

CORBY ENERGY FROM WASTE FACILITY PERMIT APPLICATION

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Appendix K IED Baseline and Application Site Condition Report

Client: Encyclis Limited

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APPLICATION
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Contents

1	INTRODUCTION	5
1.1	Background.....	5
1.2	Key Objectives.....	5
1.3	Description of Permitted Activities.....	6
2	APPLICATION SITE CONDITION REPORT	8
2.1	Application Phase	8
2.2	Site Condition Report Summary	8
3	STAGE 1 – IDENTIFY WHICH HAZARDOUS SUBSTANCES ARE USED, PRODUCED OR RELEASED AT THE INSTALLATION AND PRODUCE A LIST OF THESE SUBSTANCES	10
3.2	Incoming Waste Materials	12
3.3	Leachate.....	12
3.4	Flue Gas Treatment Chemicals	12
3.5	White Diesel and other Oils	12
3.6	Water and Cooling Water	12
3.7	Boiler Water Treatment Chemicals	12
3.8	Bottom Ash and Boiler Ash.....	13
3.9	APC Residues.....	13
3.10	Process Waters.....	13
3.11	Flue Gases	13
4	STAGE 2 – IDENTIFYING THE RELEVANT HAZARDOUS SUBSTANCES.....	14
5	STAGE 3 – ASSESSMENT OF THE SITE SPECIFIC POLLUTION POSSIBILITY	17
5.2	White Diesel and other Oils	17
5.3	Bunker Leachate	18
5.4	APC Residues.....	18
5.5	Ammonium Hydroxide	18
5.6	Site Specific Pollution Possibility	18
6	STAGE 4 – PROVIDE A SITE HISTORY	19
6.2	General Site History	19
6.3	Previous Ground Investigation.....	19
	Frank Graham Consulting Engineers (1996).....	19
	Babtie Group (2002).....	20
	Delta-Simons (2015)	21
	Delta-Simons (2022)	22
6.4	Potential Historic Contaminants.....	22
6.5	Operational History	22
7	STAGE 5 – IDENTIFY THE SITE’S ENVIRONMENTAL SETTING	23
7.1	Site Setting and Sources of Desk Study Information	23
7.2	Site Description.....	23
7.3	Topography.....	23
7.4	Geology and Hydrogeology	23
7.5	Hydrology.....	23
7.6	Man-made Pathways.....	23
7.7	Environmental Consents, Licences, Authorisations, Permits and Designations for the Site and Surrounding Areas.....	24
	Abstraction Licences	24
	Water Discharges.....	24
	Landfill Sites.....	24
	Historic Landfill Sites	24

	Permitted Waste Sites	25
	Permitted Installation Sites	25
	Statutory Designated / Sensitive Sites within 1 km.....	25
	Miningō ō	25
	COMAH	25
	Radonō ō	25
8	STAGE 6 – SITE CHARACTERISATION.....	26
8.2	Conceptual Site Model	26
	Background.....	26
	Potential Pollutant Linkages	26
	Potential Contaminant Sources	26
	On Site . Current	26
	On Site . Historical	26
	Off-site . Current.....	27
	Off-Site . Historical	27
	Potential Pathways.....	27
	Potential Receptors.....	27
	Outline Conceptual Site Model	27
9	STAGE 7 – SITE INVESTIGATION.....	30
10	STAGE 8 – PRODUCE A BASELINE REPORT.....	31
11	OPERATIONAL PHASE SITE CONDITION REPORT	32
11.1	Operational Phase	32
11.2	Site Condition Report Summary	32
12	SURRENDER SITE CONDITION REPORT	33
13	CONCLUSIONS	34
	REFERENCES	35

Tables

Table 3-1	Incoming Waste Codes and Description	10
Table 4-1	Summary of Potential Pollution Risk of Hazardous Substances	15
Table 5-1	Chemical Inventory and Assessment of Actual Pollution Risk	18
Table 6-1:	Historic Site Use.....	19
Table 7-1:	Landfill Sites within 1km	24
Table 7-2:	Historic Landfill Sites	24
Table 7-3:	Permitted Waste Sites	25
Table 7-4:	Permitted Installation Sites	25
Table 8-1:	Conceptual Site Model	28

Drawings

- Drawing 1** Site Location Plan
- Drawing 2** Site Layout Plan including Site Boundary
- Drawing 3** Site Sensitivity Plan
- Drawing 4** Drainage Plan
- Drawing 5** Ecological Designated Sites

Appendices

Appendix A Envirocheck Report

Appendix B Ground Investigation Information

1 INTRODUCTION

1.1 Background

- 1.1.1 Encyclis Limited (Encyclis) intends to submit an application to the Environment Agency for a proposed waste Energy Recovery Facility (EfW) capable of processing circa 357,408 tpa of non-hazardous waste per annum, generating circa 30.76 MW of electricity.
- 1.1.2 To support the application for the permit, there is a requirement to provide an Industrial Emissions Directive (IED) Baseline Report as well as a Site Condition Report.
- 1.1.3 This site condition and baseline report (SCBR) report has been prepared in accordance with the European Commission Guidance (Ref. 1) concerning baseline reports required under the IED and the Environment Agency's H5 Horizontal Guidance.
- 1.1.4 The Industrial Emissions Directive (IED), Article 22, paragraphs 2 to 4, contains provisions for the definitive cessation of activities involving the use, production or release of Relevant Hazardous Substances (RHS) in order to prevent and tackle potential soil and groundwater contamination from such substances. A key tool in this respect is the establishment of a baseline report where an activity involves the use, production or release of RHS and having regard to the possibility of soil and groundwater contamination. The report will form the basis for a comparison with the state of contamination upon definitive cessation of activities. Where information produced pursuant to other national or union law reflects the state at the time the report is drawn up, that information may be included in, or attached to, the baseline report.
- 1.1.5 RPS has prepared this report based on information and data available at the time of preparation of the report.

1.2 Key Objectives

- 1.2.1 The key objectives of this report are to:
- Establish the environmental setting of the site and determine its environmental sensitivity.
 - Identify activities that are currently undertaken at the site, including the identification of RHS and preventative measures implemented to protect land and groundwater.
 - Establish the extent of historical contamination in the soil and groundwater in areas where current and/or future processes may include similar potentially contaminating substances.
 - To identify the Site Conditions at the site at the point of varying the permit for the facility (baseline condition) such that they may be used as a point of reference to determine whether the site has been contaminated during the site's permitted operation in line with IED and Environmental Permitting Regulations requirements; and
 - To provide conclusions on whether land quality has been impacted from historical activities.
- 1.2.2 A summary of each stage required for an IED baseline report is outlined below along with where it is addressed within this report:
- Stage 1 - Identify hazardous substances used, produced or released at the installation. This is addressed within Section 3 of this report;
 - Stage 2 - Identify relevant hazardous substances used, produced or released at the installation from the list of hazardous substances identified in Stage 1. This is addressed within Section 4 of this report;
 - Stage 3 . Undertake an assessment of site-specific pollution possibility for relevant hazardous substances. This is addressed within Section 5 of this report;
 - Stage 4 . Evaluation of Site History and potential for relevant hazardous substances to be present in soils and groundwater. This is addressed within Section 6 of this report;

- Stage 5 . Evaluation of Environmental Setting to determine the fate of potential emissions of relevant hazardous substances This is addressed within Section 7 of this report;
- Stage 6 . Site Characterisation that synthesises findings of Stage 5 and 6 on the basis of a Conceptual Site Model. This is addressed within Section 8 of this report;
- Stage 7 . Site Investigation (including sampling strategy). This is addressed within Section 9 of this report; and
- Stage 8 . Production of Baseline Report. This is addressed within Section 10 of this report.

