Medworth Energy from Waste
Combined Heat and Power Facility

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June 2022

Environmental Statement

Appendix 13A: Wisbech Phases 1 and 2 Geoenvironmental Desk Study and Interpretative Report

Regulation reference: The Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 Regulation 5(2)(a)

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Report Status, June 2022

This report covers the study area for land contamination for the EfW CHP Facility Site, Access Improvements, CHP Connection, TCC and a portion of the Water Connections as defined in **Chapter 13: Geology, Hydrogeology and Contaminated Land (Volume 6.3)** of the Medworth Energy from Waste Combined Heat and Power Facility Environmental Statement (PINS ref. EN010110).

It should be noted that the report also covers additional land now outside the Study Area due to design evolution between the PEIR and Environmental Statement for the Waste Combined Heat and Power Facility, as described below.

This report was produced for the Medworth Energy from Waste Combined Heat and Power Facility PEIR (PINS ref. EN010110), June 2021, and reflects the Proposed Development boundary and design information available at the time the PEIR was produced. The report was previously appended to the PEIR in Chapter 13: Geology, Hydrogeology and Contaminated Land, Appendix 13A and although it has been subjected to some formatting updates the contents remain consistent with the previous publication.

As the design of the Proposed Development has evolved since the PEIR, the Proposed Development boundary area presented at PEIR has been reduced to arrive at the Order limits which are the subject of the DCO application. This has resulted in a slightly reduced area for the CHP Connection, Access Improvements and TCC. This means that some land contamination sources and receptors in this report are not relevant to the Environmental Statement. This is reflected in the Environmental Statement which only contains information relevant to the updated land contamination study area in **Chapter 13: Geology, Hydrogeology and Contaminated** Land (Volume 6.3), however the numbering of sources remains consistent with this report.

Executive summary

Background	Wood Environment & Infrastructure Solutions UK Ltd (Wood) was commissioned by MVV Environment Ltd (MVV) to prepare a Phase 1 and Phase 2 Geoenvironmental Appraisal in relation to the proposed redevelopment of the Medworth Waste Transfer Facility in Wisbech (the site). The Medworth Energy from Waste (EfW) Combined Heat and Power (CHP) Facility is being proposed for the site and will comprise a large multi-storey building and chimney stacks with accessory buildings containing plant, offices and utilities. This report also considers associated components of the Proposed Development including the CHP Connection, Access Improvements and TCC. The site boundary for the purposes of this report comprises the Preliminary Environmental Impact Assessment (PEIR) boundary encompassing all of these elements. This report was previously issued as draft in July 2020 for the EfW CHP site only, it was then updated to support the PEIR for the Proposed Development to include the other components described above. In addition, the footprint of the EfW CHP Facility has increased since the report was issued in 2020 to include land southeast of the previous boundary. The area previously subject to Phase 1 and 2 assessment is therefore referred to throughout this report as the 'leased area' and the new area of land within the footprint of the EfW CHP Facility as the 'additional area'. Where the EfW CHP Facility is referred to without qualification, this reflects both areas of land. The land condition of the associated Grid Connection Corridor for the EfW CHP Facility has been assessed separately in a Phase 1 geoenvironmental desk study.[1]
Purpose of the report	This report has been produced for the purpose of informing the Applicant of potential geotechnical and geoenvironmental risks and constraints associated with the potential redevelopment of the site. The report also provides information to support the Environmental Impact Assessment (EIA) and site condition report (SCR).
Site Description	**EfW CHP Facility** The EfW CHP Facility is accessed via Algores Way. Most of the EfW CHP Facility (the leased area) is currently occupied by an aggregate and waste management facility which stockpiles and processes natural aggregates, road scalpings, concrete, brick and household waste. Household waste is stored within a steel-framed concrete-floored waste reception warehouse in the north-east corner of the site. The EfW CHP Facility site is surfaced with compacted gravel. The additional area to the southeast is currently greenfield and has never been used for waste operations. The leased area is bound by a ~2m high highly vegetated earth bund on all sides. The earth bunds do not continue the full length of the site boundaries along the north-west and south-east site boundaries. A staff car park, weighbridge and three portable welfare / storage containers are located adjacent to the north-west façade of the waste reception warehouse. Anecdotal evidence indicates a 2500 litre below ground diesel fuel tank and filling station is present beneath a storage container located between the weighbridge and welfare cabins. The tank provides fuel for on-site vehicles. An above-ground

[1] Included as **Appendix 13B**

	2000 litre unbunded double skinned tank containing AdBlue is located to the east of the storage container. An above-ground 1000 litre unbunded diesel tank is located adjacent to the north-west corner of the waste reception warehouse. **CHP Connection Corridor, Access Improvements and TCC** The CHP Connection Corridor covers the land in which the proposed CHP Connection route will be developed and comprises the disused March to Wisbech Railway running along the western boundary of the EfW CHP Facility site and continuing north then northwest to the Nestle Purina site. The disused railway is heavily overgrown with vegetation. Ground levels are typically within 2 to 4m AOD. The ground surface rises along the CHP connection route from south to north. Drainage ditches are present on the western side of the connection route. The Access Improvements site area comprises a section of New Bridge Lane and adjoining land west of the EfW CHP Facility site. In addition, an existing access point to the EfW CHP Facility site from Algores Way, at the east side of the EfW CHP Facility site, will be reconGraphicd to provide staff and visitor car and pedestrian access to the EfW CHP Facility, and the section of Algores Way running northeast from the EfW CHP Facility site to Weasenham Lane is included in this report for completeness. The TCC for the EfW CHP Facility include currently undeveloped, vegetated, greenfield land east of the EfW CHP Facility site. The ground levels in this area are typically within 1.5 to 2.0m AOD. The ground surface slopes very slightly to the south. A small area of higher elevation (4m AOD) is present on the western edge. A drainage ditch runs across the centre and southern edge of this area.
Site History	**EfW CHP Facility** The site generally remained undeveloped agricultural land until the early 2000s, although historical mapping between the early 1950s and 1980s suggests infilling of historical drainage channels may have occurred. The disused March to Wisbech Railway is present adjacent to the north-west site boundary. The line is now disused and was active between 1887 and 2000. An industrial / commercial park was developed north of the EfW CHP Facility site, progressing southward towards the EfW CHP Facility site from 1.0km to 30m north between the 1950s and 2000s. Aerial photography indicates the hedged area in the southeast of the EfW CHP Facility site has been used for an unknown activity and had a small structure in its northeast corner. **CHP Connection Corridor** This area was developed as railway land from first mapping in the 1880s, including a goods station, cranes and hydraulic rams on the land in the north, which was developed by 2003 and expanded in 2006 as the Nestle factory. There is potential for localised contamination associated with the railway use and demolition of historical buildings/sheds on the railway line, though if any significant contamination was present on the Nestle facility this is likely to have been addressed during its redevelopment. The surrounding area has generally remained in commercial use.

	Access Improvements New Bridge Lane was present in its current location by first mapping, with two sluice gates shown onsite on drains either side of the lane where it is crossed by the railway. A filing station was present adjacent to this area by 1968. Algores Way was shown as fields on first mapping, and was used as a track by 1980, the road was present by 1990. By 1950 works had been developed north of Algores Way on former allotments, and factories were present to the west and east. **TCC** The TCC site has remained greenfield, with land drains, since first mapping. The maps indicate some former land drains may have been infilled by the 1990s.
Environmental Setting & Site Sensitivity	The site is underlain by the following geological sequence: Tidal Flat Deposits (comprising silt and clay with subordinate sand, gravel and peat) underlain by the Ampthill Clay (Mudstone) Formation. Made ground is not indicated on geological mapping but is expected to be present due to the current site usage as a waste transfer and aggregate processing facility. The groundwater sensitivity is assessed as low - the superficial and bedrock deposits beneath the site are classified as an unproductive aquifer. The BGS borehole records suggest that groundwater is held within the superficial deposits as perched discontinuous groundwater bodies. The site does not lie within a Source Protection Zone. The surface water sensitivity is assessed as high – the site is situated within an area served by an extensive network of artificial drainage channels under the control and management of the Internal Drainage Board (IDB). Drainage ditches flow adjacent to the north, east and south boundaries and within the central area of the site, conveying water by gravity to the south-west. Drainage is passed to the River Nene at the Middle Level IDB's South Brink pumping station. The ditches are culverted in the north-east corner of the site adjacent to Algores Way. The grid connection routes cross several drainage ditches within the rateable area of Hundred of Wisbech and King's Lynn IDB. The ecological sensitivity is assessed as low on the basis that the site is not located within or within close vicinity to an environmentally sensitive site.
Preliminary sources of contamination	**EfW CHP Facility (leased area)** Thirteen very low to low risk pollutant linkages have been identified. The risks are not considered significant and therefore will not be assessed further. Ten moderate and ten moderate / low risk pollutant linkages have been identified affecting property, surface water, future site users and off-site users. These linkages are considered potentially significant and have been assessed further. Significant potential sources of contamination have been identified on the site, including hydrocarbon fuel tanks, a septic tank, a leachate drain, hazardous household waste, made ground and stockpiles of demolition materials & asphalt. The EfW CHP Facility area has been subject to ground investigation and the updated risk assessment is below. **EfW CHP Facility (additional area)** The initial conceptual model and preliminary risk assessment for the additional area of the EfW CHP Facility has identified two moderate/low risks which require further consideration as follows: Moderate/low risk to future site users and future surface water associated with possible contaminants in the area of unknown storage/other activity southeast of the EfW CHP site CHP Connection Corridor, Access Improvements and TCC.

	The initial conceptual model and preliminary risk assessment for the CHP Connection Corridor, Access Improvements and TCC identified one potentially significant contaminant linkage (with moderate or higher risks classed as being potentially significant) and there are also six moderate/low risks that may require further investigation, as follows: Moderate risk to future site users associated with the disused March to Wisbech Railway; Moderate/low risk to current and future surface water associated with the disused March to Wisbech Railway; Moderate/low risk to future site users and future surface water associated with made ground including infilled former drains on land which may be used as a TCC; Moderate/low risk to future site users associated with offsite historical and current works adjacent to the EfW CHP Facility Site; Moderate/low risk to future site users associated with the offsite former petrol filling station adjacent to the Access Improvements area at New Bridge Lane.
Preliminary geotechnical constraints	The Phase 1 Desk Study revealed that there are no site-specific ground investigations available for the EfW CHP Facility leased area, EfW CHP Facility additional area, CHP Connection Corridor, Access Improvements or TCC. Available information from previous ground investigations completed offsite, was reviewed to identify the preliminary geotechnical issues and constraints that may be present on the site. The review revealed the following potential geotechnical issues and constraints: Potential presence of Made Ground on site to unknown depths and extent. This is further confirmed by the current uses of the site. This material is considered not suitable as a foundation layer; Potential presence of soft and compressible deposits at shallow depth. These materials are susceptible to settlements and therefore may preclude the use of shallow foundations or require treatment to improve their stiffness if shallow foundations are adopted; The soils underlying the site may contain sulphate, leading to the potential for sulphate and thaumasite attack on buried concrete;. Further constraints relating to the potential for shallow groundwater, running sand and soil volume change potential were also identified. Intrusive ground investigations were recommended on the EfW CHP Facility (leased area) to obtain site-specific factual information necessary for the assessment and further evaluation of the identified constraints. These were completed in 2020 as described below.
Scope of the intrusive Ground investigation: EfW CHP Facility (leased area)	**Allied Exploration & Geotechnics Limited undertook an intrusive ground investigation on the EfW CHP Facility (leased area) between 2nd February and 6th March 2020.** The Phase 2: Intrusive Ground investigation (GI) comprised the drilling of 12 cable percussion boreholes (with rotary following on in five boreholes) and the excavation of seventeen trial pits. Environmental sampling and testing were

	undertaken to obtain information for assessment of contamination of soils and ground water. In addition, monitoring of ground and surface water together with gas levels was undertaken during and post GI Works. Further, in-situ and laboratory geotechnical testing was undertaken to obtain site-specific information necessary for further assessment of the potential geotechnical issues and constraints identified during the Phase 1 Study.
Land Quality findings: EfW CHP Facility (leased area)	**Soils** Detectable concentrations of inorganic and organic compounds have been recorded in all material types on the site, however no recorded concentrations exceed the relevant GAC for a commercial / industrial end use assuming a conservative 1% SOM content. Loose fibres of chrysotile and amosite were identified in BH10 at 0.3m bgl, however quantification analysis indicates the concentration is below the laboratory limit of detection. **Ground Gas** The results indicate that ground gas generation is negligible within the made ground deposits and impermeable clay indicating the site may be classified as Characteristic Situation 1 (CS1). These wells are also above silt/peat deposits, indicating that upward migration of ground gas from these deposits is potentially limited. This is supported by the low positive gas flows recorded at the site. However, mitigation may be required if a pathway for upward migration, or migration into basements/services is introduced. **Groundwater/surface water** Groundwater flow within the shallow Tidal Flat Deposits is influenced by the adjacent drainage channels. Deeper groundwater in the Tidal Flat Deposits flows in a north-westerly direction, in the direction of the River Nene. This indicates that the adjacent drainage channels are unlikely to be in connectivity with this deeper groundwater unit. The monitoring results indicate that the deeper groundwater is under sub-artesian pressure. No or marginal exceedances of the EQS have been identified in site groundwater. Heavy end aliphatic hydrocarbons (>C16-35) were identified above the laboratory limit of detection in one location, BH12. This borehole is located away from the fuel tanks on site. All other concentrations of TPH were recorded below the laboratory limit of detection. No VOCs were present above the limit of detection in any of the groundwater samples.
Geotechnical findings/conclusions: EfW CHP Facility (leased area)	The geotechnical interpretation of the GI confirmed the presence of the Made Ground beneath the site. As anticipated the Made Ground was found to be variable in consistency, and based on exploratory holes was determined to be about 1.0m thick increasing to 2.0m in the areas where bunds were found to exist on site. The GI also confirmed the presence of shallow soft compressible layers in the form of Cohesive Tidal Flat Deposits, with peat bands present at the interface between cohesive and granular Tidal Deposits. These compressible layers, together with Made Ground, are considered unsuitable as foundation strata without any ground improvement/treatment to improve their stiffness. Other ground conditions were generally consistent with the geological conditions depicted in the BGS maps comprising Glaciofluvial Sand and Gravel, Glacial Deposits (Glacial Till / Glaciolacustrine Clay) and Ampthill Clay (Stiff Clay to very weak Mudstone).

	For groundwater conditions, this were found to be very shallow and may rise to surface due to seasonal fluctuation and following potential heavy rainfall events. Chemical testing on samples obtained from all the encountered strata indicated that pyrite was not present and detected low level of soluble sulphate. Based on this, aggressivity of the ground against construction materials is considered low .
Environmental Conclusions	**EfW CHP Facility (leased area)** The environmental risk assessment has identified the following outstanding plausible pollutant linkages at the EfW CHP Facility site which could present a moderate risk to identified receptors. Ground gas from natural peat deposits presenting a risk to humans and property through gas ingress into buildings and subsequent inhalation / accumulation. Organic contaminants in soil associated with onsite current activities presenting a risk to services including potable water supply pipes through permeation. Moderate to Low risks have also been identified to surface water as a result of hydrocarbons identified in shallow groundwater during round 1. This is considered to represent an isolated area of contamination, which does not appear to be impacted on adjacent surface water quality within the drainage channels. Concentrations of TPH at this location were below the laboratory limit of detection during the two subsequent rounds of sampling. The presence of measurable concentrations of organic contaminants in the shallow soils is suggestive of the need for barrier type potable water supply pipes. This should be discussed and agreed with the statutory provider. **EfW CHP Facility (additional area)** As described above, potential sources of contamination and potential contaminant linkages have been identified on the EfW CHP Facility (additional area). There are moderate/low risks to site users and surface waters associated with the identified source, and Phase 2 intrusive site investigation is therefore recommended as part of the detailed design process. **CHP Connection Corridor, Access Improvements and TCC** Potential sources of contamination and potential contaminant linkages have been identified on the CHP Connection Corridor, Access Improvements and TCC. There is one moderate risk to future site users associated with potential contamination, including asbestos, on the disused March to Wisbech Railway land. There are also moderate/low risks to site users and surface waters associated with the identified sources, including onsite made ground and an offsite petrol filling station, and Phase 2 intrusive site investigation would be considered prudent for these sources as part of the detailed design process.
Geotechnical Recommendations	**Based on the geotechnical findings, the following is recommended for the EfW CHP facility:** Made ground should not be used as a foundation stratum due to its variability and unknown source and deposition. Both shallow and piled foundations are considered suitable for the site, depending on applied loads and tolerable settlement criteria. However, due to their susceptibility to settlements, the cohesive Tidal Flat Deposits should be improved/treated to support shallow foundations and limit settlements to within tolerable levels. The same applies to ground floor slabs in that they should not be

	founded on cohesive Tidal Flat Deposits before these are improved or site levels raised. Alternatively, suspended ground slabs should be adopted. Groundwater is found to be close or at surface. Design to resist uplift should be considered for both permanent and temporary structures. In addition, consideration should be given to raising site levels through the adoption of a cut and fill strategy to improve site drainage system, prevent potential site flooding, control influence of high water levels on design and construction of foundations and other groundworks, and allow installation of buried services in the dry to ensure their long term performance. It is likely that open excavations will be unstable, depending on depth and extent. Provision for design and construction of an adequate temporary support system to ensure stability of the excavation works and a safe working environment should be considered. In addition, dewatering may be required during excavations and any underground works. Suitable dewatering systems should be designed to both control groundwater during construction and prevent potential effects on the stability of any adjacent structure foundations and underground services. Ground investigation is recommended on the additional area of the EfW CHP Facility to confirm the ground conditions in this area with respect to contamination and also potential geotechnical hazards and risks. The geotechnical review for the CHP Connection Corridor site identified a number of potential geotechnical hazards and risks. Ground Investigation is recommended in order to provide information on the ground and groundwater conditions beneath the site, and to further evaluate the potential risks and hazards.

Contents

1. Introduction

Background	Wood Environment & Infrastructure Solutions UK Ltd (Wood) was commissioned by MVV Environment Ltd (MVV) to prepare a phase 1 geoenvironmental appraisal, followed by an intrusive geotechnical and geoenvironmental ground investigation (GI) in relation to the proposed redevelopment of the Wisbech Waste Transfer Facility as the Medworth Energy from Waste (EfW) Combined Heat and Power (CHP) Facility. This report also considers associated developments including the proposed CHP Connection and Access Improvements and a proposed TCC located to the east of the EfW CHP Facility, and the site boundary for the purposes of this report comprises the Preliminary Environmental Impact Assessment (PEIR) boundary for these elements. To date, GI has only been carried out on the portion of the EfW CHP Facility site currently leased for waste management operations, the associated development areas (CHP Connection Corridor, Access Improvements and land required for a TCC) and the additional area of the EfW CHP Facility to the southeast of the leased area are included in the desk based assessment in this report. This report was previously issued as draft in July 2020 for the EfW CHP site only, it has since been updated to support the PEIR for the Proposed Development to include the other site elements described above. The footprint of the proposed EfW CHP Facility has increased since the report was issued in 2020 to include land to the southeast of the previous boundary, and this report reflects the updated boundary.
Purpose of the Report	This report has been completed in line with Wood's proposal referenced 41310_GI_i2, dated 27th September 2019. The purpose of the report is to assist in: • Identifying potential environmental related constraints and risks associated with the historical development of the site. • Identifying geotechnical constraints and risks which may impact the development of the site. • Undertaking intrusive investigation to obtain additional information for further assessment of the identified issues and constraints. This report will be used to inform the Environmental Impact Assessment (EIA), Site Condition Report (SCR) and provide contamination and geotechnical information to inform MVV of the likely requirements for foundations, groundworks design and construction.
Scope of work	The scope of work comprised the following: **Phase 1 – Desk Study (all site areas):** • Obtaining desk-based salient geoenvironmental information through private and publicly accessible sources. • Site walkover survey. • Producing a preliminary (qualitative) environmental risk assessment for the Proposed Development.

- Identify Potential geotechnical issues and constraints and prepare a Geotechnical Risk Register (GRR).

Phase 2 – Intrusive Investigation and Interpretation (EfW CHP Facility leased area only):

- Design intrusive Ground Investigation (GI) and prepare specification for their procurement.
- Observe intrusive GI fieldworks.
- Schedule geotechnical and chemical testing.
- Assess the contamination identified and update the conceptual model.
- Assess ground and groundwater conditions encountered during GI.
- Providing recommendations for further assessment or potential remediation options.
- Provide geotechnical interpretation and engineering recommendations for design of the proposed facilities foundations and associated groundworks.
- Review and update the preliminary GRR.

Information Sources

The following sources of information have been used in the preparation of this report, and should be read in conjunction with this report:

Phase 1 - Desk Study:

- Envirocheck Report for the EfW CHP Facility leased area, obtained October 2019 (Appendix B).
- Groundsure EnviroInsight, GeoInsight and Historical Maps in GIS format and PDF (Ref. GSIP-2021-10737-4868) for all site areas, obtained May 2021.
- British Geological Survey Borehole Logs, obtained 18th October 2019 and May 2021 (Appendix C).
- Zetica Unexploded Ordnance Risk Map [redacted], obtained 14th November 2019, and accessed May 2021 (Appendix D).
- British Geological Survey Lexicon database [redacted]), accessed 18th October 2019.
- British Geological Survey GeoIndex webpage [redacted]
- Coal Authority online viewer [redacted]

Phase 2 – Intrusive Investigation and Interpretation (EfW CHP Facility leased area only):

- BSI (2015): BS5930 – Code of Practice for ground investigations.

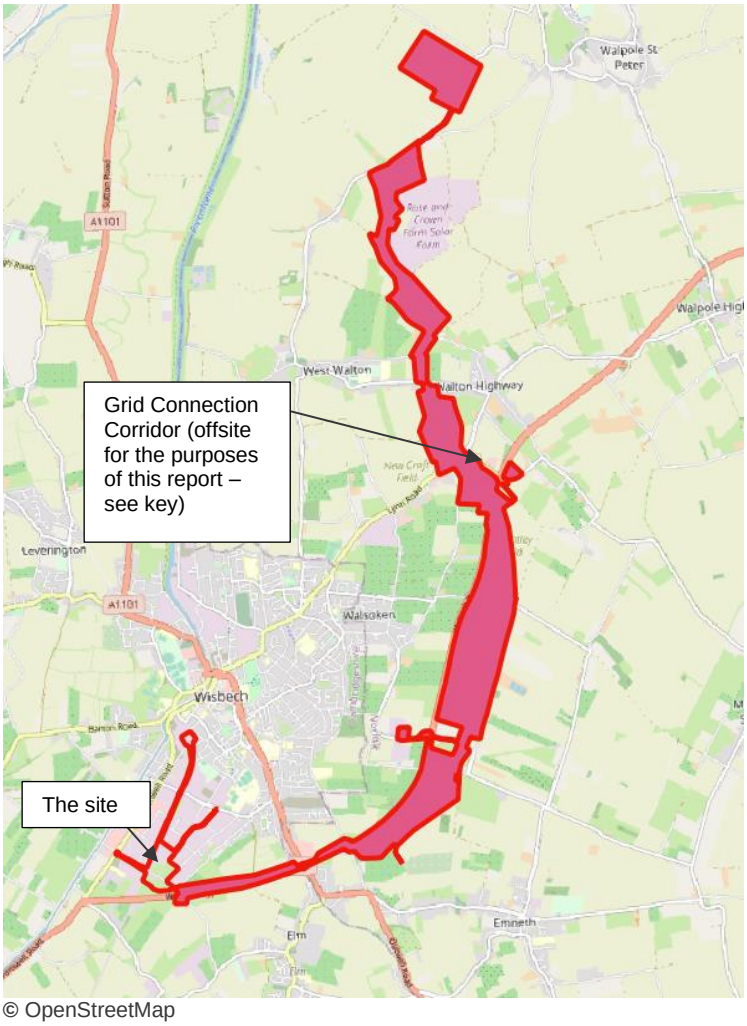
	• BSI (2004): BS EN 1997-1: Eurocode 7: Geotechnical Design - Part 1: General Rules. • BSI (2004): UK National Annex to Eurocode 7: Geotechnical design – Part 1: General Rules. • BSI (2007): BS EN 1997-2: Eurocode 7 – Geotechnical design – Part 2: Ground Investigation and testing. • BSI (2007): UK National Annex to Eurocode 7 – Geotechnical design – Part 2: Ground Investigation and testing. • DEFRA/ Environment Agency, Model Procedures for the Management of Land Contamination Contaminated Land Report 11,2004.
National Planning Policy Framework, 2019 (NPPF)	The NPPF is of material consideration for the assessment of contaminated land. This states that a site needs to be suitable for its proposed use taking into account ground conditions and risks arising from land instability and contamination. As a minimum, following remediation, land should not be capable of meeting the definition of contaminated land under Part 2A of the Environmental Protection Act 1990.
Limitations	The conclusions reached and advice given in this report are based in part upon information and/or documents that have been prepared by third parties. In view of this, we accept no responsibility or liability of any kind in relation to such third-party information and no representation, warranty or undertaking of any kind, express or implied, is made with respect to the completeness, accuracy or adequacy of such third-party information. In preparing this report we have assumed that all information provided by the Client is complete, accurate and not misleading.

2. Site details and environmental context

2.1 Site details

The study site of this report is in the southwest of the town of Wisbech (Fenland District) and is shown **Graphic 2.1 Proposed Development Location**. It is part of a much larger Proposed Development boundary, which extends north to the Walpole Substation, west of the village of Walpole St Peter, as shown on **Graphic 2.1 Proposed Development Location**. As noted previously, there is a separate Phase 1 report[1] covering the pink shaded area associated with the Grid Connection for the Proposed Development.

Graphic 2.1 Proposed Development Location



© OpenStreetMap

Key:

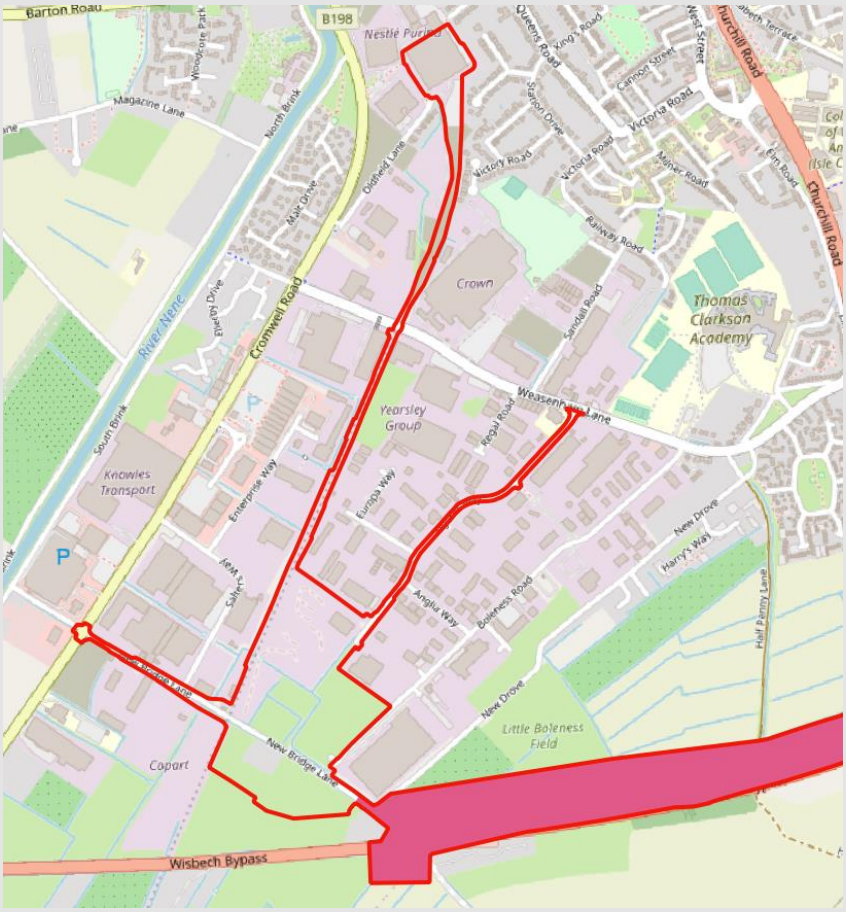
Proposed Development boundary including the site

Area of the Proposed Development covered in a separate report includes the Grid Connection Corridor and a further three TCCs.

Site Location and Layout

The site is entirely located in the town of Wisbech. The EfW CHP Facility is approximately 1.8km southwest of Wisbech town centre at post code PE14 0SH. The Access Improvements site area extends northwest from the EfW CHP Facility site area to Cromwell Road. The CHP Connection Corridor runs generally north from the EfW CHP Facility to the Nestle Purina factory at post code PE13 2PD approximately 400m southwest of Wisbech town centre. The site also includes Algores Way which runs from the EfW CHP Facility northeast to Weasenham Land, and land for use as a Temporary Compound comprising a greenfield area southeast of the EfWCHP Facility. The site location is shown on **Graphic 2.2 Site Location** and the site layout in relation to the relevant Proposed Development components is shown on **Graphic 2.3 Site Layout**.

Graphic 2.2 Site Location



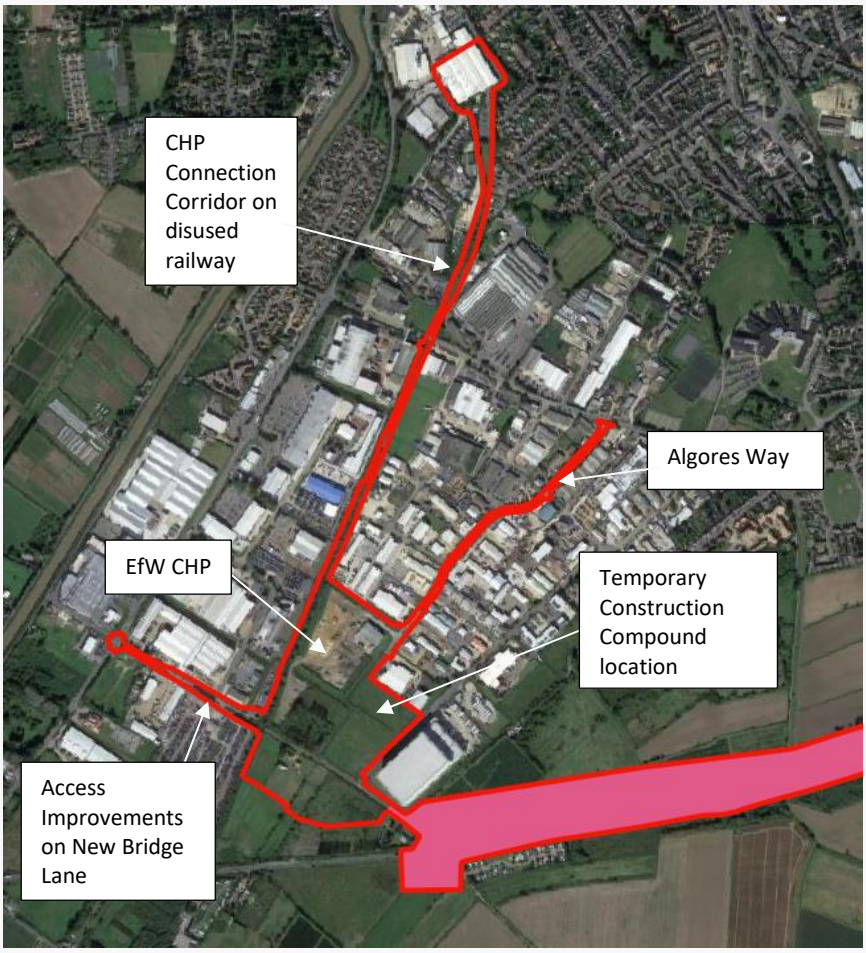
© **OpenStreetMap**

Key:

Proposed Development boundary including the site

Area of the Proposed Development covered in a separate report includes the Grid Connection Corridor and a further three Temporary Construction Compounds.

Graphic 2.3 Site Layout



Key:

Proposed Development boundary including the site

Area of the Proposed Development covered in a separate report includes the Grid Connection Corridor and a further three TCCs.

Grid Reference	• EfW CHP Facility: 545518, 307881 • CHP Connection Corridor (northern extent): 545873, 309310 • Access Improvements (western extent at New Bridge Lane): 545036, 307962 • Northern extent of Algores Way: 546154, 308451 • TCC: 545651, 307813
Site Address	• EfW CHP Facility: Frimstone Ltd, Algores Way, Wisbech PE13 2TQ • CHP Connection Corridor (northern extent): Nestle Purina, Cromwell Road, Wisbech PE13 2RG • Access Improvements: New Bridge Lane, approximate post code PE13 4TS • Algores Way, approximate post code PE13 2RU • TCC: off Algores Way, approximate post code PE13 2XQ

Site Description:

EfW CHP Facility (leased area)

This section describes the leased area of the EfW CHP Facility which corresponds to the existing waste management facility. The EfW CHP Facility (leased area) layout is shown in **Graphic 2.4 EfW CHP Facility Layout**.

The EfW CHP Facility (leased area) is accessed via Algores Way and comprises 4.5 hectares of brownfield land surfaced with compacted gravel hardstanding (as shown by the pink boundary line below). It is currently occupied by an aggregate and waste management facility which stockpiles and processes natural aggregates, road scalpings. concrete, brick and household waste. A steel-framed concrete-floored warehouse, weighbridge and site cabins are present in the north-east corner of the EfW CHP Facility site.

The northern part of the EfW CHP Facility (leased area) is approximately square in shape (identified below as Area A) with a narrow rectangular extension (identified below as Area B) protruding from its south-west corner. The topography slopes gently to the south-west, from 2.1m above Ordnance Datum (AOD) at the northern boundary, to 1.65m AOD close to the southern boundary.

Graphic 2.4 EfW CHP Facility Layout

Extract from Envirocheck report showing division of areas on EfW CHP Facility (leased area) (see Appendix B). Not to Scale.

The EfW CHP Facility (leased area) site is bound by a ~2m high highly vegetated earth bund on all sides, although the bunds do not continue the full length of the north-west and south-east site boundaries of Area A.

A site walkover was undertaken on 16th October 2019 by a competent geoenvironmental Wood Specialist. Wood was informed that the earth bund in Area A comprises topsoil stripped from the EfW CHP Facility site. The Wood

engineer was able to access a small section of the earth bund in the south-west corner of the EfW CHP Facility (leased area) site and confirmed the presence of topsoil (see Plate 7 in Appendix A).

Area B is bunded on all sides. The Wood engineer observed anthropogenic fragments such as brick, macadam and concrete on the earth bund surface (see Plate 8 in Appendix A).

Surface water drainage channels are present off-site adjacent to the earth bunds, running along all boundaries of Area A. The southern surface water ditch intercepts the EfW CHP Facility site between Area A and Area B (see Plates 9 to 11 in Appendix A). The surface water channels are culverted in the north-east corner of the EfW CHP Facility (leased area) site adjacent to Algores Way.

Further details from the EfW CHP Facility (leased area) site walkover are presented below under Current site activities.

EfW CHP Facility (additional area)

The EFW CHP Facility (additional area) comprises an area of greenfield land with onsite surface water drainage channels and some trees and hedging, located immediately southeast of the EfW CHP Facility (leased area). The area is not known to be currently in use. The additional area (green overlay) is shown in relation to the leased area (orange overlay) below.

	Other site areas: CHP Connection Corridor, Access Improvements, TCC The CHP Connection Corridor site area comprises the disused March to Wisbech Railway running along the western boundary of the EfW CHP Facility site and continuing north then northwest to the Nestle Purina site. The disused railway is heavily overgrown with vegetation. Ground levels are typically within 2 to 4m AOD. The ground surface rises along the CHP connection route from south to north. Drainage ditches are present on the western side of the connection route. **Access Improvements** The Access Improvements site area comprises a section of New Bridge Lane and adjoining land west of the EfW CHP Facility site. In addition, an existing access point to the EfW CHP Facility site from Algores Way, at the east side of the EfW CHP Facility site, will be reconGraphicd to provide staff and visitor car and pedestrian access to the EfW CHP Facility, and the section of Algores Way running northeast from the EfW CHP Facility site to Weasenham Lane is included in this report for completeness. **TCC** The TCC comprises currently undeveloped, vegetated, greenfield land east of the EfW CHP Facility site. The ground levels in this area are typically within 1.5 to 2.0m AOD. The ground surface slopes very slightly to the south. A small area of higher elevation (4m AOD) is present on the western edge. Drainage ditches are present in this area connected to those on the EfW CHP Facility and to the ditch running parallel to New Bridge Lane along its northern edge. **Other Areas Onsite** Between the EfW CHP Facility and TCC and New Bridge Lane there is an adjoining area of greenfield land which is not known to be currently in use. A farm property and some greenfield land is located south of New Bridge Lane and is also within the site boundary. These areas are included in the site boundary as they have been identified as potential mitigation areas for the Proposed Development, however there are currently no proposals to develop either of these areas of land or to use them during construction, and no potential sources of contamination that could significantly affect the Proposed Development have been identified within these areas in this report. They are therefore not considered further in this assessment other than as potential receptors that could be affected by land contamination on or migrating from the Proposed Development component areas.

Boundaries (Land uses and relevant features): EfW CHP Facility site	**Direction**	**Adjacent**	**Beyond (within 200m)**
	North-east	Drainage ditch. Manufacturer of pre-cast concrete products and book sales and storage.	Industrial estate of various activities.
	South-east	Drainage ditch. Processing of food (apples) and manufacture of wigs and accessories.	Industrial estate of various activities.

	South-west	Drainage ditch. Disused thickly vegetated land	Arable land and car auction/salvage car park
	North-west	Heavily vegetated disused March to Wisbech Railway (within CHP Connection Corridor site area) & possible drainage ditch.	Industrial estate of various activities such as haulage, frozen food production and car salvage.
Boundaries (Land uses and relevant features): CHP Connection Corridor	North	Nestle Purina extends north/northwest beyond the CHP Connection Corridor site area	The B198 (Cromwell Road), Coalwharf Road, residential housing and the River Nene
	East	Residential housing, various industrial units including Crown Packaging and the EfW CHP Facility site	Residential housing, various industrial units
	South	New Bridge Lane	Agricultural fields, car salvage and auction site to the southwest, A47
	West	Nestle Purina extends west of the CHP Connection Corridor site area, residential housing, various industrial units	The B198 (Cromwell Road), residential housing, industrial units, the River Nene
Boundaries (Land uses and relevant features): Access Improvements (New Bridge Lane)	North	Various industrial units, including Tesco petrol station	Industrial units
	East	The EfW CHP Facility	Industrial units, agricultural land
	South	Industrial units including car salvage and auction site	Agricultural land
	West	Industrial/commercial units	South Brink road, the River Nene
Boundaries (Land uses and relevant features): (Algores Way)	North	Weasenham Lane	Industrial/commercial units
	East	Industrial units	Industrial units, residential, agricultural land

	South	Industrial units	Industrial units, agricultural land
	West	Industrial units	Industrial units
Boundaries (Land uses and relevant features): TCC	North	Industrial units, including the EfW CHP Facility site and James Mackle (UK) Ltd	Industrial units
	East	Industrial units including Lineage Logistics cold store	New Drive road, agricultural land
	South	New Bridge Lane	Agricultural land
	West	The EfW CHP Facility site (leased area – waste operations and additional area – greenfield), New Bridge Lane,	Industrial units

Current site activities: EfW CHP Facility (leased area)

A site walkover was carried out of the EFW CHP Facility leased area by Wood on 16th October 2019. Photographs of the walkover are provided in Appendix A.

The EfW CHP Facility leased area is currently occupied by an aggregate and waste management facility. The EfW CHP Facility leased area has been zoned, based on material types, as followed:

- Natural aggregate was located in the north-western half of Area A, and a granite stockpile was in the southern corner of Area B (Plates 2 & 19).
- Stockpiles of demolition-derived materials – brick crush, concrete crush etc. were located in Area B. The stockpiles have not been placed on a bunded impermeable surface (Plate 3).
- Stockpiles of processed macadam gravel, screened Topsoil, made ground, and large blocks of concrete, brick and macadam awaiting crushing, were located in the south-east corner of the EfW CHP Facility site. The stockpiles have not been placed on a bunded impermeable surface (Plates 4 & 5).
- A household waste reception warehouse (WRW) is present in the north-east corner of the EfW CHP Facility site. The warehouse is approximately 1,400m^2 with an equivalent area of exterior concrete hardstanding to the south-west (Plates 12 to 14).

See Graphic 5.

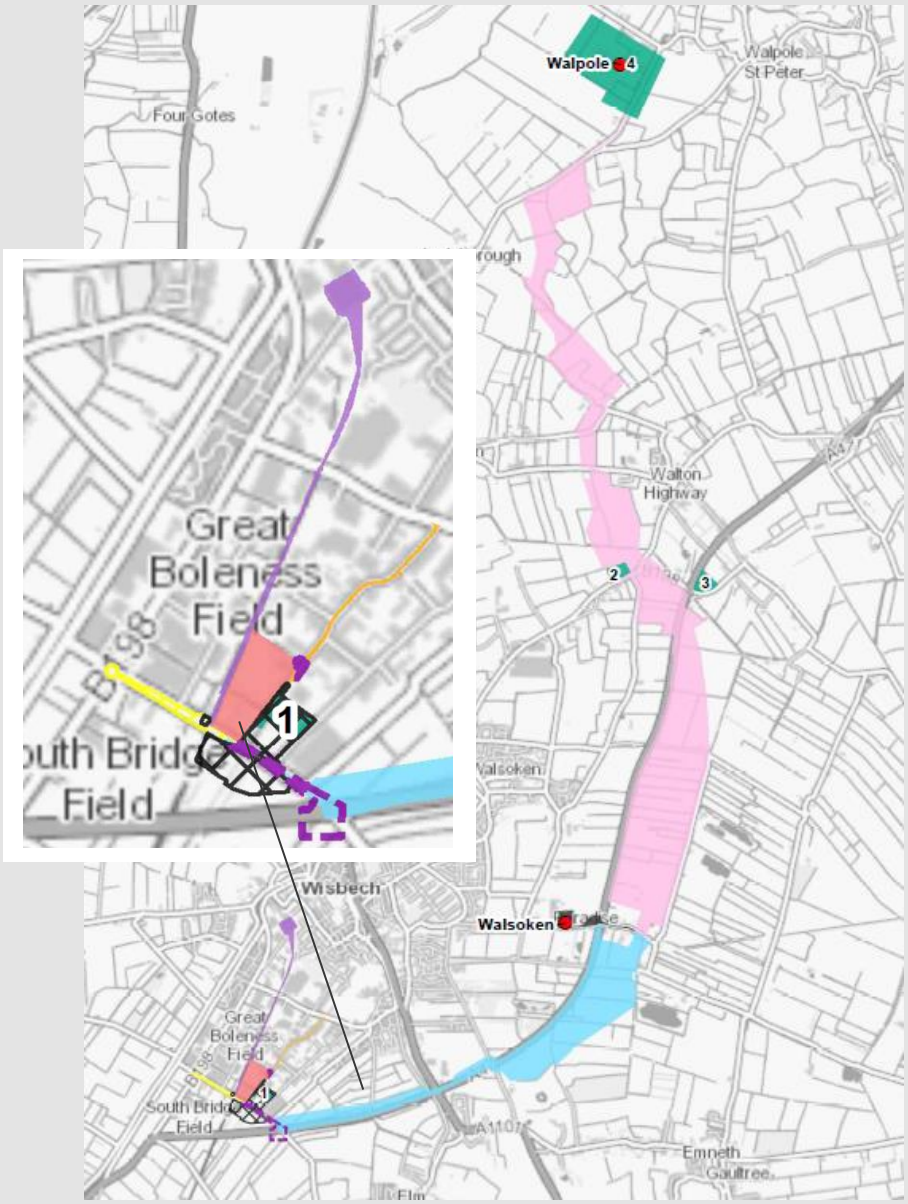
Waste Reception Warehouse

Household waste is delivered by articulated truck via the south-west façade and placed inside the WRW on a concrete floor. The waste is plastic-wrapped into large bundles for international export. Storage facilities for hazardous substances, such as batteries and gas cylinders, which are found with the imported household waste, are located adjacent to the south-western corner of the WRW.

	A leachate (Aco) drain spans the length of the south-west façade. The Aco drain feeds into a 20 m^3 below-ground holding tank located adjacent to the south-west corner of warehouse. The tank is pumped of its contents when required. At the time of the walkover, the Aco drain looked blocked. *Welfare Facilities & Weighbridge* A staff car park, weighbridge and three portable welfare / storage cabins are present adjacent to the north-west of the waste reception warehouse (Plates 1 & 6). Wood was informed by the EfW CHP Facility site occupants that a 2500 litre below ground diesel fuel tank and filling station is located beneath a storage container located between the weighbridge and welfare cabins. The tank provides fuel for on-site vehicles. An above-ground 2000 litre unbunded double skinned tank containing AdBlue is located to the east of the storage container. An above-ground 1000 litre unbunded diesel tank is located adjacent to the north-west corner of the waste reception warehouse. An unbunded double skinned above ground diesel tank and generator are located adjacent to the north-west corner of the waste reception warehouse (Plate 17). The welfare facilities utilise a below-ground sewage treatment unit located adjacent to the south-west of the weighbridge (Plate 18). The sewage tank is regularly pumped, however an outflow pipe into the drainage ditched along the south-east site boundary is marked on service drawings.
Current site activities: EfW CHP Facility (additional area), CHP Connection Corridor, Access Improvements, TCC	All other areas proposed for development are currently understood to be disused. There are proposals by third parties to reinstate the March & Wisbech Railway on which the CHP Connection Corridor is located, however there are no ongoing works in relation to this at the time of writing (June 2021).
Services	The client has provided Wood with an as-built utility and drainage layout drawing for the EfW CHP Facility leased area, which is illustrated in Graphic 3. Surface water drainage pipes run adjacent to the south-west, south-east and north-east facades of the waste reception warehouse. The system outfalls into the south-east adjacent drainage channel. A second drainage system runs from the sewage treatment unit and site car park and outfalls into the adjacent south-east drainage channel. An electricity substation is present adjacent to the EfW CHP Facility site entrance. Electricity services run towards the EfW CHP Facility site welfare beneath the southern road verge, whilst BT and drinking water run beneath the northern road verge. Wood is not aware of utility services which may run beneath the materials storage yard. No service drawings are available for the other site areas.
Unexploded Ordnance (UXO)	According to the Unexploded Bomb (UXB) risk map for all site areas, provided by Zetica UXO, the site and surrounding area have a low bomb risk. As such, it is not envisaged that specific UXO measures will be required for Ground Investigation works. The UXO Risk map is presented in **Appendix D**.

Proposed Development	The Proposed Development comprises the EfW CHP Facility and associated components as previously described. A Proposed Development drawing for the EfW CHP Facility is presented in **Graphic 2.5** (note: this updates a previous version of the layout issued in 2019 which only occupied the leased area). The Proposed Development components on site are detailed below and shown on **Graphic 2.5 Proposed Development Components**. The EfW CHP facility will comprise a large multi-storey building and chimney stacks with accessory buildings containing plant, offices, utilities and a weigh bridge. The CHP Connection for the EfW CHP facility will allow the export of steam and electricity from the facility to surrounding business users via dedicated pipelines and private wire cables. The pipeline would be located on a steel structure approximately 1.6m to 1.7m in height, with an electricity and data cable running underneath. A pipe bridge approximately 25m long and 7m high would be constructed over Weasenham Lane, allowing traffic to pass underneath. Concrete foundations extending up to 2m below the ground would form the footings of the pipe bridge. Details of the Access Improvements design are not yet known however the PEIR boundary includes land that may be required to construct improved vehicular access via New Bridge Lane to the EfW CHP Facility. Additionally, the EfW CHP Facility site is currently accessed from Algores Way, and no physical changes are proposed on Algores Way, other than at the site access, however this land is discussed in this report for completeness. The TCC will be restored back to greenfield land on completion of the construction phase.

Graphic 2.5 Proposed Development Components



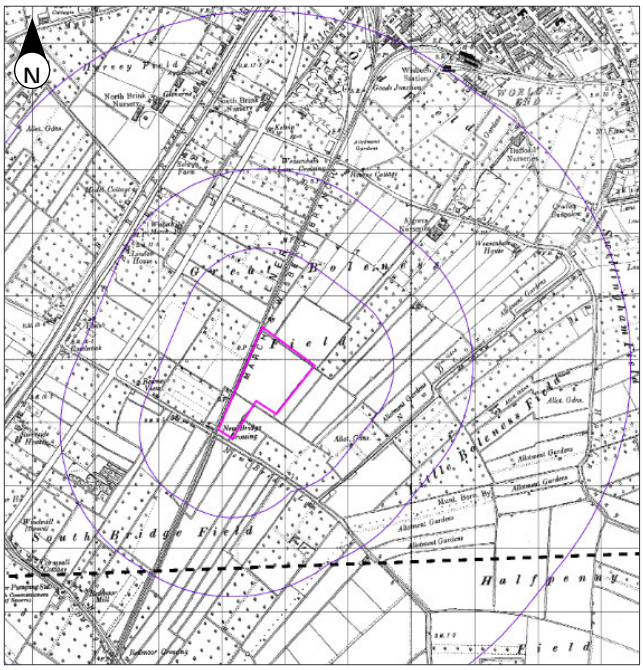
Key:

- Substation sites
- EfW CHP Facility Site and Temporary Construction Compound
- CHP Connection
- Access improvements
- Algores Way access
- Common Grid Connection (Options 1 and 2)
- Walpole Grid Connection (Option 1)
- Walsoken Grid Connection (Option 2)
- Temporary Construction Compound*
- Anglian Water Connections
- Potential Mitigation Area

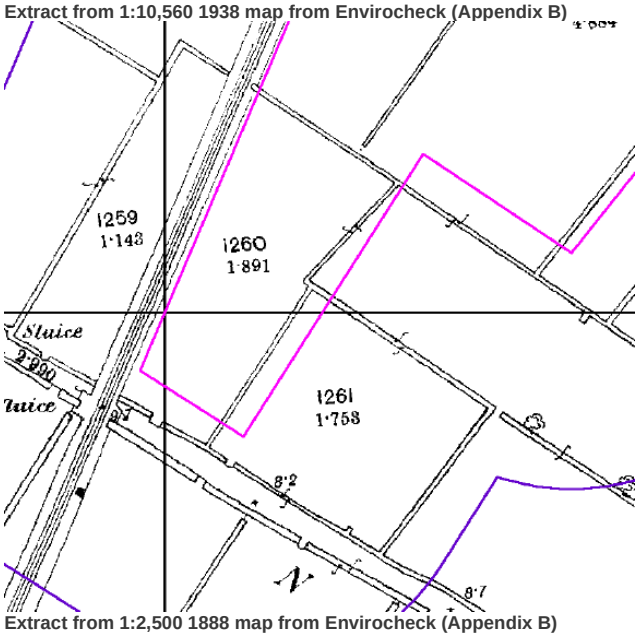
2.2 Site history: EfW CHP Facility

2.2.1 A summary of the historical development of the site since 1887, based on historical OS maps, is presented below. The historical maps can be found within the Envirocheck report in Appendix B. Where relevant, interpretation of the maps is supported by knowledge from discussions with the client and other stakeholders and previous reports for the EfW CHP Facility site.

2.2.2 The historical review below for the EfW CHP Facility has been updated to include the additional area of land to the southeast of the leased area, however some historical map images below show the leased area boundary rather than the updated boundary for the EfW CHP Facility.



Extract from 1:10,560 1938 map from Envirocheck (Appendix B)



Extract from 1:2,500 1888 map from Envirocheck (Appendix B)

Map: 1887 to 1953 1:10,560 & 1881 to 1900 1:2,500

On-Site: Agricultural land. Drainage channels run along the NE, SE & SW site boundaries, and two through the centre of the site SW-NE and NW-SE. The central SW-NE drainage channel on the leased area is no longer depicted by 1927 - assumed infilled.

On the additional area in the south there is an approximately square area of field entirely surrounded by drainage channels.

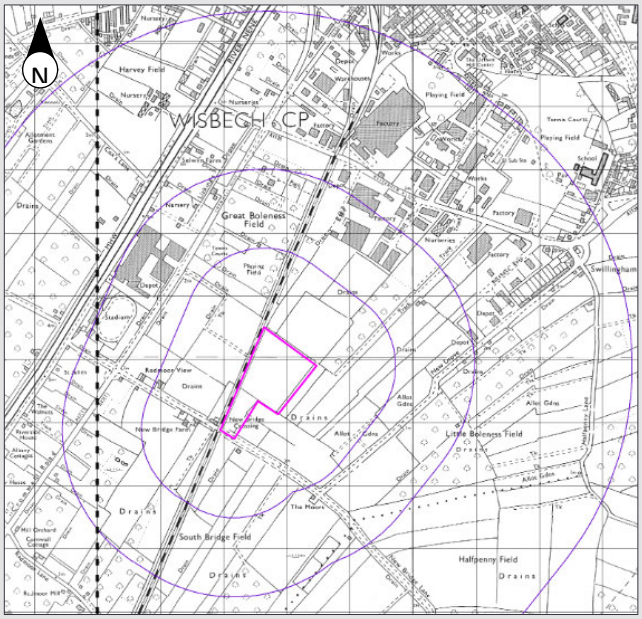
Off-site: The site is surrounded by agricultural land, orchards, nurseries and allotment gardens. Parcels of land are divided with drainage channels.

A branch railway (the disused March to Wisbech Railway) is depicted adjacent to the NW site boundary, orientated SW-NE. A road is adjacent to the site's SW boundary.

The River Nene is depicted 500 m NW of the site flowing SW-NE.

A Brick Works is depicted 625m NE of the site. The works are no longer depicted and partially infilled by 1953.

Fishing ponds are depicted 700 to 900m N and 300 to 500m SW of the site, and are partially infilled by 1953 and again by1982.



Extract fom 1:10,560 1982 map from Envirocheck (Appendix B)

Map: 1982 to 2000 1:10,000 & 1980 to 2000 1:2,500

On Site: No significant change. The western portion of the drainage channel crossing the site NW-SE, is no longer depicted- potentially culverted.

Off-Site: Large industrial 'factory and works' buildings are depicted 325m to 1000m N to NE of the site, over the former brick works and fishpond sites.

Two depots, works buildings and a sports stadium (running track) are depicted 30 to 500m NW of the site.

Wisbech rail line running along the NW site boundary is no longer depicted / disused by 2000.

An electricity substation is depicted 180m NE and W of the site by 1992.

A tank is depicted 50m W of the site by 1992.

© Infoterra Ltd & Bluesky

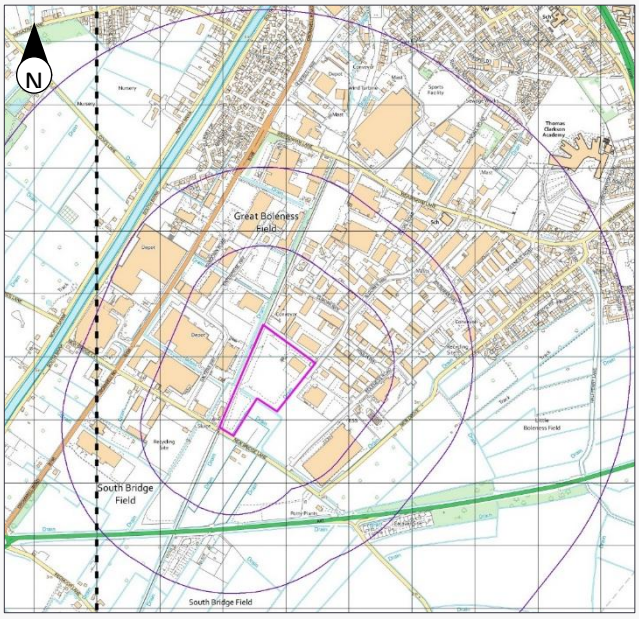
1999 Aerial photography

On site: The EfW CHP facility site is still undeveloped greenfield land. Field boundaries divide the leased area of the EfW CHP Facility site from the additional area of land. The square area surrounded by drains on the additional area of land is now hedged/tree-lined and some ground disturbance is evident within the hedged area and extending slightly east of it, and there is a central dividing hedge within this area oriented southwest to northeast.

© The GeoInformation Group

2003 Aerial photography

On site: The northern area of EfW CHP facility site is developed with a new rectangular building in the east and stockpiles of materials visible. The southwest area of the leased area is still greenfield. On or adjacent to the additional area of land in the south of the EfW CHP Facility a small structure is visible in the northeast corner of the hedged area.



Extract fom 1:10,560 2019 map from Envirocheck (Appendix B)

Map: 2006 to 2019 1:10,000 & 1881 to 1900 1:2,500

On Site: A rectangular building with exterior hardstanding depicted in the eastern quadrant of the site. Unknown structures, understood to be material segregation dividers, are depicted in the northern quadrant of the site.

Off-Site: Significant development of an industrial estate with units adjacent to the NW, NE and SE of the site. A vehicle salvage yard is depicted 100m SW of the site. A recycling site is depicted 400m E of the site.

Site history summary and pertinent features relating to Land Quality: EfW CHP Facility

The EfW CHP Facility site and surrounding area had an agricultural / horticultural land use until 1953 at the earliest. A branch railway (the disused March to Wisbech Railway), adjacent to the site's NW boundary, was active between 1887 and 2000.

An industrial park was developed between the 1950s and 2000s, progressing south towards the site from 1km to 30m north.

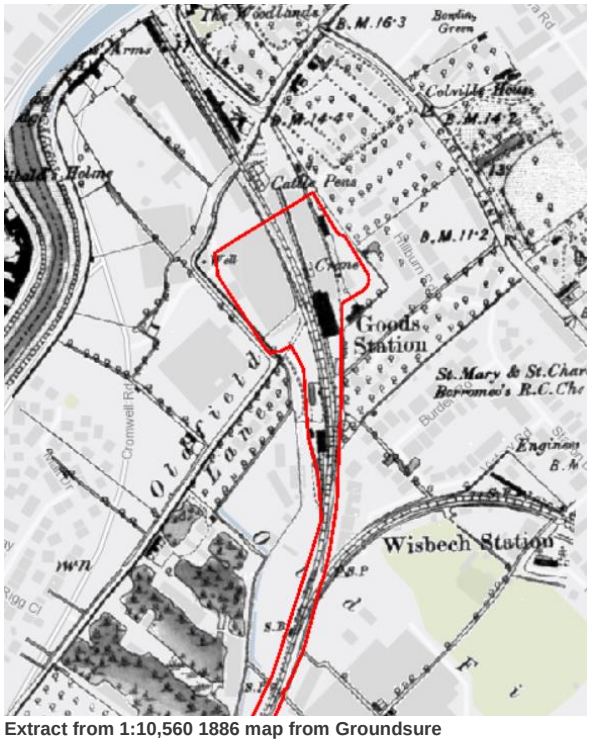
Aerial photography obtained in 2000 shows the site to be undeveloped agricultural land. Between 2000 and 2006 the leased area was developed for use as a materials and waste management facility.

Areas of potential land filling have been identified on site associated with drainage channels crossing the site.

The additional area has remained greenfield over time with some land drains present. Aerial photography from 1999 shows unknown activity including some ground disturbance and a small structure within a hedged area in the south. Recent aerial photography (2021 viewed on Google Earth Pro) shows the area is currently over-grown. Google Streetview shows a former access track into this area from New Bridge Lane is blocked by two large concrete pipe sections.

2.3 Site history: CHP Connection Corridor, Access Improvements, TCC

2.3.1 A summary of the historical development of the site since 1887, based on historical OS maps included with the Groundsure report. Where relevant, interpretation of the maps is supported by available aerial photography (such as Google Earth Pro).



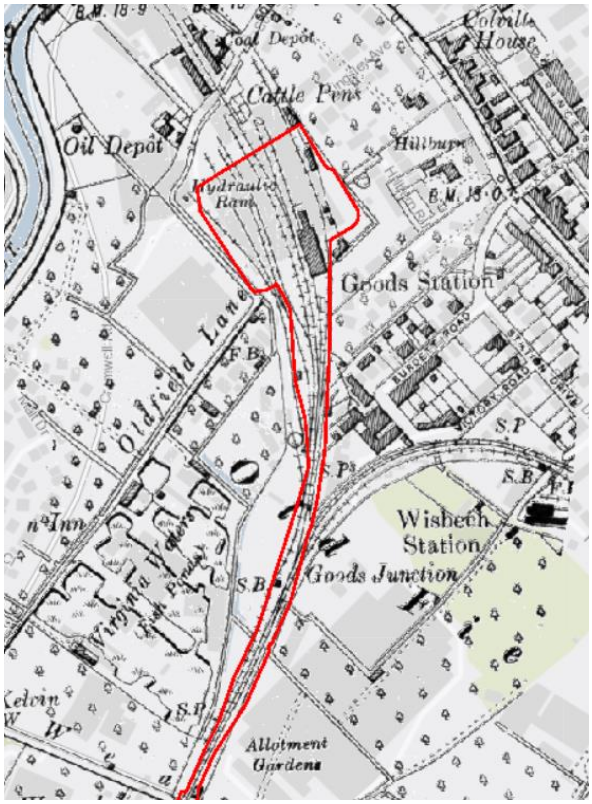
Extract from 1:10,560 1886 map from Groundsure

Onsite
By first mapping from 1886 the March to Wisbech Branch railway is present on the CHP Connection Corridor site. At the north end of the CHP Connection Corridor (current Nestle factory) the site is in use as a goods station and a shed and a crane are present with several sidings, the railway line continues beyond the site to the northwest. Some small buildings are present south of the larger shed on the west side of the railway line. New Bridge Lane is present in its current location, with two sluice gates shown onsite on drains either side of the lane where it is crossed by the railway. The Access Improvements and TCC areas are shown as fields with land drains. By 1925 more sidings and hydraulic rams are present in the north of the CHP Connection Corridor site.

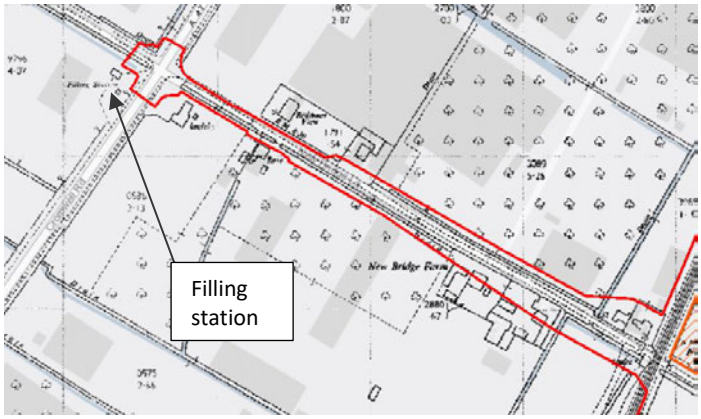
By 1981 the large shed in the northern part of the CHP Connection Corridor site has been demolished and some smaller buildings to the south of it. One small shed and sidings remain.

By 1993 some of the drainage channels on the TCC area are no longer shown, indicating they may been infilled.

Aerial photography (Google Earth Pro) from 2003 is the first to show the development of a large warehouse in the north of the CHP



Extract from 1:10,560 1925 map from Groundsure



Extract from 1:2,500 1970 map from Groundsure

Connection Corridor site (current Nestle factory), and by 2006 this had been extended eastwards and a car park constructed south of the warehouse.

Offsite

Immediately north of the Access Improvements site at on Algores Way a brick works with kilns is present by first mapping. North of the CHP Connection Corridor cattle pens are shown and a well is located immediately west. Before it reaches the northern end of the CHP Connection Corridor, the railway splits with a branch running eastwards offsite to Wisbech Station 225m east.

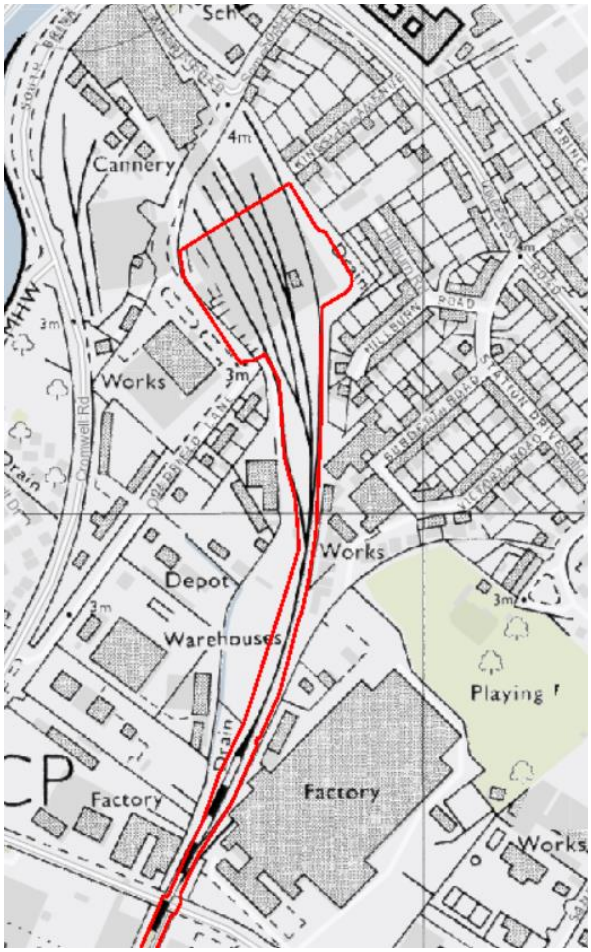
1900 mapping shows a timber yard immediately west of the north end of the CHP Connection Corridor site.

1925 mapping shows an oil depot 35m northwest of the CHP Connection Corridor site and a coal depot 85m north. Virginia Waters fish ponds are shown 20m west of the CHP Connection Corridor site. The brick works north of Weasenham Lane is now shown as allotments and Algores Nurseries are present south of the Lane, immediately west of the Access Improvements site area.

By 1950 the coal depot and oil depot are no longer labelled and additional warehouses are shown north/northwest of the CHP Connection Corridor site.

By 1967 a large cannery has been developed 80m northwest of the CHP Connection Corridor site. The fish ponds are now a depot and warehouses. Several new factories and warehouses are now present west and east the site north of Weasenham Lane, including a large metal container factory immediately east. Works have been developed north of Algores Way on the former allotments, and further factories are present in the area west and east.

1968 1:2500 mapping shows a filling station immediately southwest of the Access Improvements site area at its western extent. Mapping from the 1990s suggests the filling station was removed by then and current aerial photography suggests the area has been redeveloped as a car dealership.



Extract from 1:10,000 1981 map from Groundsure

By 1981 a new works has been developed west of the site where the timber yard was formerly located.

By 1986 works and a substation are located north of the site and New Bridge Lane at the western extent of the Access Improvements site.

By 1991 a large depot is present immediately west of the railway and the southern prior of the CHP Connection Corridor site, and by 1995 industrial developments extend southwards to New Bridge Lane at the western Access Improvements site area.

Imagery ©2021 CNES/Airbus, Getmapping plc, Infoterra Ltd & Bluesky, Landsat/Copernicus, Maxar Technologies, The Geoninformation Group, Map data © 2021

Site history summary and pertinent features relating to Land Quality

Onsite: CHP Connection Corridor
This site area was developed as railway land from first mapping in the 1880s, including a goods station, cranes and hydraulic rams on the land in the north, which was developed by 2003 and expanded in 2006 as the Nestle factory. Internet sources indicate the railway (known as the Wisbech to March 'Bramley Line') closed to passengers in 1968 and to rail freight in 2000[2]. There is potential for localised contamination associated with the railway use and demolition of historical buildings/sheds on the railway, though if any significant contamination was present on the Nestle facility this is likely to have been addressed during its redevelopment.

Onsite: Access Improvements & Algores Way
New Bridge Lane was present in its current location by first mapping, with two sluice gates shown onsite on drains either side of the lane where it is crossed by the railway.

Algores Way was shown as fields on first mapping, and was used as a track by 1980, the road was present by 1990.

2 [redacted]

Onsite: TCC
The TCC has remained greenfield, with land drains, since first mapping. The maps indicate some former land drains may have been infilled by the 1990s.

Offsite: CHP Connection Corridor
The area adjoining the CHP Connection Corridor has been used as an oil depot, timber yard (all removed by the 1950s), brickworks, fish ponds, a cannery and various other commercial uses.

Offsite: Access Improvements & Algores Way
By 1968 a filing station was present at its western extent of the Access Improvements site. Mapping from the 1990s suggests the filling station was removed by then and current aerial photography suggests the area has been redeveloped as a car dealership.

In the area surrounding Algores Way a brick works with kilns was present to the north by the 1880s. Allotments and nurseries were developed on the adjoining land by 1925. By 1950 works had been developed north of Algores Way on the former allotments, and factories were present to the west and east.

Offsite: TCC
The area north and east of the Temporary Compound remained greenfield until around the 1990s when aerial photography shows the land c.70m to the north was developed for commercial use. By 2016 commercial development extended to the northern boundary of the TCC and the cold store facility was constructed to the east.

2.4 Environmental context

Geology & Hydrogeology	Information taken from BGS mapping website [redacted], BGS 1:50k map portal Sheet 159 [redacted]), BGS Lexicon database and the UK Government opensource data [redacted] The Envirocheck report is presented in Appendix B and BGS borehole records are included in Appendix C.

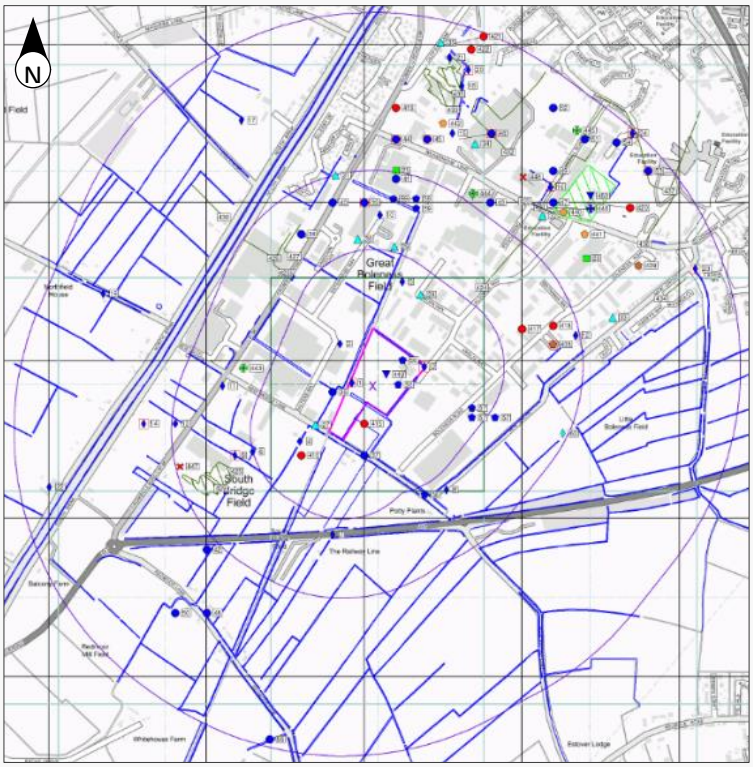
Strata	Brief Description of typical constituents	Average depth to upper surface (m bgl) or thickness (m)	Aquifer and approximate water level if known*	Notable features
Made ground	Observed as gravel aggregate surface across the site and in Area B earth bunds as topsoil comprising brick, concrete, macadam and concrete slabs.	unknown	unknown	

Tidal Flat Deposits – Clay & Silt (Terrington Beds)	Normally a consolidated or unconsolidated soft silty clay, with layers of sand, gravel & peat[3].	Thickness: 22.5m[4]	Unproductive Groundwater strike at 3.2m rising to 2.9 observed in nearby boreholes[5]	Sporadic thin peats may be present.
Glacial Till deposits	Can comprise a mixture of rock fragments, gravels, sand, silt and clays	Intercepted in nearby boreholes at 22.8 m bgl[3]		
Ampthill Clay Formation - mudstone	Pale to medium grey mudstone with argillaceous limestone nodules; some rhythmic alternations of dark grey mudstone[6].	Thickness – 48 m[2]	Unproductive	
Kellaways and Oxford Clay Formation	marine silty mudstone; beds of argillaceous limestone nodules; units of siltstone and sandstone[7].	Bedrock surface: 57m bgl[2] Thickness – 41m[2]	No information	Underlies the Ampthill Clay Formation.
Mineral Extraction and Coal Mining Activities	The site is not located within a coal mining area. There are no active quarries nor surface mineral resources within influencing distance of the site. There are no hydrocarbon licence areas within influencing distance of the site.			
Faults	There are no known faults within influencing distance of the site.			
Radon	The property is in a Lower Probability Radon Area, as less than 1% of properties are above the Action Level. The Envirocheck Report states that "No radon protective measures are necessary" (see Appendix B).			
Stability Hazards	According to the Envirocheck report, the following stability hazards are classified, based on the underlying geology: • Landslides, collapsible ground– No hazard to low risk. • Compressible ground, running sand and shrink/swell clays – moderate risk.			
Hydrogeological sensitivity[8]	The superficial and bedrock deposits beneath the site are classified as an unproductive aquifer.			

[3] BGS Lexicon database ([redacted]) accessed 18th October 2019.
[4] Cross-section of BGS 1:50k scale Geological Sheet 159
[5] BGS Borehole Logs presented in Appendix C.
[6] BGS Lexicon database [redacted] accessed 18th October 2019.
[7] Description as stated on BGS 1:50k scale Geological Sheet 159.
[8] Private water supplies are not included in the database and as such are not considered within the risk assessment, however, there remains the potential for risks to private water supplies

	The BGS Borehole records listed above suggest that groundwater held within the superficial deposits are present as perched discontinuous groundwater bodies. The site does not lie within a Source Protection Zone. The nearest groundwater abstraction well is located 480m east of the site for use in horticultural irrigation. Based on the impermeable nature of the underlying geology, Wood does not consider the abstraction location to be within influencing distance of the site.
Groundwater Flooding	The British Geological Survey provide an assessment of the susceptibility of land to groundwater flooding e.g. the potential for groundwater to emerge at the ground surface or within basements[9]. The assessment utilises two hydrogeological conceptual models; superficial deposit flooding and clearwater flooding which assesses land based on a 50m grid. Superficial deposits flooding describes geological settings where a shallow unconsolidated aquifer overlies impermeable strata. The susceptibility for flooding is often high as the storage capacity of superficial aquifers is usually limited and direct recharge from rainfall is usually high. Clearwater flooding describes the regionally extensive and long-lasting flooding of unconfined aquifers in response to extreme rainfall events. The Envirocheck Report states that groundwater flooding is not applicable to the site.
Groundwater Sensitivity	The assessment of groundwater sensivity has been based on The Guidance for the Safe Development of Housing on Land Affected by Contamination R&D66: 2008 [10]. A low senstivitity is considered appropriate for the site.
Hydrology	The nearest named water course is the River Nene, located 550m north-west of the site, flowing towards the north-east. River quality information is not available, The site is situated within an area served by an extensive network of artificial drainage channels under the control and management of the Internal Drainage Board (IDB). Drainage ditches flow adjacent to the north-east, south-east and south-west boundaries and within the central area of the site, conveying water by gravity to the south-west. Drainage is passed to the River Nene at the Middle Level IDB's South Brink pumping station. The ditches are culverted in the north-east corner of the site adjacent to Algores Way. A discharge consent relating to sewage waste is held by Frimstone Ltd, the current site occupants. The license allows for final treated effluent to enter a tributary of the River Nene. This is confirmed on the as-built drainage design drawings. There are several discharge consents relating to sewage effluent registered within 500m of the site. Discharge consents relating to the discharge of 'Other matter-surface water' is located 175m and 360m north of the site. This license 175m north was revoked in 1992.

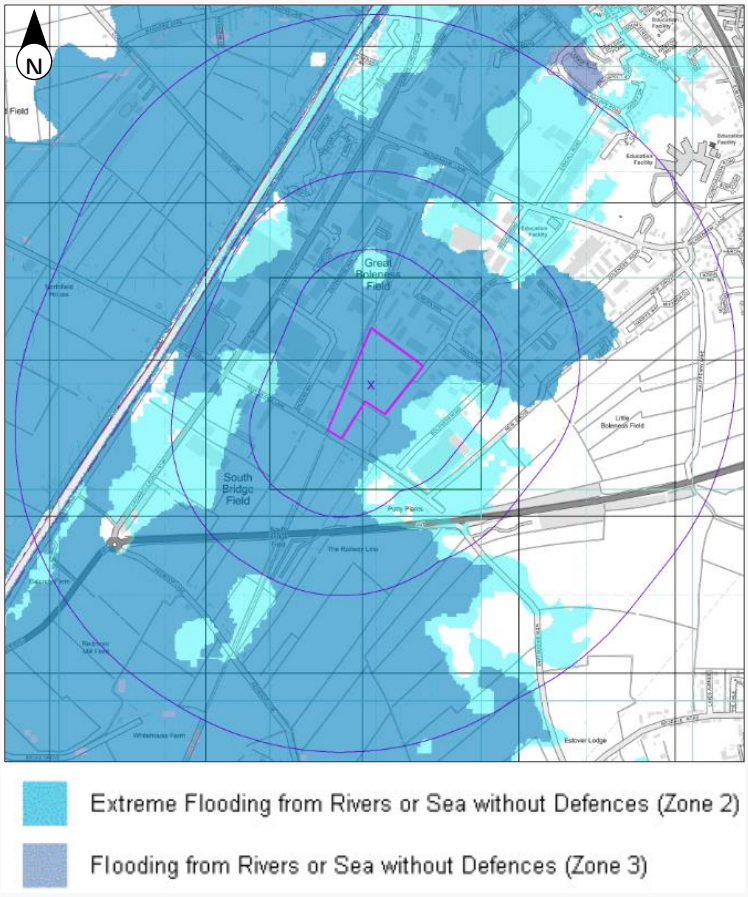
[9] British Geological Source [redacted] () accessed 18th October 2019.
[10] NHBC/ CIEH / Environment Agency, Guidance for the Safe Development of Housing on Land Affected by Contamination R&D66: 2008



Extract from Envirocheck report showing the extent of the drainage network at and around the EfW CHP site (see appendix B). Not to scale.

Hydrological sensitivity	High sensitivity – surface water site drainage and surface water run-off discharge directly into drainage channels bounding the site.
Flooding	A river and coastal flood Zone 2 and 3 are located on site[11]. The Environment Agency consider the risk of flooding from rivers and the sea to be medium.[12] The Environment Agency depict the site as being at risk of flooding from reservoirs.[11]

[11]https://flood-map-for-planning.service.gov.uk/confirm-location?easting=545530&northing=307920, accessed 18th October 2019.
https://flood-warning-information.service.gov.uk/long-term-flood-risk/map[12], accessed 18th October 2019.



Extract from Envirocheck report (see appendix B). Not to scale.

Ecology	The site is not located within or within close vicinity to an environmentally sensitive site. The site does not lie within a Nitrate Vulnerable Zone for surface water[13].
Ecological sensitivity	The ecological sensitivity is assessed as Low.

2.5 BGS Borehole Records

2.5.1 Although there are no exploratory hole records available for the site itself (all areas), a total of 10 exploratory hole records (8 Trial Pits to maximum depth of 3.1m bgl, 2 boreholes to 6.45m and 27.9m bgl) exist from ground investigation works carried out at the former greyhound stadium approximately 400 m west of the EfW CHP site and immediately west of the Access Improvements site's western extent at New Bridge Lane, and a borehole record located west of the CHP Connection Corridor site at an engineering depot at Oldfield Lane was also reviewed. These are summarised below:

[13] www.magic.gov.uk

Exploratory Hole	Date	Summary	Distance from Site / Direction
TF40NE-68	2006	Ground level 2.42m AOD MADE GROUND to 0.30m bgl Soft light grey / orange sandy CLAY (Tidal Flat Deposits - TFD) to 1.20m bgl Very dark brown Peat (TFD) to 1.30m bgl Very soft grey slightly sandy CLAY (TFD) to 2.0m bgl Grey clayey SAND (TFD) to base at 2.3m bgl Groundwater at 0.8m bgl	390m west of EfW CHP Facility
TF40NE-61	2006	Ground level 2.14m AOD MADE GROUND to 0.30m bgl Grey mottled orange sandy SILT with rootlets to 2.8m bgl (TFD) Soft grey sandy CLAY to base at 3.0m bgl (TFD) Groundwater at 2.1m bgl	390m west of EfW CHP Facility
TF40NE-67	2006	Ground level 2.00m AOD MADE GROUND to 0.30m bgl Grey / orange slightly sandy SILT with roots to 0.7m bgl (TFD) Firm light grey mottled orange slightly sandy CLAY to 1.2m bgl (TFD) Very dark brown PEAT to 1.23m bgl (TFD) Grey mottled orange brown clayey SAND with roots to base at 2.0m bgl (TFD) No Groundwater encountered	410m west of EfW CHP Facility
TF40NE-55	2006	Ground level 2.15m AOD MADE GROUND to 0.30m bgl Brownish grey / orange sandy CLAY to 1.0m bgl (TFD) Soft dark brown sandy CLAY to 1.8m bgl (TFD) Very dark brown PEAT to 1.82m bgl (TFD) Very soft dark brown sandy CLAY to 2.8m bgl (TFD) Loose grey brown slightly clayey SAND to base at 6.45m bgl (TFD) Groundwater at 1.0m bgl	420m west of EfW CHP Facility
TF40NE-62	2006	Ground level 2.31m AOD MADE GROUND to 0.20m bgl Grey to light grey mottled orange brown sandy SILT with rootlets to 1.5 mbgl (TFD) Very dark brown PEAT to 1.60m bgl (TFD) Very soft grey mottled orange brown slightly sandy CLAY to 2.8m bgl (TFD) Grey silty SAND to base at 3.10m bgl (TFD) Groundwater at 1.2m bgl and 2.3m bgl	420m west of EfW CHP Facility
TF40NE-70	2006	Ground level 2.00m AOD MADE GROUND to 0.40m bgl Firm grey sandy CLAY to 1.3m bgl (TFD) Very dark brown PEAT to 1.4m bgl (TFD)	430m west of EfW CHP Facility

Exploratory Hole	Date	Summary	Distance from Site / Direction
		Very soft grey slightly sandy CLAY to base at 2.0m bgl (TFD) Groundwater at 1.2m bgl	
TF40NE-69	2006	Ground level 2.70m AOD MADE GROUND (hardcore) to 0.05m bgl MADE GROUND (Red gravelly sand with brick fragments to 0.10m bgl MADE GROUND (Grey sandy slightly gravelly clay with various anthropogenic materials and hydrocarbon staining to 1.4m bgl Grey mottled orange brown silty SAND with roots to 1.7m bgl (TFD) Soft grey mottled brown sandy CLAY to 2.2m bgl (TFD) Very dark brown PEAT to 2.3m bgl (TFD) Very soft grey brown mottled orange brown sandy CLAY to base at 2.6m bgl Loose grey brown slightly clayey SAND to base at 6.45m bgl (TFD) Groundwater at 2.6m bgl	430m west of EfW CHP Facility
TF40NE-54	2006	Ground level 2.52m AOD TOPSOIL to 0.3m bgl Very soft brownish grey sandy CLAY to 2.7m bgl (TFD) Loose becoming medium dense grey silty SAND to 22.8m bgl (TFD) Very dense grey brown gravelly SAND to 25.8m bgl (Glaciofluvial Deposits) Very stiff grey slightly sandy gravelly CLAY to base at 27.87m bgl (Glacial Till) Groundwater at 3.2m bgl	430m west of EfW CHP Facility
TF40NE-71	2006	Ground level 2.50m AOD MADE GROUND to 0.10m bgl Firm grey mottled orange brown slightly sandy CLAY to 1.4m bgl (TFD) Very dark brown PEAT to 1.50m bgl (TFD) Soft grey slightly sandy CLAY with occasional roots to base at 1.8m bgl (TFD) Groundwater at 1.1m bgl	430m west of EfW CHP Facility
TF40NE-64	2006	Ground level 2.01m AOD MADE GROUND to 0.10m bgl Firm grey mottled orange brown slightly sandy CLAY to 1.1m bgl (TFD) Very dark brown PEAT to 1.15m bgl (TFD) Very soft grey brown slightly sandy CLAY to 2.3m bgl (TFD) Grey slightly clayey SAND with occasional roots to base at 2.6m bgl (TFD) Groundwater at 0.7m bgl	440m west of EfW CHP Facility

Exploratory Hole	Date	Summary	Distance from Site / Direction
TF40NE2	1961	Ground level 2.5m AOD Topsoil to 0.3m bgl Soft brown silty clay to 1.4m bgl Soft dark grey organic silty clay to 2.5m bgl Very soft grey brown clayey silt to 6.1m bgl. No groundwater recorded.	80m west of Access Improvements site area

2.5.2 A review of the above exploratory holes information indicated the presence of made ground in all but one of the exploratory holes at the stadium area, to a maximum depth of 1.4m bgl. In the remaining hole, topsoil was encountered to 0.3m bgl. The made ground or topsoil was underlain by tidal flat deposits comprising clay and silt with thin peat bands, underlain by silty sand. All but one of the boreholes at the stadium terminated within this layer. Only one of the exploratory holes in the stadium area (TF40NE-54) proved the base of the Tidal Flat Deposits, at a depth of 22.8m bgl. The Tidal Flat Deposits were underlain by glaciofluvial deposits (dense gravelly sand) to 25.8m bgl, and then stiff sandy gravelly clay (Glacial Till) to the base of the borehole. The borehole west of the CHP Connection Corridor site area encountered silty clay and clayey silt (Tidal Flat Deposits) to the base of the hole at 6.1m. The solid geology (Ampthill Clay) was not encountered in any of the reviewed exploratory holes.

2.5.3 Historical borehole records are presented in Appendix C.

2.6 Other regulatory database information

2.6.1 Only regulatory data within 250m with the potential to impact the site has been detailed below, please refer to Appendix B for the complete regulatory dataset.

Activity	On-Site	0-250m	Details
Waste management/ transfer/ treatment facilities/disposal	1	2	• The Envirocheck records that the EfW CHP Facility leased area is registered as a waste transfer centre for “HCI Waste TS and treatment”. • A car recycling facility is located 120m south-west of the EfW CHP Facility. Industries >250m distance of the EfW CHP Facility comprise household waste treatment, household waste recycling centre, solvent recycling centre, metal recycling and car recycling. A storage tank comprising aromatic hydrocarbons, caustic, latex, petroleum solvent bearing lacquer, thinners and waste oil is located 660m north-east of the EfW CHP Facility site. The Groundsure EnviroInsight report records two offsite waste transfer activities:

Activity	On-Site	0-250m	Details
			• The Nestle Purina site northwest of the CHP Connection Corridor site area. • Greencore Prepared Meals 100m southwest of Algores Way.
Landfill	0	0	There are no registered landfill sites on the site or within 2.0km of the site. Areas of historical infilled land (pond marsh river, stream or dock) are anticipated between 310 and 955m from the site and there is the potential for infilled drains on the EfW CHP Facility and TCC.
Sites handling hazardous or explosive substances (inc COMAH or NIHHS) planning hazardous consents	0	0	The Envirocheck records no COMAH or NIHHS sites registered within 250m of the EfW CHP Facility site. There nearest COMAH site is located 330m west of it and the nearest NIHHS site is located 625m north-east.
Licensed industrial activities	0	12	The Groundsure EnviroInsight report records three offsite Part A1 Environmental Permits, as described below. • An active Part A1 Environmental Permit (Permit No. NP3106BT) is located north of the CHP Connection Corridor. This is registered to listed for the Nestle Purina UK for the Southbrink Factory which is partially within the north end of the CHP Connection Corridor. The activity is described as animal, vegetable and food; treating etc animal raw materials (not milk) for food. A second permit is registered to Nestle Purina Petcare (UK) Limited further north but its status is described as superseded. • An active Part A1 Environmental Permit is registered to Greencore Prepared Meals Limited (Permit No. EP3103LM) 100m southeast of Algores Way. The activity is described as treatment and processing (other than packaging) of animal or vegetable raw materials (other than milk only) with finished product capacity greater than formula shown in regs. The Groundsure EnviroInsight report records nine offsite Local Authority (LA) Pollution Prevention and Control (PC) (Environmental Permits) Part B permits as described below. • A historical permit for printing is located 150m northwest of the CHP Connection Corridor.

Activity	On-Site	0-250m	Details
			• Tarmac, Oldfield Lane, for use of bulk cement, 180m west of the site at the north end of the CHP Connection Corridor. • Lamb Weston Meijer, Weasenham Lane, for a waste oil burner <0.4 MW, 130m west of the CHP Connection Corridor. • SB Components International Ltd, Millennium Works, Enterprise Way, for a waste oil burner <0.4 MW, located immediately west of the CHP Connection Corridor south of Weasenham Lane. • A historical permit is listed for Tesco Petrol Filling Station, Cromwell Road 200m north of the Access Improvements site area at its western extent. • Kirk Coachworks, New Bridge Road, immediately north of the Access Improvements site area at its western extent, for respraying of road vehicles. • Floorspan Contract Ltd, Europa Way, for use of bulk cement, 85m west of Algores Way. • RMC Readicrete, Boleness Road, for use of bulk cement 155m southeast of Algores Way. • Cemex, Boleness Road, for use of bulk cement 170m southeast of Algores Way.
Unexploded Ordnance and Bomb Strikes	-	-	All site areas have been assessed by Zetica as having a low risk of UXOs associated with World War II bombing. The UXO assessment provided by Zetica is presented in Appendix D.
Pollution Incidents	1	3	The Envirocheck records two pollution incidents to controlled waters and two entries on the substantiated pollution incident register have been recorded within 250m of the site. • A pollution incident involving smoke occurred on the EfW CHP Facility in 2016. • Spillages of vegetable oil in 1995 caused a significant impact to surface water (Fen Drain), 40m west and 82m south of the EfW CHP Facility. • The release of asbestos waste in 2005 caused a significant impact to land, 100m northeast of the TCC. In addition; • A diesel spillage occurred in 1997, 376m northwest of the EfW CHP Facility site.

Activity	On-Site	0-250m	Details
			• Contaminated water was leaked into surface waters with a significant impact 284m southeast of the EfW CHP Facility site. The Groundsure EnviroInsight report records no pollution incidents on the site. Incidents recorded in the surrounding area are summarised as follows: • An incident in 2004 95m west of the CHP Connection Corridor relating to food and drink with a significant effect on water and minor effect on air (no impact on land). • An incident in 2002 50m west of the CHP Connection Corridor (immediately west of the EfW CHP Facility) relating to firefighting run-off impacting air and water. • An incident in 2002 60m northeast of the TCC area.

3. Initial Conceptual Model and Risk Assessment

3.1 Conceptual model

3.1.1 The Conceptual Model (CM) and plausible contaminant linkages are defined below based on the desk study review of publicly available information collated in the previous sections. The CM is carried out in line with Contaminated Land Report 11 (CLR11)14 and Land Contamination: risk management15 and is based on the proposed commercial land use. The CM provides an assessment of the site's potential contamination status and identifies the presence of potentially significant contaminant linkages that require further consideration.

3.2 Potential contamination (sources)

3.2.1 A review of the site's history and environmental setting has identified potential contaminant sources on the site and the surrounding area, as summarised below in **Tables 3.1 Current and historical contaminant sources: EfW CHP Facility (leased area)** and **3.2 Current and historical contaminant sources: EfW CHP Facility (additional area).** The list of contaminants has been established through a review of Annex 3 in the Guidance for the Safe Development of Housing on Land Affected by Contamination R&D66: 2008 Volume 2.

Table 3.1 Current and historical contaminant sources: EfW CHP Facility (leased area)

No.	Source	Likely Contaminants	Location	Source to be considered further?
1	Fuel tanks; diesel & AdBlue	Metals, hydrocarbons (TPH), phenols, volatile organic compounds (VOCs) and semi-volatile organic compounds (SVOCs)	North-east quadrant of Area A	Yes
2	Septic tank	High oxygen demand, ammonia, toxic metals, nitrate, sulphate & sulphide Ground gas	North-east quadrant of Area A	Yes
3	Household waste storage, including batteries and	Asbestos, toxic metals, acids, sulphides,	North-east quadrant of Area B	Yes

[14] DEFRA/ Environment Agency, Model Procedures for the Management of Land Contamination Contaminated Land Report 11,2004
[15] lhttps://www.gov.uk/guidance/land-contamination-how-to-manage-the-risks last updated 23 December 2019

No.	Source	Likely Contaminants	Location	Source to be considered further?
	gas cylinders.	chlorinated hydrocarbons & polyaromatic hydrocarbons (PAHs).		
4	Current site activities – vehicle movements & material stockpiles	Asbestos, toxic metals, hydrocarbons, benzene, toluene, ethyl benzene and xylenes (BTEX) & PAHs.	Entire EfW CHP Facility (leased area)	Yes
5	Potential made ground, including earth bunds.	Asbestos, sulphate, toxic metals, hydrocarbons & PAHs. Ground gas (carbon dioxide, methane)	Entire EfW CHP Facility (leased area) including earth bunds surrounding Area A and B.	Yes
6	Natural peat deposits	Ground gas	Non continuous bands across the entire EfW CHP Facility (leased area).	Yes
7	Historical railway line	Aromatic hydrocarbons & PAHs.	Northwest site boundary	No
8	Pre-cast concrete production	Silica dust, toxic metals, alkaline pH & sulphides.	Off-site adjacent to the north	No
9	Vehicle scrappage & haulage centres	Asbestos, toxic metals	Off-site adjacent to the south-west.	No

Table 3.2 Current and historical contaminant sources: EfW CHP Facility (additional area)

No.	Source	Likely Contaminants	Location	Source to be considered further?
10	Unknown storage/other activity within hedged area	Metals, hydrocarbons (TPH), PAHs, asbestos	EfW CHP Facility (additional area)	Yes

Table 3.3 Current and historical contaminant sources: CHP Connection Corridor, Access Improvements and TCC

No.	Source	Likely Contaminants	Location	Source to be considered further?
11	Disused March to Wisbech Railway and former sidings and goods shed	Metals, hydrocarbons (TPH), phenols, volatile organic compounds (VOCs) and semi-volatile organic compounds (SVOCs) including PAHs, asbestos	CHP Connection Corridor	Yes
12	Made ground (including infilled drainage channels)	Metals, hydrocarbons (TPH), PAHs, asbestos	TCC	Yes
13	Various offsite historical and current works	Metals, hydrocarbons (TPH), phenols, volatile organic compounds (VOCs) and semi-volatile organic compounds (SVOCs)	Adjacent to CHP Connection Corridor and Access Improvements	Yes
14	Offsite former petrol filling station	TPH including benzene, toluene, ethylbenzene and xylenes (BTEX)	Immediately southwest of Access Improvements site area at its western extent (by New Bridge Lane)	Yes

3.3 Potential receptors and exposure pathways

3.3.1 The potential receptors and associated pathways on the site have been identified in accordance with the Environment Agency (2004) Model Procedures for the Management of Land Contamination – Contaminated Land Report 11 and Land contamination: risk management[16], and are shown in **Table 3.4 Pathways and Receptors (EfW CHP Facility) below**.

Table 3.4 Pathways and Receptors (EfW CHP Facility)

Receptors	Potential pathways
Future site users (commercial)	Dermal contact, ingestion (direct) & inhalation of dusts, vapours & fibres
Off-site users (workers, crops & livestock)	Inhalation of vapours, dust & fibres
Buildings and Services	Direct contact, ingress and accumulation of hydrocarbon vapours

[16]https://www.gov.uk/guidance/land-contamination-how-to-manage-the-risks last updated 23 December 2019

Receptors	Potential pathways
Controlled Waters: Surface water drainage channels	Surface water run-off and drainage. Migration of shallow groundwater
Controlled Waters: Groundwater	Infiltration, downward migration & base flow into drainage channels

Table 3.5 Pathways and Receptors (CHP Connection Corridor, Access Improvements and TCC)

Receptors	Potential pathways
Current site users (commercial workers, landowners, members of the public)	Dermal contact, ingestion (direct) & inhalation of dusts, vapours & fibres
Future site users (commercial workers, landowners, members of the public)	Dermal contact, ingestion (direct) & inhalation of dusts, vapours & fibres
Current property (built environment including buildings and services)	Direct contact, ingress and accumulation of hydrocarbon vapours
Future property (built environment including buildings and services)	Direct contact, ingress and accumulation of hydrocarbon vapours
Current controlled Waters: Surface water drainage channels	Surface water run-off and drainage, leaching of contaminants in soils and migration in shallow groundwater
Future controlled Waters: Surface water drainage channels	Surface water run-off and drainage, leaching of contaminants in soils and migration in shallow groundwater

3.4 Exclusion from risk assessment

3.4.1 The following receptors have not been considered as part of this assessment. A detailed explanation of our rational for excluding each receptor is documented below.

Current site users

3.4.2 Users of the site in its current configuration are not considered as part of this assessment as current site activities shall cease should the site be developed for an Energy for Waste plant.

Redevelopment workers

3.4.3 The conceptual model does not consider risks to construction/ site maintenance workers on the basis that risks to workers will be dealt with under the Health and Safety at Work Act (1974) and regulations made under the act. Site-specific contamination data obtained from all site investigations should be included in the pre-construction information (requirement of Construction Design and management Regulations 2015) for the proposed works, to enable any contractors to address potential risk from contamination as necessary in their risk assessments and method statements. Moreover, as the exact details of the method adopted are not currently known, it is not considered appropriate to provide a wide ranging and speculative risk assessment for redevelopment workers.

Invasive species

3.4.4 Invasive species (such as Japanese knotweed and giant hogweed) are not considered within the risk assessment for contamination. However, invasive species are considered to be a constraint to remediation / redevelopment and should be assessed / addressed further in appropriate documentation relating to the remediation or contractor's method statements for ground preparation.

Unexploded ordnance (UXO)

3.4.5 A preliminary UXO assessment has been carried out by Zetica (see Appendix D) and indicates the risk from UXOs on the site is low.

3.5 Preliminary risk assessment

3.5.1 In order for land contamination risk to be realised, a 'contaminant linkage' must exist17. A contaminant linkage requires the presence of a:

- Source of contamination.
- Receptor capable of being harmed.
- Pathway capable of exposing a receptor to the contaminant.

3.5.2 A preliminary risk assessment has been undertaken for these potential contaminant linkages to identify potentially unacceptable risks on a qualitative basis. Risk is therefore based on a consideration of both:

- The likelihood of an event (probability – takes into account both the presence of the hazard and receptor and the integrity of the pathway).
- The severity of the potential consequence (takes into account both the potential severity of the hazard and the sensitivity of the receptor).

3.5.3 Further information on the risk assessment methodology used is given in Appendix F. The method of dealing with identified risks and the level of significance of those risks will be a function of site use. The risk assessment for the EfW CHP site in

[17] Environment Agency (2004) Model Procedures for the Management of Land Contamination – Contaminated Land Report 11

Table 3.4 Pathways and Receptors (EfW CHP Facility) is based on the future proposed land use and assumes no control measures to manage the risk (e.g. source removal or capping) have been incorporated in the development. The risk assessment for the CHP Connection Corridor, the Access Improvements and the TCC areas in **Table 3.6 Preliminary Risk Assessment – Risks to future site users and environment from current/historic sources (EfW CHP Facility)** is based on the current and future land uses and also assumes no control measures have been incorporated into the design of the relevant elements of the development.

Table 3.6 Preliminary Risk Assessment – Risks to future site users and environment from current/historic sources (EfW CHP Facility)

Item No.	Potential Source	Potential Pollutant	Potential Receptors	Potential Pathways to Receptors	Associated Hazard [severity]	Likelihood of Occurrence	Risk/ Significance
1	Fuel tanks – diesel & AdBlue	Metals, hydrocarbons, phenols, VOCs and SVOCs	Future site users (commercial)	Dermal contact & direct ingestion	Health Hazard [Medium]	Low Likelihood Above-ground and below-ground diesel fuel tanks are present on site along with an AdBlue tank. The tanks are unbunded but Wood has been informed that they are double-skinned and pressure tested for leaks, of which none have been found. There was no evidence of leaks on site surface during walkover.	Moderate / Low
2	Fuel tanks – diesel & AdBlue	Hydrocarbons, VOCs and SVOCs	Future site users (commercial)	Inhalation of vapours & gases	Health Hazard [Medium]	Low Likelihood Above-ground and below-ground diesel fuel tanks are present on site along with an AdBlue tank. Should fuels have leaked from the tanks, hydrocarbon vapours have the potential to accumulate within proposed buildings / offices. There was no evidence of leaks on site surface during walkover.	Moderate / Low
3	Fuel tanks – diesel & AdBlue	Metals, hydrocarbons, phenols, VOCs and SVOCs	Off-site users (workers)	Windblown dusts Lateral migration & inhalation	Health Hazard [Medium]	Unlikely The underlying geology is relatively impermeable (clays), mitigating against significant lateral migration (>10m from source). In addition, any lateral migration of	Low

Item No.	Potential Source	Potential Pollutant	Potential Receptors	Potential Pathways to Receptors	Associated Hazard [severity]	Likelihood of Occurrence	Risk/ Significance
						hydrocarbons through the soil is likely to seep into the bordering drainage channels and / or drainage, preventing further migration to adjacent land. There is the potential for dusts at the site in its current unsurfaced state. However, the site is surrounded by vegetated earth bunds, which are likely to capture any dusts released from the site.	
4	Fuel tanks – diesel & AdBlue	Metals, hydrocarbons, phenols, VOCs and SVOCs	Off-site users (crops & livestock)	Windblown dusts Lateral migration with dermal contact, inhalation, ingestion & plant uptake.	Health Hazard [Mild]	Unlikely The underlying geology is relatively impermeable, mitigating against significant lateral migration (>10m from source). In addition, any lateral migration of hydrocarbons through the soil is likely to seep into the bordering drainage channels and / or drainage, preventing further migration to adjacent land. There is the potential for dust release from the site as it is currently unsurfaced. However, the site is surrounded by vegetated earth bunds, which are likely to capture any dusts released from the site.	Very low
5	Fuel tanks – diesel & AdBlue	Metals, hydrocarbons, phenols, VOCs and SVOCs	Proposed property (foundations) & potable water supply	Direct contact & absorption	Health Hazard [Medium]	Low Likelihood Above-ground and below-ground diesel fuel tanks are present on site along with an AdBlue tank. The tanks are unbunded but Wood has been informed that they are double-skinned and pressure tested for leaks, of which none have been found.	Moderate / Low

Item No.	Potential Source	Potential Pollutant	Potential Receptors	Potential Pathways to Receptors	Associated Hazard [severity]	Likelihood of Occurrence	Risk/ Significance
						Should fuels have leaked from the tanks proposed structures and water-supply pipes may be contact with the hydrocarbon contamination which may impact on water supply.	
6	Fuel tanks – diesel & AdBlue	Metals, hydrocarbons, phenols, VOCs and SVOCs	Controlled Waters – Groundwater	Downward migration	Health Hazard [Mild]	Low Likelihood The underlying geology is relatively impermeable, mitigating against significant lateral migration (>10m from source). Shallow perched groundwater is likely presented at the site, but this is not a designated aquifer.	Low
7	Fuel tanks – diesel & AdBlue	Metals, hydrocarbons, phenols, VOCs and SVOCs	Controlled Waters – Surface water	Surface water run-off, migration of groundwater & drainage outflow	Health Hazard [Medium]	Likely A fuel tank and fuel filling station are located above ground on areas of hardstanding which facilitate the migration of surface contaminants into on-site drainage systems or direct surface flow into bordering drainage channels. Two drainage systems on site are known to outflow into the south-east drainage channel. Shallow groundwater is likely to be present at the site which could be impacted by hydrocarbons and be in connectivity with adjacent drainage channels.	Moderate

Item No.	Potential Source	Potential Pollutant	Potential Receptors	Potential Pathways to Receptors	Associated Hazard [severity]	Likelihood of Occurrence	Risk/ Significance
8	Septic Tank	Ammonia, toxic metals,	Future site users (commercial)	Dermal contact & direct ingestion	Health Hazard [Medium]	Low Likelihood A below-ground septic tank is present on site with an outflow pipe. The tank is regularly emptied into a portable tank for disposal. Should the tank or pipes have leaked at shallow depth, or effluent be split on external surfaces, future site users may be able to contact the listed determinand.	Moderate / Low
9	Septic Tank	Ground gas	Future site users (commercial)	Inhalation of gases	Health Hazard [Medium]	Low Likelihood A below-ground septic tank is present on site with an outflow pipe. The tank may represent a source of hazardous ground gases (methane) from decomposing organic matter.	Moderate / Low
10	Septic tank	Ammonia, toxic metals Ground gas	Off-site users (workers)	Windblown dusts Lateral migration & inhalation	Health Hazard [Medium]	Unlikely The underlying geology is relatively impermeable, mitigating against significant lateral migration (>10 m from source). In addition, any lateral migration of contaminants through the soil is likely to seep / release into the bordering drainage channels, preventing further migration to adjacent land. There is the potential for dusts at the site in its current unsurfaced state. However, the site is surrounded by vegetated earth bunds, which are likely to capture any dusts released from the site.	Low

Item No.	Potential Source	Potential Pollutant	Potential Receptors	Potential Pathways to Receptors	Associated Hazard [severity]	Likelihood of Occurrence	Risk/ Significance
11	Septic tank	Ammonia, toxic metals Ground gas	Off-site users (crops & livestock)	Windblown dusts Lateral migration with dermal contact, inhalation, ingestion & plant uptake.	Health Hazard [Mild]	Unlikely The underlying geology is relatively impermeable, mitigating against significant lateral migration (>10m from source). In addition, any lateral migration of contaminants through the soil is likely to seep / release into the bordering drainage channels, preventing further migration to adjacent land. There is the potential for dusts at the site in its current unsurfaced state. However, the site is surrounded by vegetated earth bunds, which are likely to capture any dusts released from the site.	Very low
12	Septic tank	Ammonia and sulphate Ground gas	Proposed property	Direct contact & accumulation and explosion	Health Hazard [Medium]	Low Likelihood A below-ground septic tank is present on site with an outflow pipe. The tank is regularly emptied into a portable tank for disposal. Should the tank remain beneath the Proposed Development, hazardous ground gases could accumulate within buildings / offices. Sulphates may be aggressive to buried concrete in foundations, buried services etc.	Moderate / Low
13	Septic tank	High oxygen demand, ammonia, toxic metals, nitrate, sulphate & sulphide	Controlled Waters – Groundwater	Downward migration	Health Hazard [Mild]	Unlikely The underlying geology is relatively impermeable, mitigating against significant lateral migration (>10m from source). Shallow perched groundwater is likely presented at the site, but this is not a designated aquifer.	Very Low

Item No.	Potential Source	Potential Pollutant	Potential Receptors	Potential Pathways to Receptors	Associated Hazard [severity]	Likelihood of Occurrence	Risk/ Significance
14	Septic tank	High oxygen demand, ammonia, toxic metals, nitrate, sulphate & sulphide	Controlled Waters – surface water	Surface water run-off & drainage outflow	Health Hazard [Medium]	Low Likelihood The septic tank directly outflows into an off-site drainage channel on the south-east site boundary. Should the tank become full or receive significant storm-water input, effluent may be discharged into the external drainage channels. Shallow groundwater could act as a pathway for contaminant migration to the adjacent drainage channels at the site.	Moderate / Low
15	Household waste storage	Toxic metals, acids, sulphides, chlorinated hydrocarbons & PAHs.	Future site users (commercial)	Dermal contact & direct ingestion	Health Hazard [Medium]	Unlikely The household WRW and apron is surfaced with concrete hardstanding. Should leachate seep through the concrete hardstanding or contaminating dusts been liberated from the enclosed warehouse, future site users may be exposed to contaminants which have settled on the ground surface.	Low
16	Household waste storage	Asbestos, toxic metals, acids, chlorinated hydrocarbons & PAHs.	Future site users (commercial)	Windblown dusts Inhalation of fibres & vapours	Health Hazard [Medium]	Unlikely The household WRW and apron is surfaced with concrete hardstanding. Should contaminating dusts and fibres been liberated from the enclosed warehouse, future site users may be exposed to contaminants present on the ground surface which become airborne. Chlorinated hydrocarbons may present a vapour risk, but potential migration offsite is unlikely given	Low

Item No.	Potential Source	Potential Pollutant	Potential Receptors	Potential Pathways to Receptors	Associated Hazard [severity]	Likelihood of Occurrence	Risk/ Significance
						the surrounding drainage channels. Any dusts released are likely to be captured by the surrounding vegetated earth bunds.	
17	Household waste storage	Asbestos, toxic metals, chlorinated hydrocarbons & PAHs.	Off-site users (workers, crops & livestock)	Windblown dusts Lateral migration with dermal contact, inhalation, ingestion & plant uptake	Health Hazard [Medium]	Unlikely Household waste is stored within an enclosed warehouse. Should contaminating dusts and fibres become air-borne, adjacent site users may be at risk. However, any dusts released are likely to be captured by the surrounding vegetated earth bunds. Potential migration of vapours is likely to be constrained by the surrounding drainage channels.	Low
18	Household waste storage	Chlorinated hydrocarbons.	Proposed property (potable water supply)	Direct contact & absorption	Health Hazard [Medium]	Low Likelihood The household WRW and apron is surfaced with concrete hardstanding. Should leachate and or hydrocarbons seep through the concrete hardstanding and supply pipes be laid through the potential contamination, the listed determinants could contaminate local water supply.	Moderate / Low
19	Household waste storage	Leachable toxic metals, chlorinated hydrocarbons & leachable PAHs.	Controlled waters – groundwater	Downward migration	Health Hazard [Mild]	Unlikely The underlying geology is relatively impermeable, mitigating against significant lateral migration (>10m from source).	Very Low

Item No.	Potential Source	Potential Pollutant	Potential Receptors	Potential Pathways to Receptors	Associated Hazard [severity]	Likelihood of Occurrence	Risk/ Significance
20	Household waste storage	Leachable toxic metals, chlorinated hydrocarbons & leachable PAHs.	Controlled waters – surface water	Surface water run-off & drainage outflow Groundwater migration	Health Hazard [Medium]	Likely The WRW and apron are located adjacent to a surface water drainage channel. Leachate drains are present at the entrance of the WRW and edge of concrete apron. The drains connect to a tank which has a direct outflow into the south east drainage channel and the drains appeared to be blocked.	Moderate
21	Current site activity	Toxic metals, hydrocarbons, BTEX & PAHs.	Future site users (commercial)	Dermal contact & direct ingestion	Health Hazard [Medium]	Likely Site activities include vehicle fuel filling, driving, stockpiling and treating of raw materials. Screened topsoil and brick, concrete and asphalt crush are stockpiled directly onto the ground surface. Future site users may come into contact with lead-based paint flecks, PAHs and aromatic hydrocarbons exposed at the ground surface. Potentially spilt fuels exposed at the ground surface poses a risk to future site users.	Moderate
20	Current site activity	Asbestos, toxic metals, hydrocarbons, BTEX & PAHs.	Future site users (commercial)	Inhalation of fibres & dust	Health Hazard [Medium]	Low Likelihood Screened topsoil and brick, concrete and asphalt crush are stockpiled directly onto the ground surface. Contaminated dusts and fibres could become airborne, posing a risk to future site users.	Moderate / Low

Item No.	Potential Source	Potential Pollutant	Potential Receptors	Potential Pathways to Receptors	Associated Hazard [severity]	Likelihood of Occurrence	Risk/ Significance
21	Current site activity	Asbestos, toxic metals, hydrocarbons, BTEX & PAHs.	Off-site users (workers, crops & livestock)	Windblown dusts Lateral migration with dermal contact, inhalation, ingestion & plant uptake.	Health Hazard [Medium]	Unlikely Screened topsoil and brick, concrete and asphalt crush are stockpiled directly onto the ground surface. Contaminated dusts and fibres could become airborne, posing a risk to future site users. Potential for migration offsite will be limited due to drainage channels and surrounding vegetated earth bunds.	Low
22	Current site activity	Toxic metals, sulphates, hydrocarbons, BTEX & PAH's.	Proposed property (foundations & potable water supply)	Direct contact & absorption	Health Hazard [Severe]	Low Likelihood Concrete brought onto site for crushing may have suffered chemical attack, introducing leachable sulphate minerals into the underlying soil. Potentially spilt hydrocarbons & leachable PAHs may contaminate potable water should supply pipes if in contact with potential contaminants.	Moderate
23	Current site activity	Toxic metals, sulphates, hydrocarbons, BTEX & PAHs.	Controlled waters – groundwater	Downward migration	Health Hazard [Mild]	Unlikely The underlying geology is relatively impermeable, mitigating against significant lateral migration (>10 m from source).	Very Low
24	Current site activity	Toxic metals, sulphates, hydrocarbons, BTEX & PAHs.	Controlled waters – surface water	Surface water run-off & drainage outflow	Health Hazard [Medium]	Likely Approximately 2.0m high earth bunds surround the material storage and	Moderate

Item No.	Potential Source	Potential Pollutant	Potential Receptors	Potential Pathways to Receptors	Associated Hazard [severity]	Likelihood of Occurrence	Risk/ Significance
				Groundwater migration		processing areas in the south-east quadrant of Area A and all of the Area B. The bunds are likely to prevent surface-water run-off of contaminants into adjacent drainage channels. Significant areas of standing water are present across the wider site indicating that surface water drainage is poor. There is the potential for shallow groundwater to be in connectively with the surrounding drainage channels.	
25	Potential made ground including earth bunds.	Asbestos, toxic metals, hydrocarbons, PAHs.	Future site users (commercial)	Dermal contact & direct ingestion	Health Hazard [Medium]	Low Likelihood The earth bunds were formed from topsoil stripped from the site. Evidence of anthropogenic fragments within the bunds bordering Area B. Assumed that the earth bunds will remain *in situ* during and post development.	Moderate / Low
26	Potential made ground including earth bunds.	Asbestos, toxic metals, hydrocarbons, PAHs.	Future site users (commercial)	Inhalation of fibres & dust	Health Hazard [Medium]	Low Likelihood The topsoil within the earth bunds could be used as landscape capping across the Proposed Development. The liberation of contaminated dusts and fibres may pose a risk to future site users.	Moderate / Low
27	Potential made ground including earth bunds.	Asbestos, toxic metals, hydrocarbons, PAHs.	Off-site users (workers, crops & livestock)	Windblown dusts Lateral migration with dermal	Health Hazard [Medium]	Unlikely The topsoil within the earth bunds could be used as landscape capping across the Proposed Development. The liberation of	Low

Item No.	Potential Source	Potential Pollutant	Potential Receptors	Potential Pathways to Receptors	Associated Hazard [severity]	Likelihood of Occurrence	Risk/ Significance
				contact, inhalation, ingestion & plant uptake.		contaminated dusts and fibres and air-borne transportation off-site may occur, but this is likely to be limited due to the vegetated bunds.	
28	Potential made ground including earth bunds.	Sulphates, hydrocarbons, PAHs.	Proposed property (foundations & potable water supply)	Direct contact & absorption	Health Hazard [Medium]	Low Likelihood Made ground may contain chemicals and have a pH aggressive to buried concrete in foundations, buried services etc. Potential hydrocarbons and leachable PAHs may contaminate potable water should supply pipes be laid through an area of contaminated made ground.	Moderate / Low
29	Potential made ground including earth bunds.	Leachable toxic metals, hydrocarbons, BTEX & leachable PAHs.	Controlled waters – groundwater	Downward migration	Health Hazard [Mild]	Unlikely The underlying geology is relatively impermeable, mitigating against significant lateral migration (>10m from source).	Very Low
30	Potential made ground including earth bunds.	Leachable toxic metals, hydrocarbons, BTEX & leachable PAHs.	Controlled waters – surface water	Surface water run-off & drainage outflow Groundwater migration	Health Hazard [Medium]	Low Likelihood Rainwater infiltrating through the earth bund may mobilise leachable contaminants and discharge into the bordering drainage channels.	Moderate / Low
31	Potential made ground	Hazardous ground gas	Human Health & property	Ingress into buildings / confined spaces Inhalation,	Health Hazard [Medium]	Likely A significant thickness of made ground is typically required to generate significant concentrations of hazardous ground gases. This is not anticipated but needs to be confirmed at the site.	Moderate

Item No.	Potential Source	Potential Pollutant	Potential Receptors	Potential Pathways to Receptors	Associated Hazard [severity]	Likelihood of Occurrence	Risk/ Significance
				asphyxiation Explosion			
32	Natural Peat Deposits	Hazardous ground gas	Human Health & property	Ingress into buildings / confined spaces Inhalation, asphyxiation Explosion	Health Hazard [Medium]	Likely Peat deposits are known to be present in the underlying natural strata and may have the potential to generate hazardous ground gases. Ground gases from natural sources such as peat are typically confined to layers of peat with limited flow to the site surface, although this needs to be confirmed at the site.	Moderate
33	Unknown storage/other activity within hedged area	Metals, hydrocarbons (TPH), PAHs, asbestos	Current site users (landowners, members of the public)	Dermal contact, ingestion (direct) & inhalation of dusts, vapours & fibres	Health Hazard [Medium]	Unlikely Area does not appear to be in current use.	Low
34	Unknown storage/other activity within hedged area	Metals, hydrocarbons (TPH), PAHs, asbestos	Future site users (commercial workers, landowners, members of the public)	Dermal contact, ingestion (direct) & inhalation of dusts, vapours & fibres	Health Hazard [Medium]	Low likelihood Source is not confirmed however if not adequately identified and controlled, there may be potential for contaminative materials to be disturbed, mobilised or mixed with surface soils by the development.	Moderate/low

Item No.	Potential Source	Potential Pollutant	Potential Receptors	Potential Pathways to Receptors	Associated Hazard [severity]	Likelihood of Occurrence	Risk/ Significance
35	Unknown storage/other activity within hedged area	Metals, hydrocarbons (TPH), PAHs	Current property (built environment including buildings and services)	Direct contact, ingress and accumulation of hydrocarbon vapours	Direct contact & gas accumulation [Mild]	Unlikely Area does not appear to be in current use.	Very low
36	Unknown storage/other activity within hedged area	Metals, hydrocarbons (TPH), PAHs	Future property (built environment including buildings and services)	Direct contact, ingress and accumulation of hydrocarbon vapours	Direct contact & gas accumulation [Mild]	Low likelihood Localised contamination is possible and if any services are laid in this area they could come into contact with contaminants	Low
37	Unknown storage/other activity within hedged area	Metals, hydrocarbons (TPH), PAHs	Current controlled Waters: Surface water drainage channels	Surface water run-off and drainage, leaching of contaminants in soils and migration in shallow groundwater	Surface Water pollution [Mild]	Low likelihood Some migration of contaminants from made ground to nearby surface drains is possible however area is currently overgrown which will limit potential for runoff.	Low
38	Unknown storage/other activity within hedged area	Metals, hydrocarbons (TPH), PAHs	Future controlled Waters: Surface water	Surface water run-off and drainage, leaching of contaminants	Surface Water pollution [Mild]	Likely Ground disturbance during temporary works could mobilise contaminants.	Moderate/low

Item No.	Potential Source	Potential Pollutant	Potential Receptors	Potential Pathways to Receptors	Associated Hazard [severity]	Likelihood of Occurrence	Risk/ Significance
			drainage channels	in soils and migration in shallow groundwater			

Table 3.7 Preliminary Risk Assessment – Risks to future site users and environment from current/historic sources (CHP Connection Corridor, Access Improvements and TCC)

Item No.	Potential Source	Potential Pollutant	Potential Receptors	Potential Pathways to Receptors	Associated Hazard [severity]	Likelihood of Occurrence	Risk/ Significance
39	Disused March to Wisbech Railway and former sidings and goods shed	Metals, hydrocarbons (TPH), phenols, volatile organic compounds (VOCs) and semi-volatile organic compounds (SVOCs) including PAHs, asbestos	Current site users (commercial workers, landowners, members of the public)	Dermal contact, ingestion (direct) & inhalation of dusts, vapours & fibres	Health Hazard [Medium]	Unlikely Limited use of the Disused March to Wisbech Railway due to it being overgrown. The northern part of the site is developed as the Nestle factory and any significant contamination issues in this area are likely to have been addressed during the site redevelopment.	Low
40	Disused March to Wisbech Railway and former sidings and goods shed	Metals, hydrocarbons (TPH), phenols, volatile organic compounds	Future site users (commercial workers, landowners, members of the public)	Dermal contact, ingestion (direct) & inhalation of dusts,	Health Hazard [Medium]	Likely If not adequately identified and controlled, there may be potential for contaminative materials to be disturbed, mobilised or mixed with surface soils by the development.	Moderate

Item No.	Potential Source	Potential Pollutant	Potential Receptors	Potential Pathways to Receptors	Associated Hazard [severity]	Likelihood of Occurrence	Risk/ Significance
		(VOCs) and semi-volatile organic compounds (SVOCs) including PAHs, asbestos		vapours & fibres			
41	Disused March to Wisbech Railway and former sidings and goods shed	Metals, hydrocarbons (TPH), phenols, volatile organic compounds (VOCs) and semi-volatile organic compounds (SVOCs) including PAHs	Current property (built environment including buildings and services)	Direct contact, ingress and accumulation of hydrocarbon vapours	Direct contact & gas accumulation [Mild]	Low likelihood Large vapour sources are unlikely, large contamination plumes with potential to significantly degrade services are unlikely however localised contamination is possible	Low
42	Disused March to Wisbech Railway and former sidings and goods shed	Metals, hydrocarbons (TPH), phenols, volatile organic compounds (VOCs) and semi-volatile organic compounds (SVOCs) including PAHs	Future property (built environment including buildings and services)	Direct contact, ingress and accumulation of hydrocarbon vapours	Direct contact & gas accumulation [Mild]	Low likelihood Large vapour sources are unlikely, large contamination plumes with potential to significantly degrade new infrastructure are unlikely however localised contamination is possible	Low
43	Disused March to Wisbech Railway and former sidings and goods shed	Metals, hydrocarbons (TPH), phenols,	Current controlled Waters: Surface	Surface water run-off and drainage,	Surface Water pollution [Medium]	Low likelihood Some migration of contaminants from made ground to nearby surface drains is possible.	Moderate/low

Item No.	Potential Source	Potential Pollutant	Potential Receptors	Potential Pathways to Receptors	Associated Hazard [severity]	Likelihood of Occurrence	Risk/ Significance
		volatile organic compounds (VOCs) and semi-volatile organic compounds (SVOCs) including PAHs	water drainage channels	leaching of contaminants in soils and migration in shallow groundwater			
44	Disused March to Wisbech Railway and former sidings and goods shed	Metals, hydrocarbons (TPH), phenols, volatile organic compounds (VOCs) and semi-volatile organic compounds (SVOCs) including PAHs	Future controlled Waters: Surface water drainage channels	Surface water run-off and drainage, leaching of contaminants in soils and migration in shallow groundwater	Surface Water pollution [Medium]	Low likelihood Following development the risk of contaminant migration to surface water is unlikely to increase significantly.	Moderate/low
45	Made ground (including infilled drainage channels)	Metals, hydrocarbons (TPH), PAHs, asbestos	Current site users (landowners, members of the public)	Dermal contact, ingestion (direct) & inhalation of dusts, vapours & fibres	Health Hazard [Medium]	Unlikely Area does not appear to be in current use.	Low
46	Made ground (including infilled drainage channels)	Metals, hydrocarbons (TPH), PAHs, asbestos	Future site users (commercial workers, landowners,	Dermal contact, ingestion (direct) & inhalation of	Health Hazard [Medium]	Low likelihood Source is not confirmed however if not adequately identified and controlled, there may be potential for contaminative materials to be disturbed, mobilised or mixed with	Moderate/low

Item No.	Potential Source	Potential Pollutant	Potential Receptors	Potential Pathways to Receptors	Associated Hazard [severity]	Likelihood of Occurrence	Risk/ Significance
			members of the public)	dusts, vapours & fibres		surface soils by the temporary works for the development.	
47	Made ground (including infilled drainage channels)	Metals, hydrocarbons (TPH), PAHs	Current property (built environment including buildings and services)	Direct contact, ingress and accumulation of hydrocarbon vapours	Direct contact & gas accumulation [Mild]	Unlikely Area does not appear to be in current use.	Very low
48	Made ground (including infilled drainage channels)	Metals, hydrocarbons (TPH), PAHs	Future property (built environment including buildings and services)	Direct contact, ingress and accumulation of hydrocarbon vapours	Direct contact & gas accumulation [Mild]	Low likelihood Localised contamination is possible and if any services are laid in this area they could come into contact with contaminants	Low
49	Made ground (including infilled drainage channels)	Metals, hydrocarbons (TPH), PAHs	Current controlled Waters: Surface water drainage channels	Surface water run-off and drainage, leaching of contaminants in soils and migration in shallow groundwater	Surface Water pollution [Mild]	Low likelihood Some migration of contaminants from made ground to nearby surface drains is possible however area is currently overgrown which will limit potential for runoff.	Low

Item No.	Potential Source	Potential Pollutant	Potential Receptors	Potential Pathways to Receptors	Associated Hazard [severity]	Likelihood of Occurrence	Risk/ Significance
50	Made ground (including infilled drainage channels)	Metals, hydrocarbons (TPH), PAHs	Future controlled Waters: Surface water drainage channels	Surface water run-off and drainage, leaching of contaminants in soils and migration in shallow groundwater	Surface Water pollution [Mild]	Likely Ground disturbance during temporary works could mobilise contaminants.	Moderate/low
51	Various offsite historical and current works	Metals, hydrocarbons (TPH), phenols, volatile organic compounds (VOCs) and semi-volatile organic compounds (SVOCs)	Current site users (landowners, members of the public)	Dermal contact, ingestion (direct) & inhalation of dusts, vapours & fibres	Health Hazard [Medium]	Unlikely Migration of contaminants onto the site as dust is unlikely. Current site users are unlikely to come into contact with soil or groundwater migrating onto the site due to the presence of roads or vegetation.	Low
52	Various offsite historical and current works	Metals, hydrocarbons (TPH), phenols, volatile organic compounds (VOCs) and semi-volatile organic compounds (SVOCs)	Future site users (commercial workers, landowners, members of the public)	Dermal contact, ingestion (direct) & inhalation of dusts, vapours & fibres	Health Hazard [Medium]	Low likelihood Ground disturbance during temporary works could mobilise contaminants.	Moderate/low

Item No.	Potential Source	Potential Pollutant	Potential Receptors	Potential Pathways to Receptors	Associated Hazard [severity]	Likelihood of Occurrence	Risk/ Significance
53	Various offsite historical and current works	Metals, hydrocarbons (TPH), phenols, volatile organic compounds (VOCs) and semi-volatile organic compounds (SVOCs)	Current property (built environment including buildings and services)	Direct contact, ingress and accumulation of hydrocarbon vapours	Direct contact & gas accumulation [Mild]	Unlikely Limited properties present on site and no issues are known of.	Very low
54	Various offsite historical and current works	Metals, hydrocarbons (TPH), phenols, volatile organic compounds (VOCs) and semi-volatile organic compounds (SVOCs)	Future property (built environment including buildings and services)	Direct contact, ingress and accumulation of hydrocarbon vapours	Direct contact & gas accumulation [Mild]	Low likelihood Localised contamination is possible below surface and could be encountered by new infrastructure due to onsite migration in soil or groundwater, however large plumes of contamination in groundwater are unlikely due to the low permeability of the natural deposits.	Low
55	Offsite former petrol filling station	TPH including benzene, toluene, ethylbenzene and xylenes (BTEX)	Current site users (landowners, members of the public)	Dermal contact, ingestion (direct) & inhalation of dusts, vapours & fibres	Health Hazard [Medium]	Unlikely No enclosed spaces currently onsite in proximity to the former filling station. Current site users are unlikely to come into contact with soil or groundwater migrating onto the site due to the presence of roads or vegetation.	Low
56	Offsite former petrol filling station	TPH including benzene, toluene, ethylbenzene and xylenes (BTEX)	Future site users (commercial workers, landowners,	Dermal contact, ingestion (direct) & inhalation of	Health Hazard [Medium]	Low likelihood Ground works for the access improvements could potentially mobilise contaminants.	Moderate/low

Item No.	Potential Source	Potential Pollutant	Potential Receptors	Potential Pathways to Receptors	Associated Hazard [severity]	Likelihood of Occurrence	Risk/ Significance
			members of the public)	dusts, vapours & fibres			
57	Offsite former petrol filling station	TPH including benzene, toluene, ethylbenzene and xylenes (BTEX)	Current property (built environment including buildings and services)	Direct contact, ingress and accumulation of hydrocarbon vapours	Direct contact & gas accumulation [Mild]	Unlikely Limited properties present on site and no issues are known of.	Very low
58	Offsite former petrol filling station	TPH including benzene, toluene, ethylbenzene and xylenes (BTEX)	Future property (built environment including buildings and services)	Direct contact, ingress and accumulation of hydrocarbon vapours	Direct contact & gas accumulation [Mild]	Low likelihood Localised contamination is possible below surface and could be encountered by new infrastructure due to onsite migration in soil or groundwater, however large plumes of contamination in groundwater are unlikely due to the low permeability of the natural deposits.	Low

4. Geotechnical Review

4.1 Overview

4.1.1 Historical information from the BGS borehole logs and the relevant Groundsure / Envirocheck reports have been used for this geotechnical review, to obtain an understanding of the anticipated ground and groundwater conditions, and to identify the potential geotechnical risks and constraints that may be present within the site.

4.1.2 The ley geotechnical considerations with regards to the Proposed Development of the site are discussed in the following sub-sections.

4.2 Ground Conditions

4.2.1 Whilst made ground is not indicated on the geological mapping, the previous use of the EfW CHP Facility (leased area) site means that the potential for made ground being present in the proposed site to unknown depths should not be discounted. There is also potential for made ground elsewhere on site, including at the CHP Connection Corridor (disused March to Wisbech Railway) and the TCC.

4.2.2 Based on the reviewed information, ground conditions at the site are anticipated to comprise the following:

- Made Ground – may be present locally, the depth, extent and nature will depend on previous land use.
- Tidal Flat Deposits – comprising sandy silty clay or silty sand, with occasional peat bands being possible at near surface levels. The thickness of the deposits may be in excess of 20m in some locations.
- Glaciofluvial Deposits – Encountered beneath the tidal flat deposits in a historical borehole approximately 430m west of the EFW CHP facility. The borehole proved a thickness of 3m. Strata comprises dense silty gravelly sand or sandy gravel.
- Glacial Till - Encountered beneath the glaciofluvial deposits in one historical borehole, which did not prove the whole thickness of the deposit. Comprises very stiff sandy gravelly clay.
- Ampthill Clay – Anticipated to be present at the base of the Glacial Till, at an unknown depth. Strata comprises light to medium grey mudstone with limestone nodules.

4.3 Groundwater Conditions

4.3.1 There is only limited data with which to make an assessment of the likely groundwater regime, and this should be supplemented by ground investigation and subsequent groundwater monitoring. Based on the available information, the

potential for shallow perched groundwater within the made ground and Tidal Flat Deposits should be anticipated.

4.4 Geotechnical Properties

4.4.1 No data is available with which to make a preliminary derivation of characteristic geotechnical parameters, for the soils underlying the Proposed Development site.

4.5 Ground Hazards

Ground Stability

4.5.1 The Envirocheck report gives hazard ratings for natural ground subsidence and stability. The primary natural ground subsidence hazards on site are related to the Tidal Flat Deposits.

4.5.2 The report cites a moderate hazard for Compressible deposits and for running sand, both of which were observed on the EfW CHP site.

4.5.3 The ratings for other hazards are either low or negligible.

Mining, ground workings and natural cavities

4.5.4 The online Coal Authority Interactive Map Viewer [redacted] shows that the site is not within a Coal Mining Reporting area.

4.5.5 No current or historical mineral extraction has taken place within the site boundaries, although it has been identified that historical brick works, potentially with accompanying extraction sites, have existed in the surrounding area.

4.6 Geotechnical Issues and Constraints

4.6.1 Based on the geotechnical review findings, the following geotechnical issues and constraints have been identified.

- No ground investigations have been undertaken within the site boundaries and its surroundings that could be used to assess the ground and groundwater conditions and identify all site-specific geotechnical issues and constraints. Intrusive ground investigation is therefore required to provide this information and inform design.
- Due to its variability and potentially soft and compressible nature, made ground is not usually a suitable bearing stratum for development. It is also likely that shallow tidal flat deposits may be highly compressible, but this should be confirmed by ground investigation.
- The presence of trees adjacent to the EfW CHP Facility site's southern boundaries has been noted. Although the Envirocheck report indicates that the risk for shrink-swell clays is very low, this should be confirmed by sampling and testing of the underlying soils. The species of existing trees on site should be

identified and design for future development should be undertaken in accordance with the method outlined in the National House-Building Council (NHBC) Standards.[18]

- The site is underlain by deposits that may be sulphate bearing, and the ground conditions may be aggressive to buried concrete in foundations, buried services etc. Therefore, sampling and testing of the underlying materials should be carried out to analyse this in accordance with BRE Digest SD-1 (2005)19 and an appropriate concrete class determined to mitigate the risk of sulphate / thaumasite attack.
- Potential for running / blowing sand in the Tidal Flat Deposits, which may lead to instability and uplift in excavations.

4.6.2 Potential for perched groundwater as shallow depths, leading to a requirement for dewatering during construction.

4.6.3 A preliminary Geotechnical Risk Register (GRR) has been prepared and is included as Appendix C. The GRR summarises all the geotechnical risks and hazards identified during this desk study phase and provides mitigation measures for further investigation and assessment to control and / or mange these risks to an acceptable level, as the development progresses to the next phases.

4.6.4 The preliminary GRR is considered a live document that needs to be reviewed and updated during the subsequent phases of the Proposed Development. developed in line the next phases of the study and project. In this way, the risk register can continue to be used to update and manage geotechnical risks.

4.6.5 The GRR has been developed in general accordance with the guidance presented in the ICE/DETR Document 'Managing Geotechnical Risk' (2001)[20].

[18] NHBC (2011) NHBC Standards – Part 4, Building near Trees.
[19] BRE Press(2005): Special Digest 1 – Concrete in aggressive ground (3rd Edn.)
[20] Clayton C.R.I. (2001): Managing Geotechnical Risk: improving Productivity in UK Building and Construction

5. Intrusive Ground Investigation: EfW CHP Facility (leased area)

5.1 Objectives of the ground investigation

5.1.1 The intrusive investigation focussed on the provision of information on the ground and groundwater conditions beneath the site, and to re-assess the potential constraints and risks identified at the Phase 1 stage. The ground investigation also provided baseline characterisation of the site to support the Site Condition report and EIA for the development.

5.1.2 The preliminary conceptual model identified seven moderate and thirteen moderate / low risk pollutant linkages affecting property, surface water and future site users. These linkages are associated with potential sources of contamination identified on the site: hydrocarbon fuel tanks, an 'AdBlue' tank, a septic tank, a surface water / leachate drain, hazardous household waste, made ground, stockpiles of demolition materials & asphalt and gas generating natural peat deposits. The earth bunds surrounding the site have been reported to comprise topsoil, however, material within the bunds may present a risk / constraint to the development.

5.1.3 Significant potential geotechnical constraints include potential presence of soft and compressible deposits at shallow depth and made ground of unknown depth and extents. There is also potential ground aggressive to concrete and other building materials. Ground the ground investigation has been scope to provide site specific factual information that would be used to determine the ground and groundwater conditions of the site, use the findings to assess the geotechnical issues and constraints identified during the Phase 1 Study, and provide engineering recommendations for the design and construction of suitable foundations and associated ground works for the Proposed Development.

5.1.4 The scoped ground investigation was also aimed at obtaining factual information for use in the assessment and interpretation of the identified environmental issues and constraints and provide further information on general site conditions to inform the conceptual model.

5.2 GI Scope of Works

5.2.1 Intrusive Ground Investigation (GI) was carried out by Allied Exploration and Geotechnics (AEG), operating as Principal Contractor, with technical supervision provided by Wood for environmental (i.e. contamination) aspects of the GI. The GI works were undertaken between 03 February and 06 March 2020.

5.2.2 The GI Scope comprised the following:

- 12 cable percussive boreholes to depths between 10.0 and 40.0m bgl with rotary follow-on coring in four boreholes to depths between 40.0m and 45.0m bgl;
- 17 mechanically excavated trial pits to depths of between 1.2m and 4.5m bgl;

- One hand excavated trial pit to a depth of 0.75m bgl to replace a machine excavated trial pit in an area constrained by services.; and
- Geotechnical *in situ* testing including:
  - Standard penetration tests (SPT);
  - Hand shear vane testing on cohesive samples;
  - CBR Testing in eight trial pits, at two separate depths; and
  - Soakaway Testing in three trial pits.
- Geotechnical and chemical sampling (soils, groundwater and surface water);
- Geotechnical and chemical laboratory testing; and
- Installation of gas and groundwater monitoring and wells with post site-work monitoring, as detailed in **Table 5.3 Ground gas and groundwater monitoring installation details.**

5.2.3 The locations of the exploratory holes are provided by AEG and are presented as Graphic 7.

5.2.4 Electrical resistivity testing was carried out at each exploratory hole location with a maximum penetration depth of 2.0m bgl.

5.2.5 The works were completed in accordance with the Contractor's Health and Safety Plan, approved by MVV.

5.2.6 Full details of the ground investigation undertaken by AEG is presented in their factual report (Refs.4269, dated June 2020) provided in **Appendix G**.

Services Clearance

5.2.7 Prior to the commencement of all drilling works, specialists from Centara Ltd used cable avoidance tools (CAT) in conjunction with signal generation (Genny) and ground penetrating radar (GPR) to check for the presence of services across the site. This was combined with a review of all available service drawings to identify any potential services.

5.2.8 Subsequently, 1.20m deep hand excavated inspection pits were completed to prove the absence of services at each of the proposed exploratory borehole locations. All locations were then CAT scanned for a second time at the base of the inspection pit prior to drilling.

Cable Percussive and Rotary Drilling Boreholes

5.2.9 The details of borehole drilling are summarised in **Table 5.1 Borehole Drilling Summary** below:

Table 5.1 Borehole Drilling Summary

Borehole No	Method	Borehole Elevation (m AOD)	Depth to Base of Borehole (m)	Base Level of Borehole (m AOD)
BH01	Cable Percussion	2.06	10.0	-7.94
BH02	Cable Percussion / Rotary Coring	2.17	40.0	-37.83
BH03	Cable Percussion	2.31	25.0	-22.69
BH04	Cable Percussion / Rotary Coring	2.56	40.0	-37.44
BH05	Cable Percussion / Rotary Coring	2.04	40.0	-37.96
BH06	Cable Percussion	2.35	10.0	-7.65
BH07	Cable Percussion	2.61	25.0	-22.39
BH09	Cable Percussion	2.25	25.5	-23.25
BH10	Cable Percussion	2.42	40.0	-37.58
BH11	Cable Percussion / Rotary Coring	1.99	45.0	-43.01
BH12	Cable Percussion	1.68	25.0	-23.32
BH13	Cable Percussion	1.77	20.0	-18.23

5.2.10 Logging was carried out by AEG at all exploratory hole locations in general accordance with BS5930:2015[21]. The logs are included in the AEG factual report presented in Appendix G.

Geotechnical *In situ* Sampling and Testing

5.2.11 In granular materials, in situ standard penetration tests (SPT) were generally undertaken at 1m intervals throughout the boreholes. In cohesive materials, SPTs were carried out in alternation with UT100 sampling, at 1.5m intervals.

In addition, hand shear vane testing was carried out on suitable samples of cohesive material recovered from trial pits and within borehole inspection pits.

California Bearing Ratio (CBR) testing

5.2.12 CBR testing was carried out at the locations and depths detailed in **Table 5.2 Details of *in situ* CBR and Soakaway Testing** below. A total of eleven tests were carried out. Due to the presence of coarse material within the made ground at shallow depth, tests could not be carried out at 0.5m bgl in some locations.

[21] BSI: BS5930:2015 + A1:2020 – Code of Practice for ground investigations

Soakaway Testing

5.2.13 A total of three soakaway tests were carried out depths and locations given in **Table 5.2 Details of *in situ* CBR and Soakaway Testing** below.

Table 5.2 Details of *in situ* CBR and Soakaway Testing

Trial Pit No	CBR Test Depth (m bgl)	Soakaway Test Depth	Stratum Tested
TP2	0.50		Cohesive Deposits Tidal Flat
TP2	1.00		Cohesive Deposits Tidal Flat
TP3		2.00	Cohesive Deposits Tidal Flat
TP4	1.00		Cohesive Deposits Tidal Flat
TP5		3.10	Cohesive Deposits Tidal Flat
TP6	1.15		Cohesive Deposits Tidal Flat
TP7		2.10	Cohesive Deposits Tidal Flat
TP7A	1.10		Cohesive Deposits Tidal Flat
TP8	1.00		Cohesive Deposits Tidal Flat
TP9	0.50		Cohesive Deposits Tidal Flat
TP9	1.00		Cohesive Deposits Tidal Flat
TP11	0.50		Cohesive Deposits Tidal Flat

Trial Pit No	CBR Test Depth (m bgl)	Soakaway Test Depth	Stratum Tested
TP11	1.00		Cohesive Tidal Flat Deposits / Peat
TP13	1.00		Cohesive Tidal Flat Deposits

Installations

5.2.14 50mm standpipes were installed in all boreholes for the purposes for either gas or groundwater monitoring, as summarised in **Table 5.3 Ground gas and groundwater monitoring installation details** below:

Table 5.3 Ground gas and groundwater monitoring installation details

Borehole No	Depth of Installation (m bgl)	Purpose	Response Zone Depth (m bgl)	Response Zone Stratum
BH01	2.5	Ground Gas	1.0-2.5	Cohesive Tidal Flat Deposits
BH02	7.5	Shallow Groundwater	3.0-7.5	Granular Tidal Flat Deposits
BH03	5.5	Shallow Groundwater	2.2-5.5	Cohesive / Granular Tidal Flat Deposits
BH04	25.0	Deep Groundwater	21.0-25.0	Granular Tidal Flat Deposits
BH05	25.5	Deep Groundwater	22.5-25.5	Glaciofluvial Sand and Gravel
BH06	5.5	Shallow Groundwater	2.5-5.5	Cohesive / Granular Tidal Flat Deposits
BH07	2.0	Ground Gas	0.5-2.0	Made ground
BH09	2.0	Ground Gas	0.5-2.0	Made ground and Cohesive Tidal Flat Deposits

Borehole No	Depth of Installation (m bgl)	Purpose	Response Zone Depth (m bgl)	Response Zone Stratum
BH10	24.2	Deep Groundwater	21.2-24.2	Granular Tidal Flat Deposits / Glaciofluvial Sand and Gravel
BH11	1.5	Ground Gas	1.0-1.5	Cohesive Tidal Flat Deposits / Peat
BH12	7.5	Shallow Groundwater	2.8-7.7	Granular Tidal Flat Deposits
BH13	7.5	Shallow Groundwater	2.8-7.7	Cohesive / Granular Tidal Flat Deposits

5.3 Chemical soil sampling and testing

A selection of soil samples was collected by Wood for chemical analysis. The soil samples were analysed as follows:

Table 5.4 Chemical soil sampling schedule

Material Type	Total Number of Samples	Standard Testing Suite*	Asbestos Quantification	Redox and Conductivity	Petroleum Hydrocarbon Suite^	Semi-volatile and volatile organic compounds	Full Waste Acceptance Criteria
Topsoil Made ground	6	5	-	-	4	1	5
Granular made ground	15	14	1	8	7	4	6
Reworked Tidal Flat Deposits	3	3	-	1	2	1	-
Tidal Flat Deposits	11	8**	-	1	4	2	2

***The standard testing suite comprises asbestos screen and ID, pH, metals and metalloids (arsenic, cadmium, chromium (III), chromium (hexavalent), copper, lead, mercury, nickel, selenium and zinc), water-soluble boron, ammoniacal nitrogen, monohydric phenols, total organic carbon, and speciated polyaromatic hydrocarbons (PAHs). **The standard suite did not include asbestos screen or ID for samples obtained from the Tidal Flat Deposits. ^The petroleum hydrocarbon suite comprises TPHCWG, BTEX

The chemical laboratory analysis results for soils are included in **Appendix H**.

Quality assurance and control

5.3.1 Wood operates a quality system registered under BS EN ISO 9001 (Certificate Registration No. FS34171). Wood only employs contractors and other key suppliers from its 'approved supplier list', which is managed under the Quality System. Subcontractors are managed following guidance under the Quality System Procedure 'Management of Site Works Contractors'.

5.3.2 During the fieldwork, the following procedures were followed to ensure the accuracy of the sampling and prevent cross contamination:

- A stainless-steel trowel was used for soil sampling which was cleaned in between soil samples and dedicated tubing in each well was used for water sampling.
- Samples were maintained at a low temperature and conveyed to the testing laboratory at the earliest opportunity.
- Sample containers were only handled using clean nitrile gloves.

5.3.3 All samples were sent by courier accompanied by full Chain of Custody documentation and unique identifiable labels. Samples were analysed by a UKAS/MCERTS accredited laboratory that regularly participates in inter-laboratory schemes including CONTEST and AQUAcheck (i2 Laboratories).

5.4 Geotechnical Laboratory Testing

5.4.1 In addition to the *in situ* testing performed during the intrusive works, geotechnical laboratory was scheduled by Wood on representative samples and carried out by AEG's UKAS accredited laboratory. The laboratory testing results are included in the AEG factual report (Appendix G). Laboratory testing included the following:

i. Classification Testing:
   - Moisture Content.
   - Atterberg Limits.
   - Particle Size Distribution.
   - Soil Density.
   - Particle Density.

ii. Chemical Testing:
   - Organic Content.
   - BRE Testing for Brownfield Pyritic and non-pyritic ground.

iii. Compaction Testing:
   - 4.5kg compaction testing to define relationship between moisture content and dry density.

- CBR.

iv. Strength and Compressibility Testing:

- Direct Shear in 60mm shear box.
- Unconsolidated undrained triaxial testing undertaken on undisturbed soil samples.
- One-dimensional consolidation properties.
- Measurement of swelling pressure.
- Consolidated undrained triaxial with measurement of pore pressure.
- Laboratory vane testing.
- Permeability Testing in a triaxial cell.

5.5 Monitoring

5.5.1 Monitoring works for groundwater levels and ground gas commenced on the 17th March 2020 and were completed on the 13th August 2020. Groundwater samples were obtained on three occasions (March, May and July). Three rounds of surface water sampling at three locations have also been undertaken to coincide with the groundwater sampling.

Gas monitoring

5.5.2 Gas monitoring was undertaken on six occasions at the four targeted gas wells (BH01, BH07, BH09, BH11), using a calibrated gas analyser, this is still ongoing. Measurements of gas flow, carbon dioxide (CO_2), methane (CH_4), oxygen (O_2), lower explosive level (LEL), carbon monoxide (CO) and hydrogen sulphide (H_2S) are recorded. Concentrations of total volatile organic compounds (VOCs) were also recorded during each visit using a photo-ionisation detector (PID).

Groundwater monitoring

5.5.3 Groundwater levels were recorded on six occasions, over a period of six months. This was undertaken using an oil/water interface probe, with any presence and thickness of non-aqeuous phase liquid (NAPL) being recorded.

