schedule and the outcome of audits is documented and communicated in accordance with the site audit procedure.
- 3.2.32 In addition to procedure audits, the following routine assessments are undertaken to ensure preventative measures are identified as part of this AMP:

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- daily visual inspections of bunds or more thorough checks during periods of heavy rainfall;
 - monthly bund integrity inspections;
 - monthly management checks involving a site walkover of entire premises;
 - monitoring of emissions to air and water as required by the environmental permit;
 - calibration checks of continuous emissions monitoring equipment; and
 - routine maintenance checks on plant and equipment.

3.3 Operational Controls

Process Control

- 3.3.1 The plant is automatically controlled under normal operation, thereby minimising the potential for operator error. The automatic control system includes alarms to alert the Operator of potential operational problems and where relevant will be triggered with sufficient safety margin to permit operator intervention to prevent an actual problem occurring.
- 3.3.2 Automatic control systems control the furnace to:
- heat up the furnace during start-up in order to reach a temperature of >850°C before waste is introduced onto the grate;
 - ensure combustion chamber temperatures are >850°C for at least 2 seconds whilst waste derived material is being processed. An alarm will signal when there is a risk of not meeting that requirement and the burners will start automatically; and
 - ensure complete combustion of flue gasses during shutdown.
- 3.3.3 The furnace design and operation aim to maximise burn out of the waste, minimising residue quantity. As a minimum the furnace achieves a loss on ignition of 5% (dry weight) in bottom ash.
- 3.3.4 Automatic control systems are monitored via the central control room where Operatives provide manual supervision and where necessary manually interact with the control system as required.
- 3.3.5 Abatement plant is continuously monitored to ensure that it is operating as designed and that the reagent feed systems are working to control emissions prior to release to the atmosphere. In addition, emissions to air from the process are continuously monitored for key pollutants and compared against permit limits.
- 3.3.6 A staged combustion air system is employed. The system will be designed to provide effective distribution of combustion air to avoid hot zones and minimise the amount of inorganic material volatilised. The control system will be designed to monitor the combustion process and automatically control the process including adjustment of air flows, waste feed etc. to ensure efficient combustion is achieved.

Safe Shutdown

- 3.3.7 The plant includes fail safe systems. The control system includes a controlled shutdown and an emergency shutdown system which can be automatically or manually triggered. This system is supported by documented shutdown procedures which cover planned, unplanned and emergency shutdown scenarios.
- 3.3.8 If any incident endangers or is likely to endanger personnel (e.g. an external steam leak) or cause serious damage to the facility or lead to an exceedance of emission limits or other breach of the environmental permit, the emergency shut-down procedure will be used.

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- 3.3.9 The operator will develop up operating procedures for the various possible scenarios and taking into account first the safety of personnel and neighbouring populations, then as far as possible, the safety of the facility and environment. Over time these procedures will be reviewed and updated drawing upon operational experience.
- 3.3.10 To extinguish combustion in an emergency, operators can use the emergency stop button resulting in immediate stopping of the combustion fan, the grate feed systems and the burner.
- 3.3.11 A safeguard system is installed, that automatically stops the combustion if critical parameters in the boiler or flue gas treatment operation are breached.
- 3.3.12 Site operatives have received training to ensure they are fully aware of shutdown procedures.

Plant Reliability

- 3.3.13 Encyclis seeks to maximise plant availability to meet targets. In addition to maintenance (which is covered below), the plant will include redundancy and/or back-up for critical plant.
- 3.3.14 A criticality study will be used to identify plant for which redundancy/back-up is required. Back-up systems will be subject to routine testing and maintenance to ensure they remain in good working order.