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 be found.
- Flue gas treatment, including selective non-catalytic reduction (SNCR), dry acid gas abatement and injection of activated carbon and a bag filter.
- 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.

1.3.3 The above activities will fall under Section 5.1 (b) of Part 2 to Schedule 1 of The Environmental Permitting (England and Wales) Regulations 2016.

1.3.4 The waste fuel will be transported by road to the EfW. The tipping hall will be enclosed with access via automatic roller shutter doors which will remain shut other than for access. The tipping hall floor will be concrete, suitable for HGVs.

1.3.5 Waste will be combusted in a moving grate furnace at a high temperature. The furnaces will be designed to achieve a minimum temperature of 850°C for 2 seconds. Fuel oil 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.

1.3.6 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.

1.3.7 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.

1.3.8 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).

1.3.9 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.

1.3.10 Bottom ash produced from the combustion process will be sent offsite to a third-party ash processing plant for recovery.

1.3.11 APC residues will be recirculated into the flue gas treatment process and any surplus sent for treatment at a suitably permitted facility.

2 APPLICATION SITE CONDITION REPORT

2.1 Application Phase

- 2.1.1 This SCBR, is prepared in accordance with the Environment Agency Horizontal Guidance Note H5, provides references to the various chapters of this report, where available information on the known current condition of the operational area is provided.

2.2 Site Condition Report Summary

1.0 Site Details	
Name of the applicant	Encyclis Energy Limited
Activity address	Shelton Road, Willowbrook East Industrial Estate, Corby, Northamptonshire, NN17 5XH
National grid reference	SP 90910 90860
Site area (ha)	4.12
Document reference and dates for Site Condition Report at permit application and surrender	Application: 220203 R JER8374 LHW IES Baseline and SCR
Document references for site plans (including location and boundaries):	Drawing 1 Site Location Plan Drawing 2 Site Layout Plan including Site Boundary Drawing 3 Site Sensitivity Plan Drawing 4 Drainage Plan

2.0 Condition of the land at permit issue	
Environmental setting including: <ul style="list-style-type: none">• Topography• Geology• Hydrogeology• Hydrology• Environmental Consents, Licences, Authorisations, Permits and Designations	Details of the environmental setting are provided in Section 7 of this Site Condition and Baseline Report.
Pollution history including: <ul style="list-style-type: none">• Location, nature of incidents or direct discharges that may have affected soil or groundwater• Historical land uses and associated contaminants	Pollution history details are provided in Section 6 and 8 of this Site Condition and Baseline Report.
Evidence of historic contamination, for example, historical site investigation, assessment, remediation and verification reports (where available)	Details regarding historical contamination at the site are provided in Section 6 and 8 of this Site Condition and Baseline Report.
Baseline soil and groundwater reference data	Details regarding baseline soil and groundwater reference data at the site are provided in Section 7 of this Site Condition and Baseline Report.
Supporting information	Appendix A and B to this Site Condition and Baseline Report.

3.0 Permitted activities

Permitted activities	Details regarding permitted activities on the proposed site are provided in Section 1.3 of this Site Condition and Baseline Report.
Non-permitted activities undertaken	None
Document references for: <ul style="list-style-type: none">• plan showing activity layout; and• environmental risk assessment.	A site location and boundary plan for the facility are shown on the following drawing: Drawing 2 Site Layout Plan including Site Boundary Appendix C of the permit application provides and environmental risk assessment.

3 STAGE 1 – IDENTIFY WHICH HAZARDOUS SUBSTANCES ARE USED, PRODUCED OR RELEASED AT THE INSTALLATION AND PRODUCE A LIST OF THESE SUBSTANCES

- 3.1.1 The IED relates to contamination risk associated with hazardous substances used, produced and/or released by the facility. Hazardous substances are defined as substances or mixtures defined in Article 3 of Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on Classification, Labelling and Packaging of substances and mixtures (the CLP Regulations). The determination of whether a substance is a hazardous substance is largely determined using the substance CAS Number and European Chemicals Agency (ECHA) database (Ref. 2).
- 3.1.2 Raw materials on the facility include:
- Incoming waste materials (see Table 3-1 below)
 - Flue gas treatment chemicals: ammonium hydroxide [CAS No. 1336-21-6], hydrated lime [CAS No. 1305-62-0], activated carbon [CAS No. 7440-44-0]
 - White diesel (auxiliary and back up fuel)
 - Water (no CAS applicable)
- 3.1.3 In addition to the above, smaller volumes of boiler water treatment chemicals and oils and greases will also be required. The close circuit cooling water system contains a water/glycol mixture, there is no associated storage of glycol on site.
- 3.1.4 The main solid residues produced by the EfW will be:
- bottom ash (BA) is the cooled burnt-out residue from the combustion process.
 - air pollution control (APC) residues; residues comprising the fly ash and unreacted flue gas treatment residues.
- 3.1.5 There is the potential for leachate to accumulate within the bunker.
- 3.1.6 Process waters are generated from the water treatment plant and boiler blowdown. These waters are collected, treated and reused within the facility. A drainage plan is provided as Drawing 4. Clean rainwater run-off and surface rainwaters (having passed via an oil separator) are discharged to storm sewer. These are considered clean water discharges and are not hazardous.
- 3.1.7 Flue gases from the combustion of waste are treated within the abatement plant prior to release to air.