5.5.4 Groundwater samples were obtained on three occasions, bimonthly over the 6-month monitoring period. Samples were obtained using dedicated tubing per borehole and a submersible WASP5 pump or peristaltic pump. In-situ parameters were also monitored during purging through a flow cell connected to the end of the tubing.

Surface water monitoring

5.5.5 Surface water samples were collected from three locations from the drainage channels surrounding the site. These were obtained at the same time as the groundwater samples, on three occasions.

5.5.6 Samples are retrieved using a telescopic sampling pole.

5.6 Waste classification

5.6.1 Samples were obtained for waste classification from locations where significant volumes of material could be removed from site during development. These locations include the earth bunds bordering the site, made ground across the site and BH04 and TP8 located within the footprint of the proposed waste bunker. The results are presented in **Appendix I**.

5.7 Scope Limitations & Amendments

5.7.1 The intrusive ground investigation took place whilst the site remained in operation as an aggregate and waste management facility. Several large stockpiles of concrete, Macadam, topsoil and natural aggregate stone were present on the site at the time of exploration. In addition, surface water covered large areas of hardstanding throughout the investigation programme.

5.7.2 The majority of exploratory locations were positioned with approximately a 5.0m accuracy of the original design layout, however some exploratory holes were re-positioned due to operational constraints, services, or the presence of stockpiles and earth bunds (TP06-08 inclusive, TP10, BH05R and BH11R).

5.7.3 In addition, some boreholes were removed or reduced in depth for operational or contractual reasons (BH01, BH03R, BH06R, BH8, BH10R, BH11R and BH13).

5.7.4 Trial pit TP01 was removed and replaced by HP01 in a different location.

5.7.5 A number of additional pits were excavated to investigate the earth bunds around the perimeter of the site. These were excavated close to existing trial pits and notated with the suffix ‘A’ (TP02A, TP04A, TP07A, TP08A, TP10A, TP12A, TP13A).

6. Ground and Groundwater Conditions: EfW CHP Facility (leased area)

6.1 Ground Conditions

6.1.1 The following strata were encountered in the exploratory holes:

- Made Ground.
- Topsoil (locally).
- Cohesive Tidal Flat Deposits.
- Granular Tidal Flat Deposits.
- Granular Glaciofluvial Deposits.
- Glacial Deposits.
- Ampthill Clay Formation.

6.1.2 The surface covering was typically compacted recycled or natural aggregated to 0.2m bgl, except for HP01, TP05, and BH06, which were located in areas of soft landscaping. The underlying ground conditions are generally consistent across the site.

6.1.3 A detailed description of the encountered strata is present below.

Made Ground

6.1.4 Made ground was encountered in all exploratory hole to depths varying between 0.2m and 2.1m bgl.

6.1.5 A 0.1 to 0.3m thick surface coarse of crushed macadam or flint or limestone / sandstone or concrete or a combination of all, was encountered in TP02, TP06, TP07, TP08, TP11, TP12, BH01, BH03 and BH10.

6.1.6 The underlying layer primarily comprised a red-brown or grey-brown very sandy cobbly gravel comprising macadam, concrete, brick, flint, sandstone, limestone, quartzite, glazed tile, clay tile and occasional clinker. Layers of predominantly soft to firm brown sandy gravelly CLAY (possibly reworked tidal flat deposits) were encountered locally in BH3 between 0.7 and 2.7m bgl, BH7 between 1.9 and 2.1m bgl, and BH10 between 1.2 and 2.3m bgl.

6.1.7 A geotextile separator was encountered at the base of the made ground in most of the exploratory holes.

6.1.8 HP01, TP4A, TP10A, TP12A and TP13A did not penetrate the base of the made ground.

Tidal Flat Deposits (TFD)

6.1.9 The Tidal Flat Deposits comprise two stratigraphic groups encountered consistently beneath the site, as displayed in **Table 6.1 Stratigraphic details of Tidal Flat Deposits** below.

Table 6.1 Stratigraphic details of Tidal Flat Deposits

Stratum Type	Depth encountered (m bgl)	Base Level (m AOD)	thickness (m)	Detailed Description	Locations where missing
Clay / Silt	0.2 – 2.1	0.0 – 2.4	0.90 – >4.2	Very soft grey-brown mottled orange sandy silty clay with plant fragments. A desiccated surface was encountered in some exploratory locations. A thin Peat band or peat traces were encountered within the clay in most of the exploratory holes. This was noted as a distinct layer more consistently within the trial pits, and therefore it is likely that this was not distinct in the boreholes due to its thin nature and the drilling technique and UT100 sampling. Becoming more silty with depth.	None
Very Fine Sand	1.70 – 5.00	22.4 – 17.2	15.70 – 20.20	Dense grey locally very silty very fine sand with occasional plant debris and shells. Due to the silt content, the boundary between the clay/silt and very fine sand is uncertain.	The trial pits did not encounter the base of the cohesive layer.

6.1.10 The base of the tidal flat deposits was not proved in BH01, BH06, BH13 (terminated at depths of 10-20m bgl) and any of the in all of the trial pits where Tidal Flat Deposits were encountered.

Glaciofluvial Deposits

6.1.11 Glaciofluvial Deposits comprising dense to very dense brown and grey silty sandy GRAVEL / gravelly SAND were encountered beneath the Tidal Flat Deposits, at depths between 19.2 and 24.0m bgl. The layer varied in thickness between 2.3 and 5.3m. The base of the deposit was not proved in BH03 and BH07, both of which were terminated at 25.0m bgl.

Glacial Deposits

6.1.12 Very stiff becoming hard glacial till was encountered in exploratory holes BH02, BH04, BH05, BH09-BH12 at depths between 24.3 and 25.7m bgl (23.7m and 22.0m AOD). The deposits comprised dark grey silty sandy gravelly clay.

6.1.13 Glaciolacustrine varved deposits, comprising stiff red brown to grey thinly laminated CLAY, were encountered as a band within the glacial deposits in BH05, BH10 and BH11, varying in thickness between 1.1m and 2.7m.

6.1.14 The thickness of the glacial deposits ranged from 5.1m to 8.4m. The base of the glacial deposits was not proven in BH09 and BH12, which terminated at depths of 25.5 and 25.0m bgl. The base of the deposit was proven by rotary coring in BH02 and BH05.

Bedrock (Ampthill Clay)

6.1.15 A hard clay to very weathered mudstone was encountered beneath the Glacial Deposits in BH04, BH10 and BH11, and in the rotary coring in BH2 and BH5 at depths between 30.8m and 33.0m bgl (31.0 and 28.2 m AOD). The bedrock comprises a very stiff to hard smooth dark grey-brown laminated silty clay becoming very weak, friable weathered mudstone with frequent fossils of shells and fossil casts. Bands of clay are noted within the mudstone in the rotary cored boreholes. The clay stratum is consistent with the BGS maps indicating the presence of Ampthill Clay Formation. The base of the stratum was not proved.

Earth Bunds

6.1.16 Topsoil was encountered within the earth bunds bordering the site at TP02A, TP04A, TP10A, TP12A and TP13A, and in soft landscaping areas in HP01, BH06 and TP05, to depths between 0.2 and 0.6m bgl.

6.1.17 The topsoil comprised dark brown very loamy slightly gravelly very sandy silty clay with rootlets. The gravel is angular to rounded fine to medium and comprises sandstone, flint, quartzite and occasional brick and concrete. Significant concentrations of anthropogenic fragments such as brick, concrete, macadam, clinker, glazed tile and clay tile, along with cobbles of concrete and brick were encountered in TP04 and TP12A.

Ground Model

6.1.18 A typical ground model was developed for the site based on interpretation of the ground conditions depicted in the geological sections and the descriptions of the different encountered strata. Although the stratigraphy across the site is generally similar, the boundary levels and thicknesses of the encountered strata do vary slightly. The developed ground model for the site is presented in **Table 6.2 Typical Ground Model** below.

Table 6.2 Typical Ground Model

Stratum	Depth to Base (m BGL)	Elevation at Base (m AOD)	Thickness (m)
Made Ground	1.0	1.40*	1.00
Cohesive Tidal Flat Deposits	3.5	-1.10	2.50
Granular Tidal Flat Deposits	21.5	-19.1	18.0
Glaciofluvial Deposits	25.0	-22.6	3.50
Glacial Deposits	32.5	-30.1	7.50
Ampthill Clay	Not Proven	Not Proven	Not Proven

Note: * : thickness of made ground is increased by 1.0m from to an elevation of +2.4m AOD.

6.2 Soil Screening and Visual and Olfactory evidence of contamination

6.2.1 No visual or olfactory evidence of contamination was observed in any of the exploratory locations on the site. Readings taken from the made ground with a photo-ionisation detector (PID) were all between detection (<0.1ppm) and 8.4ppm.

6.2.2 Readings obtained from the plant-rich sandy clayey silty Tidal Flat Deposits recorded 0.0 to 10.5ppm which is likely to be derived from observed decaying plant matter within the material.

6.3 Groundwater Conditions

6.3.1 During drilling, water was added to boreholes to mitigate the potential issues with blowing sand. The water was added as soon as the sand was encountered and, therefore, few water strikes were observed. In BH1, groundwater was recorded at the top of the sand layer, at a depth of 3.1m bgl. Also, groundwater was recorded within the made ground in BH7, at a depth of 1.0m bgl.

6.3.2 Within the trial pits, groundwater seepage was observed within the silt and clay in the Tidal Flat Deposits at depths between 2.7 and 4.5m bgl. In addition, seepage was observed within the made ground at a depth of 0.30m bgl, in TP7.

6.3.3 Monitoring of groundwater levels was carried out over a six-month period from the 11 wells installed during the GI works. The groundwater depths and elevations recorded are presented in **Table 9.1 Groundwater level monitoring data**. The monitoring results recorded the highest groundwater level to be at approximately 0.46m bgl (1.956 m AOD) in BH10.

7. Assessment of soils for human health: EfW CHP Facility (leased area)

7.1 Generic assessment criteria

Derivation of risk assessment criteria used in human health risk assessment

7.1.1 In order to provide an assessment of risks to humans presented by any contaminants identified within the surface soils and vapours, a human health Generic Quantitative Risk Assessment (GQRA) has been undertaken. The GQRA involves comparing contaminant concentrations observed at the site with appropriate GAC. As noted above, a GQRA forms Tier 2 of the tiered approach to assessing risks from land contamination as set out in CLR11 and and Land Contamination: risk management.

7.1.2 In the first instance we have used Category 4 Screening Levels (C4SLs)[22]. These are values that have been derived for use in England and Wales to define sites posing low or no risk and adopted by DEFRA and Department for Communities and Local Government (DCLG) for use under UK planning to define suitable for use. To date there have only been C4SLs produced for six substances.

7.1.3 In the absence of C4SLs, more conservative Suitable for use levels (S4ULs)[23] have been used which are based on minimal risk levels rather than low levels of toxicological concern defined by a detailed toxicological risk assessment. In the absence of C4SLs or S4ULs we have used Wood-derived GAC based on the Environmental Industries Commission/Association of Geotechnical and Geo-environmental Specialists/CL:AIRE (EIC/AGS/CL:AIRE) GAC[24] for the assessment of risks to human health;

7.1.4 Generic parameters are presently published for the following land uses:

- Residential with consumption of home-grown produce.
- Public Open Spaces – parks and areas near residential housing.
- Allotments.
- Commercial (formerly commercial/industrial).

7.1.5 The two thresholds for public open spaces comprise:

- A residential open space which may be used by children in the age range 3 to 9 years old close to housing that includes tracking back of soil.

[22] Contaminated Land: Applications in Real Environments (CL:AIRE), SP1010 – Development of Category 4 Screening Levels for Assessment of Land Affected by Contamination Final Project Report FINAL) 20th December 2013
[23] Land Quality Management/Chartered Institute of Environmental Health (LQM/CIEH), 2015. The LQM/CIEH S4ULs for Human Health Risk Assessment. Copyright Land Quality Management Limited reproduced with permission. Publication No. S4UL3076
[24] EIC/AGS/CLAIRE, December 2009, The EIC/AGS/CL:AIRE Soil Generic Assessment Criteria for Human Health Risk Assessment

- A park-type open space where the park may be used by very young children 0 to 6 years but is considered to be at a sufficient distance that there is negligible tracking back of soil to residential from public open space.

Criteria used in the current assessment

7.1.6 MVV Environment Ltd propose to develop the site for commercial use, therefore data has been compared against the thresholds for a commercial land use. The development is proposed to comprise a waste tipping hall, buildings containing plant, workshops and office space. Due to the large room space and likely frequent air circulation, the use of GAC for commercial end use could be considered conservative with regard to VOC accumulation within buildings.

Soil organic matter

7.1.7 The GACs are derived for particular soil conditions and therefore the specific values used have been selected based on soil organic matter (SOM) content where appropriate. The GACs have been derived for soil containing 1%, 3% and 6% SOM.

7.1.8 SOM was analysed as part of the site investigation (derived from fraction of total organic carbon) and is presented per material type below:

Table 7.1 SOM assessment per material type

Material Type	Topsoil made ground	Made ground	Reworked Tidal Flat Deposits	Tidal Flat Deposits
SOM Range %	1.89 – 4.13	0.34 – 5.69	1.55 – 2.07	1.03 – 2.76
SOM Average %	2.95	3.42	1.84	1.81

7.1.9 The average SOM content of each material type range between 1.81 and 2.95%, therefore GACs based on SOM values of 1% have been used as a conservative assessment.

Division of Data

7.1.10 As an initial screen all the soil data has been assessed against relevant GAC to identify potential contaminant of concern. Where exceedances have been identified further consideration has been given to the source and distribution of this data.

7.2 Chemical Analysis Results

Inorganics

7.2.1 The assessment of the concentrations of inorganic substances is presented in **Table 7.2 Summary of screening assessment of inorganic soil data**. The laboratory analysis indicates that inorganic substances present within all material types do not

exceed the appropriate generic assessment criteria thresholds for a commercial land use.

Table 7.2 Summary of screening assessment of inorganic soil data.

Analyte	Units	Number of Samples	Commercial/ Industrial GAC(c)	Minimum	Maximum
Arsenic(a)	mg/kg	30	640 (0)	6	25
Boron (water soluble)	mg/kg	30	240,000 (0)	0.3	4.2
Cadmium(a)	mg/kg	30	410 (0)	< 0.2	0.9
Chromium III	mg/kg	30	8600 (0)	17	90
Chromium (hexavalent)	mg/kg	30	49 (0)	< 1.2	< 1.2
Copper	mg/kg	30	68000 (0)	< 1.0	57
Lead (a)	mg/kg	30	2300 (0)	11	110
Mercury(b)	mg/kg	30	15 (0)	< 0.3	< 0.3
Nickel	mg/kg	30	980 (0)	12	41
Selenium	mg/kg	30	12000 (0)	< 1.0	< 1.0
Zinc	mg/kg	30	730000 (0)	38	150
pH	-	30	-	7.3	10.4

Notes:
(a) Screening criteria based on C4SL;
(b) Screening criteria based on methyl mercury;
(c) Values in brackets indicate the number exceeding the GAC

Asbestos

7.2.2 Asbestos analysis was carried out on twenty samples of which thirteen were recorded as made ground incorporating construction rubble. Loose fibres of chrysotile and amosite was identified in BH10 at 0.3m bgl with a quantification of <0.001%. The concentration is below the limit of detection and detectable asbestos has only been identified in one sample location at the site. As such, this is not considered to present a significant risk to human health.

Polycyclic Aromatic Hydrocarbons (PAHs)

7.2.3 In the assessment of carcinogenic PAHs we have used benzo(a)pyrene as a marker for all carcinogenic PAHs. To ensure this is an appropriate approach, it is important to assess the mixture present and confirm it is consistent with that used in the toxicological assessment. The approach is set out in guidance by the HPA[25] and comprises examining the ratio of the other carcinogenic PAHs to benzo(a)pyrene and confirming if these lie within the range of the toxicological studies. The assessment is summarised in **Table 7.3 Assessment of surrogate marker approach**. The assessment indicates the surrogate marker approach is appropriate.

Table 7.3 Assessment of surrogate marker approach

PAH Compound	Representative range of ratios to benzo(a)pyrene	Number of evaluations (b)	Number below representative range	Number above representative range
Benz[a]anthracene	0.49 – 4.60	0	0	0
Chrysene	0.51 – 3.20	0	0	0
Benzo[b]fluoranthene	0.92 – 4.40	0	0	0
Benzo[k]fluoranthene)	0.33 – 1.80	0	0	0
Dibenz[ah]anthracene	0.06 – 1.00	0	0	0
Indeno[123-cd]pyrene	0.21 – 1.00	0	0	0
Benzo[ghi]perylene	0.21 – 1.00	0	0	0

Assessment of PAH data

7.2.4 Benzo(a)pyrene has been used to assess the carcinogenicity of PAHs. Naphthalene has been assessed separately as this is volatile and behaves differently to the other PAHs and is not a carcinogenic PAH.

7.2.5 The laboratory benzo(a)pyrene and naphthalene data is summarised in **Table 7.4 Summary of screening assessment of PAH data** and indicates that concentrations of benzo(a)pyrene and naphthalene do not exceed the relevant GACs for commercial end use.

[25] HPA, 2010. Risk assessment approaches for polycyclic aromatic hydrocarbons. HPA contaminated land information sheet. Available online at:

[redacted]

Table 7.4 Summary of screening assessment of PAH data

Analyte	Units	Number of Samples	GAC for commercial /industrial	Minimum	Maximum
Naphthalene	mg/kg	30	1900 (0)	<0.05	1.8
Benzo[a]pyrene	mg/kg	30	77 (0)	<0.05	56

Note: Values in brackets indicate the number exceeding the GAC. Benzo(a)pyrene GAC is based on the C4SL, with the GAC for naphthalene based on the S4UL

Total Petroleum Hydrocarbon

7.2.6 Analysis for total petroleum hydrocarbon was carried out on 17 samples. The data was screened against criteria for individual TPH fractions and BTEX compounds. In addition, the additive toxicity was assessed summing the ratios of the concentration and screening criteria for each fraction to give a hazard index. Where this hazard index is greater than 1 the additive concentrations of the TPH exceed the screening criteria.

7.2.7 The assessment is summarised in **Table 7.5 Summary of TPH Analysis**. All samples analyses for BTEX substance contained concentrations below the laboratory limit of detection.

7.2.8 Concentrations of TPH compounds were detected, however no samples exceeded the commercial/ industrial mixture specific GACs. The hazard index is less than one for all samples.

Table 7.5 Summary of TPH Analysis

Analyte	Units	Number of Samples	GAC for commercial /industrial	Minimum	Maximum
Benzene	µg/kg	17	27000 (0)	< 1.0	< 1.0
Toluene	µg/kg	17	56000000 (0)	< 1.0	< 1.0
Ethylbenzene	µg/kg	17	5700000 (0)	< 1.0	< 1.0
Total Xylenes	µg/kg	17	5900000 (0)	< 1.0	< 1.0
Total Petroleum Hydrocarbons (C6-C40)	mg/kg	17	3200 (0)*	< 10	1556.70
Hazard Index	-	17	-	0.00	0.04

* GAC for Aliphatic C5 – 6 (LQM/CIEH S4UL (Commercial / Industrial)

Volatile Organic Compounds (VOCs) & Semi-volatile Organic Compounds (SVOC)

7.2.9 Eight samples were analysed for VOCs and SVOCs. There are no recorded concentrations of VOCs above the laboratory limit of detection. Excluding the standard 16 PAHs discussed above, the only measurable concentrations of SVOCs were for dibenzofuran, carbazole, and anthraquinone were above laboratory detection limits. None of these substances have a GAC available, but given that none of the concentrations are significantly above the LoD it is considered unlikely that these substances will present an unacceptable risk to human health at the site.

Table 7.6 Summary of SVOCs present above detection limits

Analyte	Units	Number of Samples	GAC for commercial /industrial	Minimum	Maximum
Dibenzofuran	mg/kg	8	-	< 0.2	0.5
Carbazole	mg/kg	8	-	< 0.3	0.5
Anthraquinone	mg/kg	8	-	< 0.3	1.1

7.3 Summary of chemical soil findings

7.3.1 Detectable concentrations of inorganic and organic compounds have been recorded in all material types on the site, however no recorded concentrations exceed the relevant GAC for a commercial / industrial end use assuming a conservative 1% SOM content.

7.3.2 Loose fibres of chrysotile and amosite were identified in BH10 at 0.3m bgl, however quantification analysis indicates the concentration is below the laboratory limit of detection. As such the presence of asbestos on the site is not considered to represent a significant risk to human health.

8. Assessment of gas regime: EfW CHP Facility (leased area)

8.1 Initial conceptual model and potential sources of gas/vapour

Receptors

8.1.1 The receptors assumed are future workers and buildings (commercial buildings) where gas could potentially accumulate. The design detail of the proposed structure is not currently available.

Gas migration

8.1.2 The site is relatively flat with hardstanding comprising fairly permeable non-cohesive made ground of sandy gravel or very gravelly sand with a thickness between 0.3 and 1.9m. The made ground is underlain by an relatively impermeable clay/silt strata 0.2 to >3.5m thick with an average thickness of 1.06m. The clay is underlain by a relatively continuous band of peat. The thickness of peat ranges from 0.05 to 0.2m.

8.1.3 Wood consider the potential for upward migration of ground gas through the clay strata to be negligible, however, where basement or deep excavated structures are proposed, these may intercept gas-generating strata and provide a direct pathway into buildings.

8.1.4 Surface water drainage channels, approximately 2m deep, border the site to the north-east and south-east and a third bisects the site in the south-west. The channels are anticipated to limit off-site migration of gas / vapours.

Sources of soil gas

8.1.5 Potential sources of ground gases and vapours have been identified in the preliminary conceptual model including a below ground diesel fuel tank, a septic tank, made ground and natural silt and peat deposits with high plant matter content.

8.1.6 The site is not considered to be affected by hazardous ground gases generated from landfill or coal mine workings.

Diesel tank & septic tank

8.1.7 The below ground tanks vent to ground level and no evidence of potential leaks were observed during the intrusive site investigation.

Made Ground

8.1.8 Fairly permeable made ground was encountered in all exploratory holes across the site at shallow depth. This stratum is currently unconfined at surface. In general, very little degradable organic material (such as wood, paper, plant material etc.) was identified within the made ground, however, occasional fragments of timber were

observed in TP04, TP06 and TP07. The low frequency occurrence of biodegradable material is considered unlikely to generate significant volumes of ground gas.

Natural Strata

8.1.9 The underlying sand and silt strata are rich in plant fragments, debris and decomposing rootlets. A layer of peat is present in the majority of exploratory holes and is assumed to form a layer beneath the site. A strong odour was emitted from the peat stratum during the intrusive investigation and measurable concentrations of organic vapours were recorded on the PID during screening of this material on site.

8.1.10 Natural soils, such as peat, can quite often contain high concentrations of methane and carbon dioxide in monitoring wells. This is due to the release of ground gas that has been generated historically and is trapped as pockets of trapped gas in the pores due to limited transport (at low diffusion rates) within the material. RB17[26] indicates that significant gas flows are not typically associated with these natural soils and that Characteristic situation 2 can be assumed for sites with buried peat (where the peat is well decomposed and the remaining material is predominately woody material i.e. lignin). RB17 states that "*experience has shown that provision of passive venting or positive pressurisation below the floor slab combined with a gas resistant membrane (installed correctly and independently verified) is sufficient to mitigate the risks posed by the presence of gas in the ground*".

Overall

8.1.11 The assessment indicates that the made ground is unlikely to generate significant ground gas, however, the underlying natural strata at the site are anticipated to have significant gas generation potential. The upward migration of ground gas into future buildings may be limited by the presence of a relatively impermeable clay/silt stratum separating the organic matter containing strata from the ground surface.

8.1.12 In accordance with CIRIA C665, the gas potential of the site is considered to be moderate and the future development of the site for commercial use is considered to be of low sensitivity.

Gas Monitoring

8.1.13 The gas monitoring program comprised of six rounds of monitoring over a six-month period in order to support the Environmental Impact Assessment and planning application for the site.

8.1.14 Ground gas has been measured from four boreholes on the site designed specifically to target the potential gas sources on site. The installation details and the description of the target strata are summarised in **Table 8.1 Summary of gas monitoring installations** below.

8.1.15 Gas monitoring was undertaken between March and August 2020.

[26] CL:AIRE, 2012, Research Bulletin (RB) 17, A Pragmatic Approach to Ground Gas Risk Assessment

Table 8.1 Summary of gas monitoring installations

Monitoring Point	Standpipe Diameter (mm)	Response Zone Top (m bgl)	Response Zone Base (m bgl)	Strata monitored and evidence of potential gas generation sources
BH01	0.055	1.0	2.5	CLAY and SILT with plant fragments
BH07	0.055	0.5	2.0	Made ground
BH09	0.055	0.5	2.0	CLAY & SILT with plant fragments
BH11	0.055	1.0	1.5	CLAY, SILT & PEAT

8.2 Results

8.2.1 The results of the gas monitoring are presented in Appendix K and summarised in Table 8.2 Summary of gas monitoring data.

8.2.2 The atmospheric pressure at the time of the first, second and fourth monitoring round was falling from 1029 to 1026 mb,1022 to 1020 mb and 1014 to 1013, respectively.

8.2.3 Steady flow rates were low (<0.1 to 0.4 l/hr). High peak positive and negative flow readings recorded in BH01 (-7.5 l/hr during round 1) and BH09 (7.3 l/hr during round 1) fell steadily over 5 minutes and 150 seconds, respectively. Both locations recorded flow rates of <0.1 l/hr during rounds 2, 3 and 4. High peak negative flows were recorded at BH01, BH07 and BH09 during round 6, quickly stabilising to <0.1 l/hr. These negative peak flows are assumed to be due to variations in groundwater levels in between monitoring rounds.

8.2.4 Methane and carbon dioxide have been recorded in monitoring wells BH01 and BH09 which target plant-rich silts and peat strata. Negligible concentrations of ground gases have been recorded in BH07 targeting the made ground and BH11. It is worth noting that the peat and plant-rich silt strata within BH11 were fully saturated at the time of monitoring, therefore, the results reflect the gas generating potential of the overlying impermeable clay stratum and potential upward migration of gas present within the underlying peat.

8.2.5 Concentrations of carbon monoxide ranged between <0.1 to 2ppm, with no measurable concentrations of hydrogen sulphide (<0.1 ppm) being recorded.

8.2.6 Measurable concentrations of total VOCs have been recorded in all four monitoring wells, with the highest concentrations recorded in wells targeting plant-rich strata. The concentrations were generally less than 2ppm which is not considered significant.

8.2.7 Depleted oxygen levels have been recorded at BH09. An LEL reading of 17.8%, 7% and 56% were recorded at this location during rounds 2, 3 and 6, which were significantly higher than that recorded at either of the remaining three locations. This is suggestive of the presence of ground gas within the silt/peat deposits. However, the absence of a positive steady flow rate and similar observations within the other boreholes suggests that the ground gas is trapped within the silt/peat layer.

Table 8.2 Summary of gas monitoring data

BH ID	Number of rounds	Flow Rate (l/hr)		Methane (%v/v)		Carbon Dioxide (%v/v)		Oxygen (%v/v)		VOC (ppm)
		Peak	Steady	Peak	Steady	Peak	Steady	Peak (low)	Steady	Steady
BH01	6	-10- 0.2	<0.1-0.2	<0.1	<0.1	0.8-2.2	0.8-2.2	16.9-21.6	16.9-21.7	<0.1-8.1
BH07	6	-7 – 0.4	<0.1-0.4	<0.1	<0.1	0.1-1.2	0.1-1.2	18.8-19.9	18.8-19.9	<0.1-2.0
BH09	6	-57- 7.3	<0.1-0.2	<0.1-2.4	<0.1-2.4	1.9-20.8	1.9-20.6	0.2-12.4	0.2-12.5	<0.1-1.9
BH11	6	-13.5-0.4	<0.1-0.4	<0.1	<0.1	0.1-1.9	0.1-1.9	20.5-21.9	20.5-22.2	<0.1-1.7

8.3 Summary

8.3.1 The preliminary results indicate that ground gas generation is negligible within the made ground deposits and impermeable clay indicating the site may be classified as Characteristic Situation 1 (CS1). These wells are also above silt/peat deposits, indicating that upward migration of ground gas from these deposits is potentially limited. This is supported by the low gas flows recorded at the site. However, mitigation may be required if a pathway for upward migration, or migration into basements/services is introduced.

8.3.2 The observations of carbon dioxide above 5% v/v in BH09 within the silt/peat layer, along with the depleted oxygen levels, is suggestive of the presence of ground gas at concentrations which could require mitigation if a pathway for upward migration, or migration into basements/services is introduced. The concentrations recorded are representative of CS1, but this is raised to CS2 due to concentrations of carbon dioxide typically being recorded above 5% v/v (in 4 of 6 monitoring rounds).

9. Assessment of groundwater: EfW CHP Facility (leased area)

9.1 Hydrogeological model

9.1.1 The data from the ground investigation and current monitoring programme has been used to construct a conceptual site model (CSM) of groundwater flow and contaminant fate and transport.

Controlled water receptors

9.1.2 The site as underlain by Tidal Flat Deposits comprising very fine silty sand and Glaciofluvial deposits of gravelly fine sand to between 30.8 and 36.0m depth which is underlain by Glacial Till and the Ampthill Clay Formation. The superficial and bedrock deposits beneath the site are classified as unproductive. The site is not located within a source protection zone and the nearest extraction point is located approximately 500m east of the site for use in horticultural irrigation.

9.1.3 The groundwater sensitivity is considered to be low.

9.1.4 The site is situated within an area served by an extensive network of open artificial drainage channels under the control and management of the Internal Drainage Board (IDB). Drainage ditches flow adjacent to the north-east, south-east and south-west boundaries and within the central area of the site, conveying water by gravity to the south-west. Drainage is passed to the River Nene at the Middle Level IDB's South Brink pumping station. The River Nene is tidally influenced and flows towards the north-east.

9.1.5 The surface water sensitivity is considered to be high.

Groundwater level monitoring

The groundwater level monitoring program comprised of six rounds of monitoring over a six-month period. The groundwater levels are presented in **Table 9.1 Groundwater level monitoring data** below.

Table 9.1 Groundwater level monitoring data

Borehole ID	Response Zone Strata	Groundwater elevation (m bgl)	Groundwater elevation (m AOD)	Field observations
BH01	Tidal Flat Deposits	1.03-1.60	0.460-1.030	-
BH02	Tidal Flat Deposits	1.43-1.94	0.229-0.739	Low turbidity, slight colouration and no noticeable odour. Unable to monitoring during round 2 due to issue with well cover.

Borehole ID	Response Zone Strata	Groundwater elevation (m bgl)	Groundwater elevation (m AOD)	Field observations
BH03	Tidal Flat Deposits	1.58-2.06	0.247-0.727	High turbidity, slight colouration and slight hydrocarbon odour during round 1
BH04	Tidal Flat Deposits – Deeper	1.82-2.35	0.214-0.744	Low turbidity, clear and no noticeable odour.
BH05	Tidal Flat Deposits – Deeper	1.68-2.12	-0.082 -0.358	Low turbidity, slight colouration and no noticeable odour.
BH06	Tidal Flat Deposits	1.78-1.98	0.371-0.571	Low turbidity, clear and no noticeable odour. Slow recharge rate.
BH07	Made ground	0.76-1.21	1.398-1.848	-
BH09	Made ground and Tidal Flat Deposits	1.03-1.73	0.520-1.220	-
BH10	Tidal Flat Deposits – Deeper	0.326-2.15	0.266-2.09	Unable to access during round 1. Standing surface water adjacent during round 5
BH11	Made ground & Peat	0.50-1.38	0.611-1.491	Unable to find location during round 6
BH12	Tidal Flat Deposits	1.00-1.55	0.127-0.677	Low turbidity, slight colouration and no noticeable odour.
BH13	Tidal Flat Deposits	1.07-1.66	0.107-0.697	Moderate turbidity, colouration, high silt content and no noticeable odour.

9.1.6 Groundwater depths for both the shallow and deeper groundwater units are comparable across the site. Groundwater in the deeper Tidal Flat Deposits is under sub-artesian pressure (presenting a positive vertical gradient), being confirmed by the overlying clays. As such, it is considered unlikely that these two groundwater units are in connectivity with each other.

9.1.7 Groundwater flow direction in the shallow and deeper waterbodies are shown on Graphics 8 and 9, respectively.

9.1.8 Shallow groundwater appears to be heavily influenced by the boundary drainage channels, with groundwater flow predominantly to the east but influenced by the drainage channels in all directions. Deeper groundwater in the Tidal Flat Deposits flows in a north-westerly direction, in the direction of the River Nene. This indicates that the adjacent drainage channels are unlikely to be in connectivity with this deeper groundwater unit.

Permeability Observations

9.1.9 During monitoring groundwater recharge was observed. The recovery was fast with groundwater recovery following purging within minutes. This indicates that the groundwater units have a relatively high hydraulic conductivity. The exception to this was BH06 which was drawn down during purging and was left to recover.

Ground and surface water conditions

9.1.10 The groundwater monitoring data is summarised in **Table 9.2**.

9.1.11 These show the groundwater is approximately neutral with slightly alkaline conditions encountered in the north eastern most boreholes. The results are consistent with the laboratory measurements. Dissolved oxygen concentrations generally suggest aerobic, oxygenated groundwater and surface water conditions. The redox results converted to the Eh reference scale confirm an oxidising environment. The temperature is fairly comparable between surface water and groundwater suggesting some influence from surface air conditions.

9.1.12 The electrical conductivity (EC) results for both groundwater and surface water suggest saline influence, with an EC above 1,500µS/cm generally regarded as brackish water. The analytical results for the surface water confirm the presence of waters in the brackish range for electrical conductivity. Additional monitoring of off-site open drains confirms these results represent a local background of elevated conductivity.

Table 9.2 Summary of field parameters

Exploratory Hole	Temperature (oC)	Dissolved Oxygen (%)	pH	Electrical Conductivity (EC) (µS/cm)	Oxidation Reduction Potential (ORP) calibrated as Eh (mV)*1
Groundwater					
BH02	11.7-13.9	0.3-24.5	7.37-7.34	6994-7595	-44- 114.9
BH03	10.4-14.0	6.9-45.5	6.56-6.81	2827-3084	120- 165.7
BH04	11.6-13.1	2.9-11.8	7.39-7.41	7616-8042	70 - 107.1

Exploratory Hole	Temperature (oC)	Dissolved Oxygen (%)	pH	Electrical Conductivity (EC) (µS/cm)	Oxidation Reduction Potential (ORP) calibrated as Eh (mV)*1
BH05	11.6-12.1	0.3-19.7	7.34-7.40	8003-8470	72 - 162.7
BH06	11.2-14.4	5.5-26.1	6.7-6.93	1975-2800	89 - 153.8
BH10	-	-	-	-	-
BH12	11.2-15.0	0.3-24.8	7.49-7.55	8016-8572	30 - 100.7
BH13	11.3-15.6	0.2-21.6	6.76-7.14	2149-4458	76 - 111.9
Surface Water					
SW1	10.3-16.9	23.1-45.5	7.41-7.99	358-3800	199-228
SW2	10.6-17.0	11.6-49.3	7.43-7.62	338-5033	119-224
SW3	10.7-20.0	46.8-71.6	7.37-8.19	3971-10019	178.7-271

- No measurement recorded

Note. Results recorded by YSI 46 Probe. Results displayed account for the final stabilised result.

*1 ORP data converted to the Eh reference scale using addition of half-cell potential of reference electrode (Ag/AgCl) at a temperature of 10 ^{o}C[27]. Assumes YSI 46 probe uses a 4M KCl filling solution.

Evidence of groundwater contamination

9.1.13 No visual or olfactory evidence of contamination was identified at any of the groundwater monitoring locations. No measurable light non-aqueous phase liquid (LNAPL) was recorded and there was no sheen on any of the groundwater.

Limitations of groundwater monitoring

9.1.14 It was not possible to obtain a sample from BH10 during round 1 as the bung was stuck in the borehole. This was subsequently addressed by AEG to allow monitoring to be undertaken during the next two sampling rounds. However, during the two subsequent monitoring rounds the borehole was found to have silted up past the response zone at this location.

9.2 Screening Criteria for Contaminants in Controlled Waters

9.2.1 As part of a Tier 2 risk assessment, chemical analysis data for groundwater and surface water are compared with generic assessment criteria (GAC) for determinands where values are available, in order to identify contaminants of concern and determine whether further assessment of risks is required. The assessment criteria used depends upon the source media (soil, groundwater) and

[27] USEPA. Operating Procedure. Field Measurement of ORP. April 2017

the receptor under consideration. This section provides the criteria used in the assessment.

Environmental Quality Standards

9.2.2 Environmental Quality Standards (EQS) have been derived from the Water Framework Directive (Standards and Classification) Directions (England and Wales) and are generally used for assessment of surface water. These values have also been used for assessment of groundwater given the likely connectivity of site groundwater with the adjacent surface water drainage channels. The EQS for coastal waters and freshwater has been used given that the drainage channels ultimately flow into the River Nene which is tidally influenced.

Absence of Guidelines

9.2.3 Where there are no applicable EQS, the UK Drinking Water Standards or World Health Organisation (WHO) Guidelines for Drinking Water Quality have been used. The absence of an applicable EQS or DWS for TPH is covered by below.

Assessment of TPH

9.2.4 TPH no longer has an EQS or DWS following the replacement of the Private Water Supply Regulations 1991 with the Private Water Supply Regulations 2016. In the absence of a threshold value with a statutory basis it is more appropriate to evaluate the risk on the basis of marker and indicative compounds, such as benzene, toluene, ethylbenzene and xylenes (BTEX) compounds and PAH species such as naphthalene and benzo(a)pyrene. In addition, it is noted as to whether TPH is above or below the detection limit.

Vapours from Groundwater

9.2.5 Volatile compounds present within groundwater potentially present a risk to site users via volatilisation of vapours from groundwater and subsequent inhalation. Initially volatile substances have been assessed against the detection limit. Where concentrations of volatile substances are identified, further assessment has been undertaken.

Assessment of LNAPL

9.2.6 The presence of LNAPL has been assessed directly via measurement but also by assessment of the concentration in groundwater against the solubility limit. As a rule-of-thumb where the concentrations of a given TPH fraction was within 10% of the solubility limit, this has been taken as indicative of the presence of LNAPL.

9.3 Laboratory chemical analysis results

9.3.1 Groundwater and surface water chemical analysis data is provided in Appendix J. Analysis has been carried out on eight groundwater samples (with the exception of BH10 during round 1) and three surface water samples in each round.

Inorganics

Table 9.3 Summary of inorganics in groundwater

Analyte	Units	Number of Samples	Water Quality Target (WQT)	Minimum	Maximum	Location of Exceedance of WQT
Arsenic (dissolved)	µg/l	23	25 (0) Coastal EQS 50 (0) Freshwater EQS	< 0.15	9.62	-
Boron (dissolved)	µg/l	23	1000 (4) DWS	330	1700	BH4, BH2, BH12 and BH5 on all three sampling rounds
Cadmium (dissolved)	µg/l	23	0.2 (0) Coastal EQS 0.25 (0) Freshwater EQS	< 0.02	0.15	-
Chromium (hexavalent)	µg/l	23	0.6 (0) Coastal EQS 3.4 (0) Freshwater EQS	< 5.0	< 5.0	-
Chromium III (dissolved)	µg/l	23	4.7 (0) Freshwater EQS	< 0.2	1	-
Copper (dissolved)	µg/l	23	34 (0) Coastal EQS 22 (0) Freshwater EQS	< 0.5	11	-
Lead (dissolved)	µg/l	23	1.3 (1) Coastal EQS 20 (0) Freshwater EQS	< 0.2	1.9	1.9µg/l at BH03 on 09/07/2020

Analyte	Units	Number of Samples	Water Quality Target (WQT)	Minimum	Maximum	Location of Exceedance of WQT
Mercury (dissolved)	µg/l	23	0 (0) Coastal EQS 1 (0) Freshwater EQS	< 0.05	< 0.05	-
Nickel (dissolved)	µg/l	23	8.6 (0) Coastal EQS 31 (0) Freshwater EQS	< 0.5	5	-
Zinc (dissolved)	µg/l	23	6.8 (0) Coastal EQS 87 (0) Freshwater EQS	< 0.5	9.9	-
pH	pH Units	7	6 (0) to 9 (0) Freshwater EQS	6.9	7.8	-
Sulphate as SO4	µg/l	23	250000 (19) DWS	156	1530	All locations on at least one sampling round
Ammoniacal Nitrogen as N	µg/l	23	300 (23) Freshwater EQS	420	4100	All samples

9.3.2 There are no exceedances of the saline EQSs, with the exception of a marginal exceedance of the EQS for lead at BH03 on one occasion. Widespread exceedances of the UK DWS have been identified for sulphate and ammoniacal nitrogen, respectively, in site groundwater. Four out of seven groundwater sample locations also had concentrations of boron marginally above the WQT (UK DWS) during each monitoring round.

Table 9.4 Summary of inorganics in surface water

Analyte	Units	Number of Samples	Water Quality Target (WQT)	Minimum	Maximum	Location of Exceedance of WQT
Arsenic (dissolved)	µg/l	9	25 (0) Coastal EQS 50 (0) Freshwater EQS	< 0.15	7.03	
Boron (dissolved)	µg/l	9	1000 (1) DWS	56	1800	
Cadmium (dissolved)	µg/l	9	0.2 (1) Coastal EQS 0.25 (0) Freshwater EQS	< 0.02	0.24	SW1 during sampling round 3 (July)
Chromium (hexavalent)	µg/l	9	0.6 (0) Coastal EQS 3.4 (0) Freshwater EQS	< 5.0	< 5.0	
Chromium III (dissolved)	µg/l	9	4.7 (0) Freshwater EQS	< 0.2	2.3	
Copper (dissolved)	µg/l	9	40 (0) Coastal EQS 22 (0) Freshwater EQS	< 0.5	8.6	
Lead (dissolved)	µg/l	9	1.3 (2) Coastal EQS 20 (0) Freshwater EQS	< 0.2	3.9	SW1 during sampling round 1 (March) and 3 (July)
Mercury (dissolved)	µg/l	9	0 (0) Coastal EQS 1 (0) Freshwater EQS	< 0.05	< 0.05	

Analyte	Units	Number of Samples	Water Quality Target (WQT)	Minimum	Maximum	Location of Exceedance of WQT
Nickel (dissolved)	µg/l	9	8.6 (0) Coastal EQS 31 (0) Freshwater EQS	< 0.5	7.8	
Zinc (dissolved)	µg/l	9	6.8 (6) Coastal EQS 87 (0) Freshwater EQS	< 0.5	120	All three locations during sampling round 1 (March) and round 3 (July)
pH	pH Units	9	6 (0) to 9 (0) Freshwater EQS	7.8	8	
Sulphate as SO4	µg/l	9	250000 (3) DWS	17.4	410	SW3 on all three sampling rounds
Ammoniacal Nitrogen as N	µg/l	9	300 (8) Freshwater EQS	16	2400	All three locations, on at least two occasions

9.3.3 An exceedance of the coastal EQS for lead was reported at SW1 on two occasions and a minor exceedance of the coastal EQS for cadmium was identified at SW1 on one occasion (but not freshwater). All concentrations of zinc recorded in all three surface waters exceeded the coastal EQS during sampling undertaken in March and July, but again the concentrations were below the freshwater EQS. Concentrations of zinc at each of the three surface water locations were below the coastal EQS during round 2 in May 2020 (but not freshwater). Exceedances of the freshwater EQS were recorded for ammoniacal nitrogen and exceedances of the UK DWS were recorded for sulphate.

Organics

Phenols

9.3.4 Concentrations of total phenols ranged between <0.1 to 18µg/l in site groundwater. Five exceedances of the EQS (coastal and freshwater) were recorded of 7.7µg/l from samples from BH4, BH2, BH13., BH12 and BH5 on one occasion.

9.3.5 Concentrations of total phenols ranged between 1 to 7.5µg/l in the three surface water samples. None of which exceeded the EQS.

Petroleum Hydrocarbons

9.3.6 BTEX and methyl tertiary butyl ether (MTBE) concentrations were below the laboratory limit of detection (<1 µg/l) in all samples.

9.3.7 Measurable concentrations of TPH (aliphatic >C16-35) was detected in one location (BH12) during sampling round 1 in March 2020. No measurable hydrocarbons were identified at this location or elsewhere on site during the subsequent two rounds of groundwater sampling. This borehole is located in the north-eastern corner of Area B, adjacent to the drainage channel, which divides Areas A and B.

Table 9.5 Summary of TPH in groundwater

Analyte	Units	Solubility limit †	Number of Samples	Minimum	Maximum	Location of measurable concentrations
TPH-CWG - Aliphatic >C5 - C6	µg/l	35900	23	< 1.0	< 1.0	
TPH-CWG - Aliphatic >C6 - C8	µg/l	5370	23	< 1.0	< 1.0	
TPH-CWG - Aliphatic >C8 - C10	µg/l	427	23	< 1.0	< 1.0	
TPH-CWG - Aliphatic >C10 - C12	µg/l	33.9	23	< 10	< 10	
TPH-CWG - Aliphatic >C12 - C16	µg/l	0.759	23	< 10	< 10	
TPH-CWG - Aliphatic >C16 - C21	µg/l	0.00254	23	< 10	2800	BH12 on one occasion
TPH-CWG - Aliphatic >C21 - C35	µg/l	0.00254	23	< 10	2200	BH12 on one occasion
TPH-CWG - Aromatic >C5 - C7	µg/l	1780000	23	< 1.0	< 1.0	
TPH-CWG - Aromatic >C7 - C8	µg/l	590000	23	< 1.0	< 1.0	
TPH-CWG - Aromatic >C8 - C10	µg/l	64600	23	< 1.0	< 1.0	
TPH-CWG - Aromatic >C10 - C12	µg/l	24500	23	< 10	< 10	

Analyte	Units	Solubility limit †	Number of Samples	Minimum	Maximum	Location of measurable concentrations
TPH-CWG - Aromatic >C12 - C16	µg/l	5750	23	< 10	< 10	
TPH-CWG - Aromatic >C16 - C21	µg/l	653	23	< 10	< 10	
TPH-CWG - Aromatic >C21 - C35	µg/l	6.61	23	< 10	< 10	

Numbers in bold exceed the solubility limit † Solubility taken from LQM/CIEH S4ULs for Human Health Risk Assessment Nathanial, C.P.; McCaffrey,C.; Gillett, A.G.; Ogden, R.C. & Nathanial, J.F. Land Quality Press, Nottingham 2015

9.3.8 No TPH, BTEX and methyl tertiary butyl ether (MTBE) was detected in any of the surface water samples.

Polycyclic aromatic hydrocarbons

9.3.9 No exceedances of the EQSs for PAHs were identified in site groundwater. All concentrations of PAHs in surface water were below the laboratory limit of detection of <0.01 µg/l.

Table 9.6 Summary of results for PAHs in groundwater

Analyte	Units	Number of Samples	WQT	Minimum	Maximum
Benzo(a)pyrene	µg/l	23	0.00017 (0)	< 0.01	< 0.01
Naphthalene	µg/l	23	2 (0)	< 0.01	0.21
Fluoranthene	µg/l	23	0.0063 (0)	< 0.01	< 0.01

Semi-volatile Organic Compounds (SVOCs) and Volatile Organic compounds (VOCs)

9.3.10 With the exception of PAHs (see above), all concentrations of SVOCs and VOCS were reported below the laboratory limit of detection in all groundwater samples.

9.3.11 All VOCs were reported below the laboratory limit of detection in surface water samples. All SVOCs were recorded below the laboratory limit of detection in surface water, with the exception of 4-methylphenol and 2,4-dimethylphenol recorded at SW1 and SW2 during sampling round 2 in May 2020.

Assessment of risks to human health from groundwater vapours

9.3.12 The following total concentrations of VOCs were recorded on the PID, during monitoring round 1.

Table 9.7 Concentrations of total VOCs recorded by PID

Borehole ID	Steady VOC concentration (ppm)
BH01	0.9
BH02	<0.1
BH03	<0.1
BH04	-
BH05	<0.1
BH06	-
BH07	0.1
BH09	1.2
BH10	-
BH11	<0.1
BH12	0.5
BH13	0.6

9.3.13 Although measurable concentrations of VOCs were recorded at BH01, BH09, BH12 and BH13 during the sampling, concentrations of volatile contaminants were all recorded below the laboratory limit of detection in groundwater. The exception to this is naphthalene, which was recorded above the limit of detection at one location BH12, with a concentration of 0.21µg/l. This is well below the GAC for groundwater vapour for a commercial use (23,000µg/l)[28] and hence is not considered significant.

9.4 Summary

- Groundwater flow within the shallow Tidal Flat Deposits is influenced by the adjacent drainage channels. Deeper groundwater in the Tidal Flat Deposits flows in a north-westerly direction, in the direction of the River Nene. This indicates that the adjacent drainage channels are unlikely to be in connectivity with this deeper groundwater unit. The monitoring results indicate that the deeper groundwater is under sub-artesian pressure.
- No exceedances of the freshwater EQS have been identified in site groundwater for inorganic contaminants, including metals except for ammoniacal nitrogen which exceeds the freshwater EQS in all samples. In the absence of EQS, the UK DWS were used for comparison against recorded concentrations, with exceedances identified for boron and sulphate in site groundwater.

[28] Society of Brownfield Risk Assessment (SOBRA), 2017, Development of Generic Assessment Criteria for Assessing Vapour Risks to Human Health from Volatile contaminants in Groundwater. Version 1.0 February 2017

- A marginal exceedance of the EQS for total phenols was identified at BH13.
- Heavy end aliphatic hydrocarbons (>C16-35) were identified above the laboratory limit of detection in one location, BH12. This borehole is located away from the fuel tanks on site. All other concentrations of TPH were recorded below the laboratory limit of detection.
- The majority of PAHs recorded concentrations below the laboratory limit of detection. Measurable concentrations of PAHs recorded in site groundwater were below the EQS. No other SVOCs were identified above the laboratory limit of detection.
- No VOCs were present above the limit of detection in any of the groundwater samples.
- Surface water results are broadly comparable to groundwater for inorganic contaminants. Exceedances for lead and zinc were recorded against coastal EQS but not for freshwater EQS. The surface drains ultimately connect to a tidally influenced river ~500m down-gradient of the site. As in groundwater, exceedances were identified for sulphate and ammoniacal nitrogen.
- Surface water concentrations of total phenols ranged between 3.4 to 7.5 µg/l. No further organics were recorded above the laboratory limits of detection in surface water, with the exception of other phenolic compounds (of 4-methylphenol and 2,4-dimethylphenol) identified at SW1 and SW2 on one occasion.

10. Revised conceptual model and environmental risk assessment: EfW CHP Facility (leased area)

10.1.1 This chapter presents the updated conceptual model (CM) developed for the site and identifies the presence of any potentially unacceptable risks. The conceptual model is a representation of the relationship between contaminant sources, pathways and receptors developed on the basis of hazard identification. Unique identification numbers or letters are allocated to each source, pathway and receptor; these are then carried forward to the risk assessment. The CM provides a graphical representation summarising the key features of the site, along with the plausible pathways and any sources of relevance to the risk assessment.

10.1.2 This conceptual model is shown schematically in Graphic6, along with the contaminant sources detailed below. The land use for which the assessment has been undertaken is for a future commercial unit.

10.2 Potential contaminant sources

10.2.1 A number of preliminary sources were identified using desk study data as set out in **Section 3.2**. The targeted phase 2 investigation described in **Section 5.1** has investigated those sources with potential moderate and moderate / low risks as identified in the preliminary risk assessment. **Table 10.1 Identified sources of contamination** provides the identified sources following the site investigation. For ease of identification the numbering of the sources has been carried over from those identified in **Table 3.1**. None of the potential sources have been completely ruled out as a result of the site investigation.

10.2.2 The below revised conceptual model is based on chemical soil data and monitoring results from the site.

Table 10.1 Identified sources of contamination

No.	Source	Likely Contaminants	Location	Source to be considered further?
1	Fuel tanks; diesel & AdBlue	Metals, hydrocarbons (TPH), phenols, volatile organic compounds (VOCs) and semi-volatile organic compounds (SVOCs)	North-east quadrant of Area A	Yes

No.	Source	Likely Contaminants	Location	Source to be considered further?
2	Septic tank	High oxygen demand, ammonia, toxic metals, nitrate, sulphate & sulphide Ground gas	North-east quadrant of Area A	Yes
3	Household waste storage, including batteries and gas cylinders.	Asbestos, toxic metals, acids, sulphides, chlorinated hydrocarbons & polyaromatic hydrocarbons (PAHs).	North-east quadrant of Area B	Yes
4	Current site activities – vehicle movements & material stockpiles	Asbestos, toxic metals, hydrocarbons, benzene, toluene, ethyl benzene and xylenes (BTEX) & PAHs.	Entire site	Yes
5	Potential made ground, including earth bunds.	Asbestos, sulphate, toxic metals, hydrocarbons & PAHs. Ground gas (carbon dioxide, methane)	Entire site including earth bunds surrounding Area A and B.	Yes
6	Natural peat deposits	Ground gas	Non continuous bands across the site	Yes

10.3 Identified receptors & pathways

10.3.1 Potential receptors specific to the site are presented in Table 10.2 Summary of receptors & pathways below.

Table 10.2 Summary of receptors & pathways

Receptors	Potential pathways
Future site users (commercial)	Dermal contact, ingestion (direct) & inhalation of dusts, vapours & fibres
Off-site users (workers, crops & livestock)	Inhalation of vapours, dust & fibres
Buildings and Services	Direct contact, ingress and accumulation of hydrocarbon vapours

Receptors	Potential pathways
Controlled Waters: Surface water drainage channel	Surface water run-off and drainage. Migration of shallow groundwater
Controlled Waters: Groundwater	Infiltration, downward migration & base flow into drainage channels

10.4 Exclusions from risk assessment

10.4.1 Please refer to **Section 3.4** of this report which lists receptors which have not been considered as part of this assessment. These exclusions have been carried over during the development of the revised conceptual model.

10.5 Revised risk assessment

10.5.1 The preliminary risk assessment undertaken in **Section 3.5** has been revised to account for Phase 2 findings for the EfW CHP site only. Potentially unacceptable risks identified for future use are considered in **Table 10.3 Refine Risk Assessment - Risks to future site users and environment from current/historic sources** below.

Table 10.3 Refine Risk Assessment - Risks to future site users and environment from current/historic sources

Item No.	Potential Source	Potential Pollutant	Potential Receptors	Potential Pathways to Receptors	Associated Hazard [severity]	Likelihood of Occurrence	Risk/ Significance
1	Fuel tanks – diesel & AdBlue	Metals, hydrocarbons, phenols, VOCs and SVOCs	Future site users (commercial)	Dermal contact & direct ingestion	Health Hazard [Medium]	Unlikely Above-ground and below-ground diesel fuel tanks are present on site along with an AdBlue tank. No measurable hydrocarbons have been identified in shallow soils in the vicinity of fuel tanks on site	Low
2	Fuel tanks – diesel & AdBlue	Hydrocarbons, VOCs and SVOCs	Future site users (commercial)	Inhalation of vapours & gases	Health Hazard [Medium]	Unlikely Above-ground and below-ground diesel fuel tanks are present on site along with an AdBlue tank. No measurable concentrations of hydrocarbons have been identified in site soils adjacent to the fuel tanks. No measurable concentrations of volatile contaminants identified in shallow groundwater adjacent to the fuel tanks that could potentially present a vapour inhalation risk.	Low
3	Fuel tanks – diesel & AdBlue	Metals, hydrocarbons, phenols, VOCs and SVOCs	Off-site users (workers)	Windblown dusts Lateral migration & inhalation	Health Hazard [Medium]	Unlikely No measurable concentrations of hydrocarbons have been identified in site soils adjacent to the fuel tanks. No measurable concentrations of volatile contaminants identified in shallow groundwater adjacent to the fuel tanks that could potentially present a vapour inhalation risk.	Low

Item No.	Potential Source	Potential Pollutant	Potential Receptors	Potential Pathways to Receptors	Associated Hazard [severity]	Likelihood of Occurrence	Risk/ Significance
4	Fuel tanks – diesel & AdBlue	Metals, hydrocarbons, phenols, VOCs and SVOCs	Off-site users (crops & livestock)	Windblown dusts Lateral migration with dermal contact, inhalation, ingestion & plant uptake.	Health Hazard [Mild]	Unlikely No measurable concentrations of hydrocarbons have been identified in site soils adjacent to the fuel tanks. No measurable concentrations of volatile contaminants identified in shallow groundwater adjacent to the fuel tanks that could potentially present a vapour inhalation risk.	Very low
5	Fuel tanks – diesel & AdBlue	Metals, hydrocarbons, phenols, VOCs and SVOCs	Proposed property (foundations) & potable water supply	Direct contact & absorption	Health Hazard [Medium]	Low Measurable concentrations of organic contaminants have been identified in shallow site soils in the north-east of the site. Concentrations of TPH C21-35 and electrical conductivity exceed the thresholds identified by Anglian Water for water pipe selection (see Appendix L29). No measurable concentrations of organic contaminants have been identified in shallow groundwater adjacent to the fuel tanks.	Moderate / Low
6	Fuel tanks – diesel & AdBlue	Metals, hydrocarbons, phenols, VOCs and SVOCs	Controlled Waters – Groundwater	Downward migration	Health Hazard [Mild]	Unlikely No measurable concentrations of hydrocarbons have been identified in site soils adjacent to the fuel tanks. No measurable concentrations of organic contaminants have been identified in shallow groundwater adjacent to the fuel tanks.	Low

[29] Anglian Water, 2012, Information for developers about contaminated land and ground condition assessment - [redacted]

Item No.	Potential Source	Potential Pollutant	Potential Receptors	Potential Pathways to Receptors	Associated Hazard [severity]	Likelihood of Occurrence	Risk/ Significance
7	Fuel tanks – diesel & AdBlue	Metals, hydrocarbons, phenols, VOCs and SVOCs	Controlled Waters – Surface water	Surface water run-off, migration of groundwater & drainage outflow	Health Hazard [Medium]	Unlikely Shallow groundwater has been found to be in connectivity with the adjacent drainage channels. however, no measurable concentrations of organics have been identified in site groundwater or the surface waters near the fuel tanks.	Low
8	Septic Tank	Ammonia, toxic metals,	Future site users (commercial)	Dermal contact & direct ingestion	Health Hazard [Medium]	Unlikely A below-ground septic tank is present on site with an outflow pipe. The tank is regularly emptied into a portable tank for disposal. No concentrations of metals have been identified in shallow soils above the GAC for commercial use.	Low
9	Septic Tank	Ground gas	Future site users (commercial)	Inhalation of gases	Health Hazard [Medium]	Unlikely A below-ground septic tank is present on site with an outflow pipe. The tank may represent a source of hazardous ground gases (methane) from decomposing organic matter. Ground gas monitoring does not show the presence of elevated concentrations of soil gas in this area of the site.	Low

Item No.	Potential Source	Potential Pollutant	Potential Receptors	Potential Pathways to Receptors	Associated Hazard [severity]	Likelihood of Occurrence	Risk/ Significance
10	Septic tank	Ammonia, toxic metals Ground gas	Off-site users (workers)	Windblown dusts Lateral migration & inhalation	Health Hazard [Medium]	Unlikely Preliminary ground gas monitoring does not suggest the presence of elevated concentrations of soil gas in this area of the site. No concentrations of metals have been identified in shallow soils above the GAC for commercial use. Migration of gases in shallow soils is likely to be restricted by the presence of the adjacent drainage channels.	Low
11	Septic tank	Ammonia, toxic metals Ground gas	Off-site users (crops & livestock)	Windblown dusts Lateral migration with dermal contact, inhalation, ingestion & plant uptake.	Health Hazard [Mild]	Unlikely Ground gas monitoring does not show the presence of elevated concentrations of soil gas in this area of the site. No concentrations of metals have been identified in shallow soils above the GAC for commercial use. Migration of gases in shallow soils is likely to be restricted by the presence of the adjacent drainage channels.	Very low
12	Septic tank	Ammonia and sulphate Ground gas	Proposed property	Direct contact & accumulation and explosion	Health Hazard [Medium]	Unlikely Ground gas monitoring does not show the presence of elevated concentrations of soil gas in this area of the site.	Low

Item No.	Potential Source	Potential Pollutant	Potential Receptors	Potential Pathways to Receptors	Associated Hazard [severity]	Likelihood of Occurrence	Risk/ Significance
13	Septic tank	High oxygen demand, ammonia, toxic metals, nitrate, sulphate & sulphide	Controlled Waters – Groundwater	Downward migration	Health Hazard [Mild]	Unlikely Shallow perched groundwater is presented at the site, but this is not a designated aquifer. Concentrations of sulphate and ammoniacal nitrogen have been identified above the UK DWS, but this is across the whole site and not constrained to the area of the septic tank.	Very Low
14	Septic tank	High oxygen demand, ammonia, toxic metals, nitrate, sulphate & sulphide	Controlled Waters – surface water	Surface water run-off & drainage outflow	Health Hazard [Medium]	Unlikely Shallow groundwater has been found to be in connectivity with the adjacent drainage channels. Concentrations of sulphate and ammoniacal nitrogen have been identified above the UK DWS, but this is across the whole site and all surface water locations, and not constrained to the area of the septic tank. The elevated ammoniacal nitrogen concentrations are likely to be associated with the underlying peat rather than the septic tank.	Low
15	Household waste storage	Asbestos, toxic metals, acids, sulphides, chlorinated hydrocarbons & PAHs.	Future site users (commercial)	Dermal contact & direct ingestion	Health Hazard [Medium]	Unlikely The household WRW and apron is surfaced with concrete hardstanding. No soil concentrations recorded above the GAC for commercial use.	Low

Item No.	Potential Source	Potential Pollutant	Potential Receptors	Potential Pathways to Receptors	Associated Hazard [severity]	Likelihood of Occurrence	Risk/ Significance
16	Household waste storage	Asbestos, toxic metals, acids, chlorinated hydrocarbons & PAHs.	Future site users (commercial)	Windblown dusts Inhalation of fibres & vapours	Health Hazard [Medium]	Unlikely The household WRW and apron is surfaced with concrete hardstanding. No soil concentrations recorded above the GAC for commercial use.	Low
17	Household waste storage	Asbestos, toxic metals, chlorinated hydrocarbons & PAHs.	Off-site users (workers, crops & livestock)	Windblown dusts Lateral migration with dermal contact, inhalation, ingestion & plant uptake	Health Hazard [Medium]	Unlikely No soil concentrations recorded above the GAC for commercial use.	Low
18	Household waste storage	Chlorinated hydrocarbons	Proposed property (potable water supply)	Direct contact & absorption	Health Hazard [Medium]	Unlikely No soil concentrations recorded above the GAC for commercial use. Measurable concentrations of organic contaminants identified in shallow site soils, but no chlorinated hydrocarbons identified above the laboratory limit of detection.	Low

Item No.	Potential Source	Potential Pollutant	Potential Receptors	Potential Pathways to Receptors	Associated Hazard [severity]	Likelihood of Occurrence	Risk/ Significance
19	Household waste storage	Leachable toxic metals, chlorinated hydrocarbons & leachable PAHs.	Controlled waters – groundwater	Downward migration	Health Hazard [Mild]	Unlikely The household WRW and apron is surfaced with concrete hardstanding. No significant groundwater contamination has been identified in this area of the site.	Very Low
20	Household waste storage	Leachable toxic metals, chlorinated hydrocarbons & leachable PAHs.	Controlled waters – surface water	Surface water run-off & drainage outflow Groundwater migration	Health Hazard [Medium]	Unlikely The WRW and apron are located adjacent to a surface water drainage channel. Leachate drains are present at the entrance of the WRW and edge of concrete apron. The drains connect to a tank which has a direct outflow into the south-east drainage channel and the drains appeared to be blocked. No significant surface water contamination was identified during monitoring in the north of the site.	Low
21	Current site activity	Toxic metals, hydrocarbons, BTEX & PAHs.	Future site users (commercial)	Dermal contact & direct ingestion	Health Hazard [Medium]	Unlikely Site activities include vehicle fuel filling, driving, stockpiling and treating of raw materials. Screened topsoil and brick, concrete and asphalt crush are stockpiled directly onto the ground surface. No soil concentrations recorded above the GAC for commercial use.	Low

Item No.	Potential Source	Potential Pollutant	Potential Receptors	Potential Pathways to Receptors	Associated Hazard [severity]	Likelihood of Occurrence	Risk/ Significance
20	Current site activity	Asbestos, toxic metals, hydrocarbons, BTEX & PAHs.	Future site users (commercial)	Inhalation of fibres & dust	Health Hazard [Medium]	Low Likelihood Screened topsoil and brick, concrete and asphalt crush are stockpiled directly onto the ground surface. No soil concentrations recorded above the GAC for commercial use. One isolated detection of asbestos fibres at a depth of 0.3m in the southern section of Area A.	Moderate / Low
21	Current site activity	Asbestos, toxic metals, hydrocarbons, BTEX & PAHs.	Off-site users (workers, crops & livestock)	Windblown dusts Lateral migration with dermal contact, inhalation, ingestion & plant uptake.	Health Hazard [Medium]	Unlikely Screened topsoil and brick, concrete and asphalt crush are stockpiled directly onto the ground surface. No soil concentrations recorded above the GAC for commercial use. One isolated detection of asbestos fibres at a depth of 0.3m in the southern section of Area A.	Low
22	Current site activity	Toxic metals, sulphates, hydrocarbons, BTEX & PAHs.	Proposed property (foundations & potable water supply)	Direct contact & absorption	Health Hazard [Severe]	Low Likelihood Measurable concentrations of organics identified in shallow soils at the site. Concentrations of total SVOCs, TPH C21-35 and electrical conductivity identified in soils at the site above the thresholds listed by Anglian Water for water pipe selection.	Moderate

Item No.	Potential Source	Potential Pollutant	Potential Receptors	Potential Pathways to Receptors	Associated Hazard [severity]	Likelihood of Occurrence	Risk/ Significance
23	Current site activity	Toxic metals, sulphates, hydrocarbons, BTEX & PAHs.	Controlled waters – groundwater	Downward migration	Health Hazard [Mild]	Likely No significant groundwater contamination by metals, BTEX and PAHs has been identified in this area of the site. Measurable concentrations of hydrocarbons have been identified in shallow groundwater at BH12 located in the north-eastern corner of Area B. This appears to be an isolated location, with no known source. TPH was reported below the detection limit on the subsequent two sampling rounds at this location.	Moderate / Low
24	Current site activity	Toxic metals, sulphates, hydrocarbons, BTEX & PAHs.	Controlled waters – surface water	Surface water run-off & drainage outflow Groundwater migration	Health Hazard [Medium]	Low No significant groundwater contamination by metals, BTEX and PAHs has been identified in this area of the site. Measurable concentrations of hydrocarbons have been identified in shallow groundwater at BH12 located in the north-eastern corner of Area B. Shallow groundwater has been proven to be in connectivity with the adjacent drainage channels; however, no measurable TPH was recorded in any of the three surface water samples collected during round 1.	Moderate / Low

Item No.	Potential Source	Potential Pollutant	Potential Receptors	Potential Pathways to Receptors	Associated Hazard [severity]	Likelihood of Occurrence	Risk/ Significance
25	Potential made ground including earth bunds.	Toxic metals, hydrocarbons, PAHs.	Future site users (commercial)	Dermal contact & direct ingestion	Health Hazard [Medium]	Unlikely No soil concentrations above the GAC for commercial use.	Low
26	Potential made ground including earth bunds.	Asbestos, toxic metals, hydrocarbons, PAHs.	Future site users (commercial)	Inhalation of fibres & dust	Health Hazard [Medium]	Unlikely No soil concentrations above the GAC for commercial use. No asbestos identified in samples from the earth bunds.	Low
27	Potential made ground including earth bunds.	Asbestos, toxic metals, hydrocarbons, PAHs.	Off-site users (workers, crops & livestock)	Windblown dusts Lateral migration with dermal contact, inhalation, ingestion & plant uptake.	Health Hazard [Medium]	Unlikely No soil concentrations above the GAC for commercial use. No asbestos identified in samples from the earth bunds.	Low
28	Potential made ground including earth bunds.	Sulphates, hydrocarbons, PAHs.	Proposed property (foundations & potable water supply)	Direct contact & absorption	Health Hazard [Medium]	Unlikely No soil concentrations above the GAC for commercial use. Measurable concentrations of organic contaminants identified in samples analysed from the earth bund, but no exceedance of the thresholds identified by Anglian Water for pipe selection.	Low

Item No.	Potential Source	Potential Pollutant	Potential Receptors	Potential Pathways to Receptors	Associated Hazard [severity]	Likelihood of Occurrence	Risk/ Significance
29	Potential made ground including earth bunds.	Leachable toxic metals, hydrocarbons, BTEX & leachable PAHs.	Controlled waters – groundwater	Downward migration	Health Hazard [Mild]	Unlikely No significant groundwater contamination has been identified at the site that could be associated with the earth bunds.	Very Low
30	Potential made ground including earth bunds.	Leachable toxic metals, hydrocarbons, BTEX & leachable PAHs.	Controlled waters – surface water	Surface water run-off & drainage outflow Groundwater migration	Health Hazard [Medium]	Unlikely No significant groundwater or surface water contamination has been identified at the site that could be associated with the earth bunds.	Low
31	Potential made ground	Hazardous ground gas	Human Health & property	Ingress into buildings / confined spaces Inhalation, asphyxiation Explosion	Health Hazard [Medium]	Low No significant concentrations of ground gas have been identified within monitoring wells screened in the made ground during monitoring.	Moderate / Low
32	Natural Peat Deposits	Hazardous ground gas	Human Health & property	Ingress into buildings / confined spaces Inhalation, asphyxiation Explosion	Health Hazard [Medium]	Likely Peat deposits are known to be present in the underlying natural strata and may have the potential to generate hazardous ground gases. Measurable concentrations of ground gas, predominately carbon dioxide, along with depleted oxygen has been identified in monitoring wells screened in the organic silts / peats on site.	Moderate

Item No.	Potential Source	Potential Pollutant	Potential Receptors	Potential Pathways to Receptors	Associated Hazard [severity]	Likelihood of Occurrence	Risk/ Significance
						There is limited evidence that this is migrating to the surface, with concentrations below the detection limit in shallower wells at the site. However, excavation or piling may provide a preferential pathway for gas migration to future buildings which will need to be considered.	

10.6 Summary of environmental risks

10.6.1 The site investigation findings have led to a refinement of the assessment of potential environmental risks at the site and downgrading of many of the moderate risks identified in the PRA. Outstanding plausible pollutant linkages with moderate risks are identified as follows.

- Ground gas from natural peat deposits presenting a risk to humans and property through gas ingress into buildings and subsequent inhalation / accumulation.
- Organic contaminants in soil associated with onsite current activities presenting a risk to services including potable water supply pipes through permeation.

11. Geotechnical Properties: EfW CHP Facility (leased area)

11.1 General

11.1.1 The derivation of geotechnical properties is based on borehole information, interpretation of *in situ* and laboratory-based testing results and literature recommendations, as applicable.

11.1.2 Although made ground is generally not recommended as a competent founding stratum, the derivation of characteristic geotechnical parameters has been undertaken for consideration in the design and construction of the proposed works, as applicable. It should be noted that Wood has no information detailing how this made ground was placed (i.e. whether it was compacted or predominantly loose-tipped material), and therefore moderately conservative values have been recommended for design, based on limited testing data.

11.2 Earth Bund Material

Classification Testing

11.2.1 One sample of material from the earth bunds around the periphery of the site was subjected to Particle Size Distribution Testing (PSD). The sample was found to contain 91% fines, 7% sand and 2% gravel. The result confirms the cohesive nature of the material.

Compaction testing

11.2.2 Three samples of material from the bunds were subjected to 4.5kg rammer compaction testing to derive values for the Maximum Dry Density (MDD) and Optimum Moisture Content (OMC). This testing helps to assess whether the material would be suitable for re-use as fill. The tests gave MDD values of between 1.77 and 1.83Mg/m^3, with corresponding OMCs of between 14.8% and 15.6%. The compaction curves indicate that the material can be compacted to achieve less than 5% air voids. However, as the natural moisture content for the samples varied from 25% to 29%, the material would need to be conditioned to reduce its natural moisture content to allow it to be re-used.

11.3 Made Ground

In situ testing

11.3.1 Three Standard Penetration Tests (SPTs) were performed within the made ground. A test within granular material in BH7 at a depth of 1.2m bgl encountered an obstruction and therefore a refusal was recorded. Another test in granular made

ground (BH4 at 1.2m bgl) recorded an 'N' value of 19. Within the reworked tidal flat deposits, (BH10 at 1.2m bgl) a blow count 'N' value of 13 was recorded.

11.3.2 Due to the limited data set of testing information, it is not feasible to derive a representative 'N' value for made ground.

11.3.3 One Hand Shear Vane test was carried out in cohesive made ground at a depth of 0.5m bgl in BH12, giving a peak shear strength value of 76kPa, and a residual strength value of 32kPa.

Classification Testing

11.3.4 A total of six samples of made ground (three samples of granular surface material, and three samples of clay material encountered locally, beneath the granular surface layer) were subjected to moisture content testing, with 2 of the cohesive samples also being subjected to Atterberg Limit testing.

11.3.5 The granular samples returned moisture contents between 9.7 and 18%, whilst the cohesive samples had moisture contents between 26% and 45%.

11.3.6 Three bulk samples of granular material were subjected to PSD tests. Results indicate that these samples generally comprise between 7-29% fines, 19% - 60% Sand and 11% - 70% Gravel. The results largely confirm the description of the material as predominantly granular.

11.3.7 The PSD test results are summarised graphically in **Graphic 11.1 Graphical Summary of PSD Results for made ground** below:

Graphic 11.1 Graphical Summary of PSD Results for made ground

11.3.8 The Atterberg Limit tests carried out on the clay samples gave Plasticity index (PI) values of 27% to 49%, corresponding to intermediate to very high plasticity.

Density

11.3.9 Five samples of made ground were subjected to Bulk Density and Dry Density testing, resulting in Bulk Density values of 19.1 to 22.2kN/m^3, and Dry Density values of 15.1 to 20.2kN/m^3; with the higher values being obtained in granular material close to the surface.

11.3.10 Based on the characteristic density of soils suggested in Graphics 1 and 2 of BS 8004:2015[30] Code of Practice for Foundations, a density of 17kN/m^3 can be adopted for the made ground, which corresponds to a cohesionless material of medium relative density.

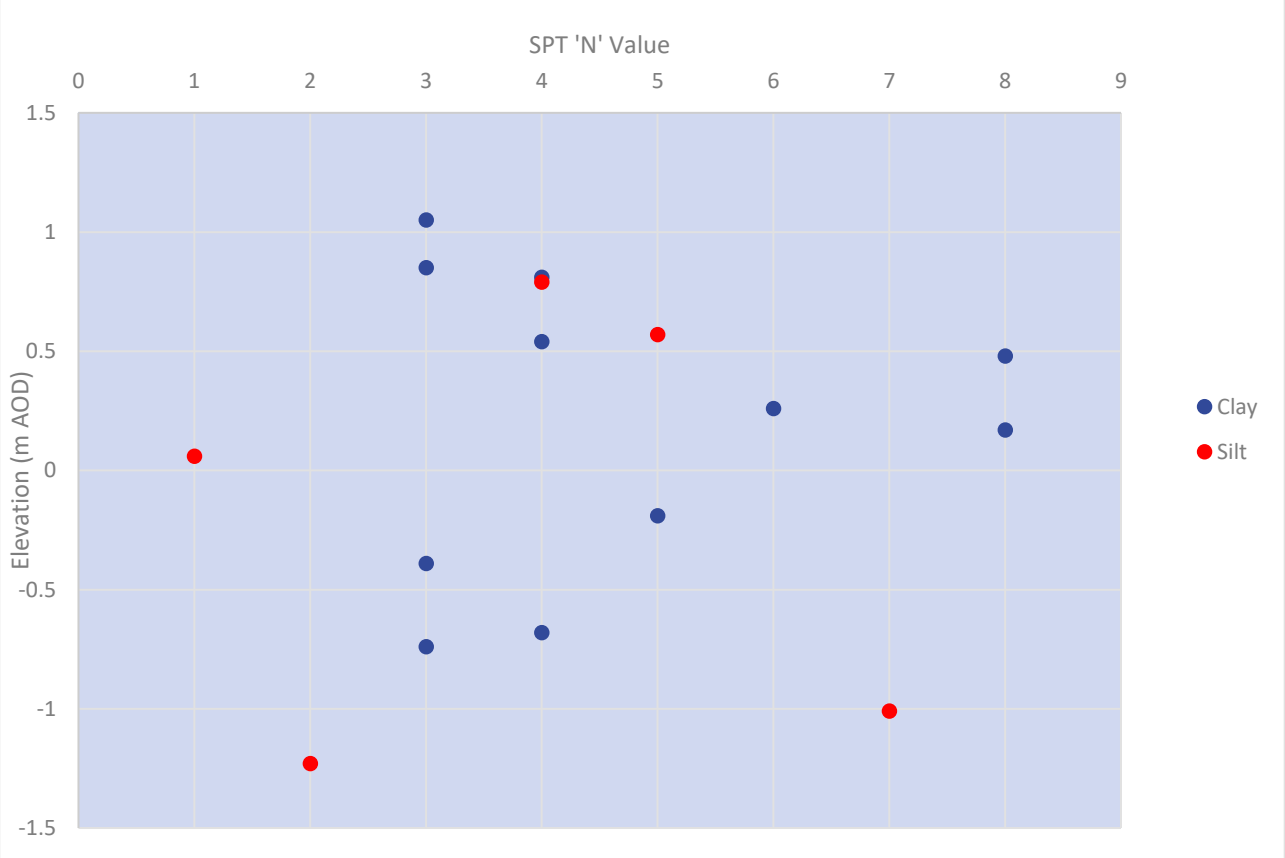
11.4 Tidal Flat Deposits (Cohesive)

In situ testing

11.4.1 A total of 16 SPTs were carried out in the cohesive tidal flat deposits, at depths between 1.00m and 3.30m bgl (1.05 to -1.23m AOD). Corrected SPT N-values ranged from 1 to 8, with the higher values being recorded towards the base of the stratum, and the interface with the underlying sand. The recorded values are illustrated in **Graphic 11.2 SPT Data vs Depth for Tidal Flat Deposits** below.

[30] BSI (2015): BS8004 – Code of Practice for foundations

Graphic 11.2 SPT Data vs Depth for Tidal Flat Deposits



11.4.2 A review of the above results indicates two distinct discernible trends with depth: increasing with depth from 0.0m AOD before decreasing with depth after that down to about -1.5m AOD. This suggest that 1.5 to the first 1.5no discernible trend with depth. This indicates that decrease in consistency and therefore strength after 0.0mAOD to the base of the stratum.

Other *in situ* Testing

11.4.3 A total of 11 i*n situ* Plate Load tests were carried out in Trial Pits at depths between 0.5m and 1.15m bgl, to assess the Modulus of Subgrade Reaction and CBR. The tests returned CBR values ranging between 0.39% and 3.64% (Subgrade Modulus 9.68 to 40.26kN/m^2). One test could not be completed due to an obstruction preventing penetration of the Plate. The results are discussed in more detail in Section 12.

11.4.4 A total of 26 Hand Shear Vane tests were carried out on cohesive tidal flat deposits, at depths between 0.5m and 3.5m bgl; yielding peak shear strength values between 8 and 66 kPa, with residual strengths between 0 and 60kPa. The results indicate clay of very low to medium strength (very soft to firm).

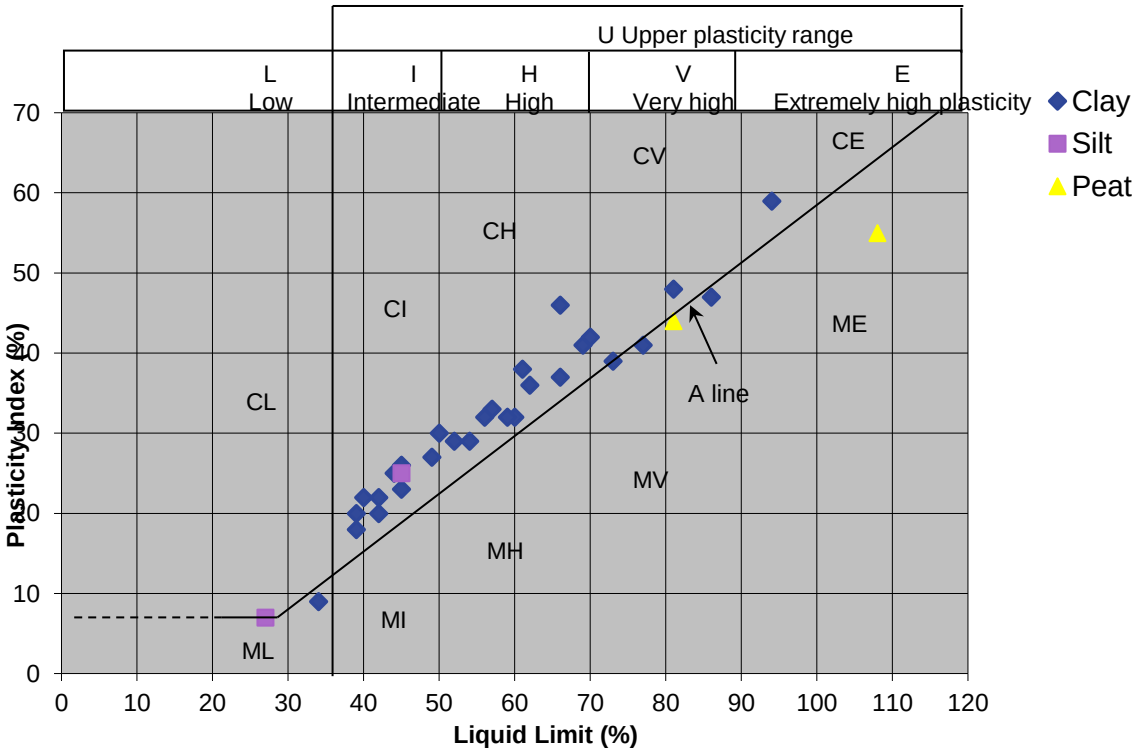
Classification Testing

Moisture Content and Plasticity Index

11.4.5 A total of 51 samples of cohesive tidal flat deposits were tested for moisture content, on samples described predominantly as clay, but with occasional silt, and some samples recovered from a potential peat band. The test results ranged from 19% to 216%, the range in results being due to the varying amount of organic content (including peat) encountered.

11.4.6 A total of 43 samples were subjected to Atterberg Limit testing. The tests indicated variable PI values of 7 to 79, generally indicating intermediate to extremely high plasticity silt and clays, as shown in **Graphic 11.3 Plasticity Chart for Cohesive Tidal Flat Deposits**. Three Atterberg Limit tests on silt samples were terminated as the material was found to be non-plastic.

Graphic 11.3 Plasticity Chart for Cohesive Tidal Flat Deposits



11.4.7 Based on the above results and interpretation, a representative PI value of 35 is considered appropriate for design.

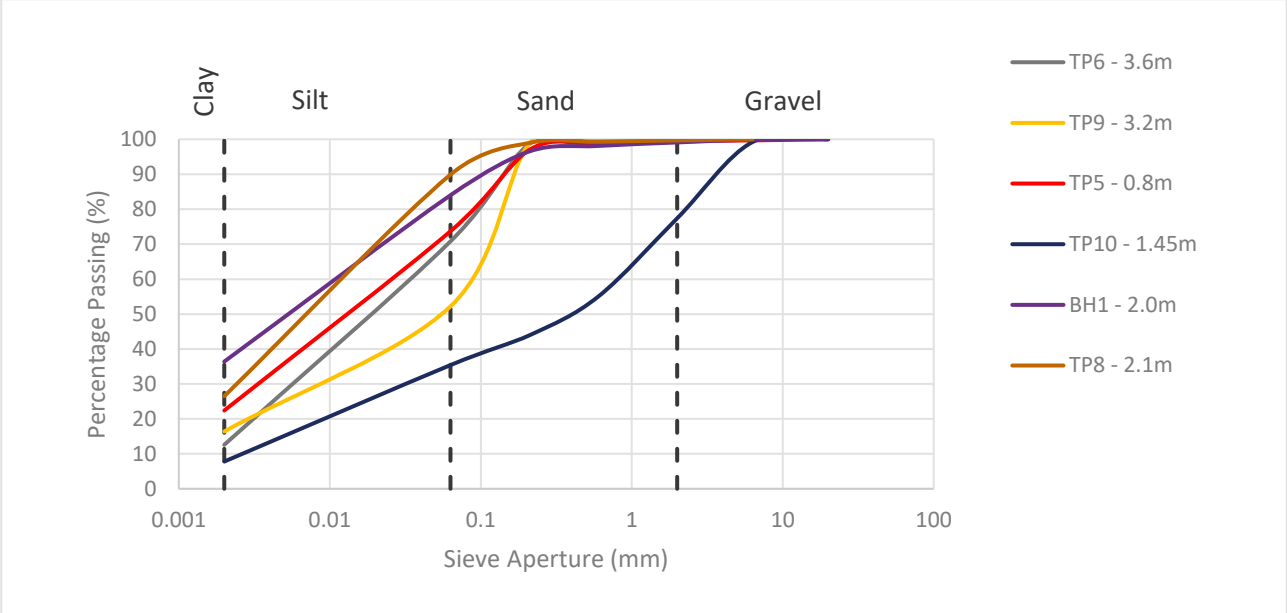
Particle Size Distribution

11.4.8 Six samples were subjected to Particle Size Distribution testing. Results indicate that the clay and silt samples generally comprise between 35-90% fines, 10% - 48%

Sand and 0% - 23% Gravel. The results largely confirm the description of the material as cohesive material (clayey silt, locally varying to sandy silt).

11.4.9 The results of the PSD tests are summarised graphically in **Graphic 11.4 PSD Plots – Cohesive Tidal Flat Deposits** below.

Graphic 11.4 PSD Plots – Cohesive Tidal Flat Deposits



Density

11.4.10 A total of 26 samples of Cohesive Tidal Flat Deposits were subjected to Bulk Density and Dry Density testing by Linear measurement, resulting in Bulk Density values of 15.3 to 21.4Mg/m^3, and Dry Density values of 9.8 to 18.0kN/m^3; the variability in the density of the material may be influenced by the presence of organic content within the material.

11.4.11 Based on a consideration of the above, and the characteristic density of soils suggested in Graphics 1 and 2 of BS 8004:2015 Code of Practice for Foundations, a density of 17kN/m^3 is recommended for design, which corresponds to a clay of very low to medium strength. This is consistent with the measured testing values within this material.

11.4.12 Three samples of peat were also subjected to Bulk Density and Dry Density testing, resulting in Bulk Density values of 11.3 to 12.3kN/m^3, and Dry Density values of 3.6 to 5.3kN/m^3. A characteristic density of 10kN/m^3 is recommended for peat.

Undrained Shear Strength

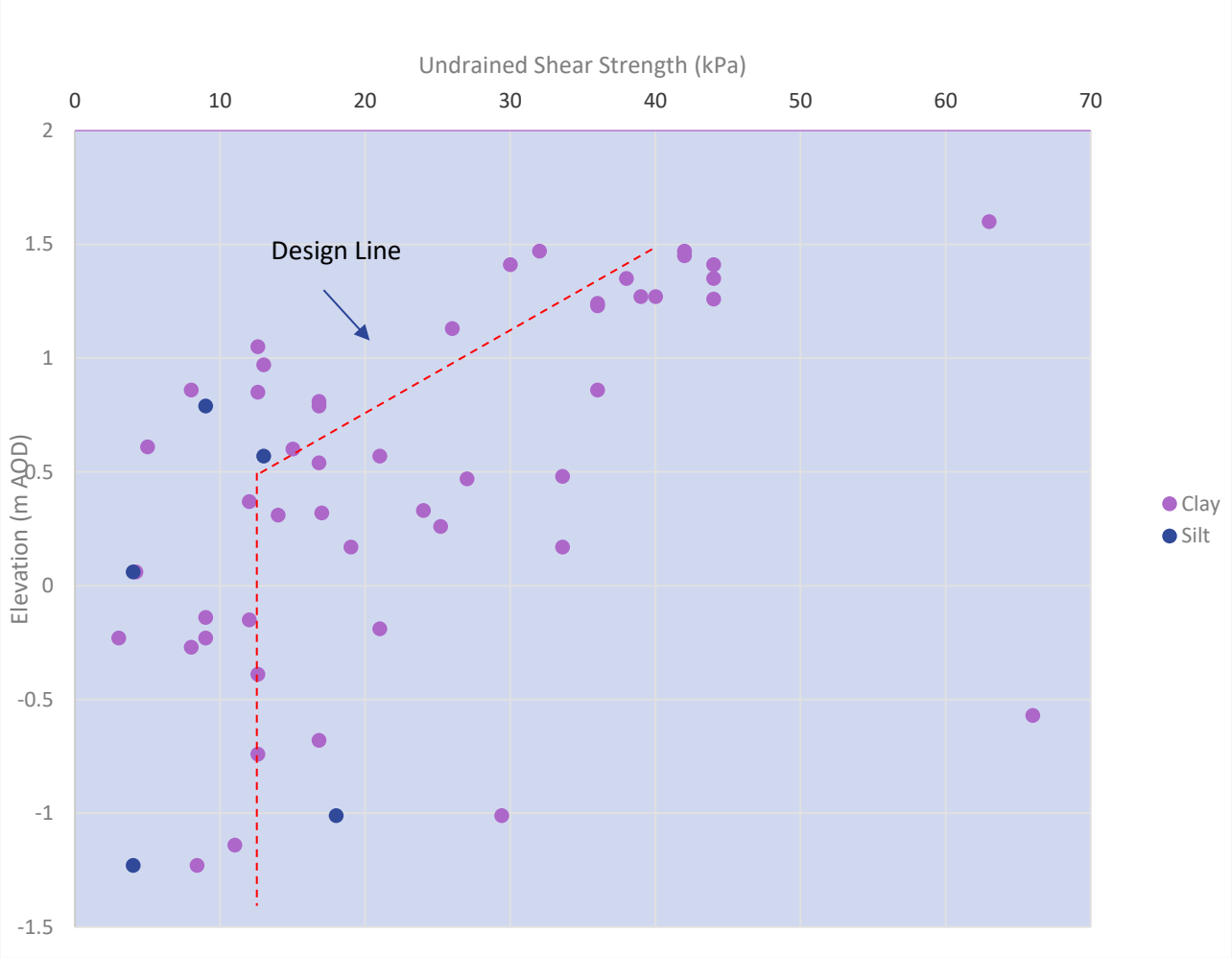
11.4.13 Five undrained triaxial compression tests were performed on cohesive tidal flat deposits. These gave values of undrained shear strength (c_u) between 3 and 36kPa, indicating very soft to soft clay.

11.4.14 In addition, undrained shear strength was determined from correlation with SPT N-values, using the relationship recommended by Stroud (1975). Based on a PI of 35,

correlation of Cu=1.2N was determined. This data has been further supplemented by the results of Hand Shear Vane testing. An illustration of this assessment is provided in **Graphic 11.5 Summary of Undrained Shear Strengths – Cohesive Tidal Flat Deposits**.

11.4.15 The plot indicates that the strength decreases between 1.5m and 0.5m AOD, before becoming more consistent below this elevation. The results reveal the strength of the Cohesive Tidal Flat deposits to reduce from firm clay to very soft clay (very low to medium strength) over the top 1.0m before becoming very soft over the remaining depth. This is consistent with borehole descriptions discussed in **Section 4**.

Graphic 11.5 Summary of Undrained Shear Strengths – Cohesive Tidal Flat Deposits



11.4.16 A total of 26 Hand Shear Vane tests were carried out on cohesive tidal flat deposits, at depths between 0.5m and 3.5m bgl; yielding peak shear strength values between 8 and 66 kPa, with residual strengths between 0 and 60kPa. The results indicate clay of very low to medium strength (very soft to firm).

11.4.17 Based on the above interpretation, the following undrained shear strength values are recommended for design:

- Cu = 25 kPa (for elevation from +1.5m AOD to 0.0m AOD).
- Cu = 12 kPa (from an elevation of 0.0m AOD to base of Stratum).

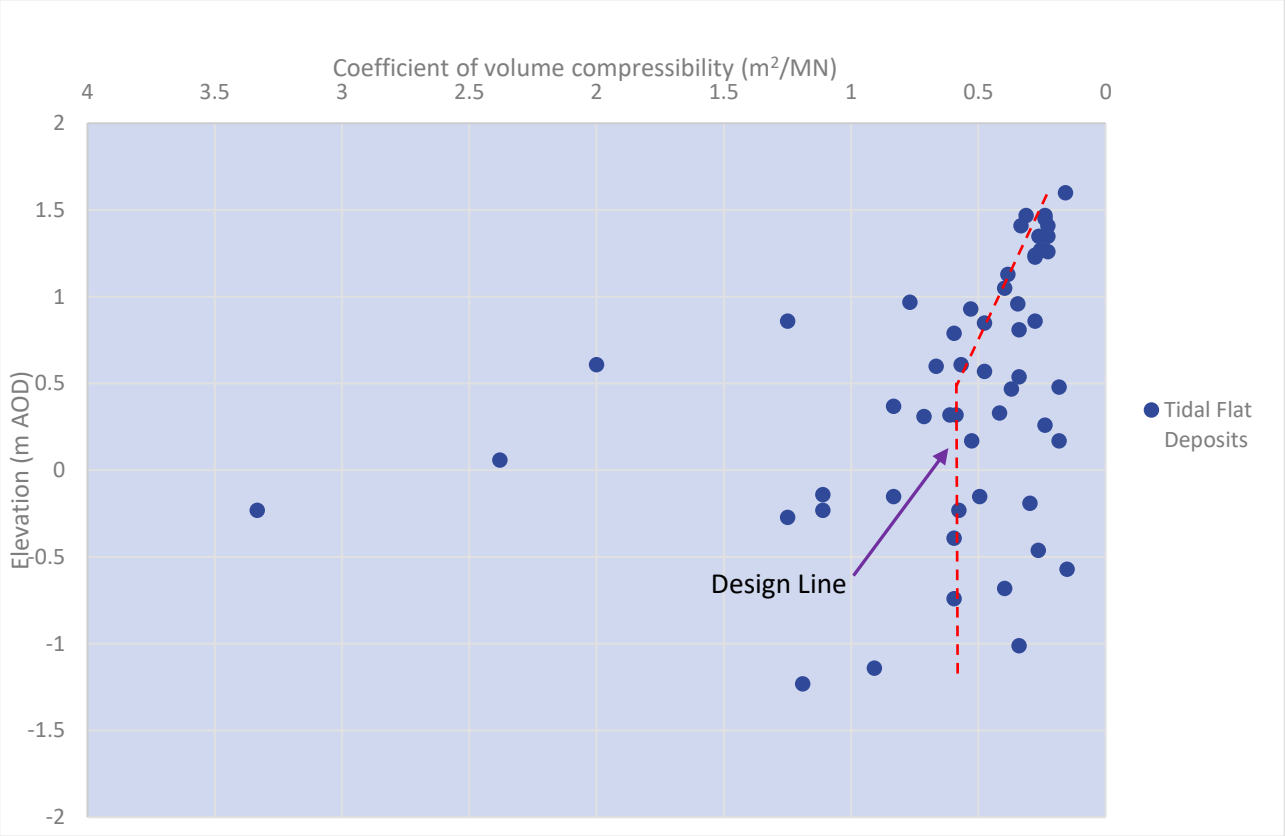
Modulus of Volume Compressibility

11.4.18 Seven oedometer consolidation tests were performed on Tidal Flat Clay specimens. The results are presented versus elevation in **Graphic 11.6 Values of mv for Cohesive Tidal Flat Deposits**.

11.4.19 The results yielded a modulus of volume compressibility (m_v) values ranging between 0.265m^2/MN and 0.612m^2/MN; with corresponding coefficient of consolidation (c_v) between 0.39 and 6.36m^2/year. The modulus of volume compressibility (m_v) can also be derived based on the correlation with SPT, m_v (m^2/MN) = 1 / 0.45N (or 10 / C_u) recommended by Stroud (1975). This results in values of m_v ranging between 0.152m^2/MN and 3.33m^2/MN. Based on the recommended undrained shear strength of 25kPa, decreasing to 15kPa below 0.0m AOD an m_v value of 0.800m^2/MN (decreasing to 0.400m^2/MN below 0.0m AOD) is obtained from this correlation.

11.4.20 The derived values are in general agreement with the recommendations given in Table 2.11 for Compressibility of various types of Clays, in Tomlinson[31], for normally consolidated alluvial and estuarine clays.

Graphic 11.6 Values of mv for Cohesive Tidal Flat Deposits



[31] MJ Tomlinson, Foundation Design and Construction, 7th Edition, 2001.

11.4.21 Four of the samples were also subjected to swelling pressure tests, to assess the expansivity of the material, for use in the design of excavations, retaining walls and shallow infrastructure. The tests resulted in swelling pressures of <1.25 to 2.5kPa.

Effective Angle of Shearing Resistance

11.4.22 A consolidated undrained triaxial test on a sample of cohesive tidal flat deposits gave an angle of shearing resistance (Φ') of 29°, with a cohesion (c') of 4kPa.

11.4.23 Two drained shear box tests on the same material gave Φ' values of 22° and 20°, with corresponding c' values of 3kPa and 1 kPa respectively.

11.4.24 The angle of shearing resistance can be approximated based on the following relationship, as indicated in BS 8004:2015 Code of Practice for Foundations where:

$$\emptyset' = 42 - 12.5Log10Ip$$

11.4.25 This relationship gives values of Φ' between 18° and 31°.

11.4.26 Based on the soft very soft nature interpreted from boreholes information and derived from the undrained shear strength tests, a value of 20° is recommended for design.

Undrained Stiffness Modulus

11.4.27 For cohesive material, the undrained modulus (E_u) has been derived from the relationships recommended by Tomlinson (2001). As E_u (MN/m^2) = 200 x C_u (kPa) for a high plasticity clay, E_u = 5.00 MN/m^2 is derived and should be adopted for design above an elevation of 1.0m AOD. Below this level, an E_u value of 3.0MN/m^2 is recommended.

Drained Stiffness Modulus

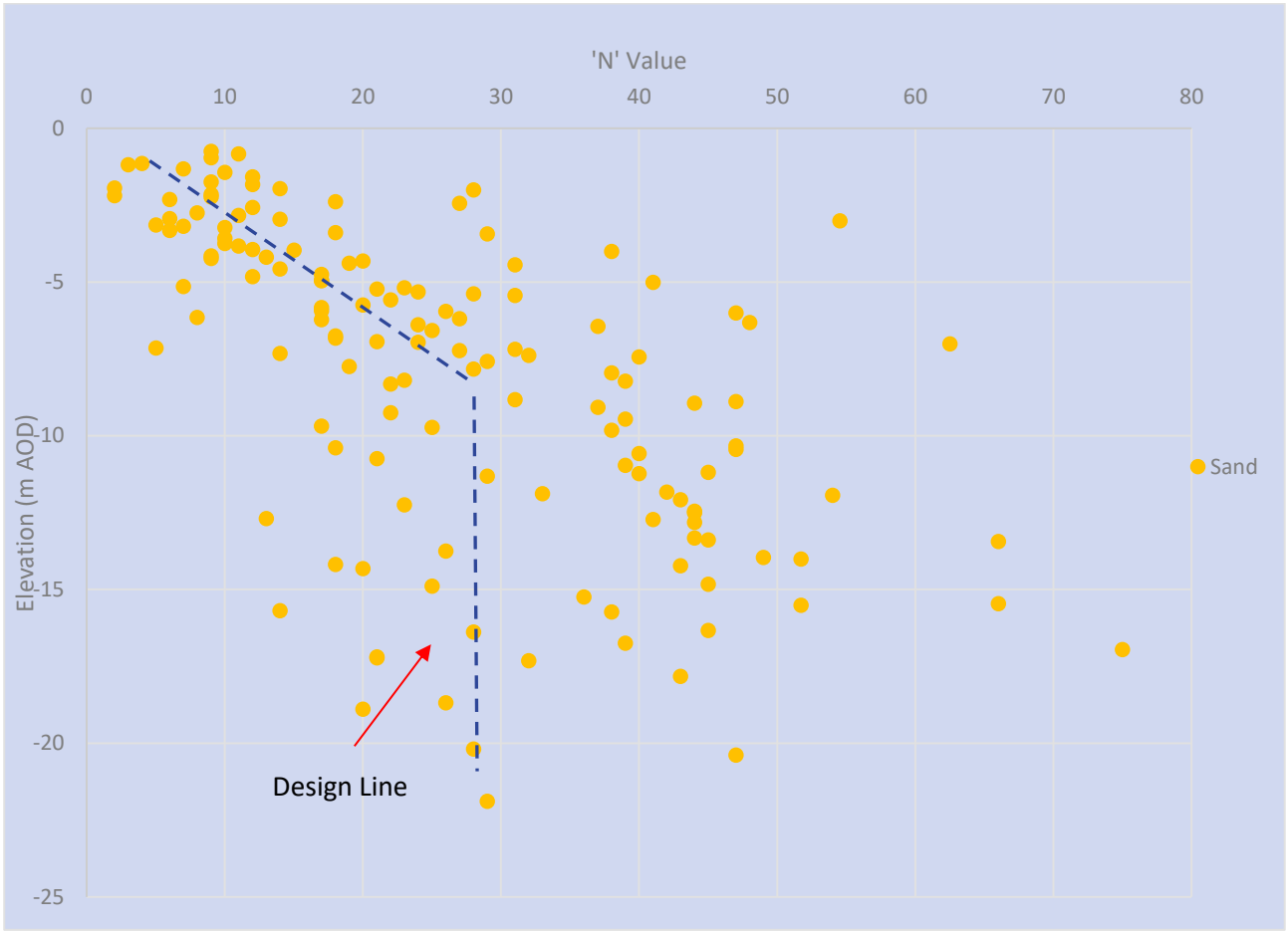
11.4.28 For cohesive tidal flat deposits, the effective drained modulus (E') has been determined from the relationship; E' = 0.6E_u, as recorded in Tomlinson (2001). As a result, an E' value of 3.0MN/m^2 has been derived and is considered appropriate for design for cohesive tidal flat deposits at an elevation of 1.0m AOD or above. Below this level, a value of E' = 1.8 is recommended.

11.5 Tidal Flat Deposits (Granular)

In-situ testing

11.5.1 A total of 156 SPTs were carried out in the granular tidal flat deposits, at depths between 3.00m and 24.5m bgl. SPT N-values ranged from 2 to 75 (extrapolated value based on penetration achieved after 50 blows). Thirteen of the tests were logged as refusals, as refusal had been recorded after 50 blows to derive a realistic extrapolated value. The recorded values are illustrated in **Graphic 11.7 SPT Results for Tidal Flat Sand** below.

Graphic 11.7 SPT Results for Tidal Flat Sand



11.5.2 As **Graphic 11.7 SPT Results for Tidal Flat Sand** shows, there is a general trend of increased SPT N value with depth, to an elevation of approximately 8m below OD, beyond which there is no discernible trend. This is illustrated by the design line showing the change in representative values with depth, which are as follows:

- N= 5 + 3.3z* (Between -1.0m AOD and to – 8.0mA OD).
- N = 28 (from -8.0m AOD to base of Stratum).

11.5.3 With z is depth below -1.0m AOD

Density

11.5.4 Ten samples of granular Tidal Flat Deposits were subjected to Bulk Density and Dry Density testing, resulting in Bulk Density values of 18.5 to 19.8kN/m^3, and Dry Density values of 14.1 to 15.7kN/m^3. The bulk density values are in concurrence with the values given for loose to medium dense sand in BS8004: 2015 Code of practice for Foundations.

11.5.5 Based on the above, a density value of 18kN/m^3 can be adopted for design corresponding to a loose to medium dense granular soil. This is consistent with SPT N values results.

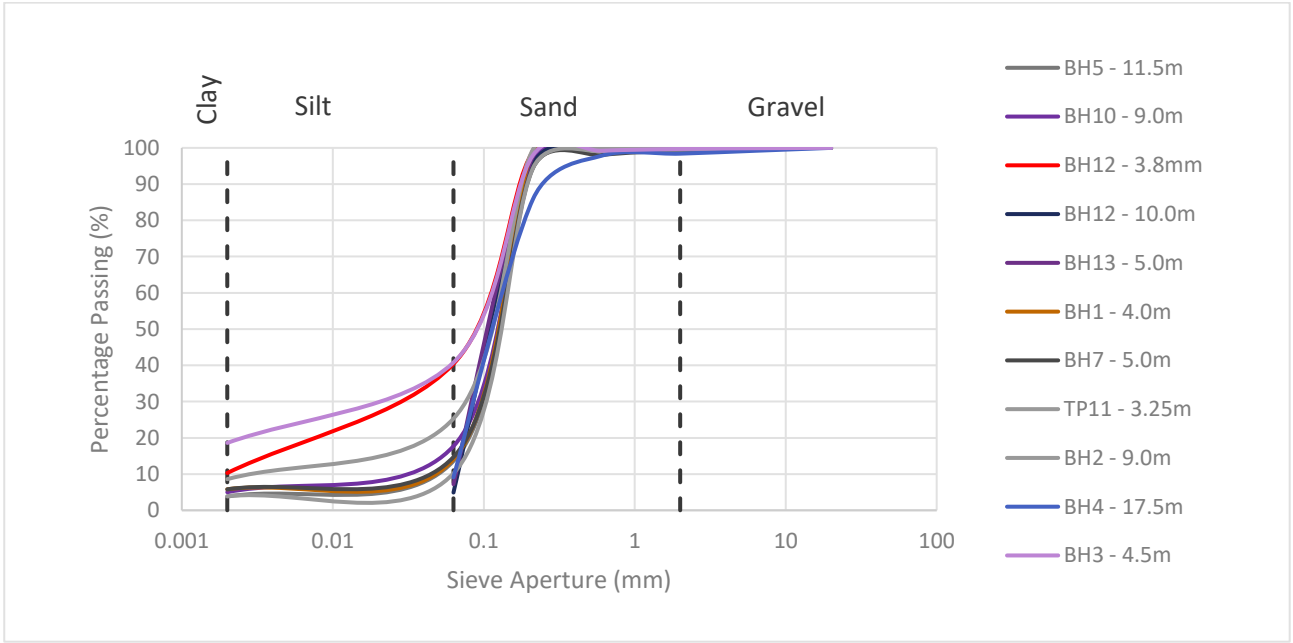
Classification Testing

11.5.6 Eleven samples of granular tidal flat deposits were subjected to moisture content determination, giving results between 20% and 31%.

11.5.7 Eleven samples of sand were subjected to Particle Size Distribution testing. Results indicate that the samples generally comprise 5-41% fines, 59-95% sand and 0-2% gravel. The results generally confirm that the material is granular, although there are two cases where the material could be described, as being borderline sandy silt / silty sand, due to the higher fines content. These samples indicate localised bands or lenses of clay/silt within the upper horizons of the stratum.

11.5.8 The results of the PSD tests are summarised graphically in **Graphic 11.8 PSD plots for granular Tidal Flat Deposits** below.

Graphic 11.8 PSD plots for granular Tidal Flat Deposits



Effective Angle of Shearing Resistance

11.5.9 Two shear box testing results were received for the Tidal Flat Sands (BH4 at 4.0m bgl, and BH10 at 4.0m bgl). This gave an angle of shearing resistance of 32°, with a cohesion (c') of 10kPa. However, the angle of shearing resistance derived from correlation with SPT N-values, using the chart recommended by Peck et al (1967), with additional reference to Table 1 of BS8004 ranged between 28º and 43°, depending on elevation and depth below ground level. From reference to the design SPT 'N' values, the following values of the effective angle of shearing resistance are recommended for design, which take in consideration fine contents of silt and clay:

- Φ' = 29° (for elevation from -1.0mAOD a to – 8.0mA OD).
- Φ' = 32° (for elevation from -8mAOD to base of stratum.

11.5.10 The above values are consistent with very loose to medium dense Sand with percentage fine contents.

Drained Stiffness Modulus

11.5.11 In accordance with CIRIA Report 143 (Clayton 1995[32]), a derivation of the drained stiffness can be established using the relationship E' (MN/m^2) = 1xN. For the representative SPT N-values, the following lower bound characteristic values of drained soil stiffness were derived:

- E' = 5 +3.3z ($MN/m^{2)}$) (for elevation from -1.0m AOD to -8.0m AOD).
- E' = 28 MN/m^2 (for elevation from -8.0m AOD to base of stratum).

11.5.12 The above values are considered to be characteristic for the drained modulus of the granular Tidal Flat Deposits, representing loose to medium dense SAND.

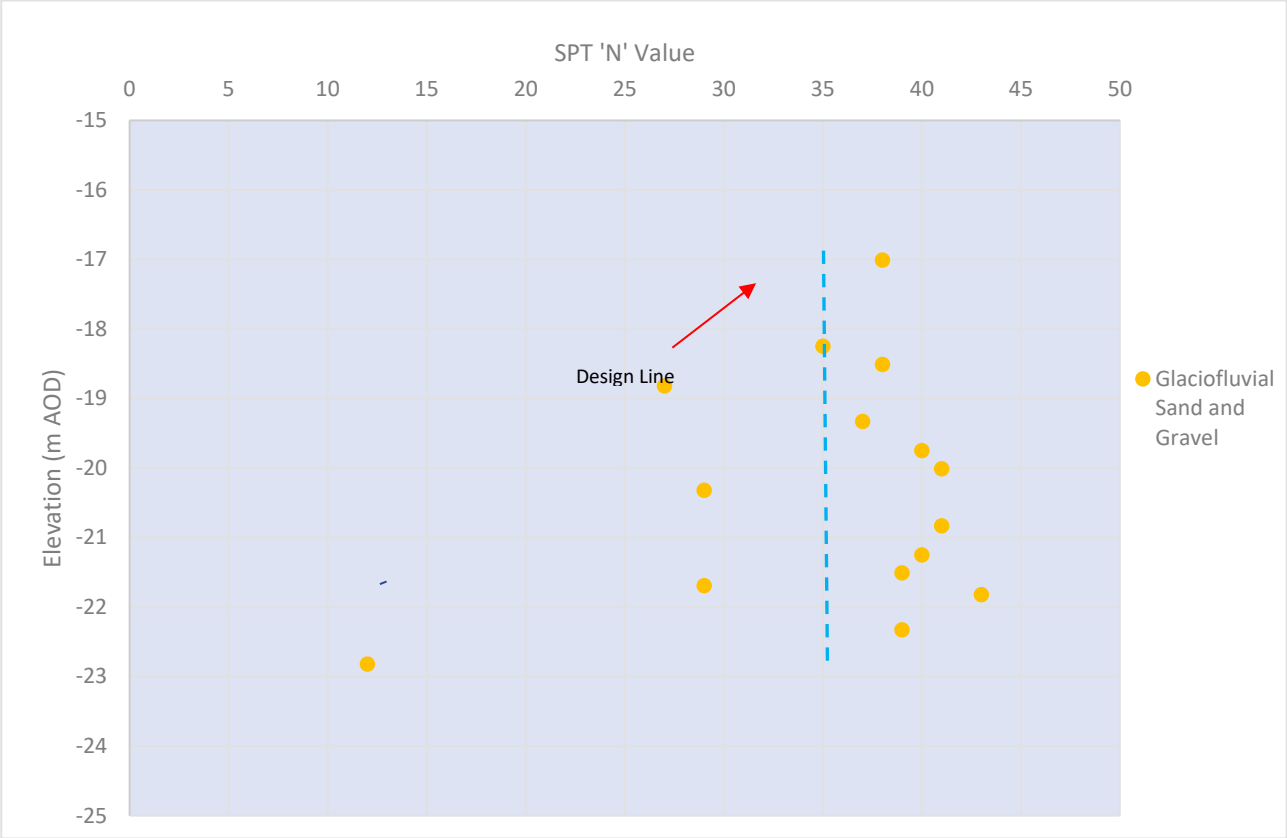
11.6 Glaciofluvial Deposits

In situ Testing

11.6.1 A total of 22 SPTs were carried out in the glaciofluvial deposits, at depths between 19.00m and 25.00m bgl. SPT N-values ranged from 13 to 48 but were typically in excess of 40. Refusals were recorded in 7 tests, due to the dense granular nature of the material. The recorded values are illustrated in **Graphic 11.9 SPT Results for Glaciofluvial Sand and Gravel** below.

[32] Clayton C.R.I (1995): CIRIA Report 143 – The Standard Penetration Test (SPT): Methods and Use

Graphic 11.9 SPT Results for Glaciofluvial Sand and Gravel



11.6.2 The results show no appreciable pattern in SPT value with elevation. Based on the range of SPT N values it is recommended that a design SPT value of N=35 be adopted, representing dense SAND and GRAVEL.

Density

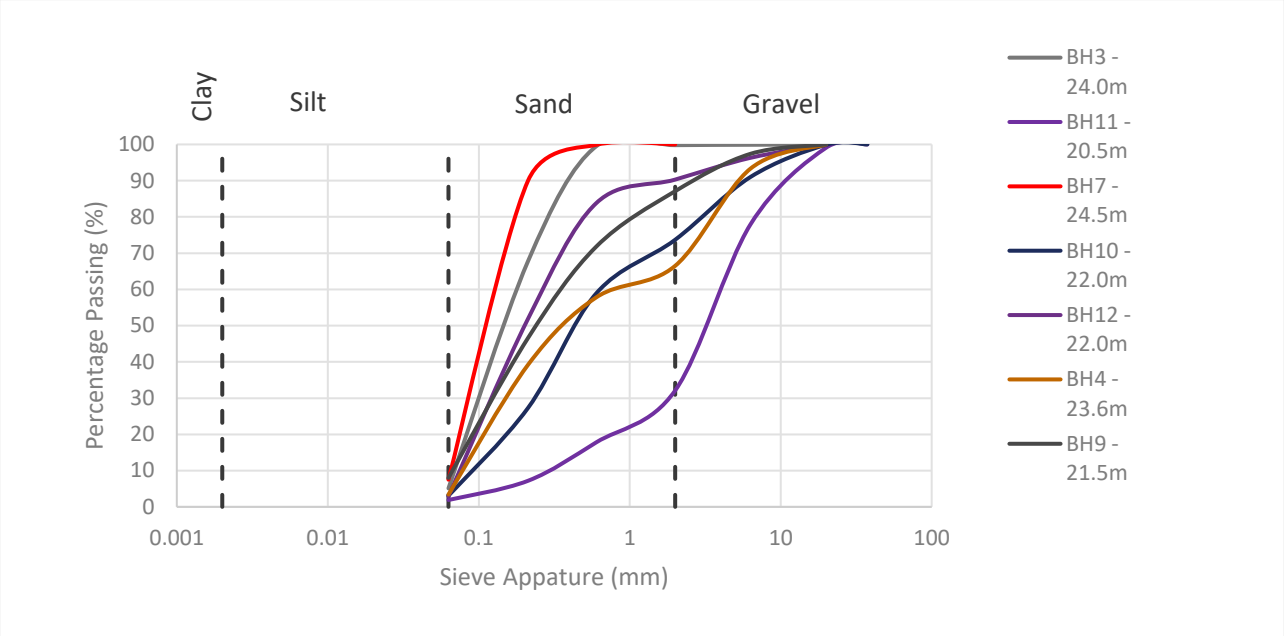
11.6.3 Density testing on three samples of glaciofluvial gravel gave bulk densities between 18.6 and 21.4kN/m^3. Based on this and the characteristic density of soils suggested in BS 8004:2015 Code of Practice for Foundations, a density value of 20kN/m^3 can be adopted for design, corresponding to a medium dense to dense granular soil.

Classification Testing

11.6.4 Seven samples of sand were subjected to Particle Size Distribution testing. Results indicate that the samples generally comprise 2-8% fines, 30-94% sand and 0-68% gravel. The results indicate the material to be generally be granular comprising Sand and Gravel. This is consistent with borehole description.

11.6.5 The results are plotted graphically in Graphic 11.10 PSD plots for Glaciofluvial Deposits below:

Graphic 11.10 PSD plots for Glaciofluvial Deposits



11.6.6 Moisture content testing on three samples gave moisture content values between 11% and 19%.

Effective Angle of Shearing Resistance

11.6.7 Due to the limited testing data, the angle of shearing resistance has also been derived from correlation with SPT N-values, using the chart recommendations after Peck et al (1967). The angle of shearing resistance was interpreted to be between 31º and 40°. From Table 1 of BS8004, the angle of shearing resistance is interpreted to be between 36° and 42°. The representative N value of 35 results in an angle of shearing resistance of 37°.

11.6.8 An effective angle of shearing resistance of 35° is recommended for design, representing a dense SAND and GRAVEL.

Drained Stiffness Modulus

11.6.9 In accordance with CIRIA Report 143 (Clayton 1995), a derivation of the drained stiffness can be established using the relationship E' (MN/m^2) = 2 x N.

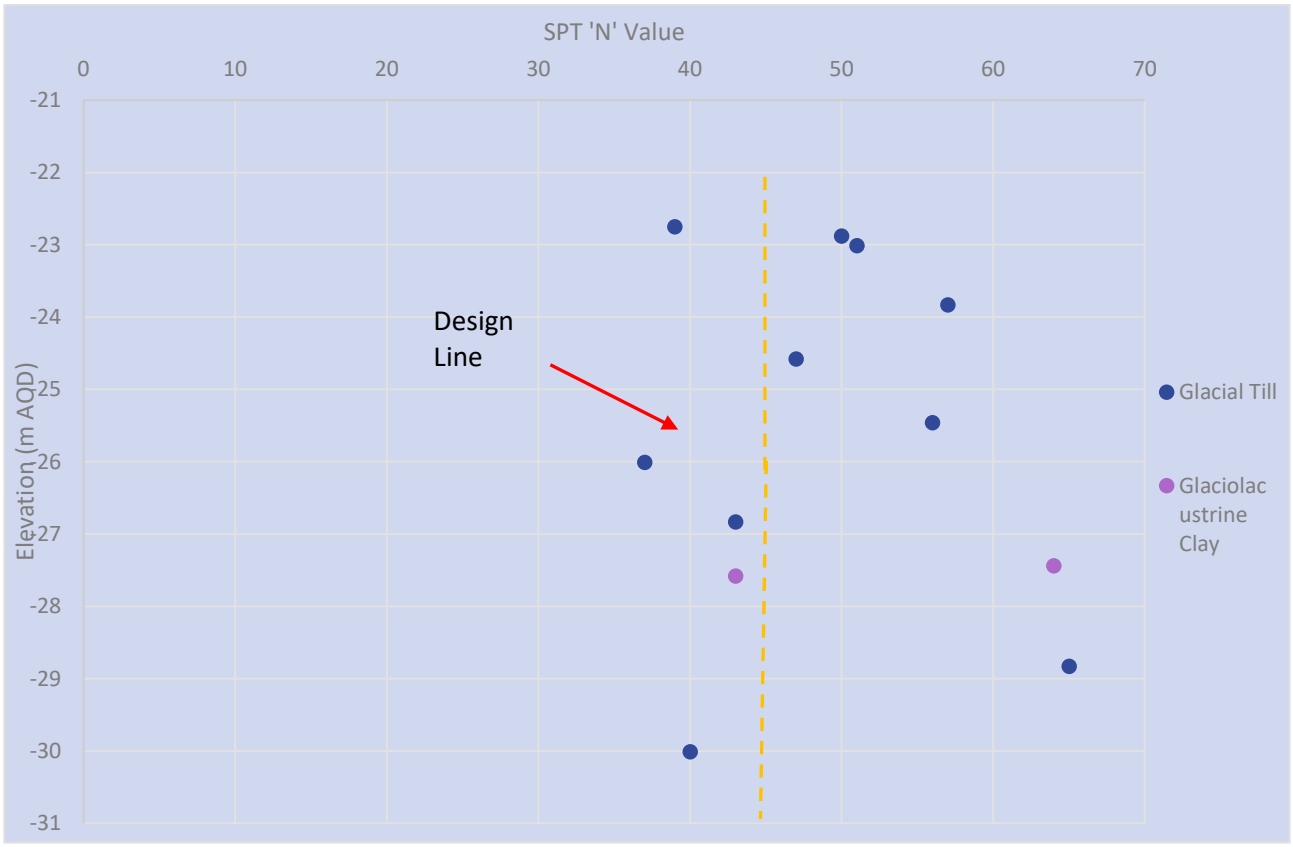
11.6.10 Considering the above, a characteristic value for the drained modulus of $70MN/m^2$ (based on a design SPT N = 35) is recommended for design, representing medium dense to dense SAND and GRAVEL.

11.7 Glacial Deposits

In Situ Testing

11.7.1 Twelve SPT N-values were recorded in the Glacial Deposits from depths between 25.0m to 32.00m bgl, recording SPT N values between 18 and 75, indicating firm to hard clay, based on the correlation postulated by Stroud (1975). The value of 18 was considerably lower than the remaining tests, which all recorded N values in excess of 40 (corresponding to very stiff Clay). The SPT test data is illustrated in **Graphic 11.11 SPT results versus depth – Glacial Deposits** below.

Graphic 11.11 SPT results versus depth – Glacial Deposits



11.7.2 No discernible pattern could be seen in the consistency of the stratum with elevation. Based on the above an SPT 'N' value of 45 is recommended for design. In addition, the results for Glacial Till (sandy gravelly CLAY) and the Glaciolacustrine Deposits (Stiff laminated CLAY) appear to be in concurrence.

Undrained Shear Strength

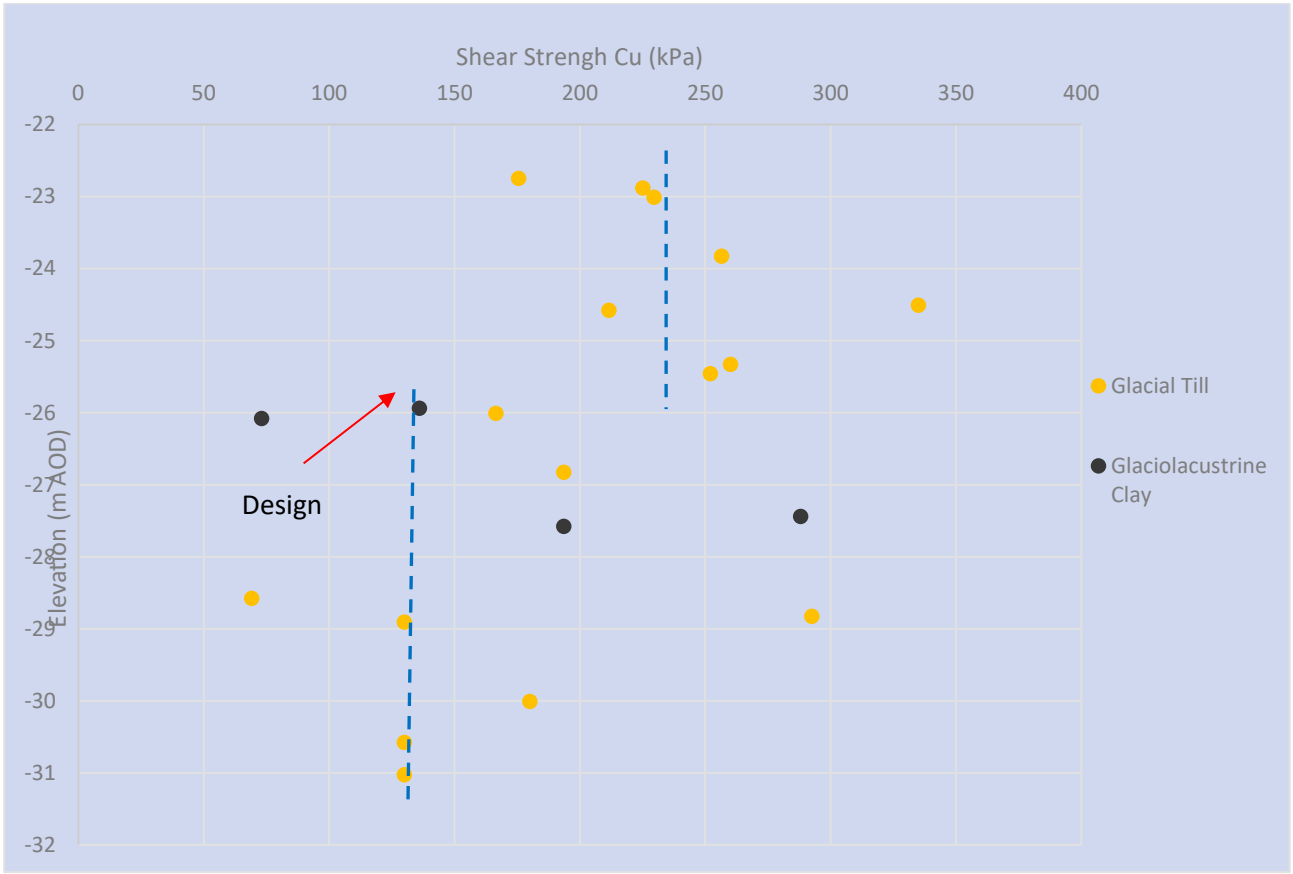
11.7.3 Four Undrained Triaxial Compression tests were performed on Glacial Till samples, giving undrained shear strength values of 73kPa to 335kPa, indicating firm to hard clay. Four laboratory vane tests gave values of 69 kPa in one sample, whilst the other three samples exceeded the maximum shear stress of the vane at 130kPa.

11.7.4 The undrained shear strength can also be correlated with SPT N-values from *in situ* tests (where C_u (kPa) = 4.5N after Stroud). The results yielded undrained shear strength values varying between 170 kPa and 300kPa between elevations of -22.0m AOD and -26.0m AOD, decreasing to between 70kPa and 200kPa from an elevation of -26m AOD to base of Stratum, indicating very stiff to hard decreasing stiff to very stiff. The combined results are presented in **Graphic 11.12 Combined Undrained Shear Strength Values for Glacial Till**.

11.7.5 Based on the above interpretation, the following undrained shear strength values are recommended for design:

- Cu = 230kPa (from an elevation of -22.m AOD to -26.0m AOD).
- Cu = 130 kPa (from elevation -26.0m AOD to base of Stratum).

Graphic 11.12 Combined Undrained Shear Strength Values for Glacial Till



Density

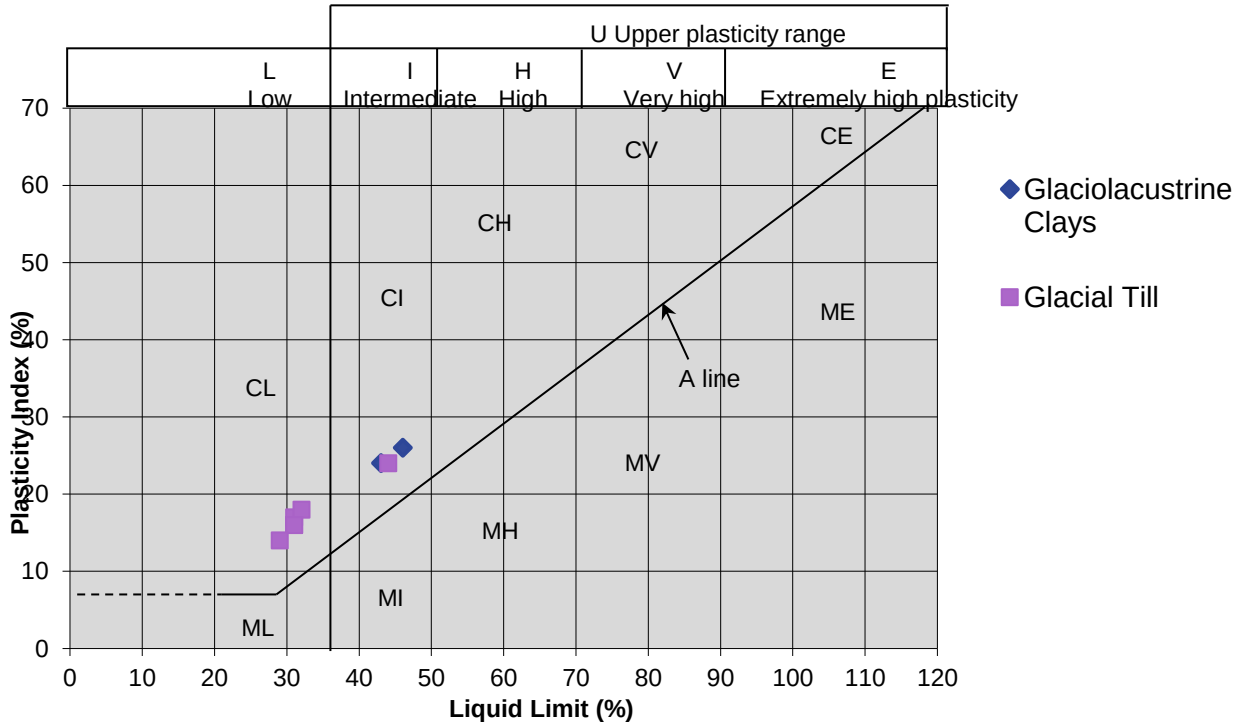
11.7.6 Density testing on three samples of Glacial Till gave bulk densities between 16.0 and 21.5kN/m^3. The lowest value (BH9 at 25.0m bgl) was in disparity with the other samples which recorded values of 20.1 and 21.5kN/m^3 respectively. The reason for this disparity is not clear and the value has been ignored as it is not consistency with the description of borehole information and in-situ testing results. The other two results were more in keeping with the range of densities for high strength clays suggested in BS 8004:2015. Based on this, and literature recommendation for

Glacial Till, a density value of 20kN/m^3 is recommended for design, corresponding to high to very high strength clay.

Classification testing

11.7.7 A total of nine samples of Glacial Till were tested for moisture content, with values of 16% to 24% being obtained. In addition, 8 samples were subjected to Atterberg limit testing, which gave PI values of 14% to 24%, indicating a low to intermediate plasticity silt and clay, as shown in **Graphic 11.13 Chart showing plasticity of Glacial Till samples**. Based on the data, a design PI value of 20% is recommended.

Graphic 11.13 Chart showing plasticity of Glacial Till samples



Modulus of Volume Compressibility

11.7.8 No direct testing was carried out on Glacial Till. However, the modulus of volume compressibility (m_v) can also be derived based on the correlation with SPT, m_v (m^2/MN) = 1 / 0.45N (or 10 / C_u) recommended by Stroud (1975). This results in values of m_v ranging between 0.159m^2/MN and 0.030m^2/MN. Based on the design shear strengths for the stratum, the following design values of m_v are obtained.

- m_v = 0.044m^2/MN (for elevation of -22.0m AOD to -26.0mAOD).
- m_v = 0.077m^2/MN (for elevation of -26.0m AOD to base of Stratum).

11.7.9 The derived values are in general agreement with the recommendations given in Table 2.11 for Compressibility of various types of Clays, in Tomlinson, Foundation Design and Construction, 7th Edition, 2001 for boulder clays.

Effective Angle of Shearing Resistance

11.7.10 No direct testing of the angle of shearing resistance was carried out in Glacial Till. However, the angle of shearing resistance can be approximated based on the following relationship, as indicated in BS 8004:2015 Code of Practice for Foundations where:

$$\emptyset' = 42 - 12.5Log10Ip$$

11.7.11 This relationship gives values of Φ' between 24° and 27°.

11.7.12 Based on the above, a value of 25° is recommended for design.

Undrained Stiffness Modulus

11.7.13 For cohesive material, the undrained modulus (E_u) has been derived from the relationships recommended by Tomlinson (2001). As E_u (MN/m^2) = 600 x C_u (kPa) for a low plasticity clay, the following design values are obtained:

- E_u = 140.00MN/m^2 (from an elevation of -22.0m AOD to -26.0mAOD).
- E_u = 80.00MN/m^2 (from an elevation of -26.0m to base of Stratum).

Drained Stiffness Modulus

11.7.14 The effective drained modulus of over-consolidated clays has been determined from correlation with undrained stiffness modulus using the relationship; E' = 0.6E_u (Tomlinson, 2001). As a result, the following E' design values are obtained:

- E' = 84.00MN/m^2 (from an elevation of -22.0m AOD to -26.0m AOD).
- E' = 48.00MN/m^2 (from an elevation of -26m AOD to base of Stratum).

11.8 Ampthill Clay

In-situ testing

11.8.1 Fourteen SPTs were attempted in the Ampthill Clay from depths between 33.0m to 45.0m bgl, all but one of which recorded refusals. One test (BH11 at 33.5m bgl) recorded an extrapolated corrected SPT N value of 65, indicating very stiff to hard clay, based on the correlation postulated by Stroud (1975). This test would appear to have taken place within an upper weathered horizon within the stratum.

Density

11.8.2 Based on the characteristic density of soils suggested in BS 8004:2015, a density value of 21kN/m^3 can be adopted for design, corresponding to very high strength clay.

Undrained Shear Strength Testing

11.8.3 One undrained triaxial compression test was carried out on a sample of Ampthill Clay, which gave an undrained shear strength of 180kPa, indicating very stiff clay.

The undrained shear strength can also be correlated with SPT N-values from *in situ* tests (where C_u (kPa) = 4.5N after Stroud). The one result from a completed test gives an undrained shear strength of 293kPa, also indicating very stiff clay.

11.8.4 Based on the above, an undrained shear strength value of 200kPa is recommended for the weathered Ampthill Clay.

Modulus of Volume Compressibility

11.8.5 No direct testing could be carried out on this stratum. However, the modulus of volume compressibility (m_v) can also be derived based on the correlation with SPT, m_v (m^2/MN) = 1 / 0.45N (or 10 / C_u) recommended by Stroud (1975). This results in m_v values of 0.034 m^2/MN and 0.056 m^2/MN, from the respective correlations.

11.8.6 Based on the design undrained shear strength value of 200kpa, a design m_v value of 0.05m^2/MN is recommended for design.

11.8.7 The derived value is in general agreement with the recommendations given in Table 2.11 for Compressibility of various types of Clays, in Tomlinson, Foundation Design and Construction, 7th Edition, 2001 for stiff weathered rocks.

Effective Shear Strength

11.8.8 Several core specimens of the Ampthill Clay were schedules for uniaxial compressive strength (UCS) testing. However, due to the friable nature of the recovered material, the selected samples were not suitable for this form of testing. Instead, effective strength testing was carried out on 8 of the samples, using the consolidated undrained triaxial method. The tests gave cohesion (c') values between 32.7 and 82.9kPa, and angles of shearing resistance between 17 and 26°. For design, effective strength parameters of c' =10kPa ∅′ =19° are recommended for design.

Undrained Stiffness Modulus

11.8.9 For cohesive material, the undrained modulus (E_u) has been derived from the relationships recommended in Tomlinson (2001). As E_u (MN/m^2) = 600 x C_u (kPa) for a low plasticity clay, E_u = 120.00 MN/m^2 is derived and should be adopted for design.

Drained Stiffness Modulus

11.8.10 The effective drained modulus has been determined from correlation with undrained stiffness modulus using the relationship; E' = 0.6E_u (Tomlinson, 2001). As a result, an E' value of 72.00 MN/m^2 has been derived.

Point Load Testing

11.8.11 Point Load strength testing was carried out on 5 specimens of Ampthill Clay. The tests gave Point Load Index (Is) values of between 0.067 and 0.921 MPa, indicating very low strength rock, according to the classification proposed by Brook (1985).

11.8.12 The results of Point Load Index testing can be related to the UCS by multiplying I_S by 22, as reported by the ISRM (1985)[33]. This resulted in UCS values of between 1.47 and 20.26MPa, depicting very weak to weak weathered rock.

11.8.13 A comparative review of the derives UCS results with other strength parameters and borehole description, indicates that the material is behaving like completely decomposed rock, and therefore should be treated as very stiff Clay strata.

11.9 Groundwater Conditions

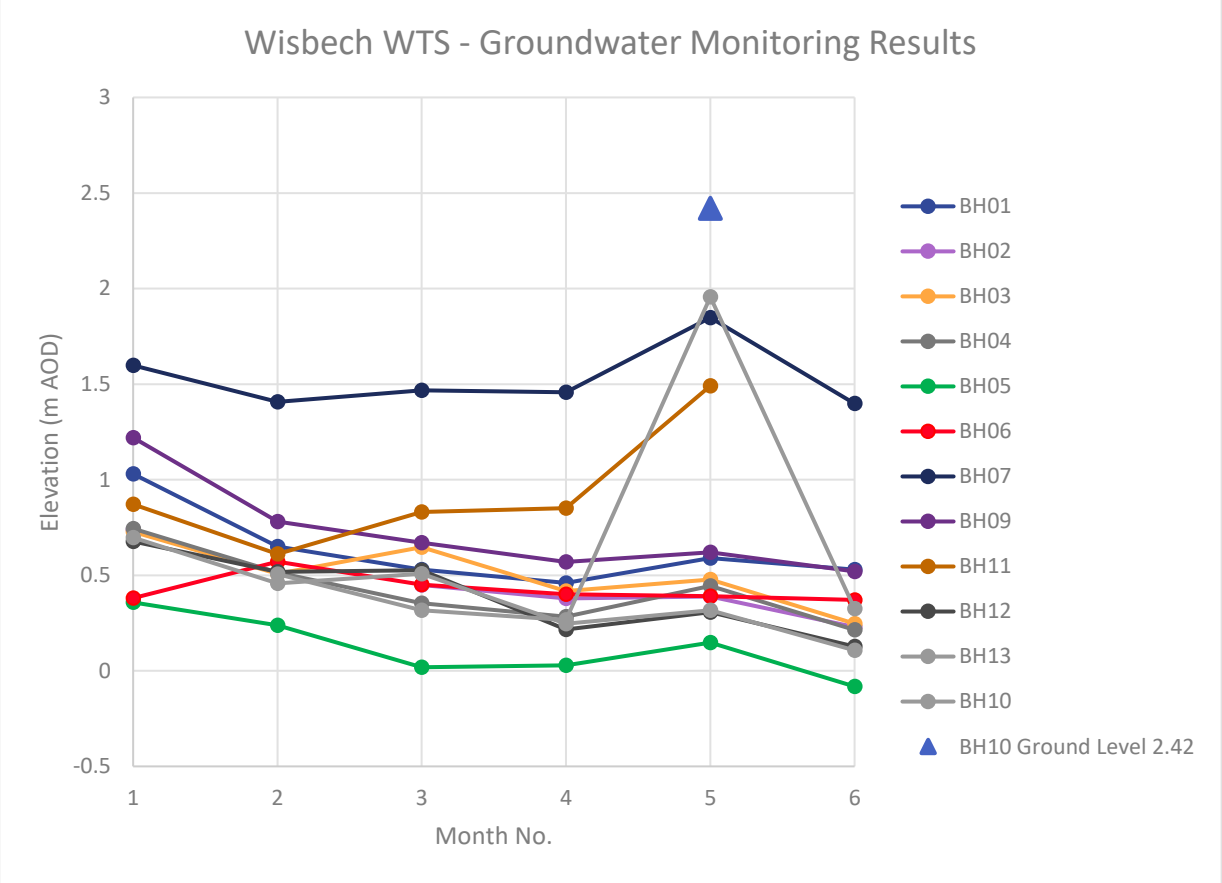
11.9.1 Groundwater conditions are discussed in **Section 6.3** and **Table 9.1 Groundwater level monitoring data**. The results of the groundwater monitoring after completion of the GI works are included in Appendix K and also presented graphically in **Graphic 11.14 Groundwater Levels Measured at the site** below.

11.9.2 Based on the observed groundwater strikes and groundwater monitoring results presented in **Table 9.1 Groundwater level monitoring data**, the groundwater levels show some variation across the site, with the highest level recorded at around 0.46m bgl (1.956m AOD). Consideration should be given to the potential for fluctuating groundwater levels, particularly with respect to seasonal variations.

11.9.3 For the purposes of design, a groundwater at surface level should be adopted.

[33] International Society for Rock Mechanics – Commission on Testing Methods: Suggested Method for Determining Point Load Strength *in Int. J. Rock Mech. Min. Sci. & Geomech. Abstr. Vol.22 No 2, pp51-60* (1985)

Graphic 11.14 Groundwater Levels Measured at the site



11.10 Aggressive Ground Conditions

11.10.1 A total of 23 samples were subjected to testing to ascertain concentrations of soluble sulphate and pH, of which 13 were also subjected to additional testing to determine their oxidisable sulphide level, and Total Potential Sulphate.

11.10.2 The tests were undertaken within all the encountered strata, and a maximum concentration of soluble sulphate of 1.40g/l was detected. The testing also indicated that pyrite was not present, and therefore the level of soluble sulphate was unlikely to be exacerbated by the future oxidisation of sulphides. Based on this, the design class of **DS-2** can be adopted for any construction work carried out below ground. In addition, assuming mobile groundwater an **ACEC Class of AC-2** should also be adopted.

11.11 CBR Testing

11.11.1 Eleven *in situ* CBR tests were carried out as part of this ground investigation. In addition, nine laboratory CBR tests were undertaken on disturbed bulk samples at depths from 0.5m to 1.0m bgl. The testing results are included in **Section 11.4**.

11.11.2 The granular made ground achieved variable results with the more favourable results being very high (30-68%); this was expected, since this material forms the surface in areas trafficked by plant and lorries.

11.11.3 A laboratory test on cohesive made ground achieved CBR's of 3.0% to 3.5%.

11.11.4 The results in cohesive tidal flat deposits varied from 0.4m to 5.4%. The results indicate that the cohesive Tidal Flat Deposits are not suitable for a pavement foundation without subgrade improvement in accordance with CD225 (2020)[34] Design for New Pavement Foundations (i.e. design CBR value of <2.5%).

11.11.5 Once site formation levels are finalised, *in situ* CBR values at the final formation levels should be established to confirm the design CBR values and required pavement designs prior to the construction of roads and pavements.

11.12 Geotechnical Risk Register

11.12.1 A geotechnical risk assessment was undertaken for the site at the desk study stage, to identify geotechnical hazards that may impact the design and construction. The aim of the assessment is to identify the risks and hazards, quantify them in relation to the proposed works and the site conditions, and provide mitigation measures to help eliminate or reduce them. The risk assessment has been undertaken in accordance with Clayton C.R.I (2001), "Managing Geotechnical Risk", Institution of Civil Engineers.

11.12.2 The preliminary GRR has been updated to include revised geotechnical risks and hazards from the GI and interpretation, and this is presented in **Appendix E**.

[34] Highways England (2020): CD225 – Design for new pavement foundations Revision 1

12. Environmental Conclusions

12.1.1 This report has assessed the risks presented by potential contaminant sources identified at the site. These have been identified through as desk based assessment and refined using findings from an intrusive ground investigation.

12.2 CHP Connection Corridor, Access Improvements and TCC

12.2.1 The initial conceptual model and preliminary risk assessment for the CHP Connection Corridor, Access Improvements and TCC site areas identified one potentially significant contaminant linkage (with moderate or higher risks classed as being potentially significant) and there are also six moderate/low risks that may require further investigation, as follows:

- **Moderate** risk to **future site users** associated with the disused disused March to Wisbech Railway;
- Moderate/low risk to **current and future surface water** associated with the disused March to Wisbech Railway;
- Moderate/low risk to **future site users** and **future surface water** associated with possible contaminants in made ground associated with infilled former drains on land which may be used as the TCC;
- Moderate/low risk to future site users associated with offsite historical and current works adjacent to the CHP Connection Corridor, Access Improvements and TCC;
- Moderate/low risk to **future site users** associated with the offsite former petrol filling station adjacent to the Access Improvements area at New Bridge Lane.

12.2.2 Based on the assessment, ground investigation should be completed to characterise the soil within the railway land on the CHP Connection Corridor, and for the other identified sources, Phase 2 intrusive site investigation would be considered prudent as part of the detailed design process where groundworks will potentially encounter the identified sources.

EfW CHP Facility (leased area and additional area)

12.2.3 The initial conceptual model and preliminary risk assessment for the additional area of the EfW CHP Facility has identified two moderate/low risks which require further consideration as follows:

- Moderate/low risk to **future site users** and **future surface water** associated with possible contaminants in the area of unknown storage/other activity southeast of the EfW CHP Site

12.2.4 The environmental risk assessment for the EfW CHP Facility leased area has identified the following outstanding plausible pollutant linkages which could present a moderate risk to identified receptors.

- Ground gas from natural peat deposits presenting a risk to humans and property through gas ingress into buildings and subsequent inhalation / accumulation.
- Organic contaminants in soil associated with onsite current activities presenting a risk to services including potable water supply pipes through permeation.

12.2.5 Moderate to low risks have also been identified to surface water as a result of hydrocarbons identified in shallow groundwater during monitoring round 1. This is considered to represent an isolated area of contamination, which does not appear to be impacted on adjacent surface water quality within the drainage channels. Concentrations of TPH at this location were below the laboratory limit of detection during the subsequent two rounds of sampling.

12.2.6 The presence of measurable concentrations of organic contaminants in the shallow soils is suggestive of the need for barrier type potable water supply pipes. This should be discussed and agreed with the statutory provider.

13. Geotechnical Conclusions and Engineering Recommendations

13.1 Ground Conditions and Geotechnical Characteristic Properties: EfW CHP Facility

13.1.1 The site is underlain predominantly by made ground over the following sequence of strata:

- Cohesive Tidal Flat Deposits.
- Granular Tidal Flat Deposits.
- Glaciofluvial Sand and Gravel.
- Glacial Deposits (Glacial Till / Glaciolacustrine Clay).
- Ampthill Clay (Stiff Clay to very weak Mudstone).

13.1.2 The interpreted ground model for the site together with geotechnical characteristic values are summarised in **Table 13.1 Summary of Characteristic Geotechnical Parameters** below.

Table 13.1 Summary of Characteristic Geotechnical Parameters

Stratum	Bulk Density, ɣ (kN/m3)	Cu (kPa)	mv (m2/MN)	ϕ' (°)	c' (kPa)	Eu (MPa)	E' (MPa)
Made ground	17	-	-	-	-	-	-
Cohesive Tidal Flat Deposits	17 (Peat = 10)	25 (above 0.00m AOD) 12 (below 0.00m AOD)	0.800 (above 0.0m AOD) 0.400 (below 0.0m AOD)	20	0	5.0 (above 0.0m AOD) 3.0 (below 0.0m AOD)	3.0 (above 0.0m AOD) 1.8 (below 0.0m AOD)
Granular Tidal Flat Deposits	17	-	-	29 (-1.0 to -8.0m OD) 32 (> - 8m below OD)	-	-	5+3.3z (-1.0m to -8m below AOD) 28 (> -8m below OD)

Stratum	Bulk Density, ɣ (kN/m3)	Cu (kPa)	mv (m2/MN)	ϕ' (°)	c' (kPa)	Eu (MPa)	E' (MPa)
Glaciofluvial Sand and Gravel	20	-	-	35	-	-	70
Glacial Deposits	20	230 (above - 26.0m AOD) 130 (below - 26.0m AOD)	0.044 (above - 26.0m AOD) 0.077 (below - 26.0m AOD)	25	0	140 (above - 26.0m AOD) 80 (below - 26.0m AOD)	84 (above - 26.0m AOD) 48 (below - 26.0m AOD)
Ampthill Clay	21	200	0.05	19	10	120	72

13.1.3 Detailed description of the encountered strata and derivation of the geotechnical parameters are presented in **Sections 4** and **11**, respectively.