Maintenance and Testing

- 3.3.15 Planned maintenance routines and operational testing will be established to ensure all plant is in good working order. The routines draw on manufactures recommendations unless operators indicate the need for variance.
- 3.3.16 Procedures will be developed in relation to the following:
- waste fuel reception and handling, including waste acceptance procedures;
 - storage, handling and removal of wastes from the site;
 - annual maintenance plan - effective plant maintenance regime to ensure energy efficiency is maintained over time;
 - steam systems, plant inspection – daily shift observation checks for leaks and insulation inspection; and
 - lubrication systems – schedule for routine lubrication.
- 3.3.17 Routine testing of all safety related equipment will be completed. This includes visual inspection/testing of surface drain and bund integrity, firefighting systems, detectors and emergency equipment. Containment systems are routinely inspected to ensure they remain in good working order. Spill kits are routinely audited to ensure they remain complete and where materials are found missing additional supplies ordered.

Raw Material and Residue Management

- 3.3.18 The principal raw materials are the incoming waste, in addition the following reagents are used for flue gas cleaning:
- ammonium hydroxide;
 - hydrated lime; and
 - activated carbon.

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- 3.3.19 There are other raw materials present on site which are not used within the flue gas treatment plant including diesel fuel oil and boiler water treatment chemicals.
- 3.3.20 The main solid residues produced by the facility are:
- bottom ash; and
 - air pollution control (APC) residues.
- 3.3.21 A list of all main raw materials and residues used within the site will be maintained in accordance with the requirements of the permit and material safety data sheets (MSDS). In addition, MSDS are located at point of use for quick reference. Assessments are made consistent with the Control of Substances Hazardous to Health (COSHH) regulations.
- 3.3.22 The main deliveries to the site comprise of incoming non-hazardous waste materials namely:
- residual municipal solid waste (MSW); and
 - commercial and industrial (C&I) waste.
- 3.3.23 Incoming waste will be checked firstly via pre-acceptance checks to ensure confirm the waste is suitable for acceptance at the EfW facility and complies with the permitted waste types. Waste acceptance checks on arrival at the site will be covered within the written waste acceptance procedures within the EMS.
- 3.3.24 The plant will be designed such that the waste bunker is physically separate from ignition sources (for more detail see fire prevention plan Appendix G of the main document).
- 3.3.25 All chemical deliveries are overseen by a trained operator. Upon delivery the raw materials mentioned in section 3.3.18 are verified and capacity checks will be carried out to ensure there is sufficient capacity to accept the delivery prior to off-loading.
- 3.3.26 The fuel bunker will be a watertight rectangular pit set down 10 m below the general floor level of the facility to ensure it is suitable for use. Operators will monitor the waste fuel flow via an automated weighing system incorporated within the crane and CCTV system in the control room.
- 3.3.27 The bottom ash bunker will be designed to be watertight and has thick concrete walls and base to avoid accidental leakage. Bottom ash handling and transfer will be via an enclosed vehicle to prevent loss of material. Excess water will be removed during the maturation process prior to loading the ash for removal off site, therefore there will be limited potential for discharge of significant amounts of run off during loading. Lorries are parked within an enclosed building which will be suitably surfaced. Any spillage of bottom ash will be cleaned up immediately.
- 3.3.28 APC residues are handled in an enclosed system prior to storage in a silo. Residues are discharged via a sealed connection to a road tanker (or on occasion APC 'big bag' discharges are transported off site in curtain sided vehicles) for offsite disposal. Filter on the silo vent will be fitted with a differential pressure alarm and automatic cleaning. Tanker loading of APC to be removed from site for disposal will be monitored by site personnel. All abatement plant will be continuously monitored (i.e. reagent flow and consumption/bag filter pressure drops) to ensure that it is operating as designed and that the reagent feed systems are working. In addition, emissions to air from the process are continuously monitored for key pollutants which would identify any potential increases in pollutant concentrations. All of these systems include appropriate alarms to alert the Operator to a potential problem and permit appropriate action to be taken. The plant will be operated in

accordance with IED and permit requirements for abnormal operation. Operational staff are fully trained in the actions to take in the event of control system alarms being triggered.