Table 3-1 Incoming Waste Codes and Description

Waste Code	Description
02	Wastes from agriculture, horticulture, aquaculture, forestry, hunting and fishing and food preparation and processing
	Wastes from agriculture, horticulture, aquaculture, forestry, hunting and fishing
02 01 03	Plant-tissue waste
02 01 04	Waste plastics (except packaging)
02 01 10	Waste metal
	Wastes from the preparation and processing of meat – fish and other foods of animal origin
02 02 03	Materials unsuitable for consumption or processing
	Wastes from the baking and confectionary industry
02 06 01	Materials unsuitable for consumption or processing

Waste Code	Description
03	Wastes from wood processing and the production of panels and furniture, pulp, paper and cardboard
	Wastes from wood processing and the production of panels and furniture
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
	Wastes from pulp, paper and cardboard production and processing
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
04	Wastes from the leather, fur and textile industries
	Wastes from the textile industry
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
15	Waste packaging; absorbents, wiping cloths, filter materials and protective clothing not otherwise specified
	Waste packaging (including separately collected municipal packaging waste)
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
17	Construction and demolition waste (including excavated soil from contaminated sites).
	Wood, glass and plastic
17 02 01	Wood
18	Wastes from human or animal health care and/or related research (except kitchen and restaurant wastes not arising from immediate health care)
	Wastes from natal care, diagnosis, treatment or prevention of disease in humans
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)
19	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
	Wastes from physico/chemical treatment of waste
19 02 03	Premixed wastes composed only of non-hazardous wastes
	Wastes from aerobic treatment of solid wastes
19 05 01	Non-composted fraction of municipal and similar wastes
19 05 02	Non-composted fraction of animal and vegetable waste
19 05 03	Off-specification compost
	Wastes from anaerobic treatment of waste
19 06 04	Digestate from the anaerobic treatment of municipal waste
19 06 06	Digestate from anaerobic treatment of animal and vegetable waste
	Wastes from the mechanical treatment of waste
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
20	Municipal wastes (household waste and similar commercial, industrial and institutional wastes) including separately collected fractions

Waste Code	Description
Separately collected fractions (except 15 01)	
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
Garden and park wastes (including cemetery waste)	
20 02 01	Biodegradable waste
Other municipal wastes	
20 03 01	Mixed municipal waste
20 03 02	Waste from markets
20 03 06	Waste from sewage cleaning
20 03 07	Bulky waste

3.2 Incoming Waste Materials

3.2.1 This is classified as a non-hazardous waste, but may contain low levels of hazardous substances. As the material is non-hazardous, it will not be considered further.

3.3 Leachate

3.3.1 It is possible that leachate could be generated from the waste stored within the bunker. Bunker management including mixing of the waste will promote the absorption of leachate or other fluids in the bunker into the waste which will subsequently be fed into the furnace.

3.4 Flue Gas Treatment Chemicals

3.4.1 Hydrated lime and activated carbon are not classified as hazardous substances to the environment and are therefore not considered further. Ammonium hydroxide is classified as hazardous.

3.5 White Diesel and other Oils

3.5.1 White diesel is stored for use during start-up and shut-down and for auxiliary firing. There will also be smaller amounts of oils and greases used and stored onsite.

3.6 Water and Cooling Water

3.6.1 Clean water is not hazardous and does not pose a significant risk to ground or groundwater. On this basis it is not considered further.

3.6.2 The water/glycol mixture used within the closed-circuit cooling water system is fully contained. There is no storage of glycol onsite. On this basis glycol/water in the cooling water system is not considered further.

3.7 Boiler Water Treatment Chemicals

3.7.1 Boiler water treatment chemicals will be delivered and held in relatively small quantities. Details of the precise water treatment chemicals to be used have not been confirmed, but they will be stored within a building, in relatively low volumes and with secondary containment.

3.8 Bottom Ash and Boiler Ash

3.8.1 Boiler ash will be mixed with bottom ash in common with practice at most EfW sites in the UK. It will be stored within an enclosed building. Bottom ash is a mirror entry in the List of Waste Regulations and can be hazardous or non-hazardous due to the potential for containing heavy metals, PAHs, dioxins and furans and dioxin like PCBs. Testing of the residue is required once the facility becomes operational to confirm its hazard status. However, most incinerator bottom ash from UK Energy from Waste facilities is classified as non-hazardous. Subject to testing once operational it is expected that this residue will be non-hazardous and therefore bottom ash is not considered further.

3.9 APC Residues

3.9.1 APC residues are a hazardous residue due to the levels of heavy metals, PAHs, dioxins and furans and dioxin like PCBs, and pH based on alkalinity. They are a dry solid powdery residue.

3.10 Process Waters

3.10.1 Process waters associated with the boiler water treatment plant and boiler blowdown are not considered likely to contain a significant quantity of hazardous substances and are not therefore considered hazardous.

3.11 Flue Gases

3.11.1 Flue gases generated from the combustion of the waste primarily comprise carbon dioxide and water vapour with low levels of nitrogen oxides, sulphur dioxide, hydrogen chloride, hydrogen fluoride, volatile organic compounds, carbon monoxide, ammonia, heavy metals, dioxins and furans, dioxin like PCBs and polyaromatic hydrocarbons (PAHs). Although containing hazardous materials post treatment residual levels of pollutants are very low and will comply with IED and BAT conclusions¹ emissions performance. Hazardous substances have been identified in the following materials on site:

- White diesel (ultra-low sulphur gas oil) and other oils;
- Bunker leachate
- APC residues;
- Flue gases;
- Ammonium hydroxide.

¹ <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32019D2010&from=EN>

4 STAGE 2 – IDENTIFYING THE RELEVANT HAZARDOUS SUBSTANCES

- 4.1.1 Stage 1 identified a number of hazardous substances that are stored and used on site as part of site operations. Stage 2 requires a review of the listed substances to determine which are relevant hazardous substances (RHS). Each of the substances identified within Stage 1 are reviewed below, considering their chemical and physical properties and how they are stored and used on site, to determine the potential pollution risk of each hazardous substance.
- 4.1.2 RHS in relation to IED are defined as:
those substances or mixtures defined within Article 3 of Regulations (EC) No1272/2008, which, as a result of their hazardousness, mobility, persistence and biodegradability (as well as other characteristics), are capable of contaminating soil or groundwater and are used, produced and/or released by the installation.
- 4.1.3 For those substances identified as hazardous in Stage 1 Table 4-1 considers the potential pollution risk via consideration of the chemical and physical properties such as: composition, physical state (solid, liquid, and gas), solubility, toxicity, mobility, persistence.

Table 4-1 Summary of Potential Pollution Risk of Hazardous Substances

Substance	Chemical Characteristics /Risks	Physical State	Solubility	Toxicity	Mobility	Persistence	Soil & Groundwater Pollution Potential	RHS
White diesel and other oils	A complex combination of hydrocarbons produced by the distillation of crude oil. <i>Suspected to be carcinogenic.</i>	Liquid	Low	Toxic to the water environment	High	Not readily biodegradable	High	Yes
Bunker leachate	Mixture of dissolved organic, inorganic, and xenobiotic compounds, inorganic ions, and heavy metals	Liquid	Soluble	Contains substances classified as toxic	High	Contains persistent substances	High	Yes
APC residues	Mixture of possible inorganic / organic combustion products including salts (carbonates, sulphates and chlorides), metals, PAHs, dioxins and furans , dioxin -like PCBs	Solid (powder)	Variable, some components soluble others insoluble. Salts and some metals likely to be soluble.	Contains substances classified as toxic (heavy metals, dioxins and furans etc.)	Low	Contains persistent substances (heavy metals, dioxins etc)	Low.	Yes
Flue Gas	Carbon dioxide, water vapour, oxygen, with trace levels of nitrogen oxides, sulphur dioxide, hydrogen chloride, hydrogen fluoride, volatile organic compounds, carbon monoxide, ammonia, heavy metals, dioxins and furans, dioxin like PCB and polyaromatic hydrocarbons (PAHs).	Gas	Carbon dioxide Water 2000 mg/l Completely soluble Oxygen 39 mg/l Nitrogen solubility in water 20mg/l Nitrogen oxides Water 67 mg/l Carbon monoxide 29 g/l (20°C)	Carbon dioxide = no ecological damage caused by this product Oxygen = no ecological damage caused by this product Nitrogen = no ecological damage caused by this product Nitrogen oxides = this product has no known environmental/toxicity effects. Carbon monoxide = no ecological damage caused by this product	High (upward)	Variable many species will undergo atmospheric reactions. Contains persistent substances (heavy metals, dioxins furans etc)	Very low. Released from a 75 m high stack designed to provide good dispersion. As a gas it unlikely to contact ground or groundwater onsite.	No