13.2 Groundwater Conditions: EfW CHP Facility

13.2.1 Groundwater observations and monitoring indicate that the shallowest groundwater level is approximately 0.32m bgl (+0.26m AOD) which suggests a perched groundwater table exists within the made ground.

13.2.2 A design groundwater level at surface is therefore recommended for design to take into consideration potential seasonal fluctuations and influence from nearby drainage channels and reservoirs. Potential for site flooding due to nearby channels (referenced in **Section 9.1**) should also be considered in finalising the Proposed Development layout and finished levels.

13.3 Foundations: EfW CHP Facility

Foundations and Underground Structures/Facilities

13.3.1 Made ground is considered unsuitable as a foundation stratum. Additionally, cohesive tidal flat deposits are not recommended as a bearing strata for shallow foundations to support all but very lightly loaded structures, due to their low strength and high compressibility, which may result in bearing failure and / or excess total and differential settlements. Shallow foundations may be founded on this compressive stratum if ground improvement measures are implemented to increase their stiffness.

13.3.2 For heavy structures and structures sensitive to settlements, piled foundations are recommended. These may be founded in the granular Tidal Flat Deposits or extend to the lower strata, depending on applied loads, tolerable settlement criteria and pile group behaviour.

13.3.3 Groundwater is found to be close or at surface. Design to resist uplift should be considered for both permanent and temporary structures. Alternatively, consideration should be given to raising site levels through the adoption of a cut and fill strategy to improve site drainage system, prevent potential site flooding, control influence of high water levels on design and construction of foundations and other groundworks, and allow installation of buried services in the dry to ensure their long term performance.

Floor Slabs: EfW CHP Facility

13.3.4 The shallow made ground and the cohesive Tidal Flat Deposits are not considered suitable for a ground bearing slab without ground improvement to improve their stiffness, due to their low strength and high compressibility. Suspended floor slabs (cast on the ground) are considered a more economical option.

13.3.5 In design, consideration should be given to the potential for hydrostatic uplift.

13.4 Excavation and Groundwater Control: EfW CHP Facility

13.4.1 Both shallow excavations and deeper excavations should be achievable by means of normal excavating plant.

13.4.2 It is likely that open excavations will be unstable, depending on depth and extent. Provision for design and construction of an adequate temporary support system to ensure stability of the excavation works and a safe working environment should be considered. All excavation support should be designed in accordance with CIRIA Report 97[35] and current Health and Safety regulations, as a minimum.

13.4.3 In addition, the potential for hydraulic uplift (heave and blow) of the floor of deeper excavations (for tipping bunkers) will need to be considered. Specific design measures may be required for groundwater control and excavation support.

13.4.4 As discussed in Section 13.2, groundwater is very shallow and close to surface. Dewatering will be required during excavations and any underground works. Suitable dewatering systems should be designed to both control groundwater during construction and prevent potential effects on the stability of any adjacent structure foundations and underground services.

13.5 Material Re-use: EFW CHP Facility

13.5.1 At this stage, final site elevations have not been provided and hence cut and fill strategy is unknown.

[35] CIRIA REP R 97 Trenching practice. 2nd edition (2001 revision).

13.5.2 There may be a potential for re-use of the material forming the bunds, although some double handling may be required to separate topsoil from the spoil. Should fill material be required for the development, excavated cohesive tidal flat deposits and other soft clays are not considered suitable for re-use. Topsoil, subject to being chemically clean, could be considered for reuse within landscaping.

13.5.3 If required, suitable materials from the bunds could be considered for reuse as general fill and for landscaping. These materials should be engineered in accordance with the Specification for Highways Works[36], or reconditioned for re-use, as applicable.

13.6 Roads and Hardstanding: EfW CHP Facility

13.6.1 Considering the CBR results obtained for the different materials, it is recommended that in *situ* CBR testing is performed at final formation levels, when Proposed Development layout and arrangements are finalised, to determine the CBR values to be used for design and construction of roads and pavements.

13.7 CHP Connection Corridor

13.7.1 In order to provide further information on the identified geotechnical risks and hazards pertaining to the CHP Connection Corridor, it is recommended that intrusive ground investigation is undertaken on this site.

[36] Highway Agency Specification for Highway Works, Series 600-Earthworks.

Figures 1-9

545000 546000 547000

309000 308000 307000

N

Wisbech
B1542 Barton Rd
North Brink
South Brink
Somers Rd
High St
The Crescent
Alexandra Rd
Love La
Kingsley Ave
Queens Rd
Kings Rd
Hillbun Rd
Station Dr
Victoria Rd
Cannon St
West St
Norfolk St
Orange Grove
Park Rd
King St
Duke St
Prince St
Ramnoth Rd
Earl St
Elizabeth Terrace
Money Bank
Peckover Dr
Penrose Gdns
Copper Fields
Miles Ave
Mansell Rd
Queen Elizabeth Dr
Falklands Dr
Churchill Rd
Elm Rd
A1101
Corporation Rd
Westmead Ave
First Ave
Second Ave
Third Ave
Fifth Ave
Sixth Ave
Mount Dr
Boyces Rd
Manor Gdns
The Water Gdns
Magazine La
Cox's La
Fenland Field
Oldfield La
Mall Dr
Ellerby Dr
Victory Rd
Railway Rd
Lanksfield
Prospect
Milner Rd
Awdry Dr
Sandall Rd
B198
Mile Tree La
Northfield House
Cromwell Rd
Sandown Rd
Great Boleness Field
Europa Way
Regal Rd
Weasenham La
Heron Rd
Elm Low Rd
Elm High Rd
Salters Way
Anglia Way
Boleness Rd
New Drove
Harrys Way
Halfpenny La
Little Boleness Field
North Bridge Field
North Brink
South Bridge Field
Potty Plants
A47
South Bridge Field
The Railway Line
Balcony Farm
Cromwell Rd
Redmoor Mill Field
New Bridge
Main Rd
Low Rd
High Rd
The Shieling
pring ottage

Key

- Proposed Development Red Line Boundary
- EfW CHP Facility (leased area)
- EfW CHP Facility (additional area)
- CHP Connection
- Access improvements
- Temporary Construction Compound

0 200 400 600 m

Scale at A3: 1:10,000

Client

Medworth CHP Limited
Medworth Energy from Waste CHP Facility DCO
Geo-environmental Report

Figure 1
Site location

June 2021

wood.

41310-Shr282

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545400

545600

308000

307800

N

SALTERS WAY

Depot

Drain

ALGORES WAY

NEW BRIDGE LANE

BOLENESS ROAD

Key

EfW CHP Facility (leased area)

0 20 40 60 80 m

Scale at A3: 1:1,500

Client

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Medworth Energy from Waste CHP Facility
DCO
Geo-environmental Report

Figure 2
EfW CHP Facility (leased area) site layout

June 2021

wood.

41310-Shr283

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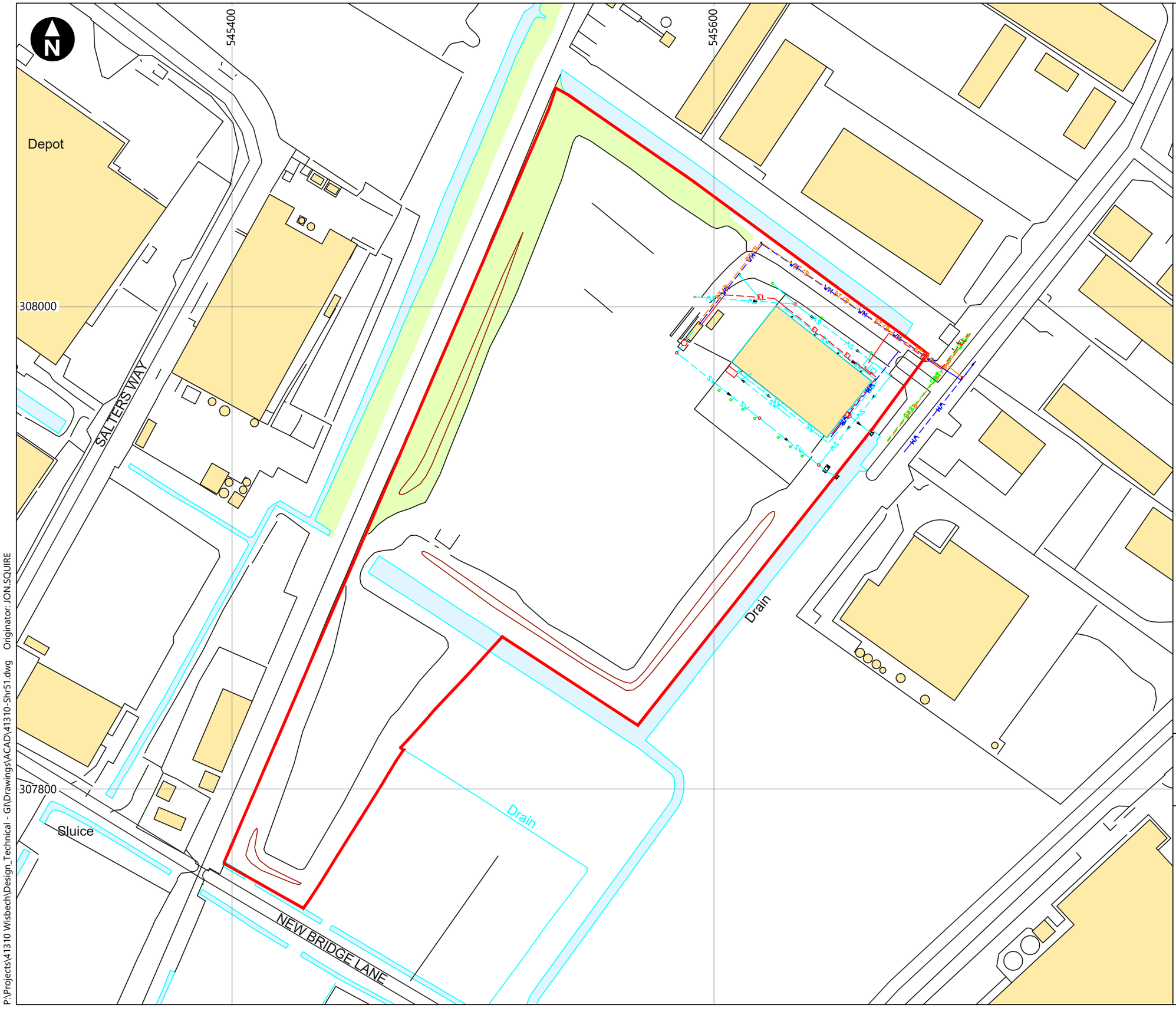

Key

- EfW CHP Facility (leased area)
- SW — Proposed surface water sewer
- FS — Proposed foul sewer
- WM — Water main
- BT/B — BT
- EL — Electric
- GAS — Gas

Note:
Services overlaid from MLM Consulting Engineers Drawing Number 650650/7 Rev F.
Onsite services are indicative only.

0 m 75 m

Scale 1:1500 @ A3

Client

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Medworth Energy from Waste CHP Facility
Geo-environmental Report

Figure 3
Service plan

June 2021

wood.

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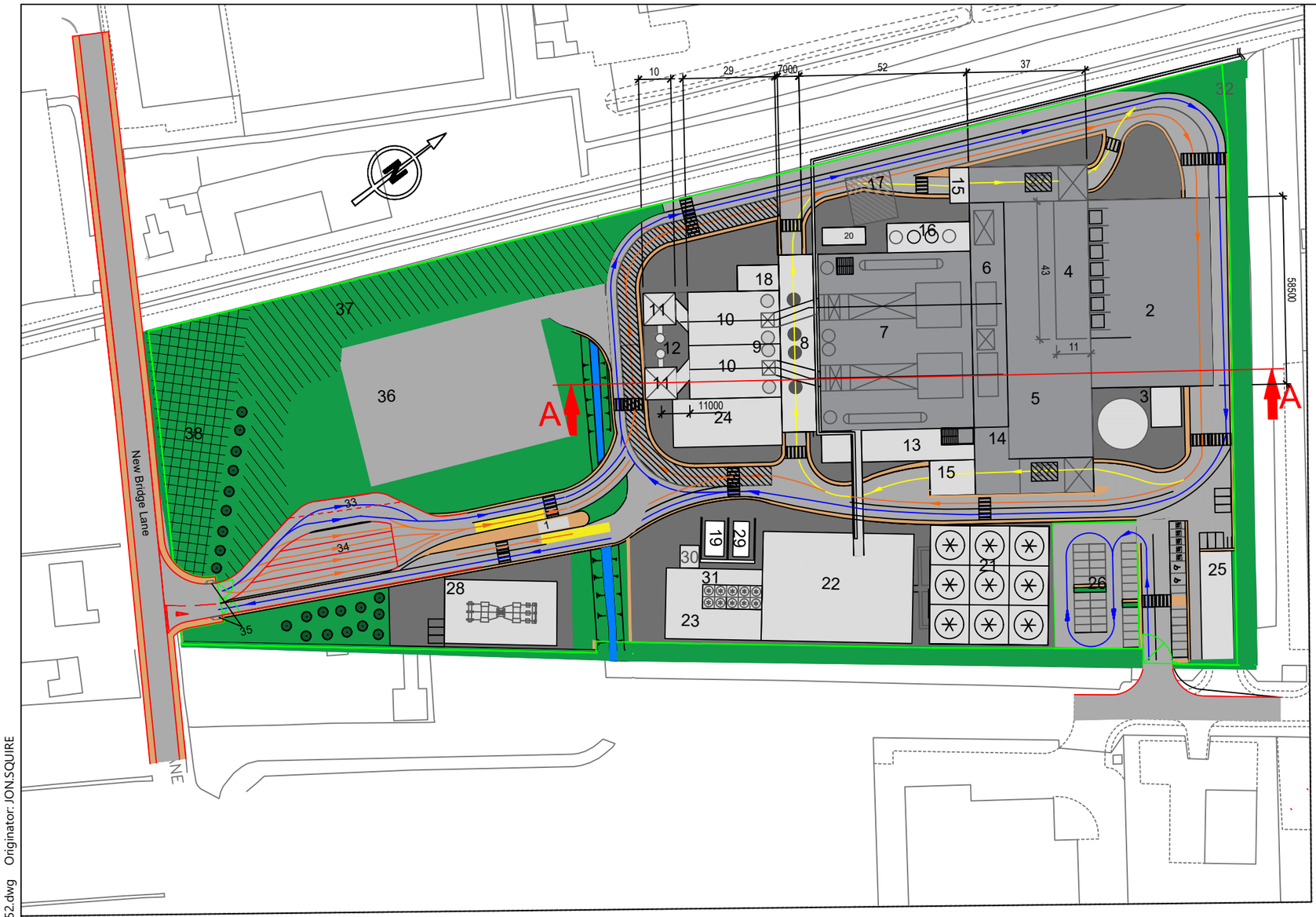
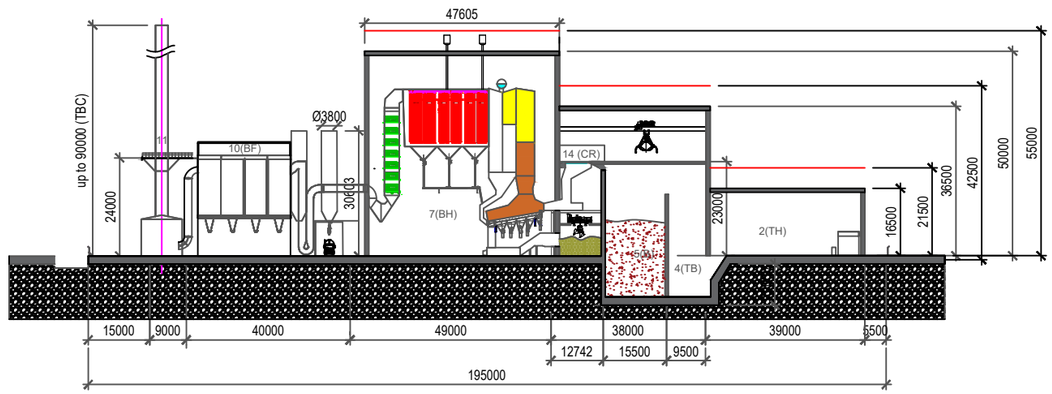
41310-Shr51



1 Gatehouse/Weighbridge
2 Tipping hall with 7 tipping bays, quarantaine area portal cabin for staff,
3 fire water tank (FWT) and fire water pump cabin (FP)
4 Tipping bunker
5 Main waste bunker
6 Waste chute platform with 2 waste chutes, auxiliary a) clearance device for waste blockages, b) shredder chute, c) 2 bunker ears with openings to exit waste crane grabs and 3 maintenance areas to maintain and change grabs
7 Boiler house with 2 boilers, 2 feed water tanks, demin water tanks, boiler water tanks, process water tank
8 APCr lime and AC loading area with APCr Silos on top
9 APC plant with lime and AC silos and reactors
10 2 bag filter houses
11 2 ID fan cabins
12 2 chimneys
13 Switch gear building
14 Control room
15 2 IBA loading enclosure
16 Diesel and urea tanks
17 Mobile crane slab
18 Compressed air station
19 Main transformer
20 Emergency diesel generator
21 Air cooled condensor
22 Turbine hall
23 Water treatment plant with towns water plant (WTP)
24 Work shop and stores
25 Admin building
26 Parking area
27 Maintenance areas/ Hoist area
28 132kV Switching compound (outdoor)
29 Private wire transformer
30 Private wire switch gear
31 Cooling water recooling system
32 Site fence line
33 Layby
34 Vehicle queuing area
35 Dropped kerb crossing
36 Laydown maintenance and Future Environmental Requirement area
37 Potential rail siding unloading area
38 Rail bridge embankment (by others) reservation area

Section A-A



0 m 75 m
Scale 1:1500 @ A3

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DCO Geo-environmental Report

Figure 4
Proposed indicative development layout

Client:

June 2020

wood.

41310-Shr52

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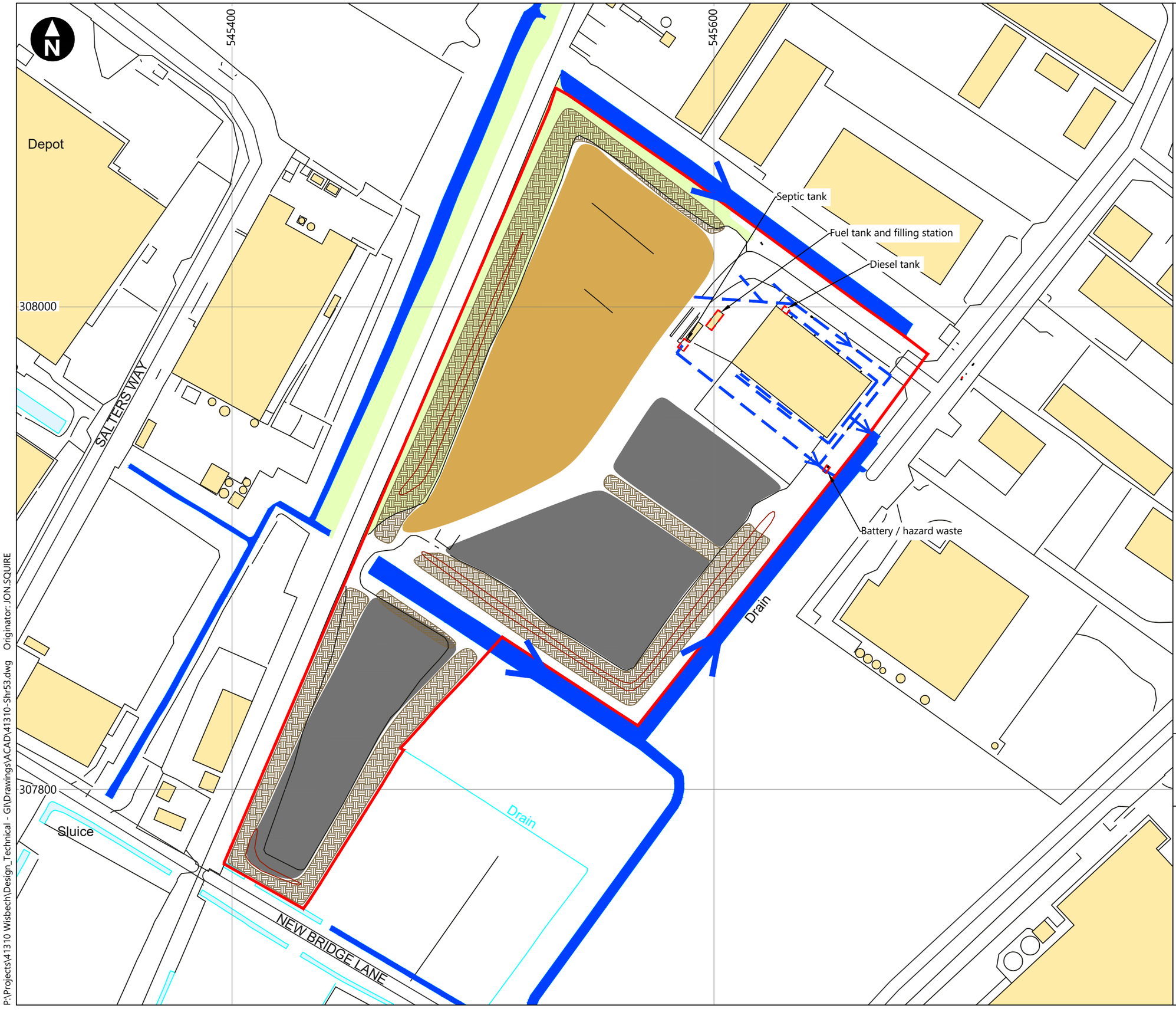

Key

- EfW CHP Facility (leased area)
- Indicative waste materials storage area
- Natural aggregate storage area
- Earth bund
- Storage tanks, fuel, septic, leachate and hazardous substances
- Drainage channel with flow direction
- Onsite drainage system with flow direction

0 m 75 m

Scale 1:1500 @ A3

Client

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Medworth Energy from Waste CHP Facility
Geo-environmental Report

Figure 5
Environmental risk plan

June 2021

wood.

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41310-Shr53

NW

SE

Drainage channel

Railway line

Earth bunb

Aggregate

Brick and concrete crush

Road scrapings

Weighbridge

Fuel pump

Site cabins (low risk)

Waste warehouse

Earth bund

Drainage channel

DS1

DS2

DS3

DS4

DS5

DS6

DS7

Silts / clays

Sand

Inferred strat boundary

Originator: Neil Patton

P:\Projects\41310 Wisbech\Drawings\Illustrator\41310-Shr48.ai 12/2019

Key

- Made ground
- Tanks (as described in Figure 5)
- Materials storage: concrete / brick and road crush
- Natural aggregate
- On-site drainage sytem and flow direction
- Strata: Tidal Flat Deposit (unproductive aquifer)

Pollutant linkages / pathways

1) Dermal, ingestion & inhalation to future site users
2) Surface run-off controlled water receptor off-site
3) Inhalation to off-site users
4) Absorption through potable pipe-work

Geotechnical hazards

DS1) Potential made ground
DS2) Soft compressible ground
DS3) Sulphate attack
DS4) Damage to underground services
DS5) Potential shallow groundwater
DS6) Shrink / swell clays
DS7) Stability of temporary excavation

Not to scale

Client

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Geo-environmental Report

Figure 6
Geoenvironmental conceptual model

June 2021

wood.

41310-Shr48.ai

545400

545600

308000

307800

N

SALTERS WAY

ALGORES WAY

NEW BRIDGE LANE

ROLENESS ROAD

TP02A
TP02
TP02A
TP02

BH02
BH02
BH01
BH01

TP03
TP03

TP04A
TP04
TP04

BH03
BH03
HP01
HP01

SW1

BH07
BH07
BH04
BH04
BH05
BH05

BH06
BH06
SW2

TP08
TP08

BH10
BH10

TP05
TP05

TP06
TP06

TP09
TP09

BH11
BH11

TP07
TP07
TP07A
TP07A

SW3

BH09
BH09

Sluice gate closed

TP10
TP10
TP10A
TP10A

TP11
TP11

BH12
BH12

BH13
BH13

TP12
TP12
TP12A
TP12A

TP13
TP13
TP13A
TP13A

Key

- EfW CHP Facility (leased area)
- Borehole
- Hand dug pit
- Surface water location
- Trial pit

0 20 40 60 80 m

Scale at A3: 1:1,500

Client

Medworth CHP Limited
Medworth Energy from Waste CHP Facility DCO
Geo-environmental Report

Figure 7
Exploratory hole location plan

June 2021

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41310-Shr288

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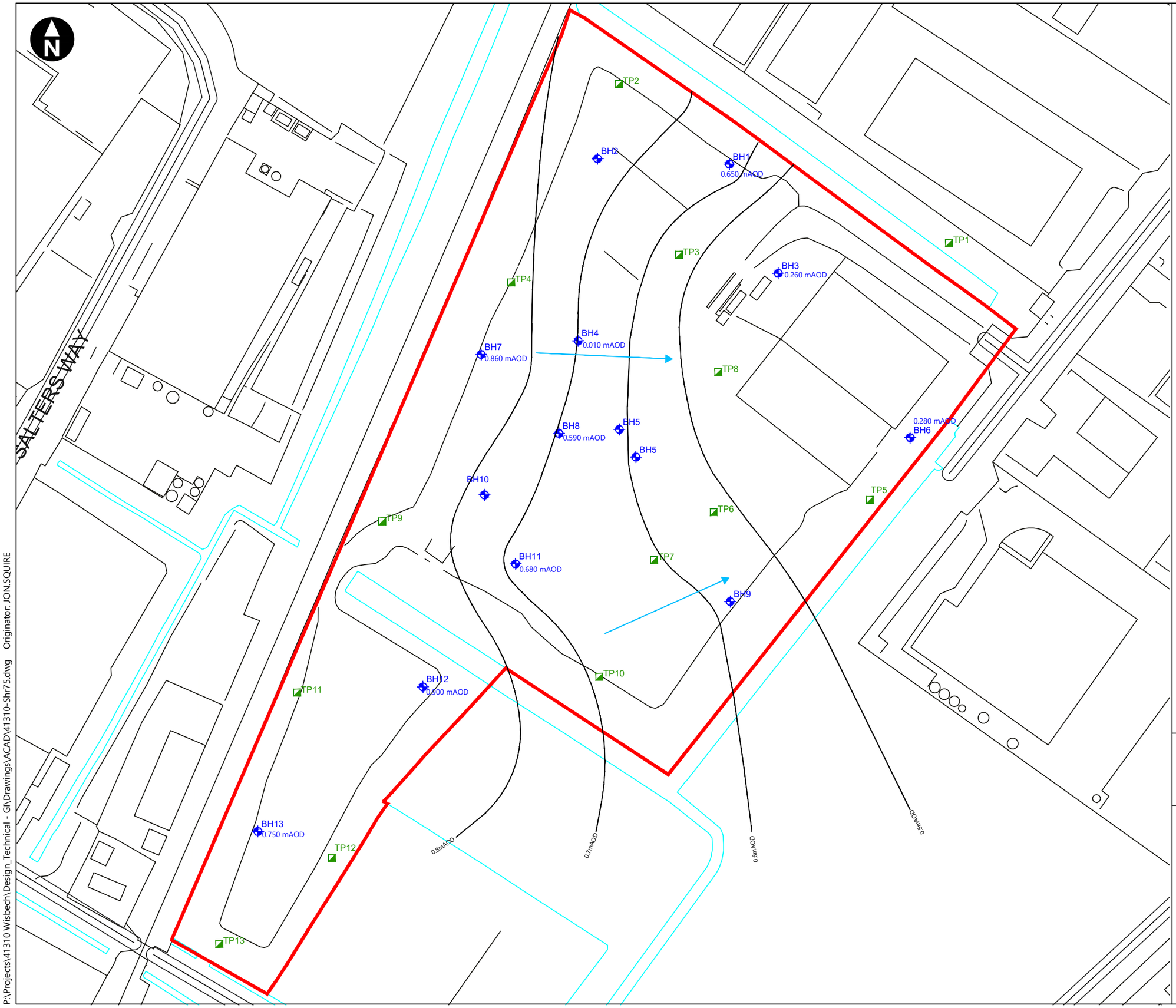

Key

- EfW CHP Facility (leased area)
- Borehole
- Trial pit
- 0.260 mAOD — Ground water level
- Groundwater flow direction
- Contours

0 m 50 m

Scale 1:1250 @ A3

Client

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Medworth Energy from Waste CHP Facility
Geo-environmental Report

Figure 8
Groundwater contours
Round 2 April 2020
Shallow groundwater

June 2021

wood.

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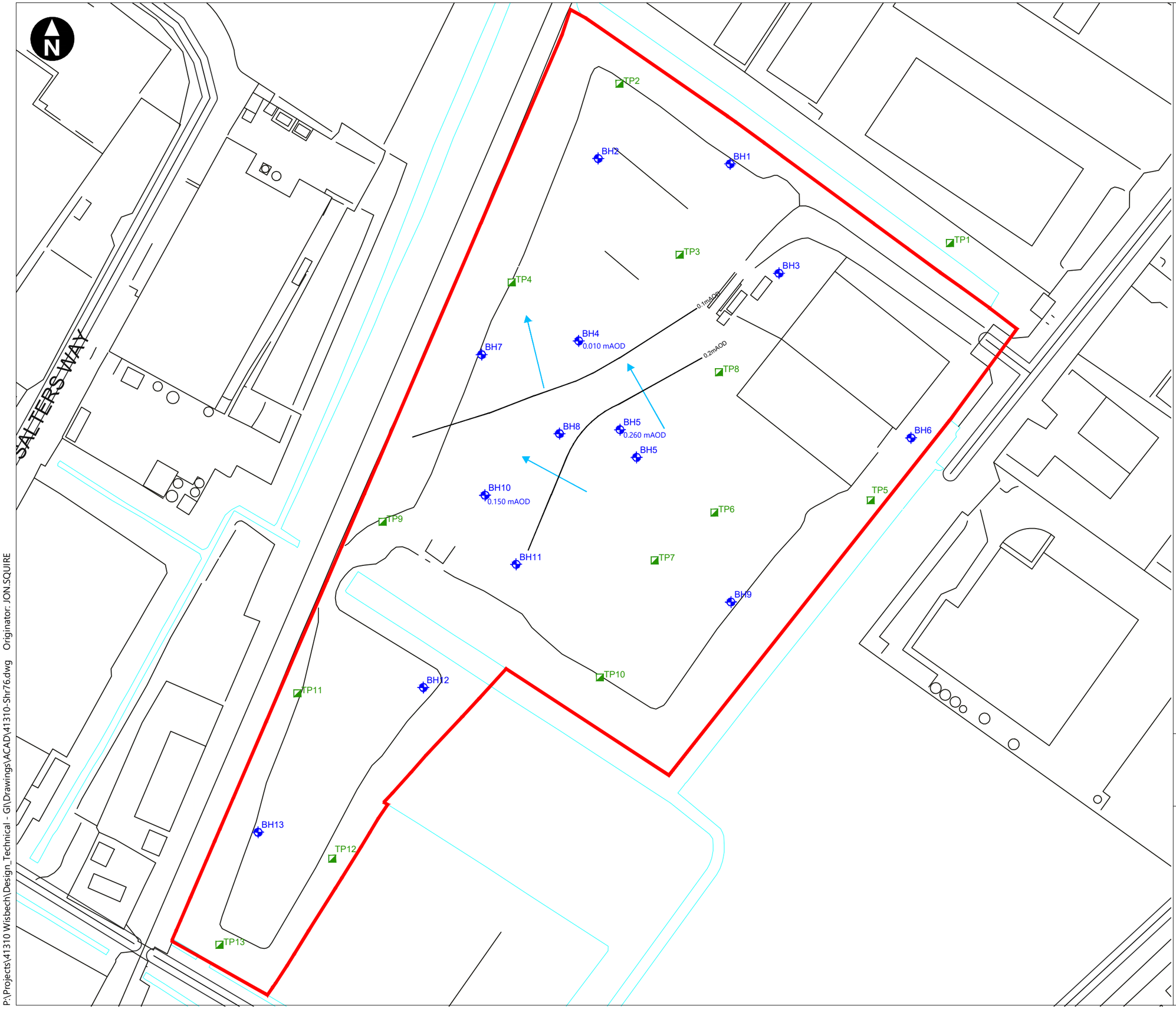

Key

- EfW CHP Facility (leased area)
- Borehole
- Trial pit
- 0.260 mAOD — Ground water level
- Estimated groundwater flow direction
- Contours

0 m 50 m

Scale 1:1250 @ A3

Client

Medworth CHP Limited
Medworth Energy from Waste CHP Facility
Geo-environmental Report

Figure 9
Groundwater contours
Round 2 April 2020
Gravelly sand groundwater body

June 2021

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41310-Shr76

Appendix A
Site Walkover Photos

Plate 1

Looking north-east from the north-west quadrant towards the weighbridge, site cabins and Waste Reception Warehouse (WRW).

Plate 2

Looking south-west from the north-west quadrant of Area A, adjacent to the north-west site boundary. Stockpiles of natural aggregate.

Plate 3

Looking south-east across Area B. Stockpiles of brick crush, concrete crush and granite are present.

Plate 4

Looking south from the south-east quadrant of Area A. Stockpiles of road scalpings (left) and screened topsoil (right).

Plate 5

Looking south-east from the south-east quadrant of Area A. Stockpiles of road scalpings (left), concrete slabs (centre) and brick (right).

Plate 6

Looking north-east from the centre of Area A. Storage area for skips containing demolition materials.

Plate 7

North-west boundary bund end located in the south-west corner of Area A. Exposed soil indicates the bund is composed of topsoil.

Plate 8

The south-east site bund of Area B. The surface of the bund comprises cobbles of brick and concrete indicating that the bund comprises Made Ground.

Plate 9

Looking south-east along the drainage channel separating Areas A and B of the site.

Plate 10

Looking south-west along the drainage channel adjacent to the south-east site boundary.

Plate 11

Looking north-west along the drainage channel adjacent to the north-east site boundary.

Plate 12

Looking north-east across the concrete surfaced loading area for the WRW.

Plate 13

Looking east within the Waste Reception Area. A leachate drain in present in front of the entrance and exit in the right of the photograph.

Plate 14

Looking south adjacent to the south-east corner of the WRW. Storage containers for batteries, gas cylinders and other hazardous items which are picked from the receiving household waste.

Plate 15

Looking north-west adjacent to the south-west corner of the WRW. The green storage container contains a fuel filling station and overlies a below ground fuel tank. The blue tank to the right contains 'AdBlue'.

Plate 16

Fuel filling of the below ground fuel tank, located directly below the storage container. The fuel is used for on-site vehicles.

Plate 17

Diesel fuel tank adajcent to the north-west corner of the WRW used to fuel the plastic wrapping system.

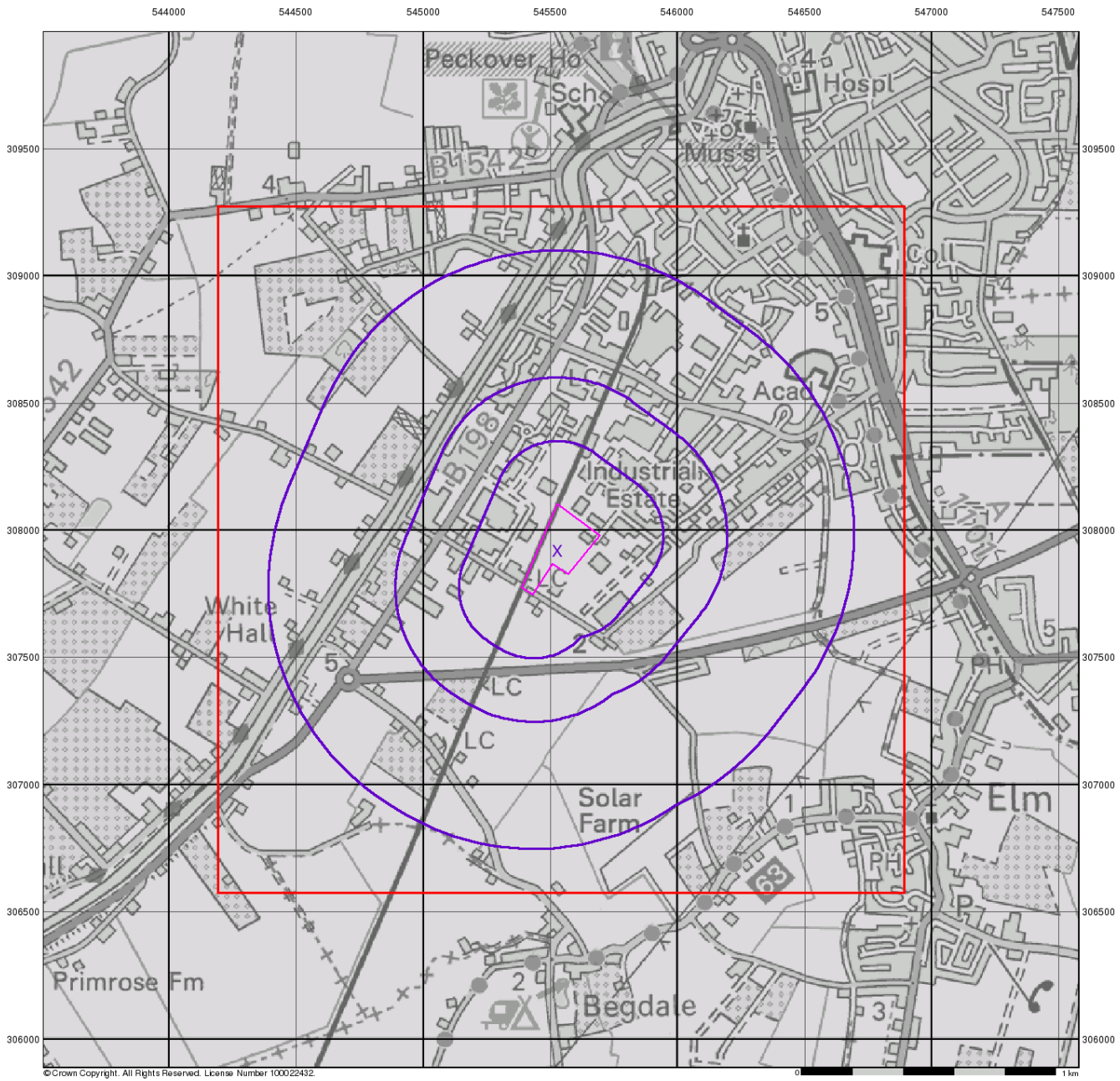
Plate 18

Location of septic tank adjacent to the south-west side of the weighbridge.

Plate 19

Panorama looking north-west from the site Weighbridge. Overlooking the aggregate storage area and the adjacent concrete products manufacturing site (blue) to the left.

Appendix B
Envirocheck Report



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Groundwater Vulnerability

General

Specified Site | Specified Buffer(s) | Bearing Reference Point | Slice | Map ID

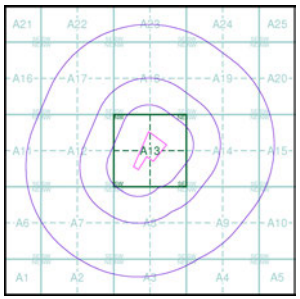
Agency and Hydrological

Bedrock Aquifers	Superficial Aquifers
High Vulnerability, Principal Aquifer	High Vulnerability, Principal Aquifer
High Vulnerability, Secondary Aquifer	High Vulnerability, Secondary Aquifer
Medium Vulnerability, Principal Aquifer	Medium Vulnerability, Principal Aquifer
Medium Vulnerability, Secondary Aquifer	Medium Vulnerability, Secondary Aquifer
Low Vulnerability, Principal Aquifer	Low Vulnerability, Principal Aquifer
Low Vulnerability, Secondary Aquifer	Low Vulnerability, Secondary Aquifer

Unproductive Aquifer

Soluble Rock

Site Sensitivity Context Map - Slice A



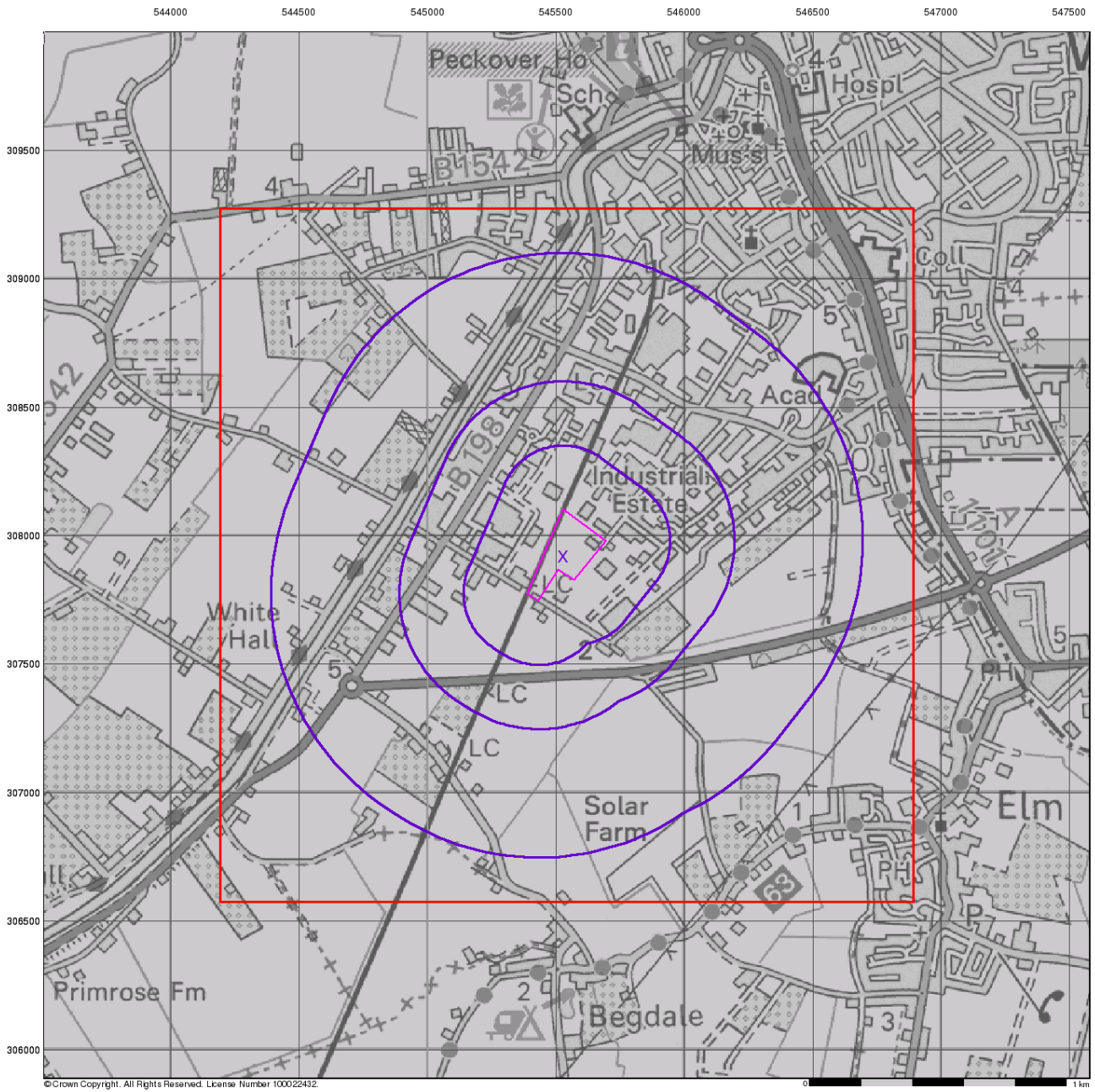
Order Details

Order Number:	220808700_1_1
Customer Ref:	41310
National Grid Reference:	545530, 307920
Slice:	A
Site Area (Ha):	4.49
Search Buffer (m):	1000

Site Details

Cage Cable Contractors Ltd, Algores Way, WISBECH, PE13 2TQ

Landmark INFORMATION GROUP
Tel: 0844 844 9952
Fax: 0844 844 9951
Web: [redacted]



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Bedrock Aquifer Designation

General

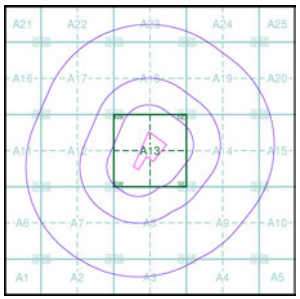
Specified Site | Specified Buffer(s) | Bearing Reference Point | Slice | Map ID

Agency and Hydrological

Geological Classes

- Principal Aquifer
- Secondary A Aquifer
- Secondary B Aquifer
- Secondary Undifferentiated
- Unproductive Strata
- Unknown
- Unknown (Lakes and Landslip)

Site Sensitivity Context Map - Slice A



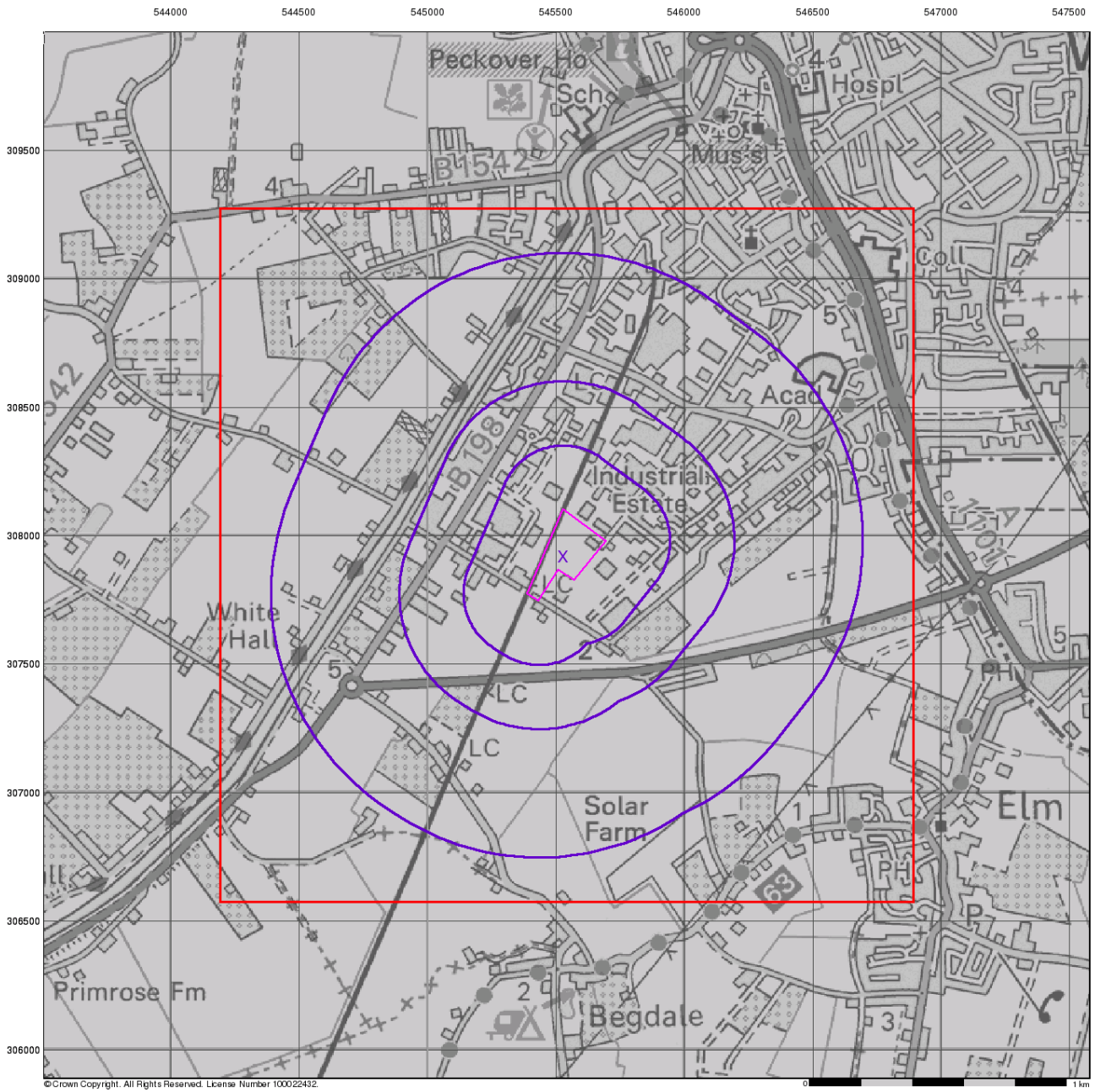
Order Details

Order Number:	220808700_1_1
Customer Ref:	41310
National Grid Reference:	545530, 307920
Slice:	A
Site Area (Ha):	4.49
Search Buffer (m):	1000

Site Details

Cage Cable Contractors Ltd, Algores Way, WISBECH, PE13 2TQ

Landmark INFORMATION GROUP
Tel: 0844 844 9952
Fax: 0844 844 9951
Web: [redacted]



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Superficial Aquifer Designation

General

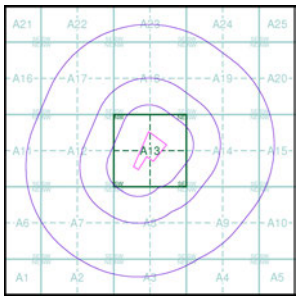
Specified Site | Specified Buffer(s) | Bearing Reference Point | Slice | Map ID

Agency and Hydrological

Geological Classes

- Principal Aquifer
- Secondary A Aquifer
- Secondary B Aquifer
- Secondary Undifferentiated
- Unproductive Strata
- Unknown
- Unknown (Lakes and Landslip)

Site Sensitivity Context Map - Slice A



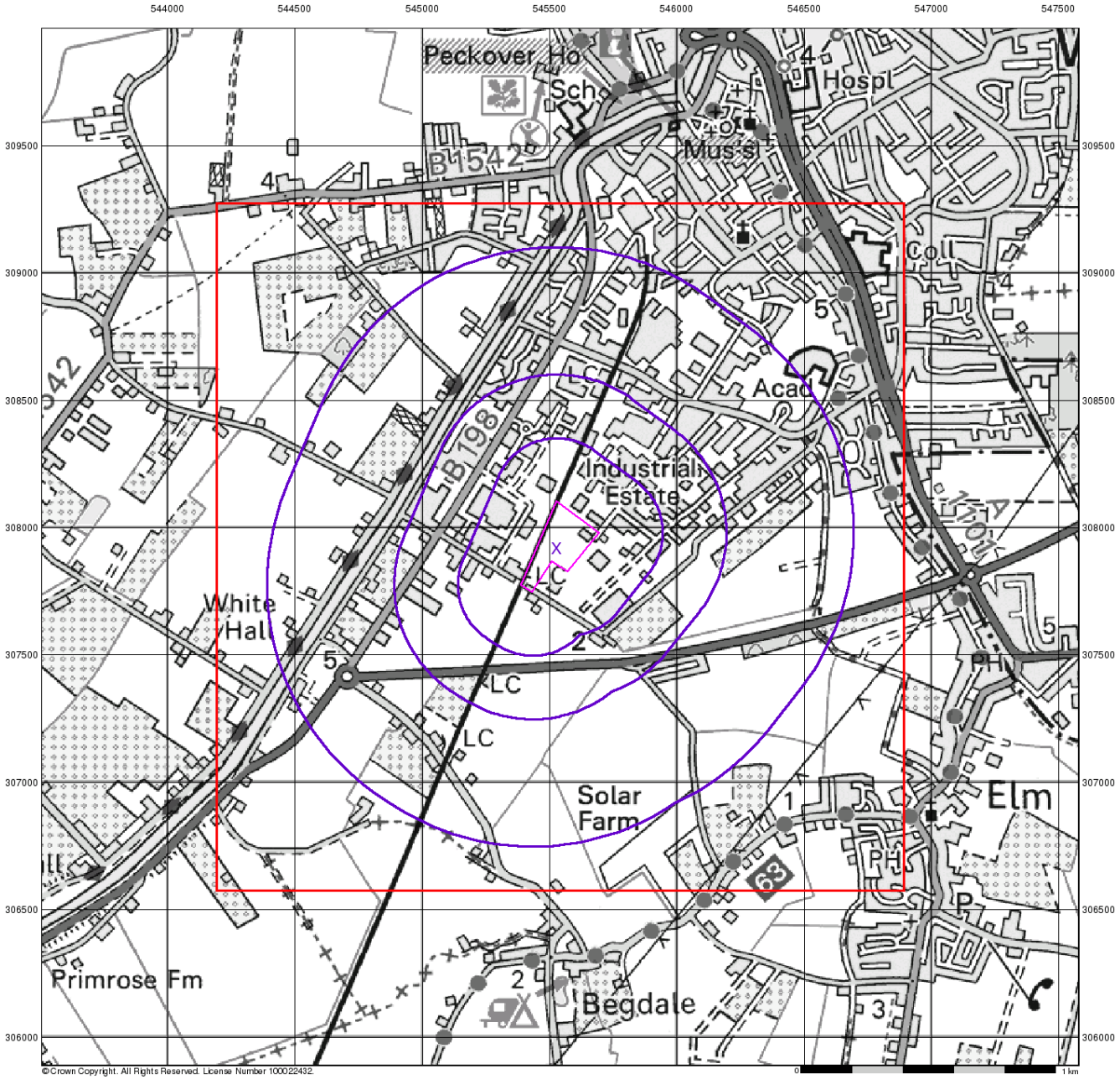
Order Details

Order Number:	220808700_1_1
Customer Ref:	41310
National Grid Reference:	545530, 307920
Slice:	A
Site Area (Ha):	4.49
Search Buffer (m):	1000

Site Details

Cage Cable Contractors Ltd, Algores Way, WISBECH, PE13 2TQ

Landmark INFORMATION GROUP
Tel: 0844 844 9952
Fax: 0844 844 9951
Web: [redacted]



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Source Protection Zones

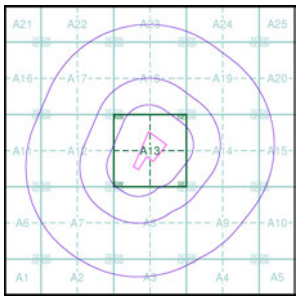
General

Specified Site | Specified Buffer(s) | Bearing Reference Point | Slice | Map ID

Agency and Hydrological

- Inner zone (Zone 1)
- Inner zone - subsurface activity only (Zone 1c)
- Outer zone (Zone 2)
- Outer zone - subsurface activity only (Zone 2c)
- Total catchment (Zone 3)
- Total catchment - subsurface activity only (Zone 3c)
- Special interest (Zone 4)

Site Sensitivity Context Map - Slice A



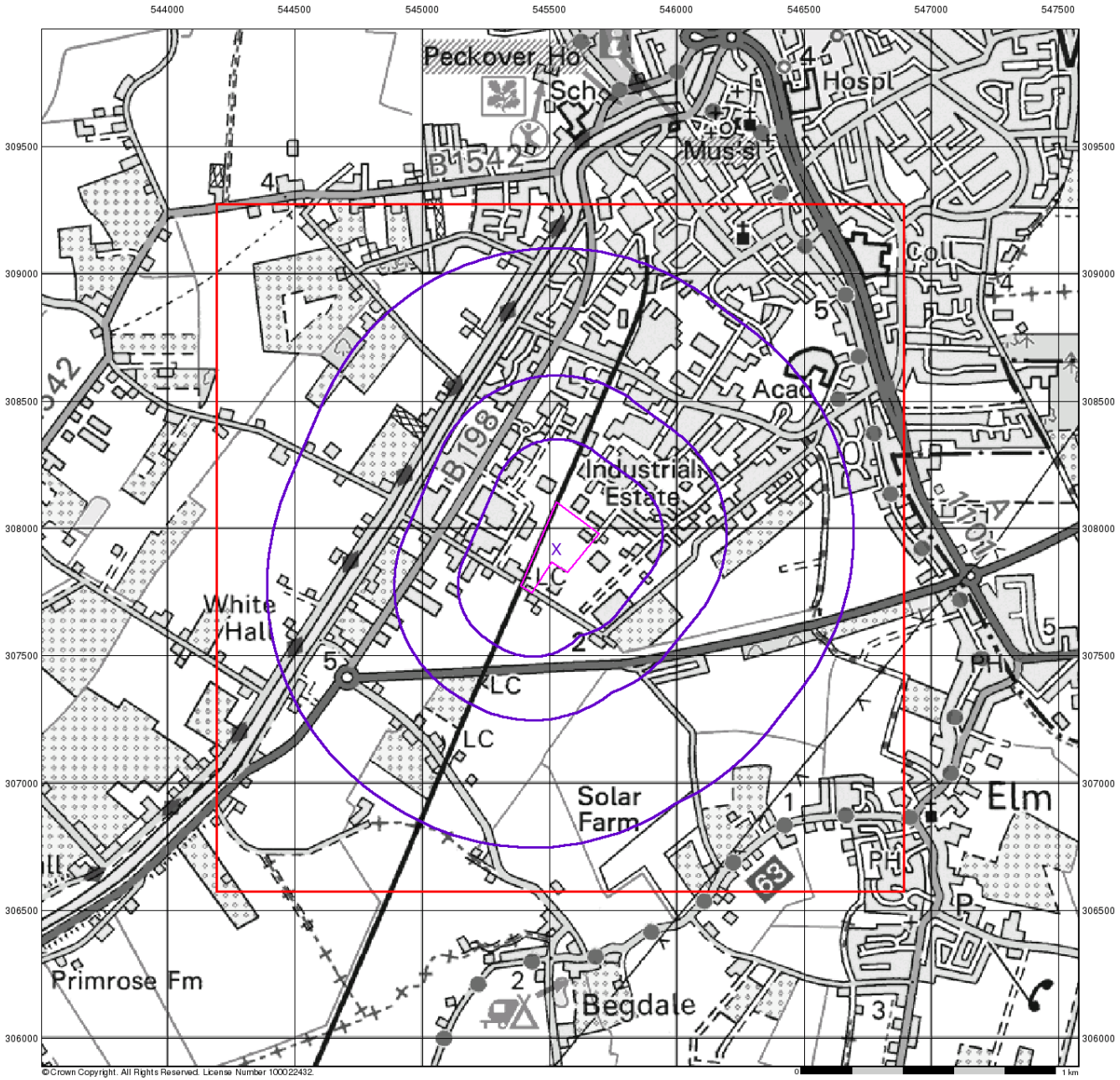
Order Details

Order Number:	220808700_1_1
Customer Ref:	41310
National Grid Reference:	545530, 307920
Slice:	A
Site Area (Ha):	4.49
Search Buffer (m):	1000

Site Details

Cage Cable Contractors Ltd, Algores Way, WISBECH, PE13 2TQ

Landmark INFORMATION GROUP
Tel: 0844 844 9952
Fax: 0844 844 9951
Web: [redacted]



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BGS Flood GFS Data

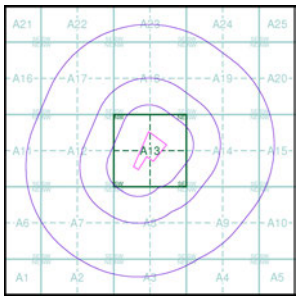
General

Specified Site | Specified Buffer(s) | Bearing Reference Point | Slice

Agency and Hydrological (Flood)

- Limited Potential for Groundwater Flooding to Occur
- Potential for Groundwater Flooding of Property Situated Below Ground Level
- Potential for Groundwater Flooding to Occur at Surface

Site Sensitivity Context Map - Slice A



Order Details

Order Number:	220808700_1_1
Customer Ref:	41310
National Grid Reference:	545530, 307920
Slice:	A
Site Area (Ha):	4.49
Search Buffer (m):	1000

Site Details

Cage Cable Contractors Ltd, Algores Way, WISBECH, PE13 2TQ

Landmark INFORMATION GROUP
Tel: 0844 844 9952
Fax: 0844 844 9951
Web: [redacted]

Envirocheck® Report:

Datasheet

Order Details:

Order Number:
220808700_1_1

Customer Reference:
41310

National Grid Reference:
545530, 307920

Slice:
A

Site Area (Ha):
4.49

Search Buffer (m):
1000

Site Details:

Cage Cable Contractors Ltd, Algores Way
WISBECH
PE13 2TQ

Client Details:

Mr S Howard
Wood Environment & Infrastructure Solutions UK Ltd
Canon Court
Abbey Lawn
Abbey Foregate
Shrewsbury
Shropshire
SY2 5DE

Prepared For:

MVV Environment Ltd

Contents

Introduction

The Environment Act 1995 has made site sensitivity a key issue, as the legislation pays as much attention to the pathways by which contamination could spread, and to the vulnerable targets of contamination, as it does the potential sources of contamination.
For this reason, Landmark's Site Sensitivity maps and Datasheet(s) place great emphasis on statutory data provided by the Environment Agency/Natural Resources Wales and the Scottish Environment Protection Agency; it also incorporates data from Natural England (and the Scottish and Welsh equivalents) and Local Authorities; and highlights hydrogeological features required by environmental and geotechnical consultants. It does not include any information concerning past uses of land. The datasheet is produced by querying the Landmark database to a distance defined by the client from a site boundary provided by the client.
In this datasheet the National Grid References (NGRs) are rounded to the nearest 10m in accordance with Landmark's agreements with a number of Data Suppliers.

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Ove Arup Copyright Notice

Peter Brett Associates Copyright Notice

Radon Potential dataset Copyright Notice

Natural Resources Wales Copyright Notice

Report Version v53.0

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Summary

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Agency & Hydrological					
BGS Groundwater Flooding Susceptibility					n/a
Contaminated Land Register Entries and Notices					
Discharge Consents	pg 1	4	3	9	19
Prosecutions Relating to Controlled Waters			n/a	n/a	n/a
Enforcement and Prohibition Notices					
Integrated Pollution Controls					
Integrated Pollution Prevention And Control	pg 9				2
Local Authority Integrated Pollution Prevention And Control					
Local Authority Pollution Prevention and Controls	pg 10		2	3	4
Local Authority Pollution Prevention and Control Enforcements					
Nearest Surface Water Feature	pg 11	Yes			
Pollution Incidents to Controlled Waters	pg 11		2	4	22
Prosecutions Relating to Authorised Processes					
Registered Radioactive Substances					
River Quality	pg 16				1
River Quality Biology Sampling Points					
River Quality Chemistry Sampling Points					
Substantiated Pollution Incident Register	pg 16	1	1	2	
Water Abstractions	pg 16			1	(*4)
Water Industry Act Referrals					
Groundwater Vulnerability Map	pg 18	Yes	n/a	n/a	n/a
Groundwater Vulnerability - Soluble Rock Risk			n/a	n/a	n/a
Groundwater Vulnerability - Local Information			n/a	n/a	n/a
Bedrock Aquifer Designations	pg 18	Yes	n/a	n/a	n/a
Superficial Aquifer Designations	pg 18	Yes	n/a	n/a	n/a
Source Protection Zones					
Extreme Flooding from Rivers or Sea without Defences	pg 18	Yes	Yes	n/a	n/a
Flooding from Rivers or Sea without Defences	pg 19	Yes		n/a	n/a
Areas Benefiting from Flood Defences				n/a	n/a
Flood Water Storage Areas				n/a	n/a
Flood Defences				n/a	n/a
OS Water Network Lines	pg 19	6	40	80	228

Summary

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Waste					
BGS Recorded Landfill Sites					
Historical Landfill Sites					
Integrated Pollution Control Registered Waste Sites					
Licensed Waste Management Facilities (Landfill Boundaries)					
Licensed Waste Management Facilities (Locations)	pg 60		2	2	4
Local Authority Landfill Coverage	pg 61	2	n/a	n/a	n/a
Local Authority Recorded Landfill Sites					
Potentially Infilled Land (Non-Water)	pg 61				1
Potentially Infilled Land (Water)	pg 62			6	8
Registered Landfill Sites					
Registered Waste Transfer Sites	pg 63			2	1
Registered Waste Treatment or Disposal Sites	pg 64				3
Hazardous Substances					
Control of Major Accident Hazards Sites (COMAH)	pg 65			1	2
Explosive Sites					
Notification of Installations Handling Hazardous Substances (NIHHS)	pg 65				1
Planning Hazardous Substance Consents	pg 65			1	1
Planning Hazardous Substance Enforcements					

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Summary

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Geological					
BGS 1:625,000 Solid Geology	pg 66	Yes	n/a	n/a	n/a
BGS Estimated Soil Chemistry	pg 66	Yes		Yes	Yes
BGS Recorded Mineral Sites	pg 67	1			1
BGS Urban Soil Chemistry					
BGS Urban Soil Chemistry Averages					
CBSCB Compensation District			n/a	n/a	n/a
Coal Mining Affected Areas			n/a	n/a	n/a
Mining Instability			n/a	n/a	n/a
Man-Made Mining Cavities					
Natural Cavities					
Non Coal Mining Areas of Great Britain				n/a	n/a
Potential for Collapsible Ground Stability Hazards				n/a	n/a
Potential for Compressible Ground Stability Hazards	pg 67	Yes		n/a	n/a
Potential for Ground Dissolution Stability Hazards				n/a	n/a
Potential for Landslide Ground Stability Hazards	pg 67	Yes		n/a	n/a
Potential for Running Sand Ground Stability Hazards	pg 67	Yes		n/a	n/a
Potential for Shrinking or Swelling Clay Ground Stability Hazards	pg 67	Yes		n/a	n/a
Radon Potential - Radon Affected Areas			n/a	n/a	n/a
Radon Potential - Radon Protection Measures			n/a	n/a	n/a
Industrial Land Use					
Contemporary Trade Directory Entries	pg 68	1	48	53	96
Fuel Station Entries	pg 85		1	2	
Points of Interest - Commercial Services	pg 85		5	13	27
Points of Interest - Education and Health	pg 89			1	
Points of Interest - Manufacturing and Production	pg 89		7	13	28
Points of Interest - Public Infrastructure	pg 93		1	7	1
Points of Interest - Recreational and Environmental	pg 93				4
Gas Pipelines					
Underground Electrical Cables					

Summary

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Sensitive Land Use					
Ancient Woodland					
Areas of Adopted Green Belt					
Areas of Unadopted Green Belt					
Areas of Outstanding Natural Beauty					
Environmentally Sensitive Areas					
Forest Parks					
Local Nature Reserves					
Marine Nature Reserves					
National Nature Reserves					
National Parks					
Nitrate Sensitive Areas					
Nitrate Vulnerable Zones					
Ramsar Sites					
Sites of Special Scientific Interest					
Special Areas of Conservation					
Special Protection Areas					
World Heritage Sites					

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
1	**Discharge Consents** Operator: Frimstone Limited Property Type: WASTE COLLECTION/TREATMENT/DISPOSAL/MATERIALS RECOVERY Location: Waste Recycling & Transfer Station Algores Way, Wisbech, Cambridgeshire, Pe13 2nt Authority: Environment Agency, Anglian Region Catchment Area: Low River Nene / South Holland Main Reference: Prnnf12940 Permit Version: 1 Effective Date: 11th July 2003 Issued Date: 17th July 2003 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge Environment: Freshwater Stream/River Receiving Water: Trib Of River Nene **Status:** **New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995)** Positional Accuracy: Located by supplier to within 10m	A13NW (W)	0	1	545460 307930
1	**Discharge Consents** Operator: Frimstone Limited Property Type: WASTE COLLECTION/TREATMENT/DISPOSAL/MATERIALS RECOVERY Location: Waste Recycling & Transfer Station Algores Way, Wisbech, Cambridgeshire, Pe13 2nt Authority: Environment Agency, Anglian Region Catchment Area: Low River Nene / South Holland Main Reference: Prnnf12940 Permit Version: 1 Effective Date: 11th July 2003 Issued Date: 17th July 2003 Revocation Date: Not Supplied Discharge Type: Trade Effluent Discharge-Site Drainage Discharge Environment: Freshwater Stream/River Receiving Water: Trib Of River Nene **Status:** **New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995)** Positional Accuracy: Located by supplier to within 10m	A13NW (W)	0	1	545460 307930
2	**Discharge Consents** Operator: Anglian Water Services Ltd Property Type: Not Given Location: Industrial Dev-Algores Way, WISBECH, Cambridgeshire Authority: Environment Agency, Anglian Region Catchment Area: Not Given Reference: AWNNF/712 Permit Version: Not Supplied Effective Date: Not Supplied Issued Date: 18th April 1989 Revocation Date: Not Supplied Discharge Type: Sewerage Emergency Discharge Discharge Environment: Freshwater Stream/River Receiving Water: I.D.B Dyke **Status:** **Not Supplied** Positional Accuracy: Located by supplier to within 100m	A13NE (E)	0	1	545690 307980
2	**Discharge Consents** Operator: Anglian Water Services Limited Property Type: PUMPING STATION ON SEWERAGE NETWORK (WATER COMPANY) Location: Ps Algores Way, Wisbech, Cambs, Pe13 2tq Authority: Environment Agency, Anglian Region Catchment Area: Low River Nene / South Holland Main Reference: Prnnf00712 Permit Version: 1 Effective Date: 18th April 1989 Issued Date: 18th April 1989 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Pumping Station - Water Company Discharge Environment: Freshwater Stream/River Receiving Water: Unnamed Trib Of River Lymm **Status:** **Post National Rivers Authority Legislation where issue date > 31/08/1989** Positional Accuracy: Located by supplier to within 10m	A13NE (E)	0	1	545690 307980

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
3	**Discharge Consents** Operator: Anglian Water Services Limited Property Type: PUMPING STATION ON SEWERAGE NETWORK (WATER COMPANY) Location: Salters Way Ps., Wisbech, Cambs, Pe14 0sh Authority: Environment Agency, Anglian Region Catchment Area: Low River Nene / South Holland Main Reference: Awnnf02304 Permit Version: 1 Effective Date: 18th February 1992 Issued Date: 18th February 1992 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Pumping Station - Water Company Discharge Environment: Freshwater Stream/River Receiving Water: Trib Tidal River Nene **Status:** **Post National Rivers Authority Legislation where issue date > 31/08/1989** Positional Accuracy: Located by supplier to within 10m	A13NW (NW)	79	1	545422 308053
4	**Discharge Consents** Operator: Copart Property Type: MAKING OF COMPUTERS/ELECTRONICS/OPTICAL PRODUCTS Location: Copart New Bridge Lane, Wisbech, Cambridge, Pe14 0se Authority: Environment Agency, Anglian Region Catchment Area: Low River Nene / South Holland Main Reference: Npswqd006861 Permit Version: 1 Effective Date: 24th March 2009 Issued Date: 24th March 2009 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge Environment: Freshwater Stream/River Receiving Water: The River Nene **Status:** **New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995)** Positional Accuracy: Located by supplier to within 10m	A13SW (SW)	99	1	545296 307744
5	**Discharge Consents** Operator: Raab Karcher (U.K.) Plc Property Type: Not Supplied Location: Algores Way, Wisbech, Cambs, Pe13 2tq Authority: Environment Agency, Anglian Region Catchment Area: Not Supplied Reference: Prnnf03135 Permit Version: 1 Effective Date: 9th August 1990 Issued Date: 9th August 1990 Revocation Date: 17th February 1992 Discharge Type: Discharge Of Other Matter-Surface Water Discharge Environment: Not Supplied Receiving Water: Not Supplied **Status:** **Post National Rivers Authority Legislation where issue date > 31/08/1989** Positional Accuracy: Located by supplier to within 10m	A13NE (N)	175	1	545620 308250
6	**Discharge Consents** Operator: Copart Uk Limited Property Type: WASTE COLLECTION/TREATMENT/DISPOSAL/MATERIALS RECOVERY Location: Copart Uk, Newbridge Lane, Wisbech, Cambridgeshire, Pe14 0se Authority: Environment Agency, Anglian Region Catchment Area: Low River Nene / South Holland Main Reference: Npswqd005151 Permit Version: 1 Effective Date: 3rd February 2009 Issued Date: 3rd February 2009 Revocation Date: Not Supplied Discharge Type: Trade Effluent Discharge-Site Drainage Discharge Environment: Freshwater Stream/River Receiving Water: Land Drain Trib Of R. Nene **Status:** **New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995)** Positional Accuracy: Located by supplier to within 10m	A12SE (SW)	252	1	545146 307711

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
7	**Discharge Consents** Operator: Mrs. P. O'Connor Property Type: Not Supplied Location: Part Parcel: Os2738. A47 Wisbech By, Cambs Authority: Environment Agency, Anglian Region Catchment Area: Not Supplied Reference: Prnlf03624 Permit Version: 1 Effective Date: 29th October 1990 Issued Date: 29th October 1990 Revocation Date: 1st October 1996 Discharge Type: Unknown Discharge Environment: Not Supplied Receiving Water: Not Supplied **Status:** **Post National Rivers Authority Legislation where issue date > 31/08/1989** Positional Accuracy: Located by supplier to within 10m	A8NW (S)	300	1	545400 307450
8	**Discharge Consents** Operator: Anglian Water Services Limited Property Type: WWTW/SEWAGE TREATMENT WORKS (WATER COMPANY) Location: Caroline Street, Alford, Ln13 9bw Authority: Environment Agency, Anglian Region Catchment Area: Not Supplied Reference: Annnf2190 Permit Version: 1 Effective Date: 2nd January 1990 Issued Date: 2nd January 1990 Revocation Date: 4th September 1992 Discharge Type: Storm /emergency overflow Discharge Environment: Drain Receiving Water: Wold Grift Drain **Status:** **Post National Rivers Authority Legislation where issue date > 31/08/1989** Positional Accuracy: Located by supplier to within 10m	A13SE (SE)	302	1	545760 307590
9	**Discharge Consents** Operator: Burall Ltd Property Type: WWTW (NOT WATER CO) (NOT STP AT A PRIVATE PREMISES) Location: Cromwell Rd, Wisbech, Cambs. Pe14 0sn, Pe14 0sn Authority: Environment Agency, Anglian Region Catchment Area: Not Given Reference: Prnnf09845 Permit Version: 2 Effective Date: 15th August 1996 Issued Date: 15th August 1996 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge Environment: Freshwater Stream/River Receiving Water: Unnamed Dyke Tributary Walders **Status:** **Post National Rivers Authority Legislation where issue date > 31/08/1989** Positional Accuracy: Located by supplier to within 10m	A12SE (SW)	309	1	545090 307700
9	**Discharge Consents** Operator: Burall Ltd Property Type: WWTW (NOT WATER CO) (NOT STP AT A PRIVATE PREMISES) Location: Cromwell Rd, Wisbech, Cambs. Pe14 0sn, Pe14 0sn Authority: Environment Agency, Anglian Region Catchment Area: Low River Nene / South Holland Main Reference: Prnnf09845 Permit Version: 1 Effective Date: 6th October 1995 Issued Date: 6th October 1995 Revocation Date: 14th August 1996 Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge Environment: Freshwater Stream/River Receiving Water: Unnamed Dyke Tributary Walders **Status:** **Post National Rivers Authority Legislation where issue date > 31/08/1989** Positional Accuracy: Located by supplier to within 100m	A12SE (SW)	309	1	545090 307700

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
10	**Discharge Consents** Operator: Anglian Water Services Limited Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: Salters Way, Wisbech, Cambridgeshire, Pe14 0sh Authority: Environment Agency, Anglian Region Catchment Area: Not Given Reference: Awnnf02307 Permit Version: 1 Effective Date: 17th May 1990 Issued Date: 17th May 1990 Revocation Date: Not Supplied Discharge Type: Discharge Of Other Matter-Surface Water Discharge Environment: Freshwater Stream/River Receiving Water: Trib Tidal River Nene **Status: Post National Rivers Authority Legislation where issue date > 31/08/1989** Positional Accuracy: Located by supplier to within 100m	A18SE (N)	360	1	545550 308460
11	**Discharge Consents** Operator: John Ladds & Co Property Type: Not Supplied Location: John Ladds & Co Garage, Cromwell Road, Wisbech Authority: Environment Agency, Anglian Region Catchment Area: Not Given Reference: Pr5nf5126 Permit Version: 1 Effective Date: 28th February 1986 Issued Date: 28th February 1986 Revocation Date: 23rd April 1996 Discharge Type: Discharge Of Other Matter-Surface Water Discharge Environment: Drain Receiving Water: Fen Drain **Status: Pre National Rivers Authority Legislation where issue date < 01/09/1989** Positional Accuracy: Located by supplier to within 100m	A12SE (W)	369	1	545050 307920
12	**Discharge Consents** Operator: Volvo Truck And Bus South Ltd Property Type: Undefined Or Other Location: Boleness Rd Wisbech, Boleness Road, Wisbech, Pe13 2re Authority: Environment Agency, Anglian Region Catchment Area: Not Given Reference: Pr5lf5484 Permit Version: 1 Effective Date: 5th February 1988 Issued Date: 5th February 1988 Revocation Date: 10th August 2005 Discharge Type: Trade Effluent Discharge Environment: Onto Land Receiving Water: Land **Status: Consent revoked: Discharge ceased (Water Resources Act 1991, Schedule 10 & 6)** Positional Accuracy: Located by supplier to within 100m	A14NW (E)	487	1	546170 308080
13	**Discharge Consents** Operator: Thurlow Nunn Standen Ltd Property Type: MAKING OF MACHINERY/ENGINE/PUMP/FURNACE/TRACTOR Location: Cromwell Road Cromwell Rd, Wisbech, Cambridgshire, Pe14 0sn Authority: Environment Agency, Anglian Region Catchment Area: Low River Nene / South Holland Main Reference: Prnnf18256 Permit Version: 1 Effective Date: 5th October 2004 Issued Date: 14th October 2004 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge Environment: Freshwater Stream/River Receiving Water: Trib Of R. Nene **Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995)** Positional Accuracy: Located by supplier to within 100m	A12SE (W)	490	1	544900 307800

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
14	**Discharge Consents** Operator: Cannon Kirk Property Ltd Property Type: MAKING OF ELECTRICAL EQUIP/BATTERIES/DOMESTIC APP Location: Commercial Site North Of Cromwell Road, Wisbech, Cambs, Pe14 0rj Authority: Environment Agency, Anglian Region Catchment Area: Low River Nene / South Holland Main Reference: Prnnf03217 Permit Version: 2 Effective Date: 24th October 1997 Issued Date: 24th October 1997 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge Environment: Freshwater Stream/River Receiving Water: Trib Tidal R Nene **Status: Varied by Application - (Water Resources Act 1991, Schedule 10 as amended by Environment Act 1995)** Positional Accuracy: Located by supplier to within 100m	A12SW (W)	590	1	544800 307800
14	**Discharge Consents** Operator: Anglia Components Property Type: Not Given Location: Commercial Site, North Of Cromwell Road, WISBECH, Cambridgeshire Authority: Environment Agency, Anglian Region Catchment Area: Not Given Reference: PRNNF/03217 Permit Version: Not Supplied Effective Date: Not Supplied Issued Date: 23rd August 1990 Revocation Date: Not Supplied Discharge Type: Sewage Effluent Discharge Environment: Freshwater Stream/River Receiving Water: Not Supplied **Status: Not Supplied** Positional Accuracy: Located by supplier to within 100m	A12SW (W)	590	1	544800 307800
14	**Discharge Consents** Operator: Cenwick Electronics Ltd Property Type: MAKING OF ELECTRICAL EQUIP/BATTERIES/DOMESTIC APP Location: Commercial Site North Of Cromwell Road, Wisbech, Cambs, Pe14 0rj Authority: Environment Agency, Anglian Region Catchment Area: Not Given Reference: Prnnf03217 Permit Version: 1 Effective Date: 23rd August 1990 Issued Date: 23rd August 1990 Revocation Date: 23rd October 1997 Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge Environment: Freshwater Stream/River Receiving Water: Trib Tidal R Nene **Status: Post National Rivers Authority Legislation where issue date > 31/08/1989** Positional Accuracy: Located by supplier to within 100m	A12SW (W)	590	1	544800 307800
15	**Discharge Consents** Operator: B H Porter & Son Property Type: Undefined Or Other Location: Virginia Waters 29 Oldfield Lane, Wisbech, Cambs, Pe13 2rj Authority: Environment Agency, Anglian Region Catchment Area: Low River Nene / South Holland Main Reference: Prnnf09846 Permit Version: 1 Effective Date: 15th June 1995 Issued Date: 15th June 1995 Revocation Date: 1st February 2001 Discharge Type: Trade Discharge - Process Water Discharge Environment: Freshwater Stream/River Receiving Water: Culverted Tributary Weasenham **Status: Consent revoked: Discharge ceased (Water Resources Act 1991, Schedule 10 & 6)** Positional Accuracy: Located by supplier to within 100m	A18NE (N)	668	1	545780 308720

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
16	**Discharge Consents** Operator: Anglian Water Services Limited Property Type: PUMPING STATION ON SEWERAGE NETWORK (WATER COMPANY) Location: Sandall Rd Ps, Wisbech, Cambs, Pe13 2rs Authority: Environment Agency, Anglian Region Catchment Area: Low River Nene / South Holland Main Reference: Aennf13000 Permit Version: 4 Effective Date: 3rd May 2004 Issued Date: 3rd May 2004 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Pumping Station - Water Company Discharge Environment: Freshwater Stream/River Receiving Water: Tributary Of River Nene **Status: Modified (Water Resources Act 1991, Schedule 10 as amended by Environment Act 1995)** Positional Accuracy: Located by supplier to within 10m	A19SW (NE)	695	1	546090 308550
16	**Discharge Consents** Operator: Anglian Water Services Limited Property Type: PUMPING STATION ON SEWERAGE NETWORK (WATER COMPANY) Location: Sandall Rd Ps, Wisbech, Cambs, Pe13 2rs Authority: Environment Agency, Anglian Region Catchment Area: Low River Nene / South Holland Main Reference: Aennf13000 Permit Version: 3 Effective Date: 3rd September 1996 Issued Date: 3rd September 1996 Revocation Date: 2nd May 2004 Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: Tributary Of River Nene **Status: Modified (Water Resources Act 1991, Schedule 10 as amended by Environment Act 1995)** Positional Accuracy: Located by supplier to within 10m	A19SW (NE)	695	1	546090 308550
16	**Discharge Consents** Operator: Anglian Water Services Limited Property Type: PUMPING STATION ON SEWERAGE NETWORK (WATER COMPANY) Location: Sandall Rd Ps, Wisbech, Cambs, Pe13 2rs Authority: Environment Agency, Anglian Region Catchment Area: Not Given Reference: Aennf13000 Permit Version: 2 Effective Date: 26th October 1992 Issued Date: 26th October 1992 Revocation Date: 2nd September 1996 Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: Tributary Of River Nene **Status: Post National Rivers Authority Legislation where issue date > 31/08/1989** Positional Accuracy: Located by supplier to within 100m	A19SW (NE)	695	1	546090 308550
16	**Discharge Consents** Operator: Anglian Water Services Limited Property Type: PUMPING STATION ON SEWERAGE NETWORK (WATER COMPANY) Location: Sandall Rd Ps, Wisbech, Cambs, Pe13 2rs Authority: Environment Agency, Anglian Region Catchment Area: Not Supplied Reference: Aennf13000 Permit Version: 1 Effective Date: 8th April 1992 Issued Date: 8th April 1992 Revocation Date: 25th October 1992 Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: Tributary Of River Nene **Status: Post National Rivers Authority Legislation where issue date > 31/08/1989** Positional Accuracy: Located by supplier to within 10m	A19SW (NE)	695	1	546090 308550

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
17	**Discharge Consents** Operator: Ermine Care Ltd Property Type: WWTW (NOT WATER CO) (NOT STP AT A PRIVATE PREMISES) Location: Ermine Care Ltd Conifer Lodge, 134 North Brink, Wisbech, Cambridgeshire, Pe13 1ll Authority: Environment Agency, Anglian Region Catchment Area: Low River Nene / South Holland Main Reference: Prnnf18475 Permit Version: 1 Effective Date: 20th January 2006 Issued Date: 22nd February 2006 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge Environment: Freshwater Stream/River Receiving Water: Un Named Trib River Nene **Status:** **New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995)** Positional Accuracy: Located by supplier to within 10m	A17NE (NW)	781	1	545110 308760
18	**Discharge Consents** Operator: Tarmac Trading Limited Property Type: MAKING OF GLASS/CERAMICS/CEMENT/CUTTING STONE Location: Hope Construction - Wisbech, Oldfield Lane, Cambs, Pe13 2rj Authority: Environment Agency, Anglian Region Catchment Area: Low River Nene / South Holland Main Reference: Prnnf09010 Permit Version: 1 Effective Date: 23rd March 1992 Issued Date: 23rd March 1992 Revocation Date: Not Supplied Discharge Type: Trade Discharge - Process Water Discharge Environment: Freshwater Stream/River Receiving Water: Fen Drain **Status:** **Post National Rivers Authority Legislation where issue date > 31/08/1989** Positional Accuracy: Located by supplier to within 100m	A18NE (N)	819	1	545810 308870
19	**Discharge Consents** Operator: Mathew Gill Property Type: Domestic Property (Single) Location: 2 The Gables Miletree Lane, Wisbech, -, Cambridgeshire, Pe13 4tr Authority: Environment Agency, Anglian Region Catchment Area: Not Supplied Reference: Npswqd007922 Permit Version: 1 Effective Date: 9th September 2009 Issued Date: 9th September 2009 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge Environment: Freshwater Stream/River Receiving Water: Trib Of River Nene **Status:** **New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995)** Positional Accuracy: Located by supplier to within 10m	A12NW (W)	831	1	544672 308211
20	**Discharge Consents** Operator: Redland Readymix Ltd Property Type: Undefined Or Other Location: Oldfield La Wisbech, Wisbech, Pe13 Authority: Environment Agency, Anglian Region Catchment Area: Not Supplied Reference: Pr5nf610 Permit Version: 1 Effective Date: 20th August 1973 Issued Date: 20th August 1973 Revocation Date: 21st December 1992 Discharge Type: Trade Effluent Discharge Environment: Drain Receiving Water: Fen Drain **Status:** **Pre National Rivers Authority Legislation where issue date < 01/09/1989** Positional Accuracy: Located by supplier to within 10m	A18NE (N)	873	1	545830 308920

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
20	**Discharge Consents** Operator: Tarmac Trading Limited Property Type: MAKING OF GLASS/CERAMICS/CEMENT/CUTTING STONE Location: Hope Construction - Wisbech, Oldfield Lane, Cambs, Pe13 2rj Authority: Environment Agency, Anglian Region Catchment Area: Low River Nene / South Holland Main Reference: Prnnf09010 Permit Version: 1 Effective Date: 23rd March 1992 Issued Date: 23rd March 1992 Revocation Date: Not Supplied Discharge Type: Trade Discharges - Site Drainage (Contam Surface Water, Not Tips) Discharge Environment: Freshwater Stream/River Receiving Water: Fen Drain **Status: Post National Rivers Authority Legislation where issue date > 31/08/1989** Positional Accuracy: Located by supplier to within 10m	A18NE (N)	882	1	545830 308930
21	**Discharge Consents** Operator: Anglia Reg.Co-Op Society Ltd Property Type: Undefined Or Other Location: Oldfield Ln Wisbech, Wisbech, Pe13 Authority: Environment Agency, Anglian Region Catchment Area: Not Given Reference: Pr5lf5353 Permit Version: 1 Effective Date: 19th June 1987 Issued Date: 19th June 1987 Revocation Date: 23rd April 1996 Discharge Type: Trade Effluent Discharge Environment: Onto Land Receiving Water: Land **Status: Pre National Rivers Authority Legislation where issue date < 01/09/1989** Positional Accuracy: Located by supplier to within 100m	A23SE (N)	892	1	545770 308960
22	**Discharge Consents** Operator: Michael D Spencer Property Type: Arable Farming Location: 383 North Brink, Wisbech, Cambs, Pe13 1jn Authority: Environment Agency, Anglian Region Catchment Area: Catchment 29 Unknown Detail Reference: Gwnlf40211 Permit Version: 1 Effective Date: 1st April 1999 Issued Date: 6th July 2000 Revocation Date: 14th January 2005 Discharge Type: Trade Discharge - Agricultural And Surface Discharge Environment: Onto Land Receiving Water: Groundwater **Status: Deemed Groundwater Regulations Authorisation** Positional Accuracy: Located by supplier to within 100m	A11SE (W)	907	1	544500 307600
23	**Discharge Consents** Operator: Anglian Water Services Limited Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: Halfpenny Lane And New Drove Sws, New Drove, Wisbech, Pe13 2rz Authority: Environment Agency, Anglian Region Catchment Area: Not Supplied Reference: Aw5nf1047 Permit Version: 1 Effective Date: 19th September 1984 Issued Date: 19th September 1984 Revocation Date: 7th June 1991 Discharge Type: Discharge Of Other Matter-Surface Water Discharge Environment: Drain Receiving Water: Fen Drain **Status: Pre National Rivers Authority Legislation where issue date < 01/09/1989** Positional Accuracy: Located by supplier to within 10m	A19SE (E)	911	1	546550 308290

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
23	**Discharge Consents** Operator: Construct Reason Ltd (D C Wyatt) Property Type: Not Supplied Location: Residential Development, Wisbech, Pe13 Authority: Environment Agency, Anglian Region Catchment Area: Not Supplied Reference: Pr5nf5356 Permit Version: 1 Effective Date: 22nd June 1987 Issued Date: 22nd June 1987 Revocation Date: 11th February 1992 Discharge Type: Discharge Of Other Matter-Surface Water Discharge Environment: Drain Receiving Water: Fen Drain **Status: Pre National Rivers Authority Legislation where issue date < 01/09/1989** Positional Accuracy: Located by supplier to within 10m	A20SW (E)	923	1	546570 308270
24	**Discharge Consents** Operator: Anglian Water Services Limited Property Type: WWTW/SEWAGE TREATMENT WORKS (WATER COMPANY) Location: Milner Rd/Prospect Pl Sso, Wisbech, Cambs Authority: Environment Agency, Anglian Region Catchment Area: Not Supplied Reference: Aennf13023 Permit Version: 2 Effective Date: 10th January 1996 Issued Date: 10th January 1996 Revocation Date: 11th December 1996 Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge Environment: Drain Receiving Water: A Fen Drain **Status: Post National Rivers Authority Legislation where issue date > 31/08/1989** Positional Accuracy: Located by supplier to within 10m	A19NE (NE)	990	1	546350 308720
24	**Discharge Consents** Operator: Anglian Water Services Limited Property Type: WWTW/SEWAGE TREATMENT WORKS (WATER COMPANY) Location: Milner Rd/Prospect Pl Sso, Wisbech, Cambs Authority: Environment Agency, Anglian Region Catchment Area: Not Given Reference: Aennf13023 Permit Version: 1 Effective Date: 8th April 1992 Issued Date: 8th April 1992 Revocation Date: 9th January 1996 Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge Environment: Drain Receiving Water: A Fen Drain **Status: Post National Rivers Authority Legislation where issue date > 31/08/1989** Positional Accuracy: Located by supplier to within 100m	A19NE (NE)	990	1	546350 308720
25	**Integrated Pollution Prevention And Control** Name: Lamb-Weston/Meijer Uk Limited Location: Lamb Weston/Meijers Uk Ltd, Weasenham Lane, WISBECH, Cambridgeshire, PE13 2RN Authority: Environment Agency, Anglian Region Permit Reference: MP3038JY Original Permit Ref: Mp3038jy Effective Date: Not Supplied **Status: Valid** Application Type: Application App. Sub Type: New Positional Accuracy: Automatically positioned to the address Activity Code: 6.8 A(1) d) ii Activity Description: Animal vegetable and food treating etc vegetable Primary Activity: Y	A18NE (N)	506	1	545601 308602

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
26	**Integrated Pollution Prevention And Control** Name: Greencore Prepared Meals Limited Location: Greencore Prepared Meals Wisbech Epr/Np3038dv, Greencore Prepared Meals, Weasenham Lane,,, Wisbech, Cambridgeshire, PE13 2RD Authority: Environment Agency, Anglian Region Permit Reference: NP3038DV Original Permit Ref: Np3038dv Effective Date: 2nd June 2017 **Status: Effective** Application Type: Application App. Sub Type: New Positional Accuracy: Automatically positioned to the address Activity Code: 6.8 A(1) d) (iii) Activity Description: CREATED BY IED - TREATMENT AND PROCESSING (OTHER THAN PACKAGING) OF ANIMAL OR VEGETABLE RAW MATERIALS (OTHER THAN MILK ONLY) WITH FINISHED PRODUCT CAPACITY GREATER THAN FORMULA SHOWN IN REGS Primary Activity: Y	A19SW (NE)	616	1	546205 308323
27	**Local Authority Pollution Prevention and Controls** Name: Kirk Coachworks Location: New Bridge Lane, Wisbech, PE14 0SE Authority: Fenland District Council, Environmental Health Department Permit Reference: SED01 Dated: 27th September 2007 Process Type: Local Authority Pollution Prevention and Control Description: PG6/34 Respraying of road vehicles **Status: Permitted** Positional Accuracy: Manually positioned to the road within the address or location	A13SW (SW)	48	2	545345 307792
28	**Local Authority Pollution Prevention and Controls** Name: Floorspan Contract Ltd Location: Europa Way, Wisbech Authority: Fenland District Council, Environmental Health Department Permit Reference: LAPPC040 Dated: 19th November 2009 Process Type: Local Authority Pollution Prevention and Control Description: PG3/1Blending, packing, loading and use of bulk cement **Status: Permitted** Positional Accuracy: Manually positioned to the road within the address or location	A13NE (NE)	172	2	545679 308204
29	**Local Authority Pollution Prevention and Controls** Name: Sb Components International Ltd Location: Millennium Works, 24 Enterprise Way, Wisbech, PE14 0SB Authority: Fenland District Council, Environmental Health Department Permit Reference: LAPPC042 Dated: Not Supplied Process Type: Local Authority Pollution Prevention and Control Description: PG1/1Waste oil burners, less than 0.4MW net rated thermal input **Status: Permitted** Positional Accuracy: Manually positioned to the address or location	A18SE (N)	264	2	545596 308356
30	**Local Authority Pollution Prevention and Controls** Name: Tesco Pfs Location: Cromwell Road, WISBECH, Cambridgeshire, PE14 0SD Authority: Fenland District Council, Environmental Health Department Permit Reference: PVRR003 Dated: 11th May 1999 Process Type: Local Authority Air Pollution Control Description: PG1/14 Petrol filling station **Status: Authorisation certificate surrendered by operator** Positional Accuracy: Manually positioned to the address or location	A18SW (N)	283	2	545480 308380
31	**Local Authority Pollution Prevention and Controls** Name: Tesco Wisbech Location: Cromwell Road, Wisbech, Cambridgeshire, PE14 0RG Authority: Fenland District Council, Environmental Health Department Permit Reference: PV22022 Dated: Not Supplied Process Type: Local Authority Pollution Prevention and Control Description: PG1/14 Petrol filling station **Status: Permitted** Positional Accuracy: Manually positioned to the address or location	A18SW (N)	496	2	545409 308582
32	**Local Authority Pollution Prevention and Controls** Name: Lamb Weston Meijer Location: Weasenham Lane, Wisbech, PE13 Authority: Fenland District Council, Environmental Health Department Permit Reference: LAPPC032 Dated: 22nd November 2006 Process Type: Local Authority Pollution Prevention and Control Description: PG1/4 Gas turbines, 20-50 MW net rated thermal input **Status: Permitted** Positional Accuracy: Manually positioned to the address or location	A19SW (NE)	603	2	546065 308454

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
33	**Local Authority Pollution Prevention and Controls** Name: Cemex Location: Boleness Road, WISBECH, Cambridgeshire, PE13 2RB Authority: Fenland District Council, Environmental Health Department Permit Reference: LAPPC007 Dated: 6th January 1993 Process Type: Local Authority Pollution Prevention and Control Description: PG3/1Blending, packing, loading and use of bulk cement **Status: Permitted** Positional Accuracy: Automatically positioned to the address	A14NE (E)	613	2	546288 308131
34	**Local Authority Pollution Prevention and Controls** Name: Crown Cork And Seal Location: Weasenham Lane, WISBECH, Cambridgeshire, PE13 2RP Authority: Fenland District Council, Environmental Health Department Permit Reference: LAPPC011 Dated: 9th September 1993 Process Type: Local Authority Pollution Prevention and Control Description: PG6/23 Coating of metal and plastic **Status: Application exempt from APC** Positional Accuracy: Manually positioned to the address or location	A18NE (NE)	664	2	545852 308681
35	**Local Authority Pollution Prevention and Controls** Name: Hope Cement Location: Oldfield Lane, WISBECH, Cambridgeshire, PE13 2RJ Authority: Fenland District Council, Environmental Health Department Permit Reference: LAPPC005 Dated: 18th December 1992 Process Type: Local Authority Pollution Prevention and Control Description: PG3/1Blending, packing, loading and use of bulk cement **Status: Permitted** Positional Accuracy: Manually positioned to the road within the address or location	A23SE (N)	927	2	545743 309003
	Nearest Surface Water Feature	A13SW (SW)	0	-	545498 307872
36	**Pollution Incidents to Controlled Waters** Property Type: Food industry Location: Spalding District Authority: Environment Agency, Anglian Region Pollutant: Oils - Vegetable Oil Note: Fen Drain Incident Date: 24th March 1995 Incident Reference: 1992 Catchment Area: Not Given Receiving Water: Freshwater Stream/River Cause of Incident: Poor/Inadequate Maintenance Incident Severity: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 100m	A13SW (W)	40	1	545400 307900
37	**Pollution Incidents to Controlled Waters** Property Type: Food industry Location: Spalding District Authority: Environment Agency, Anglian Region Pollutant: Oils - Vegetable Oil Note: Dyke In Redmoor Lane Incident Date: 1st February 1995 Incident Reference: 1968 Catchment Area: Not Given Receiving Water: Freshwater Stream/River Cause of Incident: Poor/Inadequate Maintenance Incident Severity: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 100m	A13SW (S)	82	1	545500 307700
38	**Pollution Incidents to Controlled Waters** Property Type: Road Location: Spalding District Authority: Environment Agency, Anglian Region Pollutant: Oils - Diesel (Including Agricultural) Note: Potential Surface Water Incident Date: 9th December 1997 Incident Reference: 2556 Catchment Area: Not Given Receiving Water: Potential River Cause of Incident: Fire Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A18SW (NW)	376	1	545300 308400

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
39	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: Spalding District Authority: Environment Agency, Anglian Region Pollutant: Unknown Note: Local Dyke Incident Date: 27th January 1993 Incident Reference: 1485 Catchment Area: Not Given Receiving Water: Freshwater Stream/River Cause of Incident: Unknown Incident Severity: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 100m	A18SW (N)	395	1	545500 308495
39	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: Spalding District Authority: Environment Agency, Anglian Region Pollutant: Unknown Note: Local Dyke Incident Date: 26th January 1993 Incident Reference: 1484 Catchment Area: Not Given Receiving Water: Freshwater Stream/River Cause of Incident: Unknown Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A18SW (N)	400	1	545500 308500
40	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: Spalding District Authority: Environment Agency, Anglian Region Pollutant: Unknown Note: Drain 63 - Boleness Road Incident Date: 28th January 1993 Incident Reference: 1486 Catchment Area: Not Given Receiving Water: Freshwater Stream/River Cause of Incident: Unknown Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A18SW (N)	419	1	545400 308500
41	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: Spalding District Authority: Environment Agency, Anglian Region Pollutant: Unknown Note: A Fen Drain Incident Date: 28th February 1992 Incident Reference: 1248 Catchment Area: Not Given Receiving Water: Freshwater Stream/River Cause of Incident: Unknown Incident Severity: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 100m	A18NE (N)	504	1	545600 308600
42	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: Spalding District Authority: Environment Agency, Anglian Region Pollutant: Miscellaneous - Unknown Note: Local Dyke Incident Date: 30th July 1996 Incident Reference: 2310 Catchment Area: Not Given Receiving Water: Freshwater Stream/River Cause of Incident: Unknown Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A7NE (SW)	540	1	545001 307401
43	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: Spalding District Authority: Environment Agency, Anglian Region Pollutant: Unknown Note: Surface Water Drains Incident Date: 15th December 1992 Incident Reference: 1461 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Unknown Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A19SW (NE)	542	1	545900 308500

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
44	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: Spalding District Authority: Environment Agency, Anglian Region Pollutant: Unknown Note: A Fen Drain Incident Date: 3rd March 1992 Incident Reference: 1254 Catchment Area: Not Given Receiving Water: Freshwater Stream/River Cause of Incident: Unknown Incident Severity: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 100m	A18NE (N)	598	1	545600 308695
44	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: Spalding District Authority: Environment Agency, Anglian Region Pollutant: Miscellaneous - Unknown Note: Local Dyke Incident Date: 6th August 1996 Incident Reference: 2318 Catchment Area: Not Given Receiving Water: Freshwater Stream/River Cause of Incident: Unknown Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A18NE (N)	599	1	545605 308695
44	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: Spalding District Authority: Environment Agency, Anglian Region Pollutant: Unknown Note: A Fen Drain Incident Date: 5th March 1992 Incident Reference: 1253 Catchment Area: Not Given Receiving Water: Freshwater Stream/River Cause of Incident: Unknown Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A18NE (N)	603	1	545600 308700
44	**Pollution Incidents to Controlled Waters** Property Type: Food industry Location: Spalding District Authority: Environment Agency, Anglian Region Pollutant: Organic Wastes: Other Note: Local Dyke Incident Date: 18th May 1998 Incident Reference: 2656 Catchment Area: Not Given Receiving Water: Freshwater Stream/River Cause of Incident: Poor Operational Practice Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A18NE (N)	604	1	545605 308700
45	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: Spalding District, WISBECH Authority: Environment Agency, Anglian Region Pollutant: Miscellaneous - Unknown Note: Local Dyke Incident Date: 8th March 1999 Incident Reference: 2805 Catchment Area: Not Given Receiving Water: Freshwater Stream/River Cause of Incident: Unknown Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A18NE (N)	618	1	545700 308695
45	**Pollution Incidents to Controlled Waters** Property Type: Food industry Location: Spalding District Authority: Environment Agency, Anglian Region Pollutant: Oils - Other Oil Note: Local Dyke Incident Date: 2nd December 1994 Incident Reference: 1933 Catchment Area: Not Given Receiving Water: Freshwater Stream/River Cause of Incident: Fire Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A18NE (N)	623	1	545700 308700

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
46	**Pollution Incidents to Controlled Waters** Property Type: Metal industry Location: Spalding District Authority: Environment Agency, Anglian Region Pollutant: Chemicals - Solvents Note: Not Supplied Incident Date: 24th June 1997 Incident Reference: 2470 Catchment Area: Not Given Receiving Water: Potential River Cause of Incident: Accidental Spillage/Leakage Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A18NE (N)	653	1	545800 308695
46	**Pollution Incidents to Controlled Waters** Property Type: Metal industry Location: WISBECH Authority: Environment Agency, Anglian Region Pollutant: Chemicals - Solvents Note: Not Supplied Incident Date: 24th June 1997 Incident Reference: 2470 Catchment Area: Not Given Receiving Water: Potential River Cause of Incident: Accidental Spillage/Leakage Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A18NE (N)	658	1	545800 308700
47	**Pollution Incidents to Controlled Waters** Property Type: Water Company Sewage: Pumping Station Location: Spalding District Authority: Environment Agency, Anglian Region Pollutant: Crude Sewage Note: Local Dyke Incident Date: 9th April 1996 Incident Reference: 2212 Catchment Area: Not Given Receiving Water: Freshwater Stream/River Cause of Incident: Mechanical Failure Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A19SW (NE)	661	1	546100 308500
48	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: Spalding District Authority: Environment Agency, Anglian Region Pollutant: Unknown Note: Local Dyke Incident Date: 12th September 1993 Incident Reference: 1655 Catchment Area: Not Given Receiving Water: Freshwater Stream/River Cause of Incident: Unknown Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A7SE (SW)	694	1	545001 307201
49	**Pollution Incidents to Controlled Waters** Property Type: Industrial: Other Location: Spalding District Authority: Environment Agency, Anglian Region Pollutant: Oils - Other Oil Note: Local Drain Incident Date: 1st March 1994 Incident Reference: 1762 Catchment Area: Not Given Receiving Water: Freshwater Stream/River Cause of Incident: Other Cause Incident Severity: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 100m	A19NW (NE)	741	1	546100 308600
50	**Pollution Incidents to Controlled Waters** Property Type: Food industry Location: Spalding District Authority: Environment Agency, Anglian Region Pollutant: Oils - Gas Oil Note: Local Drain Incident Date: 1st March 1994 Incident Reference: 1763 Catchment Area: Not Given Receiving Water: Freshwater Stream/River Cause of Incident: Vandalism Incident Severity: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 100m	A7SE (SW)	756	1	544900 307200

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
51	**Pollution Incidents to Controlled Waters** Property Type: Water Company Sewage: Pumping Station Location: Spalding District, WISBECH Authority: Environment Agency, Anglian Region Pollutant: Crude Sewage Note: Tributary Of Waldersey Main Drain Incident Date: 14th January 1999 Incident Reference: 2780 Catchment Area: Not Given Receiving Water: Freshwater Stream/River Cause of Incident: Mechanical Failure Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A19NW (NE)	881	1	546200 308700
52	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: Spalding District Authority: Environment Agency, Anglian Region Pollutant: Unknown Note: Groundwater Incident Date: 2nd December 1992 Incident Reference: 1458 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Unknown Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A19NW (NE)	902	1	546100 308800
53	**Pollution Incidents to Controlled Waters** Property Type: Water Company Sewage: Combined Sewer Overflow Location: Spalding District Authority: Environment Agency, Anglian Region Pollutant: Storm Sewage Note: Fen Drain Incident Date: 2nd October 1995 Incident Reference: 2108 Catchment Area: Not Given Receiving Water: Freshwater Stream/River Cause of Incident: High Flow Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A19SE (NE)	937	1	546400 308595
53	**Pollution Incidents to Controlled Waters** Property Type: Water Company Sewage: Other Location: Spalding District Authority: Environment Agency, Anglian Region Pollutant: Crude Sewage Note: Dyke At Railway Road Incident Date: 18th October 1995 Incident Reference: 2114 Catchment Area: Not Given Receiving Water: Freshwater Stream/River Cause of Incident: Unknown Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A19SE (NE)	941	1	546405 308595
53	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: Spalding District Authority: Environment Agency, Anglian Region Pollutant: Unknown Note: Private Dyke Incident Date: 1st October 1993 Incident Reference: 1672 Catchment Area: Not Given Receiving Water: Freshwater Stream/River Cause of Incident: Unknown Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A19NE (NE)	941	1	546400 308600
54	**Pollution Incidents to Controlled Waters** Property Type: Water Company Sewage: Combined Sewer Overflow Location: Spalding District Authority: Environment Agency, Anglian Region Pollutant: Crude Sewage Note: Fen Drain Incident Date: 4th May 1995 Incident Reference: 2021 Catchment Area: Not Given Receiving Water: Freshwater Stream/River Cause of Incident: Blocked Sewer Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A19NE (NE)	942	1	546300 308700

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
55	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: Spalding District Authority: Environment Agency, Anglian Region Pollutant: Oils - Other Oil Note: Fen Drain Incident Date: 30th January 1995 Incident Reference: 1964 Catchment Area: Not Given Receiving Water: Freshwater Stream/River Cause of Incident: Unknown Incident Severity: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 100m	A2NE (S)	976	1	545200 306800
	River Quality Name: Not Supplied GQA Grade: Unclassified Tidal River Reach: Not Supplied Estimated Distance (km): Not Supplied Flow Rate: Not Supplied Flow Type: Not Supplied Year: 1995	A17SE (NW)	513	1	545019 308265
56	**Substantiated Pollution Incident Register** Authority: Environment Agency - Anglian Region, Central Area Incident Date: 20th September 2016 Incident Reference: 1472778 Water Impact: Category 4 - No Impact Air Impact: Category 2 - Significant Incident Land Impact: Category 4 - No Impact Positional Accuracy: Located by supplier to within 10m Pollutant: Atmospheric Pollutants and Effects: Smoke	A13NE (NE)	0	1	545635 307975
57	**Substantiated Pollution Incident Register** Authority: Environment Agency - Anglian Region, Central Area Incident Date: 13th March 2005 Incident Reference: 298570 Water Impact: Category 4 - No Impact Air Impact: Category 4 - No Impact Land Impact: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 10m Pollutant: Asbestos Waste	A13SE (E)	196	1	545842 307850
58	**Substantiated Pollution Incident Register** Authority: Environment Agency - Anglian Region, Central Area Incident Date: 26th October 2017 Incident Reference: 1572330 Water Impact: Category 2 - Significant Incident Air Impact: Category 4 - No Impact Land Impact: Category 4 - No Impact Positional Accuracy: Located by supplier to within 10m Pollutant: Contaminated Water: Other Contaminated Water	A8NE (SE)	284	1	545706 307575
59	**Substantiated Pollution Incident Register** Authority: Environment Agency - Anglian Region, Central Area Incident Date: 1st September 2004 Incident Reference: 266520 Water Impact: Category 2 - Significant Incident Air Impact: Category 3 - Minor Incident Land Impact: Category 4 - No Impact Positional Accuracy: Located by supplier to within 10m Pollutant: General Biodegradable Materials And Wastes: Food And Drink	A18SE (N)	415	1	545593 308511
60	**Water Abstractions** Operator: M/S J W Woodrow Ltd Licence Number: 5/32/11/*G/0064 Permit Version: 100 Location: Well At Little Boleness Field Authority: Environment Agency, Anglian Region Abstraction: Horticulture And Nurseries: Spray Irrigation - Direct Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Fluvial Sand and Gravel; Status: Perpetuity Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 1st March 1966 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A14SW (E)	483	1	546130 307770

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Water Abstractions Operator: Elgood & Sons Ltd Licence Number: 5/32/11/*T/0018b Permit Version: 100 Location: River Nene At North Brink Authority: Environment Agency, Anglian Region Abstraction: Breweries/Wine: Non-Evaporative Cooling Abstraction Type: Water may be abstracted from a single point Source: Tidal Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Status: Perpetuity Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 1st April 2008 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A23SE (N)	1101	1	545600 309200
	Water Abstractions Operator: Elgood & Sons Ltd Licence Number: 5/32/11/*G/0018a Permit Version: 100 Location: 4 Wells North Brink Authority: Environment Agency, Anglian Region Abstraction: Breweries/Wine: Non-Evaporative Cooling Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Fluvial Sand and Gravel; Status: Perpetuity Authorised Start: 01 May Authorised End: 31 October Permit Start Date: 2nd December 1965 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A23SE (N)	1101	1	545600 309200
	Water Abstractions Operator: M/S J W Woodrow Ltd Licence Number: 5/32/11/*G/0064 Permit Version: 100 Location: Catchpit At Town Field Authority: Environment Agency, Anglian Region Abstraction: Horticulture And Nurseries: Spray Irrigation - Direct Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Fluvial Sand and Gravel; Status: Perpetuity Authorised Start: 01 March Authorised End: 31 August Permit Start Date: 1st March 1966 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A15SE (E)	1359	1	547030 307730
	Water Abstractions Operator: Mr M Day Licence Number: 5/32/11/*S/0158 Permit Version: 1 Location: Redmoor Drain At Elm Authority: Environment Agency, Anglian Region Abstraction: Amenity: Make-Up Or Top Up Water Abstraction Type: Water may be abstracted from a river or stream reach, or a row of wellpoints Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Not Supplied Authorised Start: 01 November Authorised End: 31 March Permit Start Date: 27th May 2004 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A3SE (S)	1494	1	545650 306270

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Groundwater Vulnerability Map Combined Classification: Unproductive Aquifer (may have productive aquifer beneath) Combined Vulnerability: Unproductive Combined Aquifer: Unproductive Bedrock Aquifer, Unproductive Superficial Aquifer Pollutant Speed: High Bedrock Flow: Well Connected Fractures Dilution: <300 mm/year Baseflow Index: >70% Superficial Patchiness: >90% Superficial Thickness: >10m Superficial Recharge: Low	A13SW (SW)	0	3	545527 307919
	Groundwater Vulnerability Map Combined Classification: Unproductive Aquifer (may have productive aquifer beneath) Combined Vulnerability: Unproductive Combined Aquifer: Unproductive Bedrock Aquifer, Unproductive Superficial Aquifer Pollutant Speed: High Bedrock Flow: Well Connected Fractures Dilution: <300 mm/year Baseflow Index: >70% Superficial Patchiness: >90% Superficial Thickness: >10m Superficial Recharge: Low	A13NW (N)	0	3	545527 308000
	Groundwater Vulnerability - Soluble Rock Risk None				
	Bedrock Aquifer Designations Aquifer Designation: Unproductive Strata	A13SW (SW)	0	3	545527 307919
	Superficial Aquifer Designations Aquifer Designation: Unproductive Strata	A13SW (SW)	0	3	545527 307919
	Extreme Flooding from Rivers or Sea without Defences Type: Extent of Extreme Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models Boundary Accuracy: As Supplied	A13SW (SW)	0	1	545495 307850
	Extreme Flooding from Rivers or Sea without Defences Type: Extent of Extreme Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial/Tidal Models Boundary Accuracy: As Supplied	A13SW (SW)	0	1	545527 307919
	Extreme Flooding from Rivers or Sea without Defences Type: Extent of Extreme Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models Boundary Accuracy: As Supplied	A13SE (E)	0	1	545550 307918
	Extreme Flooding from Rivers or Sea without Defences Type: Extent of Extreme Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models Boundary Accuracy: As Supplied	A13NE (E)	0	1	545635 307940
	Extreme Flooding from Rivers or Sea without Defences Type: Extent of Extreme Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models Boundary Accuracy: As Supplied	A13NE (E)	0	1	545685 307975
	Extreme Flooding from Rivers or Sea without Defences Type: Extent of Extreme Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models Boundary Accuracy: As Supplied	A13NE (E)	12	1	545700 307950
	Extreme Flooding from Rivers or Sea without Defences Type: Extent of Extreme Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models Boundary Accuracy: As Supplied	A13NE (E)	16	1	545710 307975
	Extreme Flooding from Rivers or Sea without Defences Type: Extent of Extreme Flooding from Rivers or Sea without Defences Flood Plain Type: Tidal Models Boundary Accuracy: As Supplied	A13SE (SE)	17	1	545616 307854

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Extreme Flooding from Rivers or Sea without Defences Type: Extent of Extreme Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models Boundary Accuracy: As Supplied	A13NE (E)	21	1	545715 307980
	Extreme Flooding from Rivers or Sea without Defences Type: Extent of Extreme Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models Boundary Accuracy: As Supplied	A13NW (N)	23	1	545485 308077
	Extreme Flooding from Rivers or Sea without Defences Type: Extent of Extreme Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models Boundary Accuracy: As Supplied	A13NE (E)	43	1	545730 307950
	Extreme Flooding from Rivers or Sea without Defences Type: Extent of Extreme Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models Boundary Accuracy: As Supplied	A13NE (E)	45	1	545735 307955
	Extreme Flooding from Rivers or Sea without Defences Type: Extent of Extreme Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models Boundary Accuracy: As Supplied	A13NE (E)	47	1	545740 307960
	Extreme Flooding from Rivers or Sea without Defences Type: Extent of Extreme Flooding from Rivers or Sea without Defences Flood Plain Type: Tidal Models Boundary Accuracy: As Supplied	A13NW (NW)	50	1	545386 308014
	Extreme Flooding from Rivers or Sea without Defences Type: Extent of Extreme Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models Boundary Accuracy: As Supplied	A13SE (SE)	60	1	545595 307770
	Extreme Flooding from Rivers or Sea without Defences Type: Extent of Extreme Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models Boundary Accuracy: As Supplied	A13NE (N)	90	1	545560 308185
	Extreme Flooding from Rivers or Sea without Defences Type: Extent of Extreme Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models Boundary Accuracy: As Supplied	A13SW (S)	155	1	545527 307620
	Extreme Flooding from Rivers or Sea without Defences Type: Extent of Extreme Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models Boundary Accuracy: As Supplied	A13NE (NE)	162	1	545820 308080
	Extreme Flooding from Rivers or Sea without Defences Type: Extent of Extreme Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models Boundary Accuracy: As Supplied	A14NW (E)	236	1	545930 307970
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial/Tidal Models Boundary Accuracy: As Supplied	A13SW (N)	0	1	545527 307919
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models Boundary Accuracy: As Supplied	A13SW (SW)	0	1	545527 307919
	Areas Benefiting from Flood Defences None				
	Flood Water Storage Areas None				
	Flood Defences None				
61	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 178.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A13NE (NE)	0	4	545615 308039

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
62	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 81.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A13SW (SW)	0	4	545471 307816
63	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 57.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A13SW (SW)	0	4	545471 307816
64	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 50.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A13SW (S)	0	4	545503 307853
65	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 130.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A13SW (SW)	0	4	545495 307870
66	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 159.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A13SE (SE)	0	4	545599 307861
67	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 10.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A13SW (SW)	2	4	545427 307749
68	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 20.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A13SW (SW)	3	4	545426 307750
69	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 151.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A13SE (SE)	5	4	545568 307823
70	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 6.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A13SW (W)	7	4	545438 307906

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
71	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 72.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A13SW (SW)	10	4	545440 307741
72	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 231.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A13NW (NW)	12	4	545452 307953
73	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 33.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A13SW (W)	13	4	545433 307911
74	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 42.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A13SW (SW)	17	4	545415 307740
75	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 18.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A13SW (SW)	17	4	545429 307731
76	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 62.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A13SW (SW)	18	4	545374 307767
77	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 4.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A13NW (N)	19	4	545528 308120
78	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 61.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A13NW (N)	22	4	545525 308123
79	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 285.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A13SW (SW)	29	4	545445 307722

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
80	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 24.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A13SW (SW)	29	4	545445 307722
81	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 124.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A13SW (W)	32	4	545410 307904
82	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 60.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A13SW (W)	32	4	545410 307904
83	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 216.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A13SW (SW)	51	4	545375 307724
84	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 111.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A13SW (S)	53	4	545519 307785
85	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 42.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A13SW (S)	58	4	545474 307706
86	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 40.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A13SW (SW)	75	4	545315 307774
87	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 317.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A13NE (N)	81	4	545550 308180
88	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 63.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A13NE (N)	81	4	545550 308180

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
89	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 29.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A13SW (S)	83	4	545502 307703
90	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 49.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A13SW (S)	97	4	545508 307686
91	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 36.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A13SW (S)	99	4	545510 307685
92	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 86.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A13SW (S)	107	4	545528 307699
93	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 4.7 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A13SW (S)	113	4	545483 307646
94	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 333.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A13SW (SW)	115	4	545287 307724
95	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 204.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A13SW (S)	116	4	545480 307642
96	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 56.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A13NW (N)	121	4	545491 308216
97	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 360.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A13NW (W)	124	4	545330 307950

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
98	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 235.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A13SW (S)	135	4	545541 307666
99	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 40.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A13SW (S)	136	4	545541 307666
100	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 21.6 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A13SE (S)	178	4	545599 307650
101	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 115.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A13SE (S)	182	4	545580 307641
102	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 113.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A13SE (S)	193	4	545617 307639
103	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 58.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A13NW (N)	195	4	545413 308258
104	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 88.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A18SE (N)	232	4	545596 308323
105	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 299.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A13SW (SW)	238	4	545206 307625
106	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 132.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A12SE (SW)	242	4	545155 307720

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
107	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 89.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A8NW (SW)	261	4	545278 307538
108	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 177.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A8NW (SW)	265	4	545290 307525
109	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 43.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A18SW (NW)	267	4	545348 308298
110	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 14.4 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A8NE (SE)	271	4	545675 307575
111	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 36.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A8NW (S)	278	4	545449 307470
112	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 41.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A8NW (S)	279	4	545413 307469
113	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 274.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A8NE (S)	282	4	545569 307476
114	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 82.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A8NE (SE)	284	4	545686 307566
115	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 190.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A13SE (SE)	286	4	545766 307614

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
116	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 113.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A12SE (W)	299	4	545108 307876
117	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 17.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A13NW (NW)	300	4	545270 308254
118	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 50.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A8NE (SE)	305	4	545722 307561
119	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 345.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A8NE (S)	308	4	545566 307450
120	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 256.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A13SE (SE)	310	4	545867 307699
121	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 111.5 Watercourse Level: On ground surface Permanent: False Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A12SE (W)	313	4	545077 307768
122	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 55.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A8NW (S)	322	4	545391 307429
123	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 217.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A8NW (S)	338	4	545342 307423
124	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 32.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A12NE (NW)	345	4	545170 308141

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
125	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 110.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A14SW (SE)	347	4	545948 307741
126	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 26.3 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A12NE (NW)	352	4	545152 308115
127	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 114.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A8NW (SW)	356	4	545234 307453
128	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 34.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A14NW (E)	356	4	546049 307953
129	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 49.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A12NE (NW)	357	4	545138 308093
130	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 11.3 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A8NE (SE)	359	4	545750 307514
131	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 33.9 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A12NE (W)	365	4	545111 308052
132	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 16.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A8NE (SE)	370	4	545759 307507
133	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 167.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A8NW (SW)	371	4	545248 307427

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
134	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 92.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A12SE (SW)	371	4	545068 307592
135	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 57.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A12NE (W)	373	4	545088 308023
136	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 2.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A12NE (W)	374	4	545090 308026
137	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 20.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A12NE (W)	375	4	545088 308023
138	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 50.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A14SW (E)	379	4	546059 307877
139	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 105.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A14NW (E)	380	4	546071 307926
140	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 279.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A8NW (SW)	382	4	545228 307426
141	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 70.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A14NW (E)	383	4	546077 307997
142	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 124.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A12NE (W)	384	4	545049 307956

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
143	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 5.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A8NE (SE)	384	4	545787 307508
144	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 14.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A8NE (SE)	385	4	545772 307497
145	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 413.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A8NW (S)	388	4	545352 307369
146	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 20.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A8NE (SE)	389	4	545788 307503
147	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 3.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A8NE (SE)	389	4	545788 307503
148	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 10.3 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A8NE (SE)	396	4	545808 307507
149	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 157.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A8NW (S)	397	4	545471 307353
150	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 210.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A18SE (N)	399	4	545656 308479
151	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 3.5 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A8NW (S)	400	4	545469 307350

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
152	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 494.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A14SW (E)	400	4	546087 307907
153	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 67.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A8NE (SE)	401	4	545818 307509
154	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 14.5 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A8NE (SE)	403	4	545740 307460
155	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 290.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A8NW (S)	403	4	545467 307347
156	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 11.1 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A8NE (SE)	407	4	545754 307462
157	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 126.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A12SE (W)	407	4	544995 307874
158	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 270.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A8NE (SE)	407	4	545754 307462
159	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 60.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A8NE (SE)	414	4	545765 307460
160	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 435.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A8NE (SE)	414	4	545828 307501

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
161	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 120.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A12SE (W)	426	4	544969 307838
162	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 191.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A9NW (SE)	432	4	545893 307536
163	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 217.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A18SW (N)	433	4	545331 308486
164	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 381.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A9NW (SE)	433	4	545883 307525
165	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 87.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A7NE (SW)	439	4	545098 307448
166	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 84.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A7NE (SW)	447	4	545038 307500
167	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 121.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A8NE (SE)	448	4	545839 307466
168	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 70.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A14SW (E)	449	4	546125 307855
169	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 74.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A7NE (SW)	453	4	545022 307512

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
170	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 141.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A12SE (W)	454	4	544936 307793
171	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 10.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A7NE (SW)	455	4	545104 307422
172	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 4.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A14SW (SE)	456	4	546021 307658
173	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 4.8 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A14SW (SE)	457	4	546024 307660
174	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 121.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A14SW (SE)	458	4	546028 307663
175	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 2.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A7NE (SW)	463	4	545093 307421
176	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 7.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A7NE (SW)	464	4	545091 307421
177	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 229.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A7NE (SW)	464	4	545091 307421
178	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 3.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A14NW (E)	467	4	546160 308002

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
179	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 5.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A7NE (SW)	469	4	545083 307421
180	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 522.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A8NE (SE)	470	4	545827 307431
181	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 52.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A7NE (SW)	473	4	545078 307420
182	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 32.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A14NW (E)	479	4	546172 308010
183	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 5.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A7NE (SW)	488	4	544958 307549
184	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 140.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A7NE (SW)	488	4	544958 307549
185	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 5.1 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A7NE (SW)	492	4	544955 307545
186	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 71.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A7NE (SW)	497	4	544952 307541
187	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 31.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A18SW (N)	504	4	545390 308586

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
188	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 71.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A18SW (N)	504	4	545390 308586
189	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 269.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A7NE (SW)	504	4	545010 307445
190	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 9.6 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A14SW (E)	507	4	546167 307797
191	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 162.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A7NE (SW)	510	4	545027 307418
192	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 267.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A7NE (SW)	511	4	545025 307418
193	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 416.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A8NE (SE)	515	4	545871 307406
194	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 30.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A14SW (E)	515	4	546173 307790
195	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 260.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A14SW (E)	517	4	546178 307796
196	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 526.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A8NE (S)	521	4	545586 307250

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
197	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 51.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A8NE (SE)	527	4	545876 307395
198	**OS Water Network Lines** Watercourse Form: Tidal river Watercourse Length: 2048.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: River Nene Catchment Name: Nene Primacy: 1	A17SE (NW)	527	4	545009 308265
199	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 218.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A7NE (SW)	535	4	545168 307284
200	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 232.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A7NE (SW)	535	4	545141 307300
201	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 224.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A7NE (SW)	538	4	545181 307273
202	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 54.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A7NE (SW)	538	4	545181 307273
203	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 64.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A14SW (E)	541	4	546191 307766
204	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 439.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Not Supplied Primacy: 2	A14SW (E)	541	4	546191 307766
205	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 506.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A8NE (SE)	542	4	545872 307375

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
206	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 48.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A7NE (SW)	547	4	544882 307573
207	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 45.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A12SW (W)	549	4	544851 307672
208	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 226.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A8SW (SW)	550	4	545224 307240
209	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 178.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A17SE (NW)	571	4	545006 308330
210	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 174.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A12SW (SW)	572	4	544847 307595
211	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 23.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A12SW (SW)	572	4	544847 307595
212	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 427.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A9NW (SE)	576	4	545913 307362
213	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 118.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A9NW (SE)	578	4	545910 307357
214	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 73.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A12SW (W)	583	4	544824 307634

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
215	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 328.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A17SE (NW)	591	4	545087 308494
216	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 34.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A14SE (E)	592	4	546221 307709
217	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 409.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Not Supplied Primacy: 2	A14SE (E)	592	4	546221 307709
218	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 45.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A12SW (SW)	598	4	544813 307618
219	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 150.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A12NE (NW)	614	4	544920 308239
220	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 299.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A17SE (NW)	621	4	545133 308580
221	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 71.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A14SE (E)	621	4	546237 307678
222	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 347.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Not Supplied Primacy: 2	A14SE (E)	621	4	546237 307678
223	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 11.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A19SW (NE)	624	4	546051 308491

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
224	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 195.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A8SW (S)	643	4	545273 307125
225	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 60.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A19SW (NE)	643	4	546062 308507
226	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 195.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A8SW (S)	652	4	545298 307110
227	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 115.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A12NW (W)	670	4	544821 308151
228	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 277.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Not Supplied Primacy: 2	A14SE (SE)	672	4	546255 307609
229	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 13.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A14SE (SE)	672	4	546255 307609
230	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 271.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Not Supplied Primacy: 2	A14SE (SE)	680	4	546267 307614
231	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 333.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Not Supplied Primacy: 2	A14NE (E)	690	4	546383 307953
232	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 249.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Not Supplied Primacy: 2	A14NE (E)	690	4	546384 307956

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
233	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 11.0 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A14NE (E)	692	4	546379 308073
234	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 270.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A7SE (SW)	693	4	544965 307229
235	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 6.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Redmoor Drain Catchment Name: Nene Primacy: 2	A7SE (SW)	693	4	544965 307229
236	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 72.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Redmoor Drain Catchment Name: Nene Primacy: 2	A7SE (SW)	694	4	544976 307219
237	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 8.5 Watercourse Level: Underground Permanent: True Watercourse Name: Redmoor Drain Catchment Name: Nene Primacy: 2	A7SE (SW)	694	4	544976 307219
238	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 3.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A9NW (SE)	695	4	545996 307275
239	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 97.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A9NW (SE)	699	4	545998 307272
240	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 89.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A12NW (W)	700	4	544790 308154
241	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 76.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A19NW (NE)	700	4	546027 308602

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
242	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 196.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A9NW (SE)	701	4	545991 307265
243	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 175.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Not Supplied Primacy: 2	A14NE (E)	702	4	546388 308080
244	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 63.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 1	A18NE (N)	713	4	545796 308762
245	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 46.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Redmoor Drain Catchment Name: Nene Primacy: 2	A7SE (SW)	716	4	545021 307162
246	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 332.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A12NW (W)	719	4	544706 307999
247	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 350.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A8SW (S)	726	4	545518 307027
248	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 29.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A8SW (S)	726	4	545518 307027
249	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 21.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A9NE (SE)	727	4	546272 307539
250	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 5.2 Watercourse Level: Underground Permanent: True Watercourse Name: Redmoor Drain Catchment Name: Nene Primacy: 2	A7SE (SW)	734	4	545048 307123

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
251	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 146.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A7NW (SW)	735	4	544791 307349
252	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 55.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Redmoor Drain Catchment Name: Nene Primacy: 2	A7SE (SW)	736	4	545051 307119
253	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 142.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A17SW (NW)	743	4	544837 308398
254	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 3.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A17SE (NW)	743	4	544873 308450
255	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 32.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A9NE (SE)	743	4	546276 307518
256	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 197.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Not Supplied Primacy: 2	A9NE (SE)	743	4	546276 307518
257	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 23.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A17SE (NW)	745	4	544873 308453
258	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 153.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A7SE (SW)	750	4	545040 307110
259	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 6.3 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A7SE (SW)	752	4	545045 307104

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
260	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 20.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A7SE (SW)	754	4	545049 307099
261	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 139.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A8SW (S)	754	4	545531 307000
262	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 79.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 1	A18NE (N)	756	4	545844 308788
263	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 19.1 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 1	A18NE (N)	756	4	545844 308788
264	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 3.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A9NE (SE)	757	4	546271 307488
265	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 4.7 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A17SW (NW)	760	4	544798 308327
266	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 12.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Redmoor Drain Catchment Name: Nene Primacy: 2	A7SE (SW)	760	4	545083 307074
267	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 6.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 1	A18NE (N)	764	4	545831 308802
268	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 4.8 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A7SE (SW)	764	4	545060 307082

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
269	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 4.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A17SW (NW)	765	4	544795 308329
270	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 7.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Redmoor Drain Catchment Name: Nene Primacy: 2	A7SE (SW)	766	4	545090 307063
271	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 9.3 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 1	A18NE (N)	766	4	545826 308807
272	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 266.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A17SW (NW)	766	4	544854 308468
273	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 19.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A7SE (SW)	766	4	545063 307078
274	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 30.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A17SW (NW)	768	4	544854 308468
275	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 152.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A17SW (NW)	769	4	544792 308333
276	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 15.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 1	A18NE (N)	769	4	545819 308813
277	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 30.5 Watercourse Level: Underground Permanent: True Watercourse Name: Redmoor Drain Catchment Name: Nene Primacy: 2	A7SE (SW)	772	4	545093 307055

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
278	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 392.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A7SE (SW)	775	4	545073 307061
279	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 4.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A7SE (SW)	775	4	545073 307061
280	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 48.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 1	A18NE (N)	775	4	545808 308824
281	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 10.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A7SE (SW)	777	4	545076 307058
282	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 216.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A8SE (S)	778	4	545754 307040
283	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 164.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A17NE (NW)	780	4	545118 308765
284	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 5.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A7SE (SW)	781	4	545082 307050
285	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 24.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A7SE (SW)	784	4	545085 307045
286	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 5.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Redmoor Drain Catchment Name: Nene Primacy: 2	A7SE (SW)	785	4	545113 307032

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
287	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 17.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Redmoor Drain Catchment Name: Nene Primacy: 2	A7SE (SW)	786	4	545117 307028
288	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 3.9 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A12NW (W)	790	4	544710 308194
289	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 12.8 Watercourse Level: Underground Permanent: True Watercourse Name: Redmoor Drain Catchment Name: Nene Primacy: 2	A7SE (SW)	794	4	545127 307015
290	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 5.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A12NW (W)	794	4	544707 308196
291	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 65.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A9SW (SE)	796	4	546064 307200
292	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 311.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Not Supplied Primacy: 2	A9SW (SE)	796	4	546064 307200
293	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 64.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A17SW (NW)	798	4	544830 308488
294	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 7.3 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A17SW (NW)	798	4	544826 308482
295	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 248.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A19SE (NE)	798	4	546281 308519

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
296	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 128.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A12NW (W)	799	4	544701 308199
297	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 5.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A12NW (W)	799	4	544701 308199
298	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 239.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A7SE (SW)	800	4	545101 307021
299	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 306.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A17SW (NW)	800	4	544812 308464
300	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 54.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Redmoor Drain Catchment Name: Nene Primacy: 2	A7SE (SW)	802	4	545134 307004
301	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 5.7 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A12NW (W)	805	4	544697 308201
302	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 62.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A12NW (W)	808	4	544698 308212
303	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 68.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A12SW (W)	808	4	544589 307886
304	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 7.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A12NW (W)	810	4	544692 308203

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
305	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 7.2 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A12NW (W)	818	4	544684 308207
306	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 11.5 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 1	A18NE (N)	822	4	545812 308872
307	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 42.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A19SE (NE)	824	4	546414 308379
308	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 79.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A12NW (W)	825	4	544678 308210
309	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 7.4 Watercourse Level: Underground Permanent: True Watercourse Name: Redmoor Drain Catchment Name: Nene Primacy: 2	A7SE (S)	830	4	545168 306961
310	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 120.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 1	A18NE (N)	833	4	545813 308884
311	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 12.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Redmoor Drain Catchment Name: Nene Primacy: 2	A7SE (S)	835	4	545172 306955
312	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 8.0 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A7SE (S)	835	4	545184 306951
313	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 155.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A17NE (N)	836	4	545166 308854

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
314	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 138.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Redmoor Drain Catchment Name: Nene Primacy: 2	A7SE (S)	842	4	545179 306945
315	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 370.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A18NW (N)	842	4	545276 308904
316	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 4.9 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A9SW (SE)	849	4	546066 307135
317	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 126.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A9SW (SE)	853	4	546066 307130
318	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 347.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A17SW (NW)	860	4	544782 308530
319	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 1.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 2	A14NE (E)	861	4	546534 308169
320	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 4.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A17SW (NW)	862	4	544782 308530
321	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 4.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 2	A14NE (E)	862	4	546535 308167
322	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 1.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 2	A14NE (E)	865	4	546537 308171

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
323	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 7.2 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A17SW (NW)	866	4	544778 308533
324	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 27.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 2	A14NE (E)	866	4	546538 308170
325	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 22.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A12NW (W)	870	4	544641 308238
326	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 131.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A17SW (NW)	873	4	544772 308537
327	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 152.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A11SE (W)	874	4	544528 307917
328	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 3.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A11SE (W)	874	4	544528 307917
329	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 3.9 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A11SE (W)	875	4	544526 307914
330	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 158.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A11SE (W)	876	4	544525 307910
331	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 325.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A17SW (NW)	877	4	544741 308501

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
332	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 73.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 2	A9NE (E)	882	4	546478 307575
333	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 83.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 2	A15SW (E)	883	4	546569 307852
334	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 633.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A9SW (SE)	883	4	546039 307077
335	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 21.9 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 2	A15SW (E)	884	4	546569 307852
336	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 307.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A3NE (S)	887	4	545592 306876
337	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 113.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A3NE (S)	887	4	545592 306876
338	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 52.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 2	A15SW (E)	888	4	546569 307830
339	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 40.3 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 2	A14SE (E)	888	4	546502 307611
340	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 83.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A7SW (SW)	889	4	544775 307133

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
341	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 11.0 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 2	A15NW (E)	891	4	546584 307942
342	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 148.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 2	A15NW (E)	891	4	546584 307942
343	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 15.2 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A12NW (W)	892	4	544621 308247
344	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 57.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 2	A15SW (E)	892	4	546580 307859
345	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 5.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 2	A15SW (E)	892	4	546582 307896
346	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 35.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 2	A15SW (E)	892	4	546582 307896
347	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 89.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A7SW (SW)	892	4	544723 307183
348	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 212.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A7SE (SW)	893	4	544914 307020
349	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 10.8 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 2	A14SE (E)	893	4	546532 307670

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
350	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 49.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 2	A14SE (E)	893	4	546532 307670
351	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 62.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 2	A15SW (E)	895	4	546566 307778
352	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 10.7 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 2	A15SW (E)	896	4	546579 307838
353	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 87.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 2	A9NE (E)	896	4	546478 307547
354	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 6.4 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 2	A15SW (E)	897	4	546587 307898
355	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 30.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 2	A15SW (E)	898	4	546579 307828
356	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 143.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A7SW (SW)	899	4	544791 307105
357	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 39.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 2	A14SE (E)	899	4	546535 307660
358	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 33.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 2	A15SW (E)	903	4	546578 307797

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
359	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 271.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 2	A15SW (E)	903	4	546578 307797
360	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 199.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 2	A15SW (E)	903	4	546593 307901
361	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 14.9 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A12NW (W)	904	4	544606 308243
362	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 5.2 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 2	A15SW (E)	905	4	546559 307711
363	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 39.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 2	A19SE (E)	906	4	546545 308291
364	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 154.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 2	A15NW (E)	906	4	546600 307985
365	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 163.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 2	A15NW (E)	907	4	546592 308100
366	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 105.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 2	A14SE (E)	907	4	546544 307662
367	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 10.0 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 2	A15SW (E)	908	4	546577 307764

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
368	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 33.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A12NW (W)	908	4	544607 308253
369	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 37.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 2	A15SW (E)	910	4	546576 307754
370	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 55.3 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 1	A23SE (N)	915	4	545778 308981
371	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 478.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 2	A15SW (E)	917	4	546573 307717
372	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 62.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A7SW (SW)	917	4	544645 307241
373	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 5.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 2	A15NW (E)	918	4	546568 308259
374	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 113.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A12NW (W)	919	4	544593 308249
375	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 165.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A17NE (NW)	920	4	544927 308798
376	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 326.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A17NE (NW)	920	4	544927 308798

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
377	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 27.4 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 2	A14SE (E)	920	4	546541 307621
378	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 10.4 Watercourse Level: Underground Permanent: True Watercourse Name: Redmoor Drain Catchment Name: Nene Primacy: 2	A3NW (S)	926	4	545265 306837
379	**OS Water Network Lines** Watercourse Form: Tidal river Watercourse Length: 1775.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: River Nene Catchment Name: Nene Primacy: 1	A6NE (SW)	927	4	544507 307493
380	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 16.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A6NE (SW)	927	4	544507 307493
381	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 18.2 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A7NW (SW)	930	4	544600 307285
382	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 20.2 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 2	A14SE (E)	931	4	546553 307621
383	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 4.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Redmoor Drain Catchment Name: Nene Primacy: 2	A3NW (S)	933	4	545272 306829
384	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 385.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 2	A15SW (E)	935	4	546560 307627
385	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 106.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A7NW (SW)	935	4	544586 307297

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
386	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 15.3 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A3NW (S)	936	4	545246 306831
387	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 10.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Redmoor Drain Catchment Name: Nene Primacy: 2	A3NW (S)	936	4	545275 306825
388	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 29.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 2	A14SE (E)	937	4	546548 307595
389	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 17.4 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A6NE (W)	938	4	544493 307500
390	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 390.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A17SW (NW)	940	4	544707 308562
391	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 5.4 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A17SW (W)	941	4	544577 308268
392	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 1.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 2	A15SW (E)	943	4	546559 307602
393	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 4.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 2	A15SW (E)	944	4	546559 307600
394	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 238.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 2	A15SW (E)	944	4	546559 307600

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
395	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 407.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A11SE (W)	945	4	544446 307760
396	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 5.5 Watercourse Level: Underground Permanent: True Watercourse Name: Redmoor Drain Catchment Name: Nene Primacy: 2	A3NW (S)	946	4	545277 306815
397	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 12.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A17SW (W)	947	4	544572 308271
398	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 6.5 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 2	A15SW (E)	948	4	546563 307600
399	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 11.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A3NW (S)	949	4	545252 306816
400	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 13.4 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A3NW (S)	949	4	545252 306816
401	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 67.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A17NE (NW)	949	4	544901 308813
402	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 221.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A6NE (W)	949	4	544479 307510
403	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 74.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Redmoor Drain Catchment Name: Nene Primacy: 2	A3NW (S)	951	4	545278 306810

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
404	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 425.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 2	A15SW (E)	954	4	546570 307599
405	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 120.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A3NW (S)	956	4	545241 306812
406	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 112.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A3NW (S)	958	4	545260 306806
407	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 3.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 2	A10NW (E)	960	4	546562 307569
408	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 253.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A17SW (NW)	961	4	544690 308575
409	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 358.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Not Supplied Primacy: 2	A9SW (SE)	962	4	546073 307004
410	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 694.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Not Supplied Primacy: 2	A9SW (SE)	962	4	546073 307004
411	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 126.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 1	A23SE (N)	967	4	545811 309026
412	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 502.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A9SW (SE)	975	4	546061 306982

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
413	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 344.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A2NE (SW)	996	4	545000 306851
414	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 116.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 2	A3NE (S)	997	4	545634 306771

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
415	**Licensed Waste Management Facilities (Locations)** Licence Number: 73121 Location: Wisbech Waste Transfer Centre, Algores Way, Wisbech, Cambridgeshire, PE13 2TQ Operator Name: Frimstone Limited Operator Location: Not Supplied Authority: Environment Agency - Anglian Region, Northern Area Site Category: HCI Waste TS + treatment **Licence Status: Modified** Issued: 8th October 2003 Last Modified: 7th January 2015 Expires: Not Supplied Suspended: Not Supplied Revoked: Not Supplied Surrendered: Not Supplied IPPC Reference: Not Supplied Positional Accuracy: Located by supplier to within 100m	A13SW (S)	29	1	545500 307800
416	**Licensed Waste Management Facilities (Locations)** Licence Number: 73150 Location: Land/premises At, New Bridge Lane, Wisbech, Cambridgeshire, PE14 0SE Operator Name: Copart U K Ltd Operator Location: Not Supplied Authority: Environment Agency - Anglian Region, Northern Area Site Category: End of Life Vehicles **Licence Status: Modified** Issued: 12th July 2005 Last Modified: 24th August 2015 Expires: Not Supplied Suspended: Not Supplied Revoked: Not Supplied Surrendered: Not Supplied IPPC Reference: Not Supplied Positional Accuracy: Located by supplier to within 100m	A13SW (SW)	118	1	545300 307700
417	**Licensed Waste Management Facilities (Locations)** Licence Number: 103971 Location: Sherwood Park Ltd, Brittania Way, Wisbech, Cambridgeshire, PE13 2RB Operator Name: Sherwood Park Ltd Operator Location: Not Supplied Authority: Environment Agency - Anglian Region, Northern Area Site Category: HCI Waste TS + treatment **Licence Status: Issued** Issued: 20th March 2012 Last Modified: Not Supplied Expires: Not Supplied Suspended: Not Supplied Revoked: Not Supplied Surrendered: Not Supplied IPPC Reference: Not Supplied Positional Accuracy: Located by supplier to within 100m	A14NW (E)	329	1	546000 308100
418	**Licensed Waste Management Facilities (Locations)** Licence Number: 70113 Location: 75 Boleness Road, Wisbech, Cambridgeshire, PE13 2RB Operator Name: Amey Cespa (East) Ltd Operator Location: Not Supplied Authority: Environment Agency - Anglian Region, Northern Area Site Category: Household Waste Amenity Sites **Licence Status: Transferred** Issued: 9th November 1992 Last Modified: Not Supplied Expires: Not Supplied Suspended: Not Supplied Revoked: Not Supplied Surrendered: Not Supplied IPPC Reference: Not Supplied Positional Accuracy: Located by supplier to within 100m	A14NW (E)	424	1	546100 308100

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
419	**Licensed Waste Management Facilities (Locations)** Licence Number: 70171 Location: 29 Oldfield Lane, Wisbech, Cambridgeshire, PE13 2RJ Operator Name: B H Porter & Son Limited Operator Location: Not Supplied Authority: Environment Agency - Anglian Region, Northern Area Site Category: Metal Recycling Sites (Mixed) **Licence Status: Transferred** Issued: 17th November 1993 Last Modified: Not Supplied Expires: Not Supplied Suspended: Not Supplied Revoked: Not Supplied Surrendered: Not Supplied IPPC Reference: Not Supplied Positional Accuracy: Located by supplier to within 100m	A18NE (N)	703	1	545600 308800
420	**Licensed Waste Management Facilities (Locations)** Licence Number: 70182 Location: 68 Weasenham Lane, Wisbech, Cambridgeshire, PE13 2RY Operator Name: Grief Mr & Mrs Operator Location: Not Supplied Authority: Environment Agency - Anglian Region, Northern Area Site Category: Metal Recycling Sites (Vehicle Dismantlers) **Licence Status: Transferred** Issued: 7th October 1994 Last Modified: Not Supplied Expires: Not Supplied Suspended: Not Supplied Revoked: Not Supplied Surrendered: Not Supplied IPPC Reference: Not Supplied Positional Accuracy: Located by supplier to within 100m	A19SW (NE)	727	1	546200 308500
421	**Licensed Waste Management Facilities (Locations)** Licence Number: 73171 Location: Porters Depot, Oldfield Lane, Eastern Region, Wisbech, Cambridgeshire, PE13 2RJ Operator Name: B H Porter & Son Limited Operator Location: Not Supplied Authority: Environment Agency - Anglian Region, Northern Area Site Category: End of Life Vehicles **Licence Status: Transferred** Issued: 4th November 2004 Last Modified: Not Supplied Expires: Not Supplied Suspended: Not Supplied Revoked: Not Supplied Surrendered: Not Supplied IPPC Reference: Not Supplied Positional Accuracy: Located by supplier to within 10m	A23SE (N)	920	1	545751 308994
422	**Licensed Waste Management Facilities (Locations)** Licence Number: 402592 Location: Wisbech Business Park, Wisbech, Cambridgeshire, PE13 2RJ Operator Name: Amaks Motors Limited Operator Location: Not Supplied Authority: Environment Agency - Anglian Region, Northern Area Site Category: Vehicle Depollution Facility <5000 tps **Licence Status: Issued** Issued: 7th November 2017 Last Modified: Not Supplied Expires: Not Supplied Suspended: Not Supplied Revoked: Not Supplied Surrendered: Not Supplied IPPC Reference: Not Supplied Positional Accuracy: Located by supplier to within 10m	A23SE (N)	937	1	545839 308985
	Local Authority Landfill Coverage Name: Fenland District Council - Has no landfill data to supply		0	5	545527 307919
	Local Authority Landfill Coverage Name: Cambridgeshire County Council - Has not been able to supply Landfill data		0	6	545527 307919
423	**Potentially Infilled Land (Non-Water)** Bearing Ref: NE Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1991	A19SW (NE)	635	-	546101 308466