3.4 Physical Control Measures

Material Containment

- 3.4.1 Encyclis uses and stores a number of chemicals, fuels and other materials in addition to the non-hazardous waste material.
- 3.4.2 Table 3.1 provides a list of liquid substances and other materials on site that could pose an environmental risk if they were to be released, the storage facilities, and expected usage. The information in Table 3.1 will help to inform an appropriate clean-up of any leaks or spillages.
- 3.4.3 All liquid tank bunds are sized to contain 110% of the tank contents or should more than one tank be contained within a single bund whichever is the greater of either 25% of the total tank volume or 110% of the largest tank.
- 3.4.4 The site is generally covered with hard standing which will be designed to direct any liquid run-off towards the site drainage system. No materials with the potential to cause environmental damage are stored in areas without hard standing.
- 3.4.5 Smaller volume materials such as boiler water treatment chemicals are generally stored within small portable bunds local to the point of use or on trays within dedicated storage areas.

Table 3-1: Main Raw Material Usage, Storage and Potential Environmental Effects

Raw Material	Nature	Expected Usage (approx.)	Storage including capacity	Fate	Environmental Effects	Alternatives
Incoming Waste	Non-hazardous waste	357,408 t/ year	5,100 t Concrete storage bunker	Combusted in the EfW facility. Approximately 70% to air as flue gases; 25% solid residues for reuse/recycling, 5% disposed to landfill	The fuel has the potential to contain List I and List II substances which are potentially toxic, although this is through leachate rather than the solid waste.	Other waste likely to have similar or increased environmental effects (e.g. hazardous waste).
Ammonium Hydroxide	<25%	225 kg/ hour	120 m ³ banded storage tank within (110% capacity bund)*	Reacted and reduced to nitrogen and water and released to air.	Not potentially bioaccumulative. Environmental toxicity in water: 24 hour LC50 rainbow trout 0.008 mg/l, 96 hour LC50 fathead minnow 8.2 mg/l, 48 hour LC50 bluegill 0.024-0.093 mg/l, 48 hour EC50 water flea Daphnia 0.66 mg/l at 22 °C.	Urea has lower hazards in storage and handling but higher GWP
Hydrated lime	Ca(OH) ₂ , solid	1,223 kg/ hour	2 x silos, 330 m ³	Reacted with acid gases to form salts and collected with APC residues.	Low toxicity to mammals, severe irritant, corrosive.	Alternatives have similar effects
Activated Carbon	Powdered	5-40 kg/ hour	50 m ³ storage tank	Collected with APC residues.	Low toxicity to mammals, low bioaccumulation potential, highly insoluble and immobile.	Alternatives have similar effects
White diesel	Ultra-low sulphur diesel	Variable dependant on number of start-ups/shut downs and auxiliary usage	250 m ³ double skinned, fully integrated storage tank	Combusted and released as combustion gases.	Not readily biodegradable. Persists under anaerobic conditions. Has the potential to bioaccumulate. Harmful, 10 < LC/EC50 < 100 mg/l, to aquatic organisms (estimated). (LC/EC50 expressed as the nominal amount of product required to prepare aqueous test extract). Low acute toxicity to mammals. May cause physical fouling of aquatic organisms.	Natural gas
Water	Town mains water		Raw water tank volume to be determined at detailed design stage. Fire water storage tank at least 900 m ³ .	Re-used or evaporated	-	Recycled water – see discussion above

*Tank volume to be confirmed during detailed design but expected to be in the region of the volume stated.

Fire Prevention and Control

- 3.4.6 A fire prevention plan has been developed outlining the measures in place across the site in relation to fire prevention and protection measures undertaken in the event of a fire and actions post incident. A full copy of the fire prevention plan can be found within Appendix D of the main document.

Site Security

- 3.4.7 Site security measures seek to minimise the likelihood of unauthorised access to the site.
- 3.4.8 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. Access to the site is controlled via the gate house.
- 3.4.9 The site is manned 24 hours per day all year.
- 3.4.10 Emergency contact procedures will be in place with the night shift personnel and they can have first responders on site as soon as practical.