Substance	Chemical Characteristics /Risks	Physical State	Solubility	Toxicity	Mobility	Persistence	Soil & Groundwater Pollution Potential	RHS
Ammonium hydroxide solution	<25% ammonium hydroxide solution	Liquid	Soluble	Very toxic to aquatic organisms	High	Low	High	Yes

5 STAGE 3 – ASSESSMENT OF THE SITE SPECIFIC POLLUTION POSSIBILITY

5.1.1 Each of the relevant hazardous substances identified in Stage 2 are to be considered in Stage 3 in the context of the site itself to determine whether circumstances exist which may result in the release of the substance in sufficient quantities to represent a pollution risk, either as a result of a singular emission or as a result of accumulation from multiple emissions.

5.1.2 Circumstances under which emissions may occur include:

- Planned emissions;
- Accidents and / or incidents; and
- Routine operations.

5.1.3 The only planned emission at the site is the release of flue gases to air. Clean rainwater run-off is directed to storm sewer however this is not directly related to the process and is also clean and therefore not a site condition matter. In Stage 2 flue gases were discounted as a RHS.

5.1.4 The site will maintain an up to date Environmental Management System (EMS) compliant with ISO 14001 (integrated with 9001 and 18001). This EMS will outline procedures in place to minimise the frequency of accidents or incidents occurring and it will outline procedures in place to minimise the risk in the event of an accident or incident occurring. These are summarised below:

- All aspects of the site operations have been assessed for significance and an appropriate environmental risk assessment has been carried out;
- Regular inspections of impermeable surfaces, tanks, bunds and pipe work will be carried out and repairs and maintenance will be undertaken as necessary;
- All plant and equipment will be inspected and maintained in accordance with legal requirements and the manufacturer's recommendations and maintenance records will be kept by site management;
- Any complaints received about site activities will be recorded and investigated in accordance with the complaints log and investigation procedure;
- A mechanism will be in place to fully investigate any environmental incidents and non-conformances in both normal and abnormal conditions and to record any remedial actions that might be taken and how to prevent re-occurrence. Relevant employees will be trained in how to report such occurrences including near misses and hazards from both an environment and health and safety perspective
- A site-specific emergency contingency and accident management plan will be in place; and
- All staff will receive environmental training relating to environmental best practice on induction and will be required to follow safe working procedure. Key personnel will also be required to complete Environment Agency technical competence assessments and continuing competence assessments as applicable.

5.1.5 Emissions as a result of the RHS used during routine operations are outlined in the sections below.

5.2 White Diesel and other Oils

5.2.1 The site requires fuel for start-up, shutdown and for auxiliary firing. White diesel will be stored in a single 250m³. The tank will be compliant with oil storage regulations and will be bunded to contain at least 110% of the tank content. Smaller amounts of oils and greases are also stored in containers. All storage containers will be stored in bunded areas.

5.2.2 The storage facilities for oil based substances are subject to daily visual checks for integrity and leaks. The site surfaces will be regularly inspected and will be repaired where necessary to maintain the impermeable nature.

5.3 Bunker Leachate

5.3.1 Bunker mixing with promote absorption.

5.3.2 The concrete bunker will be constructed to high standards and will be designed to be water-tight. The bunker walls are constructed from thick concrete slabs with a sacrificial layer of at least 80mm. All joints will be sealed. The bunker will be subject to routine visual inspections to check the integrity of the bunker walls. During planned shutdowns the bunker integrity will be inspected. Where required repairs will be made.

5.3.3 In the event that high levels of leachate build-up were observed, arrangements to remove the liquid accumulating will be made.

5.3.4 The risk of leachate escape from the bunker is considered low and on a site specific basis bunker leachate is not considered to be a RHS.

5.4 APC Residues

5.4.1 APC residues will be stored in two fully enclosed silos with a total capacity of 460 m³. The residue will be handled in a fully contained system and loaded into enclosed vehicles using sealed connections for transport off-site. Therefore, under normal operation, the potential for contamination of ground/groundwater is negligible. The potential for contamination of ground or ground water from a spillage is extremely low as the residue is a dry solid and would be cleaned up immediately using dry techniques. All processing areas will be surfaced. The potential for contamination of ground or ground water is therefore considered negligible. On a site-specific basis APC residues are not considered to be a RHS.

5.5 Ammonium Hydroxide

5.5.1 Liquid ammonia will be stored in a 120m³ (tbc) storage tank within a secondary bund sized to contain 110% of the tank content and constructed and lined to be impervious. The storage and bunding arrangements are subject to daily visual checks for integrity and leaks and to ensure rain is not accumulating in the tank bund. The site surfaces will be regularly inspected and will be repaired where necessary to maintain the impermeable nature. In the event of a spillage, the spilled material will be cleaned up immediately and disposed of appropriately. With these measures in place the risk to the environment will be minimised.

5.6 Site Specific Pollution Possibility

5.6.1 Given the above the only diesel is considered RHS for which baseline data is required:

Table 5-1 Chemical Inventory and Assessment of Actual Pollution Risk

Substance	Nature	Approx. volume or weight per annum (8,000 hours)	Amount stored on site and management/control measures	Actual Pollution Risk ¹
White diesel	Ultra low sulphur fuel oil	Variable	250 m ³	Yes
Bunker leachate	Liquid	Variable	Variable, bunker mixing with promote absorption.	No
APC residues	Powder	14,300 tonnes	2 x c460m ³	No
Ammonium hydroxide	<25% ammonia solution	225kg/h	120 m ³ (subject to confirmation during detailed design)	Yes

6 STAGE 4 – PROVIDE A SITE HISTORY

- 6.1.1 The purpose of Stage 4 is to determine which of the RHS identified in Stage 3 have the potential to be present on site in the soil and groundwater already as a result of activities undertaken at the site to date and to determine whether they are coincident with potential future emission points.
- 6.1.2 This section should consider both the history of the site prior to development of the current facility and the operational history of the current facility.

6.2 General Site History

- 6.2.1 The following table is based on a review of mapping from 1881 to 2019 included within Appendix A, ERMs ES Chapter included in Appendix M to the permit application and the various supporting reports in Appendix B.