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
424	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1959	A13NE (NE)	309	-	545874 308230
425	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1959	A12SE (SW)	320	-	545097 307648
426	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1959	A18SW (NW)	331	-	545249 308277
427	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1959	A18SW (NW)	338	-	545279 308328
428	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1959	A18SW (NW)	385	-	545214 308323
429	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1959	A12SE (SW)	388	-	545046 307595
430	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1959	A17SE (NW)	590	-	545056 308453
431	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1959	A19SW (NE)	625	-	546060 308485
432	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1959	A19NW (NE)	705	-	545959 308660
433	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1959	A18NE (N)	737	-	545782 308793
434	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1959	A14NE (E)	779	-	546443 308195
435	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1959	A18NE (N)	793	-	545800 308847
436	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1959	A19SE (NE)	797	-	546390 308368
437	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1959	A19SE (NE)	955	-	546468 308536

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
438	**Registered Waste Transfer Sites** Licence Holder: Cambs C.C. Waste Disposal Authority Licence Reference: HWRC.12/01 Site Location: Wisbech H.W.R.C, Boleness Road, Wisbech, Cambridgeshire Operator Location: Castle Court, Shire Hall, Cambridge, Cambridgeshire, Cb3 04p Authority: Environment Agency - Anglian Region, Northern Area Site Category: Civic Amenity Max Input Rate: Very Small (Less than 10,000 tonnes per year) Waste Source Restrictions: No known restriction on source of waste Licence Status: Operational as far as is knownOperational Dated: 1st March 1997 Preceded By Licence: HWRC.12 Superseded By Licence: Not Given Positional Accuracy: Manually positioned to the address or location Boundary Quality: Not Supplied Authorised Waste: Car Batteries Compressed Gas Cylinders Fridges/Freezers Garden & Green Waste Glass H'Hold Waste (As In Spec.W.Regs '96) Hazardous H'Hold Waste Household Waste N.O.S. Max.Waste Permitted By Licence Paper Plastics Scrap Metal Textiles Waste Oils Prohibited Waste: Asbestos Waste N.O.S.	A14NW (E)	412	1	546100 308050
438	**Registered Waste Transfer Sites** Licence Holder: Cambs C.C. Waste Disposal Authority Licence Reference: HWRC.12 Site Location: Wisbech H.W.R.C, Boleness Road, Wisbech, Cambridgeshire Operator Location: Castle Court, Shire Hall, Cambridge, Cambridgeshire, Cb3 04p Authority: Environment Agency - Anglian Region, Northern Area Site Category: Civic Amenity Max Input Rate: Very Small (Less than 10,000 tonnes per year) Waste Source Restrictions: No known restriction on source of waste Licence Status: Record supersededSuperseded Dated: 9th November 1992 Preceded By Licence: Not Given Superseded By Licence: HWRC.12/01 Positional Accuracy: Manually positioned to the address or location Boundary Quality: Not Supplied Authorised Waste: Householders Waste	A14NW (E)	412	1	546100 308050
439	**Registered Waste Transfer Sites** Licence Holder: Kett Autopaints Ltd Licence Reference: TS 64 Site Location: 3 & 5 Boleness Road, WISBECH, Cambridgeshire, PE13 2RB Operator Location: As Site Address Authority: Environment Agency - Anglian Region, Northern Area Site Category: Transfer Max Input Rate: Very Small (Less than 10,000 tonnes per year) Waste Source Restrictions: No known restriction on source of waste Licence Status: Licence lapsed/cancelled/defunct/not applicable/surrenderedCancelled Dated: 1st September 1992 Preceded By Licence: Not Given Superseded By Licence: Not Given Positional Accuracy: Manually positioned to the address or location Boundary Quality: Not Supplied Authorised Waste: Contam.With Paint Max.Storage In Licence Waste Solvents	A19SE (NE)	749	1	546370 308300

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
440	**Registered Waste Treatment or Disposal Sites** Licence Holder: E A & Mrs Gentile - Wisbech Motors Licence Reference: SY/039 Site Location: 68 Weasenham Lane, WISBECH, Cambridgeshire, PE13 2R Operator Location: Whitehouse, Waterless Road, WISBECH, Cambridgeshire, PE14 7AF Authority: Environment Agency - Anglian Region, Northern Area Site Category: Scrapyard Max Input Rate: Very Small (Less than 10,000 tonnes per year) Waste Source Restrictions: No known restriction on source of waste Licence Status: Operational as far as is knownOperational Dated: 7th October 1994 Preceded By Licence: Not Given Superseded By Licence: Not Given Positional Accuracy: Manually positioned to the road within the address or location Boundary Quality: Not Supplied Authorised Waste: Liqs As Integral Part Of Vehicles Only Vehicles/Parts	A19SW (NE)	651	1	546120 308470
441	**Registered Waste Treatment or Disposal Sites** Licence Holder: C.M.B. Licence Reference: TS 8 Site Location: Weasenham Lane, WISBECH, Cambridgeshire, PE13 2RP Operator Location: As Site Address Authority: Environment Agency - Anglian Region, Northern Area Site Category: Storage - Tank Max Input Rate: Undefined Waste Source Restrictions: Only waste produced on site Licence Status: Licence lapsed/cancelled/defunct/not applicable/surrenderedCancelled Dated: 1st October 1986 Preceded By Licence: Not Given Superseded By Licence: Not Given Positional Accuracy: Manually positioned to the road within the address or location Boundary Quality: Not Supplied Authorised Waste: Aromatic Hydrocarbons Caustic Latex, (Compound Sludge) Petroleum Solvent Bearing Lacquer Thinners Waste Oils	A19SW (NE)	659	1	546200 308400
442	**Registered Waste Treatment or Disposal Sites** Licence Holder: B H Porter & Son Licence Reference: SY/025 Site Location: Virginia Waters, 29 Oldfield Lane, WISBECH, Cambridg Operator Location: As Site Address Authority: Environment Agency - Anglian Region, Northern Area Site Category: Scrapyard Max Input Rate: Small (Equal to or greater than 10,000 and less than 25,000 tonnes per year) Waste Source Restrictions: No known restriction on source of waste Licence Status: Operational as far as is knownOperational Dated: 17th November 1993 Preceded By Licence: Not Given Superseded By Licence: Not Given Positional Accuracy: Manually positioned to the address or location Boundary Quality: Not Supplied Authorised Waste: Batteries Cable Clean Uncontam. Metal Drums Domestic Appliances, Refrigerators Engine Blocks Liqs As Integral Part Of Vehicles Only Metal Swarf Non-Toxic,Non-Haz Ferr./Non-Ferr.Metal Tyres Vehicles Prohibited Waste: Electrical Transformers/Capcitors Waste N.O.S.	A18NE (N)	686	1	545750 308750

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
443	**Control of Major Accident Hazards Sites (COMAH)** Name: H L Hutchinson Limited Location: Wisbech - Marvan, Marvan, 25 Cromwell Road, Wisbech, Cambridgeshire, Pe14 0sd Reference: Not Supplied Type: Lower Tier **Status: Active** Positional Accuracy: Manually positioned to the address or location	A12NE (W)	330	7	545117 307976
444	**Control of Major Accident Hazards Sites (COMAH)** Name: H L Hutchinson Limited Location: Wisbech, Garden Isle Frozen Foods Ltd, Weasenham Lane, Cambridgeshire, PE13 2RN Reference: Not Supplied Type: Lower Tier **Status: Active** Positional Accuracy: Manually positioned to the address or location	A18SE (NE)	514	7	545844 308507
445	**Control of Major Accident Hazards Sites (COMAH)** Name: Corsair Toiletries Ltd Location: Sandall Road, WISBECH, Cambridgeshire, PE13 2PS Reference: Not Supplied Type: Lower Tier **Status: Active** Positional Accuracy: Manually positioned to the address or location	A19NW (NE)	882	7	546174 308720
446	**Notification of Installations Handling Hazardous Substances (NIHHS)** Name: Corsair Toiletries Ltd. Location: Sandall Road/Weasenham Lane, Wisbech, Cambs, Pe13 2Ps **Status: Not Active** Positional Accuracy: Manually positioned to the road within the address or location	A19SW (NE)	624	7	546059 308484
447	**Planning Hazardous Substance Consents** Name: Hl Hutchinson Ltd Location: Land North East Of 25 Cromwell Road, Wisbech, Cambridge Authority: Fenland District Council Application Ref: F/YR14/0766/HAZ Hazardous Substance: Combination of Dangerous Substances Maximum Quantity: 1322 Application date: 26th August 2014 **Decision: Unknown at time of reportUnknown** Positional Accuracy: Manually positioned to the address or location	A12SE (SW)	487	5	544916 307664
448	**Planning Hazardous Substance Consents** Name: Corsair Toiletries Ltd Location: Sandall Road, Wisbech, Cambridgeshire, PE29 Authority: Fenland District Council Application Ref: F/Yr04/3599/Haz Hazardous Substance: Liquefied extremely flammable gas (including LPG) and natural gas (whether liquefied or not) Maximum Quantity: 0 Application date: 28th June 2004 **Decision: Deemed Consent GrantedGranted** Positional Accuracy: Manually positioned to the address or location	A19SW (NE)	668	5	546037 308555

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS 1:625,000 Solid Geology Description: West Walton Formation, Ampthill Clay Formation And Kimmeridge Clay Formation (Undifferentiated)	A13SW (SW)	0	8	545527 307919
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 90 - 120 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 15 - 30 mg/kg	A13SW (SW)	0	8	545527 307919
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 15 - 30 mg/kg	A13NW (N)	0	8	545527 308000
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 90 - 120 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 30 - 45 mg/kg	A12SE (W)	390	8	545000 307919
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 90 - 120 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 15 - 30 mg/kg	A12NE (W)	447	8	545000 308000
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 15 - 30 mg/kg	A23SW (N)	899	8	545500 309000
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: 100 - 200 mg/kg Nickel Concentration: 15 - 30 mg/kg	A23SW (N)	899	8	545527 309000

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
449	**BGS Recorded Mineral Sites** Site Name: Wisbech Depot Location: Wisbech, Cambridgeshire Source: British Geological Survey, National Geoscience Information Service Reference: 192181 Type: Opencast **Status: Active** Operator: Frimstone Ltd. Operator Location: Not Supplied Periodic Type: Not Available Geology: Inert Waste Commodity: Secondary Positional Accuracy: Located by supplier to within 10m	A13NE (NE)	0	8	545570 307960
450	**BGS Recorded Mineral Sites** Site Name: Weasenham Lane Brick Works Location: Wisbech, Cambridgeshire Source: British Geological Survey, National Geoscience Information Service Reference: 195190 Type: Opencast **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Quaternary Geology: Tidal Flat Deposits Commodity: Common Clay and Shale Positional Accuracy: Located by supplier to within 10m	A19SE (NE)	756	8	546217 308524
	BGS Measured Urban Soil Chemistry No data available				
	BGS Urban Soil Chemistry Averages No data available				
	Coal Mining Affected Areas In an area that might not be affected by coal mining				
	Non Coal Mining Areas of Great Britain No Hazard				
	Potential for Collapsible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13SW (SW)	0	8	545527 307919
	Potential for Compressible Ground Stability Hazards Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	A13SW (SW)	0	8	545527 307919
	Potential for Ground Dissolution Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13SW (SW)	0	8	545527 307919
	Potential for Landslide Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13SW (SW)	0	8	545527 307919
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	A13SW (SW)	0	8	545527 307919
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A13SW (SW)	0	8	545527 307919
	Radon Potential - Radon Affected Areas Affected Area: The property is in a Lower probability radon area (less than 1% of homes are estimated to be at or above the Action Level). Source: British Geological Survey, National Geoscience Information Service	A13SW (SW)	0	8	545527 307919
	Radon Potential - Radon Protection Measures Protection Measure: No radon protective measures are necessary in the construction of new dwellings or extensions Source: British Geological Survey, National Geoscience Information Service	A13SW (SW)	0	8	545527 307919

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
451	**Contemporary Trade Directory Entries** Name: Frimstone Ltd Location: Algores Way, Wisbech, Cambridgeshire, PE13 2TQ Classification: Sand, Gravel & Other Aggregates **Status: Active** Positional Accuracy: Automatically positioned to the address	A13NE (NE)	0	-	545639 307973
452	**Contemporary Trade Directory Entries** Name: D H L Location: Newbridge Lane, Wisbech, Cambridgeshire, PE14 0SE Classification: Pet Foods & Animal Feeds **Status: Active** Positional Accuracy: Manually positioned within the geographical locality	A13SW (SW)	19	-	545375 307789
453	**Contemporary Trade Directory Entries** Name: Mackle Apple Location: 57, Algores Way, Wisbech, Cambridgeshire, PE13 2TQ Classification: Food Products - Manufacturers **Status: Active** Positional Accuracy: Automatically positioned to the address	A13SE (E)	40	-	545684 307901
454	**Contemporary Trade Directory Entries** Name: Fountain Frozen Location: 11, Salters Way, Wisbech, PE14 0SH Classification: Frozen Food Processors & Distributors **Status: Active** Positional Accuracy: Automatically positioned to the address	A13NW (NW)	65	-	545420 308011
455	**Contemporary Trade Directory Entries** Name: Rcf Engineering Projects Ltd Location: 1a, Salters Way, Wisbech, Cambridgeshire, PE14 0SH Classification: Steel Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13SW (SW)	67	-	545340 307829
455	**Contemporary Trade Directory Entries** Name: Eddie Stobart Ltd Location: Salters Way, Wisbech, Cambridgeshire, PE14 0SH Classification: Road Haulage Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13SW (W)	99	-	545319 307861
456	**Contemporary Trade Directory Entries** Name: Style Seating Location: 47, Algores Way, Wisbech, PE13 2TQ Classification: Seating Manufacturers **Status: Active** Positional Accuracy: Automatically positioned to the address	A13NE (E)	91	-	545783 307996
456	**Contemporary Trade Directory Entries** Name: T B Bin Cleaning Location: 47, Algores Way, Wisbech, Cambridgeshire, PE13 2TQ Classification: Cleaning Services - Domestic **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13NE (E)	98	-	545791 307988
456	**Contemporary Trade Directory Entries** Name: Fruitpig Company Ltd Location: 6, Anglia Way, Wisbech, PE13 2TY Classification: Food Products - Manufacturers **Status: Active** Positional Accuracy: Automatically positioned to the address	A13NE (E)	104	-	545794 308008
456	**Contemporary Trade Directory Entries** Name: Newtech Engineering Division Location: Anglia Way, Wisbech, Cambridgeshire, PE13 2NT Classification: Engineers - General **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13NE (E)	119	-	545812 307994
456	**Contemporary Trade Directory Entries** Name: Newtech Location: Anglia Way, Wisbech, Cambridgeshire, PE13 2NT Classification: Refrigeration Equipment Manufacturers & Distributors **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13NE (E)	119	-	545812 307994
456	**Contemporary Trade Directory Entries** Name: Priden Engineering Location: Unit 8,Anglia Way, Wisbech, Cambridgeshire, PE13 2TY Classification: Engineering Machine Services **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A13NE (E)	143	-	545837 307976

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
456	**Contemporary Trade Directory Entries** Name: Equinox Location: Anglia Way, Wisbech, Cambridgeshire, PE13 2TY Classification: Car Dealers - Used **Status:** **Inactive** Positional Accuracy: Manually positioned to the road within the address or location	A13NE (E)	162	-	545854 308002
457	**Contemporary Trade Directory Entries** Name: Rational Technical Services Uk Ltd Location: Unit 4, Algores Square, 30, Algores Way, Wisbech, Cambridgeshire, PE13 2TQ Classification: Catering Equipment - Servicing & Repairs **Status:** **Inactive** Positional Accuracy: Automatically positioned to the address	A13NE (NE)	97	-	545706 308091
457	**Contemporary Trade Directory Entries** Name: Floorspan Contracts Location: Unit 4, Algores Square, 30, Algores Way, Wisbech, Cambridgeshire, PE13 2TQ Classification: Concrete Products **Status:** **Inactive** Positional Accuracy: Automatically positioned to the address	A13NE (NE)	97	-	545706 308091
458	**Contemporary Trade Directory Entries** Name: T E S Europe Ltd Location: Unit 6, Europa Square, Europa Way, Wisbech, PE13 2UR Classification: Electrical Engineers **Status:** **Inactive** Positional Accuracy: Automatically positioned to the address	A13NE (N)	97	-	545597 308170
459	**Contemporary Trade Directory Entries** Name: Copart Location: New Bridge Lane, WISBECH, Cambridgeshire, PE14 0SE Classification: Car Dealers **Status:** **Active** Positional Accuracy: Automatically positioned to the address	A13SW (SW)	112	-	545278 307769
460	**Contemporary Trade Directory Entries** Name: Rainbow Conversions Ltd Location: Unit 1, Algores Square, 30, Algores Way, Wisbech, Cambridgeshire, PE13 2TQ Classification: Caravan Dealers & Manufacturers **Status:** **Inactive** Positional Accuracy: Automatically positioned to the address	A13NE (NE)	123	-	545721 308112
460	**Contemporary Trade Directory Entries** Name: Truck Logic Location: Europa Way, Wisbech, Cambridgeshire, PE13 2TZ Classification: Commercial Vehicle Servicing, Repairs, Parts & Accessories **Status:** **Inactive** Positional Accuracy: Automatically positioned to the address	A13NE (NE)	143	-	545754 308112
461	**Contemporary Trade Directory Entries** Name: Truckmasters Handling Ltd Location: 94, Boleness Road, WISBECH, Cambridgeshire, PE13 2XQ Classification: Fork Lift Trucks **Status:** **Active** Positional Accuracy: Automatically positioned to the address	A13SE (E)	125	-	545790 307899
461	**Contemporary Trade Directory Entries** Name: Aj Paints Ltd Location: 92, Boleness Road, Wisbech, Cambridgeshire, PE13 2XQ Classification: Painting & Decorating Supplies **Status:** **Inactive** Positional Accuracy: Automatically positioned to the address	A13SE (E)	147	-	545821 307905
462	**Contemporary Trade Directory Entries** Name: F R S Motor Rewind Location: New Bridge La, Wisbech, Cambridgeshire, PE14 0SE Classification: Electric Motor Sales & Service **Status:** **Inactive** Positional Accuracy: Manually positioned to the road within the address or location	A13SW (W)	126	-	545277 307832
463	**Contemporary Trade Directory Entries** Name: Elsome Engineering Location: Unit 1,Anglia Way, Wisbech, Cambridgeshire, PE13 2TY Classification: Mechanical Engineers **Status:** **Inactive** Positional Accuracy: Manually positioned to the address or location	A13NE (NE)	151	-	545808 308077

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
463	**Contemporary Trade Directory Entries** Name: Donna Rolfe Interiors Location: Unit 3, Anglia Way, Wisbech, Cambridgeshire, PE13 2TY Classification: Soft Furnishings - Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13NE (E)	170	-	545850 308044
463	**Contemporary Trade Directory Entries** Name: Ford & Slater Location: Commercial House, Algores Way, Wisbech, Cambridgeshire, PE13 2TQ Classification: Commercial Vehicle Servicing, Repairs, Parts & Accessories **Status: Active** Positional Accuracy: Automatically positioned to the address	A13NE (NE)	180	-	545837 308088
464	**Contemporary Trade Directory Entries** Name: Truckmax Ltd Location: Orchard House, 90, Boleness Road, Wisbech, PE13 2XQ Classification: Exhaust System Manufacturers & Wholesalers **Status: Active** Positional Accuracy: Automatically positioned to the address	A13NE (E)	164	-	545849 307926
465	**Contemporary Trade Directory Entries** Name: Bailey Location: Europa Way, Wisbech, Cambridgeshire, PE13 2TZ Classification: Commercial Vehicle Servicing, Repairs, Parts & Accessories **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	A13NE (NE)	177	-	545742 308163
466	**Contemporary Trade Directory Entries** Name: Lineage Logistics Location: 101, Boleness Road, Wisbech, Cambridgeshire, PE13 2XQ Classification: Frozen Food Processors & Distributors **Status: Active** Positional Accuracy: Automatically positioned to the address	A13SE (SE)	188	-	545762 307762
467	**Contemporary Trade Directory Entries** Name: Ultimate Location: Unit 4, Anglia Way, Wisbech, Cambridgeshire, PE13 2TY Classification: Tyre Dealers **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A13NE (E)	188	-	545876 308024
467	**Contemporary Trade Directory Entries** Name: Premiere Fibre Supplies Ltd Location: Unit 3, Venture Court, Boleness Road, Wisbech, Cambridgeshire, PE13 2XQ Classification: Telecommunications Equipment & Systems **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14NW (E)	220	-	545910 308021
467	**Contemporary Trade Directory Entries** Name: Abtec Location: Unit 4, Venture Court, 82, Boleness Road, Wisbech, Cambridgeshire, PE13 2XQ Classification: Abrasive Products - Wholesalers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14NW (E)	229	-	545911 308051
467	**Contemporary Trade Directory Entries** Name: Albon Moulds & Tools Location: Unit 2, Venture Court, Boleness Road, Wisbech, Cambridgeshire, PE13 2XQ Classification: Precision Engineers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14NW (E)	229	-	545921 308012
467	**Contemporary Trade Directory Entries** Name: Abtec Location: Unit 4, Venture Court, 82, Boleness Road, Wisbech, PE13 2XQ Classification: Abrasive Products - Wholesalers **Status: Active** Positional Accuracy: Automatically positioned to the address	A14NW (E)	231	-	545915 308046
467	**Contemporary Trade Directory Entries** Name: Ms Development Ltd Location: Unit 5, Venture Court, Boleness Road, Wisbech, Cambridgeshire, PE13 2XQ Classification: Automation Systems & Equipment **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14NW (E)	239	-	545919 308060

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
467	**Contemporary Trade Directory Entries** Name: Russells Glass & Window Location: Unit 5, Venture Court, Boleness Road, Wisbech, Cambridgeshire, PE13 2XQ Classification: Fascias and Soffits **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14NW (E)	239	-	545919 308060
467	**Contemporary Trade Directory Entries** Name: Solar Savings Uk Ltd Location: Unit 6, Venture Court, 82, Boleness Road, Wisbech, Cambridgeshire, PE13 2XQ Classification: Electricity Generating & Distributing Equipment **Status: Active** Positional Accuracy: Automatically positioned to the address	A14NW (E)	249	-	545927 308068
467	**Contemporary Trade Directory Entries** Name: Wellington Drive Technologies Location: Algores Way, Wisbech, Cambridgeshire, PE13 2TQ Classification: Electric Motor Manufacturers **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A14NW (E)	249	-	545926 308068
467	**Contemporary Trade Directory Entries** Name: Burall Infosmart Ltd Location: Unit 8, Venture Court, 82, Boleness Road, Wisbech, Cambridgeshire, PE13 2XQ Classification: Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14NW (E)	277	-	545957 308067
468	**Contemporary Trade Directory Entries** Name: Watson Petroleum Ltd Location: 95, Boleness Road, Wisbech, PE13 2XQ Classification: Oil Fuel Distributors **Status: Active** Positional Accuracy: Automatically positioned to the address	A13SE (E)	197	-	545828 307831
468	**Contemporary Trade Directory Entries** Name: Watson Petroleum Ltd Location: 95, Boleness Road, Wisbech, Cambridgeshire, PE13 2XQ Classification: Oil Fuel Distributors **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13SE (E)	198	-	545828 307829
468	**Contemporary Trade Directory Entries** Name: Watson Petroleum Ltd Location: 95, Boleness Road, Wisbech, Cambridgeshire, PE13 2XQ Classification: Oil Fuel Distributors **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13SE (E)	198	-	545828 307829
469	**Contemporary Trade Directory Entries** Name: Maha Uk Location: 1 Europa Way, Wisbech, Cambridgeshire, PE13 2TZ Classification: Garage Equipment **Status: Active** Positional Accuracy: Manually positioned to the address or location	A13NE (NE)	204	-	545738 308199
469	**Contemporary Trade Directory Entries** Name: Maha Uk Ltd Location: Maha UK Limited, 1, Europa Way, Wisbech, PE13 2TZ Classification: Garage Equipment **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13NE (NE)	209	-	545741 308203
469	**Contemporary Trade Directory Entries** Name: Icon Engineering Wisbech Ltd Location: Europa Way, WISBECH, Cambridgeshire, PE13 2TZ Classification: Engineers - General **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13NE (NE)	212	-	545709 308231
470	**Contemporary Trade Directory Entries** Name: Kirk Coachworks Ltd Location: 4, New Bridge Lane, Wisbech, Cambridgeshire, PE14 0SE Classification: Car Body Repairs **Status: Active** Positional Accuracy: Automatically positioned to the address	A12SE (W)	205	-	545190 307818

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
471	**Contemporary Trade Directory Entries** Name: Tiger Racing Location: Unit 10, Anglia Way, Wisbech, Cambridgeshire, PE13 2TY Classification: Car Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14NW (E)	208	-	545901 307998
471	**Contemporary Trade Directory Entries** Name: Tiger Racing Location: Unit 10, Anglia Way, Wisbech, Cambridgeshire, PE13 2TY Classification: Car Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14NW (E)	208	-	545901 307998
471	**Contemporary Trade Directory Entries** Name: Martins Caravans Sales Ltd Location: Unit 11, Anglia Way, WISBECH, Cambridgeshire, PE13 2TY Classification: Caravan Dealers & Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14NW (E)	233	-	545927 307989
472	**Contemporary Trade Directory Entries** Name: Currys Pc World Location: Unit B, Belgrave Retail Park, Sandown Road, Wisbech, PE14 0SL Classification: Electrical Goods Sales, Manufacturers & Wholesalers **Status: Active** Positional Accuracy: Automatically positioned to the address	A13NW (NW)	209	-	545352 308212
473	**Contemporary Trade Directory Entries** Name: Fresh Peel Produce Ltd Location: 85, Boleness Road, Wisbech, Cambridgeshire, PE13 2XQ Classification: Food Products - Manufacturers **Status: Active** Positional Accuracy: Automatically positioned to the address	A14SW (E)	246	-	545931 307912
474	**Contemporary Trade Directory Entries** Name: Welbourns Of Wisbech Ltd Location: Wisbech, PE14 0SE Classification: Engineers - General **Status: Active** Positional Accuracy: Automatically positioned to the address	A12SE (W)	271	-	545129 307847
475	**Contemporary Trade Directory Entries** Name: R S Refinishings Location: 20, Algores Way, Wisbech, PE13 2TQ Classification: Spraying - Paint & Coatings **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13NE (NE)	286	-	545796 308258
476	**Contemporary Trade Directory Entries** Name: Fenland Radiator Services Location: 2, New Bridge Lane, WISBECH, Cambridgeshire, PE14 0SE Classification: Garage Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A12SE (W)	294	-	545122 307898
477	**Contemporary Trade Directory Entries** Name: Blyth Equipment Ltd Location: 28a-28b Europa Way, Wisbech, Cambridgeshire, PE13 2TZ Classification: Garage Equipment **Status: Inactive** Positional Accuracy: Manually positioned within the geographical locality	A18SE (NE)	298	-	545715 308334
477	**Contemporary Trade Directory Entries** Name: Blyth Equipment Ltd Location: 28a, Europa Way, Wisbech, PE13 2TZ Classification: Car Engine Tuning & Diagnostic Services **Status: Active** Positional Accuracy: Automatically positioned to the address	A18SE (NE)	302	-	545711 308342
477	**Contemporary Trade Directory Entries** Name: The Cabinet Maker Location: 26, Europa Way, Wisbech, PE13 2TZ Classification: Cabinet Makers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18SE (N)	302	-	545681 308362
478	**Contemporary Trade Directory Entries** Name: P G Amps Ltd Location: Algores Way, Wisbech, Cambridgeshire, PE13 2TQ Classification: Meat - Wholesale **Status: Active** Positional Accuracy: Automatically positioned to the address	A14NW (NE)	314	-	545915 308201

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
479	**Contemporary Trade Directory Entries** Name: Marshall Of Wisbech Location: 1, Sandown Road, Wisbech, Cambridgeshire, PE14 0SQ Classification: Car Dealers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18SW (N)	316	-	545359 308367
480	**Contemporary Trade Directory Entries** Name: Priden Engineering Ltd Location: Algores Way, Wisbech, Cambridgeshire, PE13 2TQ Classification: Engineering Machine Services **Status: Inactive** Positional Accuracy: Manually positioned within the geographical locality	A13NE (NE)	319	-	545865 308248
481	**Contemporary Trade Directory Entries** Name: W E P Fabrications Ltd Location: Unit 11 Europa Way, Wisbech, Cambridgeshire, PE13 2TZ Classification: Aluminium Fabricators **Status: Active** Positional Accuracy: Manually positioned to the address or location	A18SE (NE)	324	-	545787 308312
482	**Contemporary Trade Directory Entries** Name: Alibulk Location: 72-74, Boleness Road, Wisbech, Cambridgeshire, PE13 2RB Classification: Commercial Vehicle Manufacturers **Status: Active** Positional Accuracy: Automatically positioned to the address	A14NW (E)	331	-	546011 308075
483	**Contemporary Trade Directory Entries** Name: Bailey Ltd Location: 36, Europa Way, Wisbech, PE13 2TZ Classification: Tungsten Tool Manufacturers & Distributors **Status: Active** Positional Accuracy: Automatically positioned to the address	A18SE (NE)	345	-	545745 308369
483	**Contemporary Trade Directory Entries** Name: Trinox Ltd Location: 38d Europa Way, Wisbech, Cambridgeshire, PE13 2TZ Classification: Car Customisation & Conversion Specialists **Status: Active** Positional Accuracy: Automatically positioned to the address	A18SE (NE)	351	-	545768 308360
484	**Contemporary Trade Directory Entries** Name: Blossoms & Bows Ltd Location: Unit 3, Foster Business Park, 79, Boleness Road, Wisbech, PE13 2XQ Classification: Greeting Card Publishers & Wholesalers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14NW (E)	366	-	546059 307997
485	**Contemporary Trade Directory Entries** Name: E M G Motor Group Location: Cromwell Rd, Wisbech, Cambridgeshire, PE14 0SF Classification: Car Dealers **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	A18SW (N)	393	-	545381 308465
485	**Contemporary Trade Directory Entries** Name: Screwfix Location: 14a, Cromwell Road, Wisbech, PE14 0RG Classification: Builders' Merchants **Status: Active** Positional Accuracy: Automatically positioned to the address	A18SW (N)	424	-	545354 308488
485	**Contemporary Trade Directory Entries** Name: Formula One Autocentres Location: 14, Cromwell Road, Wisbech, PE14 0RG Classification: Tyre Dealers **Status: Active** Positional Accuracy: Automatically positioned to the address	A18SW (N)	431	-	545373 308503
485	**Contemporary Trade Directory Entries** Name: John Grose Location: 14, Cromwell Road, Wisbech, Cambridgeshire, PE14 0SF Classification: Mot Testing Centres **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18SW (N)	431	-	545373 308503
486	**Contemporary Trade Directory Entries** Name: Wisbech M O T Testing Centre Location: 33b, Regal Road, Wisbech, PE13 2RQ Classification: Mot Testing Centres **Status: Active** Positional Accuracy: Automatically positioned to the address	A19SW (NE)	394	-	545924 308299

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
486	**Contemporary Trade Directory Entries** Name: Quatunm Engineering Ltd Location: 31, Regal Road, Wisbech, Cambridgeshire, PE13 2RQ Classification: Pallets, Crates & Packing Cases **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A19SW (NE)	404	-	545894 308333
486	**Contemporary Trade Directory Entries** Name: Seymour Seating Co Location: 31, Regal Road, Wisbech, Cambridgeshire, PE13 2RQ Classification: Seating Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A19SW (NE)	404	-	545894 308333
486	**Contemporary Trade Directory Entries** Name: Fenlands Machining Services Location: 31, Regal Road, Wisbech, Cambridgeshire, PE13 2RQ Classification: Engineers - General **Status: Active** Positional Accuracy: Automatically positioned to the address	A19SW (NE)	404	-	545894 308333
487	**Contemporary Trade Directory Entries** Name: Stocks Ag Ltd Location: Cromwell Road, Wisbech, Cambridgeshire, PE14 0SD Classification: Agricultural Machinery - Sales & Service **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18SW (N)	399	-	545484 308498
487	**Contemporary Trade Directory Entries** Name: Cromwell Road Filling Station Location: Cromwell Road, Wisbech, Cambridgeshire, PE14 0SD Classification: Petrol Filling Stations **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18SW (N)	399	-	545484 308498
488	**Contemporary Trade Directory Entries** Name: Storr Holdings Location: 75, Boleness Road, Wisbech, Cambridgeshire, PE13 2XQ Classification: Road Haulage Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14NW (E)	402	-	546084 308079
489	**Contemporary Trade Directory Entries** Name: The Yearsley Group Location: Weasenham Lane, Wisbech, Cambridgeshire, PE13 2RN Classification: Road Haulage Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18SE (NE)	404	-	545833 308378
489	**Contemporary Trade Directory Entries** Name: S B Components International Ltd Location: Millennium Works, Enterprise Way, WISBECH, Cambridgeshire, PE14 0SB Classification: Commercial Vehicle Component Manufacturers **Status: Active** Positional Accuracy: Automatically positioned to the address	A18SE (NE)	404	-	545833 308378
490	**Contemporary Trade Directory Entries** Name: Tesco Filling Station Location: Cromwell Road, Wisbech, PE14 0RG Classification: Petrol Filling Stations **Status: Active** Positional Accuracy: Automatically positioned to the address	A12NE (W)	410	-	545046 308014
491	**Contemporary Trade Directory Entries** Name: Coveris Location: Cromwell Road, Wisbech, PE14 0SN Classification: Boxes & Cartons **Status: Active** Positional Accuracy: Automatically positioned to the address	A12SE (W)	412	-	544981 307723
491	**Contemporary Trade Directory Entries** Name: Coveris Location: Cromwell Road, WISBECH, Cambridgeshire, PE14 0SN Classification: Packaging Materials Manufacturers & Suppliers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A12SE (W)	427	-	544964 307736
491	**Contemporary Trade Directory Entries** Name: Burall Plastec Ltd Location: Cromwell Road, Wisbech, Cambridgeshire, PE14 0SN Classification: Printers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A12SE (W)	427	-	544964 307736

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
491	**Contemporary Trade Directory Entries** Name: Burall Plastec Location: Cromwell Road, Wisbech, Cambridgeshire, PE14 0SN Classification: Printers - Glass, Metal, Plastics Etc. **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A12SE (W)	427	-	544964 307736
492	**Contemporary Trade Directory Entries** Name: G B Commercial Vehicle Bodies Ltd Location: Algores Way, Wisbech, Cambridgeshire, PE13 2TQ Classification: Commercial Vehicle Bodybuilders & Repairers **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	A19SW (NE)	414	-	545994 308264
492	**Contemporary Trade Directory Entries** Name: The Office Key Location: 10, Algores Way, Wisbech, Cambridgeshire, PE13 2TQ Classification: Office Furniture & Equipment **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A19SW (NE)	458	-	546008 308312
492	**Contemporary Trade Directory Entries** Name: The Office Key Location: Algores Way, Wisbech, Cambridgeshire, PE13 2TQ Classification: Office Furniture & Equipment **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A19SW (NE)	458	-	546008 308312
492	**Contemporary Trade Directory Entries** Name: Style Seating Ltd Location: 8, Algores Way, Wisbech, Cambridgeshire, PE13 2TQ Classification: Catering Equipment **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A19SW (NE)	483	-	546015 308338
492	**Contemporary Trade Directory Entries** Name: Print Excell Ltd Location: 8, Algores Way, Wisbech, Cambridgeshire, PE13 2TQ Classification: Printers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A19SW (NE)	483	-	546015 308338
493	**Contemporary Trade Directory Entries** Name: Taylors Reclaims Location: 32a, Regal Road, Wisbech, Cambridgeshire, PE13 2RQ Classification: Builders' Merchants **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A19SW (NE)	418	-	545913 308336
493	**Contemporary Trade Directory Entries** Name: Pharmaceutical Technology Ltd Location: A, 32, Regal Road, Wisbech, Cambridgeshire, PE13 2RQ Classification: Laboratory Equipment **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A19SW (NE)	418	-	545913 308336
493	**Contemporary Trade Directory Entries** Name: Bluechip Brand Solutions Ltd Location: 16, Regal Road, Wisbech, Cambridgeshire, PE13 2RQ Classification: Printers **Status: Active** Positional Accuracy: Automatically positioned to the address	A19SW (NE)	460	-	545924 308381
493	**Contemporary Trade Directory Entries** Name: H S Bags Ltd Location: 15d, Regal Road, Wisbech, PE13 2RQ Classification: Textile Manufacturing **Status: Active** Positional Accuracy: Automatically positioned to the address	A19SW (NE)	472	-	545923 308396
493	**Contemporary Trade Directory Entries** Name: Quilted Bedspreads Ltd Location: 15, Regal Road, Wisbech, Cambridgeshire, PE13 2RQ Classification: Soft Furnishings - Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A19SW (NE)	472	-	545931 308390
493	**Contemporary Trade Directory Entries** Name: Wmc Motor Centre Location: Unit 7,Regal Rd, Wisbech, Cambridgeshire, PE13 2RQ Classification: Car Dealers - Used **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	A19SW (NE)	481	-	545957 308382

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
494	**Contemporary Trade Directory Entries** Name: Thurlow Nunn Location: Cromwell Road, Wisbech, PE14 0RG Classification: Car Customisation & Conversion Specialists **Status: Active** Positional Accuracy: Automatically positioned to the address	A12NE (W)	427	-	545001 307951
495	**Contemporary Trade Directory Entries** Name: Taylor Barnard (Anglia) Ltd Location: Cromwell Road, Wisbech, Cambridgeshire, PE14 0SG Classification: Packaging & Wrapping Equipment & Supplies **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A12NE (NW)	428	-	545115 308221
495	**Contemporary Trade Directory Entries** Name: Currys Location: Cromwell Road, Wisbech, Cambridgeshire, PE14 0SG Classification: Electrical Goods Sales, Manufacturers & Wholesalers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A12NE (NW)	428	-	545115 308221
496	**Contemporary Trade Directory Entries** Name: Hi-Tech Motor Engineers Ltd Location: HI Tech Motor Engineers, Britannia Way, Wisbech, PE13 2RB Classification: Garage Services **Status: Active** Positional Accuracy: Automatically positioned to the address	A14NW (NE)	443	-	546069 308215
497	**Contemporary Trade Directory Entries** Name: Delta Systems Location: 65, Boleness Road, Wisbech, Cambridgeshire, PE13 2RB Classification: Precision Engineers **Status: Active** Positional Accuracy: Automatically positioned to the address	A14NW (NE)	449	-	546102 308165
497	**Contemporary Trade Directory Entries** Name: Delta Systems Electrical Location: Unit 65, Boleness Road, WISBECH, Cambridgeshire, PE13 2RB Classification: Engineers - General **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14NW (NE)	449	-	546102 308165
498	**Contemporary Trade Directory Entries** Name: Kirk Coachworks Ltd Location: 4, Newbridge Lane Caravan Park, Newbridge Lane, Wisbech, Cambridgeshire, PE14 0SU Classification: Spraying - Paint & Coatings **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A8NE (SE)	476	-	545866 307452
499	**Contemporary Trade Directory Entries** Name: Heathcliff Haulage Ltd Location: Boleness Rd, Wisbech, Cambridgeshire, PE13 2RB Classification: Road Haulage Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14NW (E)	484	-	546169 308072
499	**Contemporary Trade Directory Entries** Name: Optimum Packaging Ltd Location: Boleness Road, Wisbech, Cambridgeshire, PE13 2RE Classification: Packaging Materials Manufacturers & Suppliers **Status: Active** Positional Accuracy: Automatically positioned to the address	A14NW (E)	490	-	546177 308062
500	**Contemporary Trade Directory Entries** Name: Brookes Plastic Supplies Location: 16 Regal Rd, Wisbech, Cambridgeshire, PE13 2RQ Classification: Fascias and Soffits **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	A19SW (NE)	513	-	545974 308409
500	**Contemporary Trade Directory Entries** Name: Excel Engineering Location: 13-14, Regal Road, Wisbech, PE13 2RQ Classification: Stainless Steel Manufacturers **Status: Active** Positional Accuracy: Automatically positioned to the address	A19SW (NE)	525	-	545958 308436

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
500	**Contemporary Trade Directory Entries** Name: H B Associates Location: 14, Regal Road, Wisbech, Cambridgeshire, PE13 2RQ Classification: Commercial Cleaning Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A19SW (NE)	534	-	545963 308444
501	**Contemporary Trade Directory Entries** Name: Del Monte Uk Ltd Location: Weasenham Lane, Wisbech, Cambridgeshire, PE13 2RN Classification: Food Products - Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18SE (NE)	514	-	545844 308507
502	**Contemporary Trade Directory Entries** Name: A Kallweit Location: Algores Way, Wisbech, Cambridgeshire, PE13 2TQ Classification: Cabinet Makers **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	A19SW (NE)	517	-	546066 308337
502	**Contemporary Trade Directory Entries** Name: Tigart Ltd Location: 12B, Algores Way, Wisbech, PE13 2TQ Classification: Engineers - General **Status: Active** Positional Accuracy: Automatically positioned to the address	A19SW (NE)	545	-	546071 308371
503	**Contemporary Trade Directory Entries** Name: Poysers Printers Ltd Location: 22, Boleness Road, Wisbech, PE13 2RB Classification: Printers **Status: Active** Positional Accuracy: Automatically positioned to the address	A14NW (NE)	535	-	546177 308208
503	**Contemporary Trade Directory Entries** Name: Smartlift Bulk Packaging Ltd Location: 20a-20b, Boleness Road, Wisbech, Cambridgeshire, PE13 2RB Classification: Packaging Materials Manufacturers & Suppliers **Status: Active** Positional Accuracy: Automatically positioned to the address	A14NW (NE)	548	-	546182 308227
503	**Contemporary Trade Directory Entries** Name: Smart Lift Location: Unit 20, Boleness Road, Wisbech, Cambridgeshire, PE13 2RB Classification: Packaging Materials Manufacturers & Suppliers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14NW (NE)	548	-	546182 308227
504	**Contemporary Trade Directory Entries** Name: Cemex Uk Location: Boleness Road, Wisbech, PE13 2RB Classification: Concrete & Mortar Ready Mixed **Status: Active** Positional Accuracy: Automatically positioned to the address	A14NE (E)	545	-	546225 308102
504	**Contemporary Trade Directory Entries** Name: A B Audio Visual Ltd Location: 96g, New Drove, Wisbech, Cambridgeshire, PE13 2RZ Classification: Wire Products - Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14NE (E)	579	-	546259 308105
504	**Contemporary Trade Directory Entries** Name: E C Hodge M F Ltd Location: New Drove, Wisbech, Cambridgeshire, PE13 2RZ Classification: Coffin Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14NE (E)	579	-	546259 308105
504	**Contemporary Trade Directory Entries** Name: Romben Garage Location: 55, Boleness Road, Wisbech, PE13 2RB Classification: Garage Services **Status: Active** Positional Accuracy: Automatically positioned to the address	A14NE (E)	599	-	546267 308154
504	**Contemporary Trade Directory Entries** Name: Rmc Readymix Readicrete Location: Boleness Road, Wisbech, Cambridgeshire, PE13 2RB Classification: Concrete & Mortar Ready Mixed **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14NE (E)	613	-	546288 308131

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
504	**Contemporary Trade Directory Entries** Name: Ready Mixed Concrete (Readicrete) Ltd Location: Boleness Road, Wisbech, Cambridgeshire, PE13 2RB Classification: Concrete & Mortar Ready Mixed **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14NE (E)	613	-	546288 308131
505	**Contemporary Trade Directory Entries** Name: Burley Fluid & Air Ltd Location: 63a, Boleness Road, Wisbech, PE13 2RB Classification: Hydraulic Engineers **Status: Active** Positional Accuracy: Automatically positioned to the address	A14NE (E)	558	-	546222 308159
505	**Contemporary Trade Directory Entries** Name: Pride & Joy Ltd Location: 63, Boleness Road, Wisbech, PE13 2RB Classification: Car Body Repairs **Status: Active** Positional Accuracy: Automatically positioned to the address	A14NE (E)	588	-	546248 308175
506	**Contemporary Trade Directory Entries** Name: Hutchinsons Location: Weasenham Lane, Wisbech, Cambridgeshire, PE13 2RN Classification: Chemical Manufacturers **Status: Active** Positional Accuracy: Manually positioned within the geographical locality	A19SW (NE)	580	-	545990 308481
506	**Contemporary Trade Directory Entries** Name: Lamb Weston Location: 1-2, Weasenham Lane, Wisbech, Cambridgeshire, PE13 2RN Classification: Frozen Food Processors & Distributors **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A19SW (NE)	583	-	545995 308480
507	**Contemporary Trade Directory Entries** Name: G W Harrington Ltd Location: 173, North Brink, Wisbech, Cambridgeshire, PE13 4TA Classification: Agricultural Merchants **Status: Active** Positional Accuracy: Automatically positioned to the address	A17SE (NW)	581	-	545057 308440
508	**Contemporary Trade Directory Entries** Name: Premier Choice Location: 3-5, Algores Way, Wisbech, Cambridgeshire, PE13 2TQ Classification: Soft Furnishings - Manufacturers **Status: Active** Positional Accuracy: Automatically positioned to the address	A19SW (NE)	586	-	546136 308363
509	**Contemporary Trade Directory Entries** Name: B H Ellerby Location: 73, South Brink, Wisbech, Cambridgeshire, PE14 0RH Classification: Garage Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18NW (N)	595	-	545295 308649
510	**Contemporary Trade Directory Entries** Name: Gav'S Bodyshop Location: Unit 61, Boleness Road, Wisbech, Cambridgeshire, PE13 2RB Classification: Car Body Repairs **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14NE (NE)	595	-	546226 308244
510	**Contemporary Trade Directory Entries** Name: James Howley Location: 12, Boleness Road, Wisbech, PE13 2RB Classification: Engineers - General **Status: Active** Positional Accuracy: Automatically positioned to the address	A19SE (NE)	620	-	546238 308275
511	**Contemporary Trade Directory Entries** Name: Network Safety Services Location: Unit 4 Regal Road, Wisbech, Cambridgeshire, PE13 2RQ Classification: Testing, Inspection & Calibration Equipment Manufacturers **Status: Active** Positional Accuracy: Automatically positioned to the address	A19SW (NE)	597	-	546041 308464
511	**Contemporary Trade Directory Entries** Name: H L Hutchinson Ltd Location: Weasenham Lane, Wisbech, Cambridgeshire, PE13 2RN Classification: Agricultural Merchants **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A19SW (NE)	603	-	546065 308454

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
511	**Contemporary Trade Directory Entries** Name: Garden Isle Location: Weasenham Lane, Wisbech, Cambridgeshire, PE13 2RN Classification: Food Products - Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A19SW (NE)	603	-	546065 308454
511	**Contemporary Trade Directory Entries** Name: Delmonte Fresh Produce (Uk) Ltd Location: Weasenham La, Wisbech, Cambridgeshire, PE13 2RN Classification: Food Products - Manufacturers **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A19SW (NE)	603	-	546064 308454
511	**Contemporary Trade Directory Entries** Name: Tpr Resistors Location: 2, Algores Way, Wisbech, Cambridgeshire, PE13 2TQ Classification: Electricity Generating & Distributing Equipment **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A19SW (NE)	619	-	546110 308436
512	**Contemporary Trade Directory Entries** Name: Greencore Prepared Meals Location: Weasenham Lane, Wisbech, Cambridgeshire, PE13 2RD Classification: Food Products - Manufacturers **Status: Active** Positional Accuracy: Automatically positioned to the address	A19SW (NE)	616	-	546205 308323
512	**Contemporary Trade Directory Entries** Name: D M D Traction Location: Weasenham Lane, Wisbech, Cambridgeshire, PE13 2RD Classification: Road Haulage Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A19SW (NE)	616	-	546205 308323
512	**Contemporary Trade Directory Entries** Name: D M D Traction Location: Weasenham Lane, Wisbech, Cambridgeshire, PE13 2RD Classification: Road Haulage Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A19SW (NE)	616	-	546205 308323
513	**Contemporary Trade Directory Entries** Name: Maxtreme Ltd Location: 11, Boleness Road, Wisbech, Cambridgeshire, PE13 2RB Classification: Car Engine Tuning & Diagnostic Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14NE (E)	622	-	546270 308214
513	**Contemporary Trade Directory Entries** Name: D W P Car Sales Location: Britannia Way,Boleness Road, Wisbech, Cambridgeshire, PE13 2RB Classification: Car Dealers - Used **Status: Active** Positional Accuracy: Manually positioned within the geographical locality	A14NE (E)	622	-	546270 308214
513	**Contemporary Trade Directory Entries** Name: Burley Location: Boleness Rd, Wisbech, Cambridgeshire, PE13 2RB Classification: Hydraulic Engineers **Status: Inactive** Positional Accuracy: Manually positioned within the geographical locality	A14NE (E)	622	-	546270 308214
513	**Contemporary Trade Directory Entries** Name: Hi-Tech Motors Ltd Location: Britannia Way,Boleness Road, Wisbech, Cambridgeshire, PE13 2RB Classification: Car Body Repairs **Status: Inactive** Positional Accuracy: Manually positioned within the geographical locality	A14NE (E)	622	-	546270 308214
513	**Contemporary Trade Directory Entries** Name: C S Motors Location: 23, Boleness Road, Wisbech, PE13 2RB Classification: Garage Services **Status: Active** Positional Accuracy: Automatically positioned to the address	A14NE (E)	627	-	546281 308198
513	**Contemporary Trade Directory Entries** Name: Dwt Fabrications Location: Unit 23, Boleness Road, Wisbech, Cambridgeshire, PE13 2RB Classification: Gate Manufacturers - Automated **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14NE (E)	629	-	546282 308202

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
513	**Contemporary Trade Directory Entries** Name: Graham Fyson Engineering Location: Unit 43 Boleness Rd, Wisbech, Cambridgeshire, PE13 2RB Classification: Engineers - General **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A14NE (E)	631	-	546301 308150
513	**Contemporary Trade Directory Entries** Name: Andy Cooper Car Sales Location: Boleness Road, Wisbech, Cambridgeshire, PE13 2RB Classification: Car Dealers - Used **Status: Active** Positional Accuracy: Automatically positioned to the address	A14NE (E)	635	-	546277 308230
513	**Contemporary Trade Directory Entries** Name: S & H Location: Unit 27, Boleness Road, Wisbech, Cambridgeshire, PE13 2RB Classification: Precision Engineers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14NE (E)	636	-	546294 308188
513	**Contemporary Trade Directory Entries** Name: Marine Essentials Location: Unit 29, Boleness Road, Wisbech, Cambridgeshire, PE13 2RB Classification: Marine Equipment & Supplies **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A14NE (E)	636	-	546294 308188
514	**Contemporary Trade Directory Entries** Name: Bulk Vehicle Services Location: Unit 10, Boleness Road, Wisbech, Cambridgeshire, PE13 2RB Classification: Commercial Vehicle Bodybuilders & Repairers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A19SE (NE)	652	-	546272 308280
514	**Contemporary Trade Directory Entries** Name: Glass & Trimming Ltd Location: Unit 10, Boleness Road, Wisbech, Cambridgeshire, PE13 2RB Classification: Glass Products - Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A19SE (NE)	652	-	546272 308280
514	**Contemporary Trade Directory Entries** Name: Cousins & Sharp Ltd Location: 8a, Boleness Road, Wisbech, Cambridgeshire, PE13 2RB Classification: Commercial Vehicle Servicing, Repairs, Parts & Accessories **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A19SE (NE)	676	-	546282 308313
514	**Contemporary Trade Directory Entries** Name: Wisbech Nuts & Bolts Location: Unit 8, Boleness Road, Wisbech, Cambridgeshire, PE13 2RB Classification: Nuts, Bolts & Fixings **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A19SE (NE)	679	-	546292 308301
514	**Contemporary Trade Directory Entries** Name: Wisbech Household Recycling Centre Location: Boleness Rd, Wisbech, Cambridgeshire, PE13 2RB Classification: Recycling Centres **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	A19SE (NE)	679	-	546305 308274
514	**Contemporary Trade Directory Entries** Name: Wnb Location: Unit 8, Boleness Road, Wisbech, Cambridgeshire, PE13 2RB Classification: Plaster Manufacturers & Suppliers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A19SE (NE)	679	-	546292 308301
514	**Contemporary Trade Directory Entries** Name: Fenland Cleaning Services Location: Unit 6, Boleness Road, Wisbech, Cambridgeshire, PE13 2RB Classification: Cleaning Services - Domestic **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A19SE (NE)	710	-	546316 308320
514	**Contemporary Trade Directory Entries** Name: Wiffen Location: Unit 6, Boleness Road, Wisbech, Cambridgeshire, PE13 2RB Classification: Blast Cleaning **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A19SE (NE)	710	-	546316 308320

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
514	**Contemporary Trade Directory Entries** Name: Fenland Hygiene Supplies Location: Unit 6, Boleness Road, Wisbech, Cambridgeshire, PE13 2RB Classification: Janitorial Equipment - Servicing & Repairs **Status: Active** Positional Accuracy: Automatically positioned to the address	A19SE (NE)	710	-	546316 308320
515	**Contemporary Trade Directory Entries** Name: Lennie'S Autos Location: 68, Weasenham Lane, Wisbech, PE13 2RU Classification: Garage Services **Status: Active** Positional Accuracy: Automatically positioned to the address	A19SW (NE)	678	-	546138 308490
515	**Contemporary Trade Directory Entries** Name: Wisbech Van Spares Location: 68, Weasenham Lane, Wisbech, Cambridgeshire, PE13 2RU Classification: Car Breakers & Dismantlers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A19SW (NE)	678	-	546138 308490
515	**Contemporary Trade Directory Entries** Name: Weasenham Garage Location: 68, Weasenham Lane, Wisbech, Cambridgeshire, PE13 2RU Classification: Car Breakers & Dismantlers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A19SW (NE)	678	-	546138 308490
515	**Contemporary Trade Directory Entries** Name: Wisbech Breakers Location: 68, Weasenham Lane, Wisbech, PE13 2RU Classification: Car Breakdown & Recovery Services **Status: Active** Positional Accuracy: Automatically positioned to the address	A19SW (NE)	678	-	546138 308490
516	**Contemporary Trade Directory Entries** Name: Mec-A-Tec Services Ltd Location: 9, Boleness Road, Wisbech, PE13 2RB Classification: Mechanical Engineers **Status: Active** Positional Accuracy: Automatically positioned to the address	A14NE (E)	689	-	546330 308242
517	**Contemporary Trade Directory Entries** Name: B H Porter & Son Ltd Location: 29, Oldfield Lane, Wisbech, PE13 2RJ Classification: Scrap Metal Merchants **Status: Active** Positional Accuracy: Automatically positioned to the address	A18NE (N)	696	-	545665 308784
518	**Contemporary Trade Directory Entries** Name: Wisbech Fabrications Ltd Location: Unit 3, 62, Weasenham Lane, Wisbech, Cambridgeshire, PE13 2RU Classification: Metal Products - Fabricated **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A19SW (NE)	720	-	546204 308486
518	**Contemporary Trade Directory Entries** Name: Fenix Engineering Ltd Location: Unit 3, 62, Weasenham Lane, WISBECH, Cambridgeshire, PE13 2RU Classification: Sheet Metal Work **Status: Active** Positional Accuracy: Automatically positioned to the address	A19SW (NE)	720	-	546204 308486
518	**Contemporary Trade Directory Entries** Name: Geoff Ogden Electrical Location: Unit 5 Queens Business Centre, Wisbech, Cambridgeshire, PE13 2RU Classification: Electrical Engineers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A19SW (NE)	723	-	546215 308479
519	**Contemporary Trade Directory Entries** Name: Greenvale Foods Ltd Location: 3-5, Boleness Road, Wisbech, Cambridgeshire, PE13 2RB Classification: Food Products - Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A19SE (NE)	746	-	546368 308299
519	**Contemporary Trade Directory Entries** Name: E S P Marketing Uk Ltd Location: 3-5, Boleness Road, Wisbech, Cambridgeshire, PE13 2RB Classification: Paint Spraying Equipment & Accessories **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A19SE (NE)	746	-	546368 308299

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
519	**Contemporary Trade Directory Entries** Name: Chiller Blinds Ltd Location: Unit 7, Boleness Road, Wisbech, Cambridgeshire, PE13 2RB Classification: Refrigeration Equipment Manufacturers & Distributors **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A19SE (NE)	750	-	546380 308283
520	**Contemporary Trade Directory Entries** Name: Hi-Tech Motor Engineers Ltd Location: Unit 20, Boleness Road, Wisbech, Cambridgeshire, PE13 2RB Classification: Garage Services **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A19SE (NE)	746	-	546340 308352
520	**Contemporary Trade Directory Entries** Name: Alpha Technology (Uk) Ltd Location: Unit 1, Boleness Road, Wisbech, Cambridgeshire, PE13 2RB Classification: Engineers - General **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A19SE (NE)	760	-	546350 308363
520	**Contemporary Trade Directory Entries** Name: W E Simpson (Continental Transport) Ltd Location: 1, Boleness Road, Wisbech, Cambridgeshire, PE13 2RB Classification: Road Haulage Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A19SE (NE)	760	-	546350 308363
521	**Contemporary Trade Directory Entries** Name: Crown Food Location: Weasenham Lane, Wisbech, Cambridgeshire, PE13 2RP Classification: Can Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A19NW (NE)	747	-	545932 308730
521	**Contemporary Trade Directory Entries** Name: Corsair Toiletries Ltd Location: Weasenham Lane, Wisbech, Cambridgeshire, PE13 2RP Classification: Toiletries **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A19NW (NE)	747	-	545932 308730
521	**Contemporary Trade Directory Entries** Name: Bibby Distribution Location: Weasenham Lane, Wisbech, Cambridgeshire, PE13 2RP Classification: Distribution Services **Status: Active** Positional Accuracy: Manually positioned within the geographical locality	A19NW (NE)	747	-	545932 308730
522	**Contemporary Trade Directory Entries** Name: Travis Perkins Plc Location: Oldfield Lane, WISBECH, Cambridgeshire, PE13 2HH Classification: Builders' Merchants **Status: Active** Positional Accuracy: Automatically positioned to the address	A18NE (N)	748	-	545664 308837
523	**Contemporary Trade Directory Entries** Name: Tarmac R M X Location: Enterprise House,Oldfield Lane, Wisbech, Cambridgeshire, PE13 2RJ Classification: Concrete & Mortar Ready Mixed **Status: Active** Positional Accuracy: Automatically positioned to the address	A18NE (N)	807	-	545690 308892
523	**Contemporary Trade Directory Entries** Name: Breedon Aggregates Location: Enterprise House, Oldfield Lane, Wisbech, Cambridgeshire, PE13 2RJ Classification: Sand, Gravel & Other Aggregates **Status: Active** Positional Accuracy: Automatically positioned to the address	A18NE (N)	808	-	545690 308893
523	**Contemporary Trade Directory Entries** Name: The Pallet Network (Anglia) Location: Enterprise House, Oldfield Lane, Wisbech, Cambridgeshire, PE13 2RJ Classification: Road Haulage Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18NE (N)	808	-	545690 308893
523	**Contemporary Trade Directory Entries** Name: German Car Services Location: Oldfield La, Wisbech, Cambridgeshire, PE13 2RJ Classification: Garage Services **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	A18NE (N)	844	-	545686 308930

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
524	**Contemporary Trade Directory Entries** Name: Anglia Location: 26, Sandall Road, Wisbech, PE13 2PS Classification: Electronic Component Manufacturers & Distributors **Status: Active** Positional Accuracy: Automatically positioned to the address	A19NW (NE)	819	-	546191 308629
524	**Contemporary Trade Directory Entries** Name: Anglia Solutions Location: 26, Sandall Road, Wisbech, Cambridgeshire, PE13 2PS Classification: Electronic Equipment - Manufacturers & Assemblers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A19NW (NE)	819	-	546191 308629
524	**Contemporary Trade Directory Entries** Name: Lenton Joinery Location: Unit 6,40 Capital Business Park, Wisbech, Cambridgeshire, PE13 2RS Classification: Joinery Manufacturers **Status: Active** Positional Accuracy: Manually positioned to the road within the address or location	A19NW (NE)	843	-	546176 308670
525	**Contemporary Trade Directory Entries** Name: Games Workshop Plastics Ltd Location: Unit 18, Sandall Road, Wisbech, Cambridgeshire, PE13 2RS Classification: Plastics - Injection Moulding **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A19NW (NE)	844	-	546100 308729
525	**Contemporary Trade Directory Entries** Name: Games Workshop Tooling Ltd Location: Unit 18, Sandall Road, Wisbech, Cambridgeshire, PE13 2RS Classification: Tool Design, Manufacturers & Makers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A19NW (NE)	844	-	546100 308729
525	**Contemporary Trade Directory Entries** Name: Alfaparcel Location: Unit 18, Sandall Road, Wisbech, Cambridgeshire, PE13 2RS Classification: Freight Forwarders **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A19NW (NE)	844	-	546100 308729
525	**Contemporary Trade Directory Entries** Name: Auto - Guru Garage Location: 10, Gold Leaf Industrial Park, Sandall Road, Wisbech, Cambridgeshire, PE13 2GA Classification: Garage Services **Status: Active** Positional Accuracy: Automatically positioned to the address	A19NW (NE)	856	-	546142 308711
526	**Contemporary Trade Directory Entries** Name: German Car Services Location: Unit 5, Porters Park, Oldfield Lane, Wisbech, PE13 2RJ Classification: Garage Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A23SE (N)	877	-	545786 308940
526	**Contemporary Trade Directory Entries** Name: Excel Engineering Location: Unit 2, Porters Park, Oldfield Lane, Wisbech, Cambridgeshire, PE13 2RJ Classification: Catering Equipment **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A23SE (N)	890	-	545760 308960
527	**Contemporary Trade Directory Entries** Name: Lafarge Readymix Location: Hope Cement Limited, Oldfield Lane, Wisbech, PE13 2RJ Classification: Concrete & Mortar Ready Mixed **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18NE (N)	880	-	545856 308918
528	**Contemporary Trade Directory Entries** Name: 5 Star Cases Ltd Location: 12, Sandall Road, Wisbech, Cambridgeshire, PE13 2QZ Classification: Case Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A19NW (NE)	909	-	546169 308758

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
528	**Contemporary Trade Directory Entries** Name: Cambridge Racing Shells Location: 10, Sandall Road, Wisbech, Cambridgeshire, PE13 2QZ Classification: Boatbuilders & Repairers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A19NW (NE)	909	-	546169 308758
529	**Contemporary Trade Directory Entries** Name: Lafarge Aggregates Ltd Location: Oldfield La, Wisbech, Cambridgeshire, PE13 2RJ Classification: Concrete & Mortar Ready Mixed **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	A23SE (N)	947	-	545754 309021
529	**Contemporary Trade Directory Entries** Name: H & L Sims Location: Unit 1-2,Business Park,Oldfield La, Wisbech, Cambridgeshire, PE13 2RJ Classification: Electrical Engineers **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	A23SE (N)	957	-	545760 309030
530	**Contemporary Trade Directory Entries** Name: Pallet Network Anglia Location: Wisbech Business Park, Oldfield Lane, WISBECH, Cambridgeshire, PE13 2RJ Classification: Freight Forwarders **Status: Active** Positional Accuracy: Automatically positioned to the address	A23SE (N)	948	-	545823 309002
530	**Contemporary Trade Directory Entries** Name: C A T Cars Location: Unit 1-2, Wisbech Business Park, Oldfield Lane, Wisbech, Cambridgeshire, PE13 2RJ Classification: Car Dealers - Used **Status: Active** Positional Accuracy: Automatically positioned to the address	A23SE (N)	958	-	545835 309008
531	**Contemporary Trade Directory Entries** Name: P H Services Location: Unit 4 Wisbech Business Centre,Oldfield La, Wisbech, Cambridgeshire, PE13 2RJ Classification: Garage Services **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	A23SE (N)	964	-	545765 309036
531	**Contemporary Trade Directory Entries** Name: Oldfield Lane Autos Location: Unit 6 Oldfield La, Wisbech, Cambridgeshire, PE13 2RJ Classification: Car Dealers - Used **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	A23SE (N)	990	-	545781 309058
531	**Contemporary Trade Directory Entries** Name: Howard Kent (Transport) Ltd Location: Enterprise House, Oldfield Lane, Wisbech, Cambridgeshire, PE13 2RJ Classification: Road Haulage Services **Status: Inactive** Positional Accuracy: Automatically positioned in the proximity of the address	A23SE (N)	993	-	545807 309054
532	**Contemporary Trade Directory Entries** Name: Spencer Lee Autos Location: Unit 5, Capital Business Park, Sandall Road, Wisbech, PE13 2QZ Classification: Garage Services **Status: Active** Positional Accuracy: Automatically positioned to the address	A19NE (NE)	968	-	546291 308740
532	**Contemporary Trade Directory Entries** Name: Gardeners Repair Centre Location: Wisbech, PE13 2QB Classification: Lawnmowers & Garden Machinery - Sales & Service **Status: Active** Positional Accuracy: Automatically positioned to the address	A19NE (NE)	971	-	546285 308749
532	**Contemporary Trade Directory Entries** Name: T J A Tooling Ltd Location: Sandall Road, Wisbech, Cambridgeshire, PE13 2RS Classification: Tool Design, Manufacturers & Makers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A19NE (NE)	971	-	546285 308749

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
533	**Fuel Station Entries** Name: Spi Ltd Location: 26, Cromwell Road , , Wisbech, Cambridgeshire, PE14 0RD Brand: Obsolete Premises Type: Not Applicable **Status: Obsolete** Positional Accuracy: Manually positioned to the address or location	A13NW (W)	146	-	545301 307940
534	**Fuel Station Entries** Name: Tesco Wisbech Location: Sandown Road , , Wisbech, Cambridgeshire, PE14 0SL Brand: TESCO Premises Type: Not Applicable **Status: Obsolete** Positional Accuracy: Manually positioned to the address or location	A18SW (N)	283	-	545480 308380
534	**Fuel Station Entries** Name: Tesco Wisbech Extra Location: Cromwell Road New Bridge Lane, , Wisbech, Cambridgeshire, PE14 0RG Brand: Tesco Extra Premises Type: Hypermarket **Status: Open** Positional Accuracy: Manually positioned to the address or location	A18SW (N)	300	-	545487 308398
535	**Points of Interest - Commercial Services** Name: Copart Location: New Bridge Lane, Wisbech, PE14 0SE Category: Recycling Services Class Code: Scrap Metal Merchants Positional Accuracy: Positioned to address or location	A13SW (SW)	112	9	545278 307768
536	**Points of Interest - Commercial Services** Name: Truck Logic Location: Europa Way, Wisbech, PE13 2TZ Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A13NE (NE)	143	9	545754 308112
536	**Points of Interest - Commercial Services** Name: Ford & Slater Location: Commercial House, Algores Way, Wisbech, PE13 2TQ Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A13NE (NE)	179	9	545836 308087
536	**Points of Interest - Commercial Services** Name: Ford & Slater Daf Wisbech Location: Commercial House, Algores Way, Wisbech, PE13 2TQ Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A13NE (NE)	180	9	545837 308088
537	**Points of Interest - Commercial Services** Name: Kirk Coachworks Ltd Location: 4 New Bridge Lane, Wisbech, PE14 0SE Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A12SE (W)	205	9	545189 307817
538	**Points of Interest - Commercial Services** Name: Tesco Wisbech Location: Sandown Road, Wibech, PE14 0SL Category: Personal, Consumer and other Services Class Code: Vehicle Cleaning Services Positional Accuracy: Positioned to address or location	A18SW (N)	281	9	545474 308377
538	**Points of Interest - Commercial Services** Name: Car Wash Location: Sandown Road, Wisbech, Cambridgeshire, PE14 0SL Category: Personal, Consumer and other Services Class Code: Vehicle Cleaning Services Positional Accuracy: Positioned to address or location	A18SW (N)	283	9	545480 308380
538	**Points of Interest - Commercial Services** Name: Tesco Wisbech Extra Location: Cromwell Road, New Bridge Lane, Wibech, PE14 Category: Personal, Consumer and other Services Class Code: Vehicle Cleaning Services Positional Accuracy: Positioned to address or location	A18SW (N)	300	9	545487 308398

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
539	**Points of Interest - Commercial Services** Name: Fenland Radiator Services Location: 2 New Bridge Lane, Wisbech, PE14 0SE Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A12SE (W)	294	9	545122 307898
540	**Points of Interest - Commercial Services** Name: Blyth Equipment Ltd Location: 28a Europa Way, Wisbech, PE13 2TZ Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A18SE (NE)	302	9	545711 308341
540	**Points of Interest - Commercial Services** Name: Trinox Ltd Location: 38d Europa Way, Wisbech, PE13 2TZ Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A18SE (NE)	351	9	545768 308360
541	**Points of Interest - Commercial Services** Name: Alibulk Car Body Repairs Location: Unit 72-74, Boleness Road, Wisbech, PE13 2RB Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A14NW (E)	331	9	546011 308075
542	**Points of Interest - Commercial Services** Name: Car Care Location: Merlin House, Regal Road, Wisbech, PE13 2RQ Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A19SW (NE)	369	9	545920 308270
542	**Points of Interest - Commercial Services** Name: Wisbech M O T Testing Centre Location: 33b Regal Road, Wisbech, PE13 2RQ Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A19SW (NE)	393	9	545923 308298
543	**Points of Interest - Commercial Services** Name: Formula One Autocentres Location: 14 Cromwell Road, Wisbech, PE14 0RG Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A18SW (N)	431	9	545373 308503
544	**Points of Interest - Commercial Services** Name: Hi-tech Motor Engineers Ltd Location: HI Tech Motor Engineers, Britannia Way, Wisbech, PE13 2RB Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A14NW (NE)	443	9	546069 308215
545	**Points of Interest - Commercial Services** Name: Tesco Hand Car Wash Location: Cromwell Road, Wisbech, PE14 0RG Category: Personal, Consumer and other Services Class Code: Vehicle Cleaning Services Positional Accuracy: Positioned to address or location	A12NE (W)	460	9	545022 308085
546	**Points of Interest - Commercial Services** Name: IMO - arc Clean Car Centres Location: Cromwell Road, Wisbech, PE14 0RG Category: Personal, Consumer and other Services Class Code: Vehicle Cleaning Services Positional Accuracy: Positioned to address or location	A18SW (N)	500	9	545440 308593
546	**Points of Interest - Commercial Services** Name: IMO - arc Clean Car Centres Location: Cromwell Road, Wisbech, PE14 0RG Category: Personal, Consumer and other Services Class Code: Vehicle Cleaning Services Positional Accuracy: Positioned to address or location	A18SW (N)	501	9	545440 308594
546	**Points of Interest - Commercial Services** Name: IMO - arc Clean Car Centres Location: Cromwell Road, Wisbech, PE14 0RG Category: Personal, Consumer and other Services Class Code: Vehicle Cleaning Services Positional Accuracy: Positioned to address or location	A18SW (N)	501	9	545440 308594

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
547	**Points of Interest - Commercial Services** Name: Autolec Location: 96d New Drove, Wisbech, PE13 2RZ Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A14NE (E)	582	9	546261 308108
548	**Points of Interest - Commercial Services** Name: Pride & Joy Ltd Location: 63 Boleness Road, Wisbech, PE13 2RB Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A14NE (E)	588	9	546248 308175
548	**Points of Interest - Commercial Services** Name: Romben Garage Location: 55 Boleness Road, Wisbech, PE13 2RB Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A14NE (E)	599	9	546267 308154
548	**Points of Interest - Commercial Services** Name: Maxtreme Ltd Location: 11 Boleness Road, Wisbech, PE13 2RB Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A14NE (E)	621	9	546269 308214
548	**Points of Interest - Commercial Services** Name: C S Motors Location: 23 Boleness Road, Wisbech, PE13 2RB Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A14NE (E)	627	9	546281 308198
549	**Points of Interest - Commercial Services** Name: B H Ellerby Location: 73 South Brink, Wisbech, PE14 0RH Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A18NW (N)	595	9	545295 308649
549	**Points of Interest - Commercial Services** Name: B H Ellerby Location: 73 South Brink, Wisbech, PE14 0RH Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A18NW (N)	595	9	545295 308649
550	**Points of Interest - Commercial Services** Name: Cousins & Sharp Ltd Location: 8a Boleness Road, Wisbech, PE13 2RB Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A19SE (NE)	676	9	546282 308313
551	**Points of Interest - Commercial Services** Name: Lennie's Autos Location: 68 Weasenham Lane, Wisbech, PE13 2RU Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A19SW (NE)	677	9	546138 308489
551	**Points of Interest - Commercial Services** Name: Wisbech Breakers Location: 68 Weasenham Lane, Wisbech, PE13 2RU Category: Recycling Services Class Code: Scrap Metal Merchants Positional Accuracy: Positioned to address or location	A19SW (NE)	677	9	546138 308489
551	**Points of Interest - Commercial Services** Name: Fenix Engineering Ltd Location: Unit 3 62, Weasenham Lane, Wisbech, PE13 2RU Category: Construction Services Class Code: Metalworkers Including Blacksmiths Positional Accuracy: Positioned to address or location	A19SW (NE)	719	9	546203 308486
551	**Points of Interest - Commercial Services** Name: Michael Motors Location: Unit 1 Queens Business Centre 62, Weasenham Lane, Wisbech, PE13 2RU Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A19SE (NE)	737	9	546235 308479

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
552	**Points of Interest - Commercial Services** Name: Scrap Yard Location: PE13 Category: Recycling Services Class Code: Scrap Metal Merchants Positional Accuracy: Positioned to address or location	A18NE (N)	685	9	545754 308748
552	**Points of Interest - Commercial Services** Name: Scrap Yard Location: Not Supplied Category: Recycling Services Class Code: Scrap Metal Merchants Positional Accuracy: Positioned to an adjacent address or location	A18NE (N)	692	9	545760 308753
552	**Points of Interest - Commercial Services** Name: Pallet Network Anglia Location: P E Logistics Limited, Oldfield Lane, Wisbech, PE13 2RJ Category: Transport, Storage and Delivery Class Code: Distribution and Haulage Positional Accuracy: Positioned to address or location	A18NE (N)	759	9	545790 308814
553	**Points of Interest - Commercial Services** Name: B H Porter & Son Ltd Location: 29 Oldfield Lane, Wisbech, PE13 2RJ Category: Recycling Services Class Code: Scrap Metal Merchants Positional Accuracy: Positioned to address or location	A18NE (N)	695	9	545664 308783
553	**Points of Interest - Commercial Services** Name: B H Porter & Son Ltd Location: 29 Oldfield Lane, Wisbech, PE13 2RJ Category: Recycling Services Class Code: Scrap Metal Merchants Positional Accuracy: Positioned to address or location	A18NE (N)	696	9	545665 308784
554	**Points of Interest - Commercial Services** Name: Tm Logistics Location: Weasenham Lane, Wisbech, PE13 2RP Category: Transport, Storage and Delivery Class Code: Distribution and Haulage Positional Accuracy: Positioned to address or location	A19NW (NE)	747	9	545932 308730
554	**Points of Interest - Commercial Services** Name: Bibby Distribution Ltd Location: Weasenham Lane, Wisbech, PE13 2RP Category: Transport, Storage and Delivery Class Code: Distribution and Haulage Positional Accuracy: Positioned to address or location	A19NW (NE)	747	9	545932 308730
555	**Points of Interest - Commercial Services** Name: The Pallet Network (Anglia) Location: Enterprise House, Oldfield Lane, Wisbech, PE13 2RJ Category: Transport, Storage and Delivery Class Code: Distribution and Haulage Positional Accuracy: Positioned to address or location	A18NE (N)	808	9	545690 308893
555	**Points of Interest - Commercial Services** Name: Pallet Network Location: Enterprise House, Oldfield Lane, Wisbech, PE13 2RJ Category: Transport, Storage and Delivery Class Code: Distribution and Haulage Positional Accuracy: Positioned to address or location	A18NE (N)	808	9	545690 308893
555	**Points of Interest - Commercial Services** Name: Howard Kent (Transport) Ltd Location: Enterprise House, Oldfield Lane, Wisbech, PE13 2RJ Category: Transport, Storage and Delivery Class Code: Distribution and Haulage Positional Accuracy: Positioned to address or location	A18NE (N)	808	9	545690 308893
556	**Points of Interest - Commercial Services** Name: Auto - Guru Garage Location: 10 Gold Leaf Industrial Park, Sandall Road, Wisbech, PE13 2GA Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A19NW (NE)	855	9	546141 308711
557	**Points of Interest - Commercial Services** Name: Wisbech Windscreens Location: A1 New Drove, Wisbech, PE13 2RZ Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A20SW (E)	948	9	546568 308347

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
558	**Points of Interest - Commercial Services** Name: Spencer Lee Autos Location: Unit 5 Capital Business Park, Sandall Road, Wisbech, PE13 2QZ Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A19NE (NE)	967	9	546291 308739
559	**Points of Interest - Education and Health** Name: ACES Opthalmology Services Location: Cromwell, Road, Wibech, PE14 0SN Category: Health Practitioners and Establishments Class Code: Hospitals Positional Accuracy: Positioned to address or location	A12SE (W)	397	9	544999 307709
560	**Points of Interest - Manufacturing and Production** Name: Tank Location: PE14 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A13NW (NW)	58	9	545447 308057
561	**Points of Interest - Manufacturing and Production** Name: Tank Location: PE14 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A13SW (W)	131	9	545292 307880
562	**Points of Interest - Manufacturing and Production** Name: Tank Location: PE13 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A13SE (E)	213	9	545871 307860
562	**Points of Interest - Manufacturing and Production** Name: Tank Location: PE13 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A13SE (E)	215	9	545878 307867
562	**Points of Interest - Manufacturing and Production** Name: Tank Location: PE13 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A14SW (E)	224	9	545884 307860
562	**Points of Interest - Manufacturing and Production** Name: Tank Location: PE13 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A14SW (E)	234	9	545892 307855
562	**Points of Interest - Manufacturing and Production** Name: Tanks Location: PE13 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A14SW (E)	235	9	545888 307846
563	**Points of Interest - Manufacturing and Production** Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A12SE (W)	253	9	545143 307829
563	**Points of Interest - Manufacturing and Production** Name: Works Location: PE14 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A12SE (W)	260	9	545135 307827
564	**Points of Interest - Manufacturing and Production** Name: Works Location: PE13 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A14NW (NE)	292	9	545913 308172

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
564	**Points of Interest - Manufacturing and Production** Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A14NW (NE)	298	9	545920 308173
565	**Points of Interest - Manufacturing and Production** Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A12NE (W)	328	9	545126 307994
565	**Points of Interest - Manufacturing and Production** Name: Works Location: PE14 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A12NE (W)	329	9	545138 308023
566	**Points of Interest - Manufacturing and Production** Name: Tanks Location: PE14 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A12NE (NW)	410	9	545123 308195
566	**Points of Interest - Manufacturing and Production** Name: Tank Location: PE14 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A12NE (NW)	413	9	545117 308188
566	**Points of Interest - Manufacturing and Production** Name: Tank Location: PE14 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A12NE (NW)	415	9	545113 308185
567	**Points of Interest - Manufacturing and Production** Name: Industrial Estate Location: PE13 Category: Industrial Features Class Code: Business Parks and Industrial Estates Positional Accuracy: Positioned to an adjacent address or location	A18SE (NE)	459	9	545846 308437
567	**Points of Interest - Manufacturing and Production** Name: Tanks Location: PE13 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A18SE (NE)	463	9	545812 308467
567	**Points of Interest - Manufacturing and Production** Name: Tank Location: PE13 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A18SE (NE)	468	9	545815 308471
567	**Points of Interest - Manufacturing and Production** Name: Tank Location: PE13 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A18SE (NE)	474	9	545844 308457
568	**Points of Interest - Manufacturing and Production** Name: Tank Location: PE13 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A14NW (E)	507	9	546175 308138
568	**Points of Interest - Manufacturing and Production** Name: Tank Location: PE13 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A14NW (E)	511	9	546178 308141

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
568	**Points of Interest - Manufacturing and Production** Name: Tank Location: PE13 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A14NW (E)	517	9	546183 308145
568	**Points of Interest - Manufacturing and Production** Name: Tanks Location: PE13 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A14NW (E)	519	9	546187 308141
568	**Points of Interest - Manufacturing and Production** Name: Tank Location: PE13 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A14NW (E)	521	9	546205 308081
569	**Points of Interest - Manufacturing and Production** Name: Industrial Estate Location: PE13 Category: Industrial Features Class Code: Business Parks and Industrial Estates Positional Accuracy: Positioned to an adjacent address or location	A14NW (NE)	513	9	546133 308243
570	**Points of Interest - Manufacturing and Production** Name: Tank Location: PE13 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A19SW (NE)	573	9	545960 308494
570	**Points of Interest - Manufacturing and Production** Name: Tank Location: PE13 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A19SW (NE)	632	9	545977 308555
571	**Points of Interest - Manufacturing and Production** Name: Tank Location: PE13 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A18NE (N)	640	9	545641 308731
572	**Points of Interest - Manufacturing and Production** Name: Tanks Location: PE13 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A18NE (N)	666	9	545734 308734
573	**Points of Interest - Manufacturing and Production** Name: Tank Location: PE13 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A19SW (NE)	688	9	546049 308571
573	**Points of Interest - Manufacturing and Production** Name: Tank Location: PE13 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A19SW (NE)	689	9	546055 308568
573	**Points of Interest - Manufacturing and Production** Name: Tank Location: PE13 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A19SW (NE)	691	9	546050 308574
573	**Points of Interest - Manufacturing and Production** Name: Tanks Location: PE13 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A19SW (NE)	694	9	546059 308571

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
573	**Points of Interest - Manufacturing and Production** Name: Industrial Estate Location: PE13 Category: Industrial Features Class Code: Business Parks and Industrial Estates Positional Accuracy: Positioned to an adjacent address or location	A19NW (NE)	766	9	546098 308632
574	**Points of Interest - Manufacturing and Production** Name: Tank Location: PE13 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A19NW (NE)	768	9	546019 308693
574	**Points of Interest - Manufacturing and Production** Name: Tank Location: PE13 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A19NW (NE)	769	9	546020 308694
574	**Points of Interest - Manufacturing and Production** Name: Tanks Location: PE13 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A19NW (NE)	769	9	546020 308694
574	**Points of Interest - Manufacturing and Production** Name: Tank Location: PE13 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A19NW (NE)	796	9	546026 308723
575	**Points of Interest - Manufacturing and Production** Name: Works Location: PE13 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A18NE (N)	793	9	545716 308872
575	**Points of Interest - Manufacturing and Production** Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A18NE (N)	796	9	545723 308873
576	**Points of Interest - Manufacturing and Production** Name: Tank Location: PE13 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A19NE (NE)	845	9	546229 308632
576	**Points of Interest - Manufacturing and Production** Name: Tanks Location: PE13 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A19NE (NE)	853	9	546234 308639
577	**Points of Interest - Manufacturing and Production** Name: Tank Location: PE13 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A19NW (NE)	875	9	546130 308744
577	**Points of Interest - Manufacturing and Production** Name: Tank Location: PE13 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A19NW (NE)	906	9	546144 308773
578	**Points of Interest - Manufacturing and Production** Name: Tank Location: PE13 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A19NW (NE)	876	9	545928 308881

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
578	**Points of Interest - Manufacturing and Production** Name: Tank Location: PE13 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A19NW (NE)	938	9	545956 308936
579	**Points of Interest - Manufacturing and Production** Name: Tanks Location: PE13 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A23SE (N)	922	9	545869 308958
580	**Points of Interest - Public Infrastructure** Name: Sluice Location: PE14 Category: Water Class Code: Weirs, Sluices and Dams Positional Accuracy: Positioned to an adjacent address or location	A13SW (SW)	32	9	545359 307769
581	**Points of Interest - Public Infrastructure** Name: Tesco Wisbech Location: Sandown Road, Wibech, PE14 0SL Category: Road And Rail Class Code: Petrol and Fuel Stations Positional Accuracy: Positioned to address or location	A18SW (N)	283	9	545480 308380
582	**Points of Interest - Public Infrastructure** Name: Tesco Wisbech Extra Location: Cromwell Road, Cromwell Road, New Bridge Lane, Wibech, PE14 Category: Road And Rail Class Code: Petrol and Fuel Stations Positional Accuracy: Positioned to address or location	A18SW (N)	300	9	545487 308398
582	**Points of Interest - Public Infrastructure** Name: Tesco Petrol Filling Station Location: Sandown Road, Wisbech, PE14 0SL Category: Road And Rail Class Code: Petrol and Fuel Stations Positional Accuracy: Positioned to address or location	A18SW (N)	399	9	545484 308498
583	**Points of Interest - Public Infrastructure** Name: Amey Cespa Location: 75 Boleness Road, Wisbech, PE13 2XQ Category: Infrastructure and Facilities Class Code: Waste Storage, Processing and Disposal Positional Accuracy: Positioned to address or location	A14NW (E)	402	9	546083 308078
583	**Points of Interest - Public Infrastructure** Name: Recycling Depot Location: Not Supplied Category: Infrastructure and Facilities Class Code: Recycling Centres Positional Accuracy: Positioned to an adjacent address or location	A14NW (E)	409	9	546094 308062
583	**Points of Interest - Public Infrastructure** Name: Recycling Depot Location: Boleness Road, PE13 Category: Infrastructure and Facilities Class Code: Recycling Centres Positional Accuracy: Positioned to address or location	A14NW (E)	410	9	546096 308057
584	**Points of Interest - Public Infrastructure** Name: Tesco Filling Station Location: Cromwell Road, Wisbech, PE14 0RG Category: Road And Rail Class Code: Petrol and Fuel Stations Positional Accuracy: Positioned to address or location	A12NE (W)	410	9	545046 308014
585	**Points of Interest - Public Infrastructure** Name: Sluice Location: PE14 Category: Water Class Code: Weirs, Sluices and Dams Positional Accuracy: Positioned to an adjacent address or location	A6NE (SW)	925	9	544508 307497
586	**Points of Interest - Recreational and Environmental** Name: Playground Location: Not Supplied Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	A20SW (NE)	986	9	546578 308415

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
586	**Points of Interest - Recreational and Environmental** Name: Playground Location: Weasenham Lane, PE13 Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to address or location	A20SW (NE)	989	9	546580 308417
587	**Points of Interest - Recreational and Environmental** Name: Play Area Location: Not Supplied Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	A23SE (N)	994	9	545621 309091
587	**Points of Interest - Recreational and Environmental** Name: Play Area Location: Malt Drive, PE14 Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to address or location	A23SE (N)	994	9	545620 309091

Agency & Hydrological	Version	Update Cycle
Contaminated Land Register Entries and Notices		
Fenland District Council - Environmental Health Department	October 2014	Annual Rolling Update
Kings Lynn And West Norfolk Borough Council - Environmental Health Department	September 2014	Annual Rolling Update
Discharge Consents		
Environment Agency - Anglian Region	July 2019	Quarterly
Enforcement and Prohibition Notices		
Environment Agency - Anglian Region	March 2013	Annual Rolling Update
Integrated Pollution Controls		
Environment Agency - Anglian Region	October 2008	Variable
Integrated Pollution Prevention And Control		
Environment Agency - Anglian Region	July 2019	Quarterly
Local Authority Integrated Pollution Prevention And Control		
Fenland District Council - Environmental Health Department	February 2015	Variable
Kings Lynn And West Norfolk Borough Council - Environmental Health Department	September 2014	Variable
Local Authority Pollution Prevention and Controls		
Fenland District Council - Environmental Health Department	February 2015	Annual Rolling Update
Kings Lynn And West Norfolk Borough Council - Environmental Health Department	September 2014	Annual Rolling Update
Local Authority Pollution Prevention and Control Enforcements		
Fenland District Council - Environmental Health Department	February 2015	Variable
Kings Lynn And West Norfolk Borough Council - Environmental Health Department	September 2014	Variable
Nearest Surface Water Feature		
Ordnance Survey	January 2019	
Pollution Incidents to Controlled Waters		
Environment Agency - Anglian Region	September 1999	Not Applicable
Prosecutions Relating to Authorised Processes		
Environment Agency - Anglian Region	March 2013	Annual Rolling Update
Prosecutions Relating to Controlled Waters		
Environment Agency - Anglian Region	March 2013	Annual Rolling Update
Registered Radioactive Substances		
Environment Agency - Anglian Region	June 2016	
River Quality		
Environment Agency - Head Office	November 2001	Not Applicable
River Quality Biology Sampling Points		
Environment Agency - Head Office	July 2012	Annually
River Quality Chemistry Sampling Points		
Environment Agency - Head Office	July 2012	Annually
Substantiated Pollution Incident Register		
Environment Agency - Anglian Region - Central Area	July 2019	Quarterly
Water Abstractions		
Environment Agency - Anglian Region	July 2019	Quarterly
Water Industry Act Referrals		
Environment Agency - Anglian Region	October 2017	Quarterly
Groundwater Vulnerability Map		
Environment Agency - Head Office	June 2018	As notified
Bedrock Aquifer Designations		
Environment Agency - Head Office	January 2018	Annually
Superficial Aquifer Designations		
Environment Agency - Head Office	January 2018	Annually
Source Protection Zones		
Environment Agency - Head Office	July 2019	Quarterly

Data Currency

Agency & Hydrological	Version	Update Cycle
Extreme Flooding from Rivers or Sea without Defences Environment Agency - Head Office	August 2019	Quarterly
Flooding from Rivers or Sea without Defences Environment Agency - Head Office	August 2019	Quarterly
Areas Benefiting from Flood Defences Environment Agency - Head Office	August 2019	Quarterly
Flood Water Storage Areas Environment Agency - Head Office	August 2019	Quarterly
Flood Defences Environment Agency - Head Office	August 2019	Quarterly
OS Water Network Lines Ordnance Survey	July 2019	Quarterly
Surface Water 1 in 30 year Flood Extent Environment Agency - Head Office	October 2013	Annually
Surface Water 1 in 100 year Flood Extent Environment Agency - Head Office	October 2013	Annually
Surface Water 1 in 1000 year Flood Extent Environment Agency - Head Office	October 2013	Annually
Surface Water Suitability Environment Agency - Head Office	October 2013	Annually
BGS Groundwater Flooding Susceptibility British Geological Survey - National Geoscience Information Service	May 2013	Annually

Waste	Version	Update Cycle
BGS Recorded Landfill Sites		
British Geological Survey - National Geoscience Information Service	June 1996	Not Applicable
Historical Landfill Sites		
Environment Agency - Head Office	July 2019	Quarterly
Integrated Pollution Control Registered Waste Sites		
Environment Agency - Anglian Region	October 2008	Not Applicable
Licensed Waste Management Facilities (Landfill Boundaries)		
Environment Agency - Anglian Region - Central Area	July 2018	Quarterly
Licensed Waste Management Facilities (Locations)		
Environment Agency - Anglian Region - Central Area	July 2019	Quarterly
Environment Agency - Anglian Region - Northern Area	July 2019	Quarterly
Local Authority Landfill Coverage		
Cambridgeshire County Council	May 2000	Not Applicable
Fenland District Council	May 2000	Not Applicable
Kings Lynn And West Norfolk Borough Council - Environmental Health Department	May 2000	Not Applicable
Norfolk County Council - Planning & Transportation - Minerals & Waste	May 2000	Not Applicable
Local Authority Recorded Landfill Sites		
Cambridgeshire County Council	May 2000	Not Applicable
Fenland District Council	May 2000	Not Applicable
Kings Lynn And West Norfolk Borough Council - Environmental Health Department	May 2000	Not Applicable
Norfolk County Council - Planning & Transportation - Minerals & Waste	May 2000	Not Applicable
Potentially Infilled Land (Non-Water)		
Landmark Information Group Limited	December 1999	Not Applicable
Potentially Infilled Land (Water)		
Landmark Information Group Limited	December 1999	Not Applicable
Registered Landfill Sites		
Environment Agency - Anglian Region - Central Area	March 2003	Not Applicable
Registered Waste Transfer Sites		
Environment Agency - Anglian Region - Central Area	March 2003	Not Applicable
Environment Agency - Anglian Region - Northern Area	March 2003	Not Applicable
Registered Waste Treatment or Disposal Sites		
Environment Agency - Anglian Region - Central Area	March 2003	Not Applicable
Environment Agency - Anglian Region - Northern Area	March 2003	Not Applicable
Hazardous Substances	**Version**	**Update Cycle**
Control of Major Accident Hazards Sites (COMAH)		
Health and Safety Executive	April 2018	Bi-Annually
Explosive Sites		
Health and Safety Executive	March 2017	Annually
Notification of Installations Handling Hazardous Substances (NIHHS)		
Health and Safety Executive	November 2000	Not Applicable
Planning Hazardous Substance Enforcements		
Cambridgeshire County Council	February 2016	Variable
Fenland District Council	February 2016	Variable
Kings Lynn And West Norfolk Borough Council - Planning Control	February 2016	Variable
Norfolk County Council - Planning & Transportation - Minerals & Waste	June 2007	Annual Rolling Update
Planning Hazardous Substance Consents		
Cambridgeshire County Council	February 2016	Variable
Fenland District Council	February 2016	Variable
Kings Lynn And West Norfolk Borough Council - Planning Control	February 2016	Variable
Norfolk County Council - Planning & Transportation - Minerals & Waste	June 2007	Annual Rolling Update

Geological	Version	Update Cycle
BGS 1:625,000 Solid Geology British Geological Survey - National Geoscience Information Service	January 2009	Not Applicable
BGS Estimated Soil Chemistry British Geological Survey - National Geoscience Information Service	October 2015	Annually
BGS Recorded Mineral Sites British Geological Survey - National Geoscience Information Service	April 2019	Bi-Annually
CBSCB Compensation District Cheshire Brine Subsidence Compensation Board (CBSCB)	August 2011	Not Applicable
Coal Mining Affected Areas The Coal Authority - Property Searches	March 2014	Annual Rolling Update
Mining Instability Ove Arup & Partners	October 2000	Not Applicable
Non Coal Mining Areas of Great Britain British Geological Survey - National Geoscience Information Service	May 2015	Not Applicable
Potential for Collapsible Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	Annually
Potential for Compressible Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	Annually
Potential for Ground Dissolution Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	Annually
Potential for Landslide Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	Annually
Potential for Running Sand Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	Annually
Potential for Shrinking or Swelling Clay Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	Annually
Radon Potential - Radon Affected Areas British Geological Survey - National Geoscience Information Service	July 2011	Annually
Radon Potential - Radon Protection Measures British Geological Survey - National Geoscience Information Service	July 2011	Annually
Industrial Land Use	**Version**	**Update Cycle**
Contemporary Trade Directory Entries Thomson Directories	July 2019	Quarterly
Fuel Station Entries Catalist Ltd - Experian	September 2019	Quarterly
Gas Pipelines National Grid	July 2014	
Points of Interest - Commercial Services PointX	September 2019	Quarterly
Points of Interest - Education and Health PointX	September 2019	Quarterly
Points of Interest - Manufacturing and Production PointX	September 2019	Quarterly
Points of Interest - Public Infrastructure PointX	September 2019	Quarterly
Points of Interest - Recreational and Environmental PointX	September 2019	Quarterly
Underground Electrical Cables National Grid	December 2015	

Sensitive Land Use	Version	Update Cycle
Ancient Woodland Natural England	August 2018	Bi-Annually
Areas of Outstanding Natural Beauty Natural England	June 2019	Bi-Annually
Environmentally Sensitive Areas Natural England	January 2017	
Forest Parks Forestry Commission	April 1997	Not Applicable
Local Nature Reserves Natural England	March 2019	Bi-Annually
Marine Nature Reserves Natural England	July 2019	Bi-Annually
National Nature Reserves Natural England	July 2019	Bi-Annually
National Parks Natural England	April 2017	Bi-Annually
Nitrate Vulnerable Zones Department for Environment, Food and Rural Affairs (DEFRA - formerly FRCA)	October 2015	
Ramsar Sites Natural England	April 2019	Bi-Annually
Sites of Special Scientific Interest Natural England	March 2019	Bi-Annually
Special Areas of Conservation Natural England	June 2019	Bi-Annually
Special Protection Areas Natural England	April 2019	Bi-Annually

Data Suppliers

A selection of organisations who provide data within this report

Data Supplier	Data Supplier Logo
Ordnance Survey	
Environment Agency	
Scottish Environment Protection Agency	
The Coal Authority	
British Geological Survey	
Centre for Ecology and Hydrology	
Natural Resources Wales	
Scottish Natural Heritage	
Natural England	
Public Health England	
Ove Arup	
Peter Brett Associates	

Useful Contacts

Contact	Name and Address	Contact Details
1	**Environment Agency - National Customer Contact Centre (NCCC)** PO Box 544, Templeborough, Rotherham, S60 1BY	[redacted]
2	**Fenland District Council - Environmental Health Department** Fenland Hall, County Road, March, Cambridgeshire, PE15 8NQ	[redacted]
3	**Environment Agency - Head Office** Rio House, Waterside Drive, Aztec West, Almondsbury, Bristol, Avon, BS32 4UD	[redacted]
4	**Ordnance Survey** Adanac Drive, Southampton, Hampshire, SO16 0AS	[redacted]
5	**Fenland District Council** Fenland Hall, County Road, March, Cambridgeshire, PE15 8NQ	[redacted]
6	**Cambridgeshire County Council** Shire Hall, Castle Hill, Cambridge, Cambridgeshire, CB3 OAP	[redacted]
7	**Health and Safety Executive** 5S.2 Redgrave Court, Merton Road, Bootle, L20 7HS	[redacted]
8	**British Geological Survey - Enquiry Service** British Geological Survey, Environmental Science Centre, Keyworth, Nottingham, Nottinghamshire, NG12 5GG	[redacted]
9	**PointX** 7 Abbey Court, Eagle Way, Sowton, Exeter, Devon, EX2 7HY	[redacted]
-	**Public Health England - Radon Survey, Centre for Radiation, Chemical and Environmental Hazards** Chilton, Didcot, Oxfordshire, OX11 0RQ	[redacted]
-	**Landmark Information Group Limited** Imperium, Imperial Way, Reading, Berkshire, RG2 0TD	[redacted]

Please note that the Environment Agency / Natural Resources Wales / SEPA have a charging policy in place for enquiries.

Geology 1:50,000 Maps Legends

Superficial Geology

Map Colour	Lex Code	Rock Name	Rock Type	Min and Max Age
	TFD	Tidal Flat Deposits	Clay and Silt	Not Supplied - Holocene

Bedrock and Faults

Map Colour	Lex Code	Rock Name	Rock Type	Min and Max Age
	AMC	Ampthill Clay Formation	Mudstone	Not Supplied - Oxfordian

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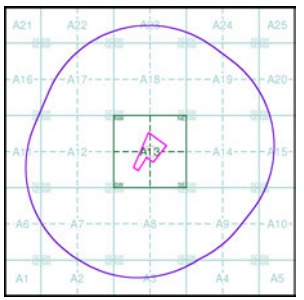
Geology 1:50,000 Maps

This report contains geological map extracts taken from the BGS Digital Geological map of Great Britain at 1:50,000 scale and is designed for users carrying out preliminary site assessments who require geological maps for the area around the site. This mapping may be more up to date than previously published paper maps.
The various geological layers - artificial and landslip deposits, superficial geology and solid (bedrock) geology are displayed in separate maps, but superimposed on the final 'Combined Surface Geology' map. All map legends feature on this page. Not all layers have complete nationwide coverage, so availability of data for relevant map sheets is indicated below.

Geology 1:50,000 Maps Coverage

Map ID:	**1**
Map Sheet No:	**159**
Map Name:	**Wisbech**
Map Date:	**1995**
Bedrock Geology:	**Available**
Superficial Geology:	**Available**
Artificial Geology:	**Available**
Faults:	**Not Supplied**
Landslip:	**Not Available**
Rock Segments:	**Not Supplied**

Geology 1:50,000 Maps - Slice A



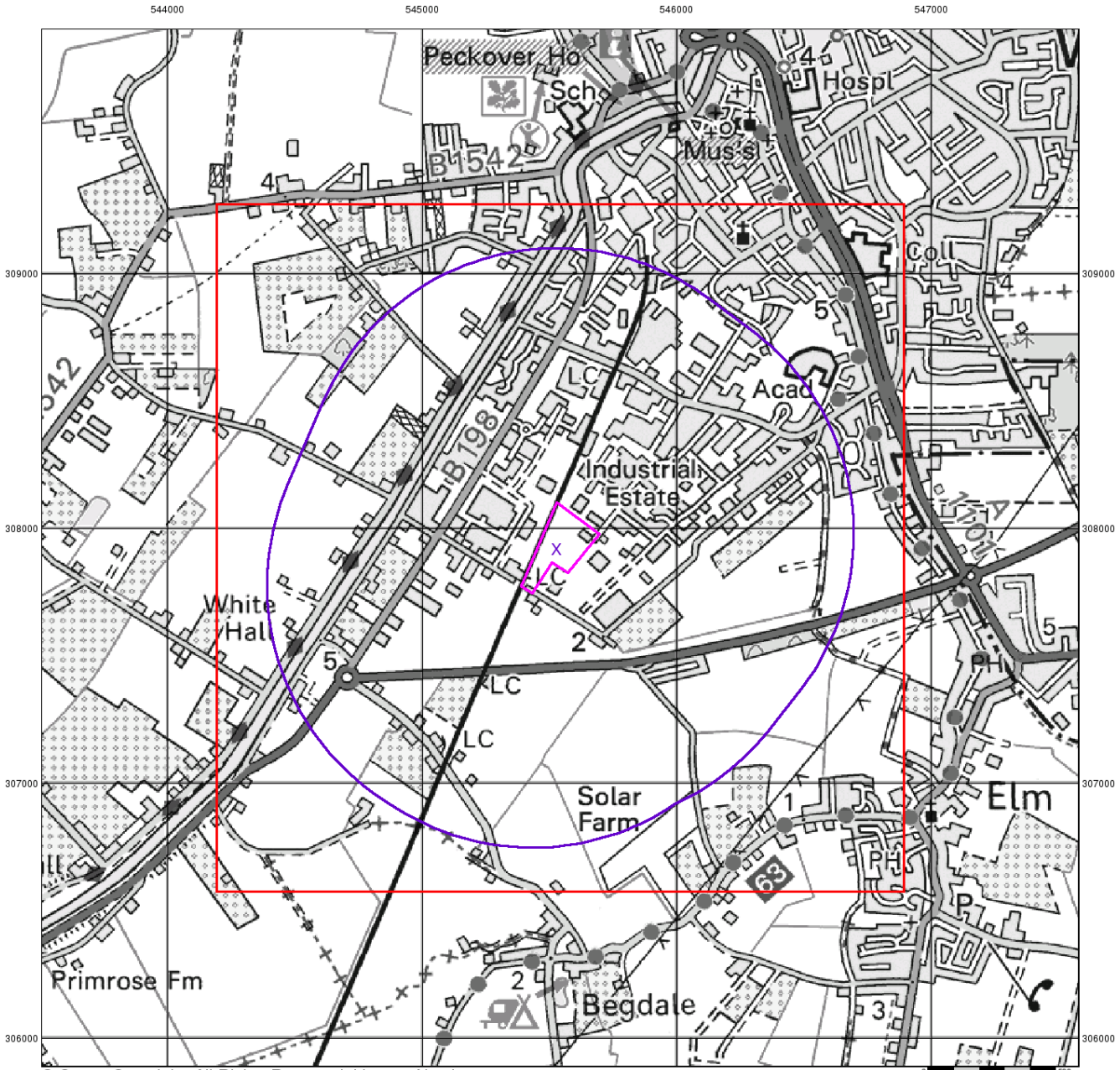
Order Details:

Order Number:	220808700_1_1
Customer Reference:	41310
National Grid Reference:	545530, 307920
Slice:	A
Site Area (Ha):	4.49
Search Buffer (m):	1000

Site Details:

Cage Cable Contractors Ltd, Algores Way, WISBECH, PE13 2TQ

Landmark INFORMATION GROUP
Tel: 0844 844 9952
Fax: 0844 844 9951
Web: [redacted]



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Artificial Ground and Landslip

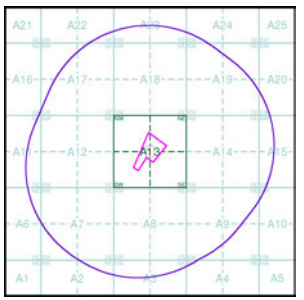
Artificial ground is a term used by BGS for those areas where the ground surface has been significantly modified by human activity. Information about previously developed ground is especially important, as it is often associated with potentially contaminated material, unpredictable engineering conditions and unstable ground.

Artificial ground includes:

- Made ground - man-made deposits such as embankments and spoil heaps on the natural ground surface.
- Worked ground - areas where the ground has been cut away such as quarries and road cuttings.
- Infilled ground - areas where the ground has been cut away then wholly or partially backfilled.
- Landscaped ground - areas where the surface has been reshaped.
- Disturbed ground - areas of ill-defined shallow or near surface mineral workings where it is impracticable to map made and worked ground separately.

Mass movement (landslip) deposits on BGS geological maps are primarily superficial deposits that have moved down slope under gravity to form landslips. These affect bedrock, other superficial deposits and artificial ground. The dataset also includes foundered strata, where the ground has collapsed due to subsidence.

Artificial Ground and Landslip Map - Slice A



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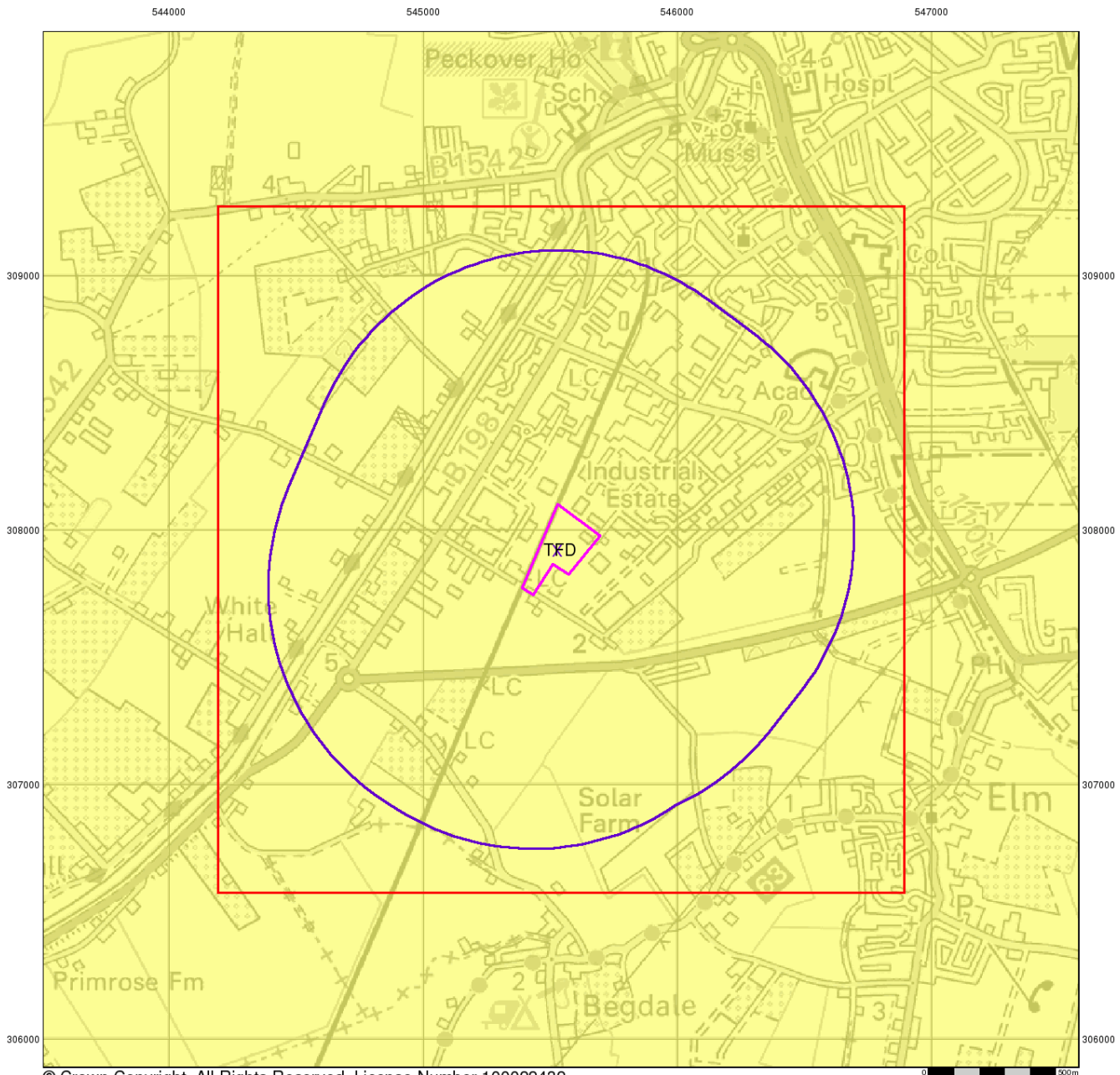

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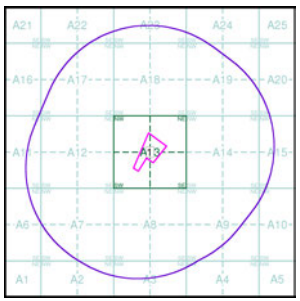
Superficial Geology

Superficial Deposits are the youngest geological deposits formed during the most recent period of geological time, the Quaternary, which extends back about 1.8 million years from the present.

They rest on older deposits or rocks referred to as Bedrock. This dataset contains Superficial deposits that are of natural origin and 'in place'. Other superficial strata may be held in the Mass Movement dataset where they have been moved, or in the Artificial Ground dataset where they are of man-made origin.

Most of these Superficial deposits are unconsolidated sediments such as gravel, sand, silt and clay, and onshore they form relatively thin, often discontinuous patches or larger spreads.

Superficial Geology Map - Slice A



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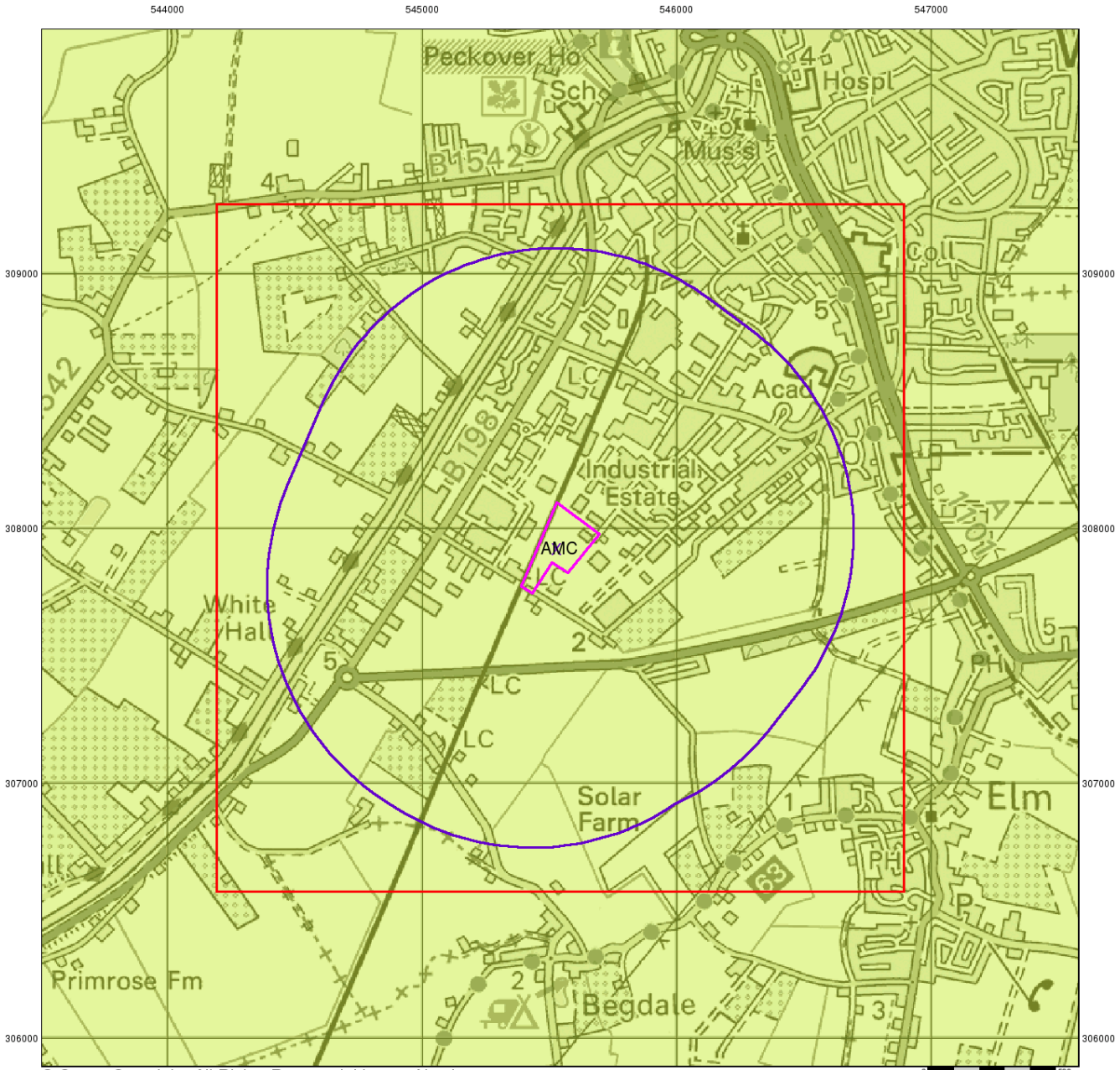

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Bedrock and Faults

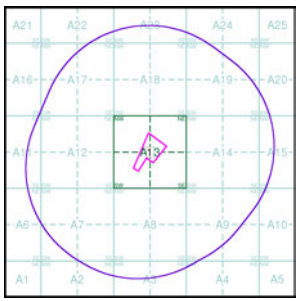
Bedrock geology is a term used for the main mass of rocks forming the Earth and are present everywhere, whether exposed at the surface in outcrops or concealed beneath superficial deposits or water.

The bedrock has formed over vast lengths of geological time ranging from ancient and highly altered rocks of the Proterozoic, some 2500 million years ago, or older, up to the relatively young Pliocene, 1.8 million years ago.

The bedrock geology includes many lithologies, often classified into three types based on origin: igneous, metamorphic and sedimentary.

The BGS Faults and Rock Segments dataset includes geological faults (e.g. normal, thrust), and thin beds mapped as lines (e.g. coal seam, gypsum bed). Some of these are linked to other particular 1:50,000 Geology datasets, for example, coal seams are part of the bedrock sequence, most faults and mineral veins primarily affect the bedrock but cut across the strata and post date its deposition.

Bedrock and Faults Map - Slice A



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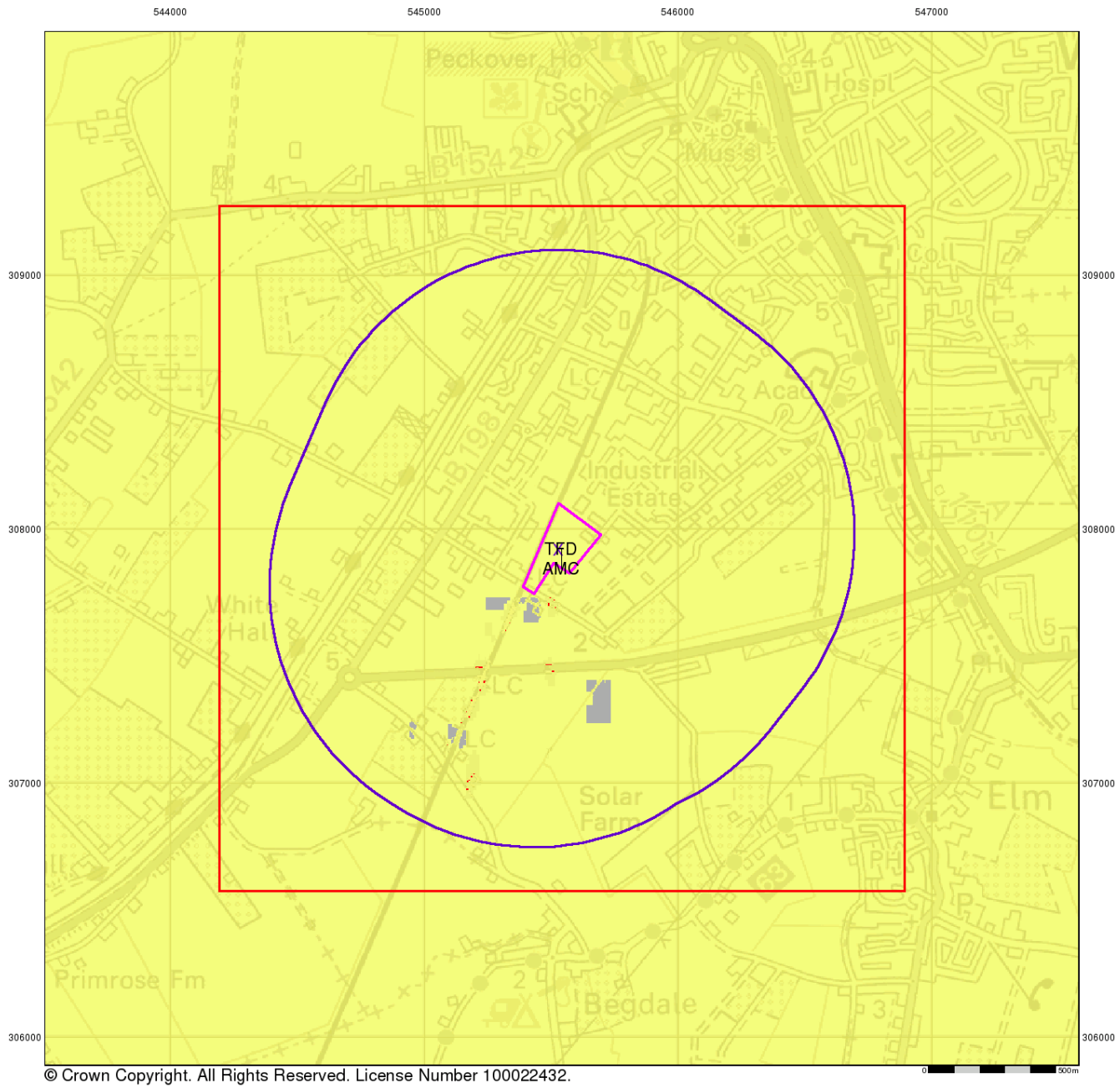

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Combined Surface Geology

The Combined Surface Geology map combines all the previous maps into one combined geological overview of your site.

Please consult the legends to the previous maps to interpret the Combined "Surface Geology" map.

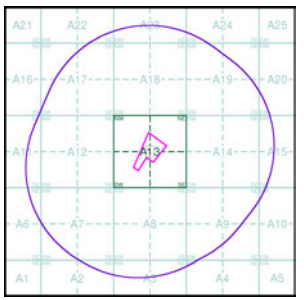
Additional Information

More information on 1:50,000 Geological mapping and explanations of rock classifications can be found on the BGS website. Using the LEX Codes in this report, further descriptions of rock types can be obtained by interrogating the 'BGS Lexicon of Named Rock Units'. This database can be accessed by following the 'Information and Data' link on the BGS website.

Contact

British Geological Survey
Kingsley Dunham Centre
Keyworth
Nottingham
NG12 5GG
Telephone: 0115 936 3143
Fax: 0115 936 3276
email: enquiries@bgs.ac.uk
[redacted]

Combined Geology Map - Slice A



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Historical Mapping Legends

Ordnance Survey County Series 1:10,560

Gravel Pit
Sand Pit
Other Pits
Quarry
Shingle
Orchard
Osiers
Reeds
Marsh
Mixed Wood
Deciduous
Brushwood
Fir
Furze
Rough Pasture
Arrow denotes flow of water
Trigonometrical Station
Site of Antiquities
Bench Mark
Pump, Guide Post, Signal Post
Well, Spring, Boundary Post
285 Surface Level
Sketched Contour
Instrumental Contour
Main Roads
Fenced
Un-Fenced
Minor Roads
Fenced
Un-Fenced
Sunken Road
Raised Road
Road over Railway
Railway over River
Railway over Road
Level Crossing
Road over River or Canal
Road over Stream
Road over Stream
County Boundary (Geographical)
County & Civil Parish Boundary
Administrative County & Civil Parish Boundary
Co. Boro. Bdy. County Borough Boundary (England)
Co. Burgh Bdy. County Burgh Boundary (Scotland)
R.D. Bdy. Rural District Boundary
Civil Parish Boundary

Ordnance Survey Plan 1:10,000

Chalk Pit, Clay Pit or Quarry
Gravel Pit
Sand Pit
Disused Pit or Quarry
Refuse or Slag Heap
Lake, Loch or Pond
Dunes
Boulders
Coniferous Trees
Non-Coniferous Trees
Orchard
Scrub
Coppice
Bracken
Heath
Rough Grassland
Marsh
Reeds
Saltings
Building
Direction of Flow of Water
Shingle
Sand
Glasshouse
Pylon
Electricity Transmission Line
Pole
Sloping Masonry
Cutting
Embankment
Standard Gauge Multiple Track
Road Under
Road Over
Level Crossing
Foot Bridge
Standard Gauge Single Track
Siding, Tramway or Mineral Line
Narrow Gauge
Geographical County
Administrative County, County Borough or County of City
Municipal Borough, Urban or Rural District, Burgh or District Council
Borough, Burgh or County Constituency
Shown only when not coincident with other boundaries
Civil Parish
Shown alternately when coincidence of boundaries occurs

BP, BS	Boundary Post or Stone	Pol Sta	Police Station
Ch	Church	PO	Post Office
CH	Club House	PC	Public Convenience
F E Sta	Fire Engine Station	PH	Public House
FB	Foot Bridge	SB	Signal Box
Fn	Fountain	Spr	Spring
GP	Guide Post	TCB	Telephone Call Box
MP	Mile Post	TCP	Telephone Call Post
MS	Mile Stone	W	Well

1:10,000 Raster Mapping

Gravel Pit
Refuse tip or slag heap
Rock
Rock (scattered)
Boulders
Boulders (scattered)
Shingle
Mud
Sand
Sand Pit
Slopes
Top of cliff
General detail
Underground detail
Overhead detail
Narrow gauge railway
Multi-track railway
Single track railway
County boundary (England only)
Civil, parish or community boundary
District, Unitary, Metropolitan, London Borough boundary
Constituency boundary
Area of wooded vegetation
Non-coniferous trees
Non-coniferous trees (scattered)
Coniferous trees
Coniferous trees (scattered)
Positioned tree
Orchard
Coppice or Osiers
Rough Grassland
Heath
Scrub
Marsh, Salt Marsh or Reeds
Water feature
Flow arrows
MHW(S) Mean high water (springs)
MLW(S) Mean low water (springs)
Telephone line (where shown)
Electricity transmission line (with poles)
BM 123.45 m Bench mark (where shown)
Triangulation station
Point feature (e.g. Guide Post or Mile Stone)
Pylon, flare stack or lighting tower
Site of (antiquity)
Glasshouse
General Building
Important Building

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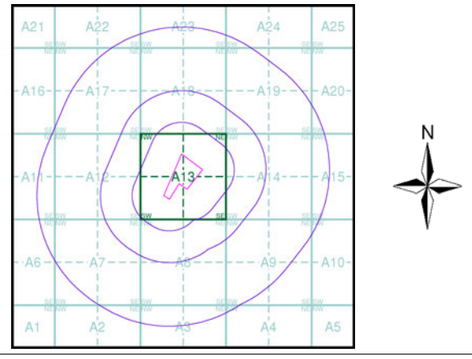
Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Cambridgeshire & Isle Of Ely	1:10,560	1887	2
Norfolk	1:10,560	1887	3
Cambridgeshire & Isle Of Ely	1:10,560	1903	4
Cambridgeshire & Isle Of Ely	1:10,560	1927 - 1928	5
Cambridgeshire & Isle Of Ely	1:10,560	1927 - 1928	6
Cambridgeshire & Isle Of Ely	1:10,560	1938 - 1953	7
Cambridgeshire & Isle Of Ely	1:10,560	1953	8
Ordnance Survey Plan	1:10,000	1959	9
Ordnance Survey Plan	1:10,000	1982 - 1983	10
Ordnance Survey Plan	1:10,000	1991	11
10K Raster Mapping	1:10,000	2000	12
10K Raster Mapping	1:10,000	2006	13
VectorMap Local	1:10,000	2019	14

Historical Map - Slice A



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Landmark INFORMATION GROUP
Tel: 0844 844 9952
Fax: 0844 844 9951
Web: [redacted]

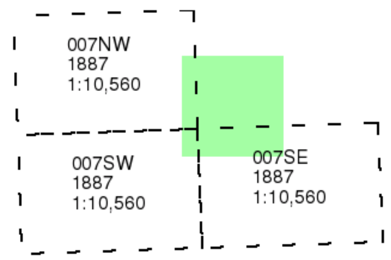
Cambridgeshire & Isle Of Ely

Published 1887

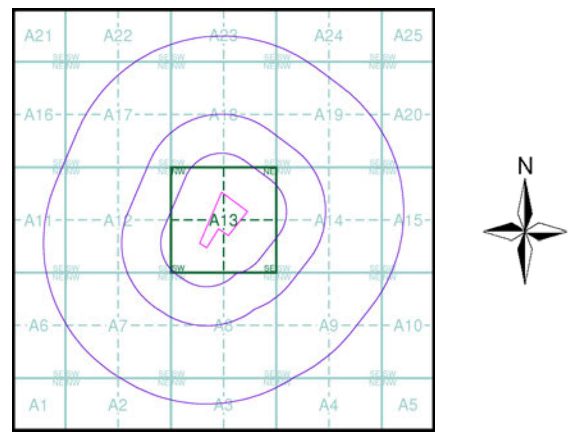
Source map scale - 1:10,560

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940`s, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)



Historical Map - Slice A



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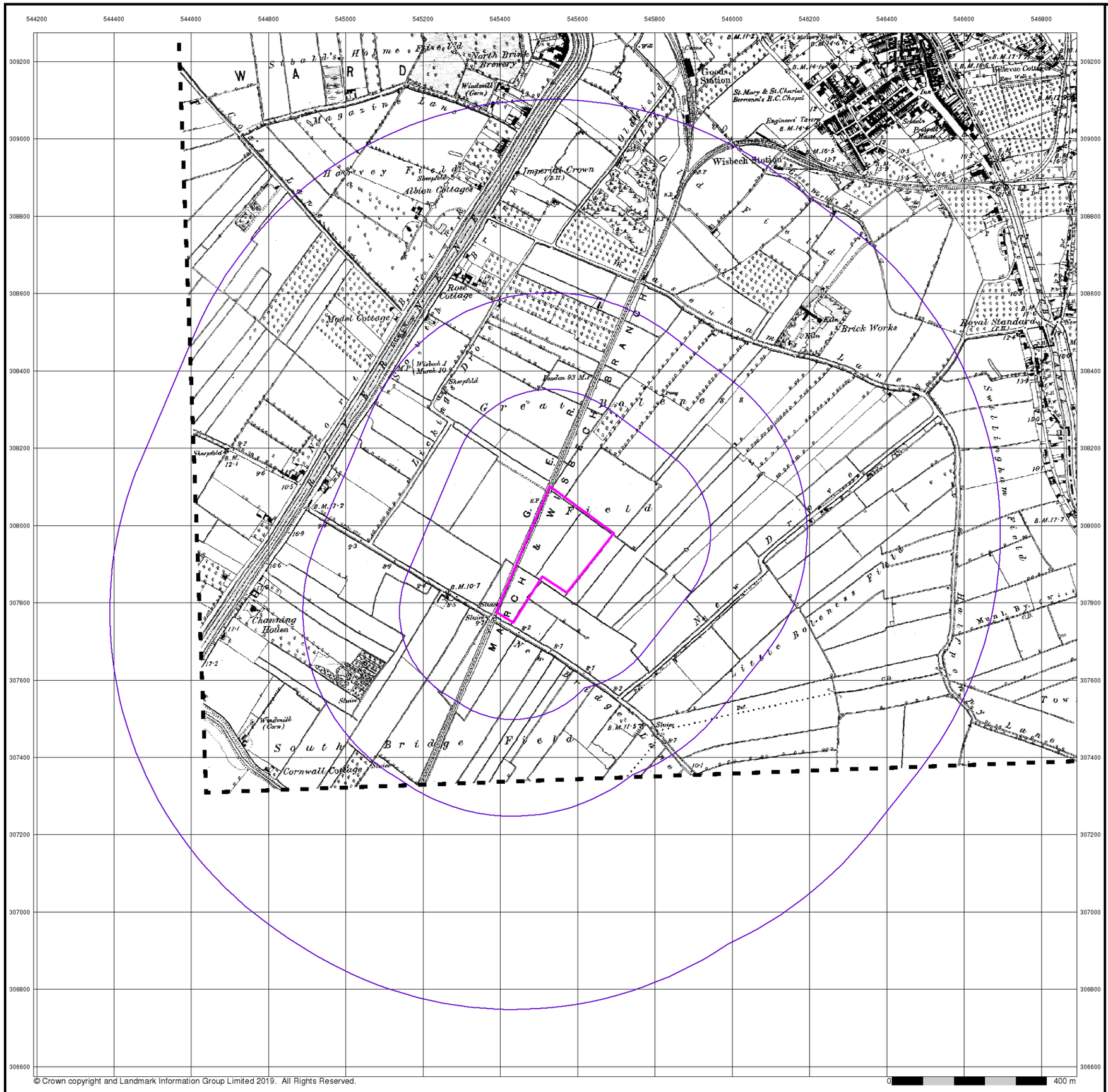

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Norfolk

Published 1887

Source map scale - 1:10,560

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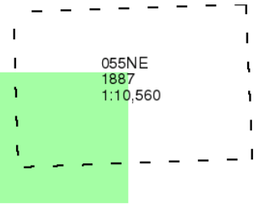
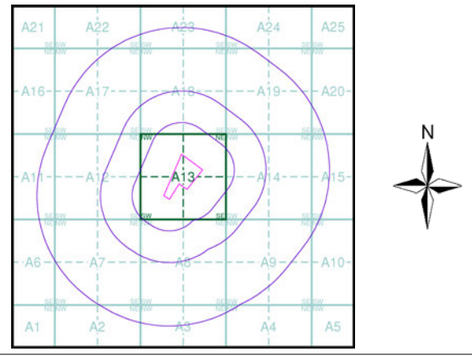


Historical Map - Slice A



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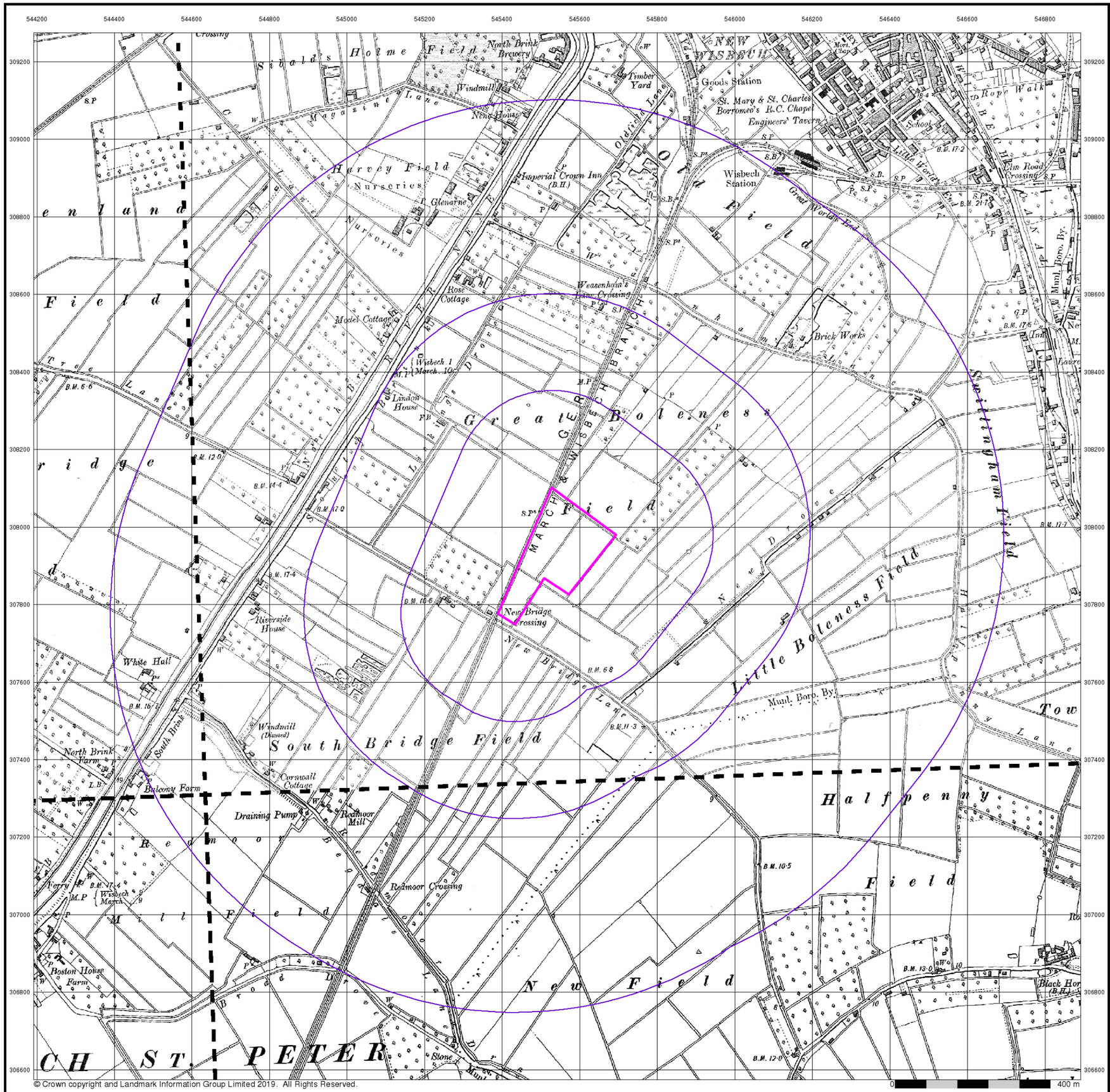

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Cambridgeshire & Isle Of Ely

Published 1903

Source map scale - 1:10,560

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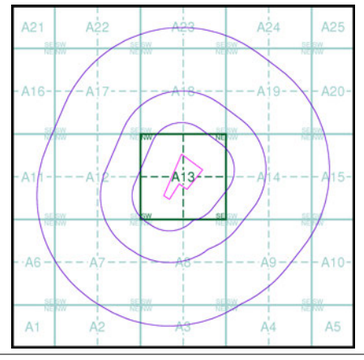
Map Name(s) and Date(s)

007NW 1903 1:10,560	007NE 1903 1:10,560
007SW 1903 1:10,560	007SE 1903 1:10,560

Historical Map - Slice A



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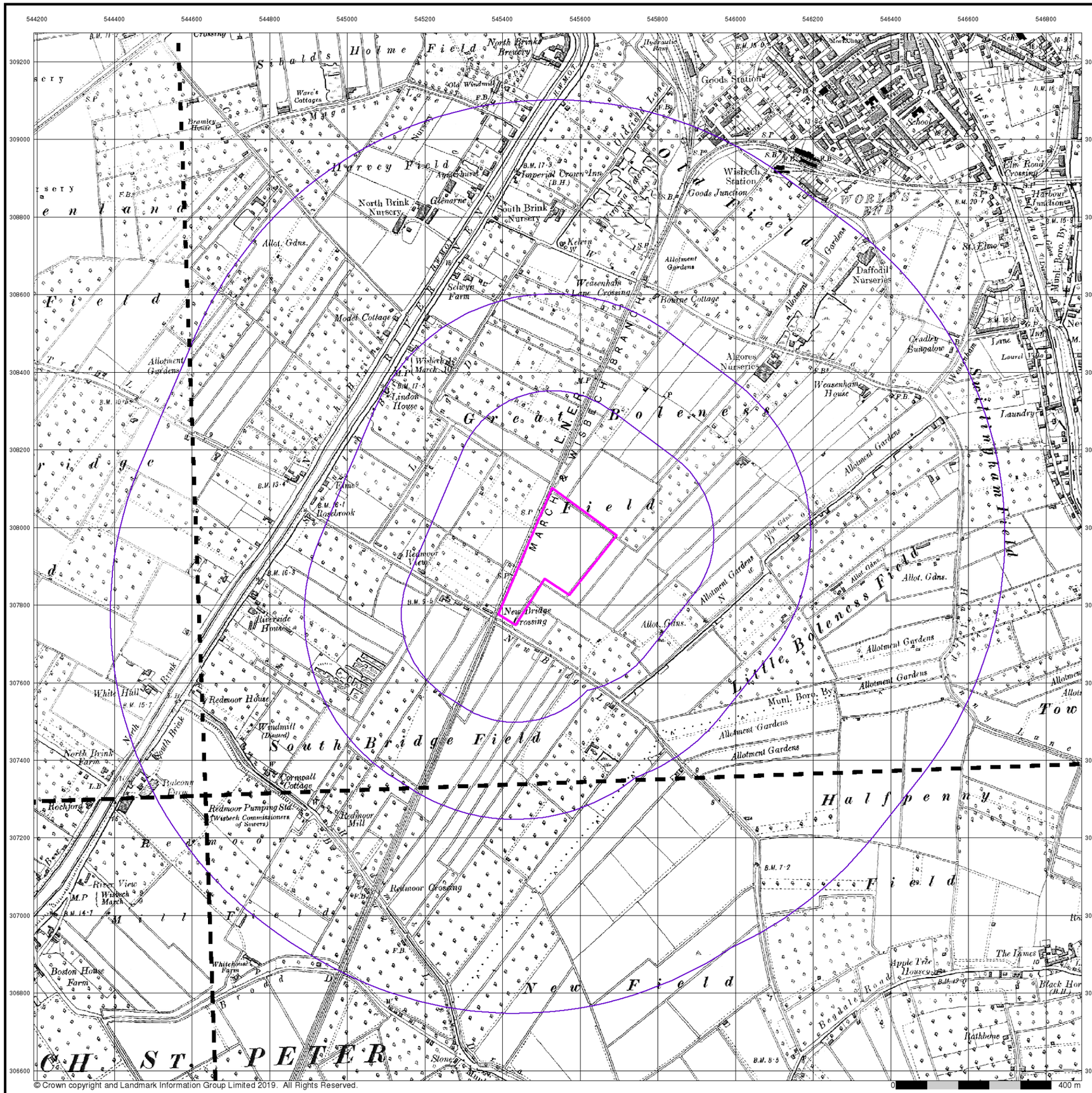

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Cambridgeshire & Isle Of Ely

Published 1927 - 1928

Source map scale - 1:10,560

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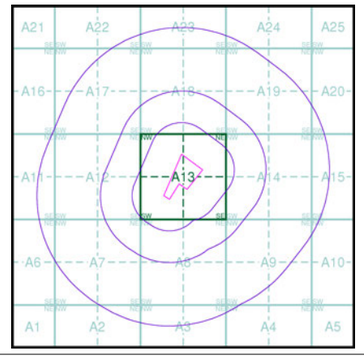
Map Name(s) and Date(s)

007NW 1927 1:10,560	007NE 1927 1:10,560
007SW 1927 1:10,560	007SE 1928 1:10,560

Historical Map - Slice A



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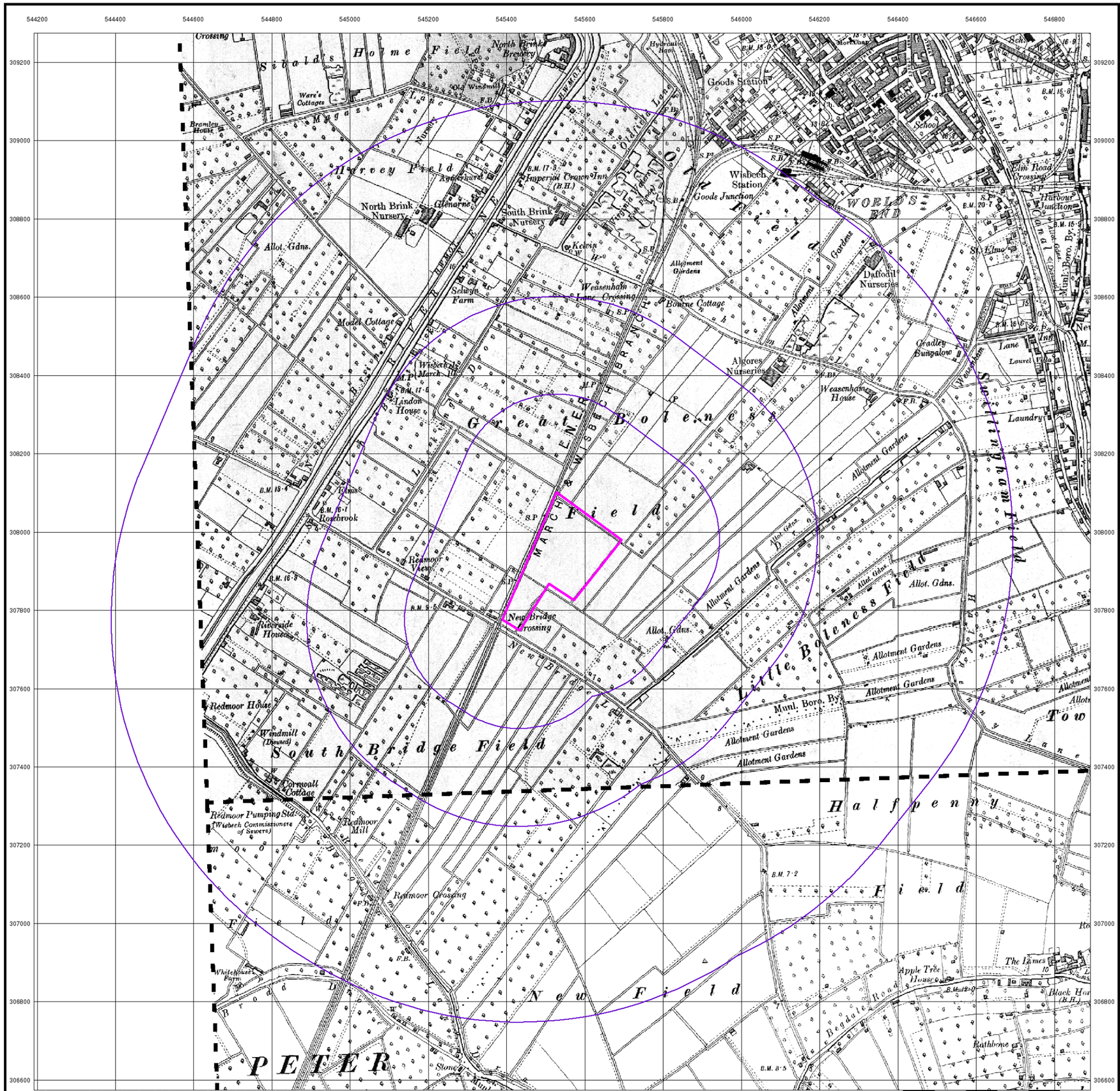

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Cambridgeshire & Isle Of Ely

Published 1927 - 1928

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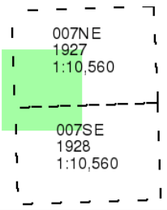

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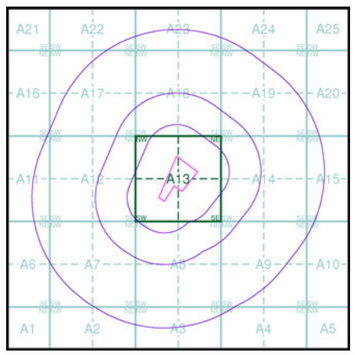


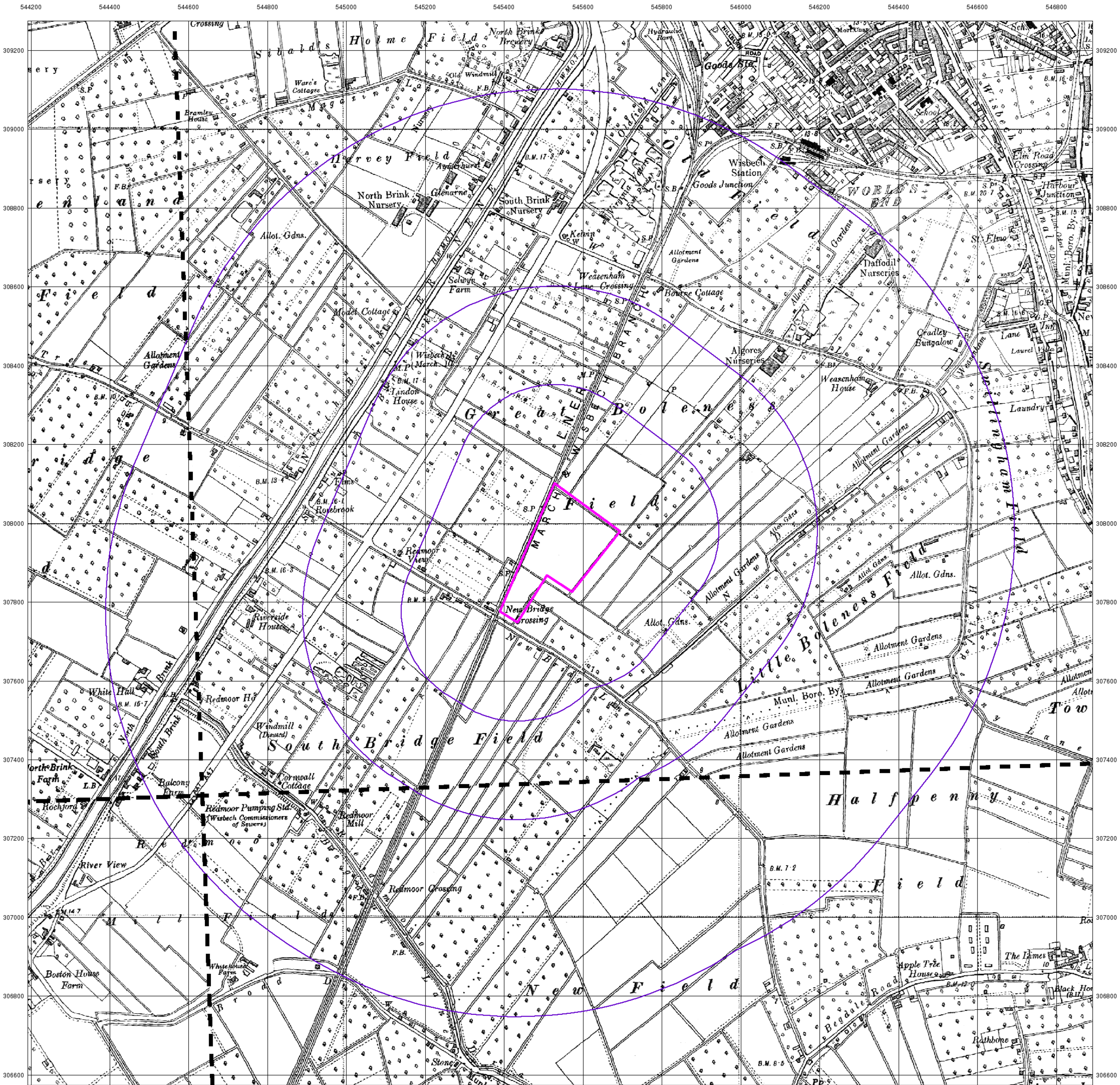
Order Details

Order Number:	220808700_1_1
Customer Ref:	41310
National Grid Reference:	545530, 307920
Slice:	A
Site Area (Ha):	4.49
Search Buffer (m):	1000