Flooding

- 3.4.11 Approximately 35m north of the site is a watercourse, the Northern Stream (a tributary of Willow Brook). This is the nearest surface water feature and flows approximately south-west to north east direction.
- 3.4.12 The Environment Agency published Flood Risk maps show that the site is indicated to be within an area at low risk of flooding (Zone 1). Furthermore, the site is not located on a floodplain.

Traffic Control and Vehicle Manoeuvring

- 3.4.13 All vehicles accessing the site need to pass via the manned access gate. The site will be subject to speed restrictions with a maximum speed of 10 miles per hour in place across the facility applicable to all vehicles. Drivers entering the site are made aware of this requirement.
- 3.4.14 Crash barriers will be in place to protect storage tanks, bunds and buildings from damage from vehicle movements, as appropriate.

4 SITE PLAN, EMERGENCY CONTACTS AND PROCEDURES

4.1 Site Plans

- 4.1.1 The plans provided in the Drawings section of this report identify the site layout, drainage, release points and storage.
- 4.1.2 The plans identify the following;
- site entrances and exits;
 - buildings;
 - drainage (surface water drainage);
 - storage of potentially hazardous materials;
 - process areas; and
 - pollution control points (monitoring points etc.).
- 4.1.3 Further plans specific to fire incidents will be included within the FPP in accordance with EA requirements.

4.2 Emergency Contacts

- 4.2.1 Where required, the Emergency Services will be called immediately. The following information must be provided to Emergency Services:
- i. Which service is required i.e. Fire, Police, Ambulance, Bomb disposal.
 - ii. Address – Willowbrook East Industrial Estate, Shelton Road, Corby, Northamptonshire, NN17 5XH.
 - iii. Control Room Number (Number to be confirmed prior to the facility becoming operational).
 - iv. Details of incident i.e. scale and nature of incident, persons involved etc.
- 4.2.2 In order to avoid duplication of call the **Incident Controlled is the ONLY** person to contact the Emergency Services.
- 4.2.3 If the fire alarm is sounded the **Incident Controller** shall ensure all vehicle access gates are open.
- 4.2.4 After investigation, the reported incident may be found to be a false alarm. The **Incident Controller** will decide when this procedure should be terminated. Whenever a SITE EVACUATION and ROLL CALL has been started, the procedure shall be fully completed.
- 4.2.5 Action should be taken to contain damage to plant, property and the Environment using emergency appliances without a risk to personnel.
- 4.2.6 Should there be a risk of pollution to water courses or sewers, (e.g. large quantities of acid, alkali, ammonia or oil), contact the Environmental Manager who will contact the relevant authority.
- 4.2.7 **Facility Manager** (or nominated deputy) will be informed as soon as practicable.
- 4.2.8 A list of managers will be documented within the Environmental Management Systems (EMS) Manual and contact information. The current version of this procedure should be referenced in the case of accident. Table 4.1 provides general onsite and external emergency contacts.

Table 4-1: Emergency Contacts

Internal Site Emergency Contacts	Telephone Number
Facility Manager	TBC
Operations Manager	TBC
HS&E Manager	TBC
Emergency Services	Telephone Number
Emergency Services (Police/Fire/Ambulance)	999 (emergency) 101 (Police non-emergency)
Corby Community Hospital	03003031573
Kettering General Hospital	08435 158203
Peterborough City Hospital	01536 492000
Leicester General Hospital	01733 678000
Regulators	Telephone Number
Local Authority: North Northamptonshire Council – Corby Area	0300 126 3000
Environment Agency	03708 506 506
Environment Agency (24hr incident line)	0800 80 70 60
HSE	TBC
Utilities	Telephone Number
TBC	TBC
Neighbouring Sites	Telephone Number
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	01536303120

4.3 Emergency Procedure

- 4.3.1 The emergency procedure documents will be established prior to the EfW becoming operational and sets out in full the procedure for the first response to an incident or accident on-site. The information provided below summarises key aspects of the procedures, however in the event of an emergency occurring the relevant Emergency Procedure must be followed.

Awareness of the Emergency Procedure

- 4.3.2 All employees will undergo a site induction followed by a more detailed departmental induction, similarly new contractors and visitors to the site will undergo a site induction including an

explanation of the site safety rules. Visitors and contract personnel will follow the site induction. This will be refreshed on an annual basis for contractors.