Table 6-1: Historic Site Use

On-site Land Use and Features	Dates
Open fields with Northern Stream which flowed southwest to north east	1885-1952
The surface water feature was channelised and moved northwards, flowing to north eastern elevation of the site.	1938
A Pool/ Lagoon was present on site, associated with nearby industrial activities including the Lancashire and Corby Steel Works.	1952-1964
The watercourse had been moved off site and the pool/lagoon appears to have been filled in.	1964
Industrial -style units shown in the southwest corner of the site.	1964-1987
The site is used as a car storage facility.	2019- present

6.3 Previous Ground Investigation

- 6.3.1 There have been a number of ground investigations on site these are detailed below and included in Appendix B:
- Frank Graham Consulting Engineers (1996), Shelton Road, Corby, Northamptonshire Site Assessment Report, Ref. CKG/590196/000, May 1996
 - Babtie Group (2002), Site G . Shelton Road, Willowbrook Industrial Estate, Corby, Validation Report, Babtie Group, Ref: BGE 200945, March 2002
 - Delta-Simons (2015) Environmental and Geotechnical Site Assessment. Proposed Site for Gasification Plant, Shelton Road, Willowbrook East Industrial Estate, Corby NN17 5XH. Ref: 15-0645.02, December 2015)
 - Delta-Simons (2022) Geotechnical Ground Investigation and Interpretive Report. Shelton Road, Willowbrook East Industrial Estate, Corby, NN17 5XH. Ref 15-0645.05

Frank Graham Consulting Engineers (1996)

- 6.3.2 This report provided was summarised by ERM in the Shelton Road, Corby, Energy Recovery Facility, Environmental Statement, 18 March 2019 and formed one of the technical appendices to the submission (see Appendix M). A copy of the Frank Graham Consulting Engineers report is included in Appendix B.
- 6.3.3 The investigation involved 13 trial pits and 22 boreholes of which 10 boreholes and 1 trial pit were located on the site. It should be noted that the area included in this report included the site and the immediate surrounding area.

-
- 6.3.5 The principle objectives of the investigations were:
- to assess the levels of hydrocarbons, poly aromatic hydrocarbons (PAHs), heavy metals and phenol concentrations within the deeper groundmass and groundwater at the site;
 - to characterise the leachate potential of the soil materials and the potential for off-site migration of contaminants;
 - to measure the potential for landfill gas generation at the site, or migration onto the site from surrounding landfills; and
 - to investigate the stability of the slope along the northern site boundary.
- 6.3.6 The report concluded that the site is of low sensitivity to the transmission of pollutants arising from the steelworks waste. The identified source of contaminants on the Site was the former sludge lagoons which contained elevated concentrations of heavy metals (primarily zinc), occasional elevated concentrations of lead and high sulphur/sulphate concentrations.
- 6.3.7 The glacial clays surrounding and covering the sludge lagoons exhibited low contamination levels. It is considered that the migration of compounds off-site is unlikely due to the presence of the low permeability boulder clays and the low solubility of the contaminants (as demonstrated through the leachability testing).

Babtie Group (2002)

- 6.3.8 The Babtie Validation Report details the clearance and remediation undertaken at and around the proposed site and was required to confirm that the remediation works were carried out in accordance with the associated Remediation Strategy. It is noted that this report pertains to both the site and immediate surrounding area, only information and data concerning the site has been summarised below.
- 6.3.9 The remedial works comprised the following:
- the ground surface was reshaped, balancing cuts and fills as far as possible. As part of this process unwanted vegetation and contaminated topsoil was removed off-site to a suitably licensed landfill;
 - along the northern boundary, a zone of landscaping 17m wide was provided along the bank of the Willowbrook North Arm to allow for any future instability in the bank. On the east, south and west sides of the Site a zone of landscaping (4m wide) was provided;
 - regrading of the site and finished surface to ensure a minimum crossfall of 1:50 graded to fall towards a central valley where storm water drains through a system of gullies and oil separators into the existing piped storm water drainage system;
 - the installation of a drainage layer beneath a 500 mm thick Type 1 capping layer that incorporates a polypropylene geotextile; and
 - the infilling of the deep central drainage ditch to form a haul down road.
- 6.3.10 The report states that the majority of the contamination is found within the steelworks wastes which are encapsulated in glacial till within the Site. The near surface deposits are impacted but with contaminants which do not pose a risk to the users of the proposed 'industrial' development. The contamination found has been shown to be relatively insoluble and therefore immobile.
- 6.3.11 The Babtie Group investigation comprised of 48 soil and 4 water samples of which 5 boreholes and 23 validation soil sample locations were obtained on the Site
- 6.3.12 The Babtie report states that the low level gas risk may be magnified by the Site capping. Therefore, remedial measures (*i.e.* venting of ground gasses by the construction of perimeter granular trenches) were implemented to mitigate such risks.

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- 6.3.14 The Babbie report states that the findings of the Site investigation and subsequent remediation statement have been discussed and agreed with the Environment Agency Groundwater Protection Officer and the local Environmental Health Officer at Corby Borough Council prior to the commencement of the site remediation works. The remediation of the Site, as observed by Babbie, was carried out in accordance with the Remediation Statement and Contractors Method Statements.
- 6.3.15 In summary the remediation of the Site was designed to reduce infiltration and direct any rainwater or runoff into the dedicated subsurface drains and surface water systems. Remediation involved the reworking and levelling of the Site, with validation samples taken of the surface soils to confirm soil concentrations were below the acceptable concentrations, prior to capping with imported crushed natural stone. Venting of any underground gasses was facilitated by the construction of perimeter granular trenches.
- 6.3.16 With the exception of zinc and nickel all validation samples taken from reworked and levelled ground had concentrations of contaminants below the Babbie derived remediation criteria. As zinc and nickel are phytotoxic contaminants it is not considered to be a potential risk to the end use of the Site. Clean topsoil was provided in the landscaped areas.

Delta-Simons (2015)

- 6.3.17 The environmental and geotechnical assessment was undertaken to establish the potential in-ground geotechnical and environmental risks and liabilities as part of due diligence for the proposed purchase and development of the site.
- 6.3.18 The intrusive investigation comprised the following:
- Drilling of 20 dynamic sampler boreholes to a maximum depth of 3.0 m bgl.
 - Drilling of ten cable percussion boreholes to a maximum depth of 20.0 m bgl;
 - Drilling of four rotary boreholes to a maximum depth of 30.0 m bgl;
 - Installation of 10 selected dynamic sampler, five cable percussive, and four rotary boreholes with 50 mm internal diameter gas and groundwater monitoring wells;
 - Collection of disturbed and undisturbed soil samples from selected locations for subsequent laboratory environmental analysis and geotechnical testing;
 - Collection of groundwater samples from installed boreholes on one occasion; and
 - Four rounds of gas and groundwater level monitoring.
- 6.3.19 A hotspot of TPH contamination was identified at a depth of 0.9 m below ground level (bgl) in DS107a which is located to the north of the site. Asbestos (amosite lagging) was identified in one sample within the Made Ground at a depth of 2.2 m bgl at DS109 which is located towards the centre of the site.
- 6.3.20 Slightly elevated concentrations of mercury were identified in six of the boreholes sampled. These exceedances are not considered significant as the site is not located within a Source Protection Zone, and there are no active groundwater abstractions within 2 km of the Site.
- 6.3.21 Ground gas monitoring indicated low gas flow rates and slightly elevated concentrations of methane (maximum concentration of 10.4% volume/volume [v/v]) and carbon dioxide (maximum concentration of 4.9% v/v) giving the Site a Characterisation Situation 2 (CS2 - Low Risk).