Site Details

Cage Cable Contractors Ltd, Algores Way, WISBECH, PE13 2TQ

Landmark INFORMATION GROUP
Tel: 0844 844 9952
Fax: 0844 844 9951
Web:



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amec foster wheeler

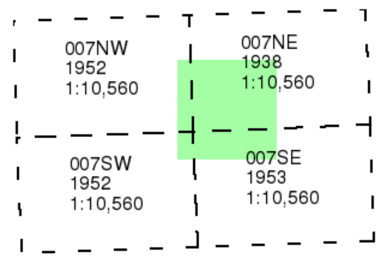
Cambridgeshire & Isle Of Ely

Published 1938 - 1953

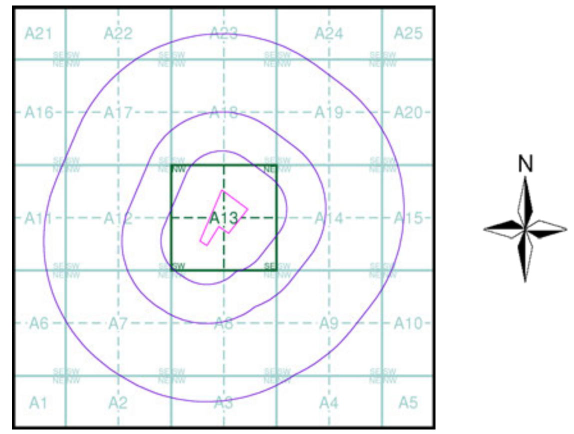
Source map scale - 1:10,560

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940`s, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)



Historical Map - Slice A



Order Details

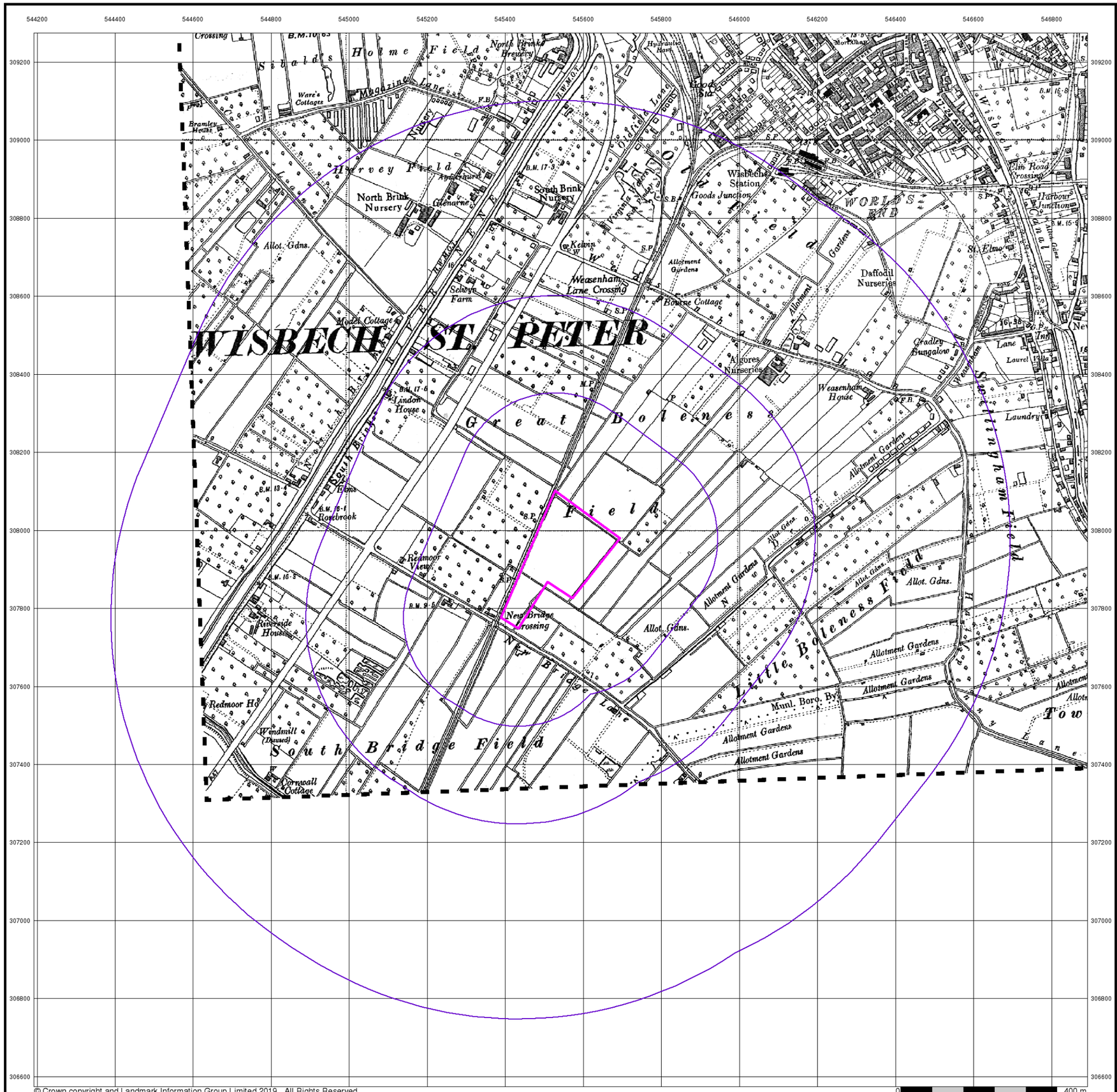
Order Number: 220808700_1_1
Customer Ref: 41310
National Grid Reference: 545530, 307920
Slice: A
Site Area (Ha): 4.49
Search Buffer (m): 1000

Site Details

Cage Cable Contractors Ltd, Algores Way, WISBECH, PE13 2TQ

Landmark INFORMATION GROUP

Tel: 0844 844 9952
Fax: 0844 844 9951
Web: [redacted]



amec foster wheeler

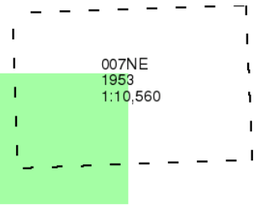
Cambridgeshire & Isle Of Ely

Published 1953

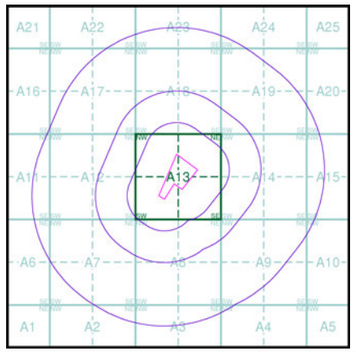
Source map scale - 1:10,560

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940`s, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)



Historical Map - Slice A



Order Details

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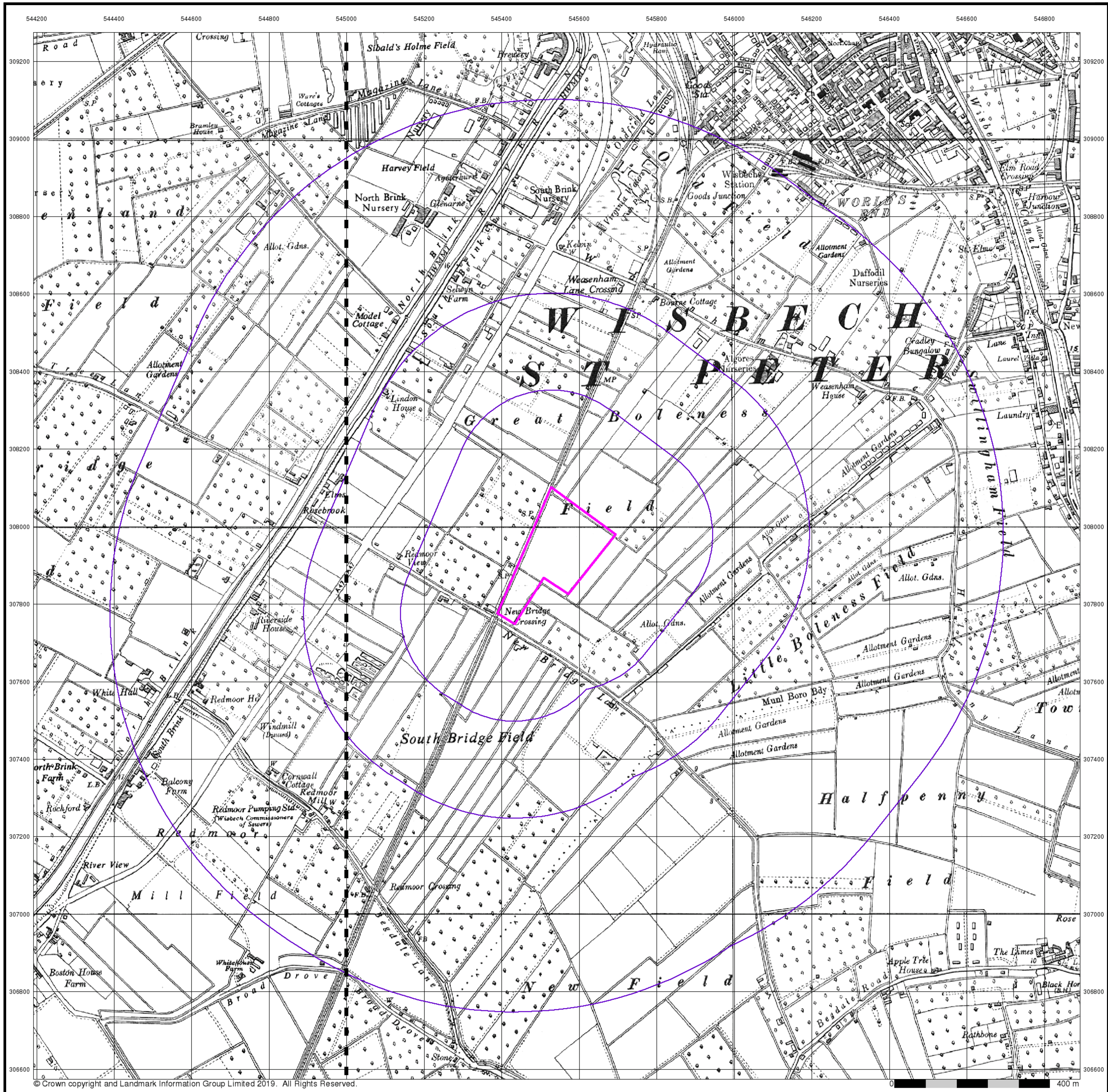
Web: [redacted]



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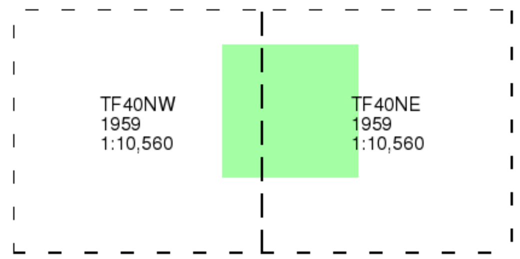
Ordnance Survey Plan

Published 1959

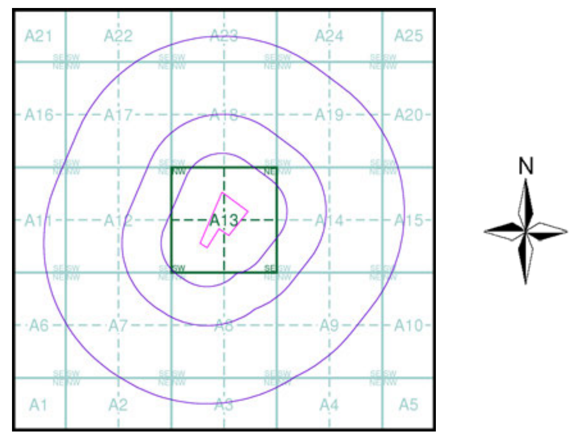
Source map scale - 1:10,000

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940`s, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)



Historical Map - Slice A



Order Details

Order Number: 220808700_1_1
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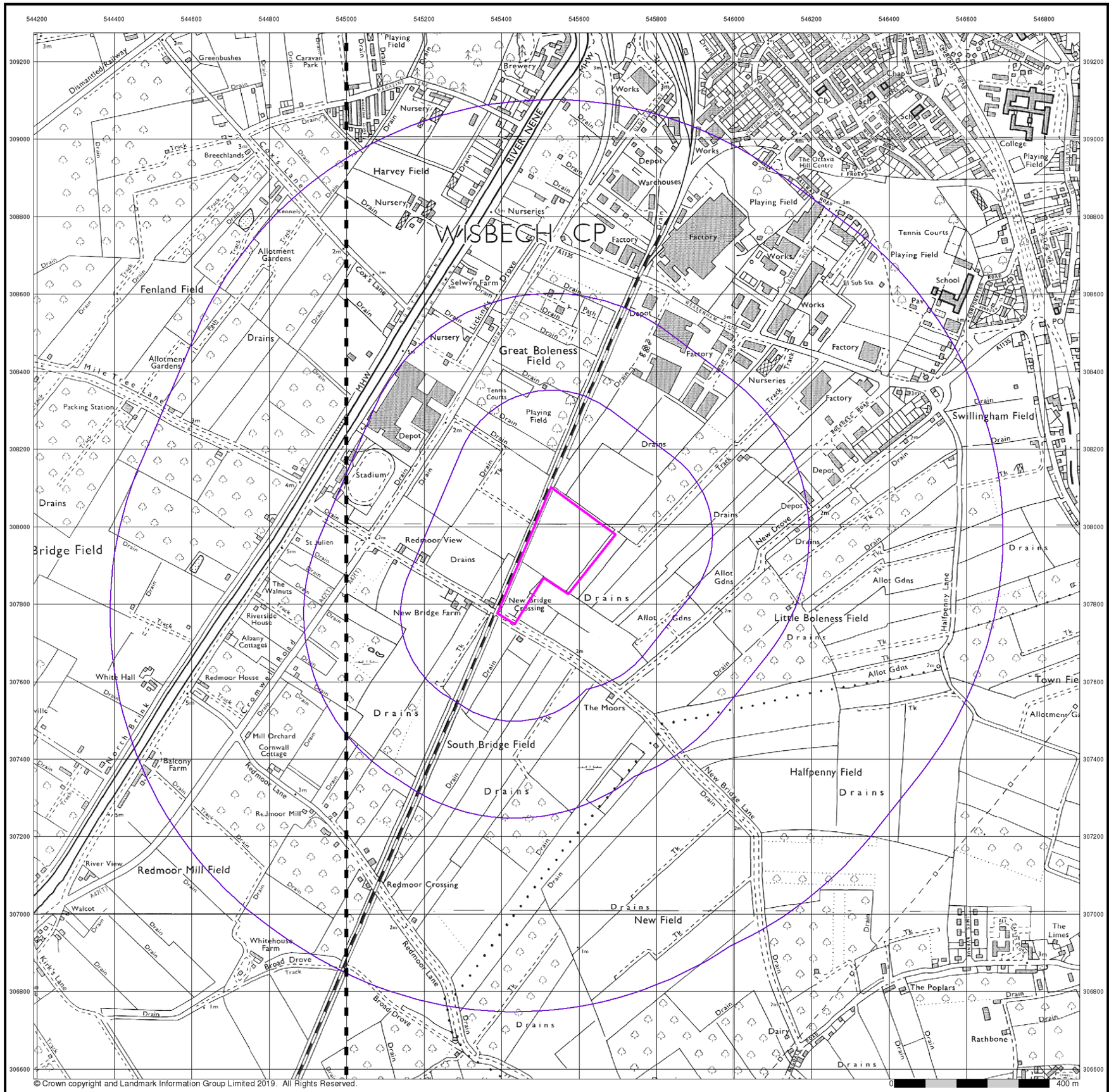


amec foster wheeler

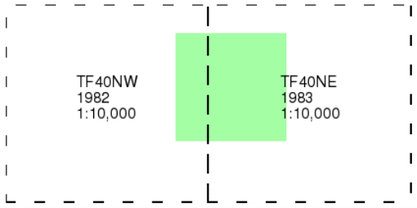
Ordnance Survey Plan

Published 1982 - 1983

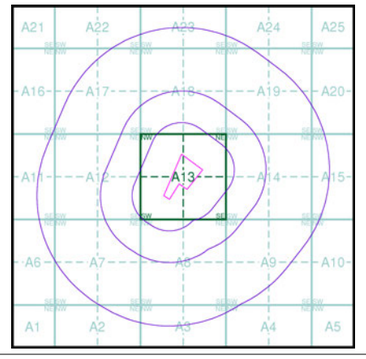
Source map scale - 1:10,000

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940`s, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)



Historical Map - Slice A



Order Details

Order Number:	220808700_1_1
Customer Ref:	41310
National Grid Reference:	545530, 307920
Slice:	A
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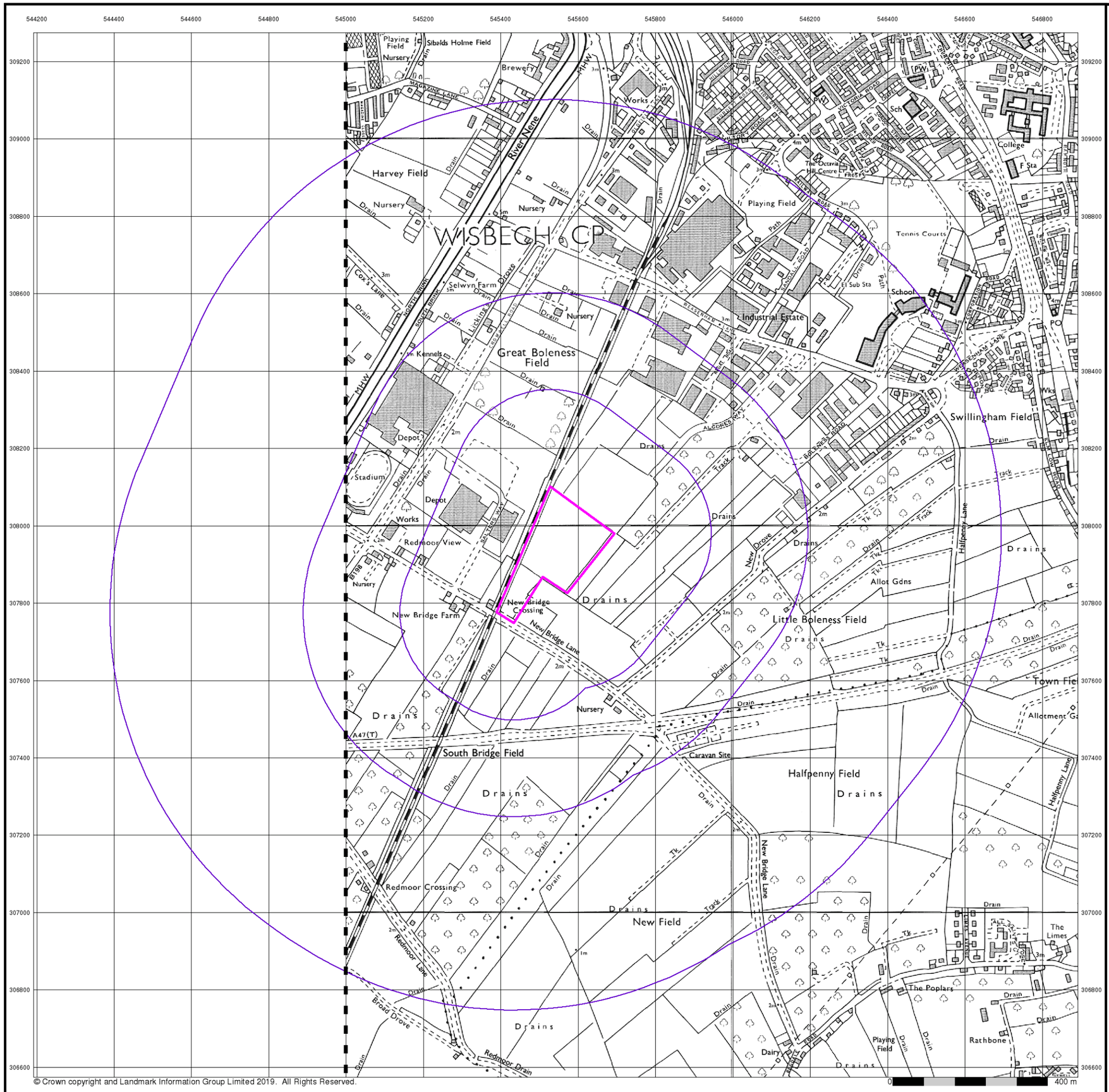
Web: [redacted]



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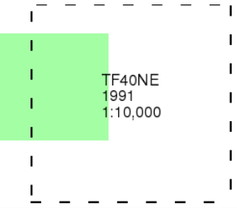
Ordnance Survey Plan

Published 1991

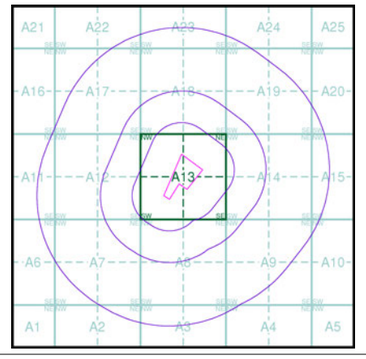
Source map scale - 1:10,000

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940`s, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)



Historical Map - Slice A



Order Details

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National Grid Reference:	545530, 307920
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Search Buffer (m):	1000

Site Details

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Tel: 0844 844 9952
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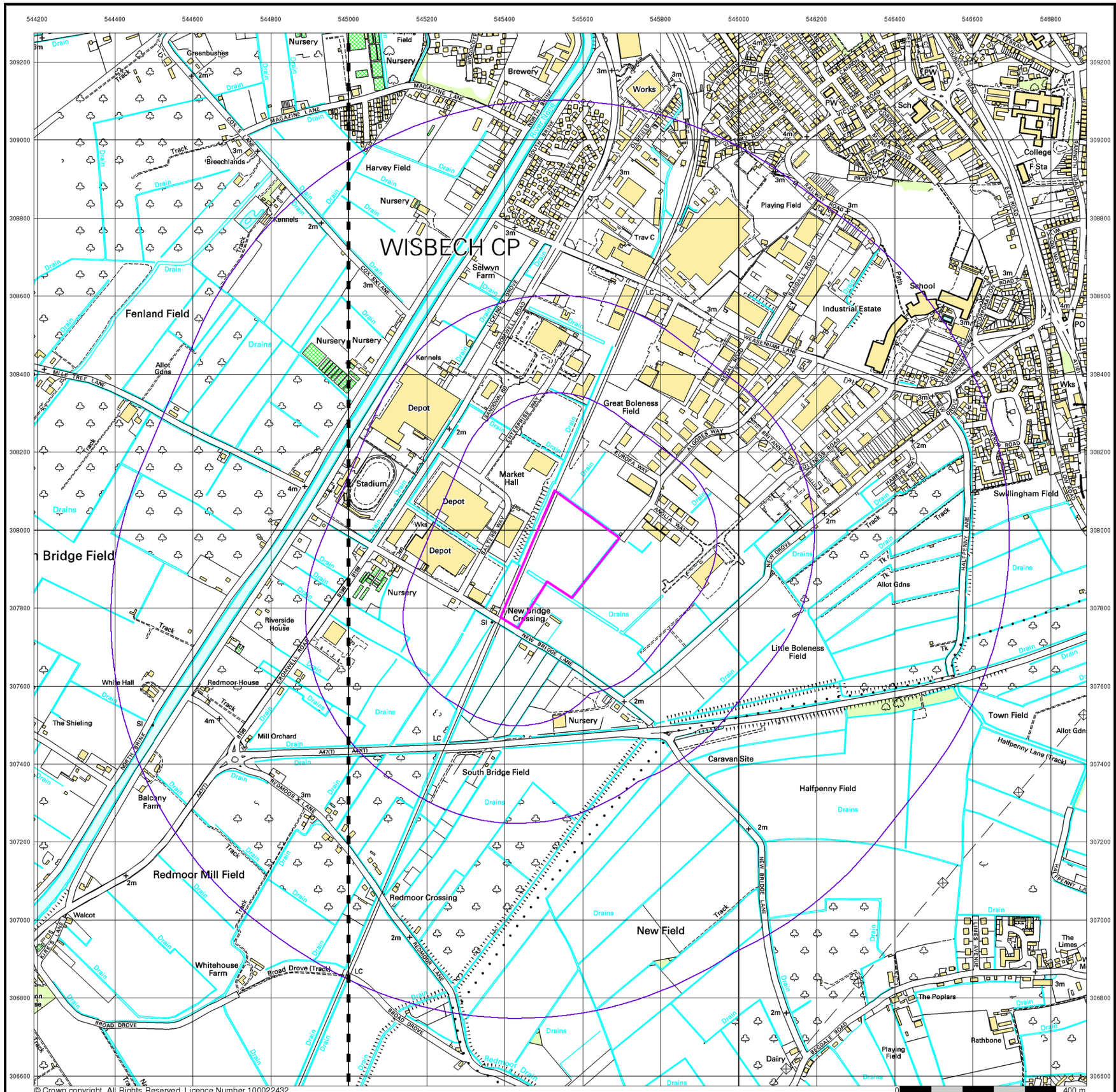

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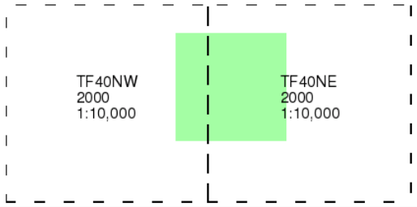
10k Raster Mapping

Published 2000

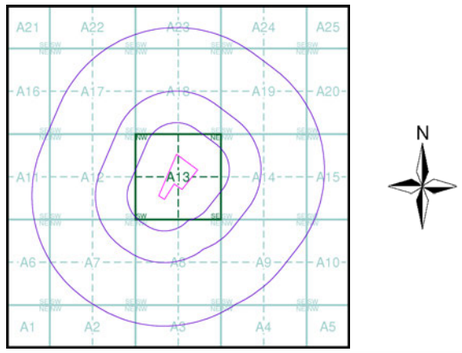
Source map scale - 1:10,000

The historical maps shown were produced from the Ordnance Survey`s 1:10,000 colour raster mapping. These maps are derived from Landplan which replaced the old 1:10,000 maps originally published in 1970. The data is highly detailed showing buildings, fences and field boundaries as well as all roads, tracks and paths. Road names are also included together with the relevant road number and classification. Boundary information depiction includes county, unitary authority, district, civil parish and constituency.

Map Name(s) and Date(s)



Historical Map - Slice A



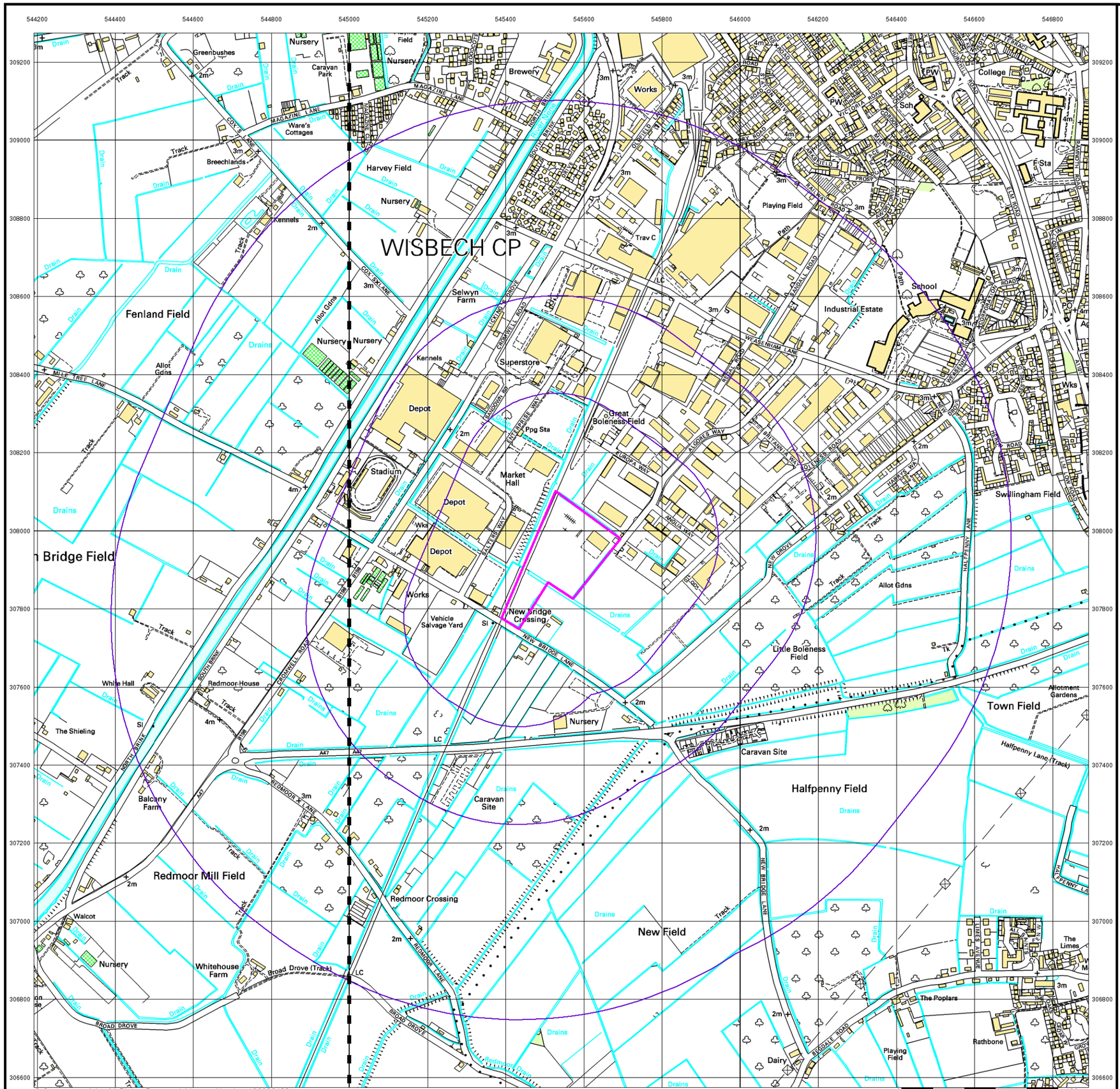
Order Details

Order Number:	220808700_1_1
Customer Ref:	41310
National Grid Reference:	545530, 307920
Slice:	A
Site Area (Ha):	4.49
Search Buffer (m):	1000

Site Details

Cage Cable Contractors Ltd, Algores Way, WISBECH, PE13 2TQ

Landmark INFORMATION GROUP
Tel: 0844 844 9952
Fax: 0844 844 9951
Web: [redacted]



amec foster wheeler

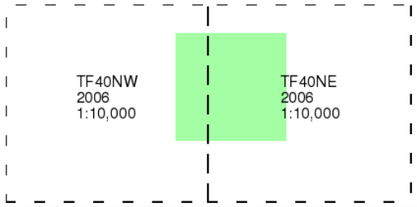
10k Raster Mapping

Published 2006

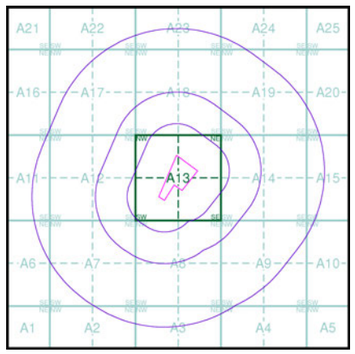
Source map scale - 1:10,000

The historical maps shown were produced from the Ordnance Survey`s 1:10,000 colour raster mapping. These maps are derived from Landplan which replaced the old 1:10,000 maps originally published in 1970. The data is highly detailed showing buildings, fences and field boundaries as well as all roads, tracks and paths. Road names are also included together with the relevant road number and classification. Boundary information depiction includes county, unitary authority, district, civil parish and constituency.

Map Name(s) and Date(s)



Historical Map - Slice A



Order Details

Order Number:	220808700_1_1
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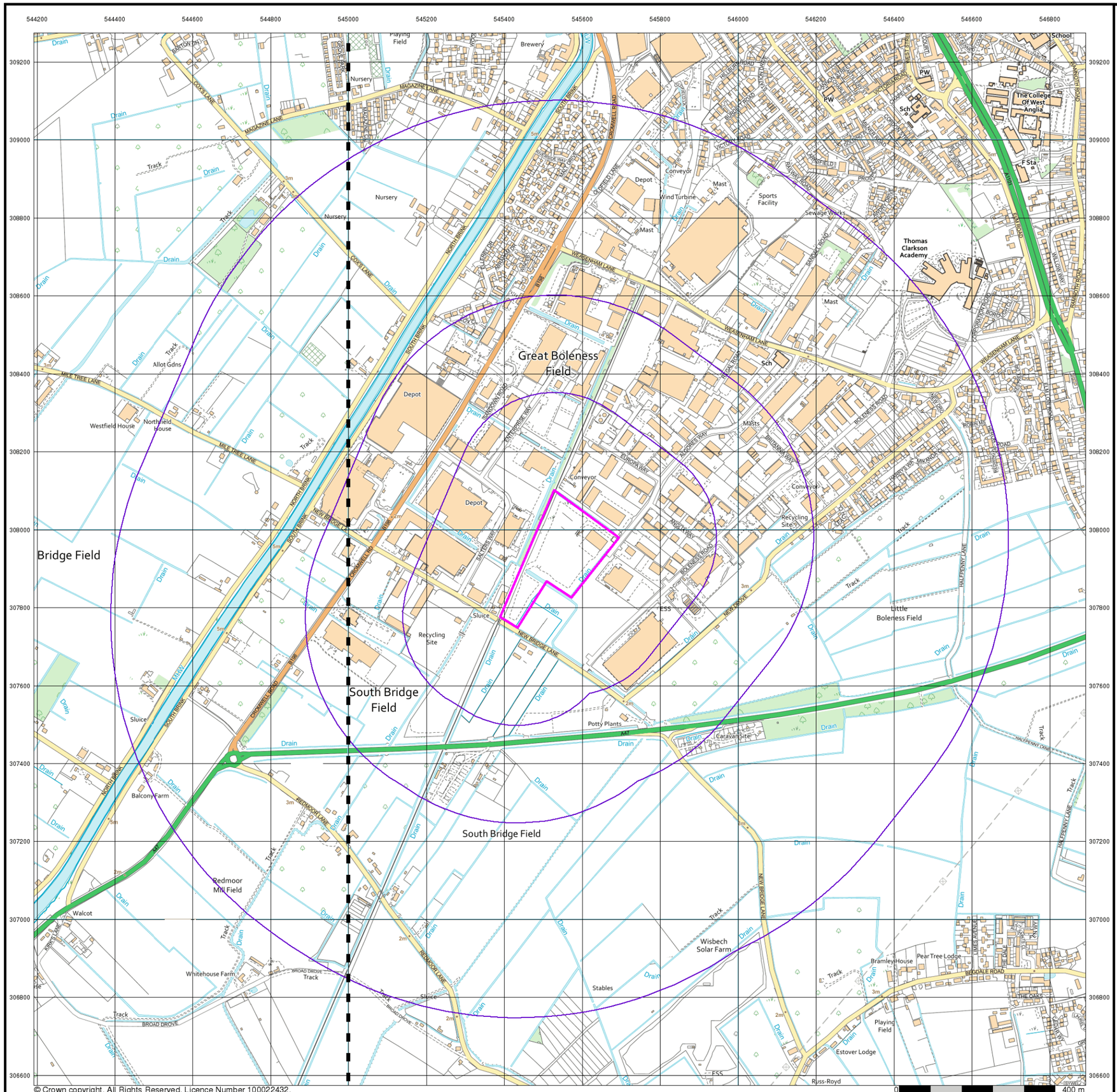


amec foster wheeler

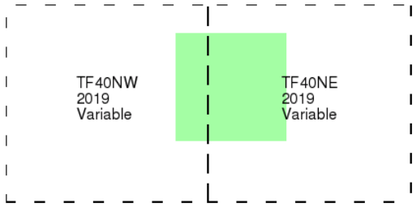
VectorMap Local

Published 2019

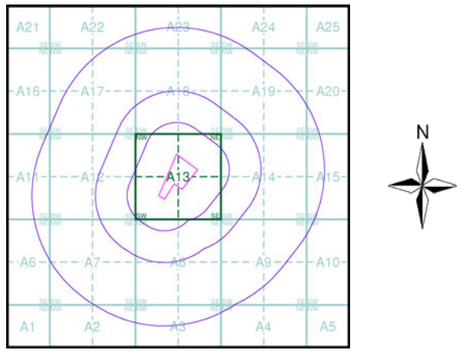
Source map scale - 1:10,000

VectorMap Local (Raster) is Ordnance Survey's highest detailed 'backdrop' mapping product. These maps are produced from OS's VectorMap Local, a simple vector dataset at a nominal scale of 1:10,000, covering the whole of Great Britain, that has been designed for creating graphical mapping. OS VectorMap Local is derived from large-scale information surveyed at 1:1250 scale (covering major towns and cities),1:2500 scale (smaller towns, villages and developed rural areas), and 1:10 000 scale (mountain, moorland and river estuary areas).

Map Name(s) and Date(s)



Historical Map - Slice A



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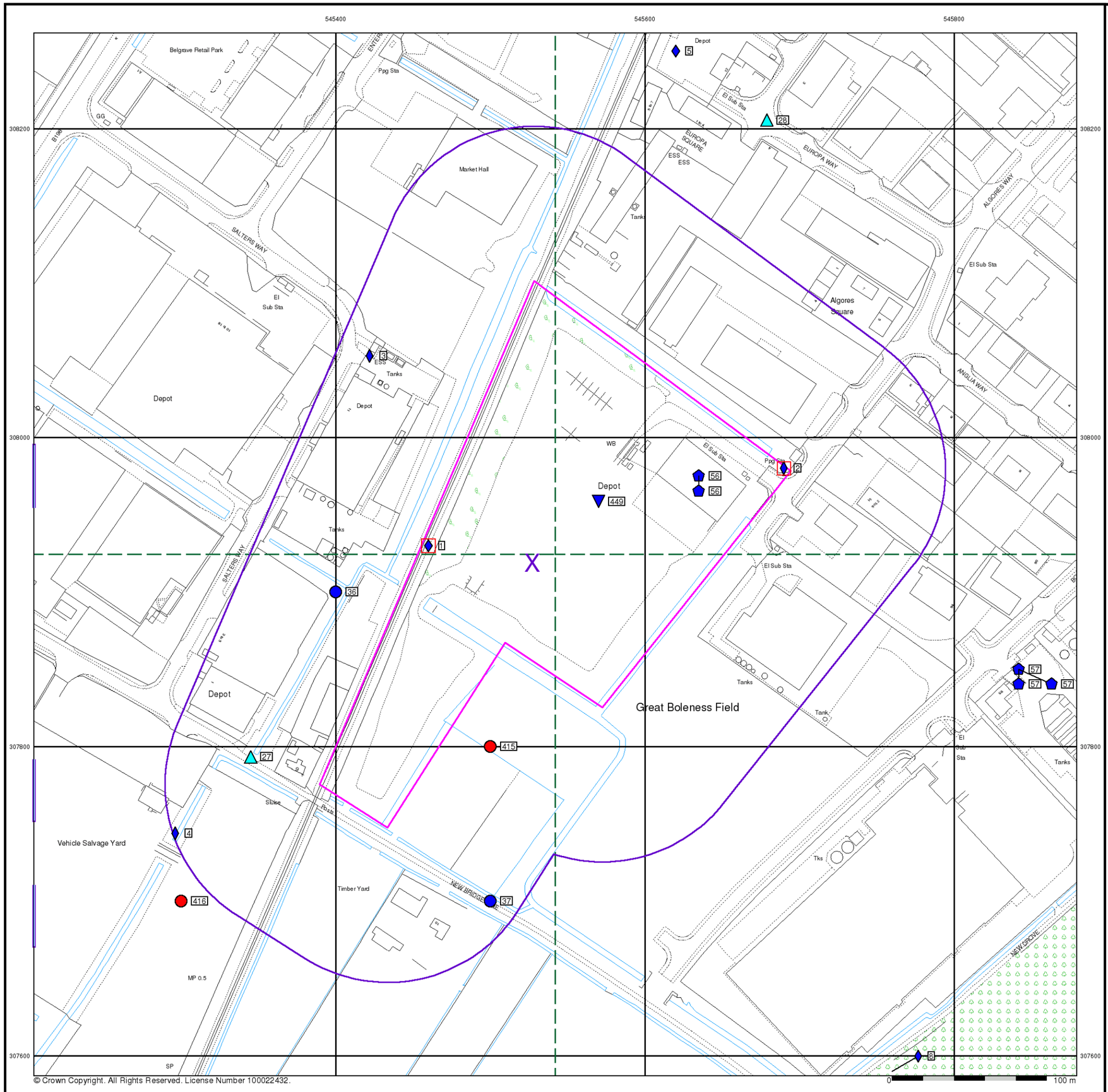
Web: [redacted]



amec foster wheeler

General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Map ID
- Several of Type at Location
- Pylon
- Overhead Transmission Line

Agency and Hydrological

- Contaminated Land Register Entry or Notice (Location)
- Contaminated Land Register Entry or Notice
- Discharge Consent
- Enforcement or Prohibition Notice
- Integrated Pollution Control
- Integrated Pollution Prevention Control
- Local Authority Integrated Pollution Prevention and Control
- Local Authority Pollution Prevention and Control
- Local Authority Pollution Prevention and Control Enforcement
- Pollution Incident to Controlled Waters
- Prosecution Relating to Authorised Processes
- Prosecution Relating to Controlled Waters
- Registered Radioactive Substance
- River Network or Water Feature
- River Quality Sampling Point
- Substantiated Pollution Incident Register
- Water Abstraction
- Water Industry Act Referral

Hazardous Substances

- COMAH Site
- Explosive Site
- NIHHS Site
- Planning Hazardous Substance Consent
- Planning Hazardous Substance Enforcement

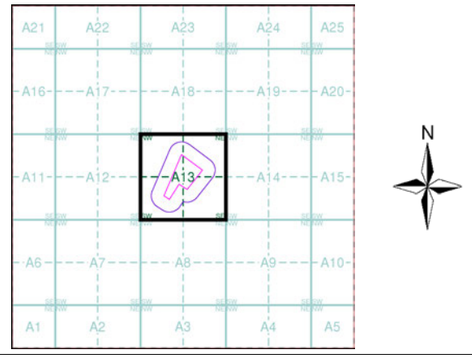
Geological

- BGS Recorded Mineral Site

Waste

- BGS Recorded Landfill Site (Location)
- BGS Recorded Landfill Site
- EA Historic Landfill (Buffered Point)
- EA Historic Landfill (Polygon)
- Integrated Pollution Control Registered Waste Site
- Licensed Waste Management Facility (Landfill Boundary)
- Licensed Waste Management Facility (Location)
- Local Authority Recorded Landfill Site (Location)
- Local Authority Recorded Landfill Site
- Potentially Infilled Land (Non-water)
- Potentially Infilled Land (Non-water)
- Potentially Infilled Land (Non-water)
- Potentially Infilled Land (Water)
- Potentially Infilled Land (Water)
- Potentially Infilled Land (Water)
- Registered Landfill Site
- Registered Landfill Site (Location)
- Registered Landfill Site (Point Buffered to 100m)
- Registered Landfill Site (Point Buffered to 250m)
- Registered Waste Transfer Site (Location)
- Registered Waste Transfer Site
- Registered Waste Treatment or Disposal Site (Location)
- Registered Waste Treatment or Disposal Site

Site Sensitivity Map - Segment A13



Order Details

Order Number:	220808700_1_1
Customer Ref:	41310
National Grid Reference:	545530, 307920
Slice:	A
Site Area (Ha):	4.49
Plot Buffer (m):	100

Site Details

Cage Cable Contractors Ltd, Algores Way, WISBECH, PE13 2TQ

Landmark INFORMATION GROUP
Tel: 0844 844 9952
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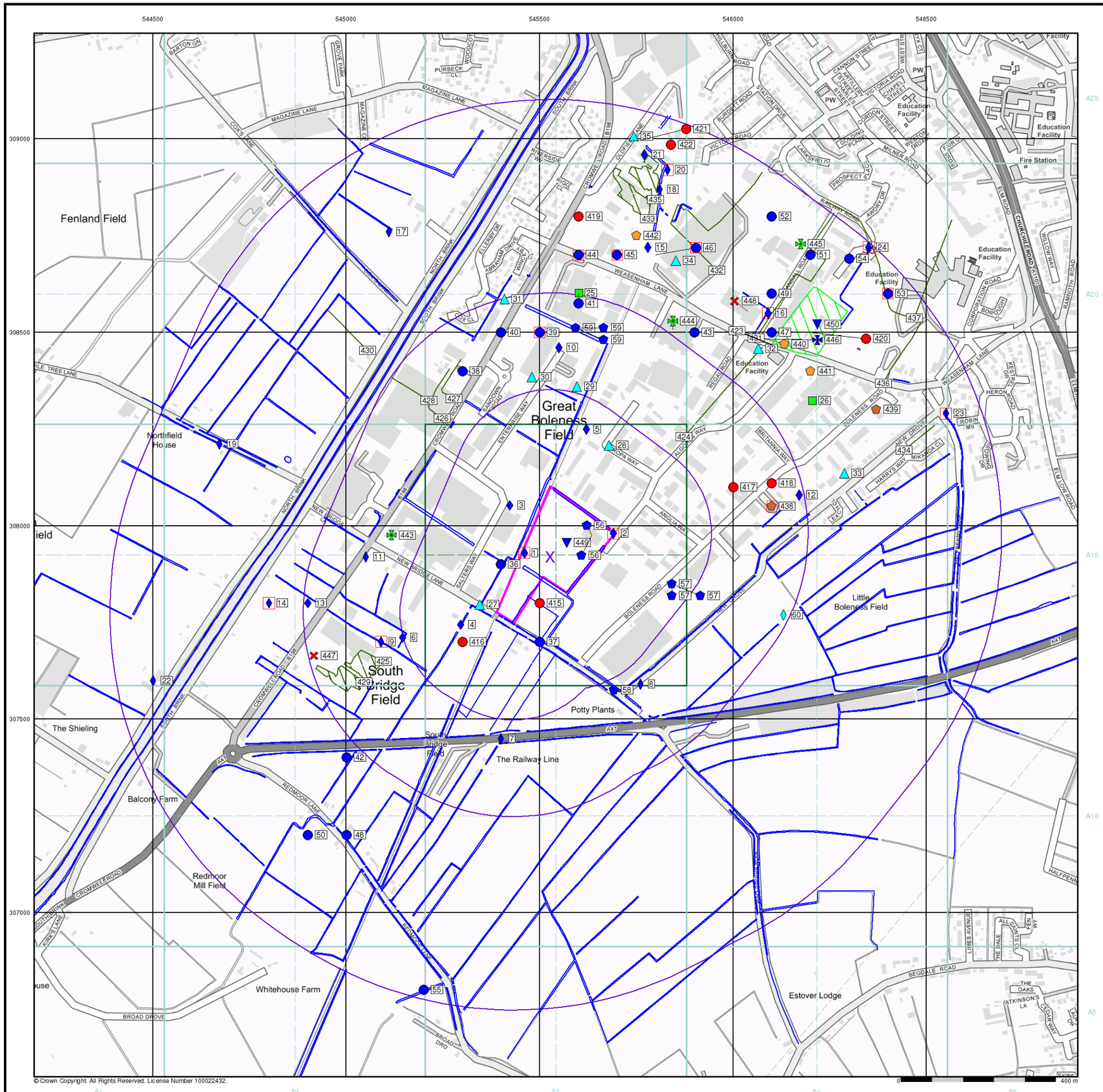
Web: [redacted]



amec foster wheeler

General

Specified Site | Specified Buffer(s) | Bearing Reference Point | Map ID

Several of Type at Location

Agency and Hydrological

- Contaminated Land Register Entry or Notice (Location)
- Contaminated Land Register Entry or Notice
- Discharge Consent
- Enforcement or Prohibition Notice
- Integrated Pollution Control
- Integrated Pollution Prevention Control
- Local Authority Integrated Pollution Prevention and Control
- Local Authority Pollution Prevention and Control
- Local Authority Pollution Prevention and Control Enforcement
- Pollution Incident to Controlled Waters
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- Prosecution Relating to Controlled Waters
- Registered Radioactive Substance
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- River Quality Sampling Point
- Substantiated Pollution Incident Register
- Water Abstraction
- Water Industry Act Referral

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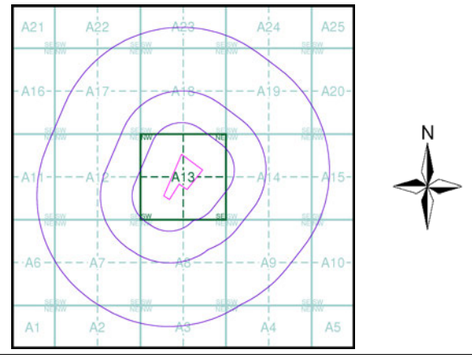
- Registered Landfill Site (Location)
- Registered Landfill Site (Point Buffered to 100m)
- Registered Landfill Site (Point Buffered to 250m)
- Registered Waste Transfer Site (Location)
- Registered Waste Transfer Site
- Registered Waste Treatment or Disposal Site (Location)
- Registered Waste Treatment or Disposal Site

Site Sensitivity Map - Slice A



Order Details

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Slice:	A
Site Area (Ha):	4.49
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Site Details

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Landmark INFORMATION GROUP

Tel: 0844 844 9952
Fax: 0844 844 9951
Web: [redacted]

amec foster wheeler

Industrial Land Use Map

General

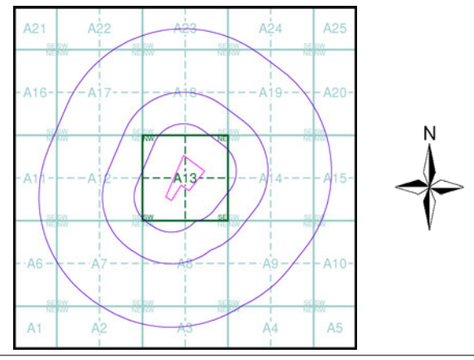
Specified Site | Specified Buffer(s) | Bearing Reference Point

Slice | Map ID

Industrial Land Use

- Contemporary Trade Directory Entry
- Fuel Station Entry
- Gas Pipeline
- Points of Interest - Commercial Services
- Points of Interest - Education and Health
- Points of Interest - Manufacturing and Production
- Points of Interest - Public Infrastructure
- Points of Interest - Recreational and Environmental
- Underground Electrical Cables

Industrial Land Use Map - Slice A



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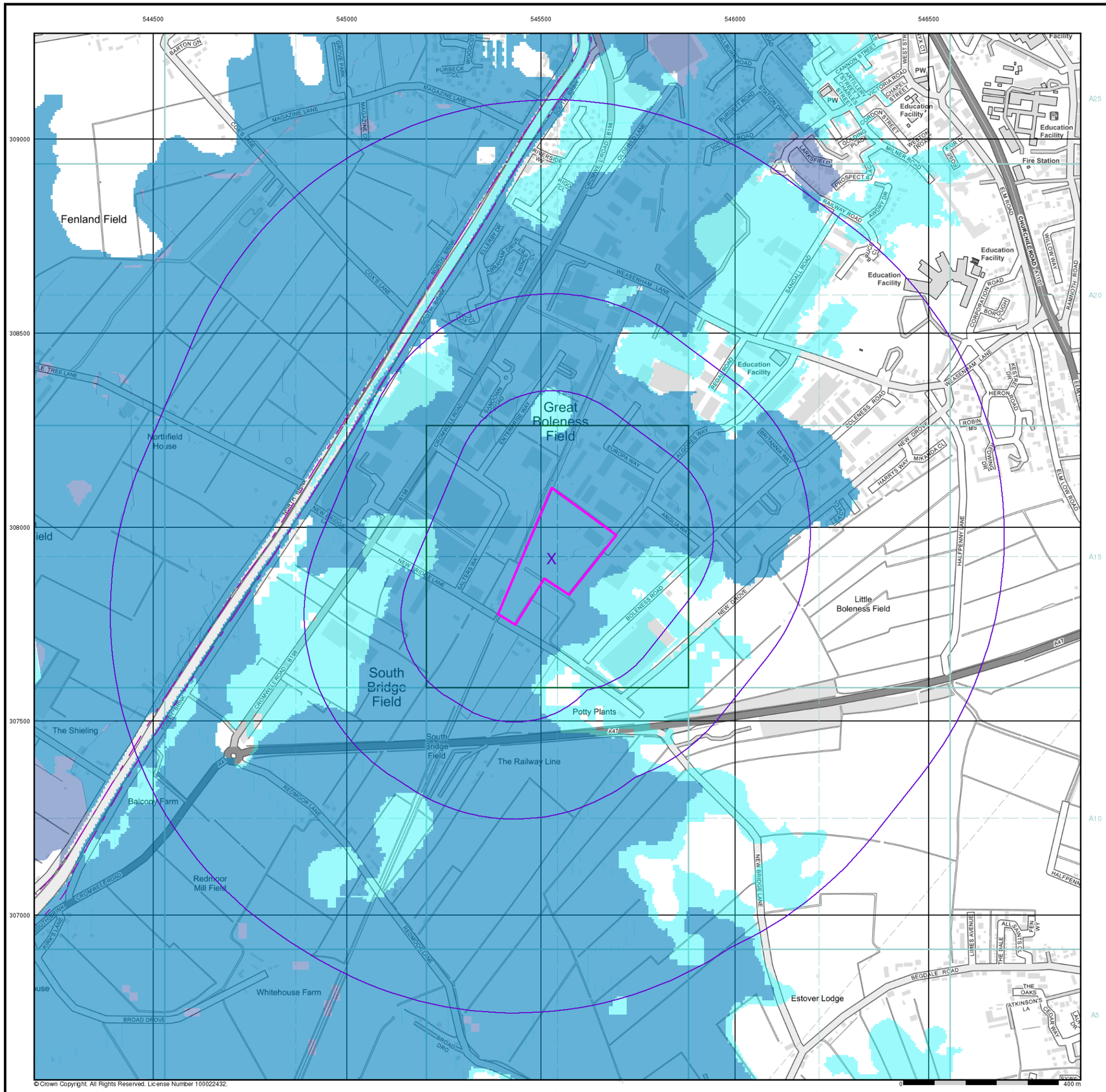
Customer Ref:	41310
National Grid Reference:	545530, 307920
Slice:	A
Site Area (Ha):	4.49
Search Buffer (m):	1000

Site Details

Cage Cable Contractors Ltd, Algores Way, WISBECH, PE13 2TQ

Landmark INFORMATION GROUP
Tel: 0844 844 9952
Fax: 0844 844 9951
Web: [redacted]



amec foster wheeler

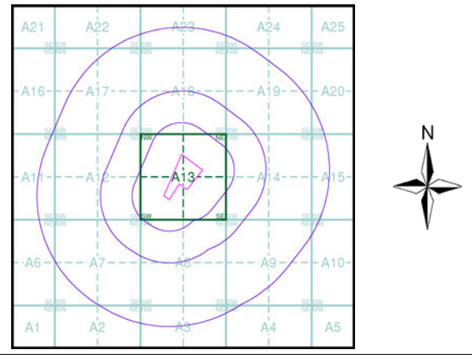
General

- Specified Site
- Specified Buffer(s)
- X Bearing Reference Point

Agency and Hydrological (Flood)

- Extreme Flooding from Rivers or Sea without Defences (Zone 2)
- Flooding from Rivers or Sea without Defences (Zone 3)
- Area Benefiting from Flood Defence
- Flood Water Storage Areas
- Flood Defence

Flood Map - Slice A



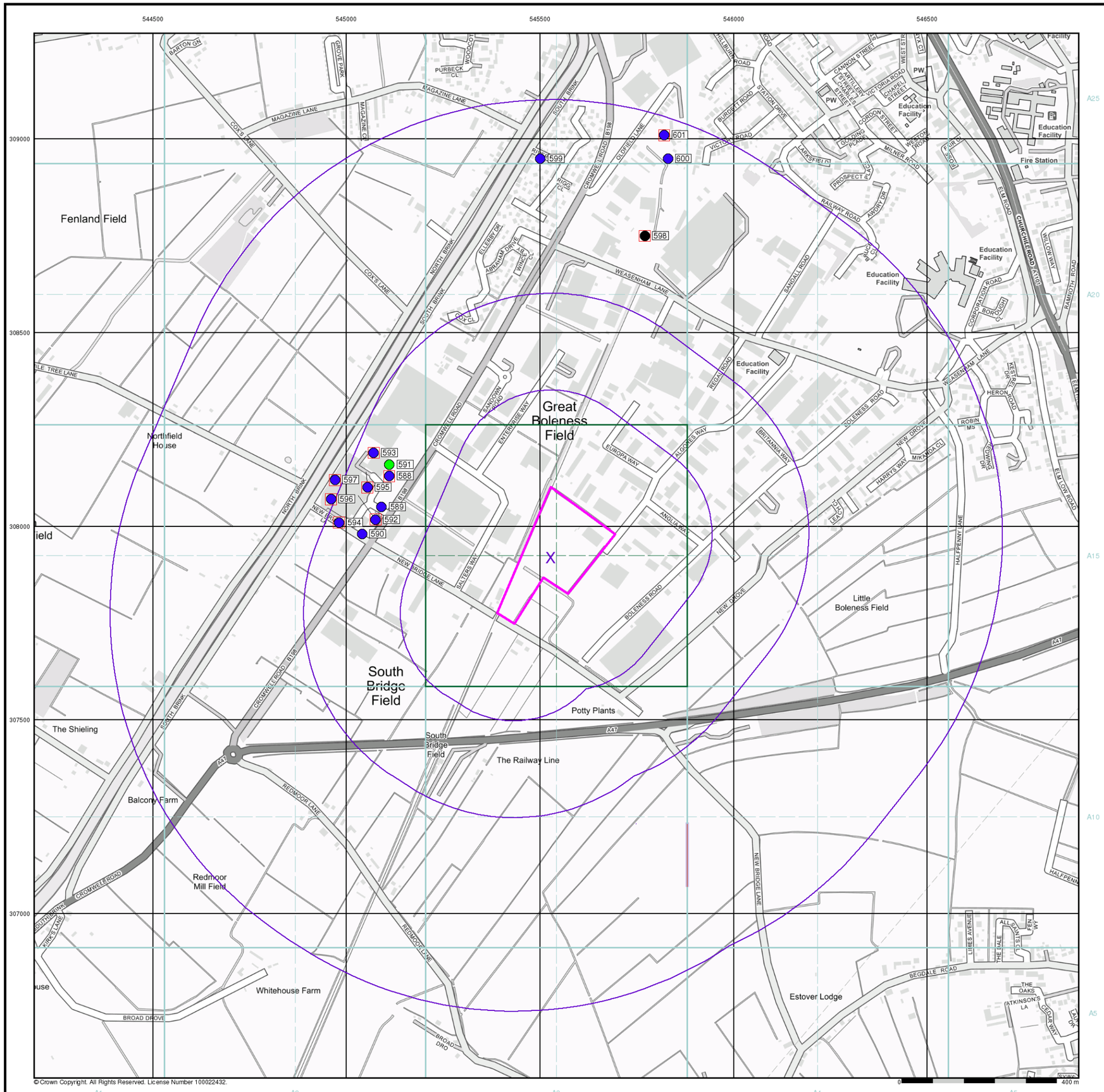
Order Details

Order Number:	220808700_1_1
Customer Ref:	41310
National Grid Reference:	545530, 307920
Slice:	A
Site Area (Ha):	4.49
Search Buffer (m):	1000

Site Details

Cage Cable Contractors Ltd, Algores Way, WISBECH, PE13 2TQ

Landmark INFORMATION GROUP
Tel: 0844 844 9952
Fax: 0844 844 9951
Web:



amec foster wheeler

General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Map ID
- Several of Type at Location

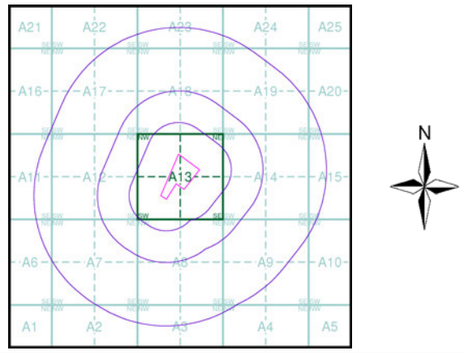
Agency and Hydrological (Boreholes)

- BGS Borehole Depth 0 - 10m
- BGS Borehole Depth 10 - 30m
- BGS Borehole Depth 30m +
- Confidential
- Other

For Borehole information please refer to the Borehole .csv file which accompanied this slice.

A copy of the BGS Borehole Ordering Form is available to download from the Support section of [redacted]

Borehole Map - Slice A



Order Details

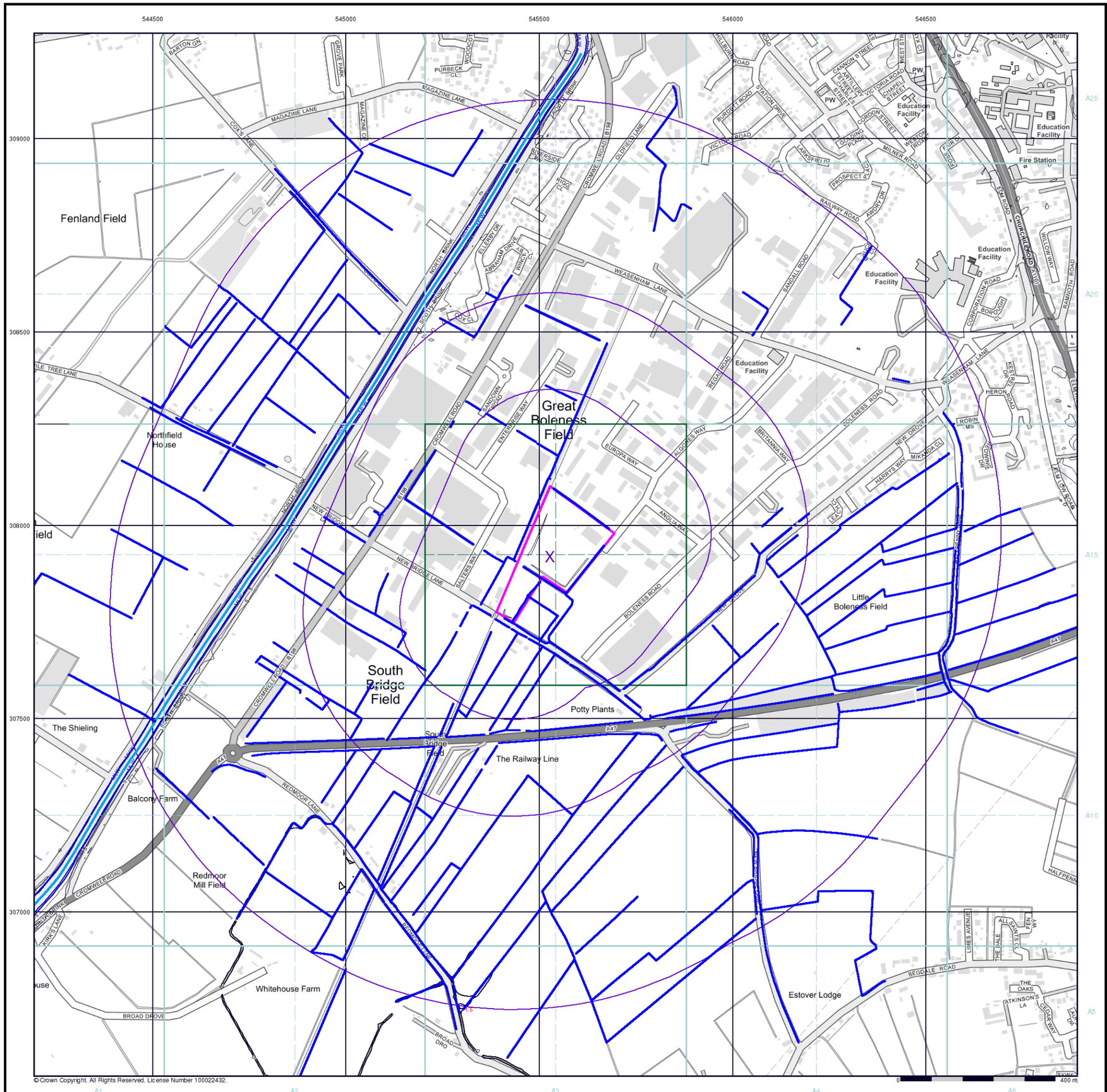
Order Number:	220808700_1_1
Customer Ref:	41310
National Grid Reference:	545530, 307920
Slice:	A
Site Area (Ha):	4.49
Search Buffer (m):	1000

Site Details

Cage Cable Contractors Ltd, Algores Way, WISBECH, PE13 2TQ

Landmark INFORMATION GROUP

Tel: 0844 844 9952
Fax: 0844 844 9951
Web: [redacted]



amec foster wheeler

General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point

OS Water Network Data

- Canal
- Reservoir
- Foreshore
- Marsh
- Tidal River
- Inland River
- Drain
- Other
- Lake
- Transfer
- Lock Or Flight Of Locks
- Sea

Contours (height in meters)

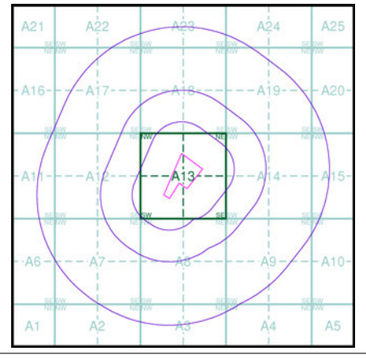
Standard Contour 105 100 95

Master Contour

Spot Height 167.3

- MLW Mean Low Water
- MHW Mean High Water

OS Water Network Map - Slice A



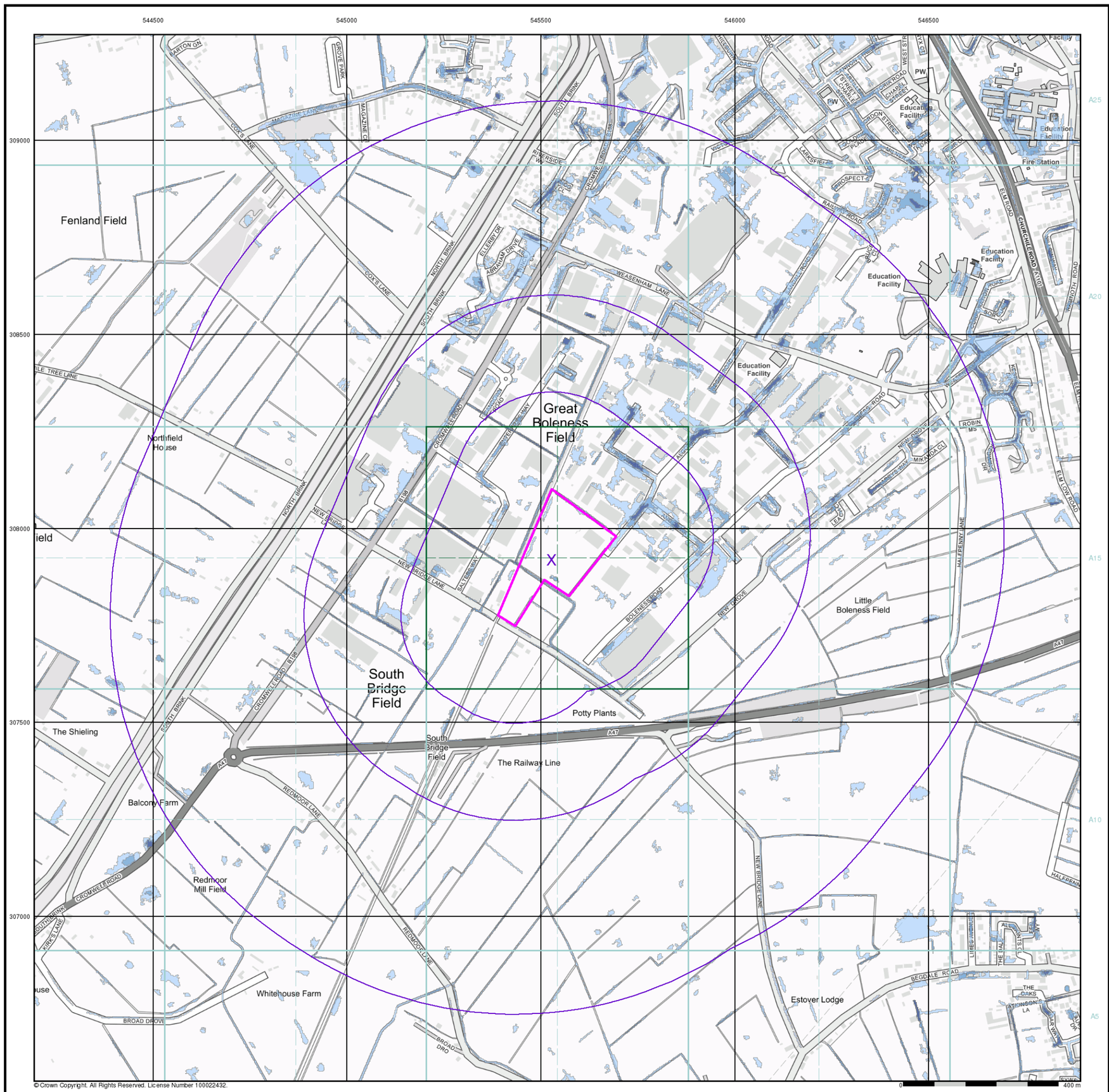
Order Details

Order Number:	220808700_1_1
Customer Ref:	41310
National Grid Reference:	545530, 307920
Slice:	A
Site Area (Ha):	4.49
Search Buffer (m):	1000

Site Details

Cage Cable Contractors Ltd, Algores Way, WISBECH, PE13 2TQ

Landmark INFORMATION GROUP
Tel: 0844 844 9952
Fax: 0844 844 9951
Web: [redacted]



amec foster wheeler

General

- Specified Site
- Specified Buffer(s)
- X Bearing Reference Point

Risk of Flooding from Surface Water

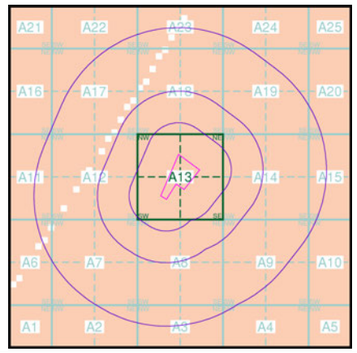
- High - 30 Year Return
- Medium - 100 Year Return
- Low - 1000 Year Return

Suitability

See the suitability map below

- National to county
- County to town
- Town to street
- Street to parcels of land
- Property

EA/NRW Suitability Map - Slice A



Order Details

Order Number:	220808700_1_1
Customer Ref:	41310
National Grid Reference:	545530, 307920
Slice:	A
Site Area (Ha):	4.49
Search Buffer (m):	1000

Site Details

Cage Cable Contractors Ltd, Algores Way, WISBECH, PE13 2TQ

Landmark INFORMATION GROUP

Tel: 0844 844 9952
Fax: 0844 844 9951
Web:

Appendix C
BGS Historic Logs

GEOLOGICAL SURVEY OF GREAT BRITAIN

RECORD OF SHAFT OR BORE FOR MINERALS

(For Survey use only)
6-inch Map Registered No. TF/40NE/2

Name of Shaft or Bore given by Geological Survey:

Name and Number given by owner: Wisbech R.O. Eng. Depot Oldfield Lane B.H. 2

Nat. Grid Reference 4580. 0897

For whom made

Town or Village Wisbech County Cambs.

Exact site

Attach a tracing from a map, or a sketch-map, if possible.

1"N.S. Map No.	1"O.S. Map No.	Confidential or not
159		

Purpose for which made Trial

Ground Level at shaft bore relative to O.D. 8·3 ft If not ground level give O.D. of beginning of shaft bore

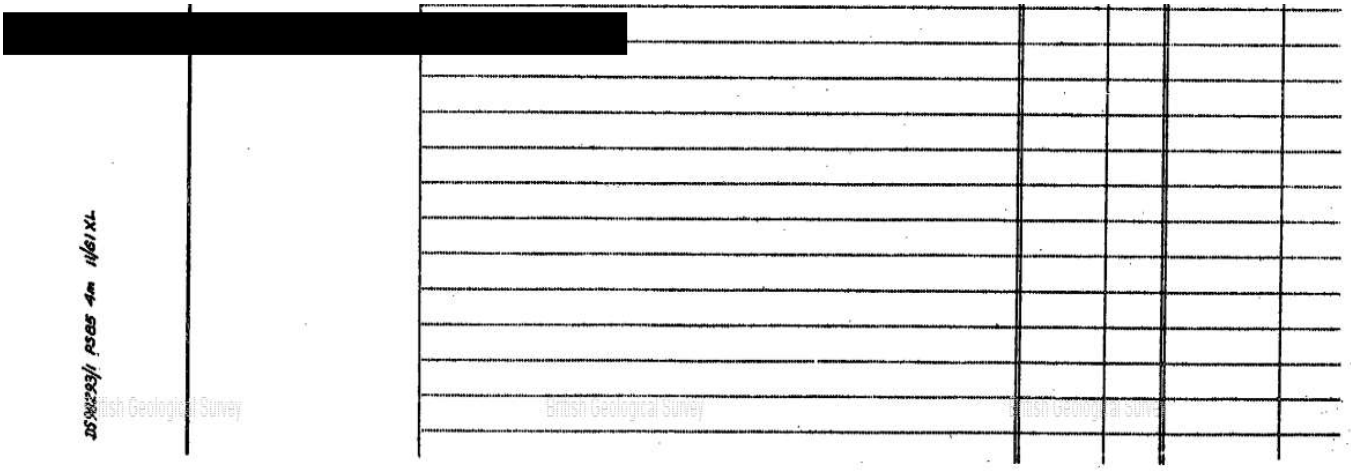
Made by Soil Mechanics Ltd. Date of sinking ? 1961

Information from Date received

Examined by

SPECIMEN NUMBERS AND ADDITIONAL NOTES

(For Survey use only) Geological Classification	Description of Strata	Thickness Ft	Thickness in.	Depth M Ft	Depth in.
	Topsoil	1	0	(0·30) 1	0
	Soft brown silty clay; grey-brown towards base	3	8	(1·42) 4	8
	Soft dark grey organic silty clay; light grey towards base	3	7	(2·51) 8	3
	Very soft grey brown clayey silt	11	9	(6·10) 20	0


[redacted]
TF 19/1 XL
British Geological Survey
British Geological Survey
British Geological Survey

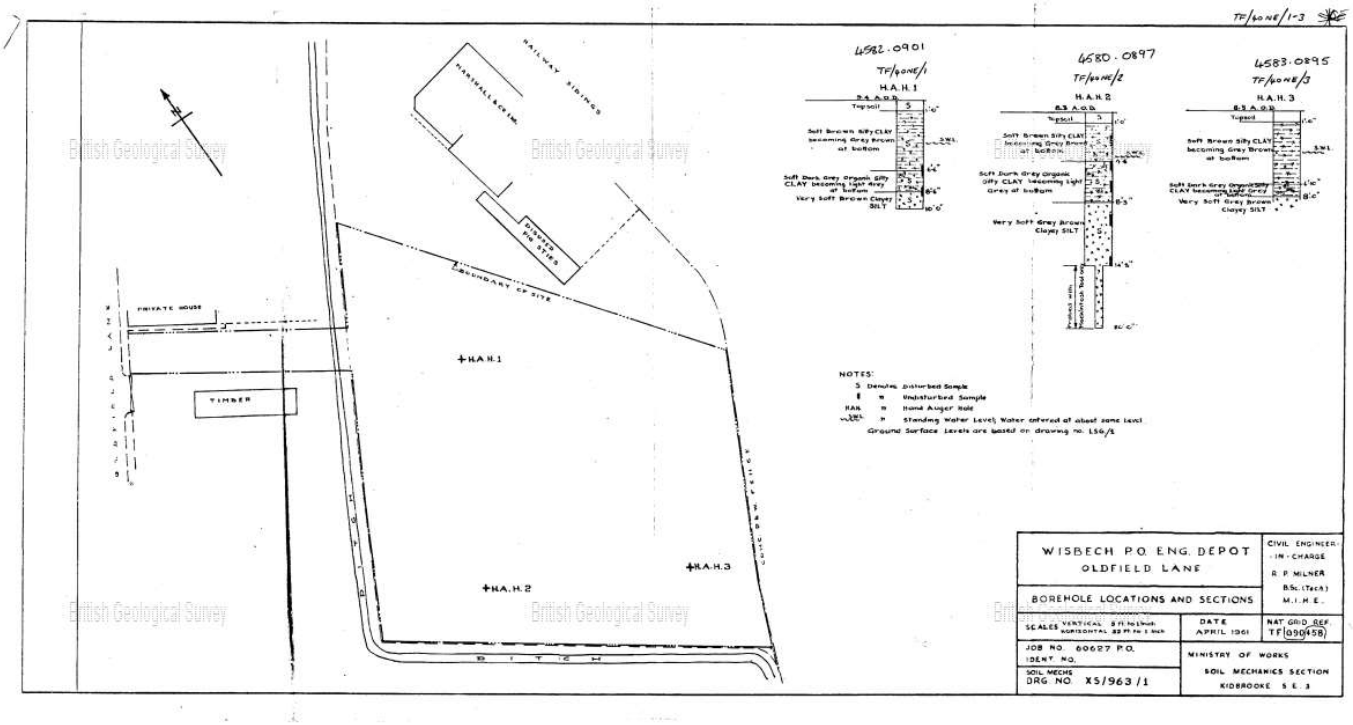
British Geological Survey

Version 2.0.6.3

BGS ID: 505681 : BGS Reference: TF40NE2
British National Grid (27700) : 545800,308970

Report an issue with this borehole

<< < Prev Page 2 of 2 Next > >>



APPLIED GEOLOGY
Talisman House
11 Talisman Square
KENILWORTH
CV8 1JB
Tel: 01926 851113 Fax: 01926 851394

Job No. AG502

Site : Old Wisbech Greyhound Stadium, Wisbech, Cambs
Client : Vyrnwy Estates
Engineer : Reuby & Stagg Ltd

BOREHOLE LOG

BH 2

Sheet 1 of 3

Method	Date	Drilling Crew	Logged By	Scale
Light Cable Percussion.	04/01/07 - 08/01/07	Andy Clark	TS	1:50

Dia (mm) 150 | Coord | Ground Level m. 2.52

Date & Casing Depth	Depth m.	Sample Type	Water Level	SPT N or Cu	Depth m.	Description of Strata
	0.00 - 0.30	B				TOPSOIL.
	0.30	D			0.30	Very soft brown grey sandy CLAY. (TERRINGTON BEDS)
	1.00 - 1.45	SPT		3N		
	1.45	D				
1.50	2.00 - 2.45	SPT		0N		
	2.45	D				
	2.70	D			2.70	
	3.00 - 3.50	B	▼			Loose grey silty fine to medium SAND. (TERRINGTON BEDS)
3.00	3.00 - 3.45	SPT	▽	6N		
	3.45	D				
	4.00 - 4.50	B				
4.00	4.00 - 4.45	SPT	3.00	7N		
	4.45	D				
	5.00 - 5.50	B				
	5.00	W				
5.00	5.00 - 5.45	SPT	3.30	7N		
	5.45	D				
	6.50 - 7.00	B				
6.50	6.50 - 6.95	SPT	3.40	9N		
	6.95	D				
	8.00 - 8.50	B				
8.00	8.00 - 8.45	SPT	3.90	11N		...below 8.0m, medium dense
	8.45	D				
	9.50 - 10.00	B				
9.50	9.50 - 9.95	SPT	4.60	11N		
	9.95	D			10.00	

Inst / Legend: BENEATH INSTALLATION

Remarks

1/ Hand dug services pit to 1.2m bgl.
2/ 8" casing used to 15.0m bgl, then reduced to 6".
3/ Monitoring probe installed to 4.0m bgl. 1m plain with bentonite, 3m slotted with gravel.
4/ Borehole backfilled with arisings below installation.

GROUNDWATER

Struck	Cased	20 mins	Sealed	Remarks
3.20	26.00	2.90		Slow inflow. Unable to seal out water.

APPLIED GEOLOGY
Talisman House
11 Talisman Square
KENILWORTH
CV8 1JB
Tel: 01926 851113 Fax: 01926 851394

Job No. AG502

Site : Old Wisbech Greyhound Stadium, Wisbech, Cambs
Client : Vyrnwy Estates
Engineer : Reuby & Stagg Ltd

BOREHOLE LOG
BH 2
Sheet 2 of 3

Method	Date	Drilling Crew	Logged By	Scale
Light Cable Percussion.	04/01/07 - 08/01/07	Andy Clark	TS	1:50

Dia (mm) 150 | Coord | Ground Level m. 2.52

Date & Casing Depth	Depth m.	Sample Type	Water Level	SPT N or Cu	Depth m.	Description of Strata	Inst	Legend
						Medium dense brown slightly silty fine to medium SAND. (TERRINGTON BEDS)	BENEATH INSTALLATION	
11.00	11.00- 11.50 11.00- 11.45	B SPT	2.60	13N				
	11.45	D						
12.50	12.50- 13.00 12.50- 12.95	B SPT	0.70	16N				
	12.95	D						
14.00	14.00- 14.50 14.00- 14.45	B SPT	0.60	18N				
	14.45	D						
15.50	15.50- 16.00 15.50- 15.95	B SPT	0.60	19N				
	15.95	D						
17.00	17.00- 17.50 17.00- 17.45	B SPT	0.50	23N				
	17.45	D						
18.50	18.50- 19.00 18.50- 18.95	B SPT	0.50	24N				
	18.95	D						
	20.00- 20.50	B						

Remarks
1/ Hand dug services pit to 1.2m bgl.
2/ 8" casing used to 15.0m bgl, then reduced to 6".
3/ Monitoring probe installed to 4.0m bgl. 1m plain with bentonite, 3m slotted with gravel.
4/ Borehole backfilled with arisings below installation.

GROUNDWATER

Struck	Cased	20 mins	Sealed	Remarks
3.20	26.00	2.90		Slow inflow. Unable to seal out water.

APPLIED GEOLOGY	Talisman House, 11 Talisman Square, KENILWORTH, CV8 1JB. Tel: 01926 851113 Fax: 01926 851394	Job No. AG502	Site : Old Wisbech Greyhound Stadium, Wisbech, Cambs Client : Vyrnwy Estates Engineer : Reuby & Stagg Ltd	BOREHOLE LOG BH 2 Sheet 3 of 3

Method	Date	Drilling Crew	Logged By	Scale
Light Cable Percussion.	04/01/07 - 08/01/07	Andy Clark	TS	1:50

Dia (mm) 150 | Coord | Ground Level m. 2.52

Date & Casing Depth	Depth m.	Sample Type	Water Level	SPT N or Cu	Depth m.	Description of Strata	Inst	Legend
20.00	20.00- 20.45	SPT	0.50	24N		Medium dense brown slightly silty fine to medium SAND. (TERRINGTON BEDS) (As previous page)	BENEATH INSTALLATION	
	20.45	D						
						...below 21.0m, grey		
	21.50- 22.00	B						
21.50	21.50- 21.95	SPT	0.40	24N				
	21.95	D				...at 21.95m, slightly gravelly		
					22.80			
	23.00- 23.50	B				Very dense grey brown gravelly SAND. Gravel is fine to coarse, angular to subrounded flint with occasional shells. (GLACIOFLUVIAL SAND AND GRAVEL)		
23.00	23.00- 23.45	CPT	0.40	52N				
						...at 24.20m, slightly gravelly		
	24.50- 25.00	B						
24.50	24.50- 24.95	CPT	0.50	27N		...below 24.5m, medium dense		
	25.80	D			25.80			
	26.00	D				Very stiff grey slightly sandy gravelly CLAY. Gravel is fine to medium, angular to subrounded flint and chalk. (GLACIAL TILL)		
25.90	26.00- 26.45	SPT	4.60	50/377				
	27.00	D						
	27.50	D						
26.00	27.50- 27.87	SPT	19.80	50/365				
					27.87			
09/01/07								

Remarks

1/ Hand dug services pit to 1.2m bgl.
2/ 8" casing used to 15.0m bgl, then reduced to 6".
3/ Monitoring probe installed to 4.0m bgl. 1m plain with bentonite, 3m slotted with gravel.
4/ Borehole backfilled with arisings below installation.

GROUNDWATER

Struck	Cased	20 mins	Sealed	Remarks
3.20	26.00	2.90		Slow inflow. Unable to seal out water.

APPLIED GEOLOGY
Talisman House
11 Talisman Square
KENILWORTH
CV8 1JB
Tel: 01926 851113 Fax: 01926 851394

Job No. AG502

Site : Old Wisbech Greyhound Stadium, Wisbech, Cambs
Client : Vyrnwy Estates
Engineer : Reuby & Stagg Limited

BOREHOLE LOG
BH DCS 1
Sheet 1 of 2

Method	Date	Drilling Crew	Logged By	Scale
Endrive Rig System.	15/12/06	GH (DRILLCO)	TS	1:25

Dia (mm) 80 | Coord | Ground Level m. 2.15

Date & Casing Depth	Depth m.	Sample Type	Water Level	SPT N or Cu	Depth m.	Description of Strata
	0.00 - 1.00	B				Brown grey mottled orange slightly gravelly sandy CLAY. Gravel is fine to coarse, angular to subrounded flint and brick with rare plant material (MADE GROUND).
	0.20	D				
	0.20	AJ			0.30	
						Brown grey mottled orange sandy CLAY with rare plant material (TERRINGTON BEDS).
	1.00 - 1.45	CPT	▽	4N	1.00	
						Soft dark brown sandy CLAY with rare plant material (TERRINGTON BEDS).
	1.30	V		21		
	1.40	D				
	1.50	V		24		
	1.70	V	▼	22		
	1.80	D			1.80	
					1.82	Plastic fibrous very dark brown slightly clayey PEAT (TERRINGTON BEDS).
	1.90	V		14		
	2.00 - 2.45	CPT		ON		Very soft dark brown sandy CLAY with rare plant material (TERRINGTON BEDS).
	2.30	V		3		
	2.40	D				
	2.50	V				
					2.80	
	2.90	D				Loose grey brown (rare red patches) slightly clayey fine to medium SAND (TERRINGTON BEDS).
	3.00 - 3.45	CPT		8N		
	3.90	D				
	4.00 - 4.45	CPT		1N		...below 4.0m, very loose
	4.90	D				
	5.00 - 5.45	CPT		12N		

Inst | Legend

Remarks
1/ Hand dug pit excavated to 1.2m bgl.
2/ Monitoring probe installed.
3/ Headspace analysis at 0.20m bgl = 0.2ppm.

GROUNDWATER

Struck	Cased	20 mins	Sealed	Remarks
1.00		1.60		

APPLIED GEOLOGY
Talisman House
11 Talisman Square
KENILWORTH
CV8 1JB
Tel: 01926 851113 Fax: 01926 851394

Job No. AG502

Site : Old Wisbech Greyhound Stadium, Wisbech, Cambs
Client : Vyrnwy Estates
Engineer : Reuby & Stagg Limited

BOREHOLE LOG
BH DCS 1
Sheet 2 of 2

Method	Date	Drilling Crew	Logged By	Scale
Endrive Rig System.	15/12/06	GH (DRILLCO)	TS	1:25

Dia (mm) 80 | Coord | Ground Level m. 2.15

Date & Casing Depth	Depth m.	Sample Type	Water Level	SPT N or Cu	Depth m.	Description of Strata	Inst	Legend
						Loose grey brown (rare red patches) slightly clayey fine to medium SAND (TERRINGTON BEDS). (As previous page) ...below 5.0m, medium dense		
	5.90 6.00 - 6.45	D CPT		33N				
					6.45			

Remarks
1/ Hand dug pit excavated to 1.2m bgl.
2/ Monitoring probe installed.
3/ Headspace analysis at 0.20m bgl = 0.2ppm.

GROUNDWATER

Struck	Cased	20 mins	Sealed	Remarks
1.00		1.60		

APPLIED GEOLOGY
Talisman House
11 Talisman Square
KENILWORTH
CV8 1JB
Tel: 01926 851113 Fax: 01926 851394

Job No. AG502

Site : Old Wisbech Greyhound Stadium, Wisbech, Cambs
Client : Vyrnwy Estates
Engineer : Reuby & Stagg Limited

TRIAL PIT LOG
TP SA3
Sheet 1 of 1

Method	Date	Ground Slope	Logged By	Scale
Machine Excavated	07/12/06 - 07/12/06	Flat	TS	1:25

Length	Breadth	Depth	Ground Level
3.00	0.70	3.10	m. R.L. 2.31

Depth m.	SOIL SAMPLES/TESTS Type	Strength	Water Level	LL/PL %	M/C %	Ease of Dig	Depth m.	Description of Strata	Legend
							0.10	GRAVEL (MADE GROUND).	
							0.20	Orange gravelly SAND with occasional plastic. Gravel is fine to coarse, angular to subrounded flint and brick (MADE GROUND). Grey to light grey mottled orange sandy SILT with occasional rootlets (TERRINGTON BEDS).	
						E			
			▽						
							1.50		
							1.60	Plastic fibrous very dark brown slightly clayey PEAT (TERRINGTON BEDS). Very soft grey mottled orange slightly sandy CLAY (TERRINGTON BEDS).	
						E			
			▽						
							2.80	Grey silty fine to medium SAND (TERRINGTON BEDS).	
						E			
							3.10		

GROUNDWATER DETAILS :
1/ Water strike at 1.20m, seepage
2/ Water strike at 2.3m, seepage

STABILITY OF PIT WALLS :
1/ Stable

GENERAL REMARKS :
1/ Soakaway test carried out
2/ Backfilled with arisings at end of test

KEY

EASE OF DIG	:	E	= EASY DIGGING
		M	= MODERATE DIGGING
		D	= DIFFICULT DIGGING
		VH	= VERY HARD DIGGING
SAMPLES	:	B	= BULK
		D	= JAR
		W	= WATER
STRENGTH (kN/m^2)	:	V	= HAND VANE SHEAR STRENGTH
		P	= HAND PENETROMETER SHEAR STRENGTH
GROUNDWATER	:	▽	ENTRY
		▼	STANDING LEVEL

Appendix D
Zetica UXO Risk Map

UNEXPLODED BOMB RISK MAP

SITE LOCATION

Map Centre: 545191,307668

LEGEND

- **High:** Areas indicated as having a bombing density of 50 bombs per 1000acre or higher.
- **Moderate:** Areas indicated as having a bombing density of 15 to 49 bombs per 1000acre.
- **Low:** Areas indicated as having 15 bombs per 1000acre or less.

miltary | **industry** | **UXO find**
transport | **dock** | **Luftwaffe targets**
utilities | **other**

How to use your Unexploded Bomb (UXB) risk map?

The map indicates the potential for Unexploded Bombs (UXB) to be present as a result of World War Two (WWII) bombing.

You can incorporate the map into your preliminary risk assessment* for potential Unexploded Ordnance (UXO) for a site. Using this map, you can make an informed decision as to whether more in-depth detailed risk assessment* is necessary.

What do I do if my site is in a moderate or high risk area?

Generally, we recommend that a detailed UXO desk study and risk assessment is undertaken for sites in a moderate or high UXB risk area.

More often than not, this further detailed research will conclude that the potential for a significant UXO hazard to be present on your site is actually low.

Never plan site work or undertake a risk assessment using these maps alone. More detail is required, particularly where there may be a source of UXO from other military operations which are not reflected on these maps.

If my site is in a low risk area, do I need to do anything?

If both the map and other research confirms that there is a low potential for UXO to be present on your site then, subject to your own comfort and risk tolerance, works can proceed with no special precautions.

A low risk really means that there is no greater probability of encountering UXO than anywhere else in the UK.

If you are unsure whether other sources of UXO may be present, you can ask for one of our **pre-desk study assessments (PDSA)**

If I have any questions, who do I contact?

tel: **+44 (0) 1993 886682**

[redacted]

The information in this UXB risk map is derived from a number of sources and should be used in conjunction with the accompanying notes on our website: [redacted]

It is important to note that this map is not a UXO risk assessment and should not be reported as such when reproduced.

*Preliminary and detailed UXO risk assessments are advocated as good practice by industry guidance such as CIRIA C681 'Unexploded Ordnance (UXO), a guide for the construction industry'.

Appendix E
Geotechnical Risk Register

The risk register is a means of documenting perceived risks and their importance and recording actions taken to manage them. The key elements of a geotechnical risk register are as follows:

1.	Identify the geotechnical risks.
2.	Identify the methods of construction that may be incorporated into the project.
3.	Scale the risks according to probability and impact.
4.	Based on the severity of each risk, decide on the type of action.
5.	Identify how each risk should be managed.
6.	Record the actions taken to manage the risk.
7.	Reassess the severity of each risk after action has been taken.
8.	Review the risk register at regular intervals and communicate.

The risk register is a live document and should be reviewed on a regular basis and at the end of each stage of the project.

The probability (P) that a given event will occur is given by the following:

Scale		Probability (Likelihood)	Chance per section of work
			(Amend to suit local conditions and to be agreed with the Client)
1		Negligible	< 1 in 100
2		Unlikely	1 in 100 to 1 in 10
3		Possible	1 in 10 to 1 in 5
4		Probable	1 in 5 to 1 in 2
5		Almost certain	> 1 in 2

The impact (I) of a given event is given by the following:

Scale		Impact (Effect)	Increase in cost or time (% increase)
			(Amend to suit local conditions and to be agreed with the Client)
1		Negligible	< 1%
2		Very low	1% to 4%
3		Low	4% to 8%
4		High	8% to 15%
5		Very high	> 15%

The risk after the application of risk control measures should be reviewed in the light of the following table:

Degree of Risk		Risk Level	Action Required	
1 - 4		Trivial	None	
5 - 9		Tolerable	Consider more cost-effective solutions or improvements	
10 - 15		Substantial	Work must not start until risk has been reduced	
16 - 25		Intolerable	Work must not start until risk has been reduced. If risk cannot be reduced, project should not proceed.	

The risks and their potential impacts may vary between the various stages of the project, such as the risk to and from buried services, where the impact can be much higher during a ground investigation than during a desk study.

Stage	Risk No	Hazard	Prior to RCM			Risk Control Measure (RCM)	After RCM		
			Probability (P)	Impact (I)	Risk (R = P x I)		Probability (P)	Impact (I)	Risk (R = P x I)
Completion of Desk Study	DS1	Made ground of unknown composition, depth and extent	4	3	12	Undertake an intrusive site investigation to identify and delineate the made ground and determine its composition and thickness.	4	1	4
	DS2	Soft and Compressible deposits at shallow depth, unsuitable as a bearing stratum	4	4	16	Undertake an intrusive site investigation including *in situ* and laboratory testing to determine the depth and extent of any soft clay deposits, and geotechnical properties for use in foundation and groundworks design.	4	1	4
	DS3	Presence of sulphate and other chemicals in soils and groundwater that may lead to sulphate or thaumasite attack on buried concrete	3	3	9	Undertake an intrusive ground investigation including sampling and chemical testing to determine level of chemical aggressivity to construction materials and the concrete classification in accordance with the relevant BRE Digest.	3	1	3
	DS4	Damage to existing underground and overhead services.	4	4	16	Use best practice to identify all utilities onsite prior to any intrusive investigation or construction. This may include obtaining service plans and call out all service providers, carry out CAT/GPR scans, and hand excavated inspection pits at all intrusive locations.	4	1	4
	DS5	High groundwater table and potential for flooding.	3	3	9	Installation of groundwater monitoring instrumentation during intrusive investigation. Long-term groundwater monitoring to determine site-specific groundwater conditions including assessment for potential flooding from the artificial channels and reservoir present at close proximity to the site boundary.	3	1	3
	DS6	Shrink/swell potential of soft cohesive soils leading to potential	2	3	6	Perform specialist geotechnical testing to determine potential shrink/swell parameters of the soft cohesive layers.	2	1	2

Stage	Risk No	Hazard	Prior to RCM			Risk Control Measure (RCM)	After RCM		
			Probability (P)	Impact (I)	Risk (R = P x I)		Probability (P)	Impact (I)	Risk (R = P x I)
		settlement and heave							
	DS7	Stability of temporary excavations in Made ground and / or soft clay	3	2	6	Undertake an intrusive site investigation including *in situ* and laboratory testing to determine the ground conditions and derive geotechnical parameters necessary for stability assessments of excavations and design of any temporary support.	3	1	3
	DS8	Proximity of Trees	3	3	9	Undertake intrusive ground investigation to assess the risk of shrink / swell conditions. Undertake tree survey to record species and maturity of trees. Geotechnical design to include mitigation measures as appropriate in accordance with NHBC Standards.	3	1	3
Completion of Ground Investigation	GI01	Ground conditions not suitable for conventional shallow foundations.	5	5	25	Employ alternative foundation solutions (such as piled or piled raft foundations). Undertake ground treatment to improve soil stiffness and control settlements to enable shallow foundations to be adopted.	5	1	5
	GI02	Potential for hydrostatic uplift of excavation floors (deeper bunker excavations)	4	4	16	Consider uplift conditions in the permanent and temporary works design.	4	1	4
	GI03	Potential collapse of excavations.	5	3	15	Employ suitable trench and excavation support measures in accordance with CIRIA Report 97 (1992)	5	1	5
	GI04	High groundwater table and possible water ingress during excavation and foundation works	4	4	16	Permanent and temporary works design to consider uplift conditions. Appropriate dewatering system and control shall be considered during construction .	4	1	4

Stage	Risk No	Hazard	Prior to RCM			Risk Control Measure (RCM)	After RCM		
			Probability (P)	Impact (I)	Risk (R = P x I)		Probability (P)	Impact (I)	Risk (R = P x I)
	GI05	Potential for flooding of site due to potential heavy rainfall events and influence from nearby drainage channels and reservoirs.	4	4	16	The design groundwater level is at surface, consider risk of flooding in design and consider incorporating mitigation measures into design (e.g. raising site levels) Consider raising site levels to improve site drainage system, control influence of high-water levels on design and construction of foundations and other groundworks. and allow installation of buried services in the dry. Adopt a cut and fill strategy to optimise material handling and waste disposal.	4	1	4
	GI06	Significant change to proposed development layout and/or structural loading.	4	3	12	Recommendations in this report to be revised based on revised plan and loading and / or change of bearing stratum.	4	1	4
	GI07	Shrink/swell potential of cohesive soils leading to potential settlement and heave during design and construction of excavation and foundation works	4	3	12	Design and construction of foundation and groundworks to consider potential for stress-relief and therefore, potential for heave are kept within tolerable criteria.	4	1	4
	GI08	Aggressivity of ground in other areas is greater than assessed in intrusive investigation.	2	4	8	Consideration should be given to adopting a higher concrete class for design.	2	1	2
	GI09	Disturbance or damage of recorded (and unrecorded) existing services	4	5	20	Up to date service location plans to be obtained from the affected authorities prior to the commencement of any construction works and exact details and locations of existing sewer shall be confirmed *in situ*.	2	2	4

Stage	Risk No	Hazard	Prior to RCM			Risk Control Measure (RCM)	After RCM		
			Probability (P)	Impact (I)	Risk (R = P x I)		Probability (P)	Impact (I)	Risk (R = P x I)
						Non-intrusive PAS128 survey to be undertaken prior to construction to confirm the details of unrecorded or recorded services. Design and construction of both temporary and permanent works to take full account of the presence of any identified services and to have mitigation measures for any unrecorded services.			
	GI10	Presence of third-party assets within and close to the proposed development.	3	4	12	Undertake impact assessment of the proposed works on each neighbouring asset and identify mitigation measures for consideration in design and construction. Monitoring strategy including baseline monitoring and emergency plan to be developed in consultation with all affected parties and implemented during construction.	3	2	6
	GI11	Road formation unable to achieve design CBR value.	3	4	12	Road formation level to be confirmed and *in situ* CBR tests should be undertaken to verify and validate design CBR values. Localised soft spots to be removed and replaced with suitable granular material.	3	1	3
	GI12	Site won materials are unsuitable to be reused as engineered fill.	3	4	12	Consider reconditioning of site won materials for reuse as general fill in landscaped areas. Testing to be undertaken as part of material handling and disposal from site.	3	1	3

Appendix F
Risk Assessment Methodology

The environmental risk assessment aims to assess the significance of each potential contaminant linkage. The key to the classification is that the designation of risk is based upon the consideration of both:

- **The magnitude of the potential consequence (i.e. severity).** It takes into account both the potential severity of the hazard and the sensitivity of the receptor.
- **The magnitude of probability (i.e. likelihood).** It takes into account both the presence of the hazard and receptor and the integrity of the pathway.

The definitions for the qualitative risk assessment have been taken from "Guidance for the Safe Development of Housing on Land Affected by Contamination" Annex 4 R&D Publication 66: 2008 Volume 2.

The Likelihood Probability Classifications of SPR Linkage being realised is presented in **Table F.1 Likelihood Probability Classifications of SPR Linkage being realised.**

Table F.1 Likelihood Probability Classifications of SPR Linkage being realised

Classification	Definition	Examples
Unlikely	There is pollutant linkage but circumstances are such that it is improbable that an event would occur even in the very long-term.	a) Elevated concentrations of toxic contaminants are present below hardstanding. b) Light industrial unit <10 yrs old containing a double skinned UST with annual integrity testing results available.
Low Likelihood	There is pollutant linkage and circumstances are possible under which an event could occur. However, it is by no means certain that even over a long period such an event would take place, and is less likely in the shorter term.	a) Elevated concentrations of toxic contaminants are present in soils at depths >1m in a residential garden, or 0.5-1.0m in public open space. b) Ground/groundwater contamination could be present on a light industrial unit constructed in the 1990s containing a UST in operation over the last 10 years – the tank is double skinned but there is no integrity testing or evidence of leakage.
Likely	There is pollutant linkage and all the elements are present and in the right place which means that it is probable that an event will occur. Circumstances are such that an event is not inevitable, but possible in the short-term and likely over the long-term.	a) Elevated concentrations of toxic contaminants are present in soils at depths of 0.5-1.0m in a residential garden, or the top 0.5m in public open space. b) Ground/ groundwater contamination could be present from an industrial site containing a UST present between 1970 and 1990. The tank is known to be single skin. There is no evidence of leakage although there are no records of integrity tests.
High Likelihood	There is pollutant linkage and an event would appear very likely in the short-term and almost inevitable over the long-term, or there is evidence at the receptor of harm or pollution	a) Elevated concentrations of toxic contaminants are present in soils in the top 0.5m in a residential garden. b) Ground/groundwater contamination could be present from chemical works, containing a number of USTs,

Classification	Definition	Examples
		having been in operation on the same site for over 50 years.

"Potential Consequence of Contaminant Linkage" gives an indication of the sensitivity of a given receptor to a particular source or contaminant of concern under consideration. It is based on full exposure via the particular linkage being examined. The classification of consequence is presented in **Table F.2**.

Table F.2 Outline of Hazard Consequence Classifications for Receptor Types from Contamination Impact:

Classification	Human Health	Controlled Water	Ecology	Property Structures/ Crops and animals	Examples
Severe	Highly elevated concentrations likely to result in "significant harm" to human health as defined by the EPA 1990, Part 2A, if exposure occurs.	Equivalent to EA Category 1 pollution incident including persistent and/or extensive effects on water quality; leading to closure of a potable abstraction point; major impact on amenity value or major damage to agriculture or commerce.	Major damage to aquatic or other ecosystems, which is likely to result in a substantial adverse change in its functioning or harm to a species of special interest that endangers the long-term maintenance of the population.	Catastrophic damage to crops, buildings or property.	Significant harm to humans is defined in circular 01/2006 as death, disease*, serious injury, genetic mutation, birth defects or the impairment of reproductive functions. Major fish kill in surface water from large spillage of contaminants from site. Highly elevated concentrations of Hazardous or priority substances present in groundwater close to small potable abstraction (high sensitivity). Explosion, causing building collapse (can also equate to immediate human health risk if buildings are occupied).
Medium	Elevated concentrations which could result in "significant harm" to human health as defined by the EPA 1990, Part 2A if exposure occurs.	Equivalent to EA Category 2 pollution incident including significant effect on water quality; notification required to abstractors; reduction in amenity value or significant damage to agriculture or commerce.	Significant damage to aquatic or other ecosystems, which may result in a substantial adverse change in its functioning or harm to a species of special interest that may endanger the long-term maintenance of the population.	Significant damage to crops, buildings or property.	Significant harm to humans is defined in circular 01/2006 as death, disease*, serious injury, genetic mutation, birth defects or the impairment of reproductive functions. Damage to building rendering it unsafe to occupy e.g. foundation damage resulting in instability. Ingress of contaminants through plastic potable water pipes.

Classification	Human Health	Controlled Water	Ecology	Property Structures/ Crops and animals	Examples
Mild	Exposure to human health unlikely to lead to "significant harm".	Equivalent to EA Category 3 pollution incident including minimal or short lived effect on water quality; marginal effect on amenity value, agriculture or commerce.	Minor or short lived damage to aquatic or other ecosystems, which is unlikely to result in a substantial adverse change in its functioning or harm to a species of special interest that would endanger the long-term maintenance of the population.	Minor damage to crops, buildings or property.	Exposure could lead to slight short-term effects (e.g. mild skin rash). Surface spalling of concrete.
Minor	No measurable effects on humans	Equivalent to insubstantial pollution incident with no observed effect on water quality or ecosystems.	Equivalent to insubstantial pollution incident with no observed effect on water quality or ecosystems.	Repairable effects of damage to buildings, structures and services.	The loss of plants in a landscaping scheme. Discoloration of concrete.

The risk matrix to link the likelihood and consequence is shown in **Table F.3.**

Table F.3 Risk Matrix

Likelihood:	Unlikely	Low Likelihood	Likely	High Likelihood
Potential Consequence:				
Severe	Moderate/low risk	**Moderate Risk**	**High Risk**	**Very High Risk**
Medium	Low	Moderate/low risk	**Moderate Risk**	**High Risk**
Mild	Very low risk	Low Risk	Moderate/low risk	**Moderate Risk**
Minor	Very low risk	Very low risk	Low Risk	Low Risk

The overall risk definitions are summarised in **Table F.4.**

Table F.4 Risk Definitions

Risk	Definition
Very Low	It is a low possibility that harm could arise to a designated receptor, but it is likely at worst, that this harm if realised would normally be mild or minor.
Low	It is possible that harm could arise to a designated receptor from identified hazard, but it is likely at worst, that this harm if realised would normally be mild. It is unlikely that the site owner/or occupier would face substantial liabilities from such a risk. Further investigative work (which is likely to be limited) to clarify the risk may be required. Any subsequent remediation works are likely to be relatively limited.
Moderate	It is possible that harm could arise to a designated receptor from an identified hazard. However, it is either relatively unlikely that any such harm would be severe, and if any harm were to occur it is more likely, that the harm would be relatively mild. Further investigative work is normally required to clarify the risk and to determine the potential liability to site owner/occupier. Some remediation works may be required in the longer term.
High	Harm is likely to arise to a designated receptor from an identified hazard at the site without remediation action. Realisation of the risk is likely to present a substantial liability to the site owner/or occupier. Investigation is required as a matter of urgency to clarify the risk. Remediation works may be necessary in the short-term and are likely over the longer term.

Risk	Definition
Very High	There is a high probability that severe harm could arise to a designated receptor from an identified hazard at the site without remediation action OR there is evidence that severe harm to a designated receptor is already occurring. Realisation of that risk is likely to present a substantial liability to be site owner/or occupier. Investigation is required as a matter of urgency and remediation works likely to follow in the short-term.

Appendix G
AEG Factual Report

Please note this document has been uploaded separately.

Appendix H
Soil Results

Candace Jackson
Wood Environment & Infrastructure Solutions
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Knutsford
WA16 8QZ

e: [redacted]

i2 Analytical Ltd.
7 Woodshots Meadow,
Croxley Green
Business Park,
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WD18 8YS

t: [redacted]
f:
e: [redacted]

Analytical Report Number : 20-85057

Replaces Analytical Report Number : 20-85057, issue no. 1

Additional analysis undertaken.

Project / Site name:	Wisbech	**Samples received on:**	06/02/2020
Your job number:	41310	**Samples instructed on:**	06/02/2020
Your order number:		**Analysis completed by:**	24/02/2020
Report Issue Number:	2	**Report issued on:**	24/02/2020
Samples Analysed:	2 soil samples		

Signed: [redacted]

Zina Abdul Razzak
Senior Quality Specialist

For & on behalf of i2 Analytical Ltd.

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils	- 4 weeks from reporting
leachates	- 2 weeks from reporting
waters	- 2 weeks from reporting
asbestos	- 6 months from reporting

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Any assessments of compliance with specifications are based on actual analytical results with no contribution from uncertainty of measurement. Application of uncertainty of measurement would provide a range within which the true result lies. An estimate of measurement uncertainty can be provided on request.

Analytical Report Number: 20-85057

Project / Site name: Wisbech

Lab Sample Number				1433061	1433062			
Sample Reference				BH12	BH12			
Sample Number				None Supplied	None Supplied			
Depth (m)				0.20-0.20	0.40-0.40			
Date Sampled				04/02/2020	04/02/2020			
Time Taken				None Supplied	None Supplied			
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Stone Content	%	0.1	NONE	< 0.1	< 0.1			
Moisture Content	%	N/A	NONE	7.4	26			
Total mass of sample received	kg	0.001	NONE	2.0	2.0			
General Inorganics								
pH - Automated	pH Units	N/A	MCERTS	9.4	7.6			
Ammoniacal Nitrogen as N	mg/kg	0.5	MCERTS	< 0.5	< 0.5			
Total Organic Carbon (TOC)	%	0.1	MCERTS	2.9	1.2			
Total Phenols								
Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0	< 1.0			
Speciated PAHs								
Naphthalene	mg/kg	0.05	MCERTS	1.8	< 0.05			
Acenaphthylene	mg/kg	0.05	MCERTS	3.2	< 0.05			
Acenaphthene	mg/kg	0.05	MCERTS	13	< 0.05			
Fluorene	mg/kg	0.05	MCERTS	11	< 0.05			
Phenanthrene	mg/kg	0.05	MCERTS	83	< 0.05			
Anthracene	mg/kg	0.05	MCERTS	24	< 0.05			
Fluoranthene	mg/kg	0.05	MCERTS	130	< 0.05			
Pyrene	mg/kg	0.05	MCERTS	110	< 0.05			
Benzo(a)anthracene	mg/kg	0.05	MCERTS	56	< 0.05			
Chrysene	mg/kg	0.05	MCERTS	40	< 0.05			
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	60	< 0.05			
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	22	< 0.05			
Benzo(a)pyrene	mg/kg	0.05	MCERTS	56	< 0.05			
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	29	< 0.05			
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	7.4	< 0.05			
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	39	< 0.05			
Total PAH								
Speciated Total EPA-16 PAHs	mg/kg	0.8	MCERTS	686	< 0.80			
Heavy Metals / Metalloids								
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	9.6	9.7			
Boron (water soluble)	mg/kg	0.2	MCERTS	0.7	0.4			
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2	< 0.2			
Chromium (hexavalent)	mg/kg	4	MCERTS	< 4.0	< 4.0			
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	17	35			
Copper (aqua regia extractable)	mg/kg	1	MCERTS	14	9.3			
Lead (aqua regia extractable)	mg/kg	1	MCERTS	24	18			
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	< 0.3			
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	12	23			
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0			
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	38	54			

Analytical Report Number : 20-85057

Project / Site name: Wisbech

* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and loam (MCERTS) soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
1433061	BH12	None Supplied	0.20-0.20	Brown clay and sand with gravel.
1433062	BH12	None Supplied	0.40-0.40	Brown clay and sand.

Analytical Report Number : 20-85057

Project / Site name: Wisbech

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Water (PrW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Ammoniacal Nitrogen as N in soil	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the discrete analyser (colorimetric) salicylate/nitroprusside method,10:1 water extraction.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	MCERTS
Boron, water soluble, in soil	Determination of water soluble boron in soil by hot water extract followed by ICP-OES.	In-house method based on Second Site Properties version 3	L038-PL	D	MCERTS
Hexavalent chromium in soil	Determination of hexavalent chromium in soil by extraction in water then by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.	In-house method	L080-PL	W	MCERTS
Metals in soil by ICP-OES	Determination of metals in soil by aqua-regia digestion followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L038-PL	D	MCERTS
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	W	NONE
Monohydric phenols in soil	Determination of phenols in soil by extraction with sodium hydroxide followed by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)	L080-PL	W	MCERTS
pH in soil (automated)	Determination of pH in soil by addition of water followed by automated electrometric measurement.	In house method.	L099-PL	D	MCERTS
Speciated EPA-16 PAHs in soil	Determination of PAH compounds in soil by extraction in dichloromethane and hexane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270	L064-PL	D	MCERTS
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
Total organic carbon (Automated) in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	In house method.	L009-PL	D	MCERTS

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.
For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.
Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.

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WD18 8YS

e: [redacted]

Analytical Report Number : 20-85706

Project / Site name:	Wisbech	**Samples received on:**	10/02/2020
Your job number:	41310	**Samples instructed on:**	10/02/2020
Your order number:		**Analysis completed by:**	14/02/2020
Report Issue Number:	1	**Report issued on:**	14/02/2020
Samples Analysed:	2 soil samples		

Signed: [redacted]

Karolina Marek
Technical Reviewer (Reporting Team)

For & on behalf of i2 Analytical Ltd.

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils	- 4 weeks from reporting
leachates	- 2 weeks from reporting
waters	- 2 weeks from reporting
asbestos	- 6 months from reporting

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Any assessments of compliance with specifications are based on actual analytical results with no contribution from uncertainty of measurement. Application of uncertainty of measurement would provide a range within which the true result lies. An estimate of measurement uncertainty can be provided on request.

Analytical Report Number: 20-85706

Project / Site name: Wisbech

Lab Sample Number				1436338	1436339			
Sample Reference				BH11	BH11			
Sample Number				ES1	ES2			
Depth (m)				0.20-0.20	0.90-0.90			
Date Sampled				07/02/2020	07/02/2020			
Time Taken				None Supplied	None Supplied			
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Stone Content	%	0.1	NONE	< 0.1	< 0.1			
Moisture Content	%	N/A	NONE	7.6	20			
Total mass of sample received	kg	0.001	NONE	2.0	2.0			
Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	-			
General Inorganics								
pH - Automated	pH Units	N/A	MCERTS	10.3	7.5			
Electrical Conductivity	µS/cm	10	ISO 17025	330	-			
Ammoniacal Nitrogen as N	mg/kg	0.5	MCERTS	< 0.5	6.9			
Total Organic Carbon (TOC)	%	0.1	MCERTS	2.7	1.3			
Redox Potential	mV	-800	NONE	172.60	-			
Total Phenols								
Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0	< 1.0			
Speciated PAHs								
Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05			
Acenaphthylene	mg/kg	0.05	MCERTS	0.50	< 0.05			
Acenaphthene	mg/kg	0.05	MCERTS	0.82	< 0.05			
Fluorene	mg/kg	0.05	MCERTS	0.70	< 0.05			
Phenanthrene	mg/kg	0.05	MCERTS	5.5	< 0.05			
Anthracene	mg/kg	0.05	MCERTS	1.4	< 0.05			
Fluoranthene	mg/kg	0.05	MCERTS	11	< 0.05			
Pyrene	mg/kg	0.05	MCERTS	10	< 0.05			
Benzo(a)anthracene	mg/kg	0.05	MCERTS	7.0	< 0.05			
Chrysene	mg/kg	0.05	MCERTS	4.3	< 0.05			
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	7.6	< 0.05			
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	3.8	< 0.05			
Benzo(a)pyrene	mg/kg	0.05	MCERTS	7.8	< 0.05			
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	3.8	< 0.05			
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	1.1	< 0.05			
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	4.2	< 0.05			
Total PAH								
Speciated Total EPA-16 PAHs	mg/kg	0.8	MCERTS	69.5	< 0.80			
Heavy Metals / Metalloids								
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	13	20			
Boron (water soluble)	mg/kg	0.2	MCERTS	0.8	2.9			
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	0.4	< 0.2			
Chromium (hexavalent)	mg/kg	4	MCERTS	< 4.0	< 4.0			
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	22	43			
Copper (aqua regia extractable)	mg/kg	1	MCERTS	32	16			
Lead (aqua regia extractable)	mg/kg	1	MCERTS	48	23			
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	< 0.3			
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	18	37			
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0			
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	85	84			

Analytical Report Number: 20-85706

Project / Site name: Wisbech

Lab Sample Number				1436338	1436339			
Sample Reference				BH11	BH11			
Sample Number				ES1	ES2			
Depth (m)				0.20-0.20	0.90-0.90			
Date Sampled				07/02/2020	07/02/2020			
Time Taken				None Supplied	None Supplied			
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Monoaromatics & Oxygenates								
Benzene	µg/kg	1	MCERTS	< 1.0	-			
Toluene	µg/kg	1	MCERTS	< 1.0	-			
Ethylbenzene	µg/kg	1	MCERTS	< 1.0	-			
p & m-xylene	µg/kg	1	MCERTS	< 1.0	-			
o-xylene	µg/kg	1	MCERTS	< 1.0	-			
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0	-			
Petroleum Hydrocarbons								
TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.001	MCERTS	< 0.001	-			
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.001	MCERTS	< 0.001	-			
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001	-			
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	3.4	-			
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	11	-			
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	19	-			
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	130	-			
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	160	-			
TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.001	MCERTS	< 0.001	-			
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.001	MCERTS	< 0.001	-			
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001	-			
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	-			
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	6.2	-			
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	45	-			
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	400	-			
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	450	-			

Analytical Report Number : 20-85706

Project / Site name: Wisbech

* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and loam (MCERTS) soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
1436338	BH11	ES1	0.20-0.20	Brown loam and clay with gravel and vegetation.
1436339	BH11	ES2	0.90-0.90	Brown clay and sand.

Analytical Report Number : 20-85706

Project / Site name: Wisbech

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Water (PrW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Ammoniacal Nitrogen as N in soil	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the discrete analyser (colorimetric) salicylate/nitroprusside method,10:1 water extraction.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	MCERTS
Asbestos identification in soil	Asbestos Identification with the use of polarised light microscopy in conjunction with disperion staining techniques.	In house method based on HSG 248	A001-PL	D	ISO 17025
Boron, water soluble, in soil	Determination of water soluble boron in soil by hot water extract followed by ICP-OES.	In-house method based on Second Site Properties version 3	L038-PL	D	MCERTS
BTEX and MTBE in soil (Monoaromatics)	Determination of BTEX in soil by headspace GC-MS.	In-house method based on USEPA8260	L073B-PL	W	MCERTS
Electrical conductivity of soil	Determination of electrical conductivity in soil by electrometric measurement.	In-house method	L031-PL	W	ISO 17025
Hexavalent chromium in soil	Determination of hexavalent chromium in soil by extraction in water then by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.	In-house method	L080-PL	W	MCERTS
Metals in soil by ICP-OES	Determination of metals in soil by aqua-regia digestion followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L038-PL	D	MCERTS
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	W	NONE
Monohydric phenols in soil	Determination of phenols in soil by extraction with sodium hydroxide followed by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)	L080-PL	W	MCERTS
pH in soil (automated)	Determination of pH in soil by addition of water followed by automated electrometric measurement.	In house method.	L099-PL	D	MCERTS
Redox Potential of soil	Determination of redox potential in soil by electrometric measurement.	In house method.	L084-PL	W	NONE
Speciated EPA-16 PAHs in soil	Determination of PAH compounds in soil by extraction in dichloromethane and hexane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270	L064-PL	D	MCERTS
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
Total organic carbon (Automated) in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	In house method.	L009-PL	D	MCERTS
TPHCWG (Soil)	Determination of hexane extractable hydrocarbons in soil by GC-MS/GC-FID.	In-house method with silica gel split/clean up.	L088/76-PL	W	MCERTS

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.
For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.
Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.

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Analytical Report Number : 20-86174

Replaces Analytical Report Number : 20-86174, issue no. 1

Additional analysis undertaken.

Project / Site name:	Wisbech	**Samples received on:**	12/02/2020
Your job number:	41310	**Samples instructed on:**	12/02/2020
Your order number:	324139	**Analysis completed by:**	27/02/2020
Report Issue Number:	2	**Report issued on:**	27/02/2020
Samples Analysed:	4 soil samples		

Signed: [redacted]

Zina Abdul Razzak
Senior Quality Specialist

For & on behalf of i2 Analytical Ltd.

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils	- 4 weeks from reporting
leachates	- 2 weeks from reporting
waters	- 2 weeks from reporting
asbestos	- 6 months from reporting

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Any assessments of compliance with specifications are based on actual analytical results with no contribution from uncertainty of measurement. Application of uncertainty of measurement would provide a range within which the true result lies. An estimate of measurement uncertainty can be provided on request.

Analytical Report Number: 20-86174

Project / Site name: Wisbech

Lab Sample Number				1438743	1438744	1438745	1438746	
Sample Reference				BH10	BH10	BH13	BH13	
Sample Number				ES1	ES2	ES1	ES2	
Depth (m)				0.30-0.30	1.30-1.30	0.30-0.30	0.50-0.50	
Date Sampled				10/02/2020	10/02/2020	11/02/2020	11/02/2020	
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	
Moisture Content	%	N/A	NONE	11	18	7.9	23	
Total mass of sample received	kg	0.001	NONE	2.0	2.0	2.0	2.0	
Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	Chrysotile & Amosite	-	-	-	
Asbestos in Soil	Type	N/A	ISO 17025	Detected	Not-detected	Not-detected	Not-detected	
Asbestos Quantification (Stage 2)	%	0.001	ISO 17025	< 0.001	-	-	-	
Asbestos Quantification Total	%	0.001	ISO 17025	< 0.001	-	-	-	
General Inorganics								
pH - Automated	pH Units	N/A	MCERTS	9.5	8.0	9.0	8.1	
Electrical Conductivity	µS/cm	10	ISO 17025	-	-	250	-	
Ammoniacal Nitrogen as N	mg/kg	0.5	MCERTS	< 0.5	19	< 0.5	0.9	
Total Organic Carbon (TOC)	%	0.1	MCERTS	1.1	1.2	2.9	1.0	
Redox Potential	mV	-800	NONE	-	-	159.90	-	
Total Phenols								
Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	
Speciated PAHs								
Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	0.33	< 0.05	
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	1.1	< 0.05	
Fluorene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	0.81	< 0.05	
Phenanthrene	mg/kg	0.05	MCERTS	0.56	< 0.05	14	1.5	
Anthracene	mg/kg	0.05	MCERTS	0.16	< 0.05	3.0	0.36	
Fluoranthene	mg/kg	0.05	MCERTS	1.1	0.30	23	1.9	
Pyrene	mg/kg	0.05	MCERTS	0.99	0.30	20	1.7	
Benzo(a)anthracene	mg/kg	0.05	MCERTS	0.69	< 0.05	9.4	0.78	
Chrysene	mg/kg	0.05	MCERTS	0.51	< 0.05	5.5	0.58	
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	0.80	< 0.05	10	0.79	
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	0.50	< 0.05	4.5	0.63	
Benzo(a)pyrene	mg/kg	0.05	MCERTS	0.69	< 0.05	8.9	0.71	
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	0.32	< 0.05	4.0	0.32	
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	1.0	< 0.05	
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	0.41	< 0.05	4.5	0.34	
Total PAH								
Speciated Total EPA-16 PAHs	mg/kg	0.8	MCERTS	6.70	< 0.80	110	9.62	
Heavy Metals / Metalloids								
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	13	18	15	11	
Boron (water soluble)	mg/kg	0.2	MCERTS	1.7	0.9	1.1	1.8	
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2	< 0.2	0.9	< 0.2	
Chromium (hexavalent)	mg/kg	1.2	MCERTS	< 1.2	< 1.2	< 1.2	< 1.2	
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	27	38	31	47	
Copper (aqua regia extractable)	mg/kg	1	MCERTS	18	14	45	18	
Lead (aqua regia extractable)	mg/kg	1	MCERTS	53	22	34	24	
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	20	35	21	40	
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	58	74	110	100	

Analytical Report Number: 20-86174

Project / Site name: Wisbech

Lab Sample Number				1438743	1438744	1438745	1438746	
Sample Reference				BH10	BH10	BH13	BH13	
Sample Number				ES1	ES2	ES1	ES2	
Depth (m)				0.30-0.30	1.30-1.30	0.30-0.30	0.50-0.50	
Date Sampled				10/02/2020	10/02/2020	11/02/2020	11/02/2020	
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Monoaromatics & Oxygenates								
Benzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	
Toluene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	
Ethylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	
p & m-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	
o-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	
Petroleum Hydrocarbons								
TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	< 2.0	10	< 2.0	
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	< 8.0	< 8.0	26	< 8.0	
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	< 8.0	< 8.0	120	< 8.0	
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	< 10	< 10	160	< 10	
TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	< 2.0	20	< 2.0	
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	< 10	< 10	160	< 10	
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	71	< 10	500	20	
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	80	< 10	670	29	

Analytical Report Number: 20-86174
Project / Site name: Wisbech
Your Order No:

Certificate of Analysis - Asbestos Quantification

Methods:

Qualitative Analysis

The samples were analysed qualitatively for asbestos by polarising light and dispersion staining as described by the Health and Safety Executive in HSG 248.

Quantitative Analysis

The analysis was carried out using our documented in-house method A006 based on HSE Contract Research Report No: 83/1996: Development and Validation of an analytical method to determine the amount of asbestos in soils and loose aggregates (Davies et al, 1996) and HSG 248. Our method includes initial examination of the entire representative sample, then fractionation and detailed analysis of each fraction, with quantification by hand picking and weighing.

The limit of detection (reporting limit) of this method is 0.001 %.

The method has been validated using samples of at least 100 g, results for samples smaller than this should be interpreted with caution.

Both Qualitative and Quantitative Analyses are UKAS accredited.

Sample Number	Sample ID	Sample Depth (m)	Sample Weight (g)	Asbestos Containing Material Types Detected (ACM)	PLM Results	Asbestos by hand picking/weighing (%)	Total % Asbestos in Sample
1438743	BH10	0.30-0.30	133	Loose Fibres	**Chrysotile & Amosite**	< 0.001	**< 0.001**

Opinions and interpretations expressed herein are outside the scope of UKAS accreditation.

Analytical Report Number : 20-86174

Project / Site name: Wisbech

* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and loam (MCERTS) soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
1438743	BH10	ES1	0.30-0.30	Brown loam and clay with gravel and rubble.
1438744	BH10	ES2	1.30-1.30	Brown loam and clay with gravel and vegetation.
1438745	BH13	ES1	0.30-0.30	Brown loam and clay with gravel and vegetation.
1438746	BH13	ES2	0.50-0.50	Brown clay and sand.

Analytical Report Number : 20-86174

Project / Site name: Wisbech

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Water (PrW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Ammoniacal Nitrogen as N in soil	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the discrete analyser (colorimetric) salicylate/nitroprusside method,10:1 water extraction.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	MCERTS
Asbestos identification in soil	Asbestos Identification with the use of polarised light microscopy in conjunction with disperion staining techniques.	In house method based on HSG 248	A001-PL	D	ISO 17025
Asbestos Quantification - Gravimetric	Asbestos quantification by gravimetric method - in house method based on references.	HSE Report No: 83/1996, HSG 248, HSG 264 & SCA Blue Book (draft).	A006-PL	D	ISO 17025
Boron, water soluble, in soil	Determination of water soluble boron in soil by hot water extract followed by ICP-OES.	In-house method based on Second Site Properties version 3	L038-PL	D	MCERTS
BTEX and MTBE in soil (Monoaromatics)	Determination of BTEX in soil by headspace GC-MS.	In-house method based on USEPA8260	L073B-PL	W	MCERTS
Electrical conductivity of soil	Determination of electrical conductivity in soil by electrometric measurement.	In-house method	L031-PL	W	ISO 17025
Hexavalent chromium in soil (Lower Level)	Determination of hexavalent chromium in soil by extraction in water then by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.	In-house method	L080-PL	W	MCERTS
Metals in soil by ICP-OES	Determination of metals in soil by aqua-regia digestion followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L038-PL	D	MCERTS
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	W	NONE
Monohydric phenols in soil	Determination of phenols in soil by extraction with sodium hydroxide followed by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)	L080-PL	W	MCERTS
pH in soil (automated)	Determination of pH in soil by addition of water followed by automated electrometric measurement.	In house method.	L099-PL	D	MCERTS
Redox Potential of soil	Determination of redox potential in soil by electrometric measurement.	In house method.	L084-PL	W	NONE
Speciated EPA-16 PAHs in soil	Determination of PAH compounds in soil by extraction in dichloromethane and hexane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270	L064-PL	D	MCERTS
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
Total organic carbon (Automated) in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	In house method.	L009-PL	D	MCERTS
TPHCWG (Soil)	Determination of hexane extractable hydrocarbons in soil by GC-MS/GC-FID.	In-house method with silica gel split/clean up.	L088/76-PL	W	MCERTS

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.
For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.
Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.

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Analytical Report Number : 20-86787

Project / Site name:	Wisbech	**Samples received on:**	14/02/2020
Your job number:	41310	**Samples instructed on:**	14/02/2020
Your order number:		**Analysis completed by:**	20/02/2020
Report Issue Number:	1	**Report issued on:**	20/02/2020
Samples Analysed:	5 soil samples		

Signed: [redacted]

Rachel Bradley

Deputy Quality Manager
For & on behalf of i2 Analytical Ltd.

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils	- 4 weeks from reporting
leachates	- 2 weeks from reporting
waters	- 2 weeks from reporting
asbestos	- 6 months from reporting

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Any assessments of compliance with specifications are based on actual analytical results with no contribution from uncertainty of measurement. Application of uncertainty of measurement would provide a range within which the true result lies. An estimate of measurement uncertainty can be provided on request.

Analytical Report Number: 20-86787

Project / Site name: Wisbech

Lab Sample Number				1441697	1441698	1441699	1441700	1441701
Sample Reference				TP03	BH07	TP13A	TP13	TP07
Sample Number				ES1	ES2	ES1	ES1	ES1
Depth (m)				0.30-0.30	1.80-1.80	0.40-0.40	0.30-0.30	0.20-0.20
Date Sampled				12/02/2020	13/02/2020	13/02/2020	13/02/2020	13/02/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Moisture Content	%	N/A	NONE	8.1	20	20	8.1	3.8
Total mass of sample received	kg	0.001	NONE	2.0	1.7	2.0	2.0	2.0
Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected	Not-detected	Not-detected	Not-detected
General Inorganics								
pH - Automated	pH Units	N/A	MCERTS	9.9	8.5	7.7	8.7	10.4
Electrical Conductivity	µS/cm	10	ISO 17025	690	-	-	-	360
Ammoniacal Nitrogen as N	mg/kg	0.5	MCERTS	< 0.5	19	< 0.5	< 0.5	0.9
Total Organic Carbon (TOC)	%	0.1	MCERTS	1.0	1.1	2.1	3.0	2.8
Redox Potential	mV	-800	NONE	143.90	-	-	-	132.30
Total Phenols								
Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Speciated PAHs								
Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthylene	mg/kg	0.05	MCERTS	0.27	< 0.05	< 0.05	2.3	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	1.2	0.36	< 0.05	4.5	0.82
Fluorene	mg/kg	0.05	MCERTS	1.0	0.26	< 0.05	4.0	0.82
Phenanthrene	mg/kg	0.05	MCERTS	11	1.8	0.59	52	7.0
Anthracene	mg/kg	0.05	MCERTS	3.6	0.52	0.22	17	1.8
Fluoranthene	mg/kg	0.05	MCERTS	21	2.5	1.2	120	9.3
Pyrene	mg/kg	0.05	MCERTS	22	2.1	1.2	110	8.5
Benzo(a)anthracene	mg/kg	0.05	MCERTS	11	0.93	0.42	61	4.9
Chrysene	mg/kg	0.05	MCERTS	8.5	0.83	0.48	45	3.3
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	11	0.87	0.50	56	4.2
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	3.7	0.57	0.37	27	2.3
Benzo(a)pyrene	mg/kg	0.05	MCERTS	9.4	0.86	0.43	44	3.9
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	4.5	0.43	0.20	22	1.8
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	1.4	< 0.05	< 0.05	4.3	0.60
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	4.4	0.48	0.24	24	2.2
Total PAH								
Speciated Total EPA-16 PAHs	mg/kg	0.8	MCERTS	114	12.5	5.85	594	51.4

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Lab Sample Number				1441697	1441698	1441699	1441700	1441701
Sample Reference				TP03	BH07	TP13A	TP13	TP07
Sample Number				ES1	ES2	ES1	ES1	ES1
Depth (m)				0.30-0.30	1.80-1.80	0.40-0.40	0.30-0.30	0.20-0.20
Date Sampled				12/02/2020	13/02/2020	13/02/2020	13/02/2020	13/02/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Heavy Metals / Metalloids								
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	16	20	20	15	6.0
Boron (water soluble)	mg/kg	0.2	MCERTS	3.9	3.5	1.1	1.6	1.9
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	0.3	0.7
Chromium (hexavalent)	mg/kg	4	MCERTS	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	28	35	38	23	20
Copper (aqua regia extractable)	mg/kg	1	MCERTS	55	13	16	26	24
Lead (aqua regia extractable)	mg/kg	1	MCERTS	22	24	33	57	30
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	17	27	30	16	14
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	90	68	73	69	87
Monoaromatics & Oxygenates								
Benzene	µg/kg	1	MCERTS	< 1.0	-	-	-	< 1.0
Toluene	µg/kg	1	MCERTS	< 1.0	-	-	-	< 1.0
Ethylbenzene	µg/kg	1	MCERTS	< 1.0	-	-	-	< 1.0
p & m-xylene	µg/kg	1	MCERTS	< 1.0	-	-	-	< 1.0
o-xylene	µg/kg	1	MCERTS	< 1.0	-	-	-	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0	-	-	-	< 1.0
Petroleum Hydrocarbons								
TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.001	MCERTS	< 0.001	-	-	-	< 0.001
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.001	MCERTS	< 0.001	-	-	-	< 0.001
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001	-	-	-	< 0.001
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	1.3	-	-	-	1.7
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	9.4	-	-	-	17
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	20	-	-	-	31
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	140	-	-	-	360
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	170	-	-	-	410
TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.001	MCERTS	< 0.001	-	-	-	< 0.001
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.001	MCERTS	< 0.001	-	-	-	< 0.001
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001	-	-	-	< 0.001
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	-	-	-	< 1.0
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	10	-	-	-	< 2.0
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	97	-	-	-	44
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	400	-	-	-	1100
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	500	-	-	-	1100

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Lab Sample Number				1441697	1441698	1441699	1441700	1441701
Sample Reference				TP03	BH07	TP13A	TP13	TP07
Sample Number				ES1	ES2	ES1	ES1	ES1
Depth (m)				0.30-0.30	1.80-1.80	0.40-0.40	0.30-0.30	0.20-0.20
Date Sampled				12/02/2020	13/02/2020	13/02/2020	13/02/2020	13/02/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
VOCs								
Chloromethane	µg/kg	1	ISO 17025	< 1.0	-	-	-	< 1.0
Chloroethane	µg/kg	1	NONE	< 1.0	-	-	-	< 1.0
Bromomethane	µg/kg	1	ISO 17025	< 1.0	-	-	-	< 1.0
Vinyl Chloride	µg/kg	1	NONE	< 1.0	-	-	-	< 1.0
Trichlorofluoromethane	µg/kg	1	NONE	< 1.0	-	-	-	< 1.0
1,1-Dichloroethene	µg/kg	1	NONE	< 1.0	-	-	-	< 1.0
1,1,2-Trichloro 1,2,2-Trifluoroethane	µg/kg	1	ISO 17025	< 1.0	-	-	-	< 1.0
Cis-1,2-dichloroethene	µg/kg	1	MCERTS	< 1.0	-	-	-	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0	-	-	-	< 1.0
1,1-Dichloroethane	µg/kg	1	MCERTS	< 1.0	-	-	-	< 1.0
2,2-Dichloropropane	µg/kg	1	MCERTS	< 1.0	-	-	-	< 1.0
Trichloromethane	µg/kg	1	MCERTS	< 1.0	-	-	-	< 1.0
1,1,1-Trichloroethane	µg/kg	1	MCERTS	< 1.0	-	-	-	< 1.0
1,2-Dichloroethane	µg/kg	1	MCERTS	< 1.0	-	-	-	< 1.0
1,1-Dichloropropene	µg/kg	1	MCERTS	< 1.0	-	-	-	< 1.0
Trans-1,2-dichloroethene	µg/kg	1	NONE	< 1.0	-	-	-	< 1.0
Benzene	µg/kg	1	MCERTS	< 1.0	-	-	-	< 1.0
Tetrachloromethane	µg/kg	1	MCERTS	< 1.0	-	-	-	< 1.0
1,2-Dichloropropane	µg/kg	1	MCERTS	< 1.0	-	-	-	< 1.0
Trichloroethene	µg/kg	1	MCERTS	< 1.0	-	-	-	< 1.0
Dibromomethane	µg/kg	1	MCERTS	< 1.0	-	-	-	< 1.0
Bromodichloromethane	µg/kg	1	MCERTS	< 1.0	-	-	-	< 1.0
Cis-1,3-dichloropropene	µg/kg	1	ISO 17025	< 1.0	-	-	-	< 1.0
Trans-1,3-dichloropropene	µg/kg	1	ISO 17025	< 1.0	-	-	-	< 1.0
Toluene	µg/kg	1	MCERTS	< 1.0	-	-	-	< 1.0
1,1,2-Trichloroethane	µg/kg	1	MCERTS	< 1.0	-	-	-	< 1.0
1,3-Dichloropropane	µg/kg	1	ISO 17025	< 1.0	-	-	-	< 1.0
Dibromochloromethane	µg/kg	1	ISO 17025	< 1.0	-	-	-	< 1.0
Tetrachloroethene	µg/kg	1	NONE	< 1.0	-	-	-	< 1.0
1,2-Dibromoethane	µg/kg	1	ISO 17025	< 1.0	-	-	-	< 1.0
Chlorobenzene	µg/kg	1	MCERTS	< 1.0	-	-	-	< 1.0
1,1,1,2-Tetrachloroethane	µg/kg	1	MCERTS	< 1.0	-	-	-	< 1.0
Ethylbenzene	µg/kg	1	MCERTS	< 1.0	-	-	-	< 1.0
p & m-Xylene	µg/kg	1	MCERTS	< 1.0	-	-	-	< 1.0
Styrene	µg/kg	1	MCERTS	< 1.0	-	-	-	< 1.0
Tribromomethane	µg/kg	1	NONE	< 1.0	-	-	-	< 1.0
o-Xylene	µg/kg	1	MCERTS	< 1.0	-	-	-	< 1.0
1,1,2,2-Tetrachloroethane	µg/kg	1	MCERTS	< 1.0	-	-	-	< 1.0
Isopropylbenzene	µg/kg	1	MCERTS	< 1.0	-	-	-	< 1.0
Bromobenzene	µg/kg	1	MCERTS	< 1.0	-	-	-	< 1.0
n-Propylbenzene	µg/kg	1	ISO 17025	< 1.0	-	-	-	< 1.0
2-Chlorotoluene	µg/kg	1	MCERTS	< 1.0	-	-	-	< 1.0
4-Chlorotoluene	µg/kg	1	MCERTS	< 1.0	-	-	-	< 1.0
1,3,5-Trimethylbenzene	µg/kg	1	ISO 17025	< 1.0	-	-	-	< 1.0
tert-Butylbenzene	µg/kg	1	MCERTS	< 1.0	-	-	-	< 1.0
1,2,4-Trimethylbenzene	µg/kg	1	ISO 17025	< 1.0	-	-	-	< 1.0
sec-Butylbenzene	µg/kg	1	MCERTS	< 1.0	-	-	-	< 1.0
1,3-Dichlorobenzene	µg/kg	1	ISO 17025	< 1.0	-	-	-	< 1.0
p-Isopropyltoluene	µg/kg	1	ISO 17025	< 1.0	-	-	-	< 1.0
1,2-Dichlorobenzene	µg/kg	1	MCERTS	< 1.0	-	-	-	< 1.0
1,4-Dichlorobenzene	µg/kg	1	MCERTS	< 1.0	-	-	-	< 1.0
Butylbenzene	µg/kg	1	MCERTS	< 1.0	-	-	-	< 1.0
1,2-Dibromo-3-chloropropane	µg/kg	1	ISO 17025	< 1.0	-	-	-	< 1.0
1,2,4-Trichlorobenzene	µg/kg	1	MCERTS	< 1.0	-	-	-	< 1.0
Hexachlorobutadiene	µg/kg	1	MCERTS	< 1.0	-	-	-	< 1.0
1,2,3-Trichlorobenzene	µg/kg	1	ISO 17025	< 1.0	-	-	-	< 1.0

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Lab Sample Number				1441697	1441698	1441699	1441700	1441701
Sample Reference				TP03	BH07	TP13A	TP13	TP07
Sample Number				ES1	ES2	ES1	ES1	ES1
Depth (m)				0.30-0.30	1.80-1.80	0.40-0.40	0.30-0.30	0.20-0.20
Date Sampled				12/02/2020	13/02/2020	13/02/2020	13/02/2020	13/02/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
SVOCs								
Aniline	mg/kg	0.1	NONE	< 0.1	-	-	-	< 0.1
Phenol	mg/kg	0.2	ISO 17025	< 0.2	-	-	-	< 0.2
2-Chlorophenol	mg/kg	0.1	MCERTS	< 0.1	-	-	-	< 0.1
Bis(2-chloroethyl)ether	mg/kg	0.2	MCERTS	< 0.2	-	-	-	< 0.2
1,3-Dichlorobenzene	mg/kg	0.2	MCERTS	< 0.2	-	-	-	< 0.2
1,2-Dichlorobenzene	mg/kg	0.1	MCERTS	< 0.1	-	-	-	< 0.1
1,4-Dichlorobenzene	mg/kg	0.2	MCERTS	< 0.2	-	-	-	< 0.2
Bis(2-chloroisopropyl)ether	mg/kg	0.1	MCERTS	< 0.1	-	-	-	< 0.1
2-Methylphenol	mg/kg	0.3	MCERTS	< 0.3	-	-	-	< 0.3
Hexachloroethane	mg/kg	0.05	MCERTS	< 0.05	-	-	-	< 0.05
Nitrobenzene	mg/kg	0.3	MCERTS	< 0.3	-	-	-	< 0.3
4-Methylphenol	mg/kg	0.2	NONE	< 0.2	-	-	-	< 0.2
Isophorone	mg/kg	0.2	MCERTS	< 0.2	-	-	-	< 0.2
2-Nitrophenol	mg/kg	0.3	MCERTS	< 0.3	-	-	-	< 0.3
2,4-Dimethylphenol	mg/kg	0.3	MCERTS	< 0.3	-	-	-	< 0.3
Bis(2-chloroethoxy)methane	mg/kg	0.3	MCERTS	< 0.3	-	-	-	< 0.3
1,2,4-Trichlorobenzene	mg/kg	0.3	MCERTS	< 0.3	-	-	-	< 0.3
Naphthalene	mg/kg	0.05	MCERTS	< 0.05	-	-	-	< 0.05
2,4-Dichlorophenol	mg/kg	0.3	MCERTS	< 0.3	-	-	-	< 0.3
4-Chloroaniline	mg/kg	0.1	NONE	< 0.1	-	-	-	< 0.1
Hexachlorobutadiene	mg/kg	0.1	MCERTS	< 0.1	-	-	-	< 0.1
4-Chloro-3-methylphenol	mg/kg	0.1	NONE	< 0.1	-	-	-	< 0.1
2,4,6-Trichlorophenol	mg/kg	0.1	MCERTS	< 0.1	-	-	-	< 0.1
2,4,5-Trichlorophenol	mg/kg	0.2	MCERTS	< 0.2	-	-	-	< 0.2
2-Methylnaphthalene	mg/kg	0.1	NONE	< 0.1	-	-	-	< 0.1
2-Chloronaphthalene	mg/kg	0.1	MCERTS	< 0.1	-	-	-	< 0.1
Dimethylphthalate	mg/kg	0.1	MCERTS	< 0.1	-	-	-	< 0.1
2,6-Dinitrotoluene	mg/kg	0.1	MCERTS	< 0.1	-	-	-	< 0.1
Acenaphthylene	mg/kg	0.05	MCERTS	0.27	-	-	-	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	1.2	-	-	-	0.82
2,4-Dinitrotoluene	mg/kg	0.2	MCERTS	< 0.2	-	-	-	< 0.2
Dibenzofuran	mg/kg	0.2	MCERTS	0.5	-	-	-	0.4
4-Chlorophenyl phenyl ether	mg/kg	0.3	ISO 17025	< 0.3	-	-	-	< 0.3
Diethyl phthalate	mg/kg	0.2	MCERTS	< 0.2	-	-	-	< 0.2
4-Nitroaniline	mg/kg	0.2	MCERTS	< 0.2	-	-	-	< 0.2
Fluorene	mg/kg	0.05	MCERTS	1.0	-	-	-	0.82
Azobenzene	mg/kg	0.3	MCERTS	< 0.3	-	-	-	< 0.3
Bromophenyl phenyl ether	mg/kg	0.2	MCERTS	< 0.2	-	-	-	< 0.2
Hexachlorobenzene	mg/kg	0.3	MCERTS	< 0.3	-	-	-	< 0.3
Phenanthrene	mg/kg	0.05	MCERTS	11	-	-	-	7.0
Anthracene	mg/kg	0.05	MCERTS	3.6	-	-	-	1.8
Carbazole	mg/kg	0.3	MCERTS	0.5	-	-	-	0.4
Dibutyl phthalate	mg/kg	0.2	MCERTS	< 0.2	-	-	-	< 0.2
Anthraquinone	mg/kg	0.3	MCERTS	1.1	-	-	-	< 0.3
Fluoranthene	mg/kg	0.05	MCERTS	21	-	-	-	9.3
Pyrene	mg/kg	0.05	MCERTS	22	-	-	-	8.5
Butyl benzyl phthalate	mg/kg	0.3	ISO 17025	< 0.3	-	-	-	< 0.3
Benzo(a)anthracene	mg/kg	0.05	MCERTS	11	-	-	-	4.9
Chrysene	mg/kg	0.05	MCERTS	8.5	-	-	-	3.3
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	11	-	-	-	4.2
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	3.7	-	-	-	2.3
Benzo(a)pyrene	mg/kg	0.05	MCERTS	9.4	-	-	-	3.9
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	4.5	-	-	-	1.8
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	1.4	-	-	-	0.60
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	4.4	-	-	-	2.2

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* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and loam (MCERTS) soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
1441697	TP03	ES1	0.30-0.30	Brown loam and sand with gravel.
1441698	BH07	ES2	1.80-1.80	Brown clay and sand with gravel.
1441699	TP13A	ES1	0.40-0.40	Brown loam and clay with vegetation.
1441700	TP13	ES1	0.30-0.30	Brown loam and clay with gravel.
1441701	TP07	ES1	0.20-0.20	Brown loam and clay with gravel.