4.3.3 If an individual witnesses an incident or a near miss a report should be filled in. Instructions on how to complete a form are displayed within the security lodge induction room and on various notice boards throughout the facility. If an incident occurs an accident form must be completed.

4.3.4 Monthly safety meetings for employees and contractors take place, where all significant incidents arising from any emergency situation are reviewed.

First Response

4.3.5 In the event of an emergency personnel are trained to ring the emergency response number by telephoning the control room, the control room will be manned 24/7 and will receive the call. Staff will gather basic information relating to the incident and then inform the relevant manager. The relevant Manager will determine whether the incident needs to be escalated to 'crisis' level.

4.3.6 In the case of such an emergency notification of persons and organisations are carried out in the order set out in Table 4-2 below.

Table 4-2 Communication Actions

Action order	Communications Action
1	Contact the emergency services FIRST
2	Contact all relevant Encyclis personnel using the Internal Encyclis contacts list in Table 4-1 . This is a time-consuming process so allocate this task to another employee (or more than one). If an OPERATOR person on the list does not reply you MUST leave a message NOTE – for major incidents, such as major fires, very serious or fatal injuries and similar you MUST ensure that Encyclis management are also informed
3	Contact relevant external persons/organisations as relevant. Note – the site permit may require specified types of emergency to be reported to EA, HSE or similar. Make sure you know any of this type of requirement and ensure contact is made
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, or a change in the condition of an injured person. Such updates may be by telephone or e-mail to a set list
5	Repeat contacting internal Encyclis persons when the emergency is over. Such updates may be by telephone or e-mail to a set list
6	If an emergency means that the site is closed, allocate a 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

Chemical Spill

4.3.7 Site operations will be designed such that spillage should not occur. As appropriate, vessels will be designed with bunds to contain spillage or leakage.

4.3.8 Material Safety Data Sheets (MSDS) are available for all chemicals used on site. In addition, MSDS are located at point of use for quick reference. Assessments are made consistent with the Control of Substances Hazardous to Health (COSHH) regulations.

4.3.9 Good housekeeping practices will be in operation to ensure that any spillages of potentially dusty materials are cleared up at the earliest opportunity. Spill kits are available for clean-up of all chemicals and oils stored and used within the facility and will be located in proximity to the relevant storage area(s) and/or delivery points.

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- 4.3.10 Should there be an uncontrolled chemical or fuel spill 'clean-up' kits should be used depending on the type of spill (oil and chemical spill kits are available).
 - 4.3.11 Notification of significant spills would be made to the EA in accordance with the EA notification procedure.