Delta-Simons (2022)

- 6.3.22 The 2022 report focussed on a geotechnical ground investigation to obtain an accurate picture of geometry of the geological and tectonic elements of the background. The report identified the stratigraphy of the ground, the geotechnical design parameters of each layer and provided guidelines for the development of the new EfW facility. The report did not include further data on soil or groundwater contamination levels.

6.4 Potential Historic Contaminants

- 6.4.1 Given the age of the site, there is potential for asbestos containing materials on site. Asbestos was identified in one location within the Made Ground at a depth of 2.2 m bgl at DS109 in the Delta Simons (2015) report.
- 6.4.2 The former sludge lagoons (thought to be associated with a former steel works) on site contain concentrations of heavy metals within the shallow Made Ground (primarily zinc) and occasional elevated concentrations of lead and high sulphur/sulphate concentrations. The glacial clays surrounding and covering the sludge lagoons exhibited low contamination levels.
- 6.4.3 The site is of low sensitivity to the transmission of pollutants arising from the steelworks waste. It is considered that the migration of compounds off-site is unlikely due to the presence of the low permeability boulder clays and the low solubility of the contaminant
- 6.4.4 There is potential for contamination within the steelworks wastes which are encapsulated in glacial till within the Site. The near surface deposits are impacted but with contaminants which do not pose a risk to the users of the proposed 'industrial' development. The contamination found has been shown to be relatively insoluble and therefore immobile

6.5 Operational History

- 6.5.1 The site appears to have had previous industrial uses including a steel works with associated sludge/waste lagoons, as depicted on mapping from 1952. The industrial units had been removed by circa 1987.
- 6.5.2 Local authority records and aerial mapping from circa 2019 indicated the site was occupied as a car storage facility with hard standing. An earlier planning record had granted permission for an extension for a steam plant, chemical tanker and offloading.

7 STAGE 5 – IDENTIFY THE SITE’S ENVIRONMENTAL SETTING

7.1 Site Setting and Sources of Desk Study Information

7.1.1 The following sections detail the environmental setting of the site. The sources of desk study information utilised in order to describe the condition of the installation, and in particular, to determine the potential for substances to be present in, on or under the land associated with present and past uses of the site and its surrounding areas are listed below:

- Envirocheck report reference 304172790_1_1, 21 November 2022
- ERM Environmental Statement, Shelton Road, Corby Energy Recovery Facility, 18 March 2019, see Appendix M of the permit application.
- Information held by the British Geological Survey relating to geology and hydrogeology.

7.2 Site Description

7.2.1 The site is roughly rectangular and the site is currently utilised as a car storage areas with tarmac road and gravelled areas. The northern area of site is landscaped and acts as a buffer between the site and adjacent surface water feature; Northern Stream.

7.3 Topography

7.3.1 The site is relatively flat, lying at approximately 106 m above ordnance datum.

7.4 Geology and Hydrogeology

7.4.1 The British Geological Survey (BGS) shows that the site is underlain by Northampton Sand Formation comprising Sandy, berthierine-oidal and sideritic ironstone.

7.4.2 DEFRA’s Groundwater Vulnerability Map shows the superficial deposits at the site are classified as unproductive; these are rock layers or drift deposits with low permeability that have negligible significance for water supply or river base flow. The bedrock is classified as a Secondary A aquifer; these are predominantly lower permeability layers which may store and yield limited amounts of groundwater due to localised fissures, thin permeable horizons and weathering.

7.4.3 The site is not located in or within 500 m of a groundwater Source Protection Zone.

7.4.4 The site is located within nitrate vulnerable zones for groundwater and surface water.

7.5 Hydrology

7.5.1 The nearest surface water feature is Northern Stream adjacent to the site boundary to the north-east.

7.6 Man-made Pathways

7.6.1 No man-made pathways have been identified.

7.7 Environmental Consents, Licences, Authorisations, Permits and Designations for the Site and Surrounding Areas

Abstraction Licences

7.7.1 There is no publicly available information regarding water abstractions, however as the site is not within a designated groundwater source protection zone, we would not expect any large-scale abstractions to be taking place within the vicinity of the site.

Water Discharges

7.7.2 There are no water discharge consents within 1 km of the site.

Landfill Sites

7.7.3 Information from the EA website at the time of writing indicates that there is one landfill site within 1 km of the site. The details are provided in Table 7-1 below

Table 7-1: Landfill Sites within 1km

Licence Holder	Address	Distance from Site	Waste Accepted
Corus U K Ltd T/A Corus Tubes	BSC Landfill Site, north bank of Northbrook, Corby, Northamptonshire	390 m West	Northamptonshire Category C * Northamptonshire Category D Northants/Lincs Category A * Northants/Lincs Category B

Historic Landfill Sites

7.7.4 Information from the EA website at the time of writing indicates that there are 6 historic landfill sites within 1 km of the site. The details are provided in Table 7-2 below:

Table 7-2: Historic Landfill Sites

Licence Holder	Address	Distance from Site	Waste Accepted
British Steel Corporation	Gretton Brook Road, Deene, Corby, Northamptonshire	31 m Northeast	Deposited Waste included Inert and Industrial Waste
BSC Corby	Candy Filter Sludge Ponds, Corby, Northamptonshire	34 m Northeast, 59 m Northwest, 239 m, 393 m, 480 m and 580 m Southeast, 673 m Southwest	Deposited Waste included Special Waste and Liquid Sludge
British Steel Corporation	North East Materials Stockyard, Birchington Road	555 m Southwest	Deposited Waste included Inert Waste and Liquid Sludge
British Steel Corporation	Refractory Tip, Gretton Road West	556 m Southwest	Deposited Waste included Inert Waste and Liquid Sludge
British Steel Corporation	BSC North Brook Lagoons, North Bank of North Brook, Lagoon Site, Corby	734 m Northwest	Deposited Waste included Inert Waste and Liquid Sludge
Midland Oak	Railway Cutting, Steel Road, Weldon	770 m Northeast	Deposited Waste included Inert Waste and Liquid Sludge

Permitted Waste Sites

7.7.5 Information from the EA website at the time of writing indicates that there is a single permitted waste sites within 1 km of the site. The details are provided in Table 7-3 below:

Table 7-3: Permitted Waste Sites

Operator	Address	Distance from Site	Permitted Activity
Clearwater D C 2001 Limited	Units 1-4 Enterprise Park, Hunters Road, Corby, Northamptonshire, NN17 5JE	660 m Southeast	Special Waste Transfer Station

Permitted Installation Sites

7.7.6 Information from the Envirocheck report indicates that there is one permitted installation site within 500 m of the site. The details are provided in Table 7-4 below:

Table 7-4: Permitted Installation Sites

Operator	Address	Distance from Site	Permitted Activity
Clean Power (UK) Limited	Corby Energy Recovery Centre, Willowbrook East Industrial Estate, Shelton Road, Corby, Northamptonshire, NN17 5XH	0 m	Disposal of >50 t/day non-hazardous waste (> 100 t/day if only AD) involving biological treatment 5.1 A(1) (A) the incineration of hazardous waste in an incineration or co-incineration plant with a capacity exceeding 10 tonnes per day

Statutory Designated / Sensitive Sites within 1 km

7.7.7 There are no statutory designated sites within 1 km of the site. Statutory designated sites in the wider environment are shown in Figure 5.