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Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Water (PrW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Ammoniacal Nitrogen as N in soil	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the discrete analyser (colorimetric) salicylate/nitroprusside method,10:1 water extraction.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	MCERTS
Asbestos identification in soil	Asbestos Identification with the use of polarised light microscopy in conjunction with disperion staining techniques.	In house method based on HSG 248	A001-PL	D	ISO 17025
Boron, water soluble, in soil	Determination of water soluble boron in soil by hot water extract followed by ICP-OES.	In-house method based on Second Site Properties version 3	L038-PL	D	MCERTS
BTEX and MTBE in soil (Monoaromatics)	Determination of BTEX in soil by headspace GC-MS.	In-house method based on USEPA8260	L073B-PL	W	MCERTS
Electrical conductivity of soil	Determination of electrical conductivity in soil by electrometric measurement.	In-house method	L031-PL	W	ISO 17025
Hexavalent chromium in soil	Determination of hexavalent chromium in soil by extraction in water then by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.	In-house method	L080-PL	W	MCERTS
Metals in soil by ICP-OES	Determination of metals in soil by aqua-regia digestion followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L038-PL	D	MCERTS
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	W	NONE
Monohydric phenols in soil	Determination of phenols in soil by extraction with sodium hydroxide followed by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)	L080-PL	W	MCERTS
pH in soil (automated)	Determination of pH in soil by addition of water followed by automated electrometric measurement.	In house method.	L099-PL	D	MCERTS
Redox Potential of soil	Determination of redox potential in soil by electrometric measurement.	In house method.	L084-PL	W	NONE
Semi-volatile organic compounds in soil	Determination of semi-volatile organic compounds in soil by extraction in dichloromethane and hexane followed by GC-MS.	In-house method based on USEPA 8270	L064-PL	D	MCERTS
Speciated EPA-16 PAHs in soil	Determination of PAH compounds in soil by extraction in dichloromethane and hexane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270	L064-PL	D	MCERTS
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
Total organic carbon (Automated) in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	In house method.	L009-PL	D	MCERTS
TPHCWG (Soil)	Determination of hexane extractable hydrocarbons in soil by GC-MS/GC-FID.	In-house method with silica gel split/clean up.	L088/76-PL	W	MCERTS
Volatile organic compounds in soil	Determination of volatile organic compounds in soil by headspace GC-MS.	In-house method based on USEPA8260	L073B-PL	W	MCERTS

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Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Water (PrW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.
For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.
Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.

The results included within the report are representative of the samples submitted for analysis.

Sample ID	Other_ID	Sample Type	Job	Sample Number	Sample Deviation Code	test_name	test_ref	Test Deviation code
BH07	ES2	S	20-86787	1441698	b	Monohydric phenols in soil	L080-PL	b
BH07	ES2	S	20-86787	1441698	b	Speciated EPA-16 PAHs in soil	L064-PL	b

Key: a - No sampling date b - Incorrect container
c - Holding time d - Headspace e - Temperature

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Analytical Report Number : 20-87316

Project / Site name:	Wisbech	**Samples received on:**	17/02/2020
Your job number:	41310	**Samples instructed on:**	17/02/2020
Your order number:	324139	**Analysis completed by:**	24/02/2020
Report Issue Number:	1	**Report issued on:**	24/02/2020
Samples Analysed:	3 soil samples		

Signed: [redacted]

Rachel Bradley

Deputy Quality Manager
For & on behalf of i2 Analytical Ltd.

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils	- 4 weeks from reporting
leachates	- 2 weeks from reporting
waters	- 2 weeks from reporting
asbestos	- 6 months from reporting

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Any assessments of compliance with specifications are based on actual analytical results with no contribution from uncertainty of measurement. Application of uncertainty of measurement would provide a range within which the true result lies. An estimate of measurement uncertainty can be provided on request.

Analytical Report Number: 20-87316

Project / Site name: Wisbech

Your Order No: 324139

Lab Sample Number				1444295	1444297	1444298		
Sample Reference				TP12A	TP04A	TP10A		
Sample Number				ES1	ES2	ES1		
Depth (m)				0.40-0.40	0.50-0.50	0.40-0.40		
Date Sampled				14/02/2020	14/02/2020	14/02/2020		
Time Taken				None Supplied	None Supplied	None Supplied		
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1		
Moisture Content	%	N/A	NONE	12	17	16		
Total mass of sample received	kg	0.001	NONE	2.0	2.0	2.0		
Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected	Not-detected		
General Inorganics								
pH - Automated	pH Units	N/A	MCERTS	7.8	7.7	7.7		
Ammoniacal Nitrogen as N	mg/kg	0.5	MCERTS	< 0.5	< 0.5	< 0.5		
Total Organic Carbon (TOC)	%	0.1	MCERTS	1.3	1.2	1.1		
Total Phenols								
Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0		
Speciated PAHs								
Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05		
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05		
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05		
Fluorene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05		
Phenanthrene	mg/kg	0.05	MCERTS	0.52	0.54	< 0.05		
Anthracene	mg/kg	0.05	MCERTS	0.12	0.11	< 0.05		
Fluoranthene	mg/kg	0.05	MCERTS	1.3	0.84	0.36		
Pyrene	mg/kg	0.05	MCERTS	1.3	0.77	0.31		
Benzo(a)anthracene	mg/kg	0.05	MCERTS	0.80	0.39	0.25		
Chrysene	mg/kg	0.05	MCERTS	0.81	0.40	0.19		
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	0.87	0.45	0.22		
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	0.58	0.18	0.15		
Benzo(a)pyrene	mg/kg	0.05	MCERTS	0.89	0.40	0.24		
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	0.51	0.23	< 0.05		
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05		
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	0.64	0.26	< 0.05		
Total PAH								
Speciated Total EPA-16 PAHs	mg/kg	0.8	MCERTS	8.36	4.57	1.72		
Heavy Metals / Metalloids								
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	13	25	10		
Boron (water soluble)	mg/kg	0.2	MCERTS	1.4	2.6	0.8		
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2		
Chromium (hexavalent)	mg/kg	1.2	MCERTS	< 1.2	< 1.2	< 1.2		
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	28	47	23		
Copper (aqua regia extractable)	mg/kg	1	MCERTS	21	22	14		
Lead (aqua regia extractable)	mg/kg	1	MCERTS	40	28	17		
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3		
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	22	29	20		
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0		
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	74	76	59		

Analytical Report Number: 20-87316

Project / Site name: Wisbech
Your Order No: 324139

Lab Sample Number				1444295	1444297	1444298		
Sample Reference				TP12A	TP04A	TP10A		
Sample Number				ES1	ES2	ES1		
Depth (m)				0.40-0.40	0.50-0.50	0.40-0.40		
Date Sampled				14/02/2020	14/02/2020	14/02/2020		
Time Taken				None Supplied	None Supplied	None Supplied		
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Monoaromatics & Oxygenates								
Benzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0		
Toluene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0		
Ethylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0		
p & m-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0		
o-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0		
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0		
Petroleum Hydrocarbons								
TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001		
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001		
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001		
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0		
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	< 2.0	< 2.0		
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	< 8.0	< 8.0	8.2		
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	< 8.0	< 8.0	50		
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	< 10	< 10	59		
TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001		
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001		
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001		
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0		
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	3.4	< 2.0	< 2.0		
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	12	< 10	12		
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	67	28	50		
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	82	36	61		

Analytical Report Number : 20-87316

Project / Site name: Wisbech

* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and loam (MCERTS) soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
1444295	TP12A	ES1	0.40-0.40	Brown loam and clay with gravel and vegetation.
1444297	TP04A	ES2	0.50-0.50	Brown loam and clay with gravel and vegetation.
1444298	TP10A	ES1	0.40-0.40	Brown loam and clay with gravel and vegetation.

Analytical Report Number : 20-87316

Project / Site name: Wisbech

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Water (PrW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Ammoniacal Nitrogen as N in soil	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the discrete analyser (colorimetric) salicylate/nitroprusside method,10:1 water extraction.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	MCERTS
Asbestos identification in soil	Asbestos Identification with the use of polarised light microscopy in conjunction with disperion staining techniques.	In house method based on HSG 248	A001-PL	D	ISO 17025
Boron, water soluble, in soil	Determination of water soluble boron in soil by hot water extract followed by ICP-OES.	In-house method based on Second Site Properties version 3	L038-PL	D	MCERTS
BTEX and MTBE in soil (Monoaromatics)	Determination of BTEX in soil by headspace GC-MS.	In-house method based on USEPA8260	L073B-PL	W	MCERTS
Hexavalent chromium in soil (Lower Level)	Determination of hexavalent chromium in soil by extraction in water then by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.	In-house method	L080-PL	W	MCERTS
Metals in soil by ICP-OES	Determination of metals in soil by aqua-regia digestion followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L038-PL	D	MCERTS
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	W	NONE
Monohydric phenols in soil	Determination of phenols in soil by extraction with sodium hydroxide followed by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)	L080-PL	W	MCERTS
pH in soil (automated)	Determination of pH in soil by addition of water followed by automated electrometric measurement.	In house method.	L099-PL	D	MCERTS
Speciated EPA-16 PAHs in soil	Determination of PAH compounds in soil by extraction in dichloromethane and hexane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270	L064-PL	D	MCERTS
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
Total organic carbon (Automated) in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	In house method.	L009-PL	D	MCERTS
TPHCWG (Soil)	Determination of hexane extractable hydrocarbons in soil by GC-MS/GC-FID.	In-house method with silica gel split/clean up.	L088/76-PL	W	MCERTS

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.
For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.
Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.

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Analytical Report Number : 20-87661

Project / Site name:	Wisbech	**Samples received on:**	18/02/2020
Your job number:	41310	**Samples instructed on:**	18/02/2020
Your order number:	324139	**Analysis completed by:**	25/02/2020
Report Issue Number:	1	**Report issued on:**	25/02/2020
Samples Analysed:	2 soil samples		

Signed [redacted]

Zina Abdul Razzak
Senior Quality Specialist

For & on behalf of i2 Analytical Ltd.

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils	- 4 weeks from reporting
leachates	- 2 weeks from reporting
waters	- 2 weeks from reporting
asbestos	- 6 months from reporting

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Analytical Report Number: 20-87661

Project / Site name: Wisbech

Your Order No: 324139

Lab Sample Number				1446388	1446389			
Sample Reference				BH01	BH01			
Sample Number				ES1	ES2			
Depth (m)				0.40-0.40	0.80-0.80			
Date Sampled				18/02/2020	18/02/2020			
Time Taken				None Supplied	None Supplied			
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Stone Content	%	0.1	NONE	< 0.1	< 0.1			
Moisture Content	%	N/A	NONE	7.7	20			
Total mass of sample received	kg	0.001	NONE	2.0	2.0			
Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	-			
General Inorganics								
pH - Automated	pH Units	N/A	MCERTS	9.6	8.5			
Ammoniacal Nitrogen as N	mg/kg	0.5	MCERTS	< 0.5	2.8			
Total Organic Carbon (TOC)	%	0.1	MCERTS	1.8	0.8			
Total Phenols								
Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0	< 1.0			
Speciated PAHs								
Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05			
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05			
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05			
Fluorene	mg/kg	0.05	MCERTS	< 0.05	< 0.05			
Phenanthrene	mg/kg	0.05	MCERTS	1.5	< 0.05			
Anthracene	mg/kg	0.05	MCERTS	0.55	< 0.05			
Fluoranthene	mg/kg	0.05	MCERTS	5.5	< 0.05			
Pyrene	mg/kg	0.05	MCERTS	5.7	< 0.05			
Benzo(a)anthracene	mg/kg	0.05	MCERTS	3.1	< 0.05			
Chrysene	mg/kg	0.05	MCERTS	2.6	< 0.05			
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	3.4	< 0.05			
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	1.4	< 0.05			
Benzo(a)pyrene	mg/kg	0.05	MCERTS	2.8	< 0.05			
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	1.5	< 0.05			
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	0.56	< 0.05			
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	1.8	< 0.05			
Total PAH								
Speciated Total EPA-16 PAHs	mg/kg	0.8	MCERTS	30.3	< 0.80			
Heavy Metals / Metalloids								
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	17	20			
Boron (water soluble)	mg/kg	0.2	MCERTS	2.5	2.2			
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2	< 0.2			
Chromium (hexavalent)	mg/kg	4	MCERTS	< 4.0	< 4.0			
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	25	54			
Copper (aqua regia extractable)	mg/kg	1	MCERTS	6.9	9.2			
Lead (aqua regia extractable)	mg/kg	1	MCERTS	22	24			
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	< 0.3			
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	17	37			
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0			
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	67	75			

Analytical Report Number : 20-87661

Project / Site name: Wisbech

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Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
1446388	BH01	ES1	0.40-0.40	Brown loam and sand with gravel and vegetation.
1446389	BH01	ES2	0.80-0.80	Brown clay and sand.

Analytical Report Number : 20-87661

Project / Site name: Wisbech

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Water (PrW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Ammoniacal Nitrogen as N in soil	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the discrete analyser (colorimetric) salicylate/nitroprusside method,10:1 water extraction.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	MCERTS
Asbestos identification in soil	Asbestos Identification with the use of polarised light microscopy in conjunction with disperion staining techniques.	In house method based on HSG 248	A001-PL	D	ISO 17025
Boron, water soluble, in soil	Determination of water soluble boron in soil by hot water extract followed by ICP-OES.	In-house method based on Second Site Properties version 3	L038-PL	D	MCERTS
Hexavalent chromium in soil	Determination of hexavalent chromium in soil by extraction in water then by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.	In-house method	L080-PL	W	MCERTS
Metals in soil by ICP-OES	Determination of metals in soil by aqua-regia digestion followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L038-PL	D	MCERTS
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	W	NONE
Monohydric phenols in soil	Determination of phenols in soil by extraction with sodium hydroxide followed by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)	L080-PL	W	MCERTS
pH in soil (automated)	Determination of pH in soil by addition of water followed by automated electrometric measurement.	In house method.	L099-PL	D	MCERTS
Speciated EPA-16 PAHs in soil	Determination of PAH compounds in soil by extraction in dichloromethane and hexane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270	L064-PL	D	MCERTS
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
Total organic carbon (Automated) in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	In house method.	L009-PL	D	MCERTS

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.
For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.
Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.

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Analytical Report Number : 20-88359

Project / Site name:	Wisbech	**Samples received on:**	20/02/2020
Your job number:	41310	**Samples instructed on:**	21/02/2020
Your order number:	13053	**Analysis completed by:**	28/02/2020
Report Issue Number:	1	**Report issued on:**	28/02/2020
Samples Analysed:	11 soil samples		

Signed: [redacted]

Rachel Bradley

Deputy Quality Manager
For & on behalf of i2 Analytical Ltd.

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils	- 4 weeks from reporting
leachates	- 2 weeks from reporting
waters	- 2 weeks from reporting
asbestos	- 6 months from reporting

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Analytical Report Number: 20-88359

Project / Site name: Wisbech

Your Order No: 13053

Lab Sample Number				1450082	1450083	1450084	1450085	1450086
Sample Reference				BH03	BH03	BH03	BH02	BH02
Sample Number				ES1	ES2	ES3	ES1	ES2
Depth (m)				0.40-0.40	0.80-0.80	2.00-2.00	0.30-0.30	0.80-0.70
Date Sampled				20/02/2020	20/02/2020	20/02/2020	20/02/2020	20/02/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Moisture Content	%	N/A	NONE	7.5	24	31	8.7	18
Total mass of sample received	kg	0.001	NONE	2.0	2.0	0.18	2.0	2.0
Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	-	-	Not-detected	-
General Inorganics								
pH - Automated	pH Units	N/A	MCERTS	8.5	8.0	-	9.8	8.4
Electrical Conductivity	µS/cm	10	ISO 17025	-	250	-	680	-
Ammoniacal Nitrogen as N	mg/kg	0.5	MCERTS	< 0.5	3.7	-	< 0.5	21
Total Organic Carbon (TOC)	%	0.1	MCERTS	1.2	0.9	-	1.0	0.9
Redox Potential	mV	-800	NONE	-	136.20	-	123.10	-
Total Phenols								
Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0	< 1.0	-	< 1.0	< 1.0
Speciated PAHs								
Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	-	< 0.05	< 0.05
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	-	0.36	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	-	0.31	< 0.05
Fluorene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	-	0.57	< 0.05
Phenanthrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	-	4.6	< 0.05
Anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	-	1.0	< 0.05
Fluoranthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	-	4.9	0.27
Pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	-	4.7	0.26
Benzo(a)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	-	2.5	< 0.05
Chrysene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	-	1.7	< 0.05
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	-	2.6	< 0.05
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	-	0.90	< 0.05
Benzo(a)pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	-	2.1	< 0.05
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	-	0.99	< 0.05
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	-	0.32	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	-	1.2	< 0.05
Total PAH								
Speciated Total EPA-16 PAHs	mg/kg	0.8	MCERTS	< 0.80	< 0.80	-	28.7	< 0.80
Heavy Metals / Metalloids								
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	18	20	-	14	11
Boron (water soluble)	mg/kg	0.2	MCERTS	0.3	2.9	-	3.0	2.1
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2	< 0.2	-	< 0.2	< 0.2
Chromium (hexavalent)	mg/kg	4	MCERTS	< 4.0	< 4.0	-	< 4.0	< 4.0
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	17	57	-	30	29
Copper (aqua regia extractable)	mg/kg	1	MCERTS	12	20	-	11	12
Lead (aqua regia extractable)	mg/kg	1	MCERTS	21	27	-	16	15
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	< 0.3	-	< 0.3	< 0.3
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	19	41	-	18	25
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0	-	< 1.0	< 1.0
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	52	87	-	52	57

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Lab Sample Number				1450082	1450083	1450084	1450085	1450086
Sample Reference				BH03	BH03	BH03	BH02	BH02
Sample Number				ES1	ES2	ES3	ES1	ES2
Depth (m)				0.40-0.40	0.80-0.80	2.00-2.00	0.30-0.30	0.80-0.70
Date Sampled				20/02/2020	20/02/2020	20/02/2020	20/02/2020	20/02/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Monoaromatics & Oxygenates								
Benzene	µg/kg	1	MCERTS	-	< 1.0	< 1.0	-	-
Toluene	µg/kg	1	MCERTS	-	< 1.0	< 1.0	-	-
Ethylbenzene	µg/kg	1	MCERTS	-	< 1.0	< 1.0	-	-
p & m-xylene	µg/kg	1	MCERTS	-	< 1.0	< 1.0	-	-
o-xylene	µg/kg	1	MCERTS	-	< 1.0	< 1.0	-	-
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	-	< 1.0	< 1.0	-	-
Petroleum Hydrocarbons								
TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.001	MCERTS	-	< 0.001	< 0.001	-	-
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.001	MCERTS	-	< 0.001	< 0.001	-	-
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.001	MCERTS	-	< 0.001	< 0.001	-	-
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	-	< 1.0	< 1.0	-	-
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	-	< 2.0	< 2.0	-	-
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	-	< 8.0	< 8.0	-	-
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	-	< 8.0	< 8.0	-	-
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	-	< 10	< 10	-	-
TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.001	MCERTS	-	< 0.001	< 0.001	-	-
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.001	MCERTS	-	< 0.001	< 0.001	-	-
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.001	MCERTS	-	< 0.001	< 0.001	-	-
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	-	< 1.0	< 1.0	-	-
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	-	< 2.0	< 2.0	-	-
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	-	< 10	< 10	-	-
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	-	< 10	< 10	-	-
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	-	< 10	< 10	-	-

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Lab Sample Number				1450082	1450083	1450084	1450085	1450086
Sample Reference				BH03	BH03	BH03	BH02	BH02
Sample Number				ES1	ES2	ES3	ES1	ES2
Depth (m)				0.40-0.40	0.80-0.80	2.00-2.00	0.30-0.30	0.80-0.70
Date Sampled				20/02/2020	20/02/2020	20/02/2020	20/02/2020	20/02/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
VOCs								
Chloromethane	µg/kg	1	ISO 17025	-	< 1.0	-	-	-
Chloroethane	µg/kg	1	NONE	-	< 1.0	-	-	-
Bromomethane	µg/kg	1	ISO 17025	-	< 1.0	-	-	-
Vinyl Chloride	µg/kg	1	NONE	-	< 1.0	-	-	-
Trichlorofluoromethane	µg/kg	1	NONE	-	< 1.0	-	-	-
1,1-Dichloroethene	µg/kg	1	NONE	-	< 1.0	-	-	-
1,1,2-Trichloro 1,2,2-Trifluoroethane	µg/kg	1	ISO 17025	-	< 1.0	-	-	-
Cis-1,2-dichloroethene	µg/kg	1	MCERTS	-	< 1.0	-	-	-
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	-	< 1.0	-	-	-
1,1-Dichloroethane	µg/kg	1	MCERTS	-	< 1.0	-	-	-
2,2-Dichloropropane	µg/kg	1	MCERTS	-	< 1.0	-	-	-
Trichloromethane	µg/kg	1	MCERTS	-	< 1.0	-	-	-
1,1,1-Trichloroethane	µg/kg	1	MCERTS	-	< 1.0	-	-	-
1,2-Dichloroethane	µg/kg	1	MCERTS	-	< 1.0	-	-	-
1,1-Dichloropropene	µg/kg	1	MCERTS	-	< 1.0	-	-	-
Trans-1,2-dichloroethene	µg/kg	1	NONE	-	< 1.0	-	-	-
Benzene	µg/kg	1	MCERTS	-	< 1.0	-	-	-
Tetrachloromethane	µg/kg	1	MCERTS	-	< 1.0	-	-	-
1,2-Dichloropropane	µg/kg	1	MCERTS	-	< 1.0	-	-	-
Trichloroethene	µg/kg	1	MCERTS	-	< 1.0	-	-	-
Dibromomethane	µg/kg	1	MCERTS	-	< 1.0	-	-	-
Bromodichloromethane	µg/kg	1	MCERTS	-	< 1.0	-	-	-
Cis-1,3-dichloropropene	µg/kg	1	ISO 17025	-	< 1.0	-	-	-
Trans-1,3-dichloropropene	µg/kg	1	ISO 17025	-	< 1.0	-	-	-
Toluene	µg/kg	1	MCERTS	-	< 1.0	-	-	-
1,1,2-Trichloroethane	µg/kg	1	MCERTS	-	< 1.0	-	-	-
1,3-Dichloropropane	µg/kg	1	ISO 17025	-	< 1.0	-	-	-
Dibromochloromethane	µg/kg	1	ISO 17025	-	< 1.0	-	-	-
Tetrachloroethene	µg/kg	1	NONE	-	< 1.0	-	-	-
1,2-Dibromoethane	µg/kg	1	ISO 17025	-	< 1.0	-	-	-
Chlorobenzene	µg/kg	1	MCERTS	-	< 1.0	-	-	-
1,1,1,2-Tetrachloroethane	µg/kg	1	MCERTS	-	< 1.0	-	-	-
Ethylbenzene	µg/kg	1	MCERTS	-	< 1.0	-	-	-
p & m-Xylene	µg/kg	1	MCERTS	-	< 1.0	-	-	-
Styrene	µg/kg	1	MCERTS	-	< 1.0	-	-	-
Tribromomethane	µg/kg	1	NONE	-	< 1.0	-	-	-
o-Xylene	µg/kg	1	MCERTS	-	< 1.0	-	-	-
1,1,2,2-Tetrachloroethane	µg/kg	1	MCERTS	-	< 1.0	-	-	-
Isopropylbenzene	µg/kg	1	MCERTS	-	< 1.0	-	-	-
Bromobenzene	µg/kg	1	MCERTS	-	< 1.0	-	-	-
n-Propylbenzene	µg/kg	1	ISO 17025	-	< 1.0	-	-	-
2-Chlorotoluene	µg/kg	1	MCERTS	-	< 1.0	-	-	-
4-Chlorotoluene	µg/kg	1	MCERTS	-	< 1.0	-	-	-
1,3,5-Trimethylbenzene	µg/kg	1	ISO 17025	-	< 1.0	-	-	-
tert-Butylbenzene	µg/kg	1	MCERTS	-	< 1.0	-	-	-
1,2,4-Trimethylbenzene	µg/kg	1	ISO 17025	-	< 1.0	-	-	-
sec-Butylbenzene	µg/kg	1	MCERTS	-	< 1.0	-	-	-
1,3-Dichlorobenzene	µg/kg	1	ISO 17025	-	< 1.0	-	-	-
p-Isopropyltoluene	µg/kg	1	ISO 17025	-	< 1.0	-	-	-
1,2-Dichlorobenzene	µg/kg	1	MCERTS	-	< 1.0	-	-	-
1,4-Dichlorobenzene	µg/kg	1	MCERTS	-	< 1.0	-	-	-
Butylbenzene	µg/kg	1	MCERTS	-	< 1.0	-	-	-
1,2-Dibromo-3-chloropropane	µg/kg	1	ISO 17025	-	< 1.0	-	-	-
1,2,4-Trichlorobenzene	µg/kg	1	MCERTS	-	< 1.0	-	-	-
Hexachlorobutadiene	µg/kg	1	MCERTS	-	< 1.0	-	-	-
1,2,3-Trichlorobenzene	µg/kg	1	ISO 17025	-	< 1.0	-	-	-

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Lab Sample Number				1450082	1450083	1450084	1450085	1450086
Sample Reference				BH03	BH03	BH03	BH02	BH02
Sample Number				ES1	ES2	ES3	ES1	ES2
Depth (m)				0.40-0.40	0.80-0.80	2.00-2.00	0.30-0.30	0.80-0.70
Date Sampled				20/02/2020	20/02/2020	20/02/2020	20/02/2020	20/02/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
SVOCs								
Aniline	mg/kg	0.1	NONE	-	< 0.1	-	-	-
Phenol	mg/kg	0.2	ISO 17025	-	< 0.2	-	-	-
2-Chlorophenol	mg/kg	0.1	MCERTS	-	< 0.1	-	-	-
Bis(2-chloroethyl)ether	mg/kg	0.2	MCERTS	-	< 0.2	-	-	-
1,3-Dichlorobenzene	mg/kg	0.2	MCERTS	-	< 0.2	-	-	-
1,2-Dichlorobenzene	mg/kg	0.1	MCERTS	-	< 0.1	-	-	-
1,4-Dichlorobenzene	mg/kg	0.2	MCERTS	-	< 0.2	-	-	-
Bis(2-chloroisopropyl)ether	mg/kg	0.1	MCERTS	-	< 0.1	-	-	-
2-Methylphenol	mg/kg	0.3	MCERTS	-	< 0.3	-	-	-
Hexachloroethane	mg/kg	0.05	MCERTS	-	< 0.05	-	-	-
Nitrobenzene	mg/kg	0.3	MCERTS	-	< 0.3	-	-	-
4-Methylphenol	mg/kg	0.2	NONE	-	< 0.2	-	-	-
Isophorone	mg/kg	0.2	MCERTS	-	< 0.2	-	-	-
2-Nitrophenol	mg/kg	0.3	MCERTS	-	< 0.3	-	-	-
2,4-Dimethylphenol	mg/kg	0.3	MCERTS	-	< 0.3	-	-	-
Bis(2-chloroethoxy)methane	mg/kg	0.3	MCERTS	-	< 0.3	-	-	-
1,2,4-Trichlorobenzene	mg/kg	0.3	MCERTS	-	< 0.3	-	-	-
Naphthalene	mg/kg	0.05	MCERTS	-	< 0.05	-	-	-
2,4-Dichlorophenol	mg/kg	0.3	MCERTS	-	< 0.3	-	-	-
4-Chloroaniline	mg/kg	0.1	NONE	-	< 0.1	-	-	-
Hexachlorobutadiene	mg/kg	0.1	MCERTS	-	< 0.1	-	-	-
4-Chloro-3-methylphenol	mg/kg	0.1	NONE	-	< 0.1	-	-	-
2,4,6-Trichlorophenol	mg/kg	0.1	MCERTS	-	< 0.1	-	-	-
2,4,5-Trichlorophenol	mg/kg	0.2	MCERTS	-	< 0.2	-	-	-
2-Methylnaphthalene	mg/kg	0.1	NONE	-	< 0.1	-	-	-
2-Chloronaphthalene	mg/kg	0.1	MCERTS	-	< 0.1	-	-	-
Dimethylphthalate	mg/kg	0.1	MCERTS	-	< 0.1	-	-	-
2,6-Dinitrotoluene	mg/kg	0.1	MCERTS	-	< 0.1	-	-	-
Acenaphthylene	mg/kg	0.05	MCERTS	-	< 0.05	-	-	-
Acenaphthene	mg/kg	0.05	MCERTS	-	< 0.05	-	-	-
2,4-Dinitrotoluene	mg/kg	0.2	MCERTS	-	< 0.2	-	-	-
Dibenzofuran	mg/kg	0.2	MCERTS	-	< 0.2	-	-	-
4-Chlorophenyl phenyl ether	mg/kg	0.3	ISO 17025	-	< 0.3	-	-	-
Diethyl phthalate	mg/kg	0.2	MCERTS	-	< 0.2	-	-	-
4-Nitroaniline	mg/kg	0.2	MCERTS	-	< 0.2	-	-	-
Fluorene	mg/kg	0.05	MCERTS	-	< 0.05	-	-	-
Azobenzene	mg/kg	0.3	MCERTS	-	< 0.3	-	-	-
Bromophenyl phenyl ether	mg/kg	0.2	MCERTS	-	< 0.2	-	-	-
Hexachlorobenzene	mg/kg	0.3	MCERTS	-	< 0.3	-	-	-
Phenanthrene	mg/kg	0.05	MCERTS	-	< 0.05	-	-	-
Anthracene	mg/kg	0.05	MCERTS	-	< 0.05	-	-	-
Carbazole	mg/kg	0.3	MCERTS	-	< 0.3	-	-	-
Dibutyl phthalate	mg/kg	0.2	MCERTS	-	< 0.2	-	-	-
Anthraquinone	mg/kg	0.3	MCERTS	-	< 0.3	-	-	-
Fluoranthene	mg/kg	0.05	MCERTS	-	< 0.05	-	-	-
Pyrene	mg/kg	0.05	MCERTS	-	< 0.05	-	-	-
Butyl benzyl phthalate	mg/kg	0.3	ISO 17025	-	< 0.3	-	-	-
Benzo(a)anthracene	mg/kg	0.05	MCERTS	-	< 0.05	-	-	-
Chrysene	mg/kg	0.05	MCERTS	-	< 0.05	-	-	-
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	-	< 0.05	-	-	-
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	-	< 0.05	-	-	-
Benzo(a)pyrene	mg/kg	0.05	MCERTS	-	< 0.05	-	-	-
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	-	< 0.05	-	-	-
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	-	< 0.05	-	-	-
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	-	< 0.05	-	-	-

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Lab Sample Number				1450087	1450088	1450089	1450090	1450091
Sample Reference				BH05	BH05	TP06	TP06	TP08
Sample Number				ES1	ES2	ES1	ES4	ES1
Depth (m)				0.40-0.40	0.70-0.70	0.30-0.30	1.10-1.10	0.40-0.40
Date Sampled				20/02/2020	20/02/2020	20/02/2020	20/02/2020	20/02/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Moisture Content	%	N/A	NONE	6.4	13	6.2	15	11
Total mass of sample received	kg	0.001	NONE	1.9	1.8	2.0	2.0	2.0
Asbestos in Soil	Type	N/A	ISO 17025	-	-	Not-detected	Not-detected	Not-detected
General Inorganics								
pH - Automated	pH Units	N/A	MCERTS	9.7	-	9.5	-	9.6
Electrical Conductivity	µS/cm	10	ISO 17025	350	220	-	-	550
Ammoniacal Nitrogen as N	mg/kg	0.5	MCERTS	1.4	-	1.2	13	4.2
Total Organic Carbon (TOC)	%	0.1	MCERTS	3.3	0.2	2.7	-	1.2
Redox Potential	mV	-800	NONE	92.20	190.10	-	-	94.90
Total Phenols								
Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Speciated PAHs								
Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	0.47	-	< 0.05
Acenaphthylene	mg/kg	0.05	MCERTS	0.27	< 0.05	0.74	-	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	0.25	< 0.05	4.1	-	0.40
Fluorene	mg/kg	0.05	MCERTS	0.22	< 0.05	4.1	-	0.43
Phenanthrene	mg/kg	0.05	MCERTS	1.7	< 0.05	37	-	3.1
Anthracene	mg/kg	0.05	MCERTS	0.75	< 0.05	7.3	-	1.1
Fluoranthene	mg/kg	0.05	MCERTS	3.9	< 0.05	48	-	6.7
Pyrene	mg/kg	0.05	MCERTS	4.2	< 0.05	41	-	7.2
Benzo(a)anthracene	mg/kg	0.05	MCERTS	2.4	< 0.05	22	-	4.2
Chrysene	mg/kg	0.05	MCERTS	2.5	< 0.05	14	-	2.8
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	5.3	< 0.05	21	-	4.3
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	1.6	< 0.05	6.3	-	1.6
Benzo(a)pyrene	mg/kg	0.05	MCERTS	4.9	< 0.05	16	-	3.5
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	2.5	< 0.05	7.5	-	1.6
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	0.78	< 0.05	2.3	-	0.55
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	3.1	< 0.05	7.9	-	1.9
Total PAH								
Speciated Total EPA-16 PAHs	mg/kg	0.8	MCERTS	34.3	< 0.80	240	-	39.2
Heavy Metals / Metalloids								
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	11	-	13	-	17
Boron (water soluble)	mg/kg	0.2	MCERTS	1.1	-	1.0	-	4.2
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2	-	< 0.2	-	< 0.2
Chromium (hexavalent)	mg/kg	4	MCERTS	< 4.0	-	< 4.0	-	< 4.0
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	25	-	27	-	29
Copper (aqua regia extractable)	mg/kg	1	MCERTS	14	-	25	-	18
Lead (aqua regia extractable)	mg/kg	1	MCERTS	11	-	41	-	30
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	-	< 0.3	-	< 0.3
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	14	-	18	-	19
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	-	< 1.0	-	< 1.0
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	38	-	74	-	110

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Project / Site name: Wisbech

Your Order No: 13053

Lab Sample Number				1450087	1450088	1450089	1450090	1450091
Sample Reference				BH05	BH05	TP06	TP06	TP08
Sample Number				ES1	ES2	ES1	ES4	ES1
Depth (m)				0.40-0.40	0.70-0.70	0.30-0.30	1.10-1.10	0.40-0.40
Date Sampled				20/02/2020	20/02/2020	20/02/2020	20/02/2020	20/02/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Monoaromatics & Oxygenates								
Benzene	µg/kg	1	MCERTS	-	< 1.0	-	-	< 1.0
Toluene	µg/kg	1	MCERTS	-	< 1.0	-	-	< 1.0
Ethylbenzene	µg/kg	1	MCERTS	-	< 1.0	-	-	< 1.0
p & m-xylene	µg/kg	1	MCERTS	-	< 1.0	-	-	< 1.0
o-xylene	µg/kg	1	MCERTS	-	< 1.0	-	-	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	-	< 1.0	-	-	< 1.0
Petroleum Hydrocarbons								
TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.001	MCERTS	-	< 0.001	-	-	< 0.001
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.001	MCERTS	-	< 0.001	-	-	< 0.001
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.001	MCERTS	-	< 0.001	-	-	< 0.001
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	-	< 1.0	-	-	1.7
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	-	< 2.0	-	-	8.9
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	-	< 8.0	-	-	30
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	-	< 8.0	-	-	180
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	-	< 10	-	-	220
TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.001	MCERTS	-	< 0.001	-	-	< 0.001
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.001	MCERTS	-	< 0.001	-	-	< 0.001
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.001	MCERTS	-	< 0.001	-	-	< 0.001
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	-	< 1.0	-	-	< 1.0
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	-	< 2.0	-	-	2.4
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	-	< 10	-	-	35
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	-	< 10	-	-	200
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	-	< 10	-	-	240

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Project / Site name: Wisbech

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Lab Sample Number				1450087	1450088	1450089	1450090	1450091
Sample Reference				BH05	BH05	TP06	TP06	TP08
Sample Number				ES1	ES2	ES1	ES4	ES1
Depth (m)				0.40-0.40	0.70-0.70	0.30-0.30	1.10-1.10	0.40-0.40
Date Sampled				20/02/2020	20/02/2020	20/02/2020	20/02/2020	20/02/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
VOCs								
Chloromethane	µg/kg	1	ISO 17025	-	< 1.0	-	-	< 1.0
Chloroethane	µg/kg	1	NONE	-	< 1.0	-	-	< 1.0
Bromomethane	µg/kg	1	ISO 17025	-	< 1.0	-	-	< 1.0
Vinyl Chloride	µg/kg	1	NONE	-	< 1.0	-	-	< 1.0
Trichlorofluoromethane	µg/kg	1	NONE	-	< 1.0	-	-	< 1.0
1,1-Dichloroethene	µg/kg	1	NONE	-	< 1.0	-	-	< 1.0
1,1,2-Trichloro 1,2,2-Trifluoroethane	µg/kg	1	ISO 17025	-	< 1.0	-	-	< 1.0
Cis-1,2-dichloroethene	µg/kg	1	MCERTS	-	< 1.0	-	-	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	-	< 1.0	-	-	< 1.0
1,1-Dichloroethane	µg/kg	1	MCERTS	-	< 1.0	-	-	< 1.0
2,2-Dichloropropane	µg/kg	1	MCERTS	-	< 1.0	-	-	< 1.0
Trichloromethane	µg/kg	1	MCERTS	-	< 1.0	-	-	< 1.0
1,1,1-Trichloroethane	µg/kg	1	MCERTS	-	< 1.0	-	-	< 1.0
1,2-Dichloroethane	µg/kg	1	MCERTS	-	< 1.0	-	-	< 1.0
1,1-Dichloropropene	µg/kg	1	MCERTS	-	< 1.0	-	-	< 1.0
Trans-1,2-dichloroethene	µg/kg	1	NONE	-	< 1.0	-	-	< 1.0
Benzene	µg/kg	1	MCERTS	-	< 1.0	-	-	< 1.0
Tetrachloromethane	µg/kg	1	MCERTS	-	< 1.0	-	-	< 1.0
1,2-Dichloropropane	µg/kg	1	MCERTS	-	< 1.0	-	-	< 1.0
Trichloroethene	µg/kg	1	MCERTS	-	< 1.0	-	-	< 1.0
Dibromomethane	µg/kg	1	MCERTS	-	< 1.0	-	-	< 1.0
Bromodichloromethane	µg/kg	1	MCERTS	-	< 1.0	-	-	< 1.0
Cis-1,3-dichloropropene	µg/kg	1	ISO 17025	-	< 1.0	-	-	< 1.0
Trans-1,3-dichloropropene	µg/kg	1	ISO 17025	-	< 1.0	-	-	< 1.0
Toluene	µg/kg	1	MCERTS	-	< 1.0	-	-	< 1.0
1,1,2-Trichloroethane	µg/kg	1	MCERTS	-	< 1.0	-	-	< 1.0
1,3-Dichloropropane	µg/kg	1	ISO 17025	-	< 1.0	-	-	< 1.0
Dibromochloromethane	µg/kg	1	ISO 17025	-	< 1.0	-	-	< 1.0
Tetrachloroethene	µg/kg	1	NONE	-	< 1.0	-	-	< 1.0
1,2-Dibromoethane	µg/kg	1	ISO 17025	-	< 1.0	-	-	< 1.0
Chlorobenzene	µg/kg	1	MCERTS	-	< 1.0	-	-	< 1.0
1,1,1,2-Tetrachloroethane	µg/kg	1	MCERTS	-	< 1.0	-	-	< 1.0
Ethylbenzene	µg/kg	1	MCERTS	-	< 1.0	-	-	< 1.0
p & m-Xylene	µg/kg	1	MCERTS	-	< 1.0	-	-	< 1.0
Styrene	µg/kg	1	MCERTS	-	< 1.0	-	-	< 1.0
Tribromomethane	µg/kg	1	NONE	-	< 1.0	-	-	< 1.0
o-Xylene	µg/kg	1	MCERTS	-	< 1.0	-	-	< 1.0
1,1,2,2-Tetrachloroethane	µg/kg	1	MCERTS	-	< 1.0	-	-	< 1.0
Isopropylbenzene	µg/kg	1	MCERTS	-	< 1.0	-	-	< 1.0
Bromobenzene	µg/kg	1	MCERTS	-	< 1.0	-	-	< 1.0
n-Propylbenzene	µg/kg	1	ISO 17025	-	< 1.0	-	-	< 1.0
2-Chlorotoluene	µg/kg	1	MCERTS	-	< 1.0	-	-	< 1.0
4-Chlorotoluene	µg/kg	1	MCERTS	-	< 1.0	-	-	< 1.0
1,3,5-Trimethylbenzene	µg/kg	1	ISO 17025	-	< 1.0	-	-	< 1.0
tert-Butylbenzene	µg/kg	1	MCERTS	-	< 1.0	-	-	< 1.0
1,2,4-Trimethylbenzene	µg/kg	1	ISO 17025	-	< 1.0	-	-	< 1.0
sec-Butylbenzene	µg/kg	1	MCERTS	-	< 1.0	-	-	< 1.0
1,3-Dichlorobenzene	µg/kg	1	ISO 17025	-	< 1.0	-	-	< 1.0
p-Isopropyltoluene	µg/kg	1	ISO 17025	-	< 1.0	-	-	< 1.0
1,2-Dichlorobenzene	µg/kg	1	MCERTS	-	< 1.0	-	-	< 1.0
1,4-Dichlorobenzene	µg/kg	1	MCERTS	-	< 1.0	-	-	< 1.0
Butylbenzene	µg/kg	1	MCERTS	-	< 1.0	-	-	< 1.0
1,2-Dibromo-3-chloropropane	µg/kg	1	ISO 17025	-	< 1.0	-	-	< 1.0
1,2,4-Trichlorobenzene	µg/kg	1	MCERTS	-	< 1.0	-	-	< 1.0
Hexachlorobutadiene	µg/kg	1	MCERTS	-	< 1.0	-	-	< 1.0
1,2,3-Trichlorobenzene	µg/kg	1	ISO 17025	-	< 1.0	-	-	< 1.0

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Project / Site name: Wisbech

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Lab Sample Number				1450087	1450088	1450089	1450090	1450091
Sample Reference				BH05	BH05	TP06	TP06	TP08
Sample Number				ES1	ES2	ES1	ES4	ES1
Depth (m)				0.40-0.40	0.70-0.70	0.30-0.30	1.10-1.10	0.40-0.40
Date Sampled				20/02/2020	20/02/2020	20/02/2020	20/02/2020	20/02/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
SVOCs								
Aniline	mg/kg	0.1	NONE	-	< 0.1	-	-	< 0.1
Phenol	mg/kg	0.2	ISO 17025	-	< 0.2	-	-	< 0.2
2-Chlorophenol	mg/kg	0.1	MCERTS	-	< 0.1	-	-	< 0.1
Bis(2-chloroethyl)ether	mg/kg	0.2	MCERTS	-	< 0.2	-	-	< 0.2
1,3-Dichlorobenzene	mg/kg	0.2	MCERTS	-	< 0.2	-	-	< 0.2
1,2-Dichlorobenzene	mg/kg	0.1	MCERTS	-	< 0.1	-	-	< 0.1
1,4-Dichlorobenzene	mg/kg	0.2	MCERTS	-	< 0.2	-	-	< 0.2
Bis(2-chloroisopropyl)ether	mg/kg	0.1	MCERTS	-	< 0.1	-	-	< 0.1
2-Methylphenol	mg/kg	0.3	MCERTS	-	< 0.3	-	-	< 0.3
Hexachloroethane	mg/kg	0.05	MCERTS	-	< 0.05	-	-	< 0.05
Nitrobenzene	mg/kg	0.3	MCERTS	-	< 0.3	-	-	< 0.3
4-Methylphenol	mg/kg	0.2	NONE	-	< 0.2	-	-	< 0.2
Isophorone	mg/kg	0.2	MCERTS	-	< 0.2	-	-	< 0.2
2-Nitrophenol	mg/kg	0.3	MCERTS	-	< 0.3	-	-	< 0.3
2,4-Dimethylphenol	mg/kg	0.3	MCERTS	-	< 0.3	-	-	< 0.3
Bis(2-chloroethoxy)methane	mg/kg	0.3	MCERTS	-	< 0.3	-	-	< 0.3
1,2,4-Trichlorobenzene	mg/kg	0.3	MCERTS	-	< 0.3	-	-	< 0.3
Naphthalene	mg/kg	0.05	MCERTS	-	< 0.05	-	-	< 0.05
2,4-Dichlorophenol	mg/kg	0.3	MCERTS	-	< 0.3	-	-	< 0.3
4-Chloroaniline	mg/kg	0.1	NONE	-	< 0.1	-	-	< 0.1
Hexachlorobutadiene	mg/kg	0.1	MCERTS	-	< 0.1	-	-	< 0.1
4-Chloro-3-methylphenol	mg/kg	0.1	NONE	-	< 0.1	-	-	< 0.1
2,4,6-Trichlorophenol	mg/kg	0.1	MCERTS	-	< 0.1	-	-	< 0.1
2,4,5-Trichlorophenol	mg/kg	0.2	MCERTS	-	< 0.2	-	-	< 0.2
2-Methylnaphthalene	mg/kg	0.1	NONE	-	< 0.1	-	-	< 0.1
2-Chloronaphthalene	mg/kg	0.1	MCERTS	-	< 0.1	-	-	< 0.1
Dimethylphthalate	mg/kg	0.1	MCERTS	-	< 0.1	-	-	< 0.1
2,6-Dinitrotoluene	mg/kg	0.1	MCERTS	-	< 0.1	-	-	< 0.1
Acenaphthylene	mg/kg	0.05	MCERTS	-	< 0.05	-	-	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	-	< 0.05	-	-	0.40
2,4-Dinitrotoluene	mg/kg	0.2	MCERTS	-	< 0.2	-	-	< 0.2
Dibenzofuran	mg/kg	0.2	MCERTS	-	< 0.2	-	-	< 0.2
4-Chlorophenyl phenyl ether	mg/kg	0.3	ISO 17025	-	< 0.3	-	-	< 0.3
Diethyl phthalate	mg/kg	0.2	MCERTS	-	< 0.2	-	-	< 0.2
4-Nitroaniline	mg/kg	0.2	MCERTS	-	< 0.2	-	-	< 0.2
Fluorene	mg/kg	0.05	MCERTS	-	< 0.05	-	-	0.43
Azobenzene	mg/kg	0.3	MCERTS	-	< 0.3	-	-	< 0.3
Bromophenyl phenyl ether	mg/kg	0.2	MCERTS	-	< 0.2	-	-	< 0.2
Hexachlorobenzene	mg/kg	0.3	MCERTS	-	< 0.3	-	-	< 0.3
Phenanthrene	mg/kg	0.05	MCERTS	-	< 0.05	-	-	3.1
Anthracene	mg/kg	0.05	MCERTS	-	< 0.05	-	-	1.1
Carbazole	mg/kg	0.3	MCERTS	-	< 0.3	-	-	< 0.3
Dibutyl phthalate	mg/kg	0.2	MCERTS	-	< 0.2	-	-	< 0.2
Anthraquinone	mg/kg	0.3	MCERTS	-	< 0.3	-	-	< 0.3
Fluoranthene	mg/kg	0.05	MCERTS	-	< 0.05	-	-	6.7
Pyrene	mg/kg	0.05	MCERTS	-	< 0.05	-	-	7.2
Butyl benzyl phthalate	mg/kg	0.3	ISO 17025	-	< 0.3	-	-	< 0.3
Benzo(a)anthracene	mg/kg	0.05	MCERTS	-	< 0.05	-	-	4.2
Chrysene	mg/kg	0.05	MCERTS	-	< 0.05	-	-	2.8
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	-	< 0.05	-	-	4.3
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	-	< 0.05	-	-	1.6
Benzo(a)pyrene	mg/kg	0.05	MCERTS	-	< 0.05	-	-	3.5
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	-	< 0.05	-	-	1.6
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	-	< 0.05	-	-	0.55
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	-	< 0.05	-	-	1.9

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Project / Site name: Wisbech

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Lab Sample Number				1450092				
Sample Reference				TP08				
Sample Number				ES6				
Depth (m)				1.00-1.00				
Date Sampled				20/02/2020				
Time Taken				None Supplied				
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Stone Content	%	0.1	NONE	< 0.1				
Moisture Content	%	N/A	NONE	19				
Total mass of sample received	kg	0.001	NONE	2.0				
Asbestos in Soil	Type	N/A	ISO 17025	-				
General Inorganics								
pH - Automated	pH Units	N/A	MCERTS	8.0				
Electrical Conductivity	µS/cm	10	ISO 17025	-				
Ammoniacal Nitrogen as N	mg/kg	0.5	MCERTS	39				
Total Organic Carbon (TOC)	%	0.1	MCERTS	1.6				
Redox Potential	mV	-800	NONE	-				
Total Phenols								
Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0				
Speciated PAHs								
Naphthalene	mg/kg	0.05	MCERTS	< 0.05				
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05				
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05				
Fluorene	mg/kg	0.05	MCERTS	< 0.05				
Phenanthrene	mg/kg	0.05	MCERTS	0.24				
Anthracene	mg/kg	0.05	MCERTS	< 0.05				
Fluoranthene	mg/kg	0.05	MCERTS	0.38				
Pyrene	mg/kg	0.05	MCERTS	0.37				
Benzo(a)anthracene	mg/kg	0.05	MCERTS	0.23				
Chrysene	mg/kg	0.05	MCERTS	0.16				
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	0.22				
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	0.09				
Benzo(a)pyrene	mg/kg	0.05	MCERTS	< 0.05				
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	< 0.05				
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	< 0.05				
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05				
Total PAH								
Speciated Total EPA-16 PAHs	mg/kg	0.8	MCERTS	1.69				
Heavy Metals / Metalloids								
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	18				
Boron (water soluble)	mg/kg	0.2	MCERTS	1.0				
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2				
Chromium (hexavalent)	mg/kg	4	MCERTS	< 4.0				
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	37				
Copper (aqua regia extractable)	mg/kg	1	MCERTS	17				
Lead (aqua regia extractable)	mg/kg	1	MCERTS	27				
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3				
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	30				
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0				
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	72				

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Project / Site name: Wisbech
Your Order No: 13053

Lab Sample Number				1450092				
Sample Reference				TP08				
Sample Number				ES6				
Depth (m)				1.00-1.00				
Date Sampled				20/02/2020				
Time Taken				None Supplied				
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Monoaromatics & Oxygenates								
Benzene	µg/kg	1	MCERTS	-				
Toluene	µg/kg	1	MCERTS	-				
Ethylbenzene	µg/kg	1	MCERTS	-				
p & m-xylene	µg/kg	1	MCERTS	-				
o-xylene	µg/kg	1	MCERTS	-				
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	-				
Petroleum Hydrocarbons								
TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.001	MCERTS	-				
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.001	MCERTS	-				
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.001	MCERTS	-				
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	-				
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	-				
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	-				
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	-				
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	-				
TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.001	MCERTS	-				
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.001	MCERTS	-				
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.001	MCERTS	-				
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	-				
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	-				
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	-				
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	-				
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	-				

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Project / Site name: Wisbech

Your Order No: 13053

Lab Sample Number				1450092				
Sample Reference				TP08				
Sample Number				ES6				
Depth (m)				1.00-1.00				
Date Sampled				20/02/2020				
Time Taken				None Supplied				
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
VOCs								
Chloromethane	µg/kg	1	ISO 17025	-				
Chloroethane	µg/kg	1	NONE	-				
Bromomethane	µg/kg	1	ISO 17025	-				
Vinyl Chloride	µg/kg	1	NONE	-				
Trichlorofluoromethane	µg/kg	1	NONE	-				
1,1-Dichloroethene	µg/kg	1	NONE	-				
1,1,2-Trichloro 1,2,2-Trifluoroethane	µg/kg	1	ISO 17025	-				
Cis-1,2-dichloroethene	µg/kg	1	MCERTS	-				
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	-				
1,1-Dichloroethane	µg/kg	1	MCERTS	-				
2,2-Dichloropropane	µg/kg	1	MCERTS	-				
Trichloromethane	µg/kg	1	MCERTS	-				
1,1,1-Trichloroethane	µg/kg	1	MCERTS	-				
1,2-Dichloroethane	µg/kg	1	MCERTS	-				
1,1-Dichloropropene	µg/kg	1	MCERTS	-				
Trans-1,2-dichloroethene	µg/kg	1	NONE	-				
Benzene	µg/kg	1	MCERTS	-				
Tetrachloromethane	µg/kg	1	MCERTS	-				
1,2-Dichloropropane	µg/kg	1	MCERTS	-				
Trichloroethene	µg/kg	1	MCERTS	-				
Dibromomethane	µg/kg	1	MCERTS	-				
Bromodichloromethane	µg/kg	1	MCERTS	-				
Cis-1,3-dichloropropene	µg/kg	1	ISO 17025	-				
Trans-1,3-dichloropropene	µg/kg	1	ISO 17025	-				
Toluene	µg/kg	1	MCERTS	-				
1,1,2-Trichloroethane	µg/kg	1	MCERTS	-				
1,3-Dichloropropane	µg/kg	1	ISO 17025	-				
Dibromochloromethane	µg/kg	1	ISO 17025	-				
Tetrachloroethene	µg/kg	1	NONE	-				
1,2-Dibromoethane	µg/kg	1	ISO 17025	-				
Chlorobenzene	µg/kg	1	MCERTS	-				
1,1,1,2-Tetrachloroethane	µg/kg	1	MCERTS	-				
Ethylbenzene	µg/kg	1	MCERTS	-				
p & m-Xylene	µg/kg	1	MCERTS	-				
Styrene	µg/kg	1	MCERTS	-				
Tribromomethane	µg/kg	1	NONE	-				
o-Xylene	µg/kg	1	MCERTS	-				
1,1,2,2-Tetrachloroethane	µg/kg	1	MCERTS	-				
Isopropylbenzene	µg/kg	1	MCERTS	-				
Bromobenzene	µg/kg	1	MCERTS	-				
n-Propylbenzene	µg/kg	1	ISO 17025	-				
2-Chlorotoluene	µg/kg	1	MCERTS	-				
4-Chlorotoluene	µg/kg	1	MCERTS	-				
1,3,5-Trimethylbenzene	µg/kg	1	ISO 17025	-				
tert-Butylbenzene	µg/kg	1	MCERTS	-				
1,2,4-Trimethylbenzene	µg/kg	1	ISO 17025	-				
sec-Butylbenzene	µg/kg	1	MCERTS	-				
1,3-Dichlorobenzene	µg/kg	1	ISO 17025	-				
p-Isopropyltoluene	µg/kg	1	ISO 17025	-				
1,2-Dichlorobenzene	µg/kg	1	MCERTS	-				
1,4-Dichlorobenzene	µg/kg	1	MCERTS	-				
Butylbenzene	µg/kg	1	MCERTS	-				
1,2-Dibromo-3-chloropropane	µg/kg	1	ISO 17025	-				
1,2,4-Trichlorobenzene	µg/kg	1	MCERTS	-				
Hexachlorobutadiene	µg/kg	1	MCERTS	-				
1,2,3-Trichlorobenzene	µg/kg	1	ISO 17025	-				

Analytical Report Number: 20-88359

Project / Site name: Wisbech

Your Order No: 13053

Lab Sample Number				1450092				
Sample Reference				TP08				
Sample Number				ES6				
Depth (m)				1.00-1.00				
Date Sampled				20/02/2020				
Time Taken				None Supplied				
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
SVOCs								
Aniline	mg/kg	0.1	NONE	-				
Phenol	mg/kg	0.2	ISO 17025	-				
2-Chlorophenol	mg/kg	0.1	MCERTS	-				
Bis(2-chloroethyl)ether	mg/kg	0.2	MCERTS	-				
1,3-Dichlorobenzene	mg/kg	0.2	MCERTS	-				
1,2-Dichlorobenzene	mg/kg	0.1	MCERTS	-				
1,4-Dichlorobenzene	mg/kg	0.2	MCERTS	-				
Bis(2-chloroisopropyl)ether	mg/kg	0.1	MCERTS	-				
2-Methylphenol	mg/kg	0.3	MCERTS	-				
Hexachloroethane	mg/kg	0.05	MCERTS	-				
Nitrobenzene	mg/kg	0.3	MCERTS	-				
4-Methylphenol	mg/kg	0.2	NONE	-				
Isophorone	mg/kg	0.2	MCERTS	-				
2-Nitrophenol	mg/kg	0.3	MCERTS	-				
2,4-Dimethylphenol	mg/kg	0.3	MCERTS	-				
Bis(2-chloroethoxy)methane	mg/kg	0.3	MCERTS	-				
1,2,4-Trichlorobenzene	mg/kg	0.3	MCERTS	-				
Naphthalene	mg/kg	0.05	MCERTS	-				
2,4-Dichlorophenol	mg/kg	0.3	MCERTS	-				
4-Chloroaniline	mg/kg	0.1	NONE	-				
Hexachlorobutadiene	mg/kg	0.1	MCERTS	-				
4-Chloro-3-methylphenol	mg/kg	0.1	NONE	-				
2,4,6-Trichlorophenol	mg/kg	0.1	MCERTS	-				
2,4,5-Trichlorophenol	mg/kg	0.2	MCERTS	-				
2-Methylnaphthalene	mg/kg	0.1	NONE	-				
2-Chloronaphthalene	mg/kg	0.1	MCERTS	-				
Dimethylphthalate	mg/kg	0.1	MCERTS	-				
2,6-Dinitrotoluene	mg/kg	0.1	MCERTS	-				
Acenaphthylene	mg/kg	0.05	MCERTS	-				
Acenaphthene	mg/kg	0.05	MCERTS	-				
2,4-Dinitrotoluene	mg/kg	0.2	MCERTS	-				
Dibenzofuran	mg/kg	0.2	MCERTS	-				
4-Chlorophenyl phenyl ether	mg/kg	0.3	ISO 17025	-				
Diethyl phthalate	mg/kg	0.2	MCERTS	-				
4-Nitroaniline	mg/kg	0.2	MCERTS	-				
Fluorene	mg/kg	0.05	MCERTS	-				
Azobenzene	mg/kg	0.3	MCERTS	-				
Bromophenyl phenyl ether	mg/kg	0.2	MCERTS	-				
Hexachlorobenzene	mg/kg	0.3	MCERTS	-				
Phenanthrene	mg/kg	0.05	MCERTS	-				
Anthracene	mg/kg	0.05	MCERTS	-				
Carbazole	mg/kg	0.3	MCERTS	-				
Dibutyl phthalate	mg/kg	0.2	MCERTS	-				
Anthraquinone	mg/kg	0.3	MCERTS	-				
Fluoranthene	mg/kg	0.05	MCERTS	-				
Pyrene	mg/kg	0.05	MCERTS	-				
Butyl benzyl phthalate	mg/kg	0.3	ISO 17025	-				
Benzo(a)anthracene	mg/kg	0.05	MCERTS	-				
Chrysene	mg/kg	0.05	MCERTS	-				
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	-				
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	-				
Benzo(a)pyrene	mg/kg	0.05	MCERTS	-				
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	-				
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	-				
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	-				

Analytical Report Number : 20-88359

Project / Site name: Wisbech

* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and loam (MCERTS) soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
1450082	BH03	ES1	0.40-0.40	Light brown sandy gravel.
1450083	BH03	ES2	0.80-0.80	Brown clay and sand.
1450084	BH03	ES3	2.00-2.00	Brown clay and sand.
1450085	BH02	ES1	0.30-0.30	Brown sandy loam with gravel.
1450086	BH02	ES2	0.80-0.70	Brown sandy clay.
1450087	BH05	ES1	0.40-0.40	Brown loam and clay with gravel.
1450088	BH05	ES2	0.70-0.70	Light brown loam and clay with gravel.
1450089	TP06	ES1	0.30-0.30	Light brown loam and clay with gravel.
1450090	TP06	ES4	1.10-1.10	Brown sandy clay with gravel.
1450091	TP08	ES1	0.40-0.40	Brown loam and clay with gravel and vegetation.
1450092	TP08	ES6	1.00-1.00	Brown clay and sand with vegetation.

Analytical Report Number : 20-88359

Project / Site name: Wisbech

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Water (PrW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Ammoniacal Nitrogen as N in soil	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the discrete analyser (colorimetric) salicylate/nitroprusside method,10:1 water extraction.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	MCERTS
Asbestos identification in soil	Asbestos Identification with the use of polarised light microscopy in conjunction with disperion staining techniques.	In house method based on HSG 248	A001-PL	D	ISO 17025
Boron, water soluble, in soil	Determination of water soluble boron in soil by hot water extract followed by ICP-OES.	In-house method based on Second Site Properties version 3	L038-PL	D	MCERTS
BTEX and MTBE in soil (Monoaromatics)	Determination of BTEX in soil by headspace GC-MS.	In-house method based on USEPA8260	L073B-PL	W	MCERTS
Electrical conductivity of soil	Determination of electrical conductivity in soil by electrometric measurement.	In-house method	L031-PL	W	ISO 17025
Hexavalent chromium in soil	Determination of hexavalent chromium in soil by extraction in water then by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.	In-house method	L080-PL	W	MCERTS
Metals in soil by ICP-OES	Determination of metals in soil by aqua-regia digestion followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L038-PL	D	MCERTS
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	W	NONE
Monohydric phenols in soil	Determination of phenols in soil by extraction with sodium hydroxide followed by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)	L080-PL	W	MCERTS
pH in soil (automated)	Determination of pH in soil by addition of water followed by automated electrometric measurement.	In house method.	L099-PL	D	MCERTS
Redox Potential of soil	Determination of redox potential in soil by electrometric measurement.	In house method.	L084-PL	W	NONE
Semi-volatile organic compounds in soil	Determination of semi-volatile organic compounds in soil by extraction in dichloromethane and hexane followed by GC-MS.	In-house method based on USEPA 8270	L064-PL	D	MCERTS
Speciated EPA-16 PAHs in soil	Determination of PAH compounds in soil by extraction in dichloromethane and hexane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270	L064-PL	D	MCERTS
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
Total organic carbon (Automated) in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	In house method.	L009-PL	D	MCERTS
TPHCWG (Soil)	Determination of hexane extractable hydrocarbons in soil by GC-MS/GC-FID.	In-house method with silica gel split/clean up.	L088/76-PL	W	MCERTS
Volatile organic compounds in soil	Determination of volatile organic compounds in soil by headspace GC-MS.	In-house method based on USEPA8260	L073B-PL	W	MCERTS

Analytical Report Number : 20-88359

Project / Site name: Wisbech

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Water (PrW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.
For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.
Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.

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Business Park,
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WD18 8YS

e: [redacted]

Analytical Report Number : 20-88361

Project / Site name:	Wisbech	**Samples received on:**	20/02/2020
Your job number:	41310	**Samples instructed on:**	21/02/2020
Your order number:	324139	**Analysis completed by:**	03/03/2020
Report Issue Number:	1	**Report issued on:**	03/03/2020
Samples Analysed:	3 10:1 WAC samples		

Signed: [redacted]

Rachel Bradley

Deputy Quality Manager
For & on behalf of i2 Analytical Ltd.

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils	- 4 weeks from reporting
leachates	- 2 weeks from reporting
waters	- 2 weeks from reporting
asbestos	- 6 months from reporting

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Any assessments of compliance with specifications are based on actual analytical results with no contribution from uncertainty of measurement. Application of uncertainty of measurement would provide a range within which the true result lies. An estimate of measurement uncertainty can be provided on request.

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Waste Acceptance Criteria Analytical Results

Report No:	**20-88361**						
					Client:	**WOODPLC**	
Location	**Wisbech**						
Lab Reference (Sample Number)	1450103 / 1450104				**Landfill Waste Acceptance Criteria Limits**		
Sampling Date	20/02/2020				Inert Waste Landfill	Stable Non-reactive HAZARDOUS waste in non-hazardous Landfill	Hazardous Waste Landfill
Sample ID	TP06 ES1						
Depth (m)	0.30-0.30						
Solid Waste Analysis							
TOC (%)**	3.1				3%	5%	6%
Loss on Ignition (%) **	5.4				--	--	10%
BTEX (µg/kg) **	< 10				6000	--	--
Sum of PCBs (mg/kg) **	< 0.007				1	--	--
Mineral Oil (mg/kg)	1000				500	--	--
Total PAH (WAC-17) (mg/kg)	310				100	--	--
pH (units)**	8.8				--	>6	--
Acid Neutralisation Capacity (mol / kg)	39				--	To be evaluated	To be evaluated
Eluate Analysis (BS EN 12457 - 2 preparation utilising end over end leaching procedure)	10:1 mg/l			10:1 mg/kg	Limit values for compliance leaching test using BS EN 12457-2 at L/S 10 l/kg (mg/kg)		
Arsenic *	0.0082			0.0743	0.5	2	25
Barium *	0.0149			0.135	20	100	300
Cadmium *	< 0.0001			< 0.0008	0.04	1	5
Chromium *	0.0040			0.037	0.5	10	70
Copper *	0.010			0.092	2	50	100
Mercury *	< 0.0005			< 0.0050	0.01	0.2	2
Molybdenum *	0.0007			0.0061	0.5	10	30
Nickel *	0.0023			0.021	0.4	10	40
Lead *	0.013			0.12	0.5	10	50
Antimony *	0.0056			0.051	0.06	0.7	5
Selenium *	< 0.0040			< 0.040	0.1	0.5	7
Zinc *	0.0088			0.080	4	50	200
Chloride *	3.7			34	800	15000	25000
Fluoride	0.50			4.6	10	150	500
Sulphate *	18			170	1000	20000	50000
TDS*	77			700	4000	60000	100000
Phenol Index (Monohydric Phenols) *	< 0.010			< 0.10	1	-	-
DOC	6.48			59.0	500	800	1000
Leach Test Information							
Stone Content (%)	< 0.1						
Sample Mass (kg)	2.0						
Dry Matter (%)	94						
Moisture (%)	6.2						

Results are expressed on a dry weight basis, after correction for moisture content where applicable.
*= UKAS accredited (liquid eluate analysis only)
Stated limits are for guidance only and i2 cannot be held responsible for any discrepancies with current legislation
** = MCERTS accredited

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes as defined by the Waste (England and Wales) Regulations 2011 (as amended) and EA Guidance WM3.
This analysis is only applicable for landfill acceptance criteria (The Environmental Permitting (England and Wales) Regulations) and does not give any indication as to whether a waste may be hazardous or non-hazardous.

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Watford, WD18 8YS

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Waste Acceptance Criteria Analytical Results

Report No:	**20-88361**						
					Client:	**WOODPLC**	
Location	**Wisbech**						
Lab Reference (Sample Number)	1450105 / 1450106				**Landfill Waste Acceptance Criteria Limits**		
Sampling Date	20/02/2020				Inert Waste Landfill	Stable Non-reactive HAZARDOUS waste in non-hazardous Landfill	Hazardous Waste Landfill
Sample ID	TP08 ES1						
Depth (m)	0.40-0.40						
Solid Waste Analysis							
TOC (%)**	1.3				3%	5%	6%
Loss on Ignition (%) **	3.7				--	--	10%
BTEX (µg/kg) **	< 10				6000	--	--
Sum of PCBs (mg/kg) **	< 0.007				1	--	--
Mineral Oil (mg/kg)	330				500	--	--
Total PAH (WAC-17) (mg/kg)	52				100	--	--
pH (units)**	9.1				--	>6	--
Acid Neutralisation Capacity (mol / kg)	18				--	To be evaluated	To be evaluated
Eluate Analysis (BS EN 12457 - 2 preparation utilising end over end leaching procedure)	10:1 mg/l			10:1 mg/kg	Limit values for compliance leaching test using BS EN 12457-2 at L/S 10 l/kg (mg/kg)		
Arsenic *	< 0.0011			< 0.0110	0.5	2	25
Barium *	0.0147			0.131	20	100	300
Cadmium *	< 0.0001			< 0.0008	0.04	1	5
Chromium *	0.0028			0.025	0.5	10	70
Copper *	0.0094			0.084	2	50	100
Mercury *	< 0.0005			< 0.0050	0.01	0.2	2
Molybdenum *	0.0031			0.0280	0.5	10	30
Nickel *	0.0012			0.011	0.4	10	40
Lead *	0.0038			0.034	0.5	10	50
Antimony *	< 0.0017			< 0.017	0.06	0.7	5
Selenium *	< 0.0040			< 0.040	0.1	0.5	7
Zinc *	0.0044			0.039	4	50	200
Chloride *	4.5			40	800	4000	25000
Fluoride	0.50			4.4	10	150	500
Sulphate *	78			700	1000	20000	50000
TDS*	160			1400	4000	60000	100000
Phenol Index (Monhydric Phenols) *	< 0.010			< 0.10	1	-	-
DOC	8.34			74.3	500	800	1000
Leach Test Information							
Stone Content (%)	< 0.1						
Sample Mass (kg)	2.0						
Dry Matter (%)	89						
Moisture (%)	11						

Results are expressed on a dry weight basis, after correction for moisture content where applicable.
*= UKAS accredited (liquid eluate analysis only)
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** = MCERTS accrediited

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes as defined by the Waste (England and Wales) Regulations 2011 (as amended) and EA Guidance WM3.
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Waste Acceptance Criteria Analytical Results

Report No:	**20-88361**						
					Client:	**WOODPLC**	
Location	**Wisbech**						
Lab Reference (Sample Number)	1450107 / 1450108				**Landfill Waste Acceptance Criteria Limits**		
Sampling Date	20/02/2020				Inert Waste Landfill	Stable Non-reactive HAZARDOUS waste in non-hazardous Landfill	Hazardous Waste Landfill
Sample ID	TP08 ES6						
Depth (m)	1.00-1.00						
Solid Waste Analysis							
TOC (%)**	1.7				3%	5%	6%
Loss on Ignition (%) **	4.8				--	--	10%
BTEX (µg/kg) **	< 10				6000	--	--
Sum of PCBs (mg/kg) **	< 0.007				1	--	--
Mineral Oil (mg/kg)	< 10				500	--	--
Total PAH (WAC-17) (mg/kg)	1.2				100	--	--
pH (units)**	8.3				--	>6	--
Acid Neutralisation Capacity (mol / kg)	8.7				--	To be evaluated	To be evaluated
Eluate Analysis (BS EN 12457 - 2 preparation utilising end over end leaching procedure)	10:1 mg/l			10:1 mg/kg	Limit values for compliance leaching test using BS EN 12457-2 at L/S 10 l/kg (mg/kg)		
Arsenic *	< 0.0011			< 0.0110	0.5	2	25
Barium *	0.0432			0.368	20	100	300
Cadmium *	< 0.0001			< 0.0008	0.04	1	5
Chromium *	0.0014			0.012	0.5	10	70
Copper *	0.0066			0.056	2	50	100
Mercury *	< 0.0005			< 0.0050	0.01	0.2	2
Molybdenum *	0.0088			0.0753	0.5	10	30
Nickel *	0.0035			0.029	0.4	10	40
Lead *	0.0019			0.016	0.5	10	50
Antimony *	< 0.0017			< 0.017	0.06	0.7	5
Selenium *	< 0.0040			< 0.040	0.1	0.5	7
Zinc *	0.0034			0.029	4	50	200
Chloride *	5.8			49	800	4000	25000
Fluoride	1.2			11	10	150	500
Sulphate *	7.0			59	1000	20000	50000
TDS*	140			1200	4000	60000	100000
Phenol Index (Monhydric Phenols) *	< 0.010			< 0.10	1	-	-
DOC	18.6			159	500	800	1000
Leach Test Information							
Stone Content (%)	< 0.1						
Sample Mass (kg)	2.0						
Dry Matter (%)	81						
Moisture (%)	19						

Results are expressed on a dry weight basis, after correction for moisture content where applicable.
*= UKAS accredited (liquid eluate analysis only)
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** = MCERTS accrediited

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes as defined by the Waste (England and Wales) Regulations 2011 (as amended) and EA Guidance WM3.
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Analytical Report Number : 20-88361

Project / Site name: Wisbech

* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and loam (MCERTS) soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
1450103	TP06	ES1	0.30-0.30	Light brown loam and clay with gravel.
1450105	TP08	ES1	0.40-0.40	Brown loam and clay with gravel and vegetation.
1450107	TP08	ES6	1.00-1.00	Brown clay and sand with vegetation.

Analytical Report Number : 20-88361

Project / Site name: Wisbech

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Water (PrW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Acid neutralisation capacity of soil	Determination of acid neutralisation capacity by addition of acid or alkali followed by electronic probe.	In-house method based on Guidance an Sampling and Testing of Wastes to Meet Landfill Waste Acceptance""	L046-PL	W	NONE
BS EN 12457-2 (10:1) Leachate Prep	10:1 (as recieved, moisture adjusted) end over end extraction with water for 24 hours. Eluate filtered prior to analysis.	In-house method based on BSEN12457-2.	L043-PL	W	NONE
BTEX in soil (Monoaromatics)	Determination of BTEX in soil by headspace GC-MS.	In-house method based on USEPA8260	L073B-PL	W	MCERTS
Chloride 10:1 WAC	Determination of Chloride colorimetrically by discrete analyser.	In house based on MEWAM Method ISBN 0117516260.	L082-PL	W	ISO 17025
Dissolved organic carbon 10:1 WAC	Determination of dissolved inorganic carbon in leachate by TOC/DOC NDIR Analyser.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L037-PL	W	NONE
Fluoride 10:1 WAC	Determination of fluoride in leachate by 1:1ratio with a buffer solution followed by Ion Selective Electrode.	In-house method based on Use of Total Ionic Strength Adjustment Buffer for Electrode Determination"	L033B-PL	W	ISO 17025
Loss on ignition of soil @ 450oC	Determination of loss on ignition in soil by gravimetrically with the sample being ignited in a muffle furnace.	In house method.	L047-PL	D	MCERTS
Metals in leachate by ICP-OES	Determination of metals in leachate by acidification followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil""	L039-PL	W	ISO 17025
Mineral Oil (Soil) C10 - C40	Determination of mineral oil fraction extractable hydrocarbons in soil by GC-MS/GC-FID.	In-house method with silica gel split/clean up.	L076-PL	D	NONE
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	W	NONE
Monohydric phenols 10:1 WAC	Determination of phenols in leachate by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L080-PL	W	ISO 17025
PCB's By GC-MS in soil	Determination of PCB by extraction with acetone and hexane followed by GC-MS.	In-house method based on USEPA 8082	L027-PL	D	MCERTS
pH at 20oC in soil	Determination of pH in soil by addition of water followed by electrometric measurement.	In house method.	L005-PL	W	MCERTS
Speciated WAC-17 PAHs in soil	Determination of PAH compounds in soil by extraction in dichloromethane and hexane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270. MCERTS accredited except Coronene.	L064-PL	D	NONE
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
Sulphate 10:1 WAC	Determination of sulphate in leachate by ICP-OES	In-house method based on MEWAM 1986 Methods for the Determination of Metals in Soil""	L039-PL	W	ISO 17025
Total dissolved solids 10:1 WAC	Determination of total dissolved solids in water by electrometric measurement.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L004-PL	W	ISO 17025

Analytical Report Number : 20-88361

Project / Site name: Wisbech

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Water (PrW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Total organic carbon (Automated) in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	In house method.	L009-PL	D	MCERTS

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.
For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.
Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.

Becky Whiteley
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Analytical Report Number : 20-88931

Project / Site name:	Wisbecit	**Samples received on:**	26/02/2020
Your job number:	41310	**Samples instructed on:**	26/02/2020
Your order number:	324139	**Analysis completed by:**	04/03/2020
Report Issue Number:	1	**Report issued on:**	04/03/2020
Samples Analysed:	2 soil samples		

Signed: [redacted]

Agnieszka Czerwińska

Technical Reviewer (Reporting Team)
For & on behalf of i2 Analytical Ltd.

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils	- 4 weeks from reporting
leachates	- 2 weeks from reporting
waters	- 2 weeks from reporting
asbestos	- 6 months from reporting

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Any assessments of compliance with specifications are based on actual analytical results with no contribution from uncertainty of measurement. Application of uncertainty of measurement would provide a range within which the true result lies. An estimate of measurement uncertainty can be provided on request.

Analytical Report Number: 20-88931

Project / Site name: Wisbecit

Your Order No: 324139

Lab Sample Number				1452968	1452969			
Sample Reference				BH06	BH06			
Sample Number				ES1	ES2			
Depth (m)				0.10-0.10	1.00-1.00			
Date Sampled				21/02/2020	21/02/2020			
Time Taken				None Supplied	None Supplied			
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Stone Content	%	0.1	NONE	< 0.1	< 0.1			
Moisture Content	%	N/A	NONE	20	19			
Total mass of sample received	kg	0.001	NONE	1.2	1.3			
Asbestos in Soil	Type	N/A	ISO 17025	-	Not-detected			
General Inorganics								
pH - Automated	pH Units	N/A	MCERTS	7.3	8.0			
Electrical Conductivity	µS/cm	10	ISO 17025	-	140			
Ammoniacal Nitrogen as N	mg/kg	0.5	MCERTS	< 0.5	< 0.5			
Total Organic Carbon (TOC)	%	0.1	MCERTS	2.4	0.6			
Redox Potential	mV	-800	NONE	-	320.40			
Total Phenols								
Total Phenols (monohydric)	mg/kg	1	MCERTS	-	< 1.0			
Speciated PAHs								
Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05			
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05			
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05			
Fluorene	mg/kg	0.05	MCERTS	< 0.05	< 0.05			
Phenanthrene	mg/kg	0.05	MCERTS	1.2	1.8			
Anthracene	mg/kg	0.05	MCERTS	0.27	0.22			
Fluoranthene	mg/kg	0.05	MCERTS	4.1	2.0			
Pyrene	mg/kg	0.05	MCERTS	3.3	1.7			
Benzo(a)anthracene	mg/kg	0.05	MCERTS	1.6	0.91			
Chrysene	mg/kg	0.05	MCERTS	1.6	0.84			
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	1.7	0.88			
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	0.78	0.47			
Benzo(a)pyrene	mg/kg	0.05	MCERTS	1.4	0.66			
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	0.79	0.36			
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	0.23	< 0.05			
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	1.0	0.44			
Total PAH								
Speciated Total EPA-16 PAHs	mg/kg	0.8	MCERTS	18.0	10.3			
Heavy Metals / Metalloids								
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	20	14			
Boron (water soluble)	mg/kg	0.2	MCERTS	2.2	1.2			
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2	< 0.2			
Chromium (hexavalent)	mg/kg	1.2	MCERTS	< 1.2	< 1.2			
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	32	30			
Copper (aqua regia extractable)	mg/kg	1	MCERTS	57	11			
Lead (aqua regia extractable)	mg/kg	1	MCERTS	110	19			
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	< 0.3			
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	26	24			
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0			
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	150	58			

Analytical Report Number: 20-88931

Project / Site name: Wisbecit
Your Order No: 324139

Lab Sample Number				1452968	1452969			
Sample Reference				BH06	BH06			
Sample Number				ES1	ES2			
Depth (m)				0.10-0.10	1.00-1.00			
Date Sampled				21/02/2020	21/02/2020			
Time Taken				None Supplied	None Supplied			
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Monoaromatics & Oxygenates								
Benzene	µg/kg	1	MCERTS	-	< 1.0			
Toluene	µg/kg	1	MCERTS	-	< 1.0			
Ethylbenzene	µg/kg	1	MCERTS	-	< 1.0			
p & m-xylene	µg/kg	1	MCERTS	-	< 1.0			
o-xylene	µg/kg	1	MCERTS	-	< 1.0			
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	-	< 1.0			
Petroleum Hydrocarbons								
TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.001	MCERTS	-	< 0.001			
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.001	MCERTS	-	< 0.001			
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.001	MCERTS	-	< 0.001			
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	-	< 1.0			
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	-	< 2.0			
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	-	< 8.0			
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	-	< 8.0			
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	-	< 10			
TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.001	MCERTS	-	< 0.001			
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.001	MCERTS	-	< 0.001			
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.001	MCERTS	-	< 0.001			
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	-	< 1.0			
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	-	< 2.0			
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	-	11			
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	-	15			
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	-	27			

Analytical Report Number: 20-88931

Project / Site name: Wisbecit

Your Order No: 324139

Lab Sample Number				1452968	1452969			
Sample Reference				BH06	BH06			
Sample Number				ES1	ES2			
Depth (m)				0.10-0.10	1.00-1.00			
Date Sampled				21/02/2020	21/02/2020			
Time Taken				None Supplied	None Supplied			
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
VOCs								
Chloromethane	µg/kg	1	ISO 17025	-	< 1.0			
Chloroethane	µg/kg	1	NONE	-	< 1.0			
Bromomethane	µg/kg	1	ISO 17025	-	< 1.0			
Vinyl Chloride	µg/kg	1	NONE	-	< 1.0			
Trichlorofluoromethane	µg/kg	1	NONE	-	< 1.0			
1,1-Dichloroethene	µg/kg	1	NONE	-	< 1.0			
1,1,2-Trichloro 1,2,2-Trifluoroethane	µg/kg	1	ISO 17025	-	< 1.0			
Cis-1,2-dichloroethene	µg/kg	1	MCERTS	-	< 1.0			
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	-	< 1.0			
1,1-Dichloroethane	µg/kg	1	MCERTS	-	< 1.0			
2,2-Dichloropropane	µg/kg	1	MCERTS	-	< 1.0			
Trichloromethane	µg/kg	1	MCERTS	-	< 1.0			
1,1,1-Trichloroethane	µg/kg	1	MCERTS	-	< 1.0			
1,2-Dichloroethane	µg/kg	1	MCERTS	-	< 1.0			
1,1-Dichloropropene	µg/kg	1	MCERTS	-	< 1.0			
Trans-1,2-dichloroethene	µg/kg	1	NONE	-	< 1.0			
Benzene	µg/kg	1	MCERTS	-	< 1.0			
Tetrachloromethane	µg/kg	1	MCERTS	-	< 1.0			
1,2-Dichloropropane	µg/kg	1	MCERTS	-	< 1.0			
Trichloroethene	µg/kg	1	MCERTS	-	< 1.0			
Dibromomethane	µg/kg	1	MCERTS	-	< 1.0			
Bromodichloromethane	µg/kg	1	MCERTS	-	< 1.0			
Cis-1,3-dichloropropene	µg/kg	1	ISO 17025	-	< 1.0			
Trans-1,3-dichloropropene	µg/kg	1	ISO 17025	-	< 1.0			
Toluene	µg/kg	1	MCERTS	-	< 1.0			
1,1,2-Trichloroethane	µg/kg	1	MCERTS	-	< 1.0			
1,3-Dichloropropane	µg/kg	1	ISO 17025	-	< 1.0			
Dibromochloromethane	µg/kg	1	ISO 17025	-	< 1.0			
Tetrachloroethene	µg/kg	1	NONE	-	< 1.0			
1,2-Dibromoethane	µg/kg	1	ISO 17025	-	< 1.0			
Chlorobenzene	µg/kg	1	MCERTS	-	< 1.0			
1,1,1,2-Tetrachloroethane	µg/kg	1	MCERTS	-	< 1.0			
Ethylbenzene	µg/kg	1	MCERTS	-	< 1.0			
p & m-Xylene	µg/kg	1	MCERTS	-	< 1.0			
Styrene	µg/kg	1	MCERTS	-	< 1.0			
Tribromomethane	µg/kg	1	NONE	-	< 1.0			
o-Xylene	µg/kg	1	MCERTS	-	< 1.0			
1,1,2,2-Tetrachloroethane	µg/kg	1	MCERTS	-	< 1.0			
Isopropylbenzene	µg/kg	1	MCERTS	-	< 1.0			
Bromobenzene	µg/kg	1	MCERTS	-	< 1.0			
n-Propylbenzene	µg/kg	1	ISO 17025	-	< 1.0			
2-Chlorotoluene	µg/kg	1	MCERTS	-	< 1.0			
4-Chlorotoluene	µg/kg	1	MCERTS	-	< 1.0			
1,3,5-Trimethylbenzene	µg/kg	1	ISO 17025	-	< 1.0			
tert-Butylbenzene	µg/kg	1	MCERTS	-	< 1.0			
1,2,4-Trimethylbenzene	µg/kg	1	ISO 17025	-	< 1.0			
sec-Butylbenzene	µg/kg	1	MCERTS	-	< 1.0			
1,3-Dichlorobenzene	µg/kg	1	ISO 17025	-	< 1.0			
p-Isopropyltoluene	µg/kg	1	ISO 17025	-	< 1.0			
1,2-Dichlorobenzene	µg/kg	1	MCERTS	-	< 1.0			
1,4-Dichlorobenzene	µg/kg	1	MCERTS	-	< 1.0			
Butylbenzene	µg/kg	1	MCERTS	-	< 1.0			
1,2-Dibromo-3-chloropropane	µg/kg	1	ISO 17025	-	< 1.0			
1,2,4-Trichlorobenzene	µg/kg	1	MCERTS	-	< 1.0			
Hexachlorobutadiene	µg/kg	1	MCERTS	-	< 1.0			
1,2,3-Trichlorobenzene	µg/kg	1	ISO 17025	-	< 1.0			

Analytical Report Number: 20-88931

Project / Site name: Wisbecit

Your Order No: 324139

Lab Sample Number				1452968	1452969			
Sample Reference				BH06	BH06			
Sample Number				ES1	ES2			
Depth (m)				0.10-0.10	1.00-1.00			
Date Sampled				21/02/2020	21/02/2020			
Time Taken				None Supplied	None Supplied			
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
SVOCs								
Aniline	mg/kg	0.1	NONE	-	< 0.1			
Phenol	mg/kg	0.2	ISO 17025	-	< 0.2			
2-Chlorophenol	mg/kg	0.1	MCERTS	-	< 0.1			
Bis(2-chloroethyl)ether	mg/kg	0.2	MCERTS	-	< 0.2			
1,3-Dichlorobenzene	mg/kg	0.2	MCERTS	-	< 0.2			
1,2-Dichlorobenzene	mg/kg	0.1	MCERTS	-	< 0.1			
1,4-Dichlorobenzene	mg/kg	0.2	MCERTS	-	< 0.2			
Bis(2-chloroisopropyl)ether	mg/kg	0.1	MCERTS	-	< 0.1			
2-Methylphenol	mg/kg	0.3	MCERTS	-	< 0.3			
Hexachloroethane	mg/kg	0.05	MCERTS	-	< 0.05			
Nitrobenzene	mg/kg	0.3	MCERTS	-	< 0.3			
4-Methylphenol	mg/kg	0.2	NONE	-	< 0.2			
Isophorone	mg/kg	0.2	MCERTS	-	< 0.2			
2-Nitrophenol	mg/kg	0.3	MCERTS	-	< 0.3			
2,4-Dimethylphenol	mg/kg	0.3	MCERTS	-	< 0.3			
Bis(2-chloroethoxy)methane	mg/kg	0.3	MCERTS	-	< 0.3			
1,2,4-Trichlorobenzene	mg/kg	0.3	MCERTS	-	< 0.3			
Naphthalene	mg/kg	0.05	MCERTS	-	< 0.05			
2,4-Dichlorophenol	mg/kg	0.3	MCERTS	-	< 0.3			
4-Chloroaniline	mg/kg	0.1	NONE	-	< 0.1			
Hexachlorobutadiene	mg/kg	0.1	MCERTS	-	< 0.1			
4-Chloro-3-methylphenol	mg/kg	0.1	NONE	-	< 0.1			
2,4,6-Trichlorophenol	mg/kg	0.1	MCERTS	-	< 0.1			
2,4,5-Trichlorophenol	mg/kg	0.2	MCERTS	-	< 0.2			
2-Methylnaphthalene	mg/kg	0.1	NONE	-	< 0.1			
2-Chloronaphthalene	mg/kg	0.1	MCERTS	-	< 0.1			
Dimethylphthalate	mg/kg	0.1	MCERTS	-	< 0.1			
2,6-Dinitrotoluene	mg/kg	0.1	MCERTS	-	< 0.1			
Acenaphthylene	mg/kg	0.05	MCERTS	-	< 0.05			
Acenaphthene	mg/kg	0.05	MCERTS	-	< 0.05			
2,4-Dinitrotoluene	mg/kg	0.2	MCERTS	-	< 0.2			
Dibenzofuran	mg/kg	0.2	MCERTS	-	< 0.2			
4-Chlorophenyl phenyl ether	mg/kg	0.3	ISO 17025	-	< 0.3			
Diethyl phthalate	mg/kg	0.2	MCERTS	-	< 0.2			
4-Nitroaniline	mg/kg	0.2	MCERTS	-	< 0.2			
Fluorene	mg/kg	0.05	MCERTS	-	< 0.05			
Azobenzene	mg/kg	0.3	MCERTS	-	< 0.3			
Bromophenyl phenyl ether	mg/kg	0.2	MCERTS	-	< 0.2			
Hexachlorobenzene	mg/kg	0.3	MCERTS	-	< 0.3			
Phenanthrene	mg/kg	0.05	MCERTS	-	1.8			
Anthracene	mg/kg	0.05	MCERTS	-	0.22			
Carbazole	mg/kg	0.3	MCERTS	-	< 0.3			
Dibutyl phthalate	mg/kg	0.2	MCERTS	-	< 0.2			
Anthraquinone	mg/kg	0.3	MCERTS	-	< 0.3			
Fluoranthene	mg/kg	0.05	MCERTS	-	2.0			
Pyrene	mg/kg	0.05	MCERTS	-	1.7			
Butyl benzyl phthalate	mg/kg	0.3	ISO 17025	-	< 0.3			
Benzo(a)anthracene	mg/kg	0.05	MCERTS	-	0.91			
Chrysene	mg/kg	0.05	MCERTS	-	0.84			
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	-	0.88			
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	-	0.47			
Benzo(a)pyrene	mg/kg	0.05	MCERTS	-	0.66			
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	-	0.36			
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	-	< 0.05			
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	-	0.44			

Analytical Report Number : 20-88931

Project / Site name: Wisbecit

* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and loam (MCERTS) soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
1452968	BH06	ES1	0.10-0.10	Brown loam with gravel and vegetation.
1452969	BH06	ES2	1.00-1.00	Brown clay and sand with gravel.

Analytical Report Number : 20-88931

Project / Site name: Wisbecit

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Water (PrW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Ammoniacal Nitrogen as N in soil	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the discrete analyser (colorimetric) salicylate/nitroprusside method,10:1 water extraction.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	MCERTS
Asbestos identification in soil	Asbestos Identification with the use of polarised light microscopy in conjunction with disperion staining techniques.	In house method based on HSG 248	A001-PL	D	ISO 17025
Boron, water soluble, in soil	Determination of water soluble boron in soil by hot water extract followed by ICP-OES.	In-house method based on Second Site Properties version 3	L038-PL	D	MCERTS
BTEX and MTBE in soil (Monoaromatics)	Determination of BTEX in soil by headspace GC-MS.	In-house method based on USEPA8260	L073B-PL	W	MCERTS
Electrical conductivity of soil	Determination of electrical conductivity in soil by electrometric measurement.	In-house method	L031-PL	W	ISO 17025
Hexavalent chromium in soil (Lower Level)	Determination of hexavalent chromium in soil by extraction in water then by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.	In-house method	L080-PL	W	MCERTS
Metals in soil by ICP-OES	Determination of metals in soil by aqua-regia digestion followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L038-PL	D	MCERTS
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	W	NONE
Monohydric phenols in soil	Determination of phenols in soil by extraction with sodium hydroxide followed by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)	L080-PL	W	MCERTS
pH in soil (automated)	Determination of pH in soil by addition of water followed by automated electrometric measurement.	In house method.	L099-PL	D	MCERTS
Redox Potential of soil	Determination of redox potential in soil by electrometric measurement.	In house method.	L084-PL	W	NONE
Semi-volatile organic compounds in soil	Determination of semi-volatile organic compounds in soil by extraction in dichloromethane and hexane followed by GC-MS.	In-house method based on USEPA 8270	L064-PL	D	MCERTS
Speciated EPA-16 PAHs in soil	Determination of PAH compounds in soil by extraction in dichloromethane and hexane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270	L064-PL	D	MCERTS
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
Total organic carbon (Automated) in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	In house method.	L009-PL	D	MCERTS
TPHCWG (Soil)	Determination of hexane extractable hydrocarbons in soil by GC-MS/GC-FID.	In-house method with silica gel split/clean up.	L088/76-PL	W	MCERTS
Volatile organic compounds in soil	Determination of volatile organic compounds in soil by headspace GC-MS.	In-house method based on USEPA8260	L073B-PL	W	MCERTS

Analytical Report Number : 20-88931

Project / Site name: Wisbecit

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Water (PrW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.
For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.
Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.

Candace Jackson
Wood Environment & Infrastructure Solutions
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Analytical Report Number : 20-89598

Project / Site name:	Wisbech	**Samples received on:**	27/02/2020
Your job number:	41310	**Samples instructed on:**	27/02/2020
Your order number:	324139	**Analysis completed by:**	05/03/2020
Report Issue Number:	1	**Report issued on:**	05/03/2020
Samples Analysed:	4 soil samples		

Signed: [redacted]

Karolina Marek
PL Head of Reporting Team

For & on behalf of i2 Analytical Ltd.

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils	- 4 weeks from reporting
leachates	- 2 weeks from reporting
waters	- 2 weeks from reporting
asbestos	- 6 months from reporting

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Any assessments of compliance with specifications are based on actual analytical results with no contribution from uncertainty of measurement. Application of uncertainty of measurement would provide a range within which the true result lies. An estimate of measurement uncertainty can be provided on request.

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Lab Sample Number				1456538	1456539	1456540	1456541	
Sample Reference				HP01	BH06	BH04	BH04	
Sample Number				ES1	ES3	ES1	ES2	
Depth (m)				0.20-0.20	3.00-3.00	0.40-0.40	2.10-2.10	
Date Sampled				26/02/2020	27/02/2020	27/02/2020	27/02/2020	
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	
Moisture Content	%	N/A	NONE	17	26	7.1	12	
Total mass of sample received	kg	0.001	NONE	0.53	0.57	1.9	1.9	
General Inorganics								
pH - Automated	pH Units	N/A	MCERTS	-	-	8.0	8.5	
Ammoniacal Nitrogen as N	mg/kg	0.5	MCERTS	-	< 0.5	-	-	
Total Organic Carbon (TOC)	%	0.1	MCERTS	2.2	1.0	-	0.3	
Total Phenols								
Total Phenols (monohydric)	mg/kg	1	MCERTS	-	< 1.0	-	-	
Speciated PAHs								
Naphthalene	mg/kg	0.05	MCERTS	-	-	-	< 0.05	
Acenaphthylene	mg/kg	0.05	MCERTS	-	-	-	< 0.05	
Acenaphthene	mg/kg	0.05	MCERTS	-	-	-	< 0.05	
Fluorene	mg/kg	0.05	MCERTS	-	-	-	< 0.05	
Phenanthrene	mg/kg	0.05	MCERTS	-	-	-	< 0.05	
Anthracene	mg/kg	0.05	MCERTS	-	-	-	< 0.05	
Fluoranthene	mg/kg	0.05	MCERTS	-	-	-	< 0.05	
Pyrene	mg/kg	0.05	MCERTS	-	-	-	< 0.05	
Benzo(a)anthracene	mg/kg	0.05	MCERTS	-	-	-	< 0.05	
Chrysene	mg/kg	0.05	MCERTS	-	-	-	< 0.05	
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	-	-	-	< 0.05	
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	-	-	-	< 0.05	
Benzo(a)pyrene	mg/kg	0.05	MCERTS	-	-	-	< 0.05	
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	-	-	-	< 0.05	
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	-	-	-	< 0.05	
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	-	-	-	< 0.05	
Total PAH								
Speciated Total EPA-16 PAHs	mg/kg	0.8	MCERTS	-	-	-	< 0.80	
Heavy Metals / Metalloids								
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	-	-	18	15	
Boron (water soluble)	mg/kg	0.2	MCERTS	-	-	0.4	0.8	
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	-	-	< 0.2	< 0.2	
Chromium (hexavalent)	mg/kg	1.2	MCERTS	-	-	< 1.2	< 1.2	
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	-	-	90	64	
Copper (aqua regia extractable)	mg/kg	1	MCERTS	-	-	< 1.0	< 1.0	
Lead (aqua regia extractable)	mg/kg	1	MCERTS	-	-	14	13	
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	-	-	< 0.3	< 0.3	
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	-	-	40	32	
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	-	-	< 1.0	< 1.0	
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	-	-	75	70	

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Lab Sample Number				1456538	1456539	1456540	1456541	
Sample Reference				HP01	BH06	BH04	BH04	
Sample Number				ES1	ES3	ES1	ES2	
Depth (m)				0.20-0.20	3.00-3.00	0.40-0.40	2.10-2.10	
Date Sampled				26/02/2020	27/02/2020	27/02/2020	27/02/2020	
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Monoaromatics & Oxygenates								
Benzene	µg/kg	1	MCERTS	< 1.0	< 1.0	-	-	
Toluene	µg/kg	1	MCERTS	< 1.0	< 1.0	-	-	
Ethylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	-	-	
p & m-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	-	-	
o-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	-	-	
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0	< 1.0	-	-	
Petroleum Hydrocarbons								
TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.001	MCERTS	< 0.001	< 0.001	-	-	
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.001	MCERTS	< 0.001	< 0.001	-	-	
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001	< 0.001	-	-	
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	< 1.0	-	-	
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	< 2.0	-	-	
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	< 8.0	< 8.0	-	-	
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	< 8.0	< 8.0	-	-	
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	< 10	< 10	-	-	
TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.001	MCERTS	< 0.001	< 0.001	-	-	
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.001	MCERTS	< 0.001	< 0.001	-	-	
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001	< 0.001	-	-	
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	< 1.0	-	-	
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	< 2.0	-	-	
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	< 10	< 10	-	-	
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	< 10	< 10	-	-	
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	< 10	< 10	-	-	

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Sample Number				ES1	ES3	ES1	ES2	
Depth (m)				0.20-0.20	3.00-3.00	0.40-0.40	2.10-2.10	
Date Sampled				26/02/2020	27/02/2020	27/02/2020	27/02/2020	
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
VOCs								
Chloromethane	µg/kg	1	ISO 17025	< 1.0	< 1.0	-	-	
Chloroethane	µg/kg	1	NONE	< 1.0	< 1.0	-	-	
Bromomethane	µg/kg	1	ISO 17025	< 1.0	< 1.0	-	-	
Vinyl Chloride	µg/kg	1	NONE	< 1.0	< 1.0	-	-	
Trichlorofluoromethane	µg/kg	1	NONE	< 1.0	< 1.0	-	-	
1,1-Dichloroethene	µg/kg	1	NONE	< 1.0	< 1.0	-	-	
1,1,2-Trichloro 1,2,2-Trifluoroethane	µg/kg	1	ISO 17025	< 1.0	< 1.0	-	-	
Cis-1,2-dichloroethene	µg/kg	1	MCERTS	< 1.0	< 1.0	-	-	
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0	< 1.0	-	-	
1,1-Dichloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0	-	-	
2,2-Dichloropropane	µg/kg	1	MCERTS	< 1.0	< 1.0	-	-	
Trichloromethane	µg/kg	1	MCERTS	< 1.0	< 1.0	-	-	
1,1,1-Trichloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0	-	-	
1,2-Dichloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0	-	-	
1,1-Dichloropropene	µg/kg	1	MCERTS	< 1.0	< 1.0	-	-	
Trans-1,2-dichloroethene	µg/kg	1	NONE	< 1.0	< 1.0	-	-	
Benzene	µg/kg	1	MCERTS	< 1.0	< 1.0	-	-	
Tetrachloromethane	µg/kg	1	MCERTS	< 1.0	< 1.0	-	-	
1,2-Dichloropropane	µg/kg	1	MCERTS	< 1.0	< 1.0	-	-	
Trichloroethene	µg/kg	1	MCERTS	< 1.0	< 1.0	-	-	
Dibromomethane	µg/kg	1	MCERTS	< 1.0	< 1.0	-	-	
Bromodichloromethane	µg/kg	1	MCERTS	< 1.0	< 1.0	-	-	
Cis-1,3-dichloropropene	µg/kg	1	ISO 17025	< 1.0	< 1.0	-	-	
Trans-1,3-dichloropropene	µg/kg	1	ISO 17025	< 1.0	< 1.0	-	-	
Toluene	µg/kg	1	MCERTS	< 1.0	< 1.0	-	-	
1,1,2-Trichloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0	-	-	
1,3-Dichloropropane	µg/kg	1	ISO 17025	< 1.0	< 1.0	-	-	
Dibromochloromethane	µg/kg	1	ISO 17025	< 1.0	< 1.0	-	-	
Tetrachloroethene	µg/kg	1	NONE	< 1.0	< 1.0	-	-	
1,2-Dibromoethane	µg/kg	1	ISO 17025	< 1.0	< 1.0	-	-	
Chlorobenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	-	-	
1,1,1,2-Tetrachloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0	-	-	
Ethylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	-	-	
p & m-Xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	-	-	
Styrene	µg/kg	1	MCERTS	< 1.0	< 1.0	-	-	
Tribromomethane	µg/kg	1	NONE	< 1.0	< 1.0	-	-	
o-Xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	-	-	
1,1,2,2-Tetrachloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0	-	-	
Isopropylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	-	-	
Bromobenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	-	-	
n-Propylbenzene	µg/kg	1	ISO 17025	< 1.0	< 1.0	-	-	
2-Chlorotoluene	µg/kg	1	MCERTS	< 1.0	< 1.0	-	-	
4-Chlorotoluene	µg/kg	1	MCERTS	< 1.0	< 1.0	-	-	
1,3,5-Trimethylbenzene	µg/kg	1	ISO 17025	< 1.0	< 1.0	-	-	
tert-Butylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	-	-	
1,2,4-Trimethylbenzene	µg/kg	1	ISO 17025	< 1.0	< 1.0	-	-	
sec-Butylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	-	-	
1,3-Dichlorobenzene	µg/kg	1	ISO 17025	< 1.0	< 1.0	-	-	
p-Isopropyltoluene	µg/kg	1	ISO 17025	< 1.0	< 1.0	-	-	
1,2-Dichlorobenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	-	-	
1,4-Dichlorobenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	-	-	
Butylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	-	-	
1,2-Dibromo-3-chloropropane	µg/kg	1	ISO 17025	< 1.0	< 1.0	-	-	
1,2,4-Trichlorobenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	-	-	
Hexachlorobutadiene	µg/kg	1	MCERTS	< 1.0	< 1.0	-	-	
1,2,3-Trichlorobenzene	µg/kg	1	ISO 17025	< 1.0	< 1.0	-	-	

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Sample Reference				HP01	BH06	BH04	BH04	
Sample Number				ES1	ES3	ES1	ES2	
Depth (m)				0.20-0.20	3.00-3.00	0.40-0.40	2.10-2.10	
Date Sampled				26/02/2020	27/02/2020	27/02/2020	27/02/2020	
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
SVOCs								
Aniline	mg/kg	0.1	NONE	< 0.1	< 0.1	-	-	
Phenol	mg/kg	0.2	ISO 17025	< 0.2	< 0.2	-	-	
2-Chlorophenol	mg/kg	0.1	MCERTS	< 0.1	< 0.1	-	-	
Bis(2-chloroethyl)ether	mg/kg	0.2	MCERTS	< 0.2	< 0.2	-	-	
1,3-Dichlorobenzene	mg/kg	0.2	MCERTS	< 0.2	< 0.2	-	-	
1,2-Dichlorobenzene	mg/kg	0.1	MCERTS	< 0.1	< 0.1	-	-	
1,4-Dichlorobenzene	mg/kg	0.2	MCERTS	< 0.2	< 0.2	-	-	
Bis(2-chloroisopropyl)ether	mg/kg	0.1	MCERTS	< 0.1	< 0.1	-	-	
2-Methylphenol	mg/kg	0.3	MCERTS	< 0.3	< 0.3	-	-	
Hexachloroethane	mg/kg	0.05	MCERTS	< 0.05	< 0.05	-	-	
Nitrobenzene	mg/kg	0.3	MCERTS	< 0.3	< 0.3	-	-	
4-Methylphenol	mg/kg	0.2	NONE	< 0.2	< 0.2	-	-	
Isophorone	mg/kg	0.2	MCERTS	< 0.2	< 0.2	-	-	
2-Nitrophenol	mg/kg	0.3	MCERTS	< 0.3	< 0.3	-	-	
2,4-Dimethylphenol	mg/kg	0.3	MCERTS	< 0.3	< 0.3	-	-	
Bis(2-chloroethoxy)methane	mg/kg	0.3	MCERTS	< 0.3	< 0.3	-	-	
1,2,4-Trichlorobenzene	mg/kg	0.3	MCERTS	< 0.3	< 0.3	-	-	
Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	-	-	
2,4-Dichlorophenol	mg/kg	0.3	MCERTS	< 0.3	< 0.3	-	-	
4-Chloroaniline	mg/kg	0.1	NONE	< 0.1	< 0.1	-	-	
Hexachlorobutadiene	mg/kg	0.1	MCERTS	< 0.1	< 0.1	-	-	
4-Chloro-3-methylphenol	mg/kg	0.1	NONE	< 0.1	< 0.1	-	-	
2,4,6-Trichlorophenol	mg/kg	0.1	MCERTS	< 0.1	< 0.1	-	-	
2,4,5-Trichlorophenol	mg/kg	0.2	MCERTS	< 0.2	< 0.2	-	-	
2-Methylnaphthalene	mg/kg	0.1	NONE	< 0.1	< 0.1	-	-	
2-Chloronaphthalene	mg/kg	0.1	MCERTS	< 0.1	< 0.1	-	-	
Dimethylphthalate	mg/kg	0.1	MCERTS	< 0.1	< 0.1	-	-	
2,6-Dinitrotoluene	mg/kg	0.1	MCERTS	< 0.1	< 0.1	-	-	
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	-	-	
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	-	-	
2,4-Dinitrotoluene	mg/kg	0.2	MCERTS	< 0.2	< 0.2	-	-	
Dibenzofuran	mg/kg	0.2	MCERTS	< 0.2	< 0.2	-	-	
4-Chlorophenyl phenyl ether	mg/kg	0.3	ISO 17025	< 0.3	< 0.3	-	-	
Diethyl phthalate	mg/kg	0.2	MCERTS	< 0.2	< 0.2	-	-	
4-Nitroaniline	mg/kg	0.2	MCERTS	< 0.2	< 0.2	-	-	
Fluorene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	-	-	
Azobenzene	mg/kg	0.3	MCERTS	< 0.3	< 0.3	-	-	
Bromophenyl phenyl ether	mg/kg	0.2	MCERTS	< 0.2	< 0.2	-	-	
Hexachlorobenzene	mg/kg	0.3	MCERTS	< 0.3	< 0.3	-	-	
Phenanthrene	mg/kg	0.05	MCERTS	0.63	< 0.05	-	-	
Anthracene	mg/kg	0.05	MCERTS	0.13	< 0.05	-	-	
Carbazole	mg/kg	0.3	MCERTS	< 0.3	< 0.3	-	-	
Dibutyl phthalate	mg/kg	0.2	MCERTS	< 0.2	< 0.2	-	-	
Anthraquinone	mg/kg	0.3	MCERTS	< 0.3	< 0.3	-	-	
Fluoranthene	mg/kg	0.05	MCERTS	1.8	< 0.05	-	-	
Pyrene	mg/kg	0.05	MCERTS	1.7	< 0.05	-	-	
Butyl benzyl phthalate	mg/kg	0.3	ISO 17025	< 0.3	< 0.3	-	-	
Benzo(a)anthracene	mg/kg	0.05	MCERTS	0.76	< 0.05	-	-	
Chrysene	mg/kg	0.05	MCERTS	1.2	< 0.05	-	-	
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	0.98	< 0.05	-	-	
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	0.42	< 0.05	-	-	
Benzo(a)pyrene	mg/kg	0.05	MCERTS	0.78	< 0.05	-	-	
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	0.51	< 0.05	-	-	
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	-	-	
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	0.71	< 0.05	-	-	

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* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and loam (MCERTS) soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
1456538	HP01	ES1	0.20-0.20	Brown loam and clay with gravel and vegetation.
1456539	BH06	ES3	3.00-3.00	Grey clay with gravel.
1456540	BH04	ES1	0.40-0.40	Brown sand with gravel.
1456541	BH04	ES2	2.10-2.10	Brown clay and sand with gravel.

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Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Water (PrW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Ammoniacal Nitrogen as N in soil	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the discrete analyser (colorimetric) salicylate/nitroprusside method,10:1 water extraction.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	MCERTS
Boron, water soluble, in soil	Determination of water soluble boron in soil by hot water extract followed by ICP-OES.	In-house method based on Second Site Properties version 3	L038-PL	D	MCERTS
BTEX and MTBE in soil (Monoaromatics)	Determination of BTEX in soil by headspace GC-MS.	In-house method based on USEPA8260	L073B-PL	W	MCERTS
Hexavalent chromium in soil (Lower Level)	Determination of hexavalent chromium in soil by extraction in water then by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.	In-house method	L080-PL	W	MCERTS
Metals in soil by ICP-OES	Determination of metals in soil by aqua-regia digestion followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L038-PL	D	MCERTS
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	W	NONE
Monohydric phenols in soil	Determination of phenols in soil by extraction with sodium hydroxide followed by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)	L080-PL	W	MCERTS
pH in soil (automated)	Determination of pH in soil by addition of water followed by automated electrometric measurement.	In house method.	L099-PL	D	MCERTS
Semi-volatile organic compounds in soil	Determination of semi-volatile organic compounds in soil by extraction in dichloromethane and hexane followed by GC-MS.	In-house method based on USEPA 8270	L064-PL	D	MCERTS
Speciated EPA-16 PAHs in soil	Determination of PAH compounds in soil by extraction in dichloromethane and hexane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270	L064-PL	D	MCERTS
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
Total organic carbon (Automated) in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	In house method.	L009-PL	D	MCERTS
TPHCWG (Soil)	Determination of hexane extractable hydrocarbons in soil by GC-MS/GC-FID.	In-house method with silica gel split/clean up.	L088/76-PL	W	MCERTS
Volatile organic compounds in soil	Determination of volatile organic compounds in soil by headspace GC-MS.	In-house method based on USEPA8260	L073B-PL	W	MCERTS

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.
For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.
Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.

Appendix I
WAC Results

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Wood Environment & Infrastructure Solutions
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Knutsford
WA16 8QZ

e: [redacted]

i2 Analytical Ltd.
7 Woodshots Meadow,
Croxley Green
Business Park,
Watford,
Herts,
WD18 8YS

t: [redacted]
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e: [redacted]

Analytical Report Number : 20-86791

Project / Site name:	Wisbech	**Samples received on:**	14/02/2020
Your job number:	41310	**Samples instructed on:**	14/02/2020
Your order number:		**Analysis completed by:**	24/02/2020
Report Issue Number:	1	**Report issued on:**	24/02/2020
Samples Analysed:	3 10:1 WAC samples		

Signed: [redacted]

Zina Abdul Razzak
Senior Quality Specialist

For & on behalf of i2 Analytical Ltd.

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils	- 4 weeks from reporting
leachates	- 2 weeks from reporting
waters	- 2 weeks from reporting
asbestos	- 6 months from reporting

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Any assessments of compliance with specifications are based on actual analytical results with no contribution from uncertainty of measurement. Application of uncertainty of measurement would provide a range within which the true result lies. An estimate of measurement uncertainty can be provided on request.

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Waste Acceptance Criteria Analytical Results

Report No:	**20-86791**						
					Client:	**WOODPLC**	
Location	**Wisbech**						
Lab Reference (Sample Number)	1441721 / 1441722				**Landfill Waste Acceptance Criteria Limits**		
Sampling Date	12/02/2020				Inert Waste Landfill	Stable Non-reactive HAZARDOUS waste in non-hazardous Landfill	Hazardous Waste Landfill
Sample ID	TP03 ES1						
Depth (m)	0.30-0.30						
Solid Waste Analysis							
TOC (%)**	0.8				3%	5%	6%
Loss on Ignition (%) **	2.9				--	--	10%
BTEX (µg/kg) **	< 10				6000	--	--
Sum of PCBs (mg/kg) **	< 0.007				1	--	--
Mineral Oil (mg/kg)	110				500	--	--
Total PAH (WAC-17) (mg/kg)	140				100	--	--
pH (units)**	8.2				--	>6	--
Acid Neutralisation Capacity (mol / kg)	21				--	To be evaluated	To be evaluated
Eluate Analysis (BS EN 12457 - 2 preparation utilising end over end leaching procedure)	10:1 mg/l			10:1 mg/kg	Limit values for compliance leaching test using BS EN 12457-2 at L/S 10 l/kg (mg/kg)		
Arsenic *	< 0.0011			< 0.0110	0.5	2	25
Barium *	0.0230			0.200	20	100	300
Cadmium *	< 0.0001			< 0.0008	0.04	1	5
Chromium *	0.0030			0.026	0.5	10	70
Copper *	0.010			0.088	2	50	100
Mercury *	< 0.0005			< 0.0050	0.01	0.2	2
Molybdenum *	0.0039			0.0338	0.5	10	30
Nickel *	< 0.0003			< 0.0030	0.4	10	40
Lead *	0.0024			0.021	0.5	10	50
Antimony *	< 0.0017			< 0.017	0.06	0.7	5
Selenium *	< 0.0040			< 0.040	0.1	0.5	7
Zinc *	0.0025			0.022	4	50	200
Chloride *	4.2			37	800	15000	25000
Fluoride	0.53			4.6	10	150	500
Sulphate *	94			820	1000	20000	50000
TDS*	180			1600	4000	60000	100000
Phenol Index (Monohydric Phenols) *	< 0.010			< 0.10	1	-	-
DOC	8.85			76.9	500	800	1000
Leach Test Information							
Stone Content (%)	< 0.1						
Sample Mass (kg)	2.0						
Dry Matter (%)	92						
Moisture (%)	8.1						

Results are expressed on a dry weight basis, after correction for moisture content where applicable.
*= UKAS accredited (liquid eluate analysis only)
Stated limits are for guidance only and i2 cannot be held responsible for any discrepancies with current legislation
** = MCERTS accredited

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes as defined by the Waste (England and Wales) Regulations 2011 (as amended) and EA Guidance WM3.
This analysis is only applicable for landfill acceptance criteria (The Environmental Permitting (England and Wales) Regulations) and does not give any indication as to whether a waste may be hazardous or non-hazardous.

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Waste Acceptance Criteria Analytical Results

Report No:	**20-86791**						
					Client:	**WOODPLC**	
Location	**Wisbech**						
Lab Reference (Sample Number)	1441723 / 1441724				**Landfill Waste Acceptance Criteria Limits**		
Sampling Date	13/02/2020				Inert Waste Landfill	Stable Non-reactive HAZARDOUS waste in non-hazardous Landfill	Hazardous Waste Landfill
Sample ID	TP07 ES1						
Depth (m)	0.20-0.20						
Solid Waste Analysis							
TOC (%)**	4.0				3%	5%	6%
Loss on Ignition (%) **	7.2				--	--	10%
BTEX (µg/kg) **	< 10				6000	--	--
Sum of PCBs (mg/kg) **	< 0.007				1	--	--
Mineral Oil (mg/kg)	330				500	--	--
Total PAH (WAC-17) (mg/kg)	37				100	--	--
pH (units)**	8.0				--	>6	--
Acid Neutralisation Capacity (mol / kg)	16				--	To be evaluated	To be evaluated
Eluate Analysis (BS EN 12457 - 2 preparation utilising end over end leaching procedure)	10:1 mg/l			10:1 mg/kg	Limit values for compliance leaching test using BS EN 12457-2 at L/S 10 l/kg (mg/kg)		
Arsenic *	0.0020			0.0186	0.5	2	25
Barium *	0.0202			0.190	20	100	300
Cadmium *	< 0.0001			< 0.0008	0.04	1	5
Chromium *	0.0025			0.024	0.5	10	70
Copper *	0.015			0.14	2	50	100
Mercury *	< 0.0005			< 0.0050	0.01	0.2	2
Molybdenum *	0.0040			0.0372	0.5	10	30
Nickel *	0.0012			0.012	0.4	10	40
Lead *	0.0026			0.025	0.5	10	50
Antimony *	< 0.0017			< 0.017	0.06	0.7	5
Selenium *	< 0.0040			< 0.040	0.1	0.5	7
Zinc *	0.0065			0.061	4	50	200
Chloride *	4.5			42	800	4000	25000
Fluoride	0.20			1.9	10	150	500
Sulphate *	27			250	1000	20000	50000
TDS*	150			1400	4000	60000	100000
Phenol Index (Monhydric Phenols) *	< 0.010			< 0.10	1	-	-
DOC	8.33			78.1	500	800	1000
Leach Test Information							
Stone Content (%)	< 0.1						
Sample Mass (kg)	2.0						
Dry Matter (%)	96						
Moisture (%)	3.8						

Results are expressed on a dry weight basis, after correction for moisture content where applicable.
*= UKAS accredited (liquid eluate analysis only)
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** = MCERTS accrediited

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Waste Acceptance Criteria Analytical Results

Report No:	**20-86791**						
					Client:	**WOODPLC**	
Location	**Wisbech**						
Lab Reference (Sample Number)	1441725 / 1441726				**Landfill Waste Acceptance Criteria Limits**		
Sampling Date	13/02/2020				Inert Waste Landfill	Stable Non-reactive HAZARDOUS waste in non-hazardous Landfill	Hazardous Waste Landfill
Sample ID	TP13A ES1						
Depth (m)	0.40-0.40						
Solid Waste Analysis							
TOC (%)**	2.0				3%	5%	6%
Loss on Ignition (%) **	5.3				--	--	10%
BTEX (µg/kg) **	< 10				6000	--	--
Sum of PCBs (mg/kg) **	< 0.007				1	--	--
Mineral Oil (mg/kg)	< 10				500	--	--
Total PAH (WAC-17) (mg/kg)	4.6				100	--	--
pH (units)**	7.8				--	>6	--
Acid Neutralisation Capacity (mol / kg)	8.9				--	To be evaluated	To be evaluated
Eluate Analysis (BS EN 12457 - 2 preparation utilising end over end leaching procedure)	10:1 mg/l			10:1 mg/kg	Limit values for compliance leaching test using BS EN 12457-2 at L/S 10 l/kg (mg/kg)		
Arsenic *	0.0090			0.0789	0.5	2	25
Barium *	0.0097			0.0856	20	100	300
Cadmium *	< 0.0001			< 0.0008	0.04	1	5
Chromium *	< 0.0004			< 0.0040	0.5	10	70
Copper *	0.0070			0.062	2	50	100
Mercury *	< 0.0005			< 0.0050	0.01	0.2	2
Molybdenum *	0.0006			0.0056	0.5	10	30
Nickel *	0.0034			0.030	0.4	10	40
Lead *	0.0049			0.043	0.5	10	50
Antimony *	< 0.0017			< 0.017	0.06	0.7	5
Selenium *	< 0.0040			< 0.040	0.1	0.5	7
Zinc *	0.0039			0.035	4	50	200
Chloride *	1.6			14	800	4000	25000
Fluoride	1.8			15	10	150	500
Sulphate *	5.1			45	1000	20000	50000
TDS*	66			580	4000	60000	100000
Phenol Index (Monhydric Phenols) *	< 0.010			< 0.10	1	-	-
DOC	9.68			85.3	500	800	1000
Leach Test Information							
Stone Content (%)	< 0.1						
Sample Mass (kg)	2.0						
Dry Matter (%)	80						
Moisture (%)	20						

Results are expressed on a dry weight basis, after correction for moisture content where applicable.
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Analytical Report Number : 20-86791

Project / Site name: Wisbech

* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and loam (MCERTS) soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
1441721	TP03	ES1	0.30-0.30	Brown loam and sand with gravel.
1441723	TP07	ES1	0.20-0.20	Brown loam and clay with gravel.
1441725	TP13A	ES1	0.40-0.40	Brown loam and clay with vegetation.

Analytical Report Number : 20-86791

Project / Site name: Wisbech

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Water (PrW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Acid neutralisation capacity of soil	Determination of acid neutralisation capacity by addition of acid or alkali followed by electronic probe.	In-house method based on Guidance an Sampling and Testing of Wastes to Meet Landfill Waste Acceptance""	L046-PL	W	NONE
BS EN 12457-2 (10:1) Leachate Prep	10:1 (as recieved, moisture adjusted) end over end extraction with water for 24 hours. Eluate filtered prior to analysis.	In-house method based on BSEN12457-2.	L043-PL	W	NONE
BTEX in soil (Monoaromatics)	Determination of BTEX in soil by headspace GC-MS.	In-house method based on USEPA8260	L073B-PL	W	MCERTS
Chloride 10:1 WAC	Determination of Chloride colorimetrically by discrete analyser.	In house based on MEWAM Method ISBN 0117516260.	L082-PL	W	ISO 17025
Dissolved organic carbon 10:1 WAC	Determination of dissolved inorganic carbon in leachate by TOC/DOC NDIR Analyser.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L037-PL	W	NONE
Fluoride 10:1 WAC	Determination of fluoride in leachate by 1:1ratio with a buffer solution followed by Ion Selective Electrode.	In-house method based on Use of Total Ionic Strength Adjustment Buffer for Electrode Determination"	L033B-PL	W	ISO 17025
Loss on ignition of soil @ 450oC	Determination of loss on ignition in soil by gravimetrically with the sample being ignited in a muffle furnace.	In house method.	L047-PL	D	MCERTS
Metals in leachate by ICP-OES	Determination of metals in leachate by acidification followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil""	L039-PL	W	ISO 17025
Mineral Oil (Soil) C10 - C40	Determination of mineral oil fraction extractable hydrocarbons in soil by GC-MS/GC-FID.	In-house method with silica gel split/clean up.	L076-PL	D	NONE
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	W	NONE
Monohydric phenols 10:1 WAC	Determination of phenols in leachate by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L080-PL	W	ISO 17025
PCB's By GC-MS in soil	Determination of PCB by extraction with acetone and hexane followed by GC-MS.	In-house method based on USEPA 8082	L027-PL	D	MCERTS
pH in soil	Determination of pH in soil by addition of water followed by electrometric measurement.	In house method.	L005-PL	W	MCERTS
Speciated WAC-17 PAHs in soil	Determination of PAH compounds in soil by extraction in dichloromethane and hexane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270. MCERTS accredited except Coronene.	L064-PL	D	NONE
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
Sulphate 10:1 WAC	Determination of sulphate in leachate by ICP-OES	In-house method based on MEWAM 1986 Methods for the Determination of Metals in Soil""	L039-PL	W	ISO 17025
Total dissolved solids 10:1 WAC	Determination of total dissolved solids in water by electrometric measurement.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L004-PL	W	ISO 17025

Analytical Report Number : 20-86791

Project / Site name: Wisbech

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Water (PrW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Total organic carbon (Automated) in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	In house method.	L009-PL	D	MCERTS

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.
For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.
Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.

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Analytical Report Number : 20-87317

Project / Site name:	Wisbech	**Samples received on:**	17/02/2020
Your job number:	41310	**Samples instructed on:**	17/02/2020
Your order number:	324139	**Analysis completed by:**	26/02/2020
Report Issue Number:	1	**Report issued on:**	26/02/2020
Samples Analysed:	4 10:1 WAC samples		

Signed: [redacted]

Katarzyna Lewicka
Head of Reporting Section

For & on behalf of i2 Analytical Ltd.

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils	- 4 weeks from reporting
leachates	- 2 weeks from reporting
waters	- 2 weeks from reporting
asbestos	- 6 months from reporting

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Any assessments of compliance with specifications are based on actual analytical results with no contribution from uncertainty of measurement. Application of uncertainty of measurement would provide a range within which the true result lies. An estimate of measurement uncertainty can be provided on request.

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Waste Acceptance Criteria Analytical Results

Report No:	**20-87317**						
					Client:	**WOODPLC**	
Location	**Wisbech**						
Lab Reference (Sample Number)	1444299 / 1444300				**Landfill Waste Acceptance Criteria Limits**		
Sampling Date	14/02/2020				Inert Waste Landfill	Stable Non-reactive HAZARDOUS waste in non-hazardous Landfill	Hazardous Waste Landfill
Sample ID	TP12A ES1						
Depth (m)	0.40-0.40						
Solid Waste Analysis							
TOC (%)**	1.2				3%	5%	6%
Loss on Ignition (%) **	2.8				--	--	10%
BTEX (µg/kg) **	< 10				6000	--	--
Sum of PCBs (mg/kg) **	< 0.007				1	--	--
Mineral Oil (mg/kg)	< 10				500	--	--
Total PAH (WAC-17) (mg/kg)	10				100	--	--
pH (units)**	7.7				--	>6	--
Acid Neutralisation Capacity (mol / kg)	17				--	To be evaluated	To be evaluated
Eluate Analysis	10:1			10:1	Limit values for compliance leaching test		
(BS EN 12457 - 2 preparation utilising end over end leaching procedure)	mg/l			mg/kg	using BS EN 12457-2 at L/S 10 l/kg (mg/kg)		
Arsenic *	0.0100			0.0833	0.5	2	25
Barium *	0.0190			0.158	20	100	300
Cadmium *	< 0.0001			< 0.0008	0.04	1	5
Chromium *	0.0086			0.072	0.5	10	70
Copper *	0.018			0.15	2	50	100
Mercury *	< 0.0005			< 0.0050	0.01	0.2	2
Molybdenum *	0.0009			0.0071	0.5	10	30
Nickel *	0.0034			0.028	0.4	10	40
Lead *	0.0056			0.047	0.5	10	50
Antimony *	< 0.0017			< 0.017	0.06	0.7	5
Selenium *	< 0.0040			< 0.040	0.1	0.5	7
Zinc *	0.014			0.11	4	50	200
Chloride *	2.7			23	800	15000	25000
Fluoride	1.1			8.9	10	150	500
Sulphate *	16			130	1000	20000	50000
TDS*	99			820	4000	60000	100000
Phenol Index (Monohydric Phenols) *	< 0.010			< 0.10	1	-	-
DOC	7.89			65.9	500	800	1000
Leach Test Information							
Stone Content (%)	< 0.1						
Sample Mass (kg)	2.0						
Dry Matter (%)	88						
Moisture (%)	12						

Results are expressed on a dry weight basis, after correction for moisture content where applicable.
*= UKAS accredited (liquid eluate analysis only)
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Waste Acceptance Criteria Analytical Results

Report No:	**20-87317**						
					Client:	**WOODPLC**	
Location	**Wisbech**						
Lab Reference (Sample Number)	1444301 / 1444302				**Landfill Waste Acceptance Criteria Limits**		
Sampling Date	14/02/2020				Inert Waste Landfill	Stable Non-reactive HAZARDOUS waste in non-hazardous Landfill	Hazardous Waste Landfill
Sample ID	TP02A ES3						
Depth (m)	0.45-0.65						
Solid Waste Analysis							
TOC (%)**	1.2				3%	5%	6%
Loss on Ignition (%) **	2.9				--	--	10%
BTEX (µg/kg) **	< 10				6000	--	--
Sum of PCBs (mg/kg) **	< 0.007				1	--	--
Mineral Oil (mg/kg)	< 10				500	--	--
Total PAH (WAC-17) (mg/kg)	< 0.9				100	--	--
pH (units)**	7.7				--	>6	--
Acid Neutralisation Capacity (mol / kg)	21				--	To be evaluated	To be evaluated
Eluate Analysis	10:1			10:1	Limit values for compliance leaching test		
(BS EN 12457 - 2 preparation utilising end over end leaching procedure)	mg/l			mg/kg	using BS EN 12457-2 at L/S 10 l/kg (mg/kg)		
Arsenic *	< 0.0011			< 0.0110	0.5	2	25
Barium *	0.0171			0.144	20	100	300
Cadmium *	< 0.0001			< 0.0008	0.04	1	5
Chromium *	0.0014			0.011	0.5	10	70
Copper *	0.0056			0.047	2	50	100
Mercury *	< 0.0005			< 0.0050	0.01	0.2	2
Molybdenum *	0.0029			0.0246	0.5	10	30
Nickel *	0.0016			0.013	0.4	10	40
Lead *	< 0.0010			< 0.010	0.5	10	50
Antimony *	< 0.0017			< 0.017	0.06	0.7	5
Selenium *	< 0.0040			< 0.040	0.1	0.5	7
Zinc *	0.0068			0.057	4	50	200
Chloride *	2.6			22	800	4000	25000
Fluoride	2.7			22	10	150	500
Sulphate *	4.3			36	1000	20000	50000
TDS*	84			700	4000	60000	100000
Phenol Index (Monhydric Phenols) *	< 0.010			< 0.10	1	-	-
DOC	7.92			66.6	500	800	1000
Leach Test Information							
Stone Content (%)	< 0.1						
Sample Mass (kg)	2.0						
Dry Matter (%)	83						
Moisture (%)	17						

Results are expressed on a dry weight basis, after correction for moisture content where applicable.
*= UKAS accredited (liquid eluate analysis only)
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** = MCERTS accrediited

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This analysis is only applicable for landfill acceptance criteria (The Environmental Permitting (England and Wales) Regulations) and does not give any indication as to whether a waste may be hazardous or non-hazardous.

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Waste Acceptance Criteria Analytical Results

Report No:	**20-87317**						
					Client:	**WOODPLC**	
Location	**Wisbech**						
Lab Reference (Sample Number)	1444303 / 1444304				**Landfill Waste Acceptance Criteria Limits**		
Sampling Date	14/02/2020				Inert Waste Landfill	Stable Non-reactive HAZARDOUS waste in non-hazardous Landfill	Hazardous Waste Landfill
Sample ID	TP04A ES2						
Depth (m)	0.50-0.50						
Solid Waste Analysis							
TOC (%)**	1.2				3%	5%	6%
Loss on Ignition (%) **	3.3				--	--	10%
BTEX (µg/kg) **	< 10				6000	--	--
Sum of PCBs (mg/kg) **	< 0.007				1	--	--
Mineral Oil (mg/kg)	< 10				500	--	--
Total PAH (WAC-17) (mg/kg)	2.3				100	--	--
pH (units)**	8.2				--	>6	--
Acid Neutralisation Capacity (mol / kg)	35				--	To be evaluated	To be evaluated
Eluate Analysis	10:1			10:1	Limit values for compliance leaching test		
(BS EN 12457 - 2 preparation utilising end over end leaching procedure)	mg/l			mg/kg	using BS EN 12457-2 at L/S 10 l/kg (mg/kg)		
Arsenic *	0.0032			0.0276	0.5	2	25
Barium *	0.0208			0.176	20	100	300
Cadmium *	< 0.0001			< 0.0008	0.04	1	5
Chromium *	0.0012			0.010	0.5	10	70
Copper *	0.014			0.12	2	50	100
Mercury *	< 0.0005			< 0.0050	0.01	0.2	2
Molybdenum *	0.0004			< 0.0040	0.5	10	30
Nickel *	0.0004			0.0034	0.4	10	40
Lead *	< 0.0010			< 0.010	0.5	10	50
Antimony *	< 0.0017			< 0.017	0.06	0.7	5
Selenium *	< 0.0040			< 0.040	0.1	0.5	7
Zinc *	0.0091			0.077	4	50	200
Chloride *	2.3			20	800	4000	25000
Fluoride	1.2			10	10	150	500
Sulphate *	10			88	1000	20000	50000
TDS*	91			770	4000	60000	100000
Phenol Index (Monhydric Phenols) *	< 0.010			< 0.10	1	-	-
DOC	7.63			64.8	500	800	1000
Leach Test Information							
Stone Content (%)	< 0.1						
Sample Mass (kg)	2.0						
Dry Matter (%)	83						
Moisture (%)	17						

Results are expressed on a dry weight basis, after correction for moisture content where applicable. *= UKAS accredited (liquid eluate analysis only)

Stated limits are for guidance only and i2 cannot be held responsible for any discrepencies with current legislation ** = MCERTS accrediited

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This analysis is only applicable for landfill acceptance criteria (The Environmental Permitting (England and Wales) Regulations) and does not give any indication as to whether a waste may be hazardous or non-hazardous.

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Waste Acceptance Criteria Analytical Results

Report No:	**20-87317**						
					Client:	**WOODPLC**	
Location	**Wisbech**						
Lab Reference (Sample Number)	1444305 / 1444306				**Landfill Waste Acceptance Criteria Limits**		
Sampling Date	14/02/2020				Inert Waste Landfill	Stable Non-reactive HAZARDOUS waste in non-hazardous Landfill	Hazardous Waste Landfill
Sample ID	TP10A ES1						
Depth (m)	0.40-0.40						
Solid Waste Analysis							
TOC (%)**	1.1				3%	5%	6%
Loss on Ignition (%) **	2.1				--	--	10%
BTEX (µg/kg) **	< 10				6000	--	--
Sum of PCBs (mg/kg) **	< 0.007				1	--	--
Mineral Oil (mg/kg)	110				500	--	--
Total PAH (WAC-17) (mg/kg)	2.3				100	--	--
pH (units)**	7.7				--	>6	--
Acid Neutralisation Capacity (mol / kg)	8.1				--	To be evaluated	To be evaluated
Eluate Analysis (BS EN 12457 - 2 preparation utilising end over end leaching procedure)	10:1			10:1	Limit values for compliance leaching test using BS EN 12457-2 at L/S 10 l/kg (mg/kg)		
	mg/l			mg/kg			
Arsenic *	< 0.0011			< 0.0110	0.5	2	25
Barium *	0.0215			0.188	20	100	300
Cadmium *	< 0.0001			< 0.0008	0.04	1	5
Chromium *	0.0011			0.010	0.5	10	70
Copper *	0.0062			0.054	2	50	100
Mercury *	< 0.0005			< 0.0050	0.01	0.2	2
Molybdenum *	0.0050			0.0434	0.5	10	30
Nickel *	0.0009			0.0080	0.4	10	40
Lead *	< 0.0010			< 0.010	0.5	10	50
Antimony *	< 0.0017			< 0.017	0.06	0.7	5
Selenium *	< 0.0040			< 0.040	0.1	0.5	7
Zinc *	0.011			0.095	4	50	200
Chloride *	2.3			20	800	4000	25000
Fluoride	1.3			12	10	150	500
Sulphate *	5.8			50	1000	20000	50000
TDS*	93			810	4000	60000	100000
Phenol Index (Monhydric Phenols) *	< 0.010			< 0.10	1	-	-
DOC	5.65			49.2	500	800	1000
Leach Test Information							
Stone Content (%)	< 0.1						
Sample Mass (kg)	2.0						
Dry Matter (%)	84						
Moisture (%)	16						

Results are expressed on a dry weight basis, after correction for moisture content where applicable.
*= UKAS accredited (liquid eluate analysis only)
Stated limits are for guidance only and i2 cannot be held responsible for any discrepencies with current legislation
** = MCERTS accrediited

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes as defined by the Waste (England and Wales) Regulations 2011 (as amended) and EA Guidance WM3.
This analysis is only applicable for landfill acceptance criteria (The Environmental Permitting (England and Wales) Regulations) and does not give any indication as to whether a waste may be hazardous or non-hazardous.

Analytical Report Number : 20-87317

Project / Site name: Wisbech

* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and loam (MCERTS) soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
1444299	TP12A	ES1	0.40-0.40	Brown loam and clay with gravel and vegetation.
1444301	TP02A	ES3	0.45-0.65	Brown loam and clay with gravel and vegetation.
1444303	TP04A	ES2	0.50-0.50	Brown loam and clay with gravel and vegetation.
1444305	TP10A	ES1	0.40-0.40	Brown loam and clay with gravel and vegetation.

Analytical Report Number : 20-87317

Project / Site name: Wisbech

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Water (PrW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Acid neutralisation capacity of soil	Determination of acid neutralisation capacity by addition of acid or alkali followed by electronic probe.	In-house method based on Guidance an Sampling and Testing of Wastes to Meet Landfill Waste Acceptance""	L046-PL	W	NONE
BS EN 12457-2 (10:1) Leachate Prep	10:1 (as recieved, moisture adjusted) end over end extraction with water for 24 hours. Eluate filtered prior to analysis.	In-house method based on BSEN12457-2.	L043-PL	W	NONE
BTEX in soil (Monoaromatics)	Determination of BTEX in soil by headspace GC-MS.	In-house method based on USEPA8260	L073B-PL	W	MCERTS
Chloride 10:1 WAC	Determination of Chloride colorimetrically by discrete analyser.	In house based on MEWAM Method ISBN 0117516260.	L082-PL	W	ISO 17025
Dissolved organic carbon 10:1 WAC	Determination of dissolved inorganic carbon in leachate by TOC/DOC NDIR Analyser.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L037-PL	W	NONE
Fluoride 10:1 WAC	Determination of fluoride in leachate by 1:1ratio with a buffer solution followed by Ion Selective Electrode.	In-house method based on Use of Total Ionic Strength Adjustment Buffer for Electrode Determination"	L033B-PL	W	ISO 17025
Loss on ignition of soil @ 450oC	Determination of loss on ignition in soil by gravimetrically with the sample being ignited in a muffle furnace.	In house method.	L047-PL	D	MCERTS
Metals in leachate by ICP-OES	Determination of metals in leachate by acidification followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil""	L039-PL	W	ISO 17025
Mineral Oil (Soil) C10 - C40	Determination of mineral oil fraction extractable hydrocarbons in soil by GC-MS/GC-FID.	In-house method with silica gel split/clean up.	L076-PL	D	NONE
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	W	NONE
Monohydric phenols 10:1 WAC	Determination of phenols in leachate by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L080-PL	W	ISO 17025
PCB's By GC-MS in soil	Determination of PCB by extraction with acetone and hexane followed by GC-MS.	In-house method based on USEPA 8082	L027-PL	D	MCERTS
pH in soil	Determination of pH in soil by addition of water followed by electrometric measurement.	In house method.	L005-PL	W	MCERTS
Speciated WAC-17 PAHs in soil	Determination of PAH compounds in soil by extraction in dichloromethane and hexane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270. MCERTS accredited except Coronene.	L064-PL	D	NONE
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
Sulphate 10:1 WAC	Determination of sulphate in leachate by ICP-OES	In-house method based on MEWAM 1986 Methods for the Determination of Metals in Soil""	L039-PL	W	ISO 17025
Total dissolved solids 10:1 WAC	Determination of total dissolved solids in water by electrometric measurement.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L004-PL	W	ISO 17025

Analytical Report Number : 20-87317

Project / Site name: Wisbech

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Water (PrW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Total organic carbon (Automated) in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	In house method.	L009-PL	D	MCERTS

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.
For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.
Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.

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Analytical Report Number : 20-87663

Project / Site name:	Wisbech	**Samples received on:**	18/02/2020
Your job number:	41310	**Samples instructed on:**	18/02/2020
Your order number:	324139	**Analysis completed by:**	26/02/2020
Report Issue Number:	1	**Report issued on:**	26/02/2020
Samples Analysed:	2 10:1 WAC Samples		

Signed: [redacted]

Rachel Bradley

Deputy Quality Manager
For & on behalf of i2 Analytical Ltd.

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils	- 4 weeks from reporting
leachates	- 2 weeks from reporting
waters	- 2 weeks from reporting
asbestos	- 6 months from reporting

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Any assessments of compliance with specifications are based on actual analytical results with no contribution from uncertainty of measurement. Application of uncertainty of measurement would provide a range within which the true result lies. An estimate of measurement uncertainty can be provided on request.

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Waste Acceptance Criteria Analytical Results

Report No:	**20-87663**						
					Client:	**WOODPLC**	
Location	**Wisbech**						
Lab Reference (Sample Number)	1446397 / 1446398				**Landfill Waste Acceptance Criteria Limits**		
Sampling Date	17/02/2020				Inert Waste Landfill	Stable Non-reactive HAZARDOUS waste in non-hazardous Landfill	Hazardous Waste Landfill
Sample ID	TP11 ES15						
Depth (m)	0.30-0.30						
Solid Waste Analysis							
TOC (%)**	2.7				3%	5%	6%
Loss on Ignition (%) **	4.9				--	--	10%
BTEX (µg/kg) **	< 10				6000	--	--
Sum of PCBs (mg/kg) **	< 0.007				1	--	--
Mineral Oil (mg/kg)	260				500	--	--
Total PAH (WAC-17) (mg/kg)	55				100	--	--
pH (units)**	7.4				--	>6	--
Acid Neutralisation Capacity (mol / kg)	5.1				--	To be evaluated	To be evaluated
Eluate Analysis	10:1			10:1	Limit values for compliance leaching test		
(BS EN 12457 - 2 preparation utilising end over end leaching procedure)	mg/l			mg/kg	using BS EN 12457-2 at L/S 10 l/kg (mg/kg)		
Arsenic *	0.0040			0.0373	0.5	2	25
Barium *	0.0242			0.226	20	100	300
Cadmium *	< 0.0001			< 0.0008	0.04	1	5
Chromium *	0.0046			0.043	0.5	10	70
Copper *	0.0097			0.090	2	50	100
Mercury *	< 0.0005			< 0.0050	0.01	0.2	2
Molybdenum *	0.0035			0.0323	0.5	10	30
Nickel *	0.0030			0.028	0.4	10	40
Lead *	0.0037			0.035	0.5	10	50
Antimony *	0.0049			0.046	0.06	0.7	5
Selenium *	< 0.0040			< 0.040	0.1	0.5	7
Zinc *	0.012			0.11	4	50	200
Chloride *	4.5			42	800	15000	25000
Fluoride	0.83			7.7	10	150	500
Sulphate *	23			220	1000	20000	50000
TDS*	83			780	4000	60000	100000
Phenol Index (Monohydric Phenols) *	< 0.010			< 0.10	1	-	-
DOC	8.85			82.5	500	800	1000
Leach Test Information							
Stone Content (%)	< 0.1						
Sample Mass (kg)	2.0						
Dry Matter (%)	95						
Moisture (%)	4.8						

Results are expressed on a dry weight basis, after correction for moisture content where applicable.
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Waste Acceptance Criteria Analytical Results

Report No:	**20-87663**						
					Client:	**WOODPLC**	
Location	**Wisbech**						
Lab Reference (Sample Number)	1446399 / 1446400				**Landfill Waste Acceptance Criteria Limits**		
Sampling Date	18/02/2020				Inert Waste Landfill	Stable Non-reactive HAZARDOUS waste in non-hazardous Landfill	Hazardous Waste Landfill
Sample ID	TP09 ES1						
Depth (m)	0.20-0.20						
Solid Waste Analysis							
TOC (%)**	3.4				3%	5%	6%
Loss on Ignition (%) **	6.1				--	--	10%
BTEX (µg/kg) **	< 10				6000	--	--
Sum of PCBs (mg/kg) **	< 0.007				1	--	--
Mineral Oil (mg/kg)	360				500	--	--
Total PAH (WAC-17) (mg/kg)	150				100	--	--
pH (units)**	7.4				--	>6	--
Acid Neutralisation Capacity (mol / kg)	15				--	To be evaluated	To be evaluated
Eluate Analysis	10:1			10:1	Limit values for compliance leaching test		
(BS EN 12457 - 2 preparation utilising end over end leaching procedure)	mg/l			mg/kg	using BS EN 12457-2 at L/S 10 l/kg (mg/kg)		
Arsenic *	< 0.0011			< 0.0110	0.5	2	25
Barium *	0.0126			0.116	20	100	300
Cadmium *	< 0.0001			< 0.0008	0.04	1	5
Chromium *	0.0024			0.022	0.5	10	70
Copper *	0.0061			0.056	2	50	100
Mercury *	< 0.0005			< 0.0050	0.01	0.2	2
Molybdenum *	0.0039			0.0362	0.5	10	30
Nickel *	0.0023			0.021	0.4	10	40
Lead *	0.0063			0.059	0.5	10	50
Antimony *	< 0.0017			< 0.017	0.06	0.7	5
Selenium *	< 0.0040			< 0.040	0.1	0.5	7
Zinc *	0.011			0.11	4	50	200
Chloride *	1.3			12	800	4000	25000
Fluoride	0.89			8.2	10	150	500
Sulphate *	6.2			57	1000	20000	50000
TDS*	59			550	4000	60000	100000
Phenol Index (Monhydric Phenols) *	< 0.010			< 0.10	1	-	-
DOC	5.72			52.7	500	800	1000
Leach Test Information							
Stone Content (%)	< 0.1						
Sample Mass (kg)	2.0						
Dry Matter (%)	95						
Moisture (%)	5.2						

Results are expressed on a dry weight basis, after correction for moisture content where applicable. *= UKAS accredited (liquid eluate analysis only)

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Analytical Report Number : 20-87663

Project / Site name: Wisbech

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Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
1446397	TP11	ES15	0.30-0.30	Brown loam and clay with gravel.
1446399	TP09	ES1	0.20-0.20	Brown loam and clay with gravel.

Analytical Report Number : 20-87663

Project / Site name: Wisbech

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Water (PrW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Acid neutralisation capacity of soil	Determination of acid neutralisation capacity by addition of acid or alkali followed by electronic probe.	In-house method based on Guidance an Sampling and Testing of Wastes to Meet Landfill Waste Acceptance""	L046-PL	W	NONE
BS EN 12457-2 (10:1) Leachate Prep	10:1 (as recieved, moisture adjusted) end over end extraction with water for 24 hours. Eluate filtered prior to analysis.	In-house method based on BSEN12457-2.	L043-PL	W	NONE
BTEX in soil (Monoaromatics)	Determination of BTEX in soil by headspace GC-MS.	In-house method based on USEPA8260	L073B-PL	W	MCERTS
Chloride 10:1 WAC	Determination of Chloride colorimetrically by discrete analyser.	In house based on MEWAM Method ISBN 0117516260.	L082-PL	W	ISO 17025
Dissolved organic carbon 10:1 WAC	Determination of dissolved inorganic carbon in leachate by TOC/DOC NDIR Analyser.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L037-PL	W	NONE
Fluoride 10:1 WAC	Determination of fluoride in leachate by 1:1ratio with a buffer solution followed by Ion Selective Electrode.	In-house method based on Use of Total Ionic Strength Adjustment Buffer for Electrode Determination"	L033B-PL	W	ISO 17025
Loss on ignition of soil @ 450oC	Determination of loss on ignition in soil by gravimetrically with the sample being ignited in a muffle furnace.	In house method.	L047-PL	D	MCERTS
Metals in leachate by ICP-OES	Determination of metals in leachate by acidification followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil""	L039-PL	W	ISO 17025
Mineral Oil (Soil) C10 - C40	Determination of mineral oil fraction extractable hydrocarbons in soil by GC-MS/GC-FID.	In-house method with silica gel split/clean up.	L076-PL	D	NONE
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	W	NONE
Monohydric phenols 10:1 WAC	Determination of phenols in leachate by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L080-PL	W	ISO 17025
PCB's By GC-MS in soil	Determination of PCB by extraction with acetone and hexane followed by GC-MS.	In-house method based on USEPA 8082	L027-PL	D	MCERTS
pH in soil	Determination of pH in soil by addition of water followed by electrometric measurement.	In house method.	L005-PL	W	MCERTS
Speciated WAC-17 PAHs in soil	Determination of PAH compounds in soil by extraction in dichloromethane and hexane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270. MCERTS accredited except Coronene.	L064-PL	D	NONE
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
Sulphate 10:1 WAC	Determination of sulphate in leachate by ICP-OES	In-house method based on MEWAM 1986 Methods for the Determination of Metals in Soil""	L039-PL	W	ISO 17025
Total dissolved solids 10:1 WAC	Determination of total dissolved solids in water by electrometric measurement.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L004-PL	W	ISO 17025

Analytical Report Number : 20-87663

Project / Site name: Wisbech

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Water (PrW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Total organic carbon (Automated) in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	In house method.	L009-PL	D	MCERTS

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.
For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.
Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.