Site Power Failure

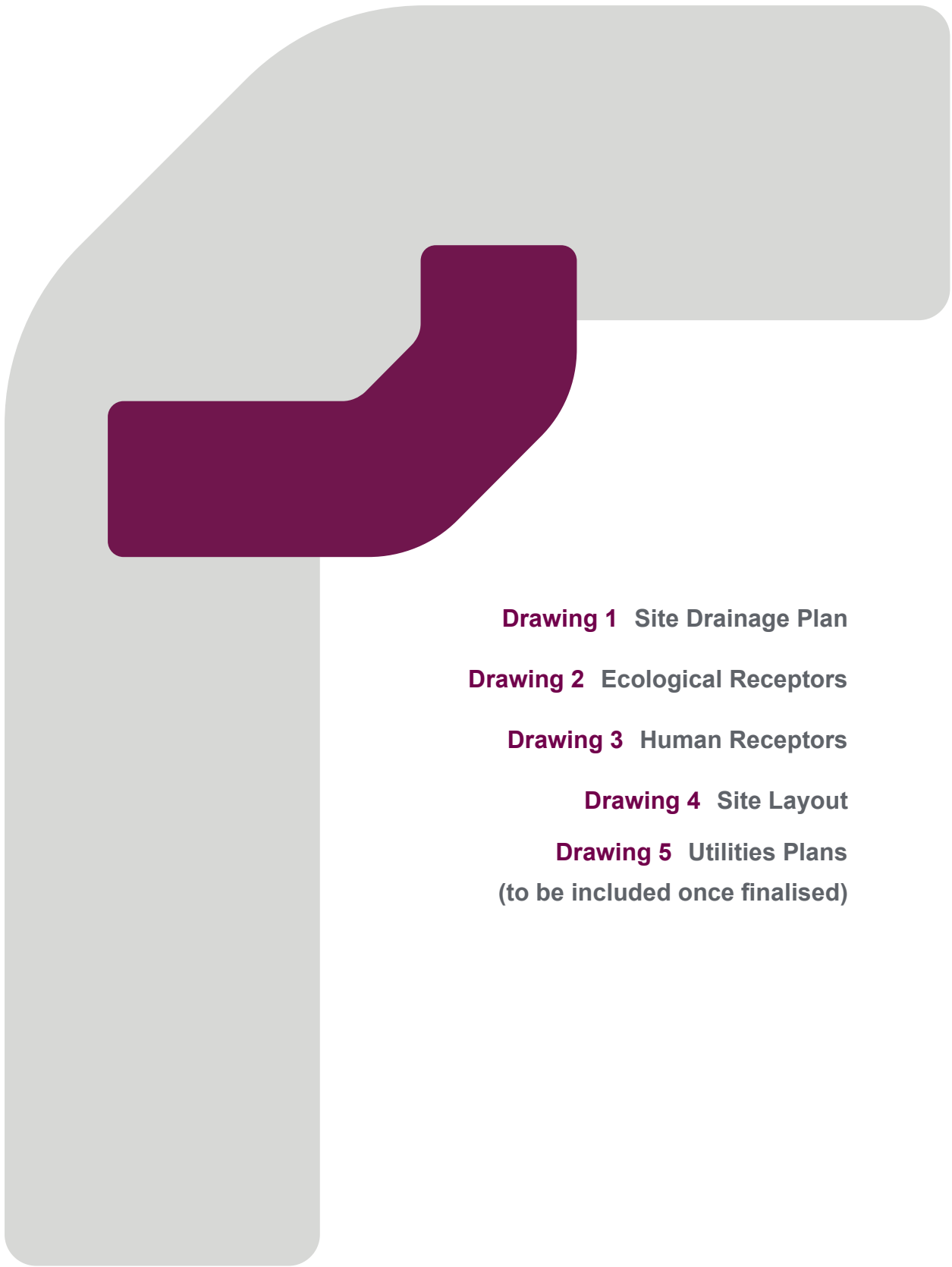
- 4.3.12 In the event of a loss of power during normal operation, the plant switches to island mode at full or reduced steam flow with excess steam dumped to the coolers via the condenser. An emergency stand-by diesel generator will be installed on site, the diesel generator will only be used to provide power to the plant to ensure a safe shutdown in the event of a simultaneous turbine trip and national grid power failure to the facility.
- 4.3.13 In the event of a loss of power to the site during non-operational periods the plant may not be able to start-up and therefore no operations can commence.

Emergency Escalation

- 4.3.14 Based on the experience of the Incident Manager, the incident may be escalated to "crisis" level at which the HS&E Manager and, as appropriate, Operations Manager may be contacted for assistance.

5 CONTINUED VALIDITY OF THE PLAN

- 5.1.1 The continued validity of this AMP will be subject to an annual internal audit to ensure all aspects are being effectively implemented.
- 5.1.2 The most up to date AMP shall be followed and shall be made readily available to all members of staff.
- 5.1.3 This AMP shall be reviewed at least every 2 years or as soon as practicable after an accident, whichever is the earlier. The EA will be notified of the results of the review within 2 months of its completion.