Mining

7.7.8 There are no mining activities within 1 km of the site.

COMAH

7.7.9 There are no COMAH sites within 1 km of the site.

Radon

7.7.10 The site is in a lower probability radon area and there are no radon protection measures required.

8 STAGE 6 – SITE CHARACTERISATION

- 8.1.1 The site is located at Shelton Road, Willowbrook East Industrial Estate, Corby NN17 5XH. The Site is located approximately 2.2 km north-east of Corby Town Centre in a light industrial setting. The nearest residential property is approximately 750 m from the site boundary.
- 8.1.2 Section 5 identifies two RHS, albeit that the actual pollution risk considered low.

8.2 Conceptual Site Model

Background

- 8.2.1 An outline conceptual site model (CSM) consists of an appraisal of the source-pathway-receptor 'contaminant linkages' which is central to the approach used to determine the existence of 'contaminated land' according to the definition set out under Part 2A of the Environmental Protection Act 1990. For a risk to exist (under Part 2A), all three of the following components must be present to facilitate a potential 'pollutant linkage'.
- Source referring to the source of contamination (Hazard).
 - Pathway for the contaminant to move/migrate to receptor(s).
 - Receptor (Target) that could be affected by the contaminant(s).
- 8.2.2 Receptors include human beings, controlled waters and buildings / structures.
- 8.2.3 As part of the assessment the potential risks to receptors for potential source is given one of the following classifications:
- Low risk - it is considered unlikely that issues within the category will give rise to significant harm to identified receptors
 - Moderate risk - it is possible, but not certain that issues within the category will give rise to significant harm to receptors
 - High risk - there is a high potential that issues within the category will give rise to significant harm to identified receptors

Potential Pollutant Linkages

- 8.2.4 Each stage of the potential pollutant linkage sequence has been assessed individually on the basis of information obtained during the review of previous site investigation reports and desk study exercise and are discussed in the following section. Current site use is considered to be the site once the permitted activities have started.

Potential Contaminant Sources

On Site – Current

- 8.2.5 The potential contamination sources from the proposed facility have been discussed in sections 3-5. Hazardous substances associated with the proposed facility are fuel oils (predominantly white diesel) and ammonium hydroxide.

On Site – Historical

- 8.2.6 The former pool/ lagoon associated with the nearby steelworks which was subsequently infilled in the 1960s is a potential source for Made Ground contamination. Possible contaminants may include metals (particularly zinc and lead), PAHs, cyanide, phenols, sulphide and sulphates.

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- 8.2.7 Furthermore, as a result of the deposited materials there is the potential for leachate and land gas generation on-site.

Off-site – Current

- 8.2.8 The area surrounding the site is dominated by light industrial use within the Willowbrook East Industrial Estate. Current off-site potentially contaminative land uses include general industrial activities.
- 8.2.9 Tata Steel is located approximately 1 km south from the site. Potential contaminants of concern may include heavy metals and metalloids, fuels and oils, asbestos and PCBs.
- 8.2.10 The coverage of hardstanding across Industrial Estate and surrounds would provide a barrier, restricting the potential for surface water infiltration, thereby reducing the mobility of sub-surface contaminants (if present) from the site.

Off-Site – Historical

- 8.2.11 Historical off-site potentially contaminative land uses include Corby Steel industry activities.

Potential Pathways

- 8.2.12 In areas of the site covered by buildings or hardstanding the risks to future on site human health receptors via the pathways of dermal contact and ingestion will be mitigated. However, in areas of soft landscaping, the pathways of dermal contact and ingestion could still be active.
- 8.2.13 There is the potential for vertical migration of Made Ground contaminates to groundwater.

Potential Receptors

- 8.2.14 Potential human health receptors include future site users.
- 8.2.15 Groundwater is potentially present within the Northampton Sand Formation (Secondary A Aquifer).
- 8.2.16 The Northern Stream is the nearest surface water feature, at the northern boundary of the site.
- 8.2.17 Built structures on site can also be considered as receptors.

Outline Conceptual Site Model

- 8.2.18 An outline CSM has been developed on the basis of the desk study and previous site investigations. The CSM is used to identify potential sources, pathways and receptors (i.e. potential pollutant linkages) on site post development and is summarised in the table below.

Table 8-1: Conceptual Site Model

Potential Source	Contaminants of Concern	Via	Potential Pathways	Linkage Potentially Active?	Receptors	Qualitative Risk Rating	Notes
On site . proposed: Storage of oil and ammonium hydroxide	Hydrocarbons and ammonium hydroxide.	Soil	Direct contact/ingestion	x	Future site users	N/A	Diesel and ammonium hydroxide will be stored on impermeable surfaces within bunds that have 110% capacity of the tank.
			Inhalation of volatiles	x		N/A	
			Airborne migration of soil or dust	x		N/A	
			Leaching of mobile contaminants	x	Groundwater	N/A	
		Groundwater	Direct contact/ingestion	x x	Future site users	N/A	
			Vertical and lateral migration in permeable strata	x x	Groundwater	N/A	
On site historical: Infilled land associated with lagoon/pool Asbestos Containing Materials	Metals (particularly zinc and lead), PAHs, cyanide, phenols, sulphide and sulphates.	Soil	Direct contact/ingestion	x	Future site users	N/A	Future users will be protected from soils by hardstanding and will therefore have no contact with soils. Groundworkers should be made aware of the possibility of encountering potential Asbestos Containing Materials (ACM) within the Made Ground across the Site and an appropriate protocol should be in place.
			Inhalation of volatiles	x	Future site users	N/A	
			Leaching of mobile contaminants	✓	Groundwater	Low Risk	