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Analytical Report Number : 20-88361

Project / Site name:	Wisbech	**Samples received on:**	20/02/2020
Your job number:	41310	**Samples instructed on:**	21/02/2020
Your order number:	324139	**Analysis completed by:**	03/03/2020
Report Issue Number:	1	**Report issued on:**	03/03/2020
Samples Analysed:	3 10:1 WAC samples		

Signed [redacted]

Rachel Bradley

Deputy Quality Manager
For & on behalf of i2 Analytical Ltd.

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils	- 4 weeks from reporting
leachates	- 2 weeks from reporting
waters	- 2 weeks from reporting
asbestos	- 6 months from reporting

Excel copies of reports are only valid when accompanied by this PDF certificate.

Any assessments of compliance with specifications are based on actual analytical results with no contribution from uncertainty of measurement. Application of uncertainty of measurement would provide a range within which the true result lies. An estimate of measurement uncertainty can be provided on request.

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Waste Acceptance Criteria Analytical Results

Report No:	**20-88361**						
					Client:	**WOODPLC**	
Location	**Wisbech**						
Lab Reference (Sample Number)	1450103 / 1450104				**Landfill Waste Acceptance Criteria Limits**		
Sampling Date	20/02/2020				Inert Waste Landfill	Stable Non-reactive HAZARDOUS waste in non-hazardous Landfill	Hazardous Waste Landfill
Sample ID	TP06 ES1						
Depth (m)	0.30-0.30						
Solid Waste Analysis							
TOC (%)**	3.1				3%	5%	6%
Loss on Ignition (%) **	5.4				--	--	10%
BTEX (µg/kg) **	< 10				6000	--	--
Sum of PCBs (mg/kg) **	< 0.007				1	--	--
Mineral Oil (mg/kg)	1000				500	--	--
Total PAH (WAC-17) (mg/kg)	310				100	--	--
pH (units)**	8.8				--	>6	--
Acid Neutralisation Capacity (mol / kg)	39				--	To be evaluated	To be evaluated
Eluate Analysis (BS EN 12457 - 2 preparation utilising end over end leaching procedure)	10:1 mg/l			10:1 mg/kg	Limit values for compliance leaching test using BS EN 12457-2 at L/S 10 l/kg (mg/kg)		
Arsenic *	0.0082			0.0743	0.5	2	25
Barium *	0.0149			0.135	20	100	300
Cadmium *	< 0.0001			< 0.0008	0.04	1	5
Chromium *	0.0040			0.037	0.5	10	70
Copper *	0.010			0.092	2	50	100
Mercury *	< 0.0005			< 0.0050	0.01	0.2	2
Molybdenum *	0.0007			0.0061	0.5	10	30
Nickel *	0.0023			0.021	0.4	10	40
Lead *	0.013			0.12	0.5	10	50
Antimony *	0.0056			0.051	0.06	0.7	5
Selenium *	< 0.0040			< 0.040	0.1	0.5	7
Zinc *	0.0088			0.080	4	50	200
Chloride *	3.7			34	800	15000	25000
Fluoride	0.50			4.6	10	150	500
Sulphate *	18			170	1000	20000	50000
TDS*	77			700	4000	60000	100000
Phenol Index (Monohydric Phenols) *	< 0.010			< 0.10	1	-	-
DOC	6.48			59.0	500	800	1000
Leach Test Information							
Stone Content (%)	< 0.1						
Sample Mass (kg)	2.0						
Dry Matter (%)	94						
Moisture (%)	6.2						

Results are expressed on a dry weight basis, after correction for moisture content where applicable.
*= UKAS accredited (liquid eluate analysis only)
Stated limits are for guidance only and i2 cannot be held responsible for any discrepancies with current legislation
** = MCERTS accredited

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes as defined by the Waste (England and Wales) Regulations 2011 (as amended) and EA Guidance WM3.
This analysis is only applicable for landfill acceptance criteria (The Environmental Permitting (England and Wales) Regulations) and does not give any indication as to whether a waste may be hazardous or non-hazardous.

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Waste Acceptance Criteria Analytical Results

Report No:	**20-88361**						
					Client:	**WOODPLC**	
Location	**Wisbech**						
Lab Reference (Sample Number)	1450105 / 1450106				**Landfill Waste Acceptance Criteria Limits**		
Sampling Date	20/02/2020				Inert Waste Landfill	Stable Non-reactive HAZARDOUS waste in non-hazardous Landfill	Hazardous Waste Landfill
Sample ID	TP08 ES1						
Depth (m)	0.40-0.40						
Solid Waste Analysis							
TOC (%)**	1.3				3%	5%	6%
Loss on Ignition (%) **	3.7				--	--	10%
BTEX (µg/kg) **	< 10				6000	--	--
Sum of PCBs (mg/kg) **	< 0.007				1	--	--
Mineral Oil (mg/kg)	330				500	--	--
Total PAH (WAC-17) (mg/kg)	52				100	--	--
pH (units)**	9.1				--	>6	--
Acid Neutralisation Capacity (mol / kg)	18				--	To be evaluated	To be evaluated
Eluate Analysis (BS EN 12457 - 2 preparation utilising end over end leaching procedure)	10:1 mg/l			10:1 mg/kg	Limit values for compliance leaching test using BS EN 12457-2 at L/S 10 l/kg (mg/kg)		
Arsenic *	< 0.0011			< 0.0110	0.5	2	25
Barium *	0.0147			0.131	20	100	300
Cadmium *	< 0.0001			< 0.0008	0.04	1	5
Chromium *	0.0028			0.025	0.5	10	70
Copper *	0.0094			0.084	2	50	100
Mercury *	< 0.0005			< 0.0050	0.01	0.2	2
Molybdenum *	0.0031			0.0280	0.5	10	30
Nickel *	0.0012			0.011	0.4	10	40
Lead *	0.0038			0.034	0.5	10	50
Antimony *	< 0.0017			< 0.017	0.06	0.7	5
Selenium *	< 0.0040			< 0.040	0.1	0.5	7
Zinc *	0.0044			0.039	4	50	200
Chloride *	4.5			40	800	4000	25000
Fluoride	0.50			4.4	10	150	500
Sulphate *	78			700	1000	20000	50000
TDS*	160			1400	4000	60000	100000
Phenol Index (Monhydric Phenols) *	< 0.010			< 0.10	1	-	-
DOC	8.34			74.3	500	800	1000
Leach Test Information							
Stone Content (%)	< 0.1						
Sample Mass (kg)	2.0						
Dry Matter (%)	89						
Moisture (%)	11						

Results are expressed on a dry weight basis, after correction for moisture content where applicable.
*= UKAS accredited (liquid eluate analysis only)
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** = MCERTS accrediited

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Waste Acceptance Criteria Analytical Results

Report No:	**20-88361**						
					Client:	**WOODPLC**	
Location	**Wisbech**						
Lab Reference (Sample Number)	1450107 / 1450108				**Landfill Waste Acceptance Criteria Limits**		
Sampling Date	20/02/2020				Inert Waste Landfill	Stable Non-reactive HAZARDOUS waste in non-hazardous Landfill	Hazardous Waste Landfill
Sample ID	TP08 ES6						
Depth (m)	1.00-1.00						
Solid Waste Analysis							
TOC (%)**	1.7				3%	5%	6%
Loss on Ignition (%) **	4.8				--	--	10%
BTEX (µg/kg) **	< 10				6000	--	--
Sum of PCBs (mg/kg) **	< 0.007				1	--	--
Mineral Oil (mg/kg)	< 10				500	--	--
Total PAH (WAC-17) (mg/kg)	1.2				100	--	--
pH (units)**	8.3				--	>6	--
Acid Neutralisation Capacity (mol / kg)	8.7				--	To be evaluated	To be evaluated
Eluate Analysis (BS EN 12457 - 2 preparation utilising end over end leaching procedure)	10:1 mg/l			10:1 mg/kg	Limit values for compliance leaching test using BS EN 12457-2 at L/S 10 l/kg (mg/kg)		
Arsenic *	< 0.0011			< 0.0110	0.5	2	25
Barium *	0.0432			0.368	20	100	300
Cadmium *	< 0.0001			< 0.0008	0.04	1	5
Chromium *	0.0014			0.012	0.5	10	70
Copper *	0.0066			0.056	2	50	100
Mercury *	< 0.0005			< 0.0050	0.01	0.2	2
Molybdenum *	0.0088			0.0753	0.5	10	30
Nickel *	0.0035			0.029	0.4	10	40
Lead *	0.0019			0.016	0.5	10	50
Antimony *	< 0.0017			< 0.017	0.06	0.7	5
Selenium *	< 0.0040			< 0.040	0.1	0.5	7
Zinc *	0.0034			0.029	4	50	200
Chloride *	5.8			49	800	4000	25000
Fluoride	1.2			11	10	150	500
Sulphate *	7.0			59	1000	20000	50000
TDS*	140			1200	4000	60000	100000
Phenol Index (Monhydric Phenols) *	< 0.010			< 0.10	1	-	-
DOC	18.6			159	500	800	1000
Leach Test Information							
Stone Content (%)	< 0.1						
Sample Mass (kg)	2.0						
Dry Matter (%)	81						
Moisture (%)	19						

Results are expressed on a dry weight basis, after correction for moisture content where applicable.
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Analytical Report Number : 20-88361

Project / Site name: Wisbech

* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and loam (MCERTS) soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
1450103	TP06	ES1	0.30-0.30	Light brown loam and clay with gravel.
1450105	TP08	ES1	0.40-0.40	Brown loam and clay with gravel and vegetation.
1450107	TP08	ES6	1.00-1.00	Brown clay and sand with vegetation.

Analytical Report Number : 20-88361

Project / Site name: Wisbech

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Water (PrW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Acid neutralisation capacity of soil	Determination of acid neutralisation capacity by addition of acid or alkali followed by electronic probe.	In-house method based on Guidance an Sampling and Testing of Wastes to Meet Landfill Waste Acceptance""	L046-PL	W	NONE
BS EN 12457-2 (10:1) Leachate Prep	10:1 (as recieved, moisture adjusted) end over end extraction with water for 24 hours. Eluate filtered prior to analysis.	In-house method based on BSEN12457-2.	L043-PL	W	NONE
BTEX in soil (Monoaromatics)	Determination of BTEX in soil by headspace GC-MS.	In-house method based on USEPA8260	L073B-PL	W	MCERTS
Chloride 10:1 WAC	Determination of Chloride colorimetrically by discrete analyser.	In house based on MEWAM Method ISBN 0117516260.	L082-PL	W	ISO 17025
Dissolved organic carbon 10:1 WAC	Determination of dissolved inorganic carbon in leachate by TOC/DOC NDIR Analyser.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L037-PL	W	NONE
Fluoride 10:1 WAC	Determination of fluoride in leachate by 1:1ratio with a buffer solution followed by Ion Selective Electrode.	In-house method based on Use of Total Ionic Strength Adjustment Buffer for Electrode Determination"	L033B-PL	W	ISO 17025
Loss on ignition of soil @ 450oC	Determination of loss on ignition in soil by gravimetrically with the sample being ignited in a muffle furnace.	In house method.	L047-PL	D	MCERTS
Metals in leachate by ICP-OES	Determination of metals in leachate by acidification followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil""	L039-PL	W	ISO 17025
Mineral Oil (Soil) C10 - C40	Determination of mineral oil fraction extractable hydrocarbons in soil by GC-MS/GC-FID.	In-house method with silica gel split/clean up.	L076-PL	D	NONE
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	W	NONE
Monohydric phenols 10:1 WAC	Determination of phenols in leachate by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L080-PL	W	ISO 17025
PCB's By GC-MS in soil	Determination of PCB by extraction with acetone and hexane followed by GC-MS.	In-house method based on USEPA 8082	L027-PL	D	MCERTS
pH at 20oC in soil	Determination of pH in soil by addition of water followed by electrometric measurement.	In house method.	L005-PL	W	MCERTS
Speciated WAC-17 PAHs in soil	Determination of PAH compounds in soil by extraction in dichloromethane and hexane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270. MCERTS accredited except Coronene.	L064-PL	D	NONE
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
Sulphate 10:1 WAC	Determination of sulphate in leachate by ICP-OES	In-house method based on MEWAM 1986 Methods for the Determination of Metals in Soil""	L039-PL	W	ISO 17025
Total dissolved solids 10:1 WAC	Determination of total dissolved solids in water by electrometric measurement.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L004-PL	W	ISO 17025

Analytical Report Number : 20-88361

Project / Site name: Wisbech

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Water (PrW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Total organic carbon (Automated) in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	In house method.	L009-PL	D	MCERTS

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.
For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.
Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.

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Analytical Report Number : 20-89599

Project / Site name:	Wisbech	**Samples received on:**	27/02/2020
Your job number:	41310	**Samples instructed on:**	27/02/2020
Your order number:	324139	**Analysis completed by:**	05/03/2020
Report Issue Number:	1	**Report issued on:**	05/03/2020
Samples Analysed:	1 leachate sample - 1 soil sample		

Signed: [redacted]

Will Fardo

Technical Reviewer (CS Team)
For & on behalf of i2 Analytical Ltd.

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland.

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soils	- 4 weeks from reporting
leachates	- 2 weeks from reporting
waters	- 2 weeks from reporting
asbestos	- 6 months from reporting

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Waste Acceptance Criteria Analytical Results

Report No:	**20-89599**						
					Client:	**WOODPLC**	
Location	**Wisbech**						
Lab Reference (Sample Number)	1456546 / 1456547				**Landfill Waste Acceptance Criteria Limits**		
Sampling Date	27/02/2020				Inert Waste Landfill	Stable Non-reactive HAZARDOUS waste in non-hazardous Landfill	Hazardous Waste Landfill
Sample ID	BH04 ES2						
Depth (m)	2.10-2.10						
Solid Waste Analysis							
TOC (%)**	0.3				3%	5%	6%
Loss on Ignition (%) **	2.1				--	--	10%
BTEX (µg/kg) **	< 10				6000	--	--
Sum of PCBs (mg/kg) **	< 0.007				1	--	--
Mineral Oil (mg/kg)	< 10				500	--	--
Total PAH (WAC-17) (mg/kg)	< 0.9				100	--	--
pH (units)**	8.8				--	>6	--
Acid Neutralisation Capacity (mol / kg)	11				--	To be evaluated	To be evaluated
Eluate Analysis (BS EN 12457 - 2 preparation utilising end over end leaching procedure)	10:1 mg/l			10:1 mg/kg	Limit values for compliance leaching test using BS EN 12457-2 at L/S 10 l/kg (mg/kg)		
Arsenic *	< 0.0011			< 0.0110	0.5	2	25
Barium *	0.0167			0.151	20	100	300
Cadmium *	< 0.0001			< 0.0008	0.04	1	5
Chromium *	0.0011			0.0097	0.5	10	70
Copper *	0.0059			0.053	2	50	100
Mercury *	< 0.0005			< 0.0050	0.01	0.2	2
Molybdenum *	0.0012			0.0105	0.5	10	30
Nickel *	0.0016			0.014	0.4	10	40
Lead *	0.0044			0.040	0.5	10	50
Antimony *	0.0060			0.054	0.06	0.7	5
Selenium *	< 0.0040			< 0.040	0.1	0.5	7
Zinc *	0.014			0.12	4	50	200
Chloride *	15			130	800	15000	25000
Fluoride	1.1			9.7	10	150	500
Sulphate *	14			130	1000	20000	50000
TDS*	130			1200	4000	60000	100000
Phenol Index (Monohydric Phenols) *	< 0.010			< 0.10	1	-	-
DOC	4.77			43.1	500	800	1000
Leach Test Information							
Stone Content (%)	< 0.1						
Sample Mass (kg)	1.9						
Dry Matter (%)	88						
Moisture (%)	12						

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** = MCERTS accredited

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Analytical Report Number : 20-89599

Project / Site name: Wisbech

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Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
1456546	BH04	ES2	2.10-2.10	Brown clay and sand with gravel.

Analytical Report Number : 20-89599

Project / Site name: Wisbech

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Water (PrW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Acid neutralisation capacity of soil	Determination of acid neutralisation capacity by addition of acid or alkali followed by electronic probe.	In-house method based on Guidance an Sampling and Testing of Wastes to Meet Landfill Waste Acceptance""	L046-PL	W	NONE
BS EN 12457-2 (10:1) Leachate Prep	10:1 (as recieved, moisture adjusted) end over end extraction with water for 24 hours. Eluate filtered prior to analysis.	In-house method based on BSEN12457-2.	L043-PL	W	NONE
BTEX in soil (Monoaromatics)	Determination of BTEX in soil by headspace GC-MS.	In-house method based on USEPA8260	L073B-PL	W	MCERTS
Chloride 10:1 WAC	Determination of Chloride colorimetrically by discrete analyser.	In house based on MEWAM Method ISBN 0117516260.	L082-PL	W	ISO 17025
Dissolved organic carbon 10:1 WAC	Determination of dissolved inorganic carbon in leachate by TOC/DOC NDIR Analyser.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L037-PL	W	NONE
Fluoride 10:1 WAC	Determination of fluoride in leachate by 1:1ratio with a buffer solution followed by Ion Selective Electrode.	In-house method based on Use of Total Ionic Strength Adjustment Buffer for Electrode Determination"	L033B-PL	W	ISO 17025
Loss on ignition of soil @ 450oC	Determination of loss on ignition in soil by gravimetrically with the sample being ignited in a muffle furnace.	In house method.	L047-PL	D	MCERTS
Metals in leachate by ICP-OES	Determination of metals in leachate by acidification followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil""	L039-PL	W	ISO 17025
Mineral Oil (Soil) C10 - C40	Determination of mineral oil fraction extractable hydrocarbons in soil by GC-MS/GC-FID.	In-house method with silica gel split/clean up.	L076-PL	D	NONE
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	W	NONE
Monohydric phenols 10:1 WAC	Determination of phenols in leachate by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L080-PL	W	ISO 17025
PCB's By GC-MS in soil	Determination of PCB by extraction with acetone and hexane followed by GC-MS.	In-house method based on USEPA 8082	L027-PL	D	MCERTS
pH at 20oC in soil	Determination of pH in soil by addition of water followed by electrometric measurement.	In house method.	L005-PL	W	MCERTS
Speciated WAC-17 PAHs in soil	Determination of PAH compounds in soil by extraction in dichloromethane and hexane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270. MCERTS accredited except Coronene.	L064-PL	D	NONE
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
Sulphate 10:1 WAC	Determination of sulphate in leachate by ICP-OES	In-house method based on MEWAM 1986 Methods for the Determination of Metals in Soil""	L039-PL	W	ISO 17025
Total dissolved solids 10:1 WAC	Determination of total dissolved solids in water by electrometric measurement.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L004-PL	W	ISO 17025

Analytical Report Number : 20-89599

Project / Site name: Wisbech

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Water (PrW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Total organic carbon (Automated) in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	In house method.	L009-PL	D	MCERTS

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.
For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.
Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.

Appendix J
Chemical Groundwater and Surface Water Results

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e: [redacted]

Analytical Report Number : 20-11214

Project / Site name:		**Samples received on:**	28/05/2020
Your job number:		**Sample instructed/ Analysis started on:**	28/05/2020
Your order number:	325031	**Analysis completed by:**	03/06/2020
Report Issue Number:	1	**Report issued on:**	03/06/2020
Samples Analysed:	3 water samples		

Signed: [redacted]

Karolina Marek
PL Head of Reporting Team

For & on behalf of i2 Analytical Ltd.

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils	- 4 weeks from reporting
leachates	- 2 weeks from reporting
waters	- 2 weeks from reporting
asbestos	- 6 months from reporting

Excel copies of reports are only valid when accompanied by this PDF certificate.

Any assessments of compliance with specifications are based on actual analytical results with no contribution from uncertainty of measurement. Application of uncertainty of measurement would provide a range within which the true result lies. An estimate of measurement uncertainty can be provided on request.

Analytical Report Number: 20-11214

Lab Sample Number				1518644	1518645	1518646		
Sample Reference				BH03	BH06	BH12		
Sample Number				None Supplied	None Supplied	None Supplied		
Depth (m)				None Supplied	None Supplied	None Supplied		
Date Sampled				26/05/2020	26/05/2020	26/05/2020		
Time Taken				None Supplied	None Supplied	None Supplied		
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
General Inorganics								
Sulphate as SO_4	mg/l	0.045	ISO 17025	1040	256	448		
Ammoniacal Nitrogen as N	µg/l	15	ISO 17025	550	930	3500		
Total Organic Carbon (TOC)	mg/l	0.1	ISO 17025	28.6	10.8	15.7		
Total Phenols								
Total Phenols (monohydric)	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Heavy Metals / Metalloids								
Boron (dissolved)	µg/l	10	ISO 17025	420	370	1200		
Chromium (hexavalent)	µg/l	5	ISO 17025	< 5.0	< 5.0	< 5.0		
Selenium (dissolved)	µg/l	4	ISO 17025	< 4.0	< 4.0	< 4.0		
Arsenic (dissolved)	µg/l	0.15	ISO 17025	0.38	< 0.15	1.30		
Boron (dissolved)	µg/l	10	ISO 17025	420	370	1200		
Cadmium (dissolved)	µg/l	0.02	ISO 17025	< 0.02	< 0.02	< 0.02		
Chromium (hexavalent)	µg/l	5	ISO 17025	< 5.0	< 5.0	< 5.0		
Chromium (dissolved)	µg/l	0.2	ISO 17025	< 0.2	< 0.2	< 0.2		
Copper (dissolved)	µg/l	0.5	ISO 17025	< 0.5	< 0.5	< 0.5		
Lead (dissolved)	µg/l	0.2	ISO 17025	< 0.2	< 0.2	< 0.2		
Mercury (dissolved)	µg/l	0.05	ISO 17025	< 0.05	< 0.05	< 0.05		
Nickel (dissolved)	µg/l	0.5	ISO 17025	1.5	< 0.5	< 0.5		
Selenium (dissolved)	µg/l	0.6	ISO 17025	U/S*	U/S*	U/S*		
Zinc (dissolved)	µg/l	0.5	ISO 17025	0.6	4.8	< 0.5		
Monoaromatics & Oxygenates								
Benzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Toluene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Ethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
p & m-xylene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
o-xylene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
MTBE (Methyl Tertiary Butyl Ether)	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		

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Date Sampled				26/05/2020	26/05/2020	26/05/2020		
Time Taken				None Supplied	None Supplied	None Supplied		
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Petroleum Hydrocarbons								
TPH-CWG - Aliphatic >C5 - C6	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
TPH-CWG - Aliphatic >C6 - C8	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
TPH-CWG - Aliphatic >C8 - C10	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
TPH-CWG - Aliphatic >C10 - C12	µg/l	10	NONE	< 10	< 10	< 10		
TPH-CWG - Aliphatic >C12 - C16	µg/l	10	NONE	< 10	< 10	< 10		
TPH-CWG - Aliphatic >C16 - C21	µg/l	10	NONE	< 10	< 10	< 10		
TPH-CWG - Aliphatic >C21 - C35	µg/l	10	NONE	< 10	< 10	< 10		
TPH-CWG - Aliphatic (C5 - C35)	µg/l	10	NONE	< 10	< 10	< 10		
TPH-CWG - Aromatic >C5 - C7	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
TPH-CWG - Aromatic >C7 - C8	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
TPH-CWG - Aromatic >C8 - C10	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
TPH-CWG - Aromatic >C10 - C12	µg/l	10	NONE	< 10	< 10	< 10		
TPH-CWG - Aromatic >C12 - C16	µg/l	10	NONE	< 10	< 10	< 10		
TPH-CWG - Aromatic >C16 - C21	µg/l	10	NONE	< 10	< 10	< 10		
TPH-CWG - Aromatic >C21 - C35	µg/l	10	NONE	< 10	< 10	< 10		
TPH-CWG - Aromatic (C5 - C35)	µg/l	10	NONE	< 10	< 10	< 10		

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Time Taken				None Supplied	None Supplied	None Supplied		
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
VOCs								
Chloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Chloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Bromomethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Vinyl Chloride	µg/l	1	NONE	< 1.0	< 1.0	< 1.0		
Trichlorofluoromethane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0		
1,1-Dichloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
1,1,2-Trichloro-1,2,2-trifluoroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Cis-1,2-dichloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
MTBE (Methyl Tertiary Butyl Ether)	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
1,1-Dichloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
2,2-Dichloropropane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Trichloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
1,1,1-Trichloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
1,2-Dichloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
1,1-Dichloropropene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Trans-1,2-dichloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Benzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Tetrachloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
1,2-Dichloropropane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Trichloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Dibromomethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Bromodichloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Cis-1,3-dichloropropene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Trans-1,3-dichloropropene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Toluene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
1,1,2-Trichloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
1,3-Dichloropropane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Dibromochloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Tetrachloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
1,2-Dibromoethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Chlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
1,1,1,2-Tetrachloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Ethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
p & m-Xylene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Styrene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Tribromomethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
o-Xylene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
1,1,2,2-Tetrachloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Isopropylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Bromobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
n-Propylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
2-Chlorotoluene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
4-Chlorotoluene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
1,3,5-Trimethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
tert-Butylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
1,2,4-Trimethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
sec-Butylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
1,3-Dichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
p-Isopropyltoluene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
1,2-Dichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
1,4-Dichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Butylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
1,2-Dibromo-3-chloropropane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
1,2,4-Trichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Hexachlorobutadiene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
1,2,3-Trichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		

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Date Sampled				26/05/2020	26/05/2020	26/05/2020		
Time Taken				None Supplied	None Supplied	None Supplied		
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
VOCs TICs								
VOCs TICs Compound Name		10	NONE	ND	ND	ND		
VOC % Match	%	10	NONE	0	0	0		

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Date Sampled				26/05/2020	26/05/2020	26/05/2020		
Time Taken				None Supplied	None Supplied	None Supplied		
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
SVOCs								
Aniline	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
Phenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
2-Chlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
Bis(2-chloroethyl)ether	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
1,3-Dichlorobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
1,2-Dichlorobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
1,4-Dichlorobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
Bis(2-chloroisopropyl)ether	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
2-Methylphenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
Hexachloroethane	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
Nitrobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
4-Methylphenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
Isophorone	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
2-Nitrophenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
2,4-Dimethylphenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
Bis(2-chloroethoxy)methane	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
1,2,4-Trichlorobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
Naphthalene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01		
2,4-Dichlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
4-Chloroaniline	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
Hexachlorobutadiene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
4-Chloro-3-methylphenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
2,4,6-Trichlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
2,4,5-Trichlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
2-Methylnaphthalene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
2-Chloronaphthalene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
Dimethylphthalate	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
2,6-Dinitrotoluene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
Acenaphthylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01		
Acenaphthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01		
2,4-Dinitrotoluene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
Dibenzofuran	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
4-Chlorophenyl phenyl ether	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
Diethyl phthalate	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
4-Nitroaniline	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
Fluorene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01		
Azobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
Bromophenyl phenyl ether	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
Hexachlorobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
Phenanthrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01		
Anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01		
Carbazole	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
Dibutyl phthalate	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
Anthraquinone	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
Fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01		
Pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01		
Butyl benzyl phthalate	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
Benzo(a)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01		
Chrysene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01		
Benzo(b)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01		
Benzo(k)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01		
Benzo(a)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01		
Indeno(1,2,3-cd)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01		
Dibenz(a,h)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01		
Benzo(ghi)perylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01		

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Date Sampled				26/05/2020	26/05/2020	26/05/2020		
Time Taken				None Supplied	None Supplied	None Supplied		
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
SVOCs TICs								
SVOCs TICs Compound Name		N/A	NONE	ND	ND	ND		
SVOC % Match	%	N/A	NONE	0	0	0		

U/S = Unsuitable Sample I/S = Insufficient Sample
* U/S for Se on ICP-MS due to matrix interference.

Analytical Report Number : 20-11214

Project / Site name:

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Water (PrW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Ammoniacal Nitrogen as N in water	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the discrete analyser (colorimetric) salicylate/nitroprusside method. Accredited matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	ISO 17025
Boron in water	Determination of boron in water by acidification followed by ICP-OES. Accredited matrices: SW PW GW	In-house method based on MEWAM	L039-PL	W	ISO 17025
BTEX and MTBE in water (Monoaromatics)	Determination of BTEX and MTBE in water by headspace GC-MS. Accredited matrices: SW PW GW	In-house method based on USEPA8260	L073B-PL	W	ISO 17025
Hexavalent chromium in water	Determination of hexavalent chromium in water by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.	In-house method by continuous flow analyser. Accredited Matrices SW, GW, PW.	L080-PL	W	ISO 17025
Metals in water by ICP-MS (dissolved)	Determination of metals in water by acidification followed by ICP-MS. Accredited Matrices: SW, GW, PW except B=SW,GW, Hg=SW,PW, Al=SW,PW.	In-house method based on USEPA Method 6020 & 200.8 "for the determination of trace elements in water by ICP-MS.	L012-PL	W	ISO 17025
Metals in water by ICP-OES (dissolved)	Determination of metals in water by acidification followed by ICP-OES. Accredited Matrices SW, GW, PW, PrW.(Al, Cu,Fe,Zn).	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L039-PL	W	ISO 17025
Monohydric phenols in water - LOW LEVEL 1 ug/l	Determination of phenols in water by continuous flow analyser. Accredited matrices: SW PW GW	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)	L080-PL	W	ISO 17025
Semi-volatile organic compounds in water	Determination of semi-volatile organic compounds in leachate by extraction in dichloromethane followed by GC-MS.	In-house method based on USEPA 8270	L102B-PL	W	NONE
Sulphate in water	Determination of sulphate in water by acidification followed by ICP-OES. Accredited matrices: SW PW GW, PrW.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L039-PL	W	ISO 17025
Tentatively identified compounds (SVOC) in water	Determination of semi-volatile organic compounds total ion count in water by extraction with hexane followed by GC-MS followed by a full library scan.	In-house method based on USEPA 8270	L070-PL	W	NONE
Tentatively identified compounds (VOC) in water	Determination of volatile organic compounds total ion count in water by headspace GC-MS followed by a full library scan.	In-house method based on USEPA8260	L073B-PL	W	NONE
Total organic carbon in water	Determination of dissolved organic carbon in water by TOC/DOC NDIR analyser. Accredited matrices: SW PW GW.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L037-PL	W	ISO 17025
TPHCWG (Waters)	Determination of dichloromethane extractable hydrocarbons in water by GC-MS, speciation by interpretation.	In-house method	L070-PL	W	NONE
Volatile organic compounds in water	Determination of volatile organic compounds in water by headspace GC-MS. Accredited matrices: SW PW GW	In-house method based on USEPA8260	L073B-PL	W	ISO 17025

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.
For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.
Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.

Ish Konteh
Wood Environment & Infrastructure Solutions
Prospect House
Leeds
LS1 4BJ

e: [redacted]

i2 Analytical Ltd.
7 Woodshots Meadow,
Croxley Green
Business Park,
Watford,
Herts,
WD18 8YS

t: [redacted]
f: [redacted]
e: [redacted]

Analytical Report Number : 20-11473

Project / Site name:	Wisbech	**Samples received on:**	28/05/2020
Your job number:	41310	**Sample instructed/ Analysis started on:**	29/05/2020
Your order number:	325031	**Analysis completed by:**	05/06/2020
Report Issue Number:	1	**Report issued on:**	05/06/2020
Samples Analysed:	2 water samples		

Signed: [redacted]

Agnieszka Czerwińska

Technical Reviewer (Reporting Team)
For & on behalf of i2 Analytical Ltd.

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland.

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soils	- 4 weeks from reporting
leachates	- 2 weeks from reporting
waters	- 2 weeks from reporting
asbestos	- 6 months from reporting

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Any assessments of compliance with specifications are based on actual analytical results with no contribution from uncertainty of measurement. Application of uncertainty of measurement would provide a range within which the true result lies. An estimate of measurement uncertainty can be provided on request.

Analytical Report Number: 20-11473

Project / Site name: Wisbech

Lab Sample Number				1519915	1519916			
Sample Reference				BH2	BH13			
Sample Number				None Supplied	None Supplied			
Depth (m)				None Supplied	None Supplied			
Date Sampled				27/05/2020	27/05/2020			
Time Taken				None Supplied	None Supplied			
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
General Inorganics								
Sulphate as SO_4	mg/l	0.045	ISO 17025	156	647			
Ammoniacal Nitrogen as N	µg/l	15	ISO 17025	2000	1300			
Total Organic Carbon (TOC)	mg/l	0.1	ISO 17025	12.0	20.2			
Total Phenols								
Total Phenols (monohydric)	µg/l	1	ISO 17025	< 1.0	< 1.0			
Heavy Metals / Metalloids								
Boron (dissolved)	µg/l	10	ISO 17025	1100	520			
Chromium (hexavalent)	µg/l	5	ISO 17025	< 5.0	< 5.0			
Selenium (dissolved)	µg/l	4	ISO 17025	< 4.0	< 4.0			
Arsenic (dissolved)	µg/l	0.15	ISO 17025	< 0.15	0.45			
Boron (dissolved)	µg/l	10	ISO 17025	1100	520			
Cadmium (dissolved)	µg/l	0.02	ISO 17025	0.06	< 0.02			
Chromium (hexavalent)	µg/l	5	ISO 17025	< 5.0	< 5.0			
Chromium (dissolved)	µg/l	0.2	ISO 17025	< 0.2	< 0.2			
Copper (dissolved)	µg/l	0.5	ISO 17025	< 0.5	< 0.5			
Lead (dissolved)	µg/l	0.2	ISO 17025	< 0.2	< 0.2			
Mercury (dissolved)	µg/l	0.05	ISO 17025	< 0.05	< 0.05			
Nickel (dissolved)	µg/l	0.5	ISO 17025	< 0.5	0.6			
Selenium (dissolved)	µg/l	0.6	ISO 17025	U/S*	U/S*			
Zinc (dissolved)	µg/l	0.5	ISO 17025	< 0.5	< 0.5			
Monoaromatics & Oxygenates								
Benzene	µg/l	1	ISO 17025	< 1.0	< 1.0			
Toluene	µg/l	1	ISO 17025	< 1.0	< 1.0			
Ethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0			
p & m-xylene	µg/l	1	ISO 17025	< 1.0	< 1.0			
o-xylene	µg/l	1	ISO 17025	< 1.0	< 1.0			
MTBE (Methyl Tertiary Butyl Ether)	µg/l	1	ISO 17025	< 1.0	< 1.0			
Petroleum Hydrocarbons								
TPH-CWG - Aliphatic >C5 - C6	µg/l	1	ISO 17025	< 1.0	< 1.0			
TPH-CWG - Aliphatic >C6 - C8	µg/l	1	ISO 17025	< 1.0	< 1.0			
TPH-CWG - Aliphatic >C8 - C10	µg/l	1	ISO 17025	< 1.0	< 1.0			
TPH-CWG - Aliphatic >C10 - C12	µg/l	10	NONE	< 10	< 10			
TPH-CWG - Aliphatic >C12 - C16	µg/l	10	NONE	< 10	< 10			
TPH-CWG - Aliphatic >C16 - C21	µg/l	10	NONE	< 10	< 10			
TPH-CWG - Aliphatic >C21 - C35	µg/l	10	NONE	< 10	< 10			
TPH-CWG - Aliphatic (C5 - C35)	µg/l	10	NONE	< 10	< 10			
TPH-CWG - Aromatic >C5 - C7	µg/l	1	ISO 17025	< 1.0	< 1.0			
TPH-CWG - Aromatic >C7 - C8	µg/l	1	ISO 17025	< 1.0	< 1.0			
TPH-CWG - Aromatic >C8 - C10	µg/l	1	ISO 17025	< 1.0	< 1.0			
TPH-CWG - Aromatic >C10 - C12	µg/l	10	NONE	< 10	< 10			
TPH-CWG - Aromatic >C12 - C16	µg/l	10	NONE	< 10	< 10			
TPH-CWG - Aromatic >C16 - C21	µg/l	10	NONE	< 10	< 10			
TPH-CWG - Aromatic >C21 - C35	µg/l	10	NONE	< 10	< 10			
TPH-CWG - Aromatic (C5 - C35)	µg/l	10	NONE	< 10	< 10			

Analytical Report Number: 20-11473

Project / Site name: Wisbech

Lab Sample Number				1519915	1519916			
Sample Reference				BH2	BH13			
Sample Number				None Supplied	None Supplied			
Depth (m)				None Supplied	None Supplied			
Date Sampled				27/05/2020	27/05/2020			
Time Taken				None Supplied	None Supplied			
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
VOCs								
Chloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0			
Chloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0			
Bromomethane	µg/l	1	ISO 17025	< 1.0	< 1.0			
Vinyl Chloride	µg/l	1	NONE	< 1.0	< 1.0			
Trichlorofluoromethane	µg/l	1	NONE	< 1.0	< 1.0			
1,1-Dichloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0			
1,1,2-Trichloro-1,2,2-trifluoroethane	µg/l	1	ISO 17025	< 1.0	< 1.0			
Cis-1,2-dichloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0			
MTBE (Methyl Tertiary Butyl Ether)	µg/l	1	ISO 17025	< 1.0	< 1.0			
1,1-Dichloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0			
2,2-Dichloropropane	µg/l	1	ISO 17025	< 1.0	< 1.0			
Trichloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0			
1,1,1-Trichloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0			
1,2-Dichloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0			
1,1-Dichloropropene	µg/l	1	ISO 17025	< 1.0	< 1.0			
Trans-1,2-dichloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0			
Benzene	µg/l	1	ISO 17025	< 1.0	< 1.0			
Tetrachloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0			
1,2-Dichloropropane	µg/l	1	ISO 17025	< 1.0	< 1.0			
Trichloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0			
Dibromomethane	µg/l	1	ISO 17025	< 1.0	< 1.0			
Bromodichloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0			
Cis-1,3-dichloropropene	µg/l	1	ISO 17025	< 1.0	< 1.0			
Trans-1,3-dichloropropene	µg/l	1	ISO 17025	< 1.0	< 1.0			
Toluene	µg/l	1	ISO 17025	< 1.0	< 1.0			
1,1,2-Trichloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0			
1,3-Dichloropropane	µg/l	1	ISO 17025	< 1.0	< 1.0			
Dibromochloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0			
Tetrachloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0			
1,2-Dibromoethane	µg/l	1	ISO 17025	< 1.0	< 1.0			
Chlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0			
1,1,1,2-Tetrachloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0			
Ethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0			
p & m-Xylene	µg/l	1	ISO 17025	< 1.0	< 1.0			
Styrene	µg/l	1	ISO 17025	< 1.0	< 1.0			
Tribromomethane	µg/l	1	ISO 17025	< 1.0	< 1.0			
o-Xylene	µg/l	1	ISO 17025	< 1.0	< 1.0			
1,1,2,2-Tetrachloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0			
Isopropylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0			
Bromobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0			
n-Propylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0			
2-Chlorotoluene	µg/l	1	ISO 17025	< 1.0	< 1.0			
4-Chlorotoluene	µg/l	1	ISO 17025	< 1.0	< 1.0			
1,3,5-Trimethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0			
tert-Butylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0			
1,2,4-Trimethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0			
sec-Butylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0			
1,3-Dichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0			
p-Isopropyltoluene	µg/l	1	ISO 17025	< 1.0	< 1.0			
1,2-Dichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0			
1,4-Dichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0			
Butylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0			
1,2-Dibromo-3-chloropropane	µg/l	1	ISO 17025	< 1.0	< 1.0			
1,2,4-Trichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0			
Hexachlorobutadiene	µg/l	1	ISO 17025	< 1.0	< 1.0			
1,2,3-Trichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0			

Analytical Report Number: 20-11473

Project / Site name: Wisbech

Lab Sample Number				1519915	1519916			
Sample Reference				BH2	BH13			
Sample Number				None Supplied	None Supplied			
Depth (m)				None Supplied	None Supplied			
Date Sampled				27/05/2020	27/05/2020			
Time Taken				None Supplied	None Supplied			
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
VOCs TICs								
VOCs TICs Compound Name		10	NONE	ND	ND			
VOC % Match	%	10	NONE	0	0			

Analytical Report Number: 20-11473

Project / Site name: Wisbech

Lab Sample Number				1519915	1519916			
Sample Reference				BH2	BH13			
Sample Number				None Supplied	None Supplied			
Depth (m)				None Supplied	None Supplied			
Date Sampled				27/05/2020	27/05/2020			
Time Taken				None Supplied	None Supplied			
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
SVOCs								
Aniline	µg/l	0.05	NONE	< 0.05	< 0.05			
Phenol	µg/l	0.05	NONE	< 0.05	< 0.05			
2-Chlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05			
Bis(2-chloroethyl)ether	µg/l	0.05	NONE	< 0.05	< 0.05			
1,3-Dichlorobenzene	µg/l	0.05	NONE	< 0.05	< 0.05			
1,2-Dichlorobenzene	µg/l	0.05	NONE	< 0.05	< 0.05			
1,4-Dichlorobenzene	µg/l	0.05	NONE	< 0.05	< 0.05			
Bis(2-chloroisopropyl)ether	µg/l	0.05	NONE	< 0.05	< 0.05			
2-Methylphenol	µg/l	0.05	NONE	< 0.05	< 0.05			
Hexachloroethane	µg/l	0.05	NONE	< 0.05	< 0.05			
Nitrobenzene	µg/l	0.05	NONE	< 0.05	< 0.05			
4-Methylphenol	µg/l	0.05	NONE	< 0.05	< 0.05			
Isophorone	µg/l	0.05	NONE	< 0.05	< 0.05			
2-Nitrophenol	µg/l	0.05	NONE	< 0.05	< 0.05			
2,4-Dimethylphenol	µg/l	0.05	NONE	< 0.05	< 0.05			
Bis(2-chloroethoxy)methane	µg/l	0.05	NONE	< 0.05	< 0.05			
1,2,4-Trichlorobenzene	µg/l	0.05	NONE	< 0.05	< 0.05			
Naphthalene	µg/l	0.01	ISO 17025	< 0.01	< 0.01			
2,4-Dichlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05			
4-Chloroaniline	µg/l	0.05	NONE	< 0.05	< 0.05			
Hexachlorobutadiene	µg/l	0.05	NONE	< 0.05	< 0.05			
4-Chloro-3-methylphenol	µg/l	0.05	NONE	< 0.05	< 0.05			
2,4,6-Trichlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05			
2,4,5-Trichlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05			
2-Methylnaphthalene	µg/l	0.05	NONE	< 0.05	< 0.05			
2-Chloronaphthalene	µg/l	0.05	NONE	< 0.05	< 0.05			
Dimethylphthalate	µg/l	0.05	NONE	< 0.05	< 0.05			
2,6-Dinitrotoluene	µg/l	0.05	NONE	< 0.05	< 0.05			
Acenaphthylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01			
Acenaphthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01			
2,4-Dinitrotoluene	µg/l	0.05	NONE	< 0.05	< 0.05			
Dibenzofuran	µg/l	0.05	NONE	< 0.05	< 0.05			
4-Chlorophenyl phenyl ether	µg/l	0.05	NONE	< 0.05	< 0.05			
Diethyl phthalate	µg/l	0.05	NONE	< 0.05	< 0.05			
4-Nitroaniline	µg/l	0.05	NONE	< 0.05	< 0.05			
Fluorene	µg/l	0.01	ISO 17025	< 0.01	< 0.01			
Azobenzene	µg/l	0.05	NONE	< 0.05	< 0.05			
Bromophenyl phenyl ether	µg/l	0.05	NONE	< 0.05	< 0.05			
Hexachlorobenzene	µg/l	0.05	NONE	< 0.05	< 0.05			
Phenanthrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01			
Anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01			
Carbazole	µg/l	0.05	NONE	< 0.05	< 0.05			
Dibutyl phthalate	µg/l	0.05	NONE	< 0.05	< 0.05			
Anthraquinone	µg/l	0.05	NONE	< 0.05	< 0.05			
Fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01			
Pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01			
Butyl benzyl phthalate	µg/l	0.05	NONE	< 0.05	< 0.05			
Benzo(a)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01			
Chrysene	µg/l	0.01	ISO 17025	< 0.01	< 0.01			
Benzo(b)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01			
Benzo(k)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01			
Benzo(a)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01			
Indeno(1,2,3-cd)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01			
Dibenz(a,h)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01			
Benzo(ghi)perylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01			

Analytical Report Number: 20-11473

Project / Site name: Wisbech

Lab Sample Number				1519915	1519916			
Sample Reference				BH2	BH13			
Sample Number				None Supplied	None Supplied			
Depth (m)				None Supplied	None Supplied			
Date Sampled				27/05/2020	27/05/2020			
Time Taken				None Supplied	None Supplied			
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
SVOCs TICs								
SVOCs TICs Compound Name		N/A	NONE	ND	ND			
SVOC % Match	%	N/A	NONE	0	0			

* U/S for Se on ICP-MS due to matrix interference.

U/S = Unsuitable Sample I/S = Insufficient Sample

Analytical Report Number : 20-11473

Project / Site name: Wisbech

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Water (PrW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Ammoniacal Nitrogen as N in water	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the discrete analyser (colorimetric) salicylate/nitroprusside method. Accredited matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	ISO 17025
Boron in water	Determination of boron in water by acidification followed by ICP-OES. Accredited matrices: SW PW GW	In-house method based on MEWAM	L039-PL	W	ISO 17025
BTEX and MTBE in water (Monoaromatics)	Determination of BTEX and MTBE in water by headspace GC-MS. Accredited matrices: SW PW GW	In-house method based on USEPA8260	L073B-PL	W	ISO 17025
Hexavalent chromium in water	Determination of hexavalent chromium in water by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.	In-house method by continuous flow analyser. Accredited Matrices SW, GW, PW.	L080-PL	W	ISO 17025
Metals in water by ICP-MS (dissolved)	Determination of metals in water by acidification followed by ICP-MS. Accredited Matrices: SW, GW, PW except B=SW,GW, Hg=SW,PW, Al=SW,PW.	In-house method based on USEPA Method 6020 & 200.8 "for the determination of trace elements in water by ICP-MS.	L012-PL	W	ISO 17025
Metals in water by ICP-OES (dissolved)	Determination of metals in water by acidification followed by ICP-OES. Accredited Matrices SW, GW, PW, PrW.(Al, Cu,Fe,Zn).	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L039-PL	W	ISO 17025
Monohydric phenols in water - LOW LEVEL 1 ug/l	Determination of phenols in water by continuous flow analyser. Accredited matrices: SW PW GW	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)	L080-PL	W	ISO 17025
Semi-volatile organic compounds in water	Determination of semi-volatile organic compounds in leachate by extraction in dichloromethane followed by GC-MS.	In-house method based on USEPA 8270	L102B-PL	W	NONE
Sulphate in water	Determination of sulphate in water by acidification followed by ICP-OES. Accredited matrices: SW PW GW, PrW.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L039-PL	W	ISO 17025
Tentatively identified compounds (SVOC) in water	Determination of semi-volatile organic compounds total ion count in water by extraction with hexane followed by GC-MS followed by a full library scan.	In-house method based on USEPA 8270	L070-PL	W	NONE
Tentatively identified compounds (VOC) in water	Determination of volatile organic compounds total ion count in water by headspace GC-MS followed by a full library scan.	In-house method based on USEPA8260	L073B-PL	W	NONE
Total organic carbon in water	Determination of dissolved organic carbon in water by TOC/DOC NDIR analyser. Accredited matrices: SW PW GW.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L037-PL	W	ISO 17025
TPHCWG (Waters)	Determination of dichloromethane extractable hydrocarbons in water by GC-MS, speciation by interpretation.	In-house method	L070-PL	W	NONE
Volatile organic compounds in water	Determination of volatile organic compounds in water by headspace GC-MS. Accredited matrices: SW PW GW	In-house method based on USEPA8260	L073B-PL	W	ISO 17025

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.
For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.
Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.

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Wood Environment & Infrastructure Solutions
Prospect House
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LS1 4BJ

e: [redacted]

i2 Analytical Ltd.
7 Woodshots Meadow,
Croxley Green
Business Park,
Watford,
Herts,
WD18 8YS

t: [redacted]
f: [redacted]
e: [redacted]

Analytical Report Number : 20-11637

Project / Site name:	Wisbech	**Samples received on:**	01/06/2020
Your job number:		**Sample instructed/ Analysis started on:**	01/06/2020
Your order number:	325031	**Analysis completed by:**	08/06/2020
Report Issue Number:	1	**Report issued on:**	10/06/2020
Samples Analysed:	8 water samples		

Signed [redacted]

Agnieszka Czerwińska

Technical Reviewer (Reporting Team)
For & on behalf of i2 Analytical Ltd.

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils	- 4 weeks from reporting
leachates	- 2 weeks from reporting
waters	- 2 weeks from reporting
asbestos	- 6 months from reporting

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Any assessments of compliance with specifications are based on actual analytical results with no contribution from uncertainty of measurement. Application of uncertainty of measurement would provide a range within which the true result lies. An estimate of measurement uncertainty can be provided on request.

Analytical Report Number: 20-11637

Project / Site name: Wisbech

Lab Sample Number				1520592	1520593	1520594	1520595	1520596
Sample Reference				BH4	BH10	SW3	BH5	DUP01
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				Deviating	Deviating	Deviating	Deviating	Deviating
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
General Inorganics								
Electrical Conductivity at 20 °C	µS/cm	10	ISO 17025	-	-	8800	-	-
Sulphate as SO_4	mg/l	0.045	ISO 17025	412	455	334	373	422
Ammoniacal Nitrogen as N	µg/l	15	ISO 17025	3300	980	440	3000	3300
Total Organic Carbon (TOC)	mg/l	0.1	ISO 17025	11.5	22.3	35.6	16.0	9.10
Chemical Oxygen Demand (Total)	mg/l	2	ISO 17025	-	-	2600	-	-
BOD (Biochemical Oxygen Demand) (Total) - PL	mg/l	1	ISO 17025	-	-	15	-	-
Hardness - Total	mgCaCO3/l	1	ISO 17025	-	-	1350	-	-
Total Phenols								
Total Phenols (monohydric)	µg/l	1	ISO 17025	< 1.0	3.5	1.0	< 1.0	< 1.0
Heavy Metals / Metalloids								
Arsenic (dissolved)	µg/l	0.15	ISO 17025	0.72	0.92	2.49	< 0.15	1.11
Boron (dissolved)	µg/l	10	ISO 17025	1500	350	1800	1700	1500
Cadmium (dissolved)	µg/l	0.02	ISO 17025	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
Calcium (dissolved)	mg/l	0.012	ISO 17025	-	-	180	-	-
Chromium (hexavalent)	µg/l	5	ISO 17025	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Chromium (dissolved)	µg/l	0.2	ISO 17025	< 0.2	0.4	< 0.2	< 0.2	< 0.2
Copper (dissolved)	µg/l	0.5	ISO 17025	< 0.5	1.3	< 0.5	< 0.5	< 0.5
Lead (dissolved)	µg/l	0.2	ISO 17025	< 0.2	0.2	< 0.2	< 0.2	< 0.2
Magnesium (dissolved)	mg/l	0.005	ISO 17025	-	-	220	-	-
Mercury (dissolved)	µg/l	0.05	ISO 17025	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Nickel (dissolved)	µg/l	0.5	ISO 17025	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Selenium (dissolved)	µg/l	0.6	ISO 17025	17	7.9	21	17	17
Zinc (dissolved)	µg/l	0.5	ISO 17025	< 0.5	0.6	< 0.5	< 0.5	< 0.5
Monoaromatics & Oxygenates								
Benzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p & m-xylene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-xylene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

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Project / Site name: Wisbech

Lab Sample Number				1520592	1520593	1520594	1520595	1520596
Sample Reference				BH4	BH10	SW3	BH5	DUP01
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				Deviating	Deviating	Deviating	Deviating	Deviating
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Petroleum Hydrocarbons								
TPH-CWG - Aliphatic >C5 - C6	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >C6 - C8	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >C8 - C10	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >C10 - C12	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >C12 - C16	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >C16 - C21	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >C21 - C35	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic (C5 - C35)	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C5 - C7	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C7 - C8	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C8 - C10	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C10 - C12	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C12 - C16	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C16 - C21	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C21 - C35	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic (C5 - C35)	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10

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Lab Sample Number				1520592	1520593	1520594	1520595	1520596
Sample Reference				BH4	BH10	SW3	BH5	DUP01
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				Deviating	Deviating	Deviating	Deviating	Deviating
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
VOCs								
Chloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromomethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Vinyl Chloride	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichlorofluoromethane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Cis-1,2-dichloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2,2-Dichloropropane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,1-Trichloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloropropene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trans-1,2-dichloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Benzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tetrachloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloropropane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Dibromomethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromodichloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Cis-1,3-dichloropropene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trans-1,3-dichloropropene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2-Trichloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3-Dichloropropane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Dibromochloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tetrachloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dibromoethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,1,2-Tetrachloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p & m-Xylene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Styrene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tribromomethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-Xylene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2,2-Tetrachloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Isopropylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
n-Propylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2-Chlorotoluene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
4-Chlorotoluene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3,5-Trimethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
tert-Butylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,4-Trimethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
sec-Butylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3-Dichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p-Isopropyltoluene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,4-Dichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Butylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dibromo-3-chloropropane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,4-Trichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Hexachlorobutadiene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,3-Trichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

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Project / Site name: Wisbech

Lab Sample Number				1520592	1520593	1520594	1520595	1520596
Sample Reference				BH4	BH10	SW3	BH5	DUP01
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				Deviating	Deviating	Deviating	Deviating	Deviating
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
VOCs TICs								
VOCs TICs Compound Name		10	NONE	ND	ND	ND	ND	ND
VOC % Match	%	10	NONE	0	0	0	0	0

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Project / Site name: Wisbech

Lab Sample Number				1520592	1520593	1520594	1520595	1520596
Sample Reference				BH4	BH10	SW3	BH5	DUP01
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				Deviating	Deviating	Deviating	Deviating	Deviating
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
SVOCs								
Aniline	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Phenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2-Chlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Bis(2-chloroethyl)ether	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
1,3-Dichlorobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
1,2-Dichlorobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
1,4-Dichlorobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Bis(2-chloroisopropyl)ether	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2-Methylphenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Hexachloroethane	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Nitrobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
4-Methylphenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Isophorone	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2-Nitrophenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2,4-Dimethylphenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Bis(2-chloroethoxy)methane	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
1,2,4-Trichlorobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Naphthalene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
2,4-Dichlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
4-Chloroaniline	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobutadiene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
4-Chloro-3-methylphenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2,4,6-Trichlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2,4,5-Trichlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2-Methylnaphthalene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2-Chloronaphthalene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Dimethylphthalate	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2,6-Dinitrotoluene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
2,4-Dinitrotoluene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Dibenzofuran	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
4-Chlorophenyl phenyl ether	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Diethyl phthalate	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
4-Nitroaniline	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Fluorene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Azobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Bromophenyl phenyl ether	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Phenanthrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Carbazole	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Dibutyl phthalate	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Anthraquinone	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Butyl benzyl phthalate	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(a)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Chrysene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	0.04
Benzo(b)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(k)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(a)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Indeno(1,2,3-cd)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Dibenz(a,h)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(ghi)perylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01

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Project / Site name: Wisbech

Lab Sample Number				1520592	1520593	1520594	1520595	1520596
Sample Reference				BH4	BH10	SW3	BH5	DUP01
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				Deviating	Deviating	Deviating	Deviating	Deviating
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
SVOCs TICs								
SVOCs TICs Compound Name		N/A	NONE	ND	ND	ND	ND	ND
SVOC % Match	%	N/A	NONE	0	0	0	0	0

U/S = Unsuitable Sample I/S = Insufficient Sample

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Project / Site name: Wisbech

Lab Sample Number				1520597	1520598	1520599		
Sample Reference				SW1	SW2	Trip Blank		
Sample Number				None Supplied	None Supplied	None Supplied		
Depth (m)				None Supplied	None Supplied	None Supplied		
Date Sampled				Deviating	Deviating	Deviating		
Time Taken				None Supplied	None Supplied	None Supplied		
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
General Inorganics								
Electrical Conductivity at 20 °C	µS/cm	10	ISO 17025	3400	4500	-		
Sulphate as SO_4	mg/l	0.045	ISO 17025	63.8	83.9	-		
Ammoniacal Nitrogen as N	µg/l	15	ISO 17025	1300	2400	-		
Total Organic Carbon (TOC)	mg/l	0.1	ISO 17025	41.4	21.1	-		
Chemical Oxygen Demand (Total)	mg/l	2	ISO 17025	2300	4600	-		
BOD (Biochemical Oxygen Demand) (Total) - PL	mg/l	1	ISO 17025	63	64	-		
Hardness - Total	mgCaCO3/l	1	ISO 17025	704	738	-		
Total Phenols								
Total Phenols (monohydric)	µg/l	1	ISO 17025	7.2	2.2	-		
Heavy Metals / Metalloids								
Arsenic (dissolved)	µg/l	0.15	ISO 17025	< 0.15	0.52	-		
Boron (dissolved)	µg/l	10	ISO 17025	150	330	-		
Cadmium (dissolved)	µg/l	0.02	ISO 17025	< 0.02	< 0.02	-		
Calcium (dissolved)	mg/l	0.012	ISO 17025	260	240	-		
Chromium (hexavalent)	µg/l	5	ISO 17025	< 5.0	< 5.0	-		
Chromium (dissolved)	µg/l	0.2	ISO 17025	< 0.2	< 0.2	-		
Copper (dissolved)	µg/l	0.5	ISO 17025	< 0.5	< 0.5	-		
Lead (dissolved)	µg/l	0.2	ISO 17025	0.7	0.8	-		
Magnesium (dissolved)	mg/l	0.005	ISO 17025	14	34	-		
Mercury (dissolved)	µg/l	0.05	ISO 17025	< 0.05	< 0.05	-		
Nickel (dissolved)	µg/l	0.5	ISO 17025	0.6	< 0.5	-		
Selenium (dissolved)	µg/l	0.6	ISO 17025	2.5	3.6	-		
Zinc (dissolved)	µg/l	0.5	ISO 17025	3.1	< 0.5	-		
Monoaromatics & Oxygenates								
Benzene	µg/l	1	ISO 17025	< 1.0	< 1.0	-		
Toluene	µg/l	1	ISO 17025	< 1.0	< 1.0	-		
Ethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	-		
p & m-xylene	µg/l	1	ISO 17025	< 1.0	< 1.0	-		
o-xylene	µg/l	1	ISO 17025	< 1.0	< 1.0	-		
MTBE (Methyl Tertiary Butyl Ether)	µg/l	1	ISO 17025	< 1.0	< 1.0	-		

Analytical Report Number: 20-11637

Project / Site name: Wisbech

Lab Sample Number				1520597	1520598	1520599		
Sample Reference				SW1	SW2	Trip Blank		
Sample Number				None Supplied	None Supplied	None Supplied		
Depth (m)				None Supplied	None Supplied	None Supplied		
Date Sampled				Deviating	Deviating	Deviating		
Time Taken				None Supplied	None Supplied	None Supplied		
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Petroleum Hydrocarbons								
TPH-CWG - Aliphatic >C5 - C6	µg/l	1	ISO 17025	< 1.0	< 1.0	-		
TPH-CWG - Aliphatic >C6 - C8	µg/l	1	ISO 17025	< 1.0	< 1.0	-		
TPH-CWG - Aliphatic >C8 - C10	µg/l	1	ISO 17025	< 1.0	< 1.0	-		
TPH-CWG - Aliphatic >C10 - C12	µg/l	10	NONE	< 10	< 10	-		
TPH-CWG - Aliphatic >C12 - C16	µg/l	10	NONE	< 10	< 10	-		
TPH-CWG - Aliphatic >C16 - C21	µg/l	10	NONE	< 10	< 10	-		
TPH-CWG - Aliphatic >C21 - C35	µg/l	10	NONE	< 10	< 10	-		
TPH-CWG - Aliphatic (C5 - C35)	µg/l	10	NONE	< 10	< 10	-		
TPH-CWG - Aromatic >C5 - C7	µg/l	1	ISO 17025	< 1.0	< 1.0	-		
TPH-CWG - Aromatic >C7 - C8	µg/l	1	ISO 17025	< 1.0	< 1.0	-		
TPH-CWG - Aromatic >C8 - C10	µg/l	1	ISO 17025	< 1.0	< 1.0	-		
TPH-CWG - Aromatic >C10 - C12	µg/l	10	NONE	< 10	< 10	-		
TPH-CWG - Aromatic >C12 - C16	µg/l	10	NONE	< 10	< 10	-		
TPH-CWG - Aromatic >C16 - C21	µg/l	10	NONE	< 10	< 10	-		
TPH-CWG - Aromatic >C21 - C35	µg/l	10	NONE	< 10	< 10	-		
TPH-CWG - Aromatic (C5 - C35)	µg/l	10	NONE	< 10	< 10	-		

Analytical Report Number: 20-11637

Project / Site name: Wisbech

Lab Sample Number				1520597	1520598	1520599		
Sample Reference				SW1	SW2	Trip Blank		
Sample Number				None Supplied	None Supplied	None Supplied		
Depth (m)				None Supplied	None Supplied	None Supplied		
Date Sampled				Deviating	Deviating	Deviating		
Time Taken				None Supplied	None Supplied	None Supplied		
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
VOCs								
Chloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Chloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Bromomethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Vinyl Chloride	µg/l	1	NONE	< 1.0	< 1.0	< 1.0		
Trichlorofluoromethane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0		
1,1-Dichloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
1,1,2-Trichloro-1,2,2-trifluoroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Cis-1,2-dichloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
MTBE (Methyl Tertiary Butyl Ether)	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
1,1-Dichloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
2,2-Dichloropropane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Trichloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
1,1,1-Trichloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
1,2-Dichloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
1,1-Dichloropropene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Trans-1,2-dichloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Benzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Tetrachloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
1,2-Dichloropropane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Trichloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Dibromomethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Bromodichloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Cis-1,3-dichloropropene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Trans-1,3-dichloropropene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Toluene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
1,1,2-Trichloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
1,3-Dichloropropane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Dibromochloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Tetrachloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
1,2-Dibromoethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Chlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
1,1,1,2-Tetrachloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Ethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
p & m-Xylene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Styrene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Tribromomethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
o-Xylene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
1,1,2,2-Tetrachloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Isopropylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Bromobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
n-Propylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
2-Chlorotoluene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
4-Chlorotoluene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
1,3,5-Trimethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
tert-Butylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
1,2,4-Trimethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
sec-Butylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
1,3-Dichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
p-Isopropyltoluene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
1,2-Dichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
1,4-Dichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Butylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
1,2-Dibromo-3-chloropropane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
1,2,4-Trichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Hexachlorobutadiene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
1,2,3-Trichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		

Analytical Report Number: 20-11637

Project / Site name: Wisbech

Lab Sample Number				1520597	1520598	1520599		
Sample Reference				SW1	SW2	Trip Blank		
Sample Number				None Supplied	None Supplied	None Supplied		
Depth (m)				None Supplied	None Supplied	None Supplied		
Date Sampled				Deviating	Deviating	Deviating		
Time Taken				None Supplied	None Supplied	None Supplied		
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
VOCs TICs								
VOCs TICs Compound Name		10	NONE	ND	ND	-		
VOC % Match	%	10	NONE	0	0	-		

Analytical Report Number: 20-11637

Project / Site name: Wisbech

Lab Sample Number				1520597	1520598	1520599		
Sample Reference				SW1	SW2	Trip Blank		
Sample Number				None Supplied	None Supplied	None Supplied		
Depth (m)				None Supplied	None Supplied	None Supplied		
Date Sampled				Deviating	Deviating	Deviating		
Time Taken				None Supplied	None Supplied	None Supplied		
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
SVOCs								
Aniline	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
Phenol	µg/l	0.05	NONE	11	1.7	< 0.05		
2-Chlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
Bis(2-chloroethyl)ether	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
1,3-Dichlorobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
1,2-Dichlorobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
1,4-Dichlorobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
Bis(2-chloroisopropyl)ether	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
2-Methylphenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
Hexachloroethane	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
Nitrobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
4-Methylphenol	µg/l	0.05	NONE	10	3.2	< 0.05		
Isophorone	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
2-Nitrophenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
2,4-Dimethylphenol	µg/l	0.05	NONE	3.2	0.94	< 0.05		
Bis(2-chloroethoxy)methane	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
1,2,4-Trichlorobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
Naphthalene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01		
2,4-Dichlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
4-Chloroaniline	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
Hexachlorobutadiene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
4-Chloro-3-methylphenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
2,4,6-Trichlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
2,4,5-Trichlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
2-Methylnaphthalene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
2-Chloronaphthalene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
Dimethylphthalate	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
2,6-Dinitrotoluene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
Acenaphthylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01		
Acenaphthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01		
2,4-Dinitrotoluene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
Dibenzofuran	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
4-Chlorophenyl phenyl ether	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
Diethyl phthalate	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
4-Nitroaniline	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
Fluorene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01		
Azobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
Bromophenyl phenyl ether	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
Hexachlorobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
Phenanthrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01		
Anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01		
Carbazole	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
Dibutyl phthalate	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
Anthraquinone	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
Fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01		
Pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01		
Butyl benzyl phthalate	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
Benzo(a)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01		
Chrysene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01		
Benzo(b)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01		
Benzo(k)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01		
Benzo(a)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01		
Indeno(1,2,3-cd)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01		
Dibenz(a,h)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01		
Benzo(ghi)perylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01		

Analytical Report Number: 20-11637

Project / Site name: Wisbech

Lab Sample Number				1520597	1520598	1520599		
Sample Reference				SW1	SW2	Trip Blank		
Sample Number				None Supplied	None Supplied	None Supplied		
Depth (m)				None Supplied	None Supplied	None Supplied		
Date Sampled				Deviating	Deviating	Deviating		
Time Taken				None Supplied	None Supplied	None Supplied		
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
SVOCs TICs								
SVOCs TICs Compound Name		N/A	NONE	ND	ND	-		
SVOC % Match	%	N/A	NONE	0	0	-		

U/S = Unsuitable Sample I/S = Insufficient Sample

Analytical Report Number : 20-11637

Project / Site name: Wisbech

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Water (PrW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Ammoniacal Nitrogen as N in water	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the discrete analyser (colorimetric) salicylate/nitroprusside method. Accredited matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	ISO 17025
Biological oxygen demand (total) of water	Determination of biochemical oxygen demand in water (5 days). Accredited matrices: SW, PW, GW.	In-house method based on standard method 5210B.	L086-PL	W	ISO 17025
Boron in water	Determination of boron in water by acidification followed by ICP-OES. Accredited matrices: SW PW GW	In-house method based on MEWAM	L039-PL	W	ISO 17025
BTEX and MTBE in water (Monoaromatics)	Determination of BTEX and MTBE in water by headspace GC-MS. Accredited matrices: SW PW GW	In-house method based on USEPA8260	L073B-PL	W	ISO 17025
Chemical Oxygen Demand in Water (Total)	Determination of total COD in water by reflux oxidation with acidified K2Cr2O7 followed by colorimetry. Accredited matrices: SW, PW, GW.	HACH DR/890 Colorimeter Procedures Manual (48470-22) (Ref 0170.2)	L065-PL	W	ISO 17025
Electrical conductivity at 20oC of water	Determination of electrical conductivity in water by electrometric measurement. Accredited Matrices SW, GW, PW	In-house method	L031-PL	W	ISO 17025
Hexavalent chromium in water	Determination of hexavalent chromium in water by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.	In-house method by continuous flow analyser. Accredited Matrices SW, GW, PW.	L080-PL	W	ISO 17025
Metals in water by ICP-MS (dissolved)	Determination of metals in water by acidification followed by ICP-MS. Accredited Matrices: SW, GW, PW except B=SW,GW, Hg=SW,PW, Al=SW,PW.	In-house method based on USEPA Method 6020 & 200.8 "for the determination of trace elements in water by ICP-MS.	L012-PL	W	ISO 17025
Metals in water by ICP-OES (dissolved)	Determination of metals in water by acidification followed by ICP-OES. Accredited Matrices SW, GW, PW, PrW.(Al, Cu,Fe,Zn).	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L039-PL	W	ISO 17025
Monohydric phenols in water - LOW LEVEL 1 ug/l	Determination of phenols in water by continuous flow analyser. Accredited matrices: SW PW GW	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)	L080-PL	W	ISO 17025
Semi-volatile organic compounds in water	Determination of semi-volatile organic compounds in leachate by extraction in dichloromethane followed by GC-MS.	In-house method based on USEPA 8270	L102B-PL	W	NONE
Sulphate in water	Determination of sulphate in water by acidification followed by ICP-OES. Accredited matrices: SW PW GW, PrW.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L039-PL	W	ISO 17025
Tentatively identified compounds (SVOC) in water	Determination of semi-volatile organic compounds total ion count in water by extraction with hexane followed by GC-MS followed by a full library scan.	In-house method based on USEPA 8270	L070-PL	W	NONE
Tentatively identified compounds (VOC) in water	Determination of volatile organic compounds total ion count in water by headspace GC-MS followed by a full library scan.	In-house method based on USEPA8260	L073B-PL	W	NONE
Total Hardness of water	Determination of hardness in waters by calculation from calcium and magnesium. Accredited Matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L045-PL	W	ISO 17025
Total organic carbon in water	Determination of dissolved organic carbon in water by TOC/DOC NDIR analyser. Accredited matrices: SW PW GW.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L037-PL	W	ISO 17025
TPHCWG (Waters)	Determination of dichloromethane extractable hydrocarbons in water by GC-MS, speciation by interpretation.	In-house method	L070-PL	W	NONE

Analytical Report Number : 20-11637

Project / Site name: Wisbech

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Water (PrW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Volatile organic compounds in water	Determination of volatile organic compounds in water by headspace GC-MS. Accredited matrices: SW PW GW	In-house method based on USEPA8260	L073B-PL	W	ISO 17025

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.
For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.
Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.

Sample ID	Other_ID	Sample Type	Job	Sample Number	Sample Deviation Code	test_name	test_ref	Test Deviation code
BH10		W	20-11637	1520593	a			
BH4		W	20-11637	1520592	a			
BH5		W	20-11637	1520595	a			
DUP01		W	20-11637	1520596	a			
SW1		W	20-11637	1520597	a			
SW2		W	20-11637	1520598	a			
SW3		W	20-11637	1520594	a			
Trip Blank		W	20-11637	1520599	a			

Key: a - No sampling date b - Incorrect container
c - Holding time d - Headspace e - Temperature

Ish Konteh
Wood Environment & Infrastructure Solutions
Prospect House
Leeds
LS1 4BJ

e: [redacted]

i2 Analytical Ltd.
7 Woodshots Meadow,
Croxley Green
Business Park,
Watford,
Herts,
WD18 8YS

t: [redacted]
f: [redacted]
e: [redacted]

Analytical Report Number : 20-18342

Project / Site name:	Wisbech	**Samples received on:**	09/07/2020
Your job number:	41310	**Sample instructed/ Analysis started on:**	09/07/2020
Your order number:		**Analysis completed by:**	16/07/2020
Report Issue Number:	1	**Report issued on:**	16/07/2020
Samples Analysed:	4 water samples		

Signed: [redacted]

Agnieszka Czerwińska

Technical Reviewer (Reporting Team)
For & on behalf of i2 Analytical Ltd.

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils	- 4 weeks from reporting
leachates	- 2 weeks from reporting
waters	- 2 weeks from reporting
asbestos	- 6 months from reporting

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Any assessments of compliance with specifications are based on actual analytical results with no contribution from uncertainty of measurement. Application of uncertainty of measurement would provide a range within which the true result lies. An estimate of measurement uncertainty can be provided on request.

Analytical Report Number: 20-18342

Project / Site name: Wisbech

Lab Sample Number				1556132	1556133	1556134	1556135	
Sample Reference				BH02	BH12	BH13	DUP	
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	
Date Sampled				08/07/2020	08/07/2020	08/07/2020	08/07/2020	
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
General Inorganics								
Electrical Conductivity at 20 °C	µS/cm	10	ISO 17025	7600	8400	4400	7500	
Sulphate as SO_4	mg/l	0.045	ISO 17025	228	529	739	248	
Ammoniacal Nitrogen as N	µg/l	15	ISO 17025	2700	4100	1400	2800	
Total Organic Carbon (TOC)	mg/l	0.1	ISO 17025	17.1	18.6	19.3	23.0	
Chemical Oxygen Demand (Total)	mg/l	2	ISO 17025	59	46	89	84	
BOD (Biochemical Oxygen Demand) (Total) - PL	mg/l	1	ISO 17025	6.6	2.0	< 1.0	4.5	
Hardness - Total	mgCaCO3/l	1	ISO 17025	769	1030	1060	806	
Total Phenols								
Total Phenols (monohydric)	µg/l	1	ISO 17025	11	11	2.4	9.0	
Heavy Metals / Metalloids								
Arsenic (dissolved)	µg/l	0.15	ISO 17025	1.17	8.76	1.07	1.13	
Boron (dissolved)	µg/l	10	ISO 17025	1300	1300	840	1200	
Cadmium (dissolved)	µg/l	0.02	ISO 17025	< 0.02	< 0.02	< 0.02	< 0.02	
Calcium (dissolved)	mg/l	0.012	ISO 17025	99	90	240	100	
Chromium (hexavalent)	µg/l	5	ISO 17025	< 5.0	< 5.0	< 5.0	< 5.0	
Chromium (dissolved)	µg/l	0.2	ISO 17025	< 0.2	< 0.2	< 0.2	< 0.2	
Copper (dissolved)	µg/l	0.5	ISO 17025	2.0	2.6	3.9	1.9	
Lead (dissolved)	µg/l	0.2	ISO 17025	< 0.2	< 0.2	0.7	< 0.2	
Magnesium (dissolved)	mg/l	0.005	ISO 17025	130	190	110	130	
Mercury (dissolved)	µg/l	0.05	ISO 17025	< 0.05	< 0.05	< 0.05	< 0.05	
Nickel (dissolved)	µg/l	0.5	ISO 17025	2.1	< 0.5	1.4	< 0.5	
Selenium (dissolved)	µg/l	0.6	ISO 17025	< 0.6	< 0.6	< 0.6	< 0.6	
Zinc (dissolved)	µg/l	0.5	ISO 17025	4.7	6.8	9.9	4.6	

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Lab Sample Number				1556132	1556133	1556134	1556135	
Sample Reference				BH02	BH12	BH13	DUP	
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	
Date Sampled				08/07/2020	08/07/2020	08/07/2020	08/07/2020	
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Monoaromatics & Oxygenates								
Benzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Toluene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Ethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
p & m-xylene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
o-xylene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
MTBE (Methyl Tertiary Butyl Ether)	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	

Petroleum Hydrocarbons

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Lab Sample Number				1556132	1556133	1556134	1556135	
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Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	
Date Sampled				08/07/2020	08/07/2020	08/07/2020	08/07/2020	
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
TPH-CWG - Aliphatic >C5 - C6	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
TPH-CWG - Aliphatic >C6 - C8	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
TPH-CWG - Aliphatic >C8 - C10	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
TPH-CWG - Aliphatic >C10 - C12	µg/l	10	NONE	< 10	< 10	< 10	< 10	
TPH-CWG - Aliphatic >C12 - C16	µg/l	10	NONE	< 10	< 10	< 10	< 10	
TPH-CWG - Aliphatic >C16 - C21	µg/l	10	NONE	< 10	< 10	< 10	< 10	
TPH-CWG - Aliphatic >C21 - C35	µg/l	10	NONE	< 10	< 10	< 10	< 10	
TPH-CWG - Aliphatic (C5 - C35)	µg/l	10	NONE	< 10	< 10	< 10	< 10	

TPH-CWG - Aromatic >C5 - C7	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
TPH-CWG - Aromatic >C7 - C8	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
TPH-CWG - Aromatic >C8 - C10	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
TPH-CWG - Aromatic >C10 - C12	µg/l	10	NONE	< 10	< 10	< 10	< 10	
TPH-CWG - Aromatic >C12 - C16	µg/l	10	NONE	< 10	< 10	< 10	< 10	
TPH-CWG - Aromatic >C16 - C21	µg/l	10	NONE	< 10	< 10	< 10	< 10	
TPH-CWG - Aromatic >C21 - C35	µg/l	10	NONE	< 10	< 10	< 10	< 10	
TPH-CWG - Aromatic (C5 - C35)	µg/l	10	NONE	< 10	< 10	< 10	< 10	

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Lab Sample Number				1556132	1556133	1556134	1556135	
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Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	
Date Sampled				08/07/2020	08/07/2020	08/07/2020	08/07/2020	
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
VOCs								
Chloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Chloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Bromomethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Vinyl Chloride	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	
Trichlorofluoromethane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	
1,1-Dichloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
1,1,2-Trichloro-1,2,2-trifluoroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Cis-1,2-dichloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
MTBE (Methyl Tertiary Butyl Ether)	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
1,1-Dichloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
2,2-Dichloropropane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Trichloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
1,1,1-Trichloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
1,2-Dichloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
1,1-Dichloropropene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Trans-1,2-dichloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Benzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Tetrachloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
1,2-Dichloropropane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Trichloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Dibromomethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Bromodichloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Cis-1,3-dichloropropene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Trans-1,3-dichloropropene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Toluene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
1,1,2-Trichloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
1,3-Dichloropropane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Dibromochloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Tetrachloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
1,2-Dibromoethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Chlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
1,1,1,2-Tetrachloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Ethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
p & m-Xylene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Styrene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Tribromomethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
o-Xylene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
1,1,2,2-Tetrachloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Isopropylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Bromobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
n-Propylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
2-Chlorotoluene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
4-Chlorotoluene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
1,3,5-Trimethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
tert-Butylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
1,2,4-Trimethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
sec-Butylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
1,3-Dichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
p-Isopropyltoluene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
1,2-Dichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
1,4-Dichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Butylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
1,2-Dibromo-3-chloropropane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
1,2,4-Trichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Hexachlorobutadiene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
1,2,3-Trichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	

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Project / Site name: Wisbech

Lab Sample Number				1556132	1556133	1556134	1556135	
Sample Reference				BH02	BH12	BH13	DUP	
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	
Date Sampled				08/07/2020	08/07/2020	08/07/2020	08/07/2020	
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
VOCs TICs								
VOCs TICs Compound Name		10	NONE	ND	ND	ND	ND	
VOC % Match	%	10	NONE	0	0	0	0	

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Project / Site name: Wisbech

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Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	
Date Sampled				08/07/2020	08/07/2020	08/07/2020	08/07/2020	
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
SVOCs								
Aniline	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
Phenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
2-Chlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
Bis(2-chloroethyl)ether	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
1,3-Dichlorobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
1,2-Dichlorobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
1,4-Dichlorobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
Bis(2-chloroisopropyl)ether	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
2-Methylphenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
Hexachloroethane	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
Nitrobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
4-Methylphenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
Isophorone	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
2-Nitrophenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
2,4-Dimethylphenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
Bis(2-chloroethoxy)methane	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
1,2,4-Trichlorobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
Naphthalene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	
2,4-Dichlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
4-Chloroaniline	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
Hexachlorobutadiene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
4-Chloro-3-methylphenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
2,4,6-Trichlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
2,4,5-Trichlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
2-Methylnaphthalene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
2-Chloronaphthalene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
Dimethylphthalate	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
2,6-Dinitrotoluene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
Acenaphthylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	
Acenaphthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	
2,4-Dinitrotoluene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
Dibenzofuran	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
4-Chlorophenyl phenyl ether	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
Diethyl phthalate	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
4-Nitroaniline	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
Fluorene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	
Azobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
Bromophenyl phenyl ether	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
Hexachlorobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
Phenanthrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	
Anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	
Carbazole	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
Dibutyl phthalate	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
Anthraquinone	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
Fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	
Pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	
Butyl benzyl phthalate	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
Benzo(a)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	
Chrysene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	
Benzo(b)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	
Benzo(k)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	
Benzo(a)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	
Indeno(1,2,3-cd)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	
Dibenz(a,h)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	
Benzo(ghi)perylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	

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Project / Site name: Wisbech

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Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	
Date Sampled				08/07/2020	08/07/2020	08/07/2020	08/07/2020	
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
SVOCs TICs								
SVOCs TICs Compound Name		N/A	NONE	ND	ND	ND	ND	
SVOC % Match	%	N/A	NONE	0	0	0	0	

U/S = Unsuitable Sample I/S = Insufficient Sample

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Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Water (PrW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Ammoniacal Nitrogen as N in water	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the discrete analyser (colorimetric) salicylate/nitroprusside method. Accredited matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	ISO 17025
Biological oxygen demand (total) of water	Determination of biochemical oxygen demand in water (5 days). Accredited matrices: SW, PW, GW.	In-house method based on standard method 5210B.	L086-PL	W	ISO 17025
Boron in water	Determination of boron in water by acidification followed by ICP-OES. Accredited matrices: SW PW GW	In-house method based on MEWAM	L039-PL	W	ISO 17025
BTEX and MTBE in water (Monoaromatics)	Determination of BTEX and MTBE in water by headspace GC-MS. Accredited matrices: SW PW GW	In-house method based on USEPA8260	L073B-PL	W	ISO 17025
Chemical Oxygen Demand in Water (Total)	Determination of total COD in water by reflux oxidation with acidified K2Cr2O7 followed by colorimetry. Accredited matrices: SW, PW, GW.	HACH DR/890 Colorimeter Procedures Manual (48470-22) (Ref 0170.2)	L065-PL	W	ISO 17025
Electrical conductivity at 20oC of water	Determination of electrical conductivity in water by electrometric measurement. Accredited Matrices SW, GW, PW	In-house method	L031-PL	W	ISO 17025
Hexavalent chromium in water	Determination of hexavalent chromium in water by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.	In-house method by continuous flow analyser. Accredited Matrices SW, GW, PW.	L080-PL	W	ISO 17025
Metals in water by ICP-MS (dissolved)	Determination of metals in water by acidification followed by ICP-MS. Accredited Matrices: SW, GW, PW except B=SW,GW, Hg=SW,PW, Al=SW,PW.	In-house method based on USEPA Method 6020 & 200.8 "for the determination of trace elements in water by ICP-MS.	L012-PL	W	ISO 17025
Metals in water by ICP-OES (dissolved)	Determination of metals in water by acidification followed by ICP-OES. Accredited Matrices SW, GW, PW, PrW.(Al, Cu,Fe,Zn).	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L039-PL	W	ISO 17025
Monohydric phenols in water - LOW LEVEL 1 ug/l	Determination of phenols in water by continuous flow analyser. Accredited matrices: SW PW GW	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)	L080-PL	W	ISO 17025
Semi-volatile organic compounds in water	Determination of semi-volatile organic compounds in leachate by extraction in dichloromethane followed by GC-MS.	In-house method based on USEPA 8270	L102B-PL	W	NONE
Sulphate in water	Determination of sulphate in water by acidification followed by ICP-OES. Accredited matrices: SW PW GW, PrW.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L039-PL	W	ISO 17025
Tentatively identified compounds (SVOC) in water	Determination of semi-volatile organic compounds total ion count in water by extraction with hexane followed by GC-MS followed by a full library scan.	In-house method based on USEPA 8270	L070-PL	W	NONE
Tentatively identified compounds (VOC) in water	Determination of volatile organic compounds total ion count in water by headspace GC-MS followed by a full library scan.	In-house method based on USEPA8260	L073B-PL	W	NONE
Total Hardness of water	Determination of hardness in waters by calculation from calcium and magnesium. Accredited Matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L045-PL	W	ISO 17025
Total organic carbon in water	Determination of dissolved organic carbon in water by TOC/DOC NDIR analyser. Accredited matrices: SW PW GW.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L037-PL	W	ISO 17025
TPHCWG (Waters)	Determination of dichloromethane extractable hydrocarbons in water by GC-MS, speciation by interpretation.	In-house method	L070-PL	W	NONE

Analytical Report Number : 20-18342

Project / Site name: Wisbech

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Water (PrW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Volatile organic compounds in water	Determination of volatile organic compounds in water by headspace GC-MS. Accredited matrices: SW PW GW	In-house method based on USEPA8260	L073B-PL	W	ISO 17025

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.
For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.
Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.

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CV34 6TT

e:

i2 Analytical Ltd.
7 Woodshots Meadow,
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Business Park,
Watford,
Herts,
WD18 8YS

t: [redacted]
f: [redacted]
e: [redacted]

Analytical Report Number : 20-18595

Project / Site name:	Wisbech	**Samples received on:**	10/09/2020
Your job number:	41310	**Sample instructed/ Analysis started on:**	10/07/2020
Your order number:		**Analysis completed by:**	17/07/2020
Report Issue Number:	1	**Report issued on:**	17/07/2020
Samples Analysed:	6 water samples		

Signe [redacted]

Karolina Marek
PL Head of Reporting Team

For & on behalf of i2 Analytical Ltd.

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils	- 4 weeks from reporting
leachates	- 2 weeks from reporting
waters	- 2 weeks from reporting
asbestos	- 6 months from reporting

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Any assessments of compliance with specifications are based on actual analytical results with no contribution from uncertainty of measurement. Application of uncertainty of measurement would provide a range within which the true result lies. An estimate of measurement uncertainty can be provided on request.

Analytical Report Number: 20-18595

Project / Site name: Wisbech

Lab Sample Number				1557726	1557727	1557728	1557729	1557730
Sample Reference				BH05	BH06	SW1	SW2	SW3
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				09/07/2020	09/07/2020	09/07/2020	09/07/2020	09/07/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
General Inorganics								
Electrical Conductivity at 20 °C	µS/cm	10	ISO 17025	-	-	7000	320	3500
Sulphate as SO_4	mg/l	0.045	ISO 17025	477	222	17.4	20.4	292
Ammoniacal Nitrogen as N	µg/l	15	ISO 17025	3600	780	720	1700	350
Total Organic Carbon (TOC)	mg/l	0.1	ISO 17025	10.7	8.77	7.17	11.2	13.8
Chemical Oxygen Demand (Total)	mg/l	2	ISO 17025	-	-	82	99	89
BOD (Biochemical Oxygen Demand) (Total) - PL	mg/l	1	ISO 17025	-	-	4.8	5.2	5.9
Hardness - Total	mgCaCO3/l	1	ISO 17025	-	-	76.8	78.6	524
Total Phenols								
Total Phenols (monohydric)	µg/l	1	ISO 17025	16	3.9	2.7	2.7	2.4
Heavy Metals / Metalloids								
Arsenic (dissolved)	µg/l	0.15	ISO 17025	2.20	0.44	1.25	1.30	7.03
Boron (dissolved)	µg/l	10	ISO 17025	1700	390	56	62	730
Cadmium (dissolved)	µg/l	0.02	ISO 17025	< 0.02	< 0.02	0.24	0.15	0.03
Calcium (dissolved)	mg/l	0.012	ISO 17025	-	-	26	27	93
Chromium (hexavalent)	µg/l	5	ISO 17025	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Chromium (dissolved)	µg/l	0.2	ISO 17025	< 0.2	< 0.2	0.3	0.3	< 0.2
Copper (dissolved)	µg/l	0.5	ISO 17025	2.6	2.8	8.1	8.6	2.6
Lead (dissolved)	µg/l	0.2	ISO 17025	0.3	< 0.2	2.8	1.1	0.3
Magnesium (dissolved)	mg/l	0.005	ISO 17025	-	-	3.1	2.9	71
Mercury (dissolved)	µg/l	0.05	ISO 17025	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Nickel (dissolved)	µg/l	0.5	ISO 17025	< 0.5	1.1	1.4	1.4	7.8
Selenium (dissolved)	µg/l	0.6	ISO 17025	< 0.6	7.2	0.9	1.5	< 0.6
Zinc (dissolved)	µg/l	0.5	ISO 17025	4.2	3.4	120	88	12
Monoaromatics & Oxygenates								
Benzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p & m-xylene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-xylene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Petroleum Hydrocarbons								
TPH-CWG - Aliphatic >C5 - C6	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >C6 - C8	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >C8 - C10	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >C10 - C12	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >C12 - C16	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >C16 - C21	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >C21 - C35	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic (C5 - C35)	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C5 - C7	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C7 - C8	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C8 - C10	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C10 - C12	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C12 - C16	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C16 - C21	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C21 - C35	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic (C5 - C35)	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10

Analytical Report Number: 20-18595

Project / Site name: Wisbech

Lab Sample Number				1557726	1557727	1557728	1557729	1557730
Sample Reference				BH05	BH06	SW1	SW2	SW3
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				09/07/2020	09/07/2020	09/07/2020	09/07/2020	09/07/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
VOCs								
Chloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromomethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Vinyl Chloride	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichlorofluoromethane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Cis-1,2-dichloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2,2-Dichloropropane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,1-Trichloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloropropene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trans-1,2-dichloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Benzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tetrachloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloropropane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Dibromomethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromodichloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Cis-1,3-dichloropropene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trans-1,3-dichloropropene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2-Trichloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3-Dichloropropane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Dibromochloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tetrachloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dibromoethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,1,2-Tetrachloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p & m-Xylene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Styrene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tribromomethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-Xylene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2,2-Tetrachloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Isopropylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
n-Propylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2-Chlorotoluene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
4-Chlorotoluene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3,5-Trimethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
tert-Butylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,4-Trimethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
sec-Butylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3-Dichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p-Isopropyltoluene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,4-Dichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Butylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dibromo-3-chloropropane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,4-Trichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Hexachlorobutadiene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,3-Trichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

Analytical Report Number: 20-18595

Project / Site name: Wisbech

Lab Sample Number				1557726	1557727	1557728	1557729	1557730
Sample Reference				BH05	BH06	SW1	SW2	SW3
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				09/07/2020	09/07/2020	09/07/2020	09/07/2020	09/07/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
VOCs TICs								
VOCs TICs Compound Name		10	NONE	ND	ND	ND	ND	ND
VOC % Match	%	10	NONE	0	0	0	0	0

Analytical Report Number: 20-18595

Project / Site name: Wisbech

Lab Sample Number				1557726	1557727	1557728	1557729	1557730
Sample Reference				BH05	BH06	SW1	SW2	SW3
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				09/07/2020	09/07/2020	09/07/2020	09/07/2020	09/07/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
SVOCs								
Aniline	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Phenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2-Chlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Bis(2-chloroethyl)ether	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
1,3-Dichlorobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
1,2-Dichlorobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
1,4-Dichlorobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Bis(2-chloroisopropyl)ether	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2-Methylphenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Hexachloroethane	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Nitrobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
4-Methylphenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Isophorone	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2-Nitrophenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2,4-Dimethylphenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Bis(2-chloroethoxy)methane	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
1,2,4-Trichlorobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Naphthalene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
2,4-Dichlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
4-Chloroaniline	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobutadiene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
4-Chloro-3-methylphenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2,4,6-Trichlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2,4,5-Trichlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2-Methylnaphthalene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2-Chloronaphthalene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Dimethylphthalate	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2,6-Dinitrotoluene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
2,4-Dinitrotoluene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Dibenzofuran	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
4-Chlorophenyl phenyl ether	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Diethyl phthalate	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
4-Nitroaniline	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Fluorene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Azobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Bromophenyl phenyl ether	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Phenanthrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Carbazole	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Dibutyl phthalate	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Anthraquinone	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Butyl benzyl phthalate	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(a)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Chrysene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(b)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(k)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(a)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Indeno(1,2,3-cd)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Dibenz(a,h)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(ghi)perylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01

Analytical Report Number: 20-18595

Project / Site name: Wisbech

Lab Sample Number				1557726	1557727	1557728	1557729	1557730
Sample Reference				BH05	BH06	SW1	SW2	SW3
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				09/07/2020	09/07/2020	09/07/2020	09/07/2020	09/07/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
SVOCs TICs								
SVOCs TICs Compound Name		N/A	NONE	ND	ND	ND	ND	ND
SVOC % Match	%	N/A	NONE	0	0	0	0	0

U/S = Unsuitable Sample I/S = Insufficient Sample

Analytical Report Number: 20-18595

Project / Site name: Wisbech

Lab Sample Number				1557731				
Sample Reference				Trip Blank				
Sample Number				None Supplied				
Depth (m)				None Supplied				
Date Sampled				09/07/2020				
Time Taken				None Supplied				
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
General Inorganics								
Electrical Conductivity at 20 °C	µS/cm	10	ISO 17025	-				
Sulphate as SO_4	mg/l	0.045	ISO 17025	-				
Ammoniacal Nitrogen as N	µg/l	15	ISO 17025	-				
Total Organic Carbon (TOC)	mg/l	0.1	ISO 17025	-				
Chemical Oxygen Demand (Total)	mg/l	2	ISO 17025	-				
BOD (Biochemical Oxygen Demand) (Total) - PL	mg/l	1	ISO 17025	-				
Hardness - Total	mgCaCO3/l	1	ISO 17025	-				
Total Phenols								
Total Phenols (monohydric)	µg/l	1	ISO 17025	-				
Heavy Metals / Metalloids								
Arsenic (dissolved)	µg/l	0.15	ISO 17025	-				
Boron (dissolved)	µg/l	10	ISO 17025	-				
Cadmium (dissolved)	µg/l	0.02	ISO 17025	-				
Calcium (dissolved)	mg/l	0.012	ISO 17025	-				
Chromium (hexavalent)	µg/l	5	ISO 17025	-				
Chromium (dissolved)	µg/l	0.2	ISO 17025	-				
Copper (dissolved)	µg/l	0.5	ISO 17025	-				
Lead (dissolved)	µg/l	0.2	ISO 17025	-				
Magnesium (dissolved)	mg/l	0.005	ISO 17025	-				
Mercury (dissolved)	µg/l	0.05	ISO 17025	-				
Nickel (dissolved)	µg/l	0.5	ISO 17025	-				
Selenium (dissolved)	µg/l	0.6	ISO 17025	-				
Zinc (dissolved)	µg/l	0.5	ISO 17025	-				
Monoaromatics & Oxygenates								
Benzene	µg/l	1	ISO 17025	-				
Toluene	µg/l	1	ISO 17025	-				
Ethylbenzene	µg/l	1	ISO 17025	-				
p & m-xylene	µg/l	1	ISO 17025	-				
o-xylene	µg/l	1	ISO 17025	-				
MTBE (Methyl Tertiary Butyl Ether)	µg/l	1	ISO 17025	-				
Petroleum Hydrocarbons								
TPH-CWG - Aliphatic >C5 - C6	µg/l	1	ISO 17025	-				
TPH-CWG - Aliphatic >C6 - C8	µg/l	1	ISO 17025	-				
TPH-CWG - Aliphatic >C8 - C10	µg/l	1	ISO 17025	-				
TPH-CWG - Aliphatic >C10 - C12	µg/l	10	NONE	-				
TPH-CWG - Aliphatic >C12 - C16	µg/l	10	NONE	-				
TPH-CWG - Aliphatic >C16 - C21	µg/l	10	NONE	-				
TPH-CWG - Aliphatic >C21 - C35	µg/l	10	NONE	-				
TPH-CWG - Aliphatic (C5 - C35)	µg/l	10	NONE	-				
TPH-CWG - Aromatic >C5 - C7	µg/l	1	ISO 17025	-				
TPH-CWG - Aromatic >C7 - C8	µg/l	1	ISO 17025	-				
TPH-CWG - Aromatic >C8 - C10	µg/l	1	ISO 17025	-				
TPH-CWG - Aromatic >C10 - C12	µg/l	10	NONE	-				
TPH-CWG - Aromatic >C12 - C16	µg/l	10	NONE	-				
TPH-CWG - Aromatic >C16 - C21	µg/l	10	NONE	-				
TPH-CWG - Aromatic >C21 - C35	µg/l	10	NONE	-				
TPH-CWG - Aromatic (C5 - C35)	µg/l	10	NONE	-				

Analytical Report Number: 20-18595

Project / Site name: Wisbech

Lab Sample Number				1557731				
Sample Reference				Trip Blank				
Sample Number				None Supplied				
Depth (m)				None Supplied				
Date Sampled				09/07/2020				
Time Taken				None Supplied				
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
VOCs								
Chloromethane	µg/l	1	ISO 17025	< 1.0				
Chloroethane	µg/l	1	ISO 17025	< 1.0				
Bromomethane	µg/l	1	ISO 17025	< 1.0				
Vinyl Chloride	µg/l	1	NONE	< 1.0				
Trichlorofluoromethane	µg/l	1	NONE	< 1.0				
1,1-Dichloroethene	µg/l	1	ISO 17025	< 1.0				
1,1,2-Trichloro-1,2,2-trifluoroethane	µg/l	1	ISO 17025	< 1.0				
Cis-1,2-dichloroethene	µg/l	1	ISO 17025	< 1.0				
MTBE (Methyl Tertiary Butyl Ether)	µg/l	1	ISO 17025	< 1.0				
1,1-Dichloroethane	µg/l	1	ISO 17025	< 1.0				
2,2-Dichloropropane	µg/l	1	ISO 17025	< 1.0				
Trichloromethane	µg/l	1	ISO 17025	< 1.0				
1,1,1-Trichloroethane	µg/l	1	ISO 17025	< 1.0				
1,2-Dichloroethane	µg/l	1	ISO 17025	< 1.0				
1,1-Dichloropropene	µg/l	1	ISO 17025	< 1.0				
Trans-1,2-dichloroethene	µg/l	1	ISO 17025	< 1.0				
Benzene	µg/l	1	ISO 17025	< 1.0				
Tetrachloromethane	µg/l	1	ISO 17025	< 1.0				
1,2-Dichloropropane	µg/l	1	ISO 17025	< 1.0				
Trichloroethene	µg/l	1	ISO 17025	< 1.0				
Dibromomethane	µg/l	1	ISO 17025	< 1.0				
Bromodichloromethane	µg/l	1	ISO 17025	< 1.0				
Cis-1,3-dichloropropene	µg/l	1	ISO 17025	< 1.0				
Trans-1,3-dichloropropene	µg/l	1	ISO 17025	< 1.0				
Toluene	µg/l	1	ISO 17025	< 1.0				
1,1,2-Trichloroethane	µg/l	1	ISO 17025	< 1.0				
1,3-Dichloropropane	µg/l	1	ISO 17025	< 1.0				
Dibromochloromethane	µg/l	1	ISO 17025	< 1.0				
Tetrachloroethene	µg/l	1	ISO 17025	< 1.0				
1,2-Dibromoethane	µg/l	1	ISO 17025	< 1.0				
Chlorobenzene	µg/l	1	ISO 17025	< 1.0				
1,1,1,2-Tetrachloroethane	µg/l	1	ISO 17025	< 1.0				
Ethylbenzene	µg/l	1	ISO 17025	< 1.0				
p & m-Xylene	µg/l	1	ISO 17025	< 1.0				
Styrene	µg/l	1	ISO 17025	< 1.0				
Tribromomethane	µg/l	1	ISO 17025	< 1.0				
o-Xylene	µg/l	1	ISO 17025	< 1.0				
1,1,2,2-Tetrachloroethane	µg/l	1	ISO 17025	< 1.0				
Isopropylbenzene	µg/l	1	ISO 17025	< 1.0				
Bromobenzene	µg/l	1	ISO 17025	< 1.0				
n-Propylbenzene	µg/l	1	ISO 17025	< 1.0				
2-Chlorotoluene	µg/l	1	ISO 17025	< 1.0				
4-Chlorotoluene	µg/l	1	ISO 17025	< 1.0				
1,3,5-Trimethylbenzene	µg/l	1	ISO 17025	< 1.0				
tert-Butylbenzene	µg/l	1	ISO 17025	< 1.0				
1,2,4-Trimethylbenzene	µg/l	1	ISO 17025	< 1.0				
sec-Butylbenzene	µg/l	1	ISO 17025	< 1.0				
1,3-Dichlorobenzene	µg/l	1	ISO 17025	< 1.0				
p-Isopropyltoluene	µg/l	1	ISO 17025	< 1.0				
1,2-Dichlorobenzene	µg/l	1	ISO 17025	< 1.0				
1,4-Dichlorobenzene	µg/l	1	ISO 17025	< 1.0				
Butylbenzene	µg/l	1	ISO 17025	< 1.0				
1,2-Dibromo-3-chloropropane	µg/l	1	ISO 17025	< 1.0				
1,2,4-Trichlorobenzene	µg/l	1	ISO 17025	< 1.0				
Hexachlorobutadiene	µg/l	1	ISO 17025	< 1.0				
1,2,3-Trichlorobenzene	µg/l	1	ISO 17025	< 1.0				

Analytical Report Number: 20-18595

Project / Site name: Wisbech

Lab Sample Number				1557731				
Sample Reference				Trip Blank				
Sample Number				None Supplied				
Depth (m)				None Supplied				
Date Sampled				09/07/2020				
Time Taken				None Supplied				
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
VOCs TICs								
VOCs TICs Compound Name		10	NONE	-				
VOC % Match	%	10	NONE	-				

Analytical Report Number: 20-18595

Project / Site name: Wisbech

Lab Sample Number				1557731				
Sample Reference				Trip Blank				
Sample Number				None Supplied				
Depth (m)				None Supplied				
Date Sampled				09/07/2020				
Time Taken				None Supplied				
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
SVOCs								
Aniline	µg/l	0.05	NONE	< 0.05				
Phenol	µg/l	0.05	NONE	< 0.05				
2-Chlorophenol	µg/l	0.05	NONE	< 0.05				
Bis(2-chloroethyl)ether	µg/l	0.05	NONE	< 0.05				
1,3-Dichlorobenzene	µg/l	0.05	NONE	< 0.05				
1,2-Dichlorobenzene	µg/l	0.05	NONE	< 0.05				
1,4-Dichlorobenzene	µg/l	0.05	NONE	< 0.05				
Bis(2-chloroisopropyl)ether	µg/l	0.05	NONE	< 0.05				
2-Methylphenol	µg/l	0.05	NONE	< 0.05				
Hexachloroethane	µg/l	0.05	NONE	< 0.05				
Nitrobenzene	µg/l	0.05	NONE	< 0.05				
4-Methylphenol	µg/l	0.05	NONE	< 0.05				
Isophorone	µg/l	0.05	NONE	< 0.05				
2-Nitrophenol	µg/l	0.05	NONE	< 0.05				
2,4-Dimethylphenol	µg/l	0.05	NONE	< 0.05				
Bis(2-chloroethoxy)methane	µg/l	0.05	NONE	< 0.05				
1,2,4-Trichlorobenzene	µg/l	0.05	NONE	< 0.05				
Naphthalene	µg/l	0.01	ISO 17025	< 0.01				
2,4-Dichlorophenol	µg/l	0.05	NONE	< 0.05				
4-Chloroaniline	µg/l	0.05	NONE	< 0.05				
Hexachlorobutadiene	µg/l	0.05	NONE	< 0.05				
4-Chloro-3-methylphenol	µg/l	0.05	NONE	< 0.05				
2,4,6-Trichlorophenol	µg/l	0.05	NONE	< 0.05				
2,4,5-Trichlorophenol	µg/l	0.05	NONE	< 0.05				
2-Methylnaphthalene	µg/l	0.05	NONE	< 0.05				
2-Chloronaphthalene	µg/l	0.05	NONE	< 0.05				
Dimethylphthalate	µg/l	0.05	NONE	< 0.05				
2,6-Dinitrotoluene	µg/l	0.05	NONE	< 0.05				
Acenaphthylene	µg/l	0.01	ISO 17025	< 0.01				
Acenaphthene	µg/l	0.01	ISO 17025	< 0.01				
2,4-Dinitrotoluene	µg/l	0.05	NONE	< 0.05				
Dibenzofuran	µg/l	0.05	NONE	< 0.05				
4-Chlorophenyl phenyl ether	µg/l	0.05	NONE	< 0.05				
Diethyl phthalate	µg/l	0.05	NONE	< 0.05				
4-Nitroaniline	µg/l	0.05	NONE	< 0.05				
Fluorene	µg/l	0.01	ISO 17025	< 0.01				
Azobenzene	µg/l	0.05	NONE	< 0.05				
Bromophenyl phenyl ether	µg/l	0.05	NONE	< 0.05				
Hexachlorobenzene	µg/l	0.05	NONE	< 0.05				
Phenanthrene	µg/l	0.01	ISO 17025	< 0.01				
Anthracene	µg/l	0.01	ISO 17025	< 0.01				
Carbazole	µg/l	0.05	NONE	< 0.05				
Dibutyl phthalate	µg/l	0.05	NONE	< 0.05				
Anthraquinone	µg/l	0.05	NONE	< 0.05				
Fluoranthene	µg/l	0.01	ISO 17025	< 0.01				
Pyrene	µg/l	0.01	ISO 17025	< 0.01				
Butyl benzyl phthalate	µg/l	0.05	NONE	< 0.05				
Benzo(a)anthracene	µg/l	0.01	ISO 17025	< 0.01				
Chrysene	µg/l	0.01	ISO 17025	< 0.01				
Benzo(b)fluoranthene	µg/l	0.01	ISO 17025	< 0.01				
Benzo(k)fluoranthene	µg/l	0.01	ISO 17025	< 0.01				
Benzo(a)pyrene	µg/l	0.01	ISO 17025	< 0.01				
Indeno(1,2,3-cd)pyrene	µg/l	0.01	ISO 17025	< 0.01				
Dibenz(a,h)anthracene	µg/l	0.01	ISO 17025	< 0.01				
Benzo(ghi)perylene	µg/l	0.01	ISO 17025	< 0.01				

Analytical Report Number: 20-18595

Project / Site name: Wisbech

Lab Sample Number				1557731				
Sample Reference				Trip Blank				
Sample Number				None Supplied				
Depth (m)				None Supplied				
Date Sampled				09/07/2020				
Time Taken				None Supplied				
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
SVOCs TICs								
SVOCs TICs Compound Name		N/A	NONE	-				
SVOC % Match	%	N/A	NONE	-				

U/S = Unsuitable Sample I/S = Insufficient Sample

Analytical Report Number : 20-18595

Project / Site name: Wisbech

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Water (PrW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Ammoniacal Nitrogen as N in water	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the discrete analyser (colorimetric) salicylate/nitroprusside method. Accredited matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	ISO 17025
Biological oxygen demand (total) of water	Determination of biochemical oxygen demand in water (5 days). Accredited matrices: SW, PW, GW.	In-house method based on standard method 5210B.	L086-PL	W	ISO 17025
Boron in water	Determination of boron in water by acidification followed by ICP-OES. Accredited matrices: SW PW GW	In-house method based on MEWAM	L039-PL	W	ISO 17025
BTEX and MTBE in water (Monoaromatics)	Determination of BTEX and MTBE in water by headspace GC-MS. Accredited matrices: SW PW GW	In-house method based on USEPA8260	L073B-PL	W	ISO 17025
Chemical Oxygen Demand in Water (Total)	Determination of total COD in water by reflux oxidation with acidified K2Cr2O7 followed by colorimetry. Accredited matrices: SW, PW, GW.	HACH DR/890 Colorimeter Procedures Manual (48470-22) (Ref 0170.2)	L065-PL	W	ISO 17025
Electrical conductivity at 20oC of water	Determination of electrical conductivity in water by electrometric measurement. Accredited Matrices SW, GW, PW	In-house method	L031-PL	W	ISO 17025
Hexavalent chromium in water	Determination of hexavalent chromium in water by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.	In-house method by continuous flow analyser. Accredited Matrices SW, GW, PW.	L080-PL	W	ISO 17025
Metals in water by ICP-MS (dissolved)	Determination of metals in water by acidification followed by ICP-MS. Accredited Matrices: SW, GW, PW except B=SW,GW, Hg=SW,PW, Al=SW,PW.	In-house method based on USEPA Method 6020 & 200.8 "for the determination of trace elements in water by ICP-MS.	L012-PL	W	ISO 17025
Metals in water by ICP-OES (dissolved)	Determination of metals in water by acidification followed by ICP-OES. Accredited Matrices SW, GW, PW, PrW.(Al, Cu,Fe,Zn).	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L039-PL	W	ISO 17025
Monohydric phenols in water - LOW LEVEL 1 ug/l	Determination of phenols in water by continuous flow analyser. Accredited matrices: SW PW GW	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)	L080-PL	W	ISO 17025
Semi-volatile organic compounds in water	Determination of semi-volatile organic compounds in leachate by extraction in dichloromethane followed by GC-MS.	In-house method based on USEPA 8270	L102B-PL	W	NONE
Sulphate in water	Determination of sulphate in water by acidification followed by ICP-OES. Accredited matrices: SW PW GW, PrW.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L039-PL	W	ISO 17025
Tentatively identified compounds (SVOC) in water	Determination of semi-volatile organic compounds total ion count in water by extraction with hexane followed by GC-MS followed by a full library scan.	In-house method based on USEPA 8270	L070-PL	W	NONE
Tentatively identified compounds (VOC) in water	Determination of volatile organic compounds total ion count in water by headspace GC-MS followed by a full library scan.	In-house method based on USEPA8260	L073B-PL	W	NONE
Total Hardness of water	Determination of hardness in waters by calculation from calcium and magnesium. Accredited Matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L045-PL	W	ISO 17025
Total organic carbon in water	Determination of dissolved organic carbon in water by TOC/DOC NDIR analyser. Accredited matrices: SW PW GW.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L037-PL	W	ISO 17025
TPHCWG (Waters)	Determination of dichloromethane extractable hydrocarbons in water by GC-MS, speciation by interpretation.	In-house method	L070-PL	W	NONE

Analytical Report Number : 20-18595

Project / Site name: Wisbech

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Water (PrW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Volatile organic compounds in water	Determination of volatile organic compounds in water by headspace GC-MS. Accredited matrices: SW PW GW	In-house method based on USEPA8260	L073B-PL	W	ISO 17025

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.
For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.
Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.

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Wood Environment & Infrastructure Solutions
Prospect House
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Herts,
WD18 8YS

t: [redacted]
f: [redacted]
e: [redacted]

Analytical Report Number : 20-18684

Project / Site name:	Wisbech	**Samples received on:**	10/07/2020
Your job number:	41310	**Sample instructed/ Analysis started on:**	10/07/2020
Your order number:	325031	**Analysis completed by:**	17/07/2020
Report Issue Number:	1	**Report issued on:**	17/07/2020
Samples Analysed:	3 water samples		

Signed: [redacted]

Agnieszka Czerwińska

Technical Reviewer (Reporting Team)
For & on behalf of i2 Analytical Ltd.

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils	- 4 weeks from reporting
leachates	- 2 weeks from reporting
waters	- 2 weeks from reporting
asbestos	- 6 months from reporting

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Any assessments of compliance with specifications are based on actual analytical results with no contribution from uncertainty of measurement. Application of uncertainty of measurement would provide a range within which the true result lies. An estimate of measurement uncertainty can be provided on request.

Analytical Report Number: 20-18684

Project / Site name: Wisbech

Your Order No: 325031

Lab Sample Number				1558204	1558205	1558206		
Sample Reference				BH04	BH10	BH03		
Sample Number				None Supplied	None Supplied	None Supplied		
Depth (m)				None Supplied	None Supplied	None Supplied		
Date Sampled				09/07/2020	09/07/2020	09/07/2020		
Time Taken				None Supplied	None Supplied	None Supplied		
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
General Inorganics								
Sulphate as SO_4	mg/l	0.045	ISO 17025	445	703	1530		
Ammoniacal Nitrogen as N	µg/l	15	ISO 17025	3800	2200	420		
Total Organic Carbon (TOC)	mg/l	0.1	ISO 17025	13.7	13.2	23.7		
Total Phenols								
Total Phenols (monohydric)	µg/l	1	ISO 17025	18	6.9	1.9		
Heavy Metals / Metalloids								
Arsenic (dissolved)	µg/l	0.15	ISO 17025	7.17	2.83	0.95		
Boron (dissolved)	µg/l	10	ISO 17025	1500	780	550		
Cadmium (dissolved)	µg/l	0.02	ISO 17025	< 0.02	< 0.02	< 0.02		
Chromium (hexavalent)	µg/l	5	ISO 17025	< 5.0	< 5.0	< 5.0		
Chromium (dissolved)	µg/l	0.2	ISO 17025	< 0.2	< 0.2	< 0.2		
Copper (dissolved)	µg/l	0.5	ISO 17025	8.6	7.4	11		
Lead (dissolved)	µg/l	0.2	ISO 17025	< 0.2	0.4	1.9		
Magnesium (dissolved)	mg/l	0.005	ISO 17025	160	110	140		
Mercury (dissolved)	µg/l	0.05	ISO 17025	< 0.05	< 0.05	< 0.05		
Nickel (dissolved)	µg/l	0.5	ISO 17025	0.7	5.0	2.1		
Selenium (dissolved)	µg/l	0.6	ISO 17025	< 0.6	8.5	3.6		
Zinc (dissolved)	µg/l	0.5	ISO 17025	6.4	8.3	7.9		
Monoaromatics & Oxygenates								
Benzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Toluene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Ethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
p & m-xylene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
o-xylene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
MTBE (Methyl Tertiary Butyl Ether)	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Petroleum Hydrocarbons								
TPH-CWG - Aliphatic >C5 - C6	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
TPH-CWG - Aliphatic >C6 - C8	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
TPH-CWG - Aliphatic >C8 - C10	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
TPH-CWG - Aliphatic >C10 - C12	µg/l	10	NONE	< 10	< 10	< 10		
TPH-CWG - Aliphatic >C12 - C16	µg/l	10	NONE	< 10	< 10	< 10		
TPH-CWG - Aliphatic >C16 - C21	µg/l	10	NONE	< 10	< 10	< 10		
TPH-CWG - Aliphatic >C21 - C35	µg/l	10	NONE	< 10	< 10	< 10		
TPH-CWG - Aliphatic (C5 - C35)	µg/l	10	NONE	< 10	< 10	< 10		
TPH-CWG - Aromatic >C5 - C7	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
TPH-CWG - Aromatic >C7 - C8	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
TPH-CWG - Aromatic >C8 - C10	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
TPH-CWG - Aromatic >C10 - C12	µg/l	10	NONE	< 10	< 10	< 10		
TPH-CWG - Aromatic >C12 - C16	µg/l	10	NONE	< 10	< 10	< 10		
TPH-CWG - Aromatic >C16 - C21	µg/l	10	NONE	< 10	< 10	< 10		
TPH-CWG - Aromatic >C21 - C35	µg/l	10	NONE	< 10	< 10	< 10		
TPH-CWG - Aromatic (C5 - C35)	µg/l	10	NONE	< 10	< 10	< 10		

Analytical Report Number: 20-18684

Project / Site name: Wisbech

Your Order No: 325031

Lab Sample Number				1558204	1558205	1558206		
Sample Reference				BH04	BH10	BH03		
Sample Number				None Supplied	None Supplied	None Supplied		
Depth (m)				None Supplied	None Supplied	None Supplied		
Date Sampled				09/07/2020	09/07/2020	09/07/2020		
Time Taken				None Supplied	None Supplied	None Supplied		
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
VOCs								
Chloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Chloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Bromomethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Vinyl Chloride	µg/l	1	NONE	< 1.0	< 1.0	< 1.0		
Trichlorofluoromethane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0		
1,1-Dichloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
1,1,2-Trichloro-1,2,2-trifluoroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Cis-1,2-dichloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
MTBE (Methyl Tertiary Butyl Ether)	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
1,1-Dichloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
2,2-Dichloropropane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Trichloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
1,1,1-Trichloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
1,2-Dichloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
1,1-Dichloropropene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Trans-1,2-dichloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Benzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Tetrachloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
1,2-Dichloropropane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Trichloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Dibromomethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Bromodichloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Cis-1,3-dichloropropene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Trans-1,3-dichloropropene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Toluene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
1,1,2-Trichloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
1,3-Dichloropropane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Dibromochloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Tetrachloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
1,2-Dibromoethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Chlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
1,1,1,2-Tetrachloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Ethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
p & m-Xylene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Styrene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Tribromomethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
o-Xylene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
1,1,2,2-Tetrachloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Isopropylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Bromobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
n-Propylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
2-Chlorotoluene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
4-Chlorotoluene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
1,3,5-Trimethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
tert-Butylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
1,2,4-Trimethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
sec-Butylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
1,3-Dichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
p-Isopropyltoluene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
1,2-Dichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
1,4-Dichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Butylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
1,2-Dibromo-3-chloropropane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
1,2,4-Trichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Hexachlorobutadiene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
1,2,3-Trichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		

Analytical Report Number: 20-18684

Project / Site name: Wisbech

Your Order No: 325031

Lab Sample Number				1558204	1558205	1558206		
Sample Reference				BH04	BH10	BH03		
Sample Number				None Supplied	None Supplied	None Supplied		
Depth (m)				None Supplied	None Supplied	None Supplied		
Date Sampled				09/07/2020	09/07/2020	09/07/2020		
Time Taken				None Supplied	None Supplied	None Supplied		
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
VOCs TICs								
VOCs TICs Compound Name		10	NONE	ND	ND	ND		
VOC % Match	%	10	NONE	0	0	0		

Analytical Report Number: 20-18684

Project / Site name: Wisbech

Your Order No: 325031

Lab Sample Number				1558204	1558205	1558206		
Sample Reference				BH04	BH10	BH03		
Sample Number				None Supplied	None Supplied	None Supplied		
Depth (m)				None Supplied	None Supplied	None Supplied		
Date Sampled				09/07/2020	09/07/2020	09/07/2020		
Time Taken				None Supplied	None Supplied	None Supplied		
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
SVOCs								
Aniline	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
Phenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
2-Chlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
Bis(2-chloroethyl)ether	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
1,3-Dichlorobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
1,2-Dichlorobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
1,4-Dichlorobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
Bis(2-chloroisopropyl)ether	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
2-Methylphenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
Hexachloroethane	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
Nitrobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
4-Methylphenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
Isophorone	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
2-Nitrophenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
2,4-Dimethylphenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
Bis(2-chloroethoxy)methane	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
1,2,4-Trichlorobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
Naphthalene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01		
2,4-Dichlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
4-Chloroaniline	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
Hexachlorobutadiene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
4-Chloro-3-methylphenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
2,4,6-Trichlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
2,4,5-Trichlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
2-Methylnaphthalene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
2-Chloronaphthalene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
Dimethylphthalate	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
2,6-Dinitrotoluene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
Acenaphthylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01		
Acenaphthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01		
2,4-Dinitrotoluene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
Dibenzofuran	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
4-Chlorophenyl phenyl ether	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
Diethyl phthalate	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
4-Nitroaniline	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
Fluorene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01		
Azobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
Bromophenyl phenyl ether	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
Hexachlorobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
Phenanthrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01		
Anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01		
Carbazole	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
Dibutyl phthalate	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
Anthraquinone	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
Fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01		
Pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01		
Butyl benzyl phthalate	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05		
Benzo(a)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01		
Chrysene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01		
Benzo(b)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01		
Benzo(k)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01		
Benzo(a)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01		
Indeno(1,2,3-cd)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01		
Dibenz(a,h)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01		
Benzo(ghi)perylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01		

Analytical Report Number: 20-18684

Project / Site name: Wisbech

Your Order No: 325031

Lab Sample Number				1558204	1558205	1558206		
Sample Reference				BH04	BH10	BH03		
Sample Number				None Supplied	None Supplied	None Supplied		
Depth (m)				None Supplied	None Supplied	None Supplied		
Date Sampled				09/07/2020	09/07/2020	09/07/2020		
Time Taken				None Supplied	None Supplied	None Supplied		
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
SVOCs TICs								
SVOCs TICs Compound Name		N/A	NONE	ND	ND	ND		
SVOC % Match	%	N/A	NONE	0	0	0		

U/S = Unsuitable Sample I/S = Insufficient Sample

Analytical Report Number : 20-18684

Project / Site name: Wisbech

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Water (PrW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Ammoniacal Nitrogen as N in water	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the discrete analyser (colorimetric) salicylate/nitroprusside method. Accredited matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	ISO 17025
Boron in water	Determination of boron in water by acidification followed by ICP-OES. Accredited matrices: SW PW GW	In-house method based on MEWAM	L039-PL	W	ISO 17025
BTEX and MTBE in water (Monoaromatics)	Determination of BTEX and MTBE in water by headspace GC-MS. Accredited matrices: SW PW GW	In-house method based on USEPA8260	L073B-PL	W	ISO 17025
Hexavalent chromium in water	Determination of hexavalent chromium in water by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.	In-house method by continuous flow analyser. Accredited Matrices SW, GW, PW.	L080-PL	W	ISO 17025
Metals in water by ICP-MS (dissolved)	Determination of metals in water by acidification followed by ICP-MS. Accredited Matrices: SW, GW, PW except B=SW,GW, Hg=SW,PW, Al=SW,PW.	In-house method based on USEPA Method 6020 & 200.8 "for the determination of trace elements in water by ICP-MS.	L012-PL	W	ISO 17025
Metals in water by ICP-OES (dissolved)	Determination of metals in water by acidification followed by ICP-OES. Accredited Matrices SW, GW, PW, PrW.(Al, Cu,Fe,Zn).	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L039-PL	W	ISO 17025
Monohydric phenols in water - LOW LEVEL 1 ug/l	Determination of phenols in water by continuous flow analyser. Accredited matrices: SW PW GW	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)	L080-PL	W	ISO 17025
Semi-volatile organic compounds in water	Determination of semi-volatile organic compounds in leachate by extraction in dichloromethane followed by GC-MS.	In-house method based on USEPA 8270	L102B-PL	W	NONE
Sulphate in water	Determination of sulphate in water by acidification followed by ICP-OES. Accredited matrices: SW PW GW, PrW.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L039-PL	W	ISO 17025
Tentatively identified compounds (SVOC) in water	Determination of semi-volatile organic compounds total ion count in water by extraction with hexane followed by GC-MS followed by a full library scan.	In-house method based on USEPA 8270	L070-PL	W	NONE
Tentatively identified compounds (VOC) in water	Determination of volatile organic compounds total ion count in water by headspace GC-MS followed by a full library scan.	In-house method based on USEPA8260	L073B-PL	W	NONE
Total organic carbon in water	Determination of dissolved organic carbon in water by TOC/DOC NDIR analyser. Accredited matrices: SW PW GW.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L037-PL	W	ISO 17025
TPHCWG (Waters)	Determination of dichloromethane extractable hydrocarbons in water by GC-MS, speciation by interpretation.	In-house method	L070-PL	W	NONE
Volatile organic compounds in water	Determination of volatile organic compounds in water by headspace GC-MS. Accredited matrices: SW PW GW	In-house method based on USEPA8260	L073B-PL	W	ISO 17025

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.
For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.
Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.

Sample ID	Other_ID	Sample Type	Job	Sample Number	Sample Deviation Code	test_name	test_ref	Test Deviation code
BH03		W	20-18684	1558206	c	Ammoniacal Nitrogen as N in water	L082-PL	c
BH04		W	20-18684	1558204	c	Ammoniacal Nitrogen as N in water	L082-PL	c
BH10		W	20-18684	1558205	c	Ammoniacal Nitrogen as N in water	L082-PL	c

Key: a - No sampling date b - Incorrect container
c - Holding time d - Headspace e - Temperature

Becky Whiteley
Wood Environment & Infrastructure Solutions
Floor 2, Block 3, Booths Park
Chelford Road
Knutsford
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WA16 8QZ

t: [redacted]
e: [redacted]

i2 Analytical Ltd.
7 Woodshots Meadow,
Croxley Green
Business Park,
Watford,
Herts,
WD18 8YS

t: [redacted]
f: [redacted]
e: [redacted]

Analytical Report Number : 20-93274

Replaces Analytical Report Number : 20-93274, issue no. 1

Result correction by laboratory.

Project / Site name:	Wisbech	**Samples received on:**	18/03/2020
Your job number:	41310	**Samples instructed on:**	18/03/2020
Your order number:		**Analysis completed by:**	30/03/2020
Report Issue Number:	2	**Report issued on:**	31/03/2020
Samples Analysed:	6 water samples		

Signed [redacted]

Rachel Bradley

Deputy Quality Manager
For & on behalf of i2 Analytical Ltd.

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils	- 4 weeks from reporting
leachates	- 2 weeks from reporting
waters	- 2 weeks from reporting
asbestos	- 6 months from reporting

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Any assessments of compliance with specifications are based on actual analytical results with no contribution from uncertainty of measurement. Application of uncertainty of measurement would provide a range within which the true result lies. An estimate of measurement uncertainty can be provided on request.

Analytical Report Number: 20-93274

Project / Site name: Wisbech

Lab Sample Number				1475908	1475909	1475910	1475911	1475912
Sample Reference				SW1	SW2	SW3	Water Trip Blank	BH4
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				17/03/2020	17/03/2020	17/03/2020	17/03/2020	17/03/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
General Inorganics								
pH	pH Units	N/A	ISO 17025	8.0	7.8	7.8	-	7.7
Electrical Conductivity at 20 °C	µS/cm	10	ISO 17025	2300	2600	2800	-	-
Sulphate as SO_4	µg/l	45	ISO 17025	187000	127000	410000	-	402000
Sulphate as SO_4	mg/l	0.045	ISO 17025	187	127	410	-	402
Ammoniacal Nitrogen as N	µg/l	15	ISO 17025	1600	1300	16	< 15	3900
Total Organic Carbon (TOC)	mg/l	0.1	ISO 17025	33.3	30.2	19.3	-	12.8
Chemical Oxygen Demand (Total)	mg/l	2	ISO 17025	43	3300	55	-	-
BOD (Biochemical Oxygen Demand) (Total) - PL	mg/l	1	ISO 17025	20	35	12	-	-
Hardness - Total	mgCaCO3/l	1	ISO 17025	388	503	659	-	-
Total Phenols								
Total Phenols (monohydric)	µg/l	1	ISO 17025	5.8	7.5	3.4	3.2	3.6
Heavy Metals / Metalloids								
Arsenic (dissolved)	µg/l	0.15	ISO 17025	1.72	3.05	1.30	< 0.15	6.34
Boron (dissolved)	µg/l	10	ISO 17025	340	430	500	-	1300
Cadmium (dissolved)	µg/l	0.02	ISO 17025	0.06	0.03	< 0.02	< 0.02	< 0.02
Calcium (dissolved)	mg/l	0.012	ISO 17025	110	130	170	0.15	-
Chromium (hexavalent)	µg/l	5	ISO 17025	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Chromium (dissolved)	µg/l	0.2	ISO 17025	2.3	0.5	0.7	0.3	< 0.2
Copper (dissolved)	µg/l	0.5	ISO 17025	2.2	< 0.5	2.4	1.5	0.5
Lead (dissolved)	µg/l	0.2	ISO 17025	3.9	0.7	0.4	< 0.2	< 0.2
Magnesium (dissolved)	mg/l	0.005	ISO 17025	27	41	60	0.032	-
Mercury (dissolved)	µg/l	0.05	ISO 17025	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Nickel (dissolved)	µg/l	0.5	ISO 17025	4.6	4.8	4.1	1.1	< 0.5
Selenium (dissolved)	µg/l	0.6	ISO 17025	5.6	7.5	11	< 0.6	33
Zinc (dissolved)	µg/l	0.5	ISO 17025	35	12	50	7.0	0.7

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Lab Sample Number				1475908	1475909	1475910	1475911	1475912
Sample Reference				SW1	SW2	SW3	Water Trip Blank	BH4
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				17/03/2020	17/03/2020	17/03/2020	17/03/2020	17/03/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Monoaromatics & Oxygenates								
Benzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	-	< 1.0
Toluene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	-	< 1.0
Ethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	-	< 1.0
p & m-xylene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	-	< 1.0
o-xylene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	-	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	-	< 1.0
Petroleum Hydrocarbons								
TPH-CWG - Aliphatic >C5 - C6	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	-	< 1.0
TPH-CWG - Aliphatic >C6 - C8	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	-	< 1.0
TPH-CWG - Aliphatic >C8 - C10	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	-	< 1.0
TPH-CWG - Aliphatic >C10 - C12	µg/l	10	NONE	< 10	< 10	< 10	-	< 10
TPH-CWG - Aliphatic >C12 - C16	µg/l	10	NONE	< 10	< 10	< 10	-	< 10
TPH-CWG - Aliphatic >C16 - C21	µg/l	10	NONE	< 10	< 10	< 10	-	< 10
TPH-CWG - Aliphatic >C21 - C35	µg/l	10	NONE	< 10	< 10	< 10	-	< 10
TPH-CWG - Aliphatic (C5 - C35)	µg/l	10	NONE	< 10	< 10	< 10	-	< 10
TPH-CWG - Aromatic >C5 - C7	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	-	< 1.0
TPH-CWG - Aromatic >C7 - C8	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	-	< 1.0
TPH-CWG - Aromatic >C8 - C10	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	-	< 1.0
TPH-CWG - Aromatic >C10 - C12	µg/l	10	NONE	< 10	< 10	< 10	-	< 10
TPH-CWG - Aromatic >C12 - C16	µg/l	10	NONE	< 10	< 10	< 10	-	< 10
TPH-CWG - Aromatic >C16 - C21	µg/l	10	NONE	< 10	< 10	< 10	-	< 10
TPH-CWG - Aromatic >C21 - C35	µg/l	10	NONE	< 10	< 10	< 10	-	< 10
TPH-CWG - Aromatic (C5 - C35)	µg/l	10	NONE	< 10	< 10	< 10	-	< 10

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Lab Sample Number				1475908	1475909	1475910	1475911	1475912
Sample Reference				SW1	SW2	SW3	Water Trip Blank	BH4
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				17/03/2020	17/03/2020	17/03/2020	17/03/2020	17/03/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
VOCs								
Chloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromomethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Vinyl Chloride	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichlorofluoromethane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Cis-1,2-dichloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2,2-Dichloropropane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,1-Trichloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloropropene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trans-1,2-dichloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Benzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tetrachloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloropropane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Dibromomethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromodichloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Cis-1,3-dichloropropene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trans-1,3-dichloropropene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2-Trichloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3-Dichloropropane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Dibromochloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tetrachloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dibromoethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,1,2-Tetrachloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p & m-Xylene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Styrene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tribromomethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-Xylene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2,2-Tetrachloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Isopropylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
n-Propylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2-Chlorotoluene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
4-Chlorotoluene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3,5-Trimethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
tert-Butylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,4-Trimethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
sec-Butylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3-Dichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p-Isopropyltoluene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,4-Dichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Butylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dibromo-3-chloropropane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,4-Trichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Hexachlorobutadiene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,3-Trichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

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Lab Sample Number				1475908	1475909	1475910	1475911	1475912
Sample Reference				SW1	SW2	SW3	Water Trip Blank	BH4
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				17/03/2020	17/03/2020	17/03/2020	17/03/2020	17/03/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
VOCs TICs								
VOCs TICs Compound Name		10	NONE	ND	ND	ND	-	ND
VOC % Match	%	10	NONE	0	0	0	-	0

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Project / Site name: Wisbech

Lab Sample Number				1475908	1475909	1475910	1475911	1475912
Sample Reference				SW1	SW2	SW3	Water Trip Blank	BH4
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				17/03/2020	17/03/2020	17/03/2020	17/03/2020	17/03/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
SVOCs								
Aniline	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Phenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2-Chlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Bis(2-chloroethyl)ether	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
1,3-Dichlorobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
1,2-Dichlorobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
1,4-Dichlorobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Bis(2-chloroisopropyl)ether	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2-Methylphenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Hexachloroethane	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Nitrobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
4-Methylphenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Isophorone	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2-Nitrophenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2,4-Dimethylphenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Bis(2-chloroethoxy)methane	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
1,2,4-Trichlorobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Naphthalene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
2,4-Dichlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
4-Chloroaniline	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobutadiene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
4-Chloro-3-methylphenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2,4,6-Trichlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2,4,5-Trichlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2-Methylnaphthalene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2-Chloronaphthalene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Dimethylphthalate	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2,6-Dinitrotoluene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
2,4-Dinitrotoluene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Dibenzofuran	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
4-Chlorophenyl phenyl ether	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Diethyl phthalate	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
4-Nitroaniline	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Fluorene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Azobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Bromophenyl phenyl ether	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Phenanthrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Carbazole	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Dibutyl phthalate	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Anthraquinone	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Butyl benzyl phthalate	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(a)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Chrysene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(b)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(k)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(a)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Indeno(1,2,3-cd)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Dibenz(a,h)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(ghi)perylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01

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Lab Sample Number				1475908	1475909	1475910	1475911	1475912
Sample Reference				SW1	SW2	SW3	Water Trip Blank	BH4
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				17/03/2020	17/03/2020	17/03/2020	17/03/2020	17/03/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
SVOCs TICs								
SVOCs TICs Compound Name		N/A	NONE	ND	ND	ND	-	ND
SVOC % Match	%	N/A	NONE	0	0	0	-	0

U/S = Unsuitable Sample I/S = Insufficient Sample

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Project / Site name: Wisbech

Lab Sample Number				1475913				
Sample Reference				BH4a				
Sample Number				None Supplied				
Depth (m)				None Supplied				
Date Sampled				17/03/2020				
Time Taken				None Supplied				
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
General Inorganics								
pH	pH Units	N/A	ISO 17025	7.6				
Electrical Conductivity at 20 °C	µS/cm	10	ISO 17025	-				
Sulphate as SO_4	µg/l	45	ISO 17025	401000				
Sulphate as SO_4	mg/l	0.045	ISO 17025	401				
Ammoniacal Nitrogen as N	µg/l	15	ISO 17025	3900				
Total Organic Carbon (TOC)	mg/l	0.1	ISO 17025	15.7				
Chemical Oxygen Demand (Total)	mg/l	2	ISO 17025	-				
BOD (Biochemical Oxygen Demand) (Total) - PL	mg/l	1	ISO 17025	-				
Hardness - Total	mgCaCO3/l	1	ISO 17025	-				
Total Phenols								
Total Phenols (monohydric)	µg/l	1	ISO 17025	2.1				
Heavy Metals / Metalloids								
Arsenic (dissolved)	µg/l	0.15	ISO 17025	5.92				
Boron (dissolved)	µg/l	10	ISO 17025	1300				
Cadmium (dissolved)	µg/l	0.02	ISO 17025	< 0.02				
Calcium (dissolved)	mg/l	0.012	ISO 17025	-				
Chromium (hexavalent)	µg/l	5	ISO 17025	< 5.0				
Chromium (dissolved)	µg/l	0.2	ISO 17025	< 0.2				
Copper (dissolved)	µg/l	0.5	ISO 17025	< 0.5				
Lead (dissolved)	µg/l	0.2	ISO 17025	< 0.2				
Magnesium (dissolved)	mg/l	0.005	ISO 17025	-				
Mercury (dissolved)	µg/l	0.05	ISO 17025	< 0.05				
Nickel (dissolved)	µg/l	0.5	ISO 17025	< 0.5				
Selenium (dissolved)	µg/l	0.6	ISO 17025	33				
Zinc (dissolved)	µg/l	0.5	ISO 17025	< 0.5				

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Project / Site name: Wisbech

Lab Sample Number				1475913				
Sample Reference				BH4a				
Sample Number				None Supplied				
Depth (m)				None Supplied				
Date Sampled				17/03/2020				
Time Taken				None Supplied				
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Monoaromatics & Oxygenates								
Benzene	µg/l	1	ISO 17025	< 1.0				
Toluene	µg/l	1	ISO 17025	< 1.0				
Ethylbenzene	µg/l	1	ISO 17025	< 1.0				
p & m-xylene	µg/l	1	ISO 17025	< 1.0				
o-xylene	µg/l	1	ISO 17025	< 1.0				
MTBE (Methyl Tertiary Butyl Ether)	µg/l	1	ISO 17025	< 1.0				
Petroleum Hydrocarbons								
TPH-CWG - Aliphatic >C5 - C6	µg/l	1	ISO 17025	< 1.0				
TPH-CWG - Aliphatic >C6 - C8	µg/l	1	ISO 17025	< 1.0				
TPH-CWG - Aliphatic >C8 - C10	µg/l	1	ISO 17025	< 1.0				
TPH-CWG - Aliphatic >C10 - C12	µg/l	10	NONE	< 10				
TPH-CWG - Aliphatic >C12 - C16	µg/l	10	NONE	< 10				
TPH-CWG - Aliphatic >C16 - C21	µg/l	10	NONE	< 10				
TPH-CWG - Aliphatic >C21 - C35	µg/l	10	NONE	< 10				
TPH-CWG - Aliphatic (C5 - C35)	µg/l	10	NONE	< 10				
TPH-CWG - Aromatic >C5 - C7	µg/l	1	ISO 17025	< 1.0				
TPH-CWG - Aromatic >C7 - C8	µg/l	1	ISO 17025	< 1.0				
TPH-CWG - Aromatic >C8 - C10	µg/l	1	ISO 17025	< 1.0				
TPH-CWG - Aromatic >C10 - C12	µg/l	10	NONE	< 10				
TPH-CWG - Aromatic >C12 - C16	µg/l	10	NONE	< 10				
TPH-CWG - Aromatic >C16 - C21	µg/l	10	NONE	< 10				
TPH-CWG - Aromatic >C21 - C35	µg/l	10	NONE	< 10				
TPH-CWG - Aromatic (C5 - C35)	µg/l	10	NONE	< 10				

Analytical Report Number: 20-93274

Project / Site name: Wisbech

Lab Sample Number				1475913				
Sample Reference				BH4a				
Sample Number				None Supplied				
Depth (m)				None Supplied				
Date Sampled				17/03/2020				
Time Taken				None Supplied				
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
VOCs								
Chloromethane	µg/l	1	ISO 17025	< 1.0				
Chloroethane	µg/l	1	ISO 17025	< 1.0				
Bromomethane	µg/l	1	ISO 17025	< 1.0				
Vinyl Chloride	µg/l	1	NONE	< 1.0				
Trichlorofluoromethane	µg/l	1	NONE	< 1.0				
1,1-Dichloroethene	µg/l	1	ISO 17025	< 1.0				
1,1,2-Trichloro-1,2,2-trifluoroethane	µg/l	1	ISO 17025	< 1.0				
Cis-1,2-dichloroethene	µg/l	1	ISO 17025	< 1.0				
MTBE (Methyl Tertiary Butyl Ether)	µg/l	1	ISO 17025	< 1.0				
1,1-Dichloroethane	µg/l	1	ISO 17025	< 1.0				
2,2-Dichloropropane	µg/l	1	ISO 17025	< 1.0				
Trichloromethane	µg/l	1	ISO 17025	< 1.0				
1,1,1-Trichloroethane	µg/l	1	ISO 17025	< 1.0				
1,2-Dichloroethane	µg/l	1	ISO 17025	< 1.0				
1,1-Dichloropropene	µg/l	1	ISO 17025	< 1.0				
Trans-1,2-dichloroethene	µg/l	1	ISO 17025	< 1.0				
Benzene	µg/l	1	ISO 17025	< 1.0				
Tetrachloromethane	µg/l	1	ISO 17025	< 1.0				
1,2-Dichloropropane	µg/l	1	ISO 17025	< 1.0				
Trichloroethene	µg/l	1	ISO 17025	< 1.0				
Dibromomethane	µg/l	1	ISO 17025	< 1.0				
Bromodichloromethane	µg/l	1	ISO 17025	< 1.0				
Cis-1,3-dichloropropene	µg/l	1	ISO 17025	< 1.0				
Trans-1,3-dichloropropene	µg/l	1	ISO 17025	< 1.0				
Toluene	µg/l	1	ISO 17025	< 1.0				
1,1,2-Trichloroethane	µg/l	1	ISO 17025	< 1.0				
1,3-Dichloropropane	µg/l	1	ISO 17025	< 1.0				
Dibromochloromethane	µg/l	1	ISO 17025	< 1.0				
Tetrachloroethene	µg/l	1	ISO 17025	< 1.0				
1,2-Dibromoethane	µg/l	1	ISO 17025	< 1.0				
Chlorobenzene	µg/l	1	ISO 17025	< 1.0				
1,1,1,2-Tetrachloroethane	µg/l	1	ISO 17025	< 1.0				
Ethylbenzene	µg/l	1	ISO 17025	< 1.0				
p & m-Xylene	µg/l	1	ISO 17025	< 1.0				
Styrene	µg/l	1	ISO 17025	< 1.0				
Tribromomethane	µg/l	1	ISO 17025	< 1.0				
o-Xylene	µg/l	1	ISO 17025	< 1.0				
1,1,2,2-Tetrachloroethane	µg/l	1	ISO 17025	< 1.0				
Isopropylbenzene	µg/l	1	ISO 17025	< 1.0				
Bromobenzene	µg/l	1	ISO 17025	< 1.0				
n-Propylbenzene	µg/l	1	ISO 17025	< 1.0				
2-Chlorotoluene	µg/l	1	ISO 17025	< 1.0				
4-Chlorotoluene	µg/l	1	ISO 17025	< 1.0				
1,3,5-Trimethylbenzene	µg/l	1	ISO 17025	< 1.0				
tert-Butylbenzene	µg/l	1	ISO 17025	< 1.0				
1,2,4-Trimethylbenzene	µg/l	1	ISO 17025	< 1.0				
sec-Butylbenzene	µg/l	1	ISO 17025	< 1.0				
1,3-Dichlorobenzene	µg/l	1	ISO 17025	< 1.0				
p-Isopropyltoluene	µg/l	1	ISO 17025	< 1.0				
1,2-Dichlorobenzene	µg/l	1	ISO 17025	< 1.0				
1,4-Dichlorobenzene	µg/l	1	ISO 17025	< 1.0				
Butylbenzene	µg/l	1	ISO 17025	< 1.0				
1,2-Dibromo-3-chloropropane	µg/l	1	ISO 17025	< 1.0				
1,2,4-Trichlorobenzene	µg/l	1	ISO 17025	< 1.0				
Hexachlorobutadiene	µg/l	1	ISO 17025	< 1.0				
1,2,3-Trichlorobenzene	µg/l	1	ISO 17025	< 1.0				

Analytical Report Number: 20-93274

Project / Site name: Wisbech

Lab Sample Number				1475913				
Sample Reference				BH4a				
Sample Number				None Supplied				
Depth (m)				None Supplied				
Date Sampled				17/03/2020				
Time Taken				None Supplied				
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
VOCs TICs								
VOCs TICs Compound Name		10	NONE	ND				
VOC % Match	%	10	NONE	0				

Analytical Report Number: 20-93274

Project / Site name: Wisbech

Lab Sample Number				1475913				
Sample Reference				BH4a				
Sample Number				None Supplied				
Depth (m)				None Supplied				
Date Sampled				17/03/2020				
Time Taken				None Supplied				
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
SVOCs								
Aniline	µg/l	0.05	NONE	< 0.05				
Phenol	µg/l	0.05	NONE	< 0.05				
2-Chlorophenol	µg/l	0.05	NONE	< 0.05				
Bis(2-chloroethyl)ether	µg/l	0.05	NONE	< 0.05				
1,3-Dichlorobenzene	µg/l	0.05	NONE	< 0.05				
1,2-Dichlorobenzene	µg/l	0.05	NONE	< 0.05				
1,4-Dichlorobenzene	µg/l	0.05	NONE	< 0.05				
Bis(2-chloroisopropyl)ether	µg/l	0.05	NONE	< 0.05				
2-Methylphenol	µg/l	0.05	NONE	< 0.05				
Hexachloroethane	µg/l	0.05	NONE	< 0.05				
Nitrobenzene	µg/l	0.05	NONE	< 0.05				
4-Methylphenol	µg/l	0.05	NONE	< 0.05				
Isophorone	µg/l	0.05	NONE	< 0.05				
2-Nitrophenol	µg/l	0.05	NONE	< 0.05				
2,4-Dimethylphenol	µg/l	0.05	NONE	< 0.05				
Bis(2-chloroethoxy)methane	µg/l	0.05	NONE	< 0.05				
1,2,4-Trichlorobenzene	µg/l	0.05	NONE	< 0.05				
Naphthalene	µg/l	0.01	ISO 17025	< 0.01				
2,4-Dichlorophenol	µg/l	0.05	NONE	< 0.05				
4-Chloroaniline	µg/l	0.05	NONE	< 0.05				
Hexachlorobutadiene	µg/l	0.05	NONE	< 0.05				
4-Chloro-3-methylphenol	µg/l	0.05	NONE	< 0.05				
2,4,6-Trichlorophenol	µg/l	0.05	NONE	< 0.05				
2,4,5-Trichlorophenol	µg/l	0.05	NONE	< 0.05				
2-Methylnaphthalene	µg/l	0.05	NONE	< 0.05				
2-Chloronaphthalene	µg/l	0.05	NONE	< 0.05				
Dimethylphthalate	µg/l	0.05	NONE	< 0.05				
2,6-Dinitrotoluene	µg/l	0.05	NONE	< 0.05				
Acenaphthylene	µg/l	0.01	ISO 17025	< 0.01				
Acenaphthene	µg/l	0.01	ISO 17025	< 0.01				
2,4-Dinitrotoluene	µg/l	0.05	NONE	< 0.05				
Dibenzofuran	µg/l	0.05	NONE	< 0.05				
4-Chlorophenyl phenyl ether	µg/l	0.05	NONE	< 0.05				
Diethyl phthalate	µg/l	0.05	NONE	< 0.05				
4-Nitroaniline	µg/l	0.05	NONE	< 0.05				
Fluorene	µg/l	0.01	ISO 17025	< 0.01				
Azobenzene	µg/l	0.05	NONE	< 0.05				
Bromophenyl phenyl ether	µg/l	0.05	NONE	< 0.05				
Hexachlorobenzene	µg/l	0.05	NONE	< 0.05				
Phenanthrene	µg/l	0.01	ISO 17025	< 0.01				
Anthracene	µg/l	0.01	ISO 17025	< 0.01				
Carbazole	µg/l	0.05	NONE	< 0.05				
Dibutyl phthalate	µg/l	0.05	NONE	< 0.05				
Anthraquinone	µg/l	0.05	NONE	< 0.05				
Fluoranthene	µg/l	0.01	ISO 17025	< 0.01				
Pyrene	µg/l	0.01	ISO 17025	< 0.01				
Butyl benzyl phthalate	µg/l	0.05	NONE	< 0.05				
Benzo(a)anthracene	µg/l	0.01	ISO 17025	< 0.01				
Chrysene	µg/l	0.01	ISO 17025	< 0.01				
Benzo(b)fluoranthene	µg/l	0.01	ISO 17025	< 0.01				
Benzo(k)fluoranthene	µg/l	0.01	ISO 17025	< 0.01				
Benzo(a)pyrene	µg/l	0.01	ISO 17025	< 0.01				
Indeno(1,2,3-cd)pyrene	µg/l	0.01	ISO 17025	< 0.01				
Dibenz(a,h)anthracene	µg/l	0.01	ISO 17025	< 0.01				
Benzo(ghi)perylene	µg/l	0.01	ISO 17025	< 0.01				

Analytical Report Number: 20-93274

Project / Site name: Wisbech

Lab Sample Number				1475913				
Sample Reference				BH4a				
Sample Number				None Supplied				
Depth (m)				None Supplied				
Date Sampled				17/03/2020				
Time Taken				None Supplied				
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
SVOCs TICs								
SVOCs TICs Compound Name		N/A	NONE	ND				
SVOC % Match	%	N/A	NONE	0				

U/S = Unsuitable Sample I/S = Insufficient Sample

Analytical Report Number : 20-93274

Project / Site name: Wisbech

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Water (PrW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Ammoniacal Nitrogen as N in water	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the discrete analyser (colorimetric) salicylate/nitroprusside method. Accredited matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	ISO 17025
Biological oxygen demand (total) of water	Determination of biochemical oxygen demand in water (5 days). Accredited matrices: SW, PW, GW.	In-house method based on standard method 5210B.	L086-PL	W	ISO 17025
Boron in water	Determination of boron in water by acidification followed by ICP-OES. Accredited matrices: SW PW GW	In-house method based on MEWAM	L039-PL	W	ISO 17025
BTEX and MTBE in water (Monoaromatics)	Determination of BTEX and MTBE in water by headspace GC-MS. Accredited matrices: SW PW GW	In-house method based on USEPA8260	L073B-PL	W	ISO 17025
Chemical Oxygen Demand in Water (Total)	Determination of total COD in water by reflux oxidation with acidified K2Cr2O7 followed by colorimetry. Accredited matrices: SW, PW, GW.	HACH DR/890 Colorimeter Procedures Manual (48470-22) (Ref 0170.2)	L065-PL	W	ISO 17025
Electrical conductivity at 20oC of water	Determination of electrical conductivity in water by electrometric measurement. Accredited Matrices SW, GW, PW	In-house method	L031-PL	W	ISO 17025
Hexavalent chromium in water	Determination of hexavalent chromium in water by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.	In-house method by continuous flow analyser. Accredited Matrices SW, GW, PW.	L080-PL	W	ISO 17025
Metals in water by ICP-MS (dissolved)	Determination of metals in water by acidification followed by ICP-MS. Accredited Matrices: SW, GW, PW except B=SW,GW, Hg=SW,PW, Al=SW,PW.	In-house method based on USEPA Method 6020 & 200.8 "for the determination of trace elements in water by ICP-MS.	L012-PL	W	ISO 17025
Metals in water by ICP-OES (dissolved)	Determination of metals in water by acidification followed by ICP-OES. Accredited Matrices SW, GW, PW, PrW.(Al, Cu,Fe,Zn).	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L039-PL	W	ISO 17025
Monohydric phenols in water	Determination of phenols in water by continuous flow analyser. Accredited matrices: SW PW GW	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)	L080-PL	W	ISO 17025
pH at 20oC in water (automated)	Determination of pH in water by electrometric measurement. Accredited matrices: SW PW GW	In house method.	L099-PL	W	ISO 17025
Semi-volatile organic compounds in water	Determination of semi-volatile organic compounds in leachate by extraction in dichloromethane followed by GC-MS.	In-house method based on USEPA 8270	L102B-PL	W	NONE
Sulphate in water	Determination of sulphate in water by acidification followed by ICP-OES. Accredited matrices: SW PW GW, PrW.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L039-PL	W	ISO 17025
Tentatively identified compounds (SVOC) in water	Determination of semi-volatile organic compounds total ion count in water by extraction with hexane followed by GC-MS followed by a full library scan.	In-house method based on USEPA 8270	L070-PL	W	NONE
Tentatively identified compounds (VOC) in water	Determination of volatile organic compounds total ion count in water by headspace GC-MS followed by a full library scan.	In-house method based on USEPA8260	L073B-PL	W	NONE
Total Hardness of water	Determination of hardness in waters by calculation from calcium and magnesium. Accredited Matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L045-PL	W	ISO 17025
Total organic carbon in water	Determination of dissolved organic carbon in water by TOC/DOC NDIR analyser. Accredited matrices: SW PW GW.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L037-PL	W	ISO 17025

Analytical Report Number : 20-93274

Project / Site name: Wisbech

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Water (PrW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
TPHCWG (Waters)	Determination of dichloromethane extractable hydrocarbons in water by GC-MS, speciation by interpretation.	In-house method	L070-PL	W	NONE
Volatile organic compounds in water	Determination of volatile organic compounds in water by headspace GC-MS. Accredited matrices: SW PW GW	In-house method based on USEPA8260	L073B-PL	W	ISO 17025

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.
For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.
Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.