Drawing 1 Site Drainage Plan

Drawing 2 Ecological Receptors

Drawing 3 Human Receptors

Drawing 4 Site Layout

Drawing 5 Utilities Plans
(to be included once finalised)



Appendix A
ACCIDENT RISK ASSESSMENT

Accidents risk assessment

Hazard	Receptor	Pathway	Risk Management	Probability of exposure	Consequence	What is the overall risk?
What has the potential to cause harm?	What is at risk? What do I wish to protect?	How can the hazard get to the receptor?	What measures will you take to reduce the risk? If it occurs, who is responsible for what?	How likely is this contact?	What is the harm that can be caused?	What is the risk that still remains? The balance of probability and consequence.
Operator error	Air/ Water (North Stream)/ Land	Variable - dependent on nature of the error	<p>All operational staff will be fully trained against the site operating procedures.</p> <p>Training will include raising awareness of key plant parameters and the potential implications of failure to control operations as designed and the associated potential impact on the environment.</p> <p>The EfW Facility will be automatically controlled under normal and transient operation, thereby minimising the potential for operator error. The automatic control system will include alarms to alert the Operator of potential operational problems and where relevant will be triggered with sufficient safety margin to permit operator intervention to prevent an actual problem occurring.</p>	Low	Variable depending upon nature of incident	Low
Loss of power	None	n/a	<p>In the event of a loss of power during normal operation, the plant will not be affected as it generates its own power. In the event of a loss of the turbine during normal operation either electricity will be imported from the grid or the plant may use the emergency diesel generator to safely shut down. The rated output of the emergency generator is sufficient to safely shutdown the plant.</p> <p>In the event of a loss of power during start-up a mobile emergency generator will be temporarily brought to the site and operated to complete start-up and normal operation is achieved.</p> <p>The use of the emergency generator will release exhaust gases to air, albeit these will be temporary and impacts short-term..</p>	n/a	n/a	n/a

Hazard	Receptor	Pathway	Risk Management	Probability of exposure	Consequence	What is the overall risk?
Loss of containment during storage or transfer of reagents, chemicals, fuels and oil (transformer and lubricating oil)	Air/ Water (North Stream)/ Land	Site drainage system or direct contact with land	<p>All bunds will be visually checked each day to ensure that they are empty. There will be limited liquids stored on site, primarily fuel oil, maintenance oils, ammonium hydroxide and small amounts of boiler water treatment chemicals. All process storage tanks will be built of suitable materials which are resistant to the vessel content. A maintenance programme will be established for the inspection of all storage tanks. Bunds will be sized to contain 110% of the tank content and will be constructed to appropriate standards.</p> <p>Potential release to ground or surface/groundwater would require simultaneous failure of the storage tank and containment.</p> <p>Bulk deliveries will be overseen by a trained member of staff who will be responsible for checking that there is sufficient capacity in the storage vessel to receive the delivery prior to commencing offloading.</p> <p>A site spill procedure will be developed and followed in the event of a spillage. Spill kits will be available to contain and clean up the spill.</p> <p>Solid raw materials (including activated carbon and hydrated lime) will be cleaned using dry techniques.</p> <p>Incidents will be recorded and investigated appropriately according to the site incident procedure.</p> <p>Significant incidents will be investigated and reported to the EA in accordance with the requirements of the permit.</p>	Very Low Requires multiple failure events	Medium/High Contamination of local water course - dependent on quantity and material released	Very Low/Low
Fire in waste bunker causing emissions to air	Air	Direct release of combustion gases to air	<p>The plant has been designed such that the waste storage is physically separate from ignition sources.</p> <p>The waste feed hopper will prevent backflow of material and will include a level alarm to alert the Operator that a low level of waste is present in the hopper.</p> <p>Fire protection systems will be in place in accordance with those set out in the fire prevention plan (FPP) in Appendix D. These will include sprinkler systems in the waste reception, storage and processing halls, and automatic water cannons over the waste bunker.</p> <p>In the event of fire that requires a plant shut down consideration will be given whether waste deliveries can continue. This could include consideration of diverting waste to other facilities until normal operations can recommence.</p>	Low	Low / Medium Uncontrolled release of combustion gases to air – impacts likely to be short term	Low
Flue gas treatment	Air	Stack	All abatement plant will be continuously monitored (including reagent flow, bag filter pressure drop) to ensure that it is operating as designed and that the reagent feed systems are working.	Low The APC system will be	Low/ Medium Potential for increased air	Low