Potential Source	Contaminants of Concern	Via	Potential Pathways	Linkage Potentially Active?	Receptors	Qualitative Risk Rating	Notes
		Groundwater	Leaching of mobile contaminants	✓	Surface Water (Northern Stream)	Low Risk	The Northern Stream is located adjacent to the Northern site boundary. It is considered that the groundwater is perched and unlikely to impact on the watercourse.
Off Site Current: Tata Steel Landfills	Potential contaminants may include heavy metals, metalloids,		Direct contact/ingestion	✗	Future site users	N/A	Elevated concentrations of boron, mercury and selenium have been identified within the groundwater, but are considered representative of wider groundwater quality, and as such not considered to represent a risk to the end Site use or its users
Off Site-Historic: Corby Steel industry activities	Potential contaminants may include heavy metals, metalloids, dioxins, phenols, asbestos, sulphides, benzene, toluene, ethylbenzene, and xylenes (BTEX) and hydrocarbons.	Groundwater	Direct contact/ingestion	✗	Future site users	N/A	Elevated concentrations of boron, mercury and selenium have been identified within the groundwater, but are considered representative of wider groundwater quality, and as such not considered to represent a risk to the end Site use or its users

9 STAGE 7 – SITE INVESTIGATION

- 9.1.1 Previous investigations have been summaries in Section 6.3 of this report. Frank Graham Consulting Engineers and Bactie Group reports are both over 20 years old and therefore have limited relevance in determining the current site condition.
- 9.1.2 The Delta-Simonsq2015 report provided data for a number of boreholes across the whole site area and therefore provides a useful indication of the site condition. This data included information on levels of hydrocarbons present in soils and groundwater. However, this data was collected 7 years ago and site uses since this period have included activities with the potential to add to existing hydrocarbon levels.
- 9.1.3 Data to characterise any existing levels of ammonia has not been obtained.
- 9.1.4 It is recommended that a program of targeted further investigations be carried out to establish baseline levels of ammonium hydroxide and provide more recent data for hydrocarbons.

10 STAGE 8 – PRODUCE A BASELINE REPORT

- 10.1.1 Details provided in Stages 1-7 include information on potential contaminant sources on site.
- 10.1.2 An additional targeted intrusive ground investigation has been identified to provide additional data to inform the baseline. The additional SI works will be agreed with the EA and completed at a suitable stage during the construction phase. Following completion of the investigations this Site Condition and Baseline Report will be updated to include the additional baseline data for ammonia and hydrocarbons. This data will then form the baseline levels for the identified RHSs at the site.

11 OPERATIONAL PHASE SITE CONDITION REPORT

11.1 Operational Phase

11.1.1 During the operational phase of the facility this SCBR will be periodically reviewed and information recorded as set out below.

11.2 Site Condition Report Summary

4.0 Changes to the activity	
Have there been any changes to the activity boundary? If yes, provide a plan showing the changes to the activity boundary.	
Have there been any changes to the permitted activities? If yes, provide a description of the changes to the permitted activities	
Have any dangerous substances not identified in the Application Site Condition Report been used or produced as a result of the permitted activities? If yes, list them	
Checklist of supporting information	<ul style="list-style-type: none">• Plan showing any changes to the boundary (where relevant)• Description of the changes to the permitted activities (where relevant)• List of dangerous substances used/produced by the permitted activities that were not identified in the Application Site Condition Report (where relevant)

5.0 Measures taken to protect land	
Use records that you collected during the life of the permit to summarise whether pollution prevention measures worked. If you can't, you need to collect land and/or groundwater data to assess whether the land has deteriorated.	
Checklist of supporting information	<ul style="list-style-type: none">• Inspection records and summary of findings of inspections for all pollution prevention measures• Records of maintenance, repair and replacement of pollution prevention measures

6.0 Pollution incidents that may have had an impact on land, and their remediation	
Summarise any pollution incidents that may have damaged the land. Describe how you investigated and remedied each one. If you can't, you need to collect land and/or groundwater reference data to assess whether the land has deteriorated while you've been there.	
Checklist of supporting information	<ul style="list-style-type: none">• Records of pollution incidents that may have impacted on land• Records of their investigation and remediation

7.0 Soil gas and water quality monitoring (where undertaken)	
Provide details of any soil gas and/or water monitoring you did. Include a summary of the findings. Say whether it shows that the land deteriorated as a result of the permitted activities. If it did, outline how you investigated and remedied this.	
Checklist of supporting information	<ul style="list-style-type: none">• Description of soil gas and/or water monitoring undertaken• Monitoring results (including graphs)

12 SURRENDER SITE CONDITION REPORT

- 12.1.1 At permit surrender, the following sections of the SCR template (EPR H5) will be completed and submitted to the EA as part of the permit surrender application. Information that has been gathered over the lifetime of the Permit will be used to identify whether the land is in a satisfactory condition. If necessary, surrender reference data will be collected and remediation will be undertaken if required.

8.0 Decommissioning and removal of pollution risk

Describe how the site was decommissioned. Demonstrate that all sources of pollution risk have been removed. Describe whether the decommissioning had any impact on the land. Outline how you investigated and remedied this.

Checklist of supporting information

- Site closure plan
 - List of potential sources of pollution risk
 - Investigation and remediation reports (where relevant)
-

9.0 Reference data and remediation (where relevant)

Say whether you had to collect land and/or groundwater data. Or say that you didn't need to because the information from sections 3, 4, 5 and 6 of the Surrender Site Condition Report shows that the land has not deteriorated.

If you did collect land and/or groundwater reference data, summarise what this entailed, and what your data found. Say whether the data shows that the condition of the land has deteriorated, or whether the land at the site is in a satisfactory state. If it isn't, summarise what you did to remedy this. Confirm that the land is now in a satisfactory state at surrender.

Checklist of supporting information

- Land and/or groundwater data collected at application (if collected)
 - Land and/or groundwater data collected at surrender (where needed)
 - Assessment of satisfactory state
 - Remediation and verification reports (where undertaken)
-

10.0 Statement of site condition

Using the information from sections 3 to 7, give a statement about the condition of the land at the site. This should confirm that:

- the permitted activities have stopped
 - decommissioning is complete, and the pollution risk has been removed
 - the land is in a satisfactory condition
-

13 CONCLUSIONS

- 13.1.1 RPS has undertaken an assessment of the site condition at the proposed Corby EfW facility in support of an environmental permit application. The primary purpose of this report is to provide information to the EA in relation to the permit application and to provide them with a consolidated framework against which the potential future contamination issues will be assessed.
- 13.1.2 The following RHS have been identified in relation to general site operations:
- White diesel
 - Ammonium hydroxide.
- 13.1.3 Having reviewed all available data, it is concluded that additional information is required to baseline the site prior to it becoming operational. The details of the additional SI works will be agreed with the EA and will be carried out during the construction works and prior to the facility becoming operational. Once complete this Site Condition and Baseline Report will be updated to include the additional baseline data.

REFERENCES

- 1 - <https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:32010L0075&from=EN>
- 2 - <https://echa.europa.eu/>
- 3 - Environment Agency, H5 Guidance for Applicants, Environmental Permitting Regulations, Site Condition Report . Guidance and Templates, May 2013.

Drawings

Drawing 1 Site Location Plan

Drawing 2 Site Layout Plan including Site Boundary

Drawing 3 Site Sensitivity Plan

Drawing 4 Drainage Plan

Drawing 5 Ecological Designated Sites



Appendices

Appendix A

Envirocheck Report

Appendix B

Ground Investigation Information