Becky Whiteley
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e: [redacted]

Analytical Report Number : 20-93423

Replaces Analytical Report Number : 20-93423, issue no. 1

Result correction by laboratory.

Project / Site name:	Wisbech	**Samples received on:**	19/03/2020
Your job number:	41310	**Samples instructed on:**	19/03/2020
Your order number:	325031	**Analysis completed by:**	30/03/2020
Report Issue Number:	2	**Report issued on:**	31/03/2020
Samples Analysed:	4 water samples		

Signed [redacted]

Rachel Bradley

Deputy Quality Manager
For & on behalf of i2 Analytical Ltd.

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils	- 4 weeks from reporting
leachates	- 2 weeks from reporting
waters	- 2 weeks from reporting
asbestos	- 6 months from reporting

Excel copies of reports are only valid when accompanied by this PDF certificate.

Any assessments of compliance with specifications are based on actual analytical results with no contribution from uncertainty of measurement. Application of uncertainty of measurement would provide a range within which the true result lies. An estimate of measurement uncertainty can be provided on request.

Analytical Report Number: 20-93423

Project / Site name: Wisbech

Your Order No: 325031

Lab Sample Number				1476604	1476605	1476606	1476607	
Sample Reference				BH2	BH13	BH12	BH5	
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	
Date Sampled				18/03/2020	18/03/2020	18/03/2020	18/03/2020	
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
General Inorganics								
pH	pH Units	N/A	ISO 17025	7.4	7.2	7.8	7.6	
Sulphate as SO_4	µg/l	45	ISO 17025	440000	518000	414000	416000	
Sulphate as SO_4	mg/l	0.045	ISO 17025	440	518	414	416	
Ammoniacal Nitrogen as N	µg/l	15	ISO 17025	2800	1600	4000	3700	
Total Organic Carbon (TOC)	mg/l	0.1	ISO 17025	18.5	21.2	15.5	13.4	
Total Phenols								
Total Phenols (monohydric)	µg/l	1	ISO 17025	5.1	9.3	4.7	4.2	
Heavy Metals / Metalloids								
Arsenic (dissolved)	µg/l	0.15	ISO 17025	1.76	5.17	9.62	1.40	
Boron (dissolved)	µg/l	10	ISO 17025	1100	700	1200	1500	
Cadmium (dissolved)	µg/l	0.02	ISO 17025	< 0.02	< 0.02	< 0.02	< 0.02	
Chromium (hexavalent)	µg/l	5	ISO 17025	< 5.0	< 5.0	< 5.0	< 5.0	
Chromium (dissolved)	µg/l	0.2	ISO 17025	0.3	0.3	< 0.2	< 0.2	
Copper (dissolved)	µg/l	0.5	ISO 17025	0.5	< 0.5	0.8	< 0.5	
Lead (dissolved)	µg/l	0.2	ISO 17025	< 0.2	< 0.2	< 0.2	< 0.2	
Mercury (dissolved)	µg/l	0.05	ISO 17025	< 0.05	< 0.05	< 0.05	< 0.05	
Nickel (dissolved)	µg/l	0.5	ISO 17025	< 0.5	0.8	< 0.5	< 0.5	
Selenium (dissolved)	µg/l	0.6	ISO 17025	29	17	33	34	
Zinc (dissolved)	µg/l	0.5	ISO 17025	3.2	0.8	1.2	0.6	

Analytical Report Number: 20-93423

Project / Site name: Wisbech

Your Order No: 325031

Lab Sample Number				1476604	1476605	1476606	1476607	
Sample Reference				BH2	BH13	BH12	BH5	
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	
Date Sampled				18/03/2020	18/03/2020	18/03/2020	18/03/2020	
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Monoaromatics & Oxygenates								
Benzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Toluene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Ethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
p & m-xylene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
o-xylene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
MTBE (Methyl Tertiary Butyl Ether)	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Petroleum Hydrocarbons								
TPH-CWG - Aliphatic >C5 - C6	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
TPH-CWG - Aliphatic >C6 - C8	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
TPH-CWG - Aliphatic >C8 - C10	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
TPH-CWG - Aliphatic >C10 - C12	µg/l	10	NONE	< 10	< 10	< 10	< 10	
TPH-CWG - Aliphatic >C12 - C16	µg/l	10	NONE	< 10	< 10	< 10	< 10	
TPH-CWG - Aliphatic >C16 - C21	µg/l	10	NONE	< 10	< 10	2800	< 10	
TPH-CWG - Aliphatic >C21 - C35	µg/l	10	NONE	< 10	< 10	2200	< 10	
TPH-CWG - Aliphatic (C5 - C35)	µg/l	10	NONE	< 10	< 10	5000	< 10	
TPH-CWG - Aromatic >C5 - C7	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
TPH-CWG - Aromatic >C7 - C8	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
TPH-CWG - Aromatic >C8 - C10	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
TPH-CWG - Aromatic >C10 - C12	µg/l	10	NONE	< 10	< 10	< 10	< 10	
TPH-CWG - Aromatic >C12 - C16	µg/l	10	NONE	< 10	< 10	< 10	< 10	
TPH-CWG - Aromatic >C16 - C21	µg/l	10	NONE	< 10	< 10	< 10	< 10	
TPH-CWG - Aromatic >C21 - C35	µg/l	10	NONE	< 10	< 10	< 10	< 10	
TPH-CWG - Aromatic (C5 - C35)	µg/l	10	NONE	< 10	< 10	< 10	< 10	

Analytical Report Number: 20-93423

Project / Site name: Wisbech

Your Order No: 325031

Lab Sample Number				1476604	1476605	1476606	1476607	
Sample Reference				BH2	BH13	BH12	BH5	
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	
Date Sampled				18/03/2020	18/03/2020	18/03/2020	18/03/2020	
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
VOCs								
Chloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Chloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Bromomethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Vinyl Chloride	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	
Trichlorofluoromethane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	
1,1-Dichloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
1,1,2-Trichloro-1,2,2-trifluoroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Cis-1,2-dichloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
MTBE (Methyl Tertiary Butyl Ether)	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
1,1-Dichloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
2,2-Dichloropropane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Trichloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
1,1,1-Trichloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
1,2-Dichloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
1,1-Dichloropropene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Trans-1,2-dichloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Benzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Tetrachloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
1,2-Dichloropropane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Trichloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Dibromomethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Bromodichloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Cis-1,3-dichloropropene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Trans-1,3-dichloropropene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Toluene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
1,1,2-Trichloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
1,3-Dichloropropane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Dibromochloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Tetrachloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
1,2-Dibromoethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Chlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
1,1,1,2-Tetrachloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Ethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
p & m-Xylene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Styrene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Tribromomethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
o-Xylene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
1,1,2,2-Tetrachloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Isopropylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Bromobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
n-Propylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
2-Chlorotoluene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
4-Chlorotoluene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
1,3,5-Trimethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
tert-Butylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
1,2,4-Trimethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
sec-Butylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
1,3-Dichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
p-Isopropyltoluene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
1,2-Dichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
1,4-Dichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Butylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
1,2-Dibromo-3-chloropropane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
1,2,4-Trichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
Hexachlorobutadiene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	
1,2,3-Trichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	

Analytical Report Number: 20-93423

Project / Site name: Wisbech

Your Order No: 325031

Lab Sample Number				1476604	1476605	1476606	1476607	
Sample Reference				BH2	BH13	BH12	BH5	
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	
Date Sampled				18/03/2020	18/03/2020	18/03/2020	18/03/2020	
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
VOCs TICs								
VOCs TICs Compound Name		10	NONE	ND	ND	ND	ND	
VOC % Match	%	10	NONE	0	0	0	0	

Analytical Report Number: 20-93423

Project / Site name: Wisbech

Your Order No: 325031

Lab Sample Number				1476604	1476605	1476606	1476607	
Sample Reference				BH2	BH13	BH12	BH5	
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	
Date Sampled				18/03/2020	18/03/2020	18/03/2020	18/03/2020	
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
SVOCs								
Aniline	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
Phenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
2-Chlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
Bis(2-chloroethyl)ether	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
1,3-Dichlorobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
1,2-Dichlorobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
1,4-Dichlorobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
Bis(2-chloroisopropyl)ether	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
2-Methylphenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
Hexachloroethane	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
Nitrobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
4-Methylphenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
Isophorone	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
2-Nitrophenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
2,4-Dimethylphenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
Bis(2-chloroethoxy)methane	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
1,2,4-Trichlorobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
Naphthalene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	0.21	< 0.01	
2,4-Dichlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
4-Chloroaniline	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
Hexachlorobutadiene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
4-Chloro-3-methylphenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
2,4,6-Trichlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
2,4,5-Trichlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
2-Methylnaphthalene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
2-Chloronaphthalene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
Dimethylphthalate	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
2,6-Dinitrotoluene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
Acenaphthylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	
Acenaphthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	0.53	< 0.01	
2,4-Dinitrotoluene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
Dibenzofuran	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
4-Chlorophenyl phenyl ether	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
Diethyl phthalate	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
4-Nitroaniline	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
Fluorene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	
Azobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
Bromophenyl phenyl ether	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
Hexachlorobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
Phenanthrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	
Anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	
Carbazole	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
Dibutyl phthalate	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
Anthraquinone	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
Fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	
Pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	0.69	< 0.01	
Butyl benzyl phthalate	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
Benzo(a)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	
Chrysene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	
Benzo(b)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	
Benzo(k)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	
Benzo(a)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	
Indeno(1,2,3-cd)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	
Dibenz(a,h)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	
Benzo(ghi)perylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	

Analytical Report Number: 20-93423

Project / Site name: Wisbech

Your Order No: 325031

Lab Sample Number				1476604	1476605	1476606	1476607	
Sample Reference				BH2	BH13	BH12	BH5	
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	
Date Sampled				18/03/2020	18/03/2020	18/03/2020	18/03/2020	
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
SVOCs TICs								
SVOCs TICs Compound Name		N/A	NONE	ND	ND	Phenol, 2,4-bis(1,1-dimethylethyl)-	ND	
SVOC % Match	%	N/A	NONE	0	0	96	0	
SVOCs TICs Compound Name		N/A	NONE	-	-	Pentadecane, 2,6,10-trimethyl-	-	
SVOC % Match	%	N/A	NONE	-	-	96	-	
SVOCs TICs Compound Name		N/A	NONE	-	-	Tricosane	-	
SVOC % Match	%	N/A	NONE	-	-	95	-	
SVOCs TICs Compound Name		N/A	NONE	-	-	Eicosane	-	
SVOC % Match	%	N/A	NONE	-	-	95	-	
SVOCs TICs Compound Name		N/A	NONE	-	-	Heptadecane	-	
SVOC % Match	%	N/A	NONE	-	-	95	-	
SVOCs TICs Compound Name		N/A	NONE	-	-	Cyclohexene, 1-methyl-4-(1-methylethenyl)-, (S)-	-	
SVOC % Match	%	N/A	NONE	-	-	94	-	
SVOCs TICs Compound Name		N/A	NONE	-	-	Cyclotetradecane, 1,7,11-trimethyl-4-(1-methylethyl)-	-	
SVOC % Match	%	N/A	NONE	-	-	94	-	
SVOCs TICs Compound Name		N/A	NONE	-	-	Tetrapentacontane, 1,54-dibromo-	-	
SVOC % Match	%	N/A	NONE	-	-	93	-	
SVOCs TICs Compound Name		N/A	NONE	-	-	Octadecane, 2,6,10,14-tetramethyl-	-	
SVOC % Match	%	N/A	NONE	-	-	93	-	
SVOCs TICs Compound Name		N/A	NONE	-	-	Tetracosane	-	
SVOC % Match	%	N/A	NONE	-	-	93	-	

U/S = Unsuitable Sample I/S = Insufficient Sample

Analytical Report Number : 20-93423

Project / Site name: Wisbech

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Water (PrW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Ammoniacal Nitrogen as N in water	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the discrete analyser (colorimetric) salicylate/nitroprusside method. Accredited matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	ISO 17025
Boron in water	Determination of boron in water by acidification followed by ICP-OES. Accredited matrices: SW PW GW	In-house method based on MEWAM	L039-PL	W	ISO 17025
BTEX and MTBE in water (Monoaromatics)	Determination of BTEX and MTBE in water by headspace GC-MS. Accredited matrices: SW PW GW	In-house method based on USEPA8260	L073B-PL	W	ISO 17025
Hexavalent chromium in water	Determination of hexavalent chromium in water by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.	In-house method by continuous flow analyser. Accredited Matrices SW, GW, PW.	L080-PL	W	ISO 17025
Metals in water by ICP-MS (dissolved)	Determination of metals in water by acidification followed by ICP-MS. Accredited Matrices: SW, GW, PW except B=SW,GW, Hg=SW,PW, Al=SW,PW.	In-house method based on USEPA Method 6020 & 200.8 "for the determination of trace elements in water by ICP-MS.	L012-PL	W	ISO 17025
Monohydric phenols in water - LOW LEVEL 1 ug/l	Determination of phenols in water by continuous flow analyser. Accredited matrices: SW PW GW	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)	L080-PL	W	ISO 17025
pH at 20oC in water (automated)	Determination of pH in water by electrometric measurement. Accredited matrices: SW PW GW	In house method.	L099-PL	W	ISO 17025
Semi-volatile organic compounds in water	Determination of semi-volatile organic compounds in leachate by extraction in dichloromethane followed by GC-MS.	In-house method based on USEPA 8270	L102B-PL	W	NONE
Sulphate in water	Determination of sulphate in water by acidification followed by ICP-OES. Accredited matrices: SW PW GW, PrW.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L039-PL	W	ISO 17025
Tentatively identified compounds (SVOC) in water	Determination of semi-volatile organic compounds total ion count in water by extraction with hexane followed by GC-MS followed by a full library scan.	In-house method based on USEPA 8270	L070-PL	W	NONE
Tentatively identified compounds (VOC) in water	Determination of volatile organic compounds total ion count in water by headspace GC-MS followed by a full library scan.	In-house method based on USEPA8260	L073B-PL	W	NONE
Total organic carbon in water	Determination of dissolved organic carbon in water by TOC/DOC NDIR analyser. Accredited matrices: SW PW GW.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L037-PL	W	ISO 17025
TPHCWG (Waters)	Determination of dichloromethane extractable hydrocarbons in water by GC-MS, speciation by interpretation.	In-house method	L070-PL	W	NONE
Volatile organic compounds in water	Determination of volatile organic compounds in water by headspace GC-MS. Accredited matrices: SW PW GW	In-house method based on USEPA8260	L073B-PL	W	ISO 17025

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.
For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.
Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.

Becky Whiteley
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Analytical Report Number : 20-93689

Project / Site name:	Wisbech	**Samples received on:**	19/03/2020
Your job number:	41310	**Samples instructed on:**	19/03/2020
Your order number:	325031	**Analysis completed by:**	26/03/2020
Report Issue Number:	1	**Report issued on:**	26/03/2020
Samples Analysed:	2 water samples		

Signed: [redacted]

Agnieszka Czerwińska

Technical Reviewer (Reporting Team)
For & on behalf of i2 Analytical Ltd.

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils	- 4 weeks from reporting
leachates	- 2 weeks from reporting
waters	- 2 weeks from reporting
asbestos	- 6 months from reporting

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Any assessments of compliance with specifications are based on actual analytical results with no contribution from uncertainty of measurement. Application of uncertainty of measurement would provide a range within which the true result lies. An estimate of measurement uncertainty can be provided on request.

Analytical Report Number: 20-93689

Project / Site name: Wisbech

Your Order No: 325031

Lab Sample Number				1478046	1478047			
Sample Reference				BH3	BH6			
Sample Number				None Supplied	None Supplied			
Depth (m)				None Supplied	None Supplied			
Date Sampled				18/03/2020	18/03/2020			
Time Taken				None Supplied	None Supplied			
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
General Inorganics								
pH	pH Units	N/A	ISO 17025	6.9	7.0			
Sulphate as SO_4	mg/l	0.045	ISO 17025	1290	164			
Ammoniacal Nitrogen as N	µg/l	15	ISO 17025	850	610			
Total Organic Carbon (TOC)	mg/l	0.1	ISO 17025	14.1	8.37			
Total Phenols								
Total Phenols (monohydric)	µg/l	1	ISO 17025	2.1	3.1			
Heavy Metals / Metalloids								
Arsenic (dissolved)	µg/l	0.15	ISO 17025	0.32	0.46			
Boron (dissolved)	µg/l	10	ISO 17025	510	330			
Cadmium (dissolved)	µg/l	0.02	ISO 17025	0.07	0.15			
Chromium (hexavalent)	µg/l	5	ISO 17025	< 5.0	< 5.0			
Chromium (dissolved)	µg/l	0.2	ISO 17025	1.0	0.9			
Copper (dissolved)	µg/l	0.5	ISO 17025	1.3	4.7			
Lead (dissolved)	µg/l	0.2	ISO 17025	0.8	0.3			
Mercury (dissolved)	µg/l	0.05	ISO 17025	< 0.05	< 0.05			
Nickel (dissolved)	µg/l	0.5	ISO 17025	3.1	1.9			
Selenium (dissolved)	µg/l	0.6	ISO 17025	6.8	4.9			
Zinc (dissolved)	µg/l	0.5	ISO 17025	6.1	4.5			
Monoaromatics & Oxygenates								
Benzene	µg/l	1	ISO 17025	< 1.0	< 1.0			
Toluene	µg/l	1	ISO 17025	< 1.0	< 1.0			
Ethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0			
p & m-xylene	µg/l	1	ISO 17025	< 1.0	< 1.0			
o-xylene	µg/l	1	ISO 17025	< 1.0	< 1.0			
MTBE (Methyl Tertiary Butyl Ether)	µg/l	1	ISO 17025	< 1.0	< 1.0			
Petroleum Hydrocarbons								
TPH-CWG - Aliphatic >C5 - C6	µg/l	1	ISO 17025	< 1.0	< 1.0			
TPH-CWG - Aliphatic >C6 - C8	µg/l	1	ISO 17025	< 1.0	< 1.0			
TPH-CWG - Aliphatic >C8 - C10	µg/l	1	ISO 17025	< 1.0	< 1.0			
TPH-CWG - Aliphatic >C10 - C12	µg/l	10	NONE	< 10	< 10			
TPH-CWG - Aliphatic >C12 - C16	µg/l	10	NONE	< 10	< 10			
TPH-CWG - Aliphatic >C16 - C21	µg/l	10	NONE	< 10	< 10			
TPH-CWG - Aliphatic >C21 - C35	µg/l	10	NONE	< 10	< 10			
TPH-CWG - Aliphatic (C5 - C35)	µg/l	10	NONE	< 10	< 10			
TPH-CWG - Aromatic >C5 - C7	µg/l	1	ISO 17025	< 1.0	< 1.0			
TPH-CWG - Aromatic >C7 - C8	µg/l	1	ISO 17025	< 1.0	< 1.0			
TPH-CWG - Aromatic >C8 - C10	µg/l	1	ISO 17025	< 1.0	< 1.0			
TPH-CWG - Aromatic >C10 - C12	µg/l	10	NONE	< 10	< 10			
TPH-CWG - Aromatic >C12 - C16	µg/l	10	NONE	< 10	< 10			
TPH-CWG - Aromatic >C16 - C21	µg/l	10	NONE	< 10	< 10			
TPH-CWG - Aromatic >C21 - C35	µg/l	10	NONE	< 10	< 10			
TPH-CWG - Aromatic (C5 - C35)	µg/l	10	NONE	< 10	< 10			

Analytical Report Number: 20-93689

Project / Site name: Wisbech

Your Order No: 325031

Lab Sample Number				1478046	1478047			
Sample Reference				BH3	BH6			
Sample Number				None Supplied	None Supplied			
Depth (m)				None Supplied	None Supplied			
Date Sampled				18/03/2020	18/03/2020			
Time Taken				None Supplied	None Supplied			
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
VOCs								
Chloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0			
Chloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0			
Bromomethane	µg/l	1	ISO 17025	< 1.0	< 1.0			
Vinyl Chloride	µg/l	1	NONE	< 1.0	< 1.0			
Trichlorofluoromethane	µg/l	1	NONE	< 1.0	< 1.0			
1,1-Dichloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0			
1,1,2-Trichloro-1,2,2-trifluoroethane	µg/l	1	ISO 17025	< 1.0	< 1.0			
Cis-1,2-dichloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0			
MTBE (Methyl Tertiary Butyl Ether)	µg/l	1	ISO 17025	< 1.0	< 1.0			
1,1-Dichloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0			
2,2-Dichloropropane	µg/l	1	ISO 17025	< 1.0	< 1.0			
Trichloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0			
1,1,1-Trichloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0			
1,2-Dichloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0			
1,1-Dichloropropene	µg/l	1	ISO 17025	< 1.0	< 1.0			
Trans-1,2-dichloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0			
Benzene	µg/l	1	ISO 17025	< 1.0	< 1.0			
Tetrachloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0			
1,2-Dichloropropane	µg/l	1	ISO 17025	< 1.0	< 1.0			
Trichloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0			
Dibromomethane	µg/l	1	ISO 17025	< 1.0	< 1.0			
Bromodichloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0			
Cis-1,3-dichloropropene	µg/l	1	ISO 17025	< 1.0	< 1.0			
Trans-1,3-dichloropropene	µg/l	1	ISO 17025	< 1.0	< 1.0			
Toluene	µg/l	1	ISO 17025	< 1.0	< 1.0			
1,1,2-Trichloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0			
1,3-Dichloropropane	µg/l	1	ISO 17025	< 1.0	< 1.0			
Dibromochloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0			
Tetrachloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0			
1,2-Dibromoethane	µg/l	1	ISO 17025	< 1.0	< 1.0			
Chlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0			
1,1,1,2-Tetrachloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0			
Ethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0			
p & m-Xylene	µg/l	1	ISO 17025	< 1.0	< 1.0			
Styrene	µg/l	1	ISO 17025	< 1.0	< 1.0			
Tribromomethane	µg/l	1	ISO 17025	< 1.0	< 1.0			
o-Xylene	µg/l	1	ISO 17025	< 1.0	< 1.0			
1,1,2,2-Tetrachloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0			
Isopropylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0			
Bromobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0			
n-Propylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0			
2-Chlorotoluene	µg/l	1	ISO 17025	< 1.0	< 1.0			
4-Chlorotoluene	µg/l	1	ISO 17025	< 1.0	< 1.0			
1,3,5-Trimethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0			
tert-Butylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0			
1,2,4-Trimethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0			
sec-Butylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0			
1,3-Dichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0			
p-Isopropyltoluene	µg/l	1	ISO 17025	< 1.0	< 1.0			
1,2-Dichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0			
1,4-Dichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0			
Butylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0			
1,2-Dibromo-3-chloropropane	µg/l	1	ISO 17025	< 1.0	< 1.0			
1,2,4-Trichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0			
Hexachlorobutadiene	µg/l	1	ISO 17025	< 1.0	< 1.0			
1,2,3-Trichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0			

Analytical Report Number: 20-93689

Project / Site name: Wisbech

Your Order No: 325031

Lab Sample Number				1478046	1478047			
Sample Reference				BH3	BH6			
Sample Number				None Supplied	None Supplied			
Depth (m)				None Supplied	None Supplied			
Date Sampled				18/03/2020	18/03/2020			
Time Taken				None Supplied	None Supplied			
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
VOCs TICs								
VOCs TICs Compound Name		10	NONE	ND	ND			
VOC % Match	%	10	NONE	0	0			

Analytical Report Number: 20-93689

Project / Site name: Wisbech

Your Order No: 325031

Lab Sample Number				1478046	1478047			
Sample Reference				BH3	BH6			
Sample Number				None Supplied	None Supplied			
Depth (m)				None Supplied	None Supplied			
Date Sampled				18/03/2020	18/03/2020			
Time Taken				None Supplied	None Supplied			
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
SVOCs								
Aniline	µg/l	0.05	NONE	< 0.05	< 0.05			
Phenol	µg/l	0.05	NONE	< 0.05	< 0.05			
2-Chlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05			
Bis(2-chloroethyl)ether	µg/l	0.05	NONE	< 0.05	< 0.05			
1,3-Dichlorobenzene	µg/l	0.05	NONE	< 0.05	< 0.05			
1,2-Dichlorobenzene	µg/l	0.05	NONE	< 0.05	< 0.05			
1,4-Dichlorobenzene	µg/l	0.05	NONE	< 0.05	< 0.05			
Bis(2-chloroisopropyl)ether	µg/l	0.05	NONE	< 0.05	< 0.05			
2-Methylphenol	µg/l	0.05	NONE	< 0.05	< 0.05			
Hexachloroethane	µg/l	0.05	NONE	< 0.05	< 0.05			
Nitrobenzene	µg/l	0.05	NONE	< 0.05	< 0.05			
4-Methylphenol	µg/l	0.05	NONE	< 0.05	< 0.05			
Isophorone	µg/l	0.05	NONE	< 0.05	< 0.05			
2-Nitrophenol	µg/l	0.05	NONE	< 0.05	< 0.05			
2,4-Dimethylphenol	µg/l	0.05	NONE	< 0.05	< 0.05			
Bis(2-chloroethoxy)methane	µg/l	0.05	NONE	< 0.05	< 0.05			
1,2,4-Trichlorobenzene	µg/l	0.05	NONE	< 0.05	< 0.05			
Naphthalene	µg/l	0.01	ISO 17025	< 0.01	< 0.01			
2,4-Dichlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05			
4-Chloroaniline	µg/l	0.05	NONE	< 0.05	< 0.05			
Hexachlorobutadiene	µg/l	0.05	NONE	< 0.05	< 0.05			
4-Chloro-3-methylphenol	µg/l	0.05	NONE	< 0.05	< 0.05			
2,4,6-Trichlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05			
2,4,5-Trichlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05			
2-Methylnaphthalene	µg/l	0.05	NONE	< 0.05	< 0.05			
2-Chloronaphthalene	µg/l	0.05	NONE	< 0.05	< 0.05			
Dimethylphthalate	µg/l	0.05	NONE	< 0.05	< 0.05			
2,6-Dinitrotoluene	µg/l	0.05	NONE	< 0.05	< 0.05			
Acenaphthylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01			
Acenaphthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01			
2,4-Dinitrotoluene	µg/l	0.05	NONE	< 0.05	< 0.05			
Dibenzofuran	µg/l	0.05	NONE	< 0.05	< 0.05			
4-Chlorophenyl phenyl ether	µg/l	0.05	NONE	< 0.05	< 0.05			
Diethyl phthalate	µg/l	0.05	NONE	< 0.05	< 0.05			
4-Nitroaniline	µg/l	0.05	NONE	< 0.05	< 0.05			
Fluorene	µg/l	0.01	ISO 17025	< 0.01	< 0.01			
Azobenzene	µg/l	0.05	NONE	< 0.05	< 0.05			
Bromophenyl phenyl ether	µg/l	0.05	NONE	< 0.05	< 0.05			
Hexachlorobenzene	µg/l	0.05	NONE	< 0.05	< 0.05			
Phenanthrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01			
Anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01			
Carbazole	µg/l	0.05	NONE	< 0.05	< 0.05			
Dibutyl phthalate	µg/l	0.05	NONE	< 0.05	< 0.05			
Anthraquinone	µg/l	0.05	NONE	< 0.05	< 0.05			
Fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01			
Pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01			
Butyl benzyl phthalate	µg/l	0.05	NONE	< 0.05	< 0.05			
Benzo(a)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01			
Chrysene	µg/l	0.01	ISO 17025	< 0.01	< 0.01			
Benzo(b)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01			
Benzo(k)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01			
Benzo(a)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01			
Indeno(1,2,3-cd)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01			
Dibenz(a,h)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01			
Benzo(ghi)perylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01			

Analytical Report Number: 20-93689

Project / Site name: Wisbech

Your Order No: 325031

Lab Sample Number				1478046	1478047			
Sample Reference				BH3	BH6			
Sample Number				None Supplied	None Supplied			
Depth (m)				None Supplied	None Supplied			
Date Sampled				18/03/2020	18/03/2020			
Time Taken				None Supplied	None Supplied			
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
SVOCs TICs								
SVOCs TICs Compound Name		N/A	NONE	ND	ND			
SVOC % Match	%	N/A	NONE	0	0			

U/S = Unsuitable Sample I/S = Insufficient Sample

Analytical Report Number : 20-93689

Project / Site name: Wisbech

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Water (PrW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Ammoniacal Nitrogen as N in water	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the discrete analyser (colorimetric) salicylate/nitroprusside method. Accredited matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	ISO 17025
Boron in water	Determination of boron in water by acidification followed by ICP-OES. Accredited matrices: SW PW GW	In-house method based on MEWAM	L039-PL	W	ISO 17025
BTEX and MTBE in water (Monoaromatics)	Determination of BTEX and MTBE in water by headspace GC-MS. Accredited matrices: SW PW GW	In-house method based on USEPA8260	L073B-PL	W	ISO 17025
Hexavalent chromium in water	Determination of hexavalent chromium in water by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.	In-house method by continuous flow analyser. Accredited Matrices SW, GW, PW.	L080-PL	W	ISO 17025
Metals in water by ICP-MS (dissolved)	Determination of metals in water by acidification followed by ICP-MS. Accredited Matrices: SW, GW, PW except B=SW,GW, Hg=SW,PW, Al=SW,PW.	In-house method based on USEPA Method 6020 & 200.8 "for the determination of trace elements in water by ICP-MS.	L012-PL	W	ISO 17025
Monohydric phenols in water - LOW LEVEL 1 ug/l	Determination of phenols in water by continuous flow analyser. Accredited matrices: SW PW GW	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)	L080-PL	W	ISO 17025
pH at 20oC in water (automated)	Determination of pH in water by electrometric measurement. Accredited matrices: SW PW GW	In house method.	L099-PL	W	ISO 17025
Semi-volatile organic compounds in water	Determination of semi-volatile organic compounds in leachate by extraction in dichloromethane followed by GC-MS.	In-house method based on USEPA 8270	L102B-PL	W	NONE
Sulphate in water	Determination of sulphate in water by acidification followed by ICP-OES. Accredited matrices: SW PW GW, PrW.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L039-PL	W	ISO 17025
Tentatively identified compounds (SVOC) in water	Determination of semi-volatile organic compounds total ion count in water by extraction with hexane followed by GC-MS followed by a full library scan.	In-house method based on USEPA 8270	L070-PL	W	NONE
Tentatively identified compounds (VOC) in water	Determination of volatile organic compounds total ion count in water by headspace GC-MS followed by a full library scan.	In-house method based on USEPA8260	L073B-PL	W	NONE
Total organic carbon in water	Determination of dissolved organic carbon in water by TOC/DOC NDIR analyser. Accredited matrices: SW PW GW.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L037-PL	W	ISO 17025
TPHCWG (Waters)	Determination of dichloromethane extractable hydrocarbons in water by GC-MS, speciation by interpretation.	In-house method	L070-PL	W	NONE
Volatile organic compounds in water	Determination of volatile organic compounds in water by headspace GC-MS. Accredited matrices: SW PW GW	In-house method based on USEPA8260	L073B-PL	W	ISO 17025

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.
For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.
Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.

Appendix K
Groundwater and Ground Gas Monitoring Results

CIRIA C665 Gas Screening Value Calculator

Project Number:	41310	Site:	Wisbech	Zone:	N/A

Ground conditions (including vegetation stress, visual contamination):	e.g. Gravel hardstanding covers the majority of the site, with some soft landscaping

Monitoring Point	Standpipe Diameter (m)	Response Zone Top (m bgl)	Response Zone Base (m bgl)	Strata Monitored	Evidence of potential gas generation sources?
BH01	0.055	1	2.5	CLAY and SILT with plant fragments	Decomposing plant fragments within SILT.
BH07	0.055	0.5	2	Made Ground	Made Ground & migration of gas through underlying clay
BH09	0.055	1	2.5	CLAY & SILT with plant fragments	Decomposing plant fragments within SILT.
BH11	0.055	1	1.5	CLAY, SILT & PEAT	Peat strata
End					

BS8485:2015 / CIRIA C665 Characteristic situation: Situation A - All development types except those in Situation B

Project Number:	41310	Site:	Wisbech	Zone:	N/A

	Round 1	Round 2	Round 3	Round 4	Round 5	Round 6	Round 7	Round 8	Round 9	Round 10	Round 11	Round 12	Round 13	Round 14	Round 15	Round 16	Round 17	Round 18	Round 19
Monitoring Dates	17/03/2020	15/04/2020	27/05/2020	15/06/2020	09/07/2020	13/08/2020													
al atmospheric pressure	1029	1022	1033	1014	1010	1011													
al atmospheric pressure	1026	1020	1033	1013	1010	1011													
Low Pressure (<1000mbar)	N	N	N	N	N	N													
Falling Pressure?	Y	Y	N	Y	N	N													

Monitoring Point	Number of rounds	Flow Rate (Peak positive or negative)	Flow Rate (Steady)	Methane (Peak)	Methane (Steady)	Carbon Dioxide (Peak)	Carbon Dioxide (Steady)	Oxygen (lowest value)	Oxygen (lowest steady)	Carbon Monoxide	Hydrogen Sulphide	Groundwater level	Methane GSV	Carbon Dioxide GSV	Characteristic situation based on Steady readings				VOC
		(l/hr)	(l/hr)	(%v/v)	(%v/v)	(%v/v)	(%v/v)	(%v/v)	(%v/v)	(ppm)	(ppm)	(m bgl)	(l/hr CH4)	(l/hr CO2)	Methane CS	Carbon dioxide CS	Comments on methane CS	Comments on carbon dioxide CS	Direct measurement - steady (ppm)
BH01	6	<0.1 to 0.2	<0.1 to 0.2	<0.1	<0.1	0.8 to 2.2	0.8 to 2.2	16.9 to 21.6	16.9 to 21.7	<0.1 to 2	<0.1	1.03 to 1.6	0.0002	0.0044	**CS-1**	**CS-1**			<0.1 to 8.1
BH07	6	<0.1 to 0.4	<0.1 to 0.4	<0.1	<0.1	0.1 to 1.2	0.1 to 1.2	18.8 to 19.9	18.8 to 19.9	<0.1	<0.1	0.76 to 1.21	0.0004	0.0048	**CS-1**	**CS-1**			<0.1 to 2
BH09	6	<0.1 to 7.3	<0.1 to 0.2	<0.1 to 2.4	<0.1 to 2.4	1.9 to 20.8	1.9 to 20.6	0.2 to 12.4	0.2 to 12.5	<0.1 to 2	<0.1	1.4 to 1.73	0.0048	0.0412	**CS-2***	**CS-2***	*Typical maximum concentration exceeded - assumed CS-2	*Typical maximum concentration exceeded - assumed CS-2	<0.1 to 1.9
BH11	5	<0.1 to 0.4	<0.1 to 0.4	<0.1	<0.1	0.2 to 1.9	0.1 to 1.9	20.5 to 21.9	20.5 to 22.2	<0.1	<0.1	0.5 to 1.38	0.0004	0.0076	**CS-1**	**CS-1**			<0.1 to 1.7
End																			

Monitoring Round 1

Project Number:	41310

Site:	Wisbech

Zone:	N/A

Date:	17/03/2020

Instrument model(s):	GA2000

Atm. Pressure (start) (mb):	1029

Engineer:	C Jackson & J Mendham

Instrument S/No.(s):	

Atm. Pressure (end) (mb):	1026

Temp (˚C if known):	14

Recent weather:	Stable high pressure with slight wind

Record any other observations which may have an impact on the soil gas monitoring results. These observations may include damage to the gas tap or top of well, damage to the cover or an open gas tap.	Damage to the well cover was noted on BH02 and BH09, however gas tap remained intacked.

Monitoring Point	Time	Flow Rate		Methane		Carbon Dioxide		Oxygen		Steady State Carbon Monoxide	Steady State Hydrogen Sulphide	Steady State VOCs	GW level	Notes (include peak CO, H2S, VOC values if identified)	Borehole Flooded?	Volume Of Gas In Well
		Peak positive or negative (l/hr)	Steady (l/hr)	Peak (%v/v)	Steady (%)	Peak (%v/v)	Steady (%)	Lowest value (%v/v)	Steady (%)	(ppm)	(ppm)	Direct measurement (ppm)	(m bgl)			(m^3)
BH01	12:25	-7.5	<0.1	<0.1	<0.1	2	1.1	21.6	21.7	2	<0.1	0.9	1.03	Peak flow due to changes in GrW level. GrW level measured from top of pipe. No survey level for pipe.	NO	0.002447104
BH07	16:35	0	<0.1	<0.1	<0.1	0.1	0.1	19.5	19.5	<0.1	<0.1	0.1	1.01	GrW level measured from the top of well cover	NO	0.002399588
BH09	10:39	7.3	<0.1	0.3	0.3	1.9	1.9	12.4	12.5	2	<0.1	1.2	1.4	Peak flow due to changes in GrW level. GrW level measured from top of pipe. No survey level for pipe.	NO	0.003326161
BH11	10:06	<0.1	<0.1	<0.1	<0.1	0.2	0.1	21.9	22.2	<0.1	<0.1	<0.1	1.12	GrW level measured from ground level	NO	0.002660929

Monitoring Round 2

Project Number:	41310

Site:	Wisbech

Zone:	N/A

Date:	15/04/2020

Instrument model(s):	GFM436

Atm. Pressure (start) (mb):	1022

Engineer:	Ish Konteh

Instrument S/No.(s):	13311

Atm. Pressure (end) (mb):	1020

Temp (˚C if known):	13 degrees

Recent weather:	Dry, Sunny

Record any other observations which may have an impact on the soil gas monitoring results. These observations may include damage to the gas tap or top of well, damage to the cover or an open gas tap.	

Monitoring Point	Time	Flow Rate		Methane		Carbon Dioxide		Oxygen		Steady State Carbon Monoxide	Steady State Hydrogen Sulphide	Steady State VOCs	GW level	Notes (include peak CO, H2S, VOCs if identified)	Borehole Flooded?	Volume Of Gas In Well
		Peak positive or negative (l/hr)	Steady (l/hr)	Peak (%v/v)	Steady (%)	Peak (%v/v)	Steady (%)	Lowest value (%v/v)	Steady (%)	(ppm)	(ppm)	Direct measurement (ppm)	(m bgl)			(m^3)
BH01	11:26	-5.7	<0.1	<0.1	<0.1	0.8	0.8	19.2	19.2	<0.1	<0.1	1.6	1.41	Peak flow -5.7	NO	0.00334992
BH07	12:20	<0.1	<0.1	<0.1	<0.1	0.8	0.8	19.9	19.9	<0.1	<0.1	<0.1	1.2	water bubbling up pipe	NO	0.002850995
BH09	13:10	-7	<0.1	0.7	0.7	8	8	0.8	0.8	<0.1	<0.1	0.1	1.47	Headworks full of clay. Tap standing proud of cover but folded under. Peak flow -7.0. LEL17.8%	NO	0.003492469
BH11	12:40	-13.5	<0.1	<0.1	<0.1	0.2	0.2	20.6	20.6	<0.1	<0.1	1.4	1.38	Peak flow -13.5. Some hissing from around bottom of bung	NO	0.003278645

Monitoring Round 3

Project Number:	41310	**Site:**	Wisbech
Zone:	N/A		
Date:	27/05/2020	**Instrument model(s):**	GFM436
Atm. Pressure (start) (mb):	1033		
Engineer:	Ish Konteh	**Instrument S/No.(s):**	13311
Atm. Pressure (end) (mb):	1033		
Temp (˚C if known):		**Recent weather:**	Dry, sunny

Record any other observations which may have an impact on the soil gas monitoring results. These observations may include damage to the gas tap or top of well, damage to the cover or an open gas tap.

Monitoring Point	Time	Flow Rate		Methane		Carbon Dioxide		Oxygen		Steady State Carbon Monoxide	Steady State Hydrogen Sulphide	Steady State VOCs	GW level	Notes (include peak CO, H2S, VOCs if identified)	Borehole Flooded?	Volume Of Gas In Well
		Peak positive or negative (l/hr)	Steady (l/hr)	Peak (%v/v)	Steady (%)	Peak (%v/v)	Steady (%)	Lowest value (%v/v)	Steady (%)	(ppm)	(ppm)	Direct measurement (ppm)	(m bgl)			(m^3)
BH01	13:41	< 0.1	< 0.1	< 0.1	< 0.1	1	1	19.3	19.3	< 0.1	< 0.1	< 0.1	1.53	voc 0.4PPM PEAK	NO	0.003635019
BH07	16:27	< 0.1	< 0.1	< 0.1	< 0.1	0.9	0.8	19.1	19.1	< 0.1	< 0.1	0.2	1.14		NO	0.002708446
BH11	16:37	< 0.1	< 0.1	< 0.1	< 0.1	0.3	0.3	20.6	20.6	< 0.1	< 0.1	< 0.1	1.16	vocs down from 0.5 in 10 seconds	NO	0.002755962
BH09	13:35	< 0.1	< 0.1	< 0.1	< 0.1	15.8	15.8	0.3	0.3	< 0.1	< 0.1	0.3	1.58	LEL 7.0	NO	0.003753811

Monitoring Round 4

Project Number:	41310	**Site:**	Wisbech
Zone:	N/A		
Date:	15/06/2020	**Instrument model(s):**	GFM 435
Engineer:	IK	**Instrument S/No.(s):**	
Temp (˚C if known):	23	**Recent weather:**	Sunny
Atm. Pressure (start) (mb):	1014	**Atm. Pressure (end) (mb):**	1013

Record any other observations which may have an impact on the soil gas monitoring results. These observations may include damage to the gas tap or top of well, damage to the cover or an open gas tap.

Business as usual. Deodouriser fan was turned on at site entrance.

Monitoring Point	Time	Flow Rate		Methane		Carbon Dioxide		Oxygen		Steady State Carbon Monoxide	Steady State Hydrogen Sulphide	Steady State VOCs	GW level	Notes (include peak CO, H2S, VOCs if identified)	Borehole Flooded?	Volume Of Gas In Well
		Peak positive or negative (l/hr)	Steady (l/hr)	Peak (%v/v)	Steady (%)	Peak (%v/v)	Steady (%)	Lowest value (%v/v)	Steady (%)	(ppm)	(ppm)	Direct measurement (ppm)	(m bgl)			(m^3)
BH01	13.45	< 0.1	< 0.1	< 0.1	< 0.1	1.1	1.1	17.3	17.3	< 0.1	< 0.1	< 0.1	1.6	Flow peaked at 6.2 then to 0 after 2 seconds	NO	0.003801327
BH07	13.14	< 0.1	< 0.1	< 0.1	< 0.1	0.7	0.7	19.5	19.5	< 0.1	< 0.1	< 0.1	1.15	Flow peaked at -1.8 then returned to 0 after 2 seconds	NO	0.002732204
BH11	13	< 0.1	< 0.1	< 0.1	< 0.1	0.4	0.4	20.5	20.5	< 0.1	< 0.1	< 0.1	1.14	Missing bolts, barriers broken	NO	0.002708446
BH09	13.56	< 0.1	< 0.1	< 0.1	< 0.1	3.4	3.4	2.9	2.9	< 0.1	< 0.1	< 0.1	1.68	Hissed when GFM detatched after reading gas, but not flow	NO	0.003991393

Monitoring Round 5

Project Number:	41310

Site:	Wisbech

Zone:	N/A

Date:	09/07/2020
Engineer:	IK
Temp (˚C if known):	16

Instrument model(s):	
Instrument S/No.(s):	
Recent weather:	Rain

Atm. Pressure (start) (mb):	1010
Atm. Pressure (end) (mb):	1010

Record any other observations which may have an impact on the soil gas monitoring results. These observations may include damage to the gas tap or top of well, damage to the cover or an open gas tap.

Monitoring Point	Time	Flow Rate		Methane		Carbon Dioxide		Oxygen		Steady State Carbon Monoxide	Steady State Hydrogen Sulphide	Steady State VOCs	GW level	Notes (include peak CO, H2S, VOCs if identified)	Borehole Flooded?	Volume Of Gas In Well
		Peak positive or negative (l/hr)	Steady (l/hr)	Peak (%v/v)	Steady (%)	Peak (%v/v)	Steady (%)	Lowest value (%v/v)	Steady (%)	(ppm)	(ppm)	Direct measurement (ppm)	(m bgl)			(m^3)
BH01	10:30	0.2	0.2	< 0.1	< 0.1	1.9	1.9	17.5	17.5	<0.01	<0.01	8.1	1.47		NO	0.003492469
BH07	10:55	0.4	0.4	< 0.1	< 0.1	0.3	0.3	19.2	19.2	<0.01	<0.01	2	0.76		NO	0.00180563
BH11	12:05	0.4	0.4	< 0.1	< 0.1	1.9	1.9	20.6	20.6	<0.01	<0.01	1.7	0.5	Lots of standing water around installation	YES	0.001187915
BH09	12:45	0.3	0.2	< 0.1	< 0.1	17.2	17.2	1.1	1.1	<0.01	<0.01	1.9	1.63		NO	0.003872602

Monitoring Round 6

Project Number:	41310

Site:	Wisbech

Zone:	N/A

Date:	13/08/2020

Instrument model(s):	GFM 435

Atm. Pressure (start) (mb):	1011

Engineer:	IK

Instrument S/No.(s):	13311

Atm. Pressure (end) (mb):	1011

Temp (°C if known):	not known

Recent weather:	Stormy and sunny

Record any other observations which may have an impact on the soil gas monitoring results. These observations may include damage to the gas tap or top of well, damage to the cover or an open gas tap.	Business as usual. Deodouriser fan was turned on at site entrance.

Monitoring Point	Time	Flow Rate		Methane		Carbon Dioxide		Oxygen		Steady State Carbon Monoxide	Steady State Hydrogen Sulphide	Steady State VOCs	GW level	Notes (include peak CO, H2S, VOCs if identified)	Borehole Flooded?	Volume Of Gas In Well
		Peak positive or negative (l/hr)	Steady (l/hr)	Peak (%v/v)	Steady (%)	Peak (%v/v)	Steady (%)	Lowest value (%v/v)	Steady (%)	(ppm)	(ppm)	Direct measurement (ppm)	(m bgl)			(m^3)
BH07	09:09	-7	< 0.1	< 0.1	< 0.1	1.2	1.2	18.8	18.8	< 0.1	< 0.1	< 0.1	1.21	Flow peaked at -7 then returned to 0 after 2 seconds.	NO	0.002874754
BH01	09:39	-10	< 0.1	< 0.1	< 0.1	2.2	2.2	16.9	16.9	< 0.1	< 0.1	< 0.1	1.53	Flow peaked at -10 then to 0 after 2 seconds.	NO	0.003635019
BH09	08:23	-57	< 0.1	2.4	2.4	20.8	20.6	0.2	0.2	< 0.1	< 0.1	< 0.1	1.73	peak flow -57 down to 0 after 27 seconds. lel 56. lot of suction when tap opened. bung on tap closed. 0.012 hexane.	NO	0.004110185
BH011	08:57	-	-	-	-	-	-	-	-	-	-	-	-	Missing under sand	#N/A	

Appendix L
Anglian Water Contaminated Land Guidance

INFORMATION FOR DEVELOPERS ABOUT CONTAMINATED LAND AND GROUND CONDITION ASSESSMENT

Contents

Contaminated Land

Introduction to the new approach

Prior to 2010 individual water companies set their own standards based on available data. In response to concerns by water companies in 2010 UKWIR have compiled a guide for water companies *'Guidance for the selection of water supply pipes to be used in Brownfield sites'*.

The guide provides:

- A clear concise guidance to developers, designers and water companies.
- National standards – national guidance.
- Key focus on pipe and fittings integrity in contaminated land.

Permeation of water pipes

Plastic supply pipes are permeable to hydrocarbons such as petrol, diesel, heating fuel and white spirits. To ensure that the water supply remains satisfactory we use a material which is not permeable to hydrocarbons, such as ductile iron, copper, plastic coated copper or aluminium lined polyethylene pipe (ALPE).

From a water company point of view there are a number of key concerns:

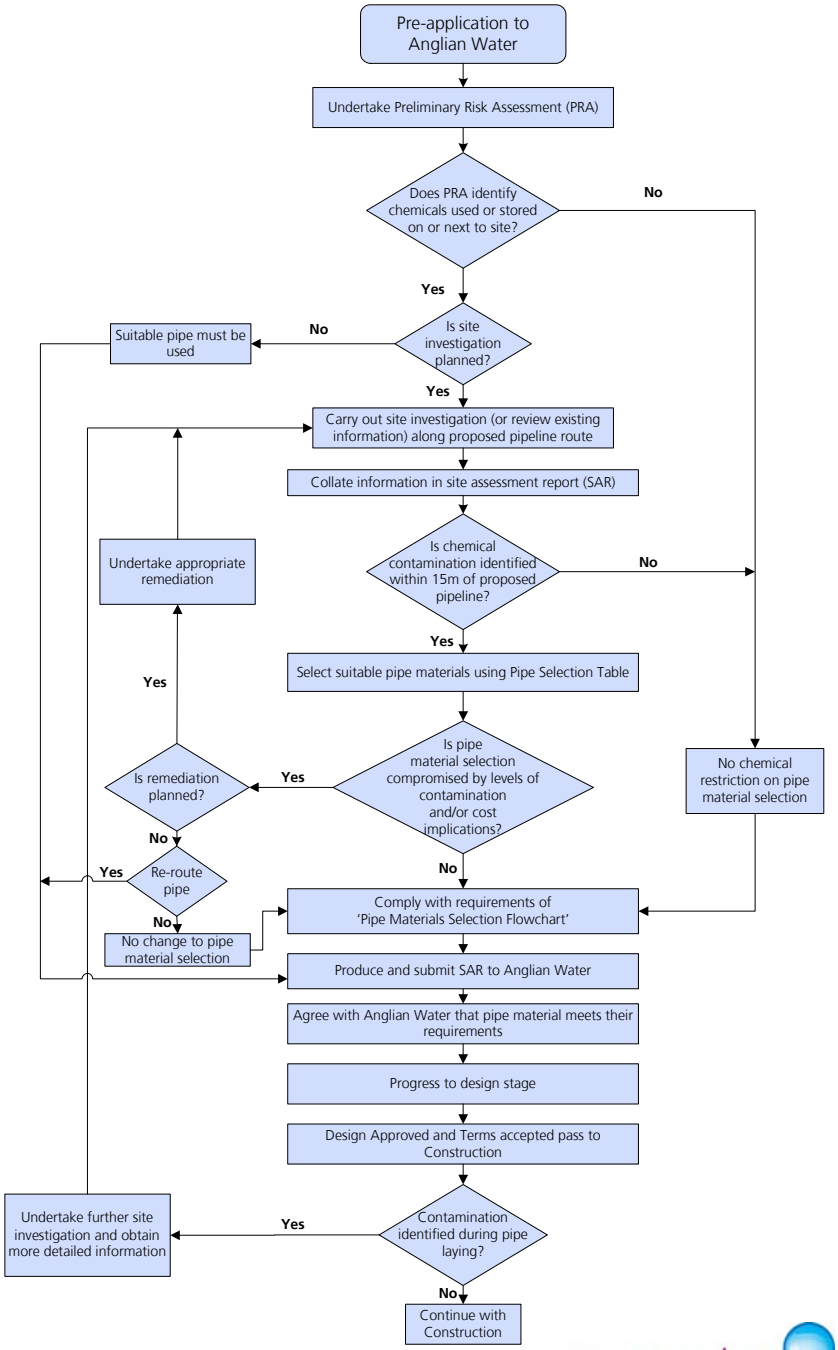
- Permeation of hydrocarbon based substances through pipework (ingestion).
- Pipe failure (environmental stress crackling, swelling of plastic pipes, corrosion of metal pipes).
- Effect of compounds on the health and safety of employees working in the ground (skin irritation).

How are sites assessed using UKWIR method?

Stage 1 – Undertake a Preliminary Risk Assessment (PRA)

For each site the developer will need to provide the following for assessment:

- Desktop study.
- Site walk over.
- Complete the PRA.
- Review findings.
- If chemicals have been stored/used on site eg oil tank, further work is required (See the flowchart below).
- If no chemicals have been stored/used on site then no further assessment is required. (See the flowchart[1] below).



[1] *Flowchart adapted from UKWIR publication 'Guidance for the selection of water supply pipes to be used in Brownfield sites'*

Stage 2 – Site Investigations (SI)

If identified as necessary at Stage 1, the developer should undertake a Site Investigation (SI).

The SI should contain the items detailed under 'What should the developer provide ?'(below) and with the methodologies in Part 2.1 of the UKWIR *'Guidance for the selection of water supply pipes to be used in Brownfield sites'*.

What should the developer provide?

When making a submission to Anglian Water the following needs to be included:

Information developer provides for the PRA

- Desk study
  - Desk based.
  - Historic and current use.
  - Chemicals that may have been stored on site.
  - Immediate area considered.
  - Land registry, maps. LA Records.

- Site plan
  - Site location, scale, site boundary, arrow identifying North, proposed route of pipes.

- Site walkover
  - Visual and factory evidence.
  - Previous/current site activities eg oil tanks.
  - Ground conditions eg fly-tipping.
  - Photographs.

Information developer provides for the IS Investigation

- Photo-ionisation detection (PID) – measure organic contamination on the site. Above ground and at depth.
- 15 metre corridor either side of the pipeline route.
- No evidence of organic vapours. At least two samples must be collected for analysis.
- If the pipeline route is unknown they must be across the site.
- All data collated into SAR and submitted to Anglian Water.
- Minimum depth 500 mm.
- Numbers and locations to be taken should be agreed with Anglian Water.
- Ground water/perched water within one metre of the base of trench a water sample should be collected (increase to two metres in the summer).
- Analysis.
- Mandatory analytical suite:
  - Group 1: Total VOCs minus total concentration of
  - Group 1a: BTEX and MTBE
  - Group 2: Total SVOCs – minus total concentration of Groups 2e and 2f
  - Group 2e: Phenols
  - Group 2f: Cresols and chlorinated phenols.
  - Group 2: (Only required if site use indicates they may be present).
  - Group 2a: Ethers.
  - Group 2b: Nitrobenzene.
  - Group 2c: Ketones.
  - Group 2d: Aldehydes.
  - Group 3: Mineral Oils C11 to C20.
  - Group 4: Mineral Oils C21 to C40.
  - Group 5: Corrosive (Conductivity, Redox and pH).
  - Group 6: Amines (only required if site use indicates they may be present).

Formats

Document formats should be as shown in Appendices A, B & C of 1 of the UKWIR *'Guidance for the selection of water supply pipes to be used in Brownfield sites'*.

Pipe materials selection

Upon receipt of PRA and SI, Anglian Water will assess the data to confirm material type considering the defined trigger levels in the Pipe Selection Table on page 5.

Pipe Selection Table[2]

		Pipe material					
		All threshold concentrations are in mg/kg					
	Parameter group	**PE**	**PVC**	**Barrier pipe (PE-AI-PE)**	**Wrapped Steel**	**Wrapped Ductile Iron**	**Copper**
1	Extended VOC suite by purge and trap or head space and GC-MS with TIC	0.5	0.125	Pass	Pass	Pass	Pass
1a	+ BTEX + MTBE	0.1	0.03	Pass	Pass	Pass	Pass
2	SVOCs TIC by purge and trap or head space and GC-MS with TIC (aliphatic and aromatic C5-C10)	2	1.4	Pass	Pass	Pass	Pass
2e	+ Phenols	2	0.4	Pass	Pass	Pass	Pass
2f	+ Cresols and chlorinated phenols	2	0.04	Pass	Pass	Pass	Pass
3	Mineral oil C11-C20	10	Pass	Pass	Pass	Pass	Pass
4	Mineral oil C21-C40	500	Pass	Pass	Pass	Pass	Pass
5	Corrosive (Conductivity, Redox and pH)	Pass	Pass	Pass	Corrosive if pH <7 and conductivity >400µS/cm	Corrosive if pH <5, Eh not neutral and conductivity >400µS/cm	Corrosive if PH <5 or >8 and Eh positive
	Specific suite identified as relevant following site investigation						
2a	Ethers	0.5	1	Pass	Pass	Pass	Pass
2b	Nitrobenzene	0.5	0.4	Pass	Pass	Pass	Pass
2c	Ketones	0.5	0.02	Pass	Pass	Pass	Pass
2d	Aldehydes	0.5	0.02	Pass	Pass	Pass	Pass
6	Amines	Fail	Pass	Pass	Pass	Pass	Pass

[2] *Taken from the UKWIR publication 'Guidance for the selection of water supply pipes to be used in Brownfield sites'*

Health and Safety assessment and the CLEA

The UKWIR guidance does not cover health and safety considerations.

In order to maintain the safety of our staff, contractors and customers, Anglian Water also assess the site based on EA CLEA (Contaminated Land Exposure Assessment) guidelines.

With each site application please include the following information to comply with Anglian Water health and safety requirements.

The samples are to be taken across the site and focused on the mains services route.

Table of trigger values for health and safety considerations when laying mains or services in contaminated land

	Contaminant	Soil guideline value (mg/kg DW)
Inorganic		
	Arsenic	32
	Nickel	130
	Mercury	170
	Selenium	35
	Cadmium	10
Organic		
	Benzene	0.33
	Toluene	610
	Ethylbenzene	350
	Xylene	230
	Phenol	420

Remediation

On site remediation of contaminated soil may have been requested as part of the planning process. Where this has been completed the following will be required in addition to the original soil survey:

- Sampling and analysis validation.
- Site plan showing areas and depths or remediation.
- Certificates of remediation.

Water infrastructure is laid with a minimum of 900mm cover to finished surface level. In order for a post remediation assessment to be considered it is suggested that the minimum level of soil cleansed is 1.2 metres in depth. Remediation of only the garden areas will not be sufficient to mitigate against the impacts of contaminates on water mains and services.

Any imported backfill must be clean, inert and supported by a contamination validation certificate from the supplier with test results.

Remediation plan

Where on site remediation is necessary and has not been completed, there is an opportunity to submit a remediation plan to Anglian Water for consideration

Benefits include:

- Agreement to move contaminated soil into areas outside those where residential properties are being built, or where water mains and services are being laid.
- The classification of the development as non-contaminated and suitable for the installation of plastic water infrastructure.

The remediation plan should contain a detailed methodology accompanies by a full Health and Safety risk assessment detailing the impact of work on:

- The land in respect to the Environment Agency guidelines.
- Personnel working on site.
- Future residents on the site.

The excavated areas should be filled with clean material from other areas of the site or clean imported material.

Dual status sites

Land parcel status assessment for contaminants within a larger development site

On large developments it has been traditional to classify the status of the land parcels in accordance with the status of the large site as a whole in respect to contamination. In essence, if the site as a whole, under the initial spine mains scheme, was declared contaminated or non-contaminated, then that status was applicable to all the land parcels contained therein.

Anglian Water can undertake to assess not only the site for its spine mains, but also for each land parcel being developed. Therefore it is

requested that each land parcel developer carry out soil analysis for their land parcel and submit it with the application.

This means Anglian Water can better assess each parcel of land on its merits and thus the possibility of 'ring-fencing' areas of contamination within a buffer zone and/or declaring land parcels contamination free. In this process of evaluation of land parcels, the elevation of the land parcel and water table in correlation with the test results and any possible contamination hot spots will be taken into account.

Part contaminated, part non-contaminated sites

In assessing the status of a site where there are hotspots of contaminant, Anglian Water will evaluate the extent of the contamination within the site using the trial holes, test results and elevation data, which the Developer has provided as a guideline.

Should the results indicate that the contamination is in an isolated area far from the residential plots and water services, for example in a public open space, then the mains can be laid in unprotected material. However, Anglian Water must be satisfied that the risk is mitigated, for example no risk of leaching due to topography.

This will be done under the provision that, should the site layout change, this decision may be changed if necessary. However, should the contamination be in a contained area which is bordered on the residential development areas, then there is the possibility of that hot spot being ring-fenced within an Anglian Water defined buffer area. The area within the buffer zone will be classified as contaminated with the rest of the site classified as clear.

Contaminated land information sources

Prior site use (site history and description) is of vital importance and all surveys must contain a detailed consideration of the site history. Possible sources to be consulted in the desk top study are detailed below along with the type of information they may provide.

Contaminated land information sources	
Department of Environment	www.environment-agency.gov.uk/clea
Ordnance survey maps	Historical site layout, buildings roads and geographical features.
Street, town and county directories	Streets, businesses, trade and land use.
Hydro geological information	Surface and groundwater incidence, groundwater depth movement and flow.
Soil survey of England & Wales	Local soil type and texture.
British Geological Survey	Geology, mines and quarries.
Industrial records	Site owners, processes, transport and storage of goods, raw materials, waste and disposal.
Site plans and photographs	Current and historic site layout, access, structures and water courses.
Local Authority records	Waste disposal sites and landfills, planning registers and applications, land reclamation IPC registration, storage of hazardous substances.
Land Condition Register (from November 2000)	This is the register of 'contaminated' land held by Local Authorities.
Environment Agency records	Groundwater vulnerability, waste disposal, radioactive substances, prescribed processes, enforcement notices, prohibition orders, convictions.
Local knowledge (insufficient alone)	Anecdotal information from former employees, local residents etc.
Water Company records	Trade effluent discharges, sludge disposal.
Site inspection reports	Groundwater vulnerability, waste disposal, radioactive substances, prescribed processes, enforcement notices, prohibition orders, convictions.

Further guidance

Appendices E, F and G of the UKWIR *'Guidance for the selection of water supply pipes to be used in Brownfield sites'*.

BS10175 (2001) Investigation of Potentially Contaminated Sites a code of practice.

CIRIA (1993) A guide to stage working practices for contaminated sites, W S Atkins, Funders report/cp/9.

Environment Agency - Contaminated Land Exposure Assessment www.environment-agency.gov.uk/clea

Want to know more about Anglian Water?
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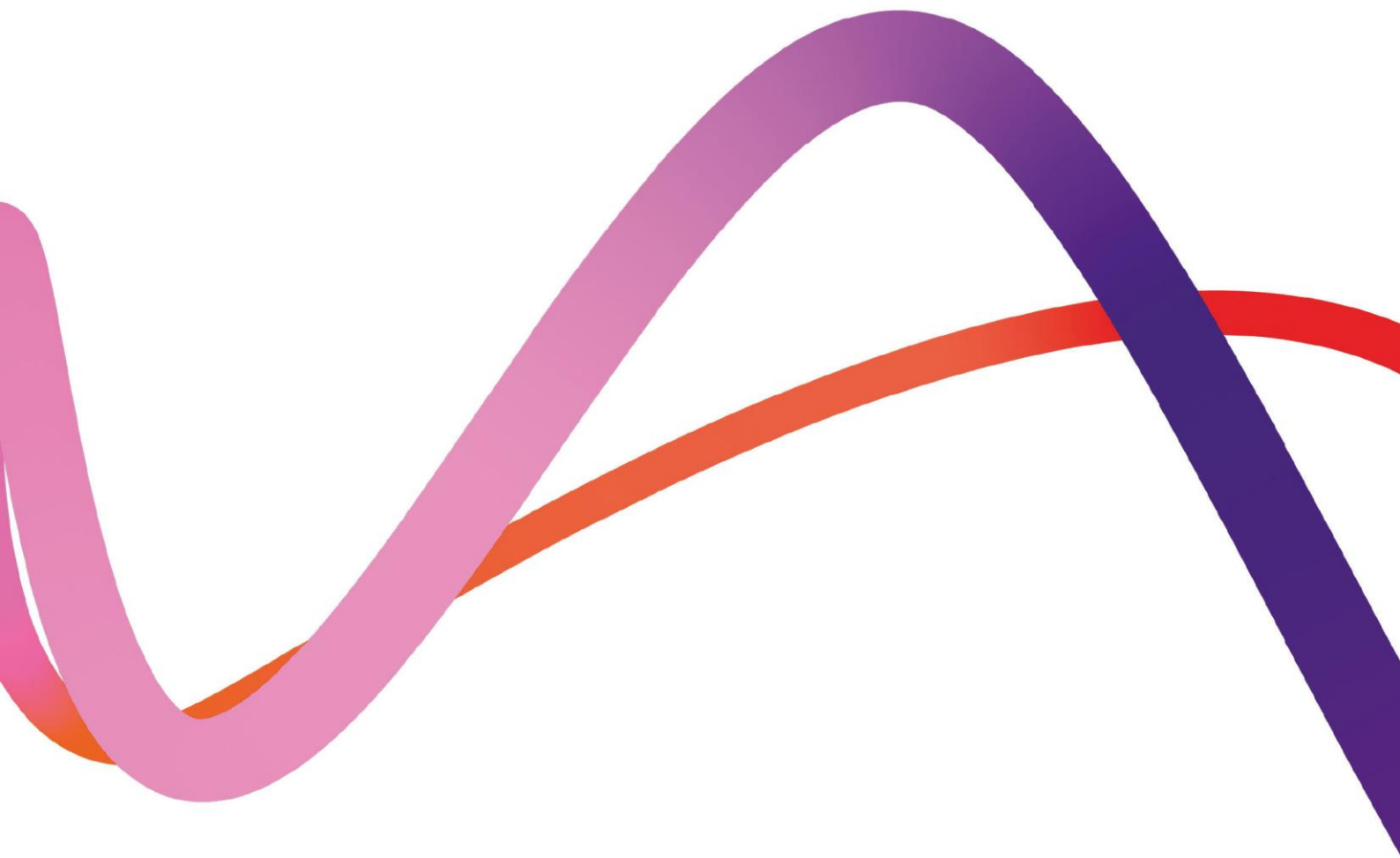


Medworth Energy from Waste
Combined Heat and Power Facility

PINS ref. EN010110
Document Reference Vol 6.4
Revision 1.0
June 2022

Environmental Statement Appendix 13B: Grid Connection Corridor Phase 1 Geoenvironmental Desk Study and Interpretative Report

Regulation reference: The Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 Regulation 5(2)(a)

We inspire with energy.

Appendix 13B
Medworth Grid Connection Corridor Phase 1 Geoenvironmental Desk Study and Interpretative Report

Report Status, June 2022

This report covers the Study Area for land contamination for the Grid Connection and a portion of the Water Connections as defined in **Chapter 13: Geology, Hydrogeology and Contaminated Land (Volume 6.3)** of the Medworth Energy from Waste Combined Heat and Power Facility Environmental Statement (PINS ref. EN010110).

It should be noted that the report also covers additional land now outside the Study Area due to design evolution between the PEIR and Environmental Statement for the Proposed Development, as described below.

This report was produced for the Medworth Energy from Waste Combined Heat and Power Facility PEIR (PINS ref. EN010110), June 2021, and reflects the Proposed Development boundary and design information available when the PEIR was produced. The report was previously appended to the PEIR in Chapter 13: Geology, Hydrogeology and Contaminated Land, Appendix 13B.

As the Proposed Development design has evolved since the PEIR, the Proposed Development boundary area has been reduced resulting in the Order limits. At PEIR, the design of the Grid Connection comprised underground cables from the EfW CHP Facility running east underground along New Bridge Lane to the A47. The route remained as underground cables through arable land until Elm High Road. The cable then passed underneath Elm High Road and continued through land adjacent to Elme Hall hotel and through agricultural land to Meadowgate Lane. At this point, the cable crossed underneath the A47 into land on the eastern side of the road. After the crossing of the A47 the Grid Connection transitioned to an overhead line (OHL) and passed north through agricultural land and across Green Lane up to Broadend Road, where it included options to go west to Walsoken Substation or to continue north as OHL to Walpole Substation.

The design for which consent is now sought comprises a Grid Connection underground except where it emerges at the Applicant's Walsoken Substation. No OHL is proposed. The underground cable now runs along the A47 highway verge and therefore avoids neighbouring agricultural fields.

The result of the design change is that some land contamination sources and receptors in this report are not relevant to the Environmental Statement. This is reflected in the Environmental Statement which only contains information relevant to the updated land contamination Study Area in **Chapter 13: Geology, Hydrogeology and Contaminated Land (Volume 6.3)**, however the numbering of sources remains consistent with this report.

Executive summary

Background	Wood Group UK Ltd (Wood) was commissioned by MVV Environment Ltd (MVV) to prepare a phase 1 geoenvironmental report for land identified for the grid connection of a proposed new Energy from Waste Combined Heat and Power (EfW CHP) Facility in Wisbech (the site). The Grid Connection Corridor and associated Temporary Construction Compounds (the site) extends from the southern boundary of the proposed EfW CHP facility to two possible grid connection options at the Walsoken and Walpole Substations.
Purpose of the report	This report has been produced for the purpose of supporting the Environmental Impact Assessment (EIA) for the Proposed Development.
Site Description	The south-western extent of the site is located within the commercial/industrial area to the south of Wisbech, the grid connection site then runs north-eastwards following the A47 until it reaches Lynn Road, before heading north through agricultural land to the Walpole Substation. The western extent of the site lies within the Fenland District Council area and the eastern extent in the King's Lynn and West Norfolk District area. The majority of the site is in the King's Lynn and West Norfolk District boundary and is in agricultural use, mainly for arable farming. The route also crosses several roads. The topography on the site is flat and low lying. Ground levels are typically 1.2 to 2.8m. The areas of highest elevation are associated with road infrastructure, such as at Walpole Bank. The agricultural land which the site runs through is drained by surface water channels which can be deep and steep sided.
Site History	Most of the site has remained in agricultural use since first mapping in the 1880s. Two former railway lines crossed the site. Wisbech Canal ran roughly parallel to Elm High Road at its west side. The canal was disused by 1927 and was used as a landfill from the 1960s to 1970s. A brickworks and kilns were present by 1927 and removed by the 1970s. A petrol filling station at Meadowgate Lane comprised two filling stations north and south of the A47 which were present by 1989, these are now closed and used for car washing. The Walsoken Substation was constructed onsite by 1967 and the Walpole Substation by 1974. The A47 road is first shown on mapping from 1990, maps show the section of road east of the A1101 is constructed on an embankment and imported fill materials are likely to have been used to raise the road level. An area in the south of the site at New Bridge Lane has been used in recent years for fly tipping. The surrounding area has remained largely agricultural, with some limited industrial activity including former mills, a brewery and the Walsoken Brick and Tile works. The Walsoken Brick and Tile works was labelled as 'works' by 1959 and current aerial photography indicates this site is still in industrial use, a refuse tip dating from the 1960s is also identified in that area.
Environmental Setting & Site Sensitivity	The site is underlain by the following geological sequence: Tidal Flat Deposits (comprising silt and clay with subordinate sand, gravel and peat) underlain by the Ampthill Clay (Mudstone) Formation. Made ground is not indicated on geological mapping but is known to be present at the onsite Wisbech Canal landfill and is expected to be present locally in other areas such as former railway land, roads and areas of ad hoc waste disposal/infilling. The groundwater sensitivity is assessed as low - the superficial and bedrock deposits beneath the site are classified as an unproductive aquifer. The BGS borehole records suggest that groundwater is held within

	the superficial deposits as perched discontinuous groundwater bodies. The site does not lie within a groundwater Source Protection Zone or Drinking Water Safeguard Zone. The surface water sensitivity is assessed as high – the site is situated within an area served by an extensive network of artificial drainage channels under the control and management of the Internal Drainage Board (IDB). The Grid Connection site crosses a number of drainage ditches within the rateable area of Hundred of Wisbech (Middle Level Commissioners) and King's Lynn IDB. Drains in the southwest of the site convey water by gravity to the south-west where they discharge to the River Nene. The River Nene flows in a north-easterly direction, approximately 700m northwest of the site. Drains in eastern areas of the site join the River Great Ouse c.10km northeast of the Grid Connection. The ecological sensitivity is assessed as low on the basis that the site is not located within or within close vicinity to an environmentally sensitive site. The site does not lie within a Nitrate Vulnerable Zone for surface water.
Preliminary sources of contamination	The initial conceptual model and preliminary risk assessment has identified no significant risks (ranked moderate or higher), however there are 28 potential contaminant linkages representing moderate/low risks that may require further investigation, as follows: Moderate/low risks to **current and future site users**, **current and future property** and **current and future surface water** associated with the onsite historical landfill at the former Wisbech Canal. Moderate/low risk to **future site users, current and future property,** associated with onsite localised made ground (including A74 embankment, former railway line, demolished farm buildings, former kilns, disused/demolished poultry houses) and onsite fly tipping at New Bridge Lane, and moderate/low risks to current and **future surface water**. Moderate/low risks to **current and future site users**, and **current and future surface water**, associated with the two onsite substations, as no previous site investigation reports are available confirming the ground conditions on these sites. Moderate/low risks to **future site users**, **current and future property**, and **future surface water**, associated with the former petrol stations at Meadowgate Lane. Moderate/low risks to **future site users** and **current and future property** associated with potential ground gas from onsite peat layers in natural soil, the risk level is due to the severity of the potential consequence (gas explosion). Moderate/low risks to **future site users**, **current and future property** associated with the offsite petrol station 30m east. Moderate/low risks to **future site users** associated with contamination in proximity to the land drain north of the site due to a historical pollution incident close to the site boundary. Moderate/low risks to **future site users, current and future property** associated with contamination in an offsite refuse tip dating from 1967 (also the site of the former Walsoken brick and tile works), and localised made ground e.g., former tramway sidings immediately south of the site. It would be prudent to investigate the identified sources as part of the detailed design process to confirm whether there is a contaminant linkage and whether remedial measures are needed for the Proposed Development .
Preliminary geotechnical constraints	There is limited ground investigation data available for the site. Based on available information, the preliminary geotechnical issues and constraints that may be present on the site include: Known and potential presence of made ground on site to unknown depths and extent. This material is considered not suitable as a foundation layer and also requires characterisation in relation to potential contaminants.

	Potential presence of soft and compressible deposits at shallow depth. These materials are susceptible to settlements and therefore may preclude the use of shallow foundations or require treatment to improve their stiffness if shallow foundations are adopted. The soils underlying the site may contain sulphate, leading to the potential for sulphate and thaumasite attack on buried concrete. There is a high groundwater table and site investigation will be needed to inform the design of temporary works e.g., at HDD launch/reception pits, joint bays and substation development sites. Intrusive ground investigations are recommended to obtain site-specific factual information necessary for the assessment and further evaluation of the identified constraints as part of the detailed design process.
Recommendations	Based on the available information for the site and the preliminary risk assessment, several moderate/low risk contaminant linkages have been identified. A Phase 2 intrusive site investigation is considered prudent as part of the detailed design process to: Characterise the onsite historical landfill. Characterise made ground in other areas where infilling/upfilling has taken place. Confirm or discount any potential contaminant linkages in relation to the historical landfills and made ground. Investigate the depth to groundwater onsite Investigate the potential impacts on groundwater and surface water quality from the onsite sources including a historical landfill, made ground/area of fly tipping, onsite substations, former onsite petrol stations, and offsite sources including the location of a pollution incident close to the site boundary, an offsite refuse tip and other made ground. Allow in-situ geotechnical testing. Install monitoring standpipes and groundwater level monitoring. Collect soil and groundwater samples. Carry out laboratory analysis of soil and groundwater for potential contamination. Carry out geotechnical laboratory testing of soils. Allow interpretative reporting to inform the temporary works design and the detailed design of the Proposed Development.

Contents

1. Introduction

Background	Wood Group UK Ltd (Wood) was commissioned by MVV Environment Ltd (MVV) to prepare a phase 1 geoenvironmental report for land identified for the grid connection of a proposed new Energy from Waste (EfW) Combined Heat and Power (CHP) Facility in Wisbech. The subject site of this report comprises the Grid Connection Corridor for the Proposed Development (EfW CHP Facility) and three Temporary Construction Compounds. The Grid Connection will run from a switching compound within the proposed EfW CHP Facility in the south of Wisbech to one of two possible grid connection options located at the Walsoken and Walpole Substations, using a combination of underground cables and above ground cables on poles. For the purposes of this report, the section of the Preliminary Environmental Impact Assessment (PEIR) boundary encompassing the Grid Connection Corridor and the three Temporary Construction Compounds is 'the site'. The land condition of the other components of the Proposed Development, the EfW CHP Facility, its associated CHP Connection Corridor, Access Improvements and a fourth Temporary Construction Compound, has been assessed separately in a combined Phase 1 and 2 geoenvironmental report[1].
Purpose of the Report	This report has been completed in line with Wood's proposal referenced 41310-WOOD-XX-XX-PL-PP-0001_s3_1, dated 6th October 2020. The purpose of the report is to support the Environmental Impact Assessment (EIA) for the grid connection and Energy from Waste Combined Heat and Power (CHP) facility.
Scope of work	The scope of work comprised the following: **Phase 1 – Desk Study:** Obtaining desk-based salient geoenvironmental information through private and publicly accessible sources. Site walkover survey - this report is currently in draft status and a targeted site walkover will be completed prior to report finalisation, and subject to site access being arranged. Producing a preliminary (qualitative) environmental risk assessment for the site. Identifying potential geotechnical issues and constraints and prepare a Geotechnical Risk Register (GRR).
Information Sources	The following sources of information have been used in the preparation of this report: Groundsure EnviroInsight, GeoInsight and Historical Maps in GIS format and PDF (Ref. GSIP-2021-10737-4868), obtained May 2021. Zetica Unexploded Ordnance Risk Map [redacted], accessed March 2021. British Geological Survey Lexicon database [redacted], accessed 18th October 2019. British Geological Survey GeoIndex webpage, including borehole records (see Appendix A) ([redacted], accessed March 2021.

[1] Wisbech Phases 1 and 2 Geoenvironmental Desk Study and Interpretative Report. Included as **Appendix 13A.**

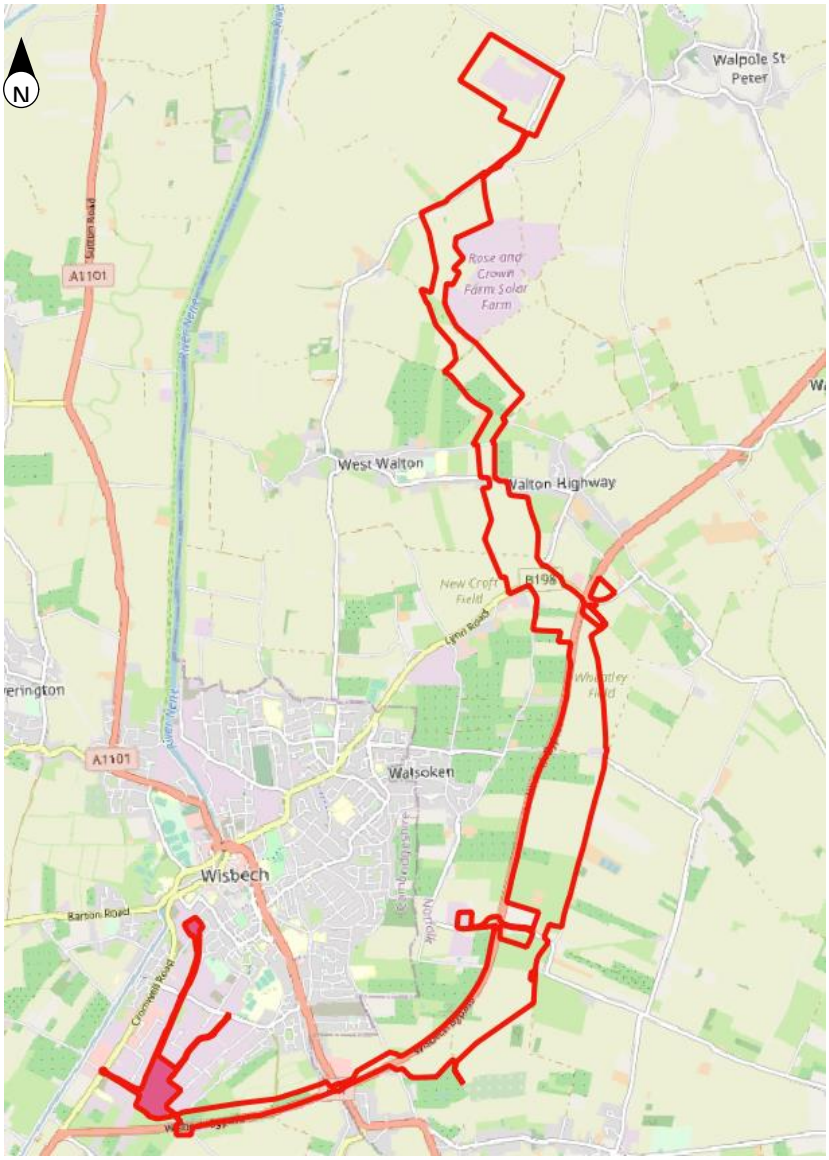
	Coal Authority online viewer [redacted], accessed 18th October 2019.
National Planning Policy Framework, 2019 (NPPF)	The NPPF is of material consideration for the assessment of contaminated land. This states that a site needs to be suitable for its proposed use taking into account ground conditions and risks arising from land instability and contamination. As a minimum, following remediation, land should not be capable of meeting the definition of contaminated land under Part 2A of the Environmental Protection Act 1990 (Part 2A EPA).
Limitations	The conclusions reached and advice given in this report are based in part upon information and/or documents that have been prepared by third parties. In view of this, we accept no responsibility or liability of any kind in relation to such third-party information and no representation, warranty or undertaking of any kind, express or implied, is made with respect to the completeness, accuracy or adequacy of such third-party information. In preparing this report we have assumed that all information provided by the Client is complete, accurate and not misleading.

2. Site details and environmental context

2.1 Site details

Site Location The site runs northwards from the town of Wisbech (Fenland District) in the south to two possible substation grid connection options, the northernmost of which is Walpole Substation (Norfolk County), as shown on **Graphic 2.1 Site Location**.

Graphic 2.1 Site Location



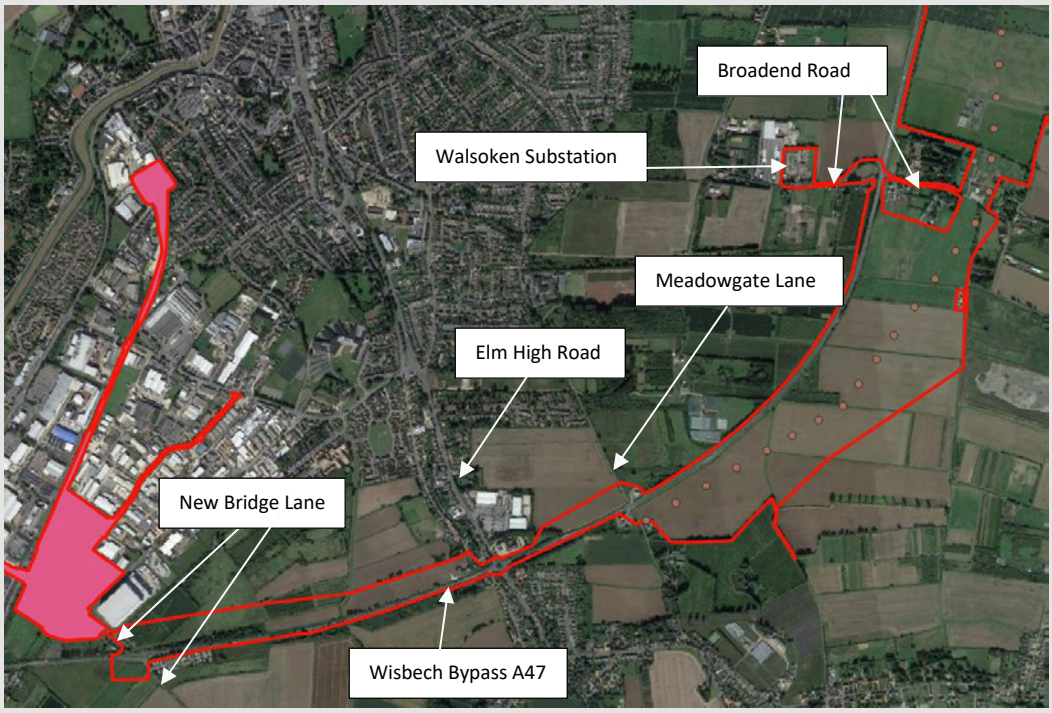
Key:

Proposed Development boundary including the site

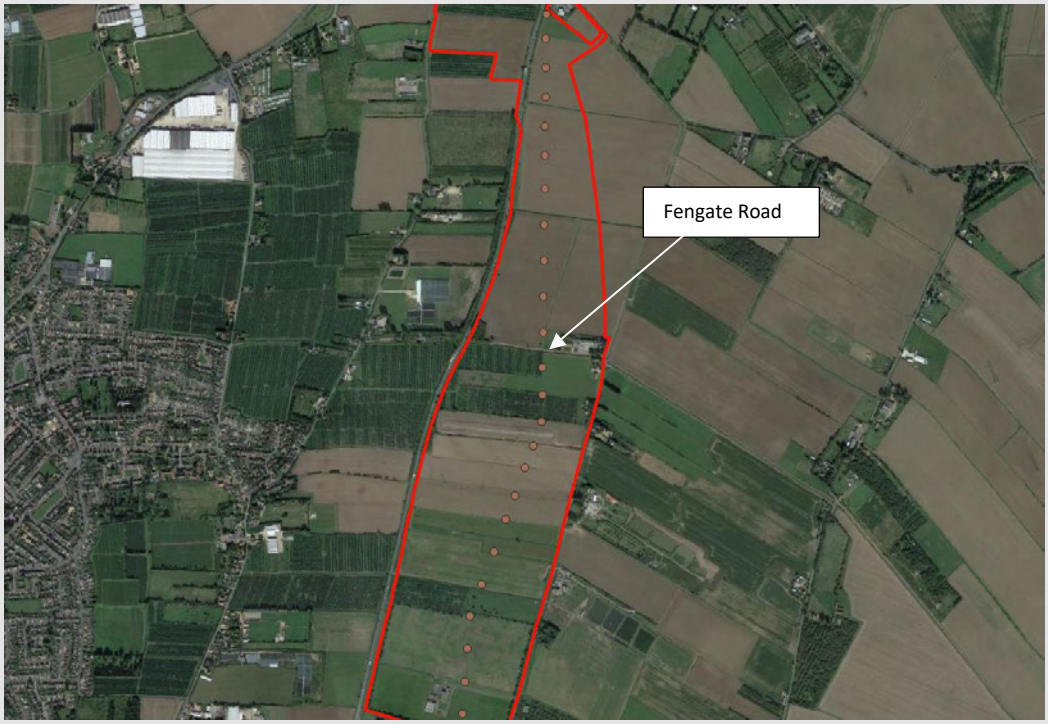
Area of the Proposed Development covered in a separate report[1] includes the proposed EfW CHP facility, CHP Connection Corridor, Access Improvements and Temporary Construction Compound.

Grid Reference	South-western extent of site: 545394, 307432 Walsoken Substation: 548247, 309294 Walpole Substation: 548648, 316605
Site Address	The Grid Connection site will run from the proposed EfW CHP facility off Algores Way, Wisbech, PE13 2TQ, at the south-western extent of the site to either: - Walpole Substation (Option 1), Walpole Bank, Wisbech, PE14 7JE (the north-eastern extent of the site); or, - Walsoken Substation (Option 2), Broadend Road, Walsoken PE14 7BL. -
Site Description	The site layout is shown in **Graphics 2.2a** to **2.2d** below from south to north. **Graphic 2.2 Site Layout** also shows the approximate pole locations for the overhead line sections of the Grid Connection.

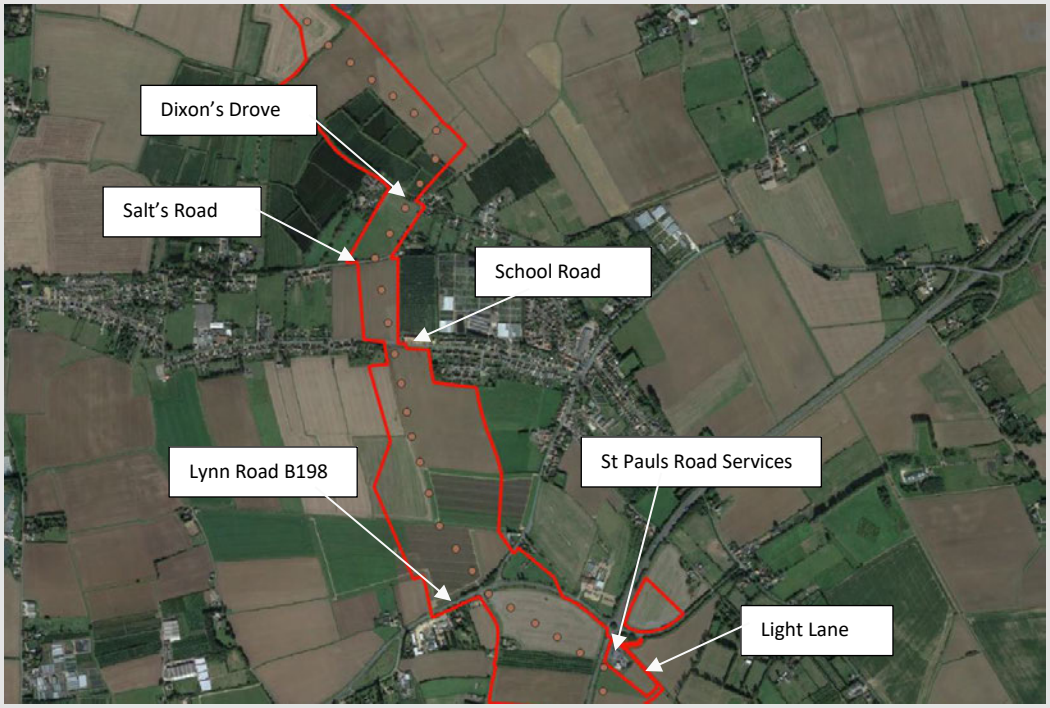
Graphic 2.2a Site layout



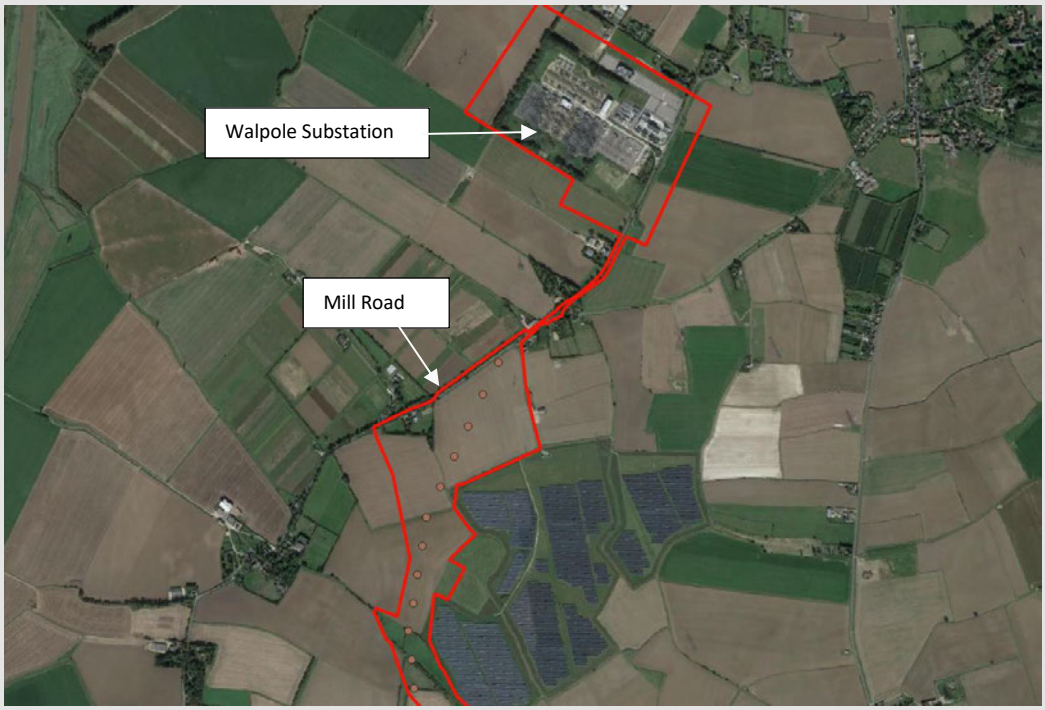
Graphic 2.2b Site layout



Graphic 2.2c Site layout



Graphic 2.2d Site layout



Key:

- Proposed Development boundary including the site
- Area of the Proposed Development covered in a separate report[1] includes the proposed EfW CHP facility, CHP Connection Corridor, Access Improvements and Temporary Construction Compound.
- Indicative pole locations

The south-western extent of the site is located within the commercial/industrial area to the south of Wisbech, the grid connection site then runs north-eastwards following the A47 until it reaches Lynn Road, before heading north through agricultural land to the Walpole Substation. The western extent of the site lies within the Fenland District Council area and the eastern extent in the King's Lynn and West Norfolk District area. Most of the site is in the King's Lynn and West Norfolk District boundary and is in agricultural use, mainly for arable farming. The route also crosses several roads, these are described in relation to the Proposed Development below.

The topography on the site is flat and low lying. Ground levels are typically 1.2 to 2.8m above Ordnance Datum (AOD). The areas of highest elevation are associated with road infrastructure, such as at Walpole Bank.

The agricultural land which the site runs through is drained by surface water channels, which can be deep and steep-sided. These are described in more detail in **Section 2.3**.

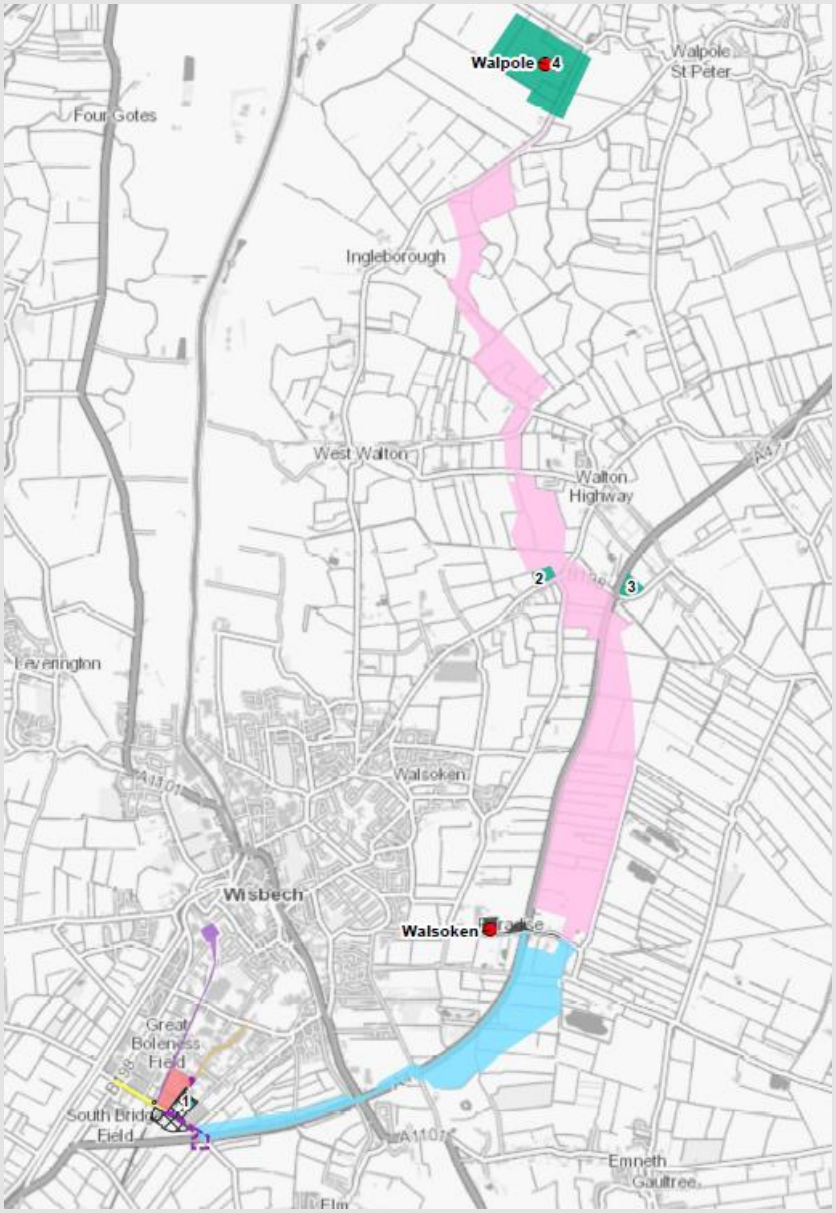
Boundaries (Land uses and relevant features)	Direction	Adjacent (descriptions from south to north)	Beyond (within 200m)
	North	Grassland, beyond the proposed EfW CHP site, DFDS Logistics freezer facility, other commercial sites, arable land, residential properties at Elm Low Road and Elm High Road, Elme High Hotel, beyond this Morrisons supermarket, nursery, Easypack site (north of Walsoken Substation), residential (Broadend Road), arable land, Lynn Road, residential (School Road), solar farm, arable fields	Arable fields, residential properties
	East	Arable land, Heathfield Nursery at Wilkins Road, residential and farm properties at Broadend Road, Biggs Road, Shell service station (south of Lynn Road), residential properties (School Road), solar farm, residential properties (Folgate Lane).	Arable land, residential properties, solar farm
	South	Campsite, commercial properties to southwest, arable land, travellers' site to south with some fly tipping (New Bridge Lane), residential and commercial properties at Low Road and Elm High Road, former service station repurposed as car wash (Meadowgate Lane), commercial site south of Broadend Road, residential and commercial properties (Lynn Road), Priory Farm (southwest of Dixon's Drove).	Arable land, residential properties
	West	Arable land, beyond this commercial properties, DFDS Logistics freezer facility, arable fields, Walsoken Substation, residential properties at Broadend Road, A47,	Industrial estate, arable land, residential properties

	Wheatley Bank, residential properties at School Road, Priory Farm, Dixon's Drove, Mill Road, arable fields
Current site activities	The current land use onsite is a mixture of arable land, residential/farm properties, roads, and commercial properties comprising a car wash (former petrol station), Elme High Hotel, a haulage company (Barwell A & Sons at Fengate Road), and the two substations at Walsoken and Walpole. There are limited buildings onsite at these properties and no changes to these buildings are proposed as part of the Proposed Development. The current land uses: agriculture, residential, commercial and roads, will not be altered following the development, other than at the area developed as a substation, at the Walpole or Walsoken Substations. No site walkover has been completed to date. A targeted site walkover will be completed prior to finalisation of the report, subject to access being possible.
Unexploded Ordnance (UXO)	According to the Zetica Unexploded Bomb (UXB) risk map, the site and surrounding area have a low risk of unexploded bombs resulting from World War II.
Proposed Development	The EfW CHP Facility requires a 132kV Grid Connection from the 132kV switching compound within the proposed EfW CHP Facility to one of two proposed substation options: - Walpole Substation - Walsoken Substation The Proposed Development components on site are detailed below and shown on **Graphic 2.3 Proposed Development Components**. - **The Common Grid Connection (Options 1 and 2):** this route is required for both substation options. From the EfW CHP substation, the Grid Connection would run east underground along New Bridge Lane to the A47. The route would remain on the western side of the A47 and head north, remaining as underground cables (UGC) through arable land until it reaches Elm High Road. The cable would pass underneath Elm High Road and continue through land adjacent to Elme Hall hotel and through agricultural land until it reaches Meadowgate Lane. At this point, the cable would cross underneath the A47 and into land on the eastern side of the road. A former petrol station currently operating as a car wash and truck wash is located adjacent to the red line boundary in this location. After the crossing of the A47 the Grid Connection would transition to an overhead line (OHL) and would pass north through agricultural land and across Green Lane until it reaches Broadend Road. At Broadend Road, the two options would take differing routes as described below; - **Walpole Grid Connection (Option 1) and Walpole Substation:** Once the common Grid Connection route reaches Broadend Road, the Option 1 Connection to Walpole Substation would continue as an OHL. The route would continue north from Broadend Road across agricultural land within the vicinity of isolated residential properties and farmsteads. The route would cross over Fengate Road. The route would cross back over the A47 to the south of the roundabout which connects the A47 with the B198 and Light Lane. The southern boundary of St Pauls Road Services is located adjacent to the A47 crossing. At this point, the route continues in a north-westerly direction across further agricultural land before crossing over the B198 adjacent to Wheatley Bank road. The route heads further north through a gap in residential properties on School Road to the west of Walton highway. The route continues north through agricultural land, crossing both Salt's

Road and Dixon's Drove. Beyond Dixon's Drove the route would pass through an area of orchard before turning north-west and heading through further agricultural land along the boundary of a solar farm.

- The route would then continue north until it reaches Mill Road. At Mill Road, the OHL would transition back to a UGC and would run north adjacent to Mill Road and Walpole Bank until it reaches Walpole Substation. Some residential properties are located along this road, and the settlement of Walpole St Peter is located further to the east of the substation.
- **Walsoken Grid Connection (Option 2) and Walsoken Substation:** Once the common Grid Connection route reaches Broadend Road, the Option 2 Connection to Walsoken Substation would transition back to a UGC. The route would head west along Broadend Road. Broadend Road is bounded by residential properties, small parcels of agricultural land, trees and other vegetation. At the end of Broadend Road, the route would cross underneath the A47. The route would continue along Broadend Road further west of the A47 until it reaches Walsoken Substation. This section of Broadend Road is bounded by residential properties, commercial premises and agricultural land.
- **Temporary Construction Compounds 2, 3 and 4:** Temporary Construction Compounds 2 and 3 are for the Walpole Grid Connection and are located approximately centrally on the site immediately north of Lynn Road, one to the west of Walton Highway and one to the east of the A47. Temporary Construction Compound 4 is located at the Walpole Substation – this is a temporary satellite construction compound for the Walpole Grid Connection.

Graphic 2.3 Proposed Development Components



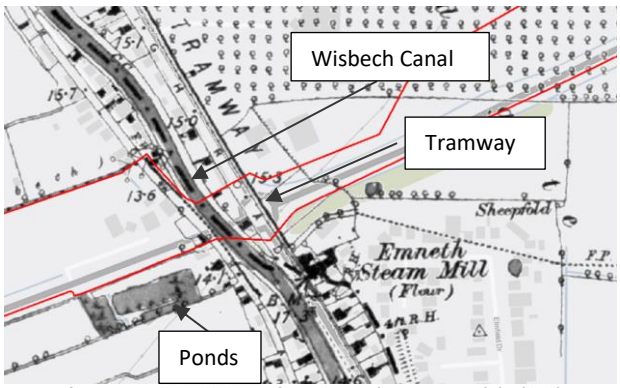
Key:

- Substation sites
- EfW CHP Facility Site and Temporary Construction Compound
- CHP Connection
- Access improvements
- Algores Way access
- Common Grid Connection (Options 1 and 2)
- Walpole Grid Connection (Option 1)
- Walsoken Grid Connection (Option 2)
- Temporary Construction Compound*
- Anglian Water Connections
- Potential Mitigation Area

2.2 Site history

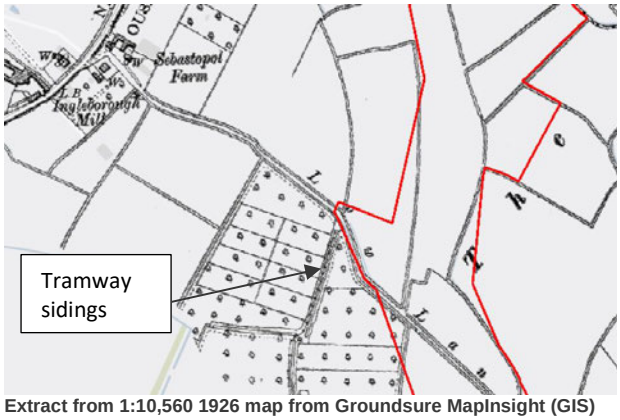
A summary of the historical development of the site since 1887, based on historical Ordnance survey (OS) maps and aerial photography, is presented below. The historical maps were provided with the Groundsure GIS based information.

1886
Extract from 1:10,560 1925 map from Groundsure MapInsight (GIS)



Extract from 1:10,560 1886 map from Groundsure MapInsight (GIS)

Extract from 1:10,560 1886 map from Groundsure MapInsight (GIS)



Extract from 1:10,560 1926 map from Groundsure MapInsight (GIS)

Map: 1886 to 1964 1:10,560 & 1:2,500

On-Site: First mapping from 1886 shows most of the site as agricultural land with several ponds and many land drains shown. Some farm buildings were also present onsite.

The 1886 map shows a tramway running through the site roughly northwest to southeast at the east side of Elm High Road (the A1101 road), and Wisbech Canal and a towing path runs roughly parallel to it, west of the tramway.

By 1925 orchard planting is shown onsite in the field southeast of the proposed EfW CHP site and on other fields onsite and allotments to the east. New bridge Lane is already present, and a sluice is shown by New Bridge Lane at Little Boleness Field. Two large ponds are present immediately south of the site nearby.

By 1927 1:2,500 mapping shows the Wisbech Canal is labelled as disused. The nearby tramway was removed by the 1960s.

In 1925 mapping the Walsoken Substation site area is shown as fields and a sheepfold is located east of this. South of the Walsoken Substation site area, a lane (now known as Green Lane) crosses the site just west of Wilkins Road and brickworks and kilns are shown to the south of this. A railway line (King's Lynn and Wisbech Branch) runs east to west through the site at Turpitt's Field, to the north of Green Lane, and Broadend Road crosses the site north of the railway. Buildings and a pump are shown onsite at Paradise Farm.

Further north, Fengate Road is shown crossing the site south of Wheatley Field (this is now a track).

A Roman Bank is shown at the east side of the road running north to the Walpole Substation option site, which is shown as fields with land drains and orchard.

Off-site: First mapping from the 1880s shows the area surrounding the site is predominantly agricultural land, with various ponds and land drains. Parcels of land are divided with drainage channels.

Emneth Steam Mill (Flour) is approximately 40m south of the site immediately east of the tramway route by Elm High Road. By 1903 the mill is shown as Elm Road Brewery. This is shown as demolished by 1963.

First mapping also shows the Walsoken Steam Brick and Tile Works located in the field immediately south of the Walsoken Substation site area, and the Paradise Brick and Tile Works is located immediately north of the site at Paradise Farm. This was no longer shown by 1925.

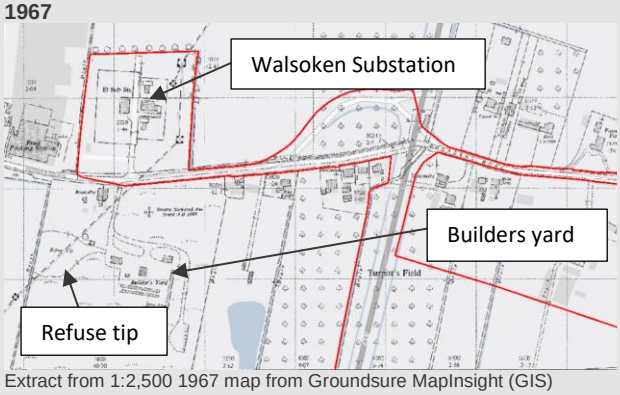
1886 mapping shows an offsite (unspecified) heap c.20m southeast of the site near Dixon's Drove.

The 1925 map shows a Bronze Socketed Axe found 1868 in the field east of the Walsoken Steam Brick and Tile Works, which by 1903 is shown as old clay pits.

The 1926 mapping shows tramway sidings immediately south of the site in the north, to the east of Mill Road. 1938 mapping shows additional tramway sidings c.80m west of the site at Rosalie Farm.

By 1959 the former brick and tile works south of the Walsoken Substation site area is shown as 'works'.

1967



Extract from 1:2,500 1967 map from Groundsure MapInsight (GIS)

1980

Extract from 1:10,000 1980 map from Groundsure MapInsight (GIS)

1991

Extract from 1:2,500 1991 map from Groundsure MapInsight (GIS)

Map: 1967 to present day 1:10,000 & 1:2,500

On Site: By 1967 the Walsoken Substation has been constructed and by 1974 the Walpole Substation had also been constructed. By 1980 the Walpole Substation is shown to include a helicopter landing pad. Allotments are shown to the north of the substation. Three poultry houses are shown onsite east of the B198 road in the northern half of the site in 1968, two of these are still visible in 2021 aerial photography but appear to be derelict. Potty Plant nursery is located onsite in the south.

By 1989 the service station at Meadowgate Lane had been constructed as two stations diagonally opposite each other, one north of the A47 and one to the south which is only partially onsite. The service stations are now closed and use for car washing, it is not known whether the underground fuel tanks are still in place.

The orchard southeast of the proposed EfW CHP site had been removed by the early 1980s. The railway line through Turpitt's Field is still shown on the 1990s mapping. In 2021 aerial photography the railway appears to have been removed or covered.

The Wisbech Canal is reported to have been infilled during the 1960s and 1970s.

The A47 road is not shown on mapping until 1990 and is partially raised on an embankment where it runs through the southern site area.

Some changes to farm buildings and building demolition is evident over time e.g., at Paradise Farm east of the Walsoken Substation, and former buildings present in 1968 north of Dixon's Drove.

The brickworks and kilns are shown to the south of Green Lane were removed by the 1970s.

2021 aerial photography shows onsite fly tipping at New Bridge Lane west of a travellers' site.

Off-Site: In general, no significant change to the surrounding land use is noted by the 1960s.

By 1967 a refuse tip and a builder's yard are shown south of the Walsoken Substation (on the former works), and a fruit packing station to the west.

By 1975 a service station was located 135m north of the site, west of Elm High Road.

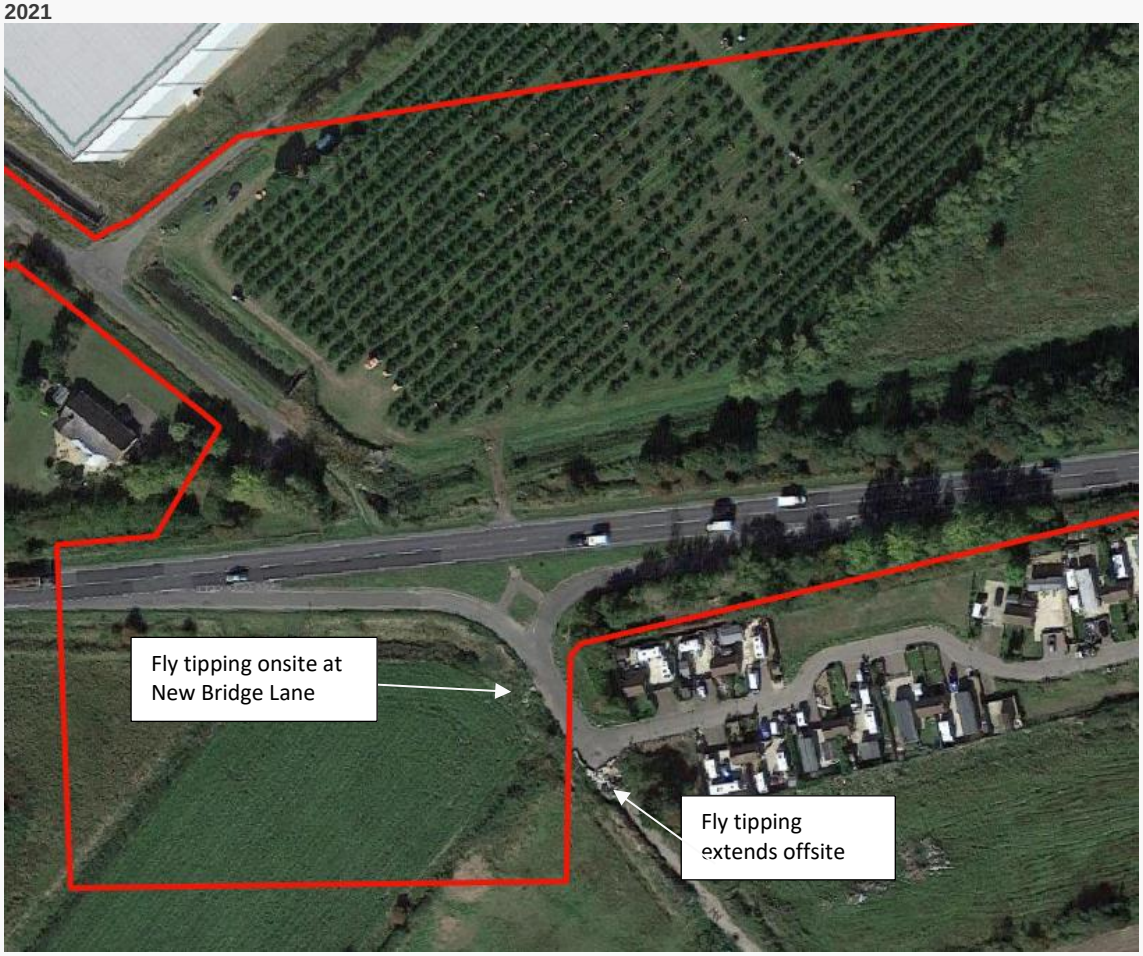
Unspecified works are shown on 1990 mapping immediately west of the Walsoken Substation.

By the 1980s, several nurseries were present in the surrounding area, one west of the A47, east of Meadowgate Lane, includes an unspecified tank c.120m northwest of the site by 1985. Current aerial photography shows the tank and nursery are still present and suggest that the tank may be a slurry tank. A pond/lagoon is located east of the tank.

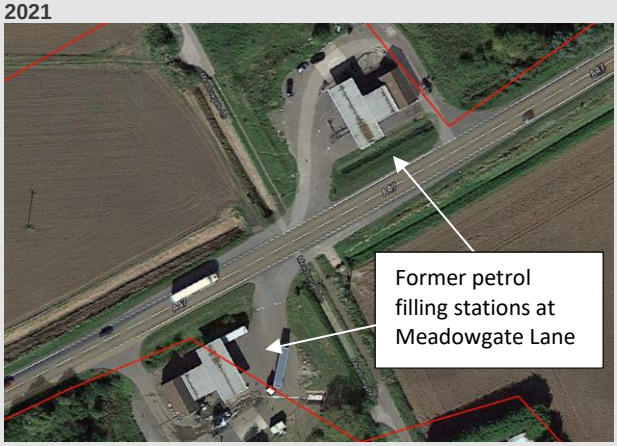
Tanks are shown on 1990 mapping c.50m east of the site at Trafford Estate in the north of the site by School Road.

Recent aerial photography shows fly tipping in the south of the site at New Bridge Lane and extending onto adjacent land to the east.

2021



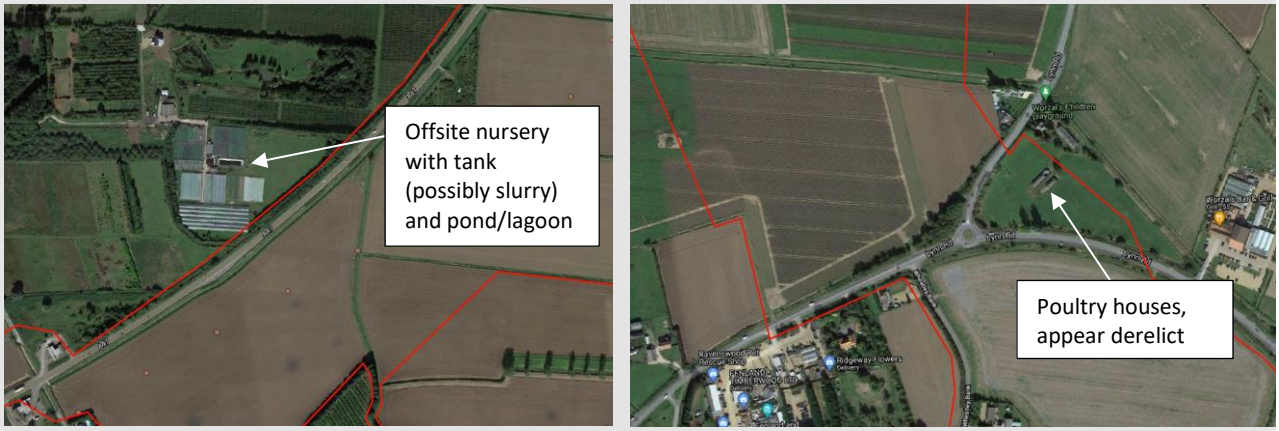
2021



2021

2021

2021



Site history summary and pertinent features relating to Land Contamination

Most of the site has remained in agricultural use since first mapping in the 1880s. Some changes to farm buildings onsite are noted, indicating some demolition activity. Two former railway lines crossed the site: a former tramway ran along the east side of Elm High Road, and the former King's Lynn and Wisbech Branch railway ran east to west through the site southeast of the Walsoken Substation site area (at 548650, 308998). Current aerial photography shows a faint scar following the route of the railway near Walsoken, no track is visible in the former onsite section however it may still be present and may have been covered with soil/other material. Wisbech Canal ran roughly parallel to Elm High Road at its west side. The canal was disused by 1927 and was used as a landfill from the 1960s to 1970s. A brickworks and kilns were present onsite in the field north of Green Lane by 1927, these were removed by the 1970s. Three poultry houses were show in the north of the site east of the B198 (Lynn Road) by 1968, two are still present, demolition materials associated with the third could be encountered onsite and the remaining two appear to be derelict and in poor condition. The petrol filling station at Meadowgate Lane comprises two filling stations north and south of the A47 which were present by 1989, the northern filling station is fully onsite and the southern one partially onsite, these are now closed and used for car washing, it is not known whether the underground fuel tanks are still in place. The Walsoken Substation was constructed by 1967 and the Walpole Substation by 1974. A helipad was shown at the Walpole Substation during the 1980s. The A47 road is first shown on mapping from 1990, maps show the section of road east of the A1101 is constructed on an embankment and imported fill materials are likely to have been used to raise the road level. An area in the south of the site at New Bridge Lane has been used in recent years for fly tipping and this may have resulted in localised ground contamination.

The surrounding area has remained largely agricultural, with some limited industrial activity including former mills, Emneth Steam Mill (Flour), which later became a brewery, 40m south from the 1880s (based on current aerial photography this site appears to have been redeveloped and is currently used as a restaurant). The Walsoken Brick and Tile works was immediately west of the site at Walsoken and the Paradise Brick and Tile Works immediately north. The former Walsoken Brick and Tile works was labelled as 'works' by 1959 and current aerial photography indicates this site is still in industrial use, a refuse tip (possibly brick works waste) dating from the 1960s is also identified in that area. Tramway sidings of unknown use are shown on 1938 mapping running up to the site boundary at its northern area at Rosalie Farm, these are not visible on aerial photography and are within a larger area of ploughed field, they are not considered further as a potential contamination source. A large tank and pond/lagoon are shown at the nursery located north of the A47 and east of Meadowgate Lane. The lagoon is around 75m northwest of the site and the tank c.120m northwest and given the limited potential for contaminants to migrate from this area to the site the nursery is not considered further as a contamination source.

2.3 Environmental context

Geology & Hydrogeology	The site geology and hydrogeology are summarised from the Groundsure EnviroInsight GIS report and the BGS GeoIndex[2]. Information taken from BGS mapping website [redacted] BGS 1:50k map portal Sheet 159 [redacted] BGS Lexicon database and the UK Government opensource data (https://flood-warning-information.service.gov.uk/long-term-flood-risk/map). The BGS borehole records are included in **Appendix A**.

Strata	Site Area	Brief Description of typical constituents	Average depth to upper surface (m bgl) or thickness (m)	Aquifer and approximate water level if known*	Notable features
Made Ground	Present locally onsite (e.g., former railway land, roads, localised infilling or ad hoc waste disposal on farmland), and known to be present at the former Wisbech Canal landfill in the south of the site	No BGS artificial ground is identified on the site. Made ground is present onsite at the former Wisbech Canal and this is summarised in **Section 2.4**.	Deep made ground is generally unlikely other than at the former Wisbech Canal where it may extend to c.4m depth.	Groundwater may be encountered within top 3m.	N/A
Tidal Flat Deposits – Clay & Silt (Terrington Beds)	All areas	Normally a consolidated or unconsolidated soft silty clay, with layers of sand, gravel & peat[3].	Thickness: 22.5m[4]	Unproductive Groundwater strike at 3.2m rising to 2.9 observed in nearby boreholes[5]	Sporadic thin peats may be present.
Glaciofluvial Deposits	Not known, encountered beneath tidal flat deposits at	Dense silty sandy gravel / gravelly sand.	Encountered between 19.2m and 24.0m bgl at CHP site,	Equivalent to Secondary A aquifer, not classified on the site	None identified.

[2] [redacted] html,accessed May 2021.
[3] BGS Lexicon database [redacted]) accessed 18th October 2019.
[4] Cross-section of BGS 1:50k scale Geological Sheet 159
[5] BGS Borehole Logs presented in Appendix A.

	EFW CHP site.		thickness between 2.3m and 5.3m.		
Glacial Till Deposits	Not known, present at the base of the glaciofluvial deposits at EFW CHP site	Can comprise a mixture of rock fragments, gravels, sand, silt and clays	Intercepted in boreholes at 24.3m and 25.7m bgl in CHP site, thickness between 5.1m and 8.4m.	Unproductive	Varved clay deposits encountered within Glacial Till, thickness 1.1m to 2.7m.
Ampthill Clay Formation - mudstone		Pale to medium grey mudstone with argillaceous limestone nodules; some rhythmic alternations of dark grey mudstone[6].	Encountered at 30.8m to 33.0m bgl at CHP site. Thickness – 48 m[2]	Unproductive	None identified
Kellaways and Oxford Clay Formation		Marine silty mudstone; beds of argillaceous limestone nodules; units of siltstone and sandstone[7].	Bedrock surface: 57 m bgl[2] Thickness – 41 m[2]	No information	Underlies the Ampthill Clay Formation.

BGS Boreholes

BGS borehole records on or in proximity to the site have been reviewed as follows:

- Borehole reference TF41NE77 in the northwest of the Walpole Substation[8] (grid reference 548450, 316750) records the following geological sequence from surface: sandy topsoil to 0.4m, clayey silt to 1.8m, silty sand to 11.1m, clay to 11.5m, sand with clayey layers, shells, shell fragments and organic odours to 19.2m, flint gravel to 20.0m, sand with some gravel to 23.6, underlain by slightly sandy silty clay to the base of the borehole at 30m. The log notes that groundwater was encountered during boring and monitored when the borehole reached a depth of 12.0m, the water was bailed out to 6.85m and the level rose to 6.53m after 20 minutes.
- Borehole record TF40NE16 located ~160m west of the Walsoken Substation (grid reference: 548000, 309200) records: made ground (sand with brick, tarmac and concrete rubble) to 0.3m, then sand with occasional timber fragments, becoming silty to 6.2m underlain by silty sand to 10.5m, then slightly silty sand with shell fragments to the base of the borehole at 15.0m. Groundwater was encountered at 1.5m.

Copies of the above logs are included in **Appendix A**.

[6] BGS Lexicon database ([redacted] accessed 18th October 2019.
[7] Description as stated on BGS 1:50k scale Geological Sheet 159.
[8] [redacted]

Mineral Extraction and Coal Mining Activities	The Coal Authority Interactive map[9] shows the site is not in a coal mining area. There are no active quarries nor surface mineral resources within influencing distance of the site. The BGS GeoIndex shows a Norfolk County Council recorded oil shale mine mineral planning permission 135m south of the Walsoken Substation. There are no hydrocarbon licence areas within influencing distance of the site.
Faults	The BGS GeoIndex[10] shows no geological faults on or within influencing distance of the site.
Radon	The Groundsure data shows the site is in a Lower Probability Radon Area, where less than 1% of properties are above the Action Level. This indicates that no radon protective measures are necessary.
Stability Hazards	According to the Groundsure GeoInsight report, the following stability hazards are classified, based on the underlying geology and apply to the entire site: Shrink swell clays are possible as ground conditions are predominantly medium plasticity. Compressibility and uneven settlement hazards, and running sand conditions, are probably present.
Hydrogeological sensitivity[11]	The superficial and bedrock deposits beneath the site are classified as unproductive strata. The BGS borehole records reviewed indicate that groundwater is present within the superficial deposits, potentially at depths of less than 2m, however, this is likely to be encountered as perched discontinuous groundwater rather than a continuous aquifer. The site is not in a groundwater Source Protection Zone (SPZ). King's Lynn and West Norfolk District Council provided information on private water supplies (PWS) and this indicates there are no PWS on the site or within 250m of the site. The Groundsure report identifies no active groundwater abstractions within 500m of the site. Three historical groundwater abstractions are identified, one onsite at Little Boleness Field, one 33m south of the site at Town Field, and one 176m west of the site, these were for irrigation and cooling purposes, not potable water supply.
Groundwater Sensitivity	The assessment of groundwater sensivity has been based on The Guidance for the Safe Development of Housing on Land Affected by Contamination R&D66: 2008 [12]. A low senstivitity is considered appropriate for the site.
Hydrology	According to the Environment Agency Catchment Data Explorer[13] the south-western portion of the site, and also the Walpole Subsation, lies within the Nene Lower and North West Norfolk Rivers catchments. There are no monitored watercourses on the site or within 250m of it.

[9] [redacted]

[11] Private water supplies are not included in the database and as such are not considered within the risk assessment, however, there remains the potential for risks to private water supplies

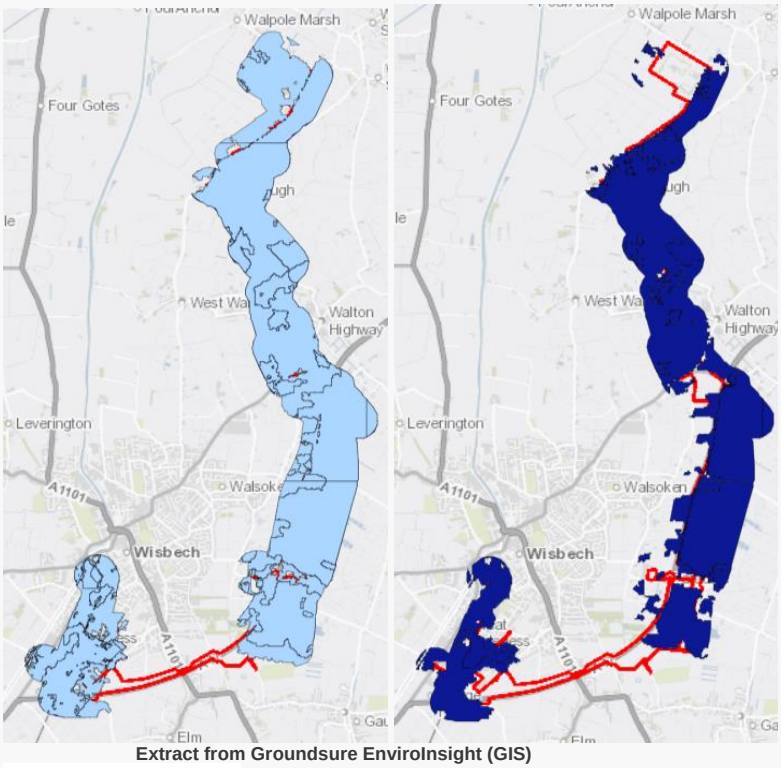
[12] NHBC/ CIEH / Environment Agency, Guidance for the Safe Development of Housing on Land Affected by Contamination R&D66: 2008

[13] [redacted]

	The River Nene flows in a north-easterly direction, approximately 700m northwest of the site. The River Nene is designated as Main River by the Environment Agency[14]. The remainder of the site is situated in an area served by an extensive network of artificial drainage channels under the control and management of the Internal Drainage Boards (IDBs). The IDB system provides a network of arterial watercourses that form a primary role in managing water levels and reducing flood risk within its district. These drains can be deep and steep sided. The Grid Connection site crosses a number of drainage ditches within the rateable area of Hundred of Wisbech (Middle Level Commissioners) and King's Lynn IDB. Drains in the southwest of the site convey water by gravity to the south-west where they discharge to the River Nene at the Middle Level IDB's South Brink pumping station. Drains in eastern areas of the site join the River Great Ouse c.10km northeast of the Grid Connection. The EA Catchment Data Explorer (EA, 2019b) indicates that the site is not within a WFD (Water Framework Directive) groundwater management catchment or reportable surface water WFD area. The nearest WFD waterbody (North Level Main Drain, 2km northwest of the Walpole Substation) achieved an overall status of 'Moderate' in the 2019 (ecological – moderate, chemical – fail). The Groundsure EnviroInsight report records two licensed discharges to surface water onsite: one located north of the Walsoken Substation immediately east of the A47 road where it crosses the site (at 549268, 311951), it dates from 1989 and is described as miscellaneous discharges to an unnamed drain, River Great Ous; the other is located nearby (at 549337, 312022) and relates to sewage discharges (final/treated effluent) from the A47 By-pass Service Area to an unnamed drain. There are also two licensed discharges that may be active within 250m of the site: 40m southwest of the Walsoken Substation for sewage discharges (final/treated effluent) to a tributary of Smeeth Lode from Grovemore Property, Broadend Industrial Estate 95m southwest of the site for sewage discharges (final/treated effluent) to a tributary of Smeeth Lode from Pondworld, Lynn Road
Flooding	The site lies within an area of medium to high risk of fluvial flooding. Environment Agency flood mapping provided with the Groundsure EnviroInsight report and reproduced below shows the majority of the site lying east of the A47 and extending from south to north to include both Walsoken and Walpole Substations, to be in zones 2 or 3, with zone 2 meaning there is between a 1 in 100 and 1 in 1,000 annual probability of river flooding, and zone 3 meaning there is a 1 in 100 or greater annual probability of river flooding, and this zone includes the functional floodplain. Environment Agency flood mapping also shows that the site area north of Broadend Road and east of the A47, and the area north of Lynn Road (the B198), benefit from flood defences. The site and surrounding area are characterised by connected field drainage channels, and the Environment Agency flood map[15] shows localised potential for surface water flooding within the fields, along some of the channels and also within the Walsoken and Walpole Substation boundaries.

14 [redacted]

15 [redacted] accessed May 2021.



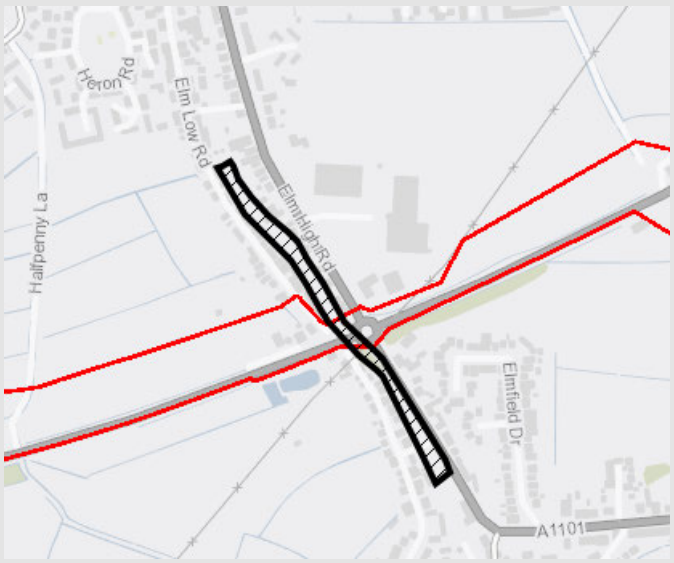
Extract from Groundsure EnviroInsight (GIS)

Hydrological sensitivity	High sensitivity – no monitored watercourses nearby, however, surface water site drainage and surface water run-off discharge directly into drainage channels bounding the site.
Ecology	The site is not located within or within close vicinity to any sites with statutory ecological designations. The site does not lie within a Nitrate Vulnerable Zone for surface water[16].
Ecological sensitivity	Due to the absence of any designated sites onsite or within 250m of the site, the ecological sensitivity is low.

[16] https://magic.defra.gov.uk/MagicMap.aspx,checked March 2021

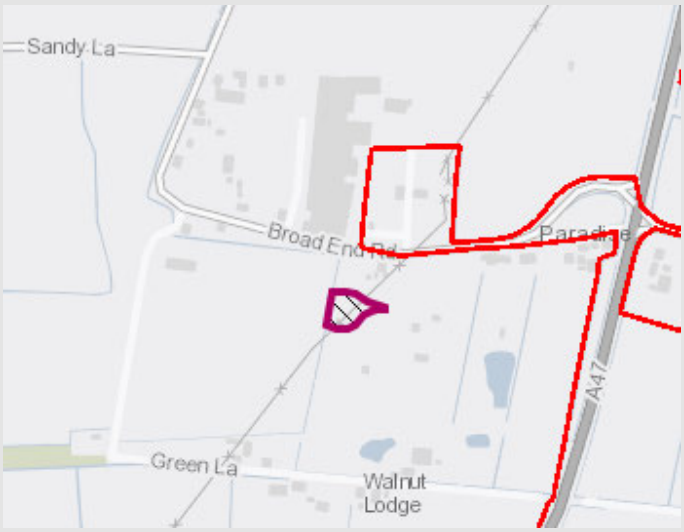
2.4 Other regulatory database information

Only regulatory data within 250m with the potential to impact the site has been detailed below.

Activity	On-Site	0-250m	Details
Waste management/ transfer/ treatment facilities/disposal	0	1	There are no waste management sites (such as waste transfer stations or recycling facilities) onsite. Offsite to the west at the proposed EfW CHP facility the area southeast of that facility there are two listings for the Wisbech Waste Transfer Centre for household, commercial and industrial waste, one with the license status listed as 'modified' and one as 'transferred'.
Other waste sites	3	N/A (small-scale activity)	There are three waste exemptions recorded onsite, one relates to use of waste in construction on a farm (in the south of the site at 546973, 307803), and the other two are related to burning (agricultural) waste in the open at The Elms, Biggs Road (549167, 310624, north of Walsoken Substation).
Landfill	1	1	**Onsite landfill** There is one historical landfill site on the site. This is the former Wisbech Canal and comprises a linear feature oriented northwest to southeast which crosses the site immediately west of Elm Road (the A1101). Licensed waste is described as inert, industrial, commercial and household waste and first input date is given as 1962 and last input date 1978. **Graphic 2.4 Onsite historical al landfill (former Wisbech Canal)** 

Activity	On-Site	0-250m	Details
			Previous investigation of the Wisbech Canal landfill, 2010 Information relating to the landfill is available on the West Norfolk Council website[17], It includes a 2010 site investigation report by ESI[18] that states that domestic type waste materials are present along the majority off the infilled canal but that the northern extent of the canal, north of the Blacksmiths Arms public house, which includes the section onsite, is likely to contain predominantly inert materials. Graphics showing exploratory hole locations are not provided with the report and it is therefore not known if any boreholes were completed on the site. Made ground was found in all boreholes located in the former canal footprint and comprised domestic waste material with an overlying cover material (0.4 to 0.8m thickness clayey gravelly sand or sandy gravelly clay with some brick and concrete fragments), the waste material typically included silty gravelly sand containing brick, ceramics, glass, clinker, fabric, plastic, metal and wood, with thickness ranging from 2.0 to 3.6m. This was underlain by natural soils comprising silty clay and slightly sandy clay. Peat lenses were found within the silts. Groundwater levels during monitoring were within the top 3m and mainly at between 1 and 2m below ground level. Waste samples were sent for laboratory testing at Alcontrol Laboratories for analytes including metals, ammoniacal nitrogen, sulphate, phenol, cyanide, pH, polycyclic aromatic hydrocarbons (PAH), total petroleum hydrocarbons (TPH), volatile organic compounds (VOC) and semi-volatile organic compounds (SVOC), organochloride pesticides and asbestos screen. Groundwater sampling and six rounds of gas monitoring for methane, oxygen, carbon dioxide, carbon monoxide and hydrogen sulphide were also carried out in 2010. No significant risks to human health were identified by ESI following screening of the soil results against the applied generic assessment criteria (GAC), or assessment of the gas results, and no significant risks to controlled waters were identified. The report concluded that the former canal site did not represent Part 2A Contaminated Land and no further investigation was recommended. No significant risks to controlled waters were identified however, the report notes the presence of a continuous shallow groundwater system along the length of the landfill is uncertain and that the degree of interaction between landfill leachate and local surface water features is unclear. It was assumed by ESI that shallow groundwater within the Terrington Beds will be in hydraulic continuity with the local network of surface water channels (not least since these channels are anticipated to have a drainage function), although the rate of movement through the superficial silts was anticipated to be low.

[17] https://www.west-norfolk.gov.uk/downloads/download/349/contaminated_land_part_2a,checked May 2021.
[18] ESI (2010) Contaminated land investigation: detailed inspection of former Wisbech Canal, Norfolk.

Activity	On-Site	0-250m	Details
			There is some risk of pollution to local controlled waters due to the absence of a landfill liner (which would act to contain leachate within the waste materials) and the absence of an engineered cap (which would minimise infiltration and thus leachate generation). Regarding the assessment of risks to human health, it is noted by Wood that improvements to asbestos testing techniques applied by environmental laboratories have taken place since 2011, and it might be the case that asbestos would be found now within the waste or cover materials that was not previously identified. **Offsite landfill** There is one offsite landfill recorded 65m south of the site at Walsoken. No details of the waste type are available. The area corresponds to a 'refuse tip' shown on 1967 mapping. **Graphic 2.5 Offsite historical landfill** 
Environment Agency or Local Authority Environmental Permit sites	0	3	The Groundsure EnviroInsight report records that there are no sites regulated under the Environmental Permitting Regulations (England and Wales) 2016 on the site. The following permits may be active in the surrounding area: • Morrisons Petrol Station, 150m north of the site (at 546963, 308012), Part B permit for unloading of petrol into storage at service stations. • Walsoken MOTs, 225m west of the Walsoken Substation (at 547968, 309446), Part B permit for a waste oil burner <0.4 MW. Given the relatively small scale of this activity and its distance from the site it is not considered further as a potential contamination source.

Activity	On-Site	0-250m	Details
			• Shell Wisbech Service Station, 30m east of the site (at 549296, 312013) Part B permit for unloading of petrol into storage at service stations.
Sites handling hazardous or explosive substances (inc. COMAH or NIHHS) planning hazardous consents	0	0	There are no Control of Major Accident Hazards (COMAH) or Notification of Installations Handling Hazardous Substances (NIHHS) sites registered within 250m of the site.
Unexploded Ordnance (UXO) and Bomb Strikes	-	-	The site has been assessed by Zetica[19] as having a low risk of UXO as a result of World War II bombing.
Pollution Incidents	2	5	Two pollution incidents have been recorded on the site, neither of which affected land: • A pollution incident (no details of pollutant) occurred in 2020 by a drainage ditch in the south of the site (at 545635, 307617), this only had a significant impact on water. • A pollution incident relating to atmospheric pollutants occurred in 2016 north of Fengate Road (549326, 310763). Offsite, the Groundsure EnviroInsight report records the following five incidents in proximity to the site with impacts on land and/or water: • An incident in 2020 at a drainage ditch immediately north of the site (at 545674, 307597), to the southeast of the proposed EfW CHP facility, by New Bridge Lane, relating to blood and offal with a significant impact on water. • Two incidents at the same drainage ditch in 2017 (at 545704, 307576), one involving crude sewage with a minor impact on land and a significant impact on water, and one involving other contaminated water with a significant impact on water. • A pollution incident 185m east of the site (at 549378, 309658), pollutant not identified, with a significant impact on land and minor impacts on air and water. • A pollution incident in 2003 110m east of the site (at 549561, 311046) involving general biodegradable material or waste, with a minor impact on land.

[19] [redacted] checked May 2021

Activity	On-Site	0-250m	Details
			Localised contamination could potentially be encountered on land in proximity to the drainage ditch at New Bridge Lane, relating to the second offsite incident listed above, however, the other incidents are unlikely to have affected land quality on the site.

3. Initial Conceptual Model and Risk Assessment

3.1 Conceptual model

3.1.1 The Conceptual Model (CM) and plausible contaminant linkages are defined below based on the desk study review of information collated in the previous sections. The CM is developed in line with UK land contamination risk management (LCRM) guidance 2020[20] and is based on the proposed commercial land use. The CM provides an assessment of the site's potential contamination status and identifies the presence of potentially significant contaminant linkages that require further consideration.

3.2 Potential contamination (sources)

3.2.1 A review of the site's history and environmental setting has identified potential contaminant sources on the site and the surrounding area, as summarised below in Table 3.1 Current and historical contaminant sources. The list of contaminants has been established through a review of Annex 3 in the Guidance for the Safe Development of Housing on Land Affected by Contamination R&D66: 2008 Volume 2.

Table 3.1 Current and historical contaminant sources

No.	Source	Likely Contaminants	Location	Source to be considered further?
1	Onsite: Historical landfill at former Wisbech Canal (waste possibly extending to 4m in depth)	Asbestos, heavy metals, total petroleum hydrocarbons (TPH), polyaromatic hydrocarbons (PAH), cyanide, ground gas (including carbon dioxide and methane), pH and other organic and inorganic compounds (for example ammonia, nitrate etc)	South of site west of Elm High Road (A1101)	Yes
2	Onsite: Localised made ground (including A74 embankment, former railway line, demolished farm buildings, former kilns,	Asbestos, heavy metals, total petroleum hydrocarbons (TPH), polyaromatic hydrocarbons (PAH),	Various: Including section of road on raised land east of Elm High Road, Elm High Road (former tramway), former main	Yes

[20] https://www.gov.uk/government/publications/land-contamination-risk-management-lcrm

No.	Source	Likely Contaminants	Location	Source to be considered further?
	disused/demolished poultry houses), and onsite fly tipping at New Bridge Lane	cyanide, ground gas (including carbon dioxide and methane), pH and other organic and inorganic compounds (for example ammonia, nitrate etc)	railway line in field between Green Lane and Broadend Road, poultry houses located in the north of the site east of the B198 (Lynn Road)	
3	Onsite: Walpole and Walsoken Substations	Total petroleum hydrocarbons, polyaromatic hydrocarbons (PAHs), polychlorinated biphenyls (PCBs), asbestos.	Walpole and Walsoken Substation option sites	Yes
4	Onsite: Former petrol filling stations	Total petroleum hydrocarbons, benzene, toluene, ethyl benzene and xylenes (BTEX)	Meadowgate Lane, north and south of A47	Yes
5	Onsite: Natural peat deposits	Ground gas (including carbon dioxide and methane)	Non-continuous bands across the site	Yes
6	Offsite: Petrol station within 50m	Total petroleum hydrocarbons, benzene, toluene, ethyl benzene and xylenes (BTEX)	30m east of the site on the cable route to the Walsoken Substation, south of the B198 (Light Lane)	Yes
7	Offsite: Pollution incident at the drainage ditch north of the site	Ammonia, biological contaminants