Hazard	Receptor	Pathway	Risk Management	Probability of exposure	Consequence	What is the overall risk?
equipment failure			<p>In addition, emissions to air from the process will be continuously monitored for key pollutants which would identify any potential increases in pollutant concentrations. All of these systems will include appropriate alarms to alert the Operator to a potential problem and permit appropriate action to be taken.</p> <p>Equipment spares will be kept on site in the event of a failure or breakage.</p> <p>The plant will be operated in accordance with IED requirements for abnormal operation. The plant will not incinerate waste for a period of more than 4 hours uninterrupted where emission limit values are exceeded and for a total of 60 hours per annum.</p> <p>Operational staff will be trained in the actions to take in the event of control system alarms being triggered.</p>	<p>fully contained.</p> <p>During routine plant walkovers, any leakage would be identified.</p>	<p>emissions, quick identification of a problem will minimise release duration. It will also allow for fast repair or plant shutdown</p>	
Failure of chemical delivery vehicle	Ground, groundwater, North Stream	Direct release to ground via flaws in hard surfacing.	<p>All deliveries are met by the Chemical Attendant or Stores Manager who oversees the connection. The driver is in attendance for the duration of the offloading.</p> <p>Chemical spillage kits are available to contain and clean up spillages. The Shift Team Leader would be notified of the incident and instigate appropriate action. All incidents would be investigated, and improvements identified and incorporated, if appropriate. to prevent reoccurrence.</p> <p>Delivery areas will be surfaced with a suitable impermeable material. Site surfacing will be routinely inspected and repairs arranged where required.</p>	Low	High	Low
Wrong connection of chemical deliveries	Dependant on nature of any reactions	Vent on tanks to air	<p>All deliveries are met by trained staff. This person will check paperwork and oversee connection. Fill points are all locked and need to be unlocked by the Chemical Attendant or Stores Manager.</p> <p>The Shift Team Leader would be notified of the incident and instigate appropriate action. This may require consultation with external specialists as appropriate.</p> <p>All incidents would be investigated, and improvements identified and incorporated, if appropriate. to prevent reoccurrence.</p>	Low	Medium	Low
Vandalism	Air/water/land	Various	<p>Security fencing will be installed around the entire site perimeter to minimise the risk of break-ins, vandalism and theft. This fencing will be at least 2 m high and have anti-climb devices on the top of the fence, such as anti-climb rotator spikes.</p>	<p>Low Security measures in place</p>	<p>Low / Medium - depending on nature of the event. Potential contamination of</p>	Low

Hazard	Receptor	Pathway	Risk Management	Probability of exposure	Consequence	What is the overall risk?
			<p>CCTV cameras will be in operation and will be present throughout the site.</p> <p>Access will be controlled via the weighbridge and the plant will be manned 24/7.</p>		<p>local water course/air/land and/or local nuisance depending on nature of event.</p>	
Flooding	Northern Stream (adjacent to the northwest boundary)	Surface water drainage system	<p>Flood risk has been addressed in a Flood Risk Assessment which was prepared to support the planning application and concluded that there is a low risk of flooding from all sources as the site is in Flood Risk Zone 1.</p> <p>The drainage system will ensure that overland flow generated on-site is retained on-site and can store excess surface water volumes.</p> <p>The plant layout and storage facilities for reagents and fuels will be designed to ensure all materials are contained and in the event of a flood, materials would not be released.</p> <p>As part of the site's emergency procedures, the appropriate procedures for responding to, reporting and investigation in the event of a flood will be assessed.</p> <p>In the event of flooding that requires a plant shut down consideration will be given whether waste deliveries can continue. This could include consideration of diverting waste to other facilities until normal operations can recommence.</p>	Very Low	<p>Medium</p> <p>Potential contamination of flood waters.</p>	Very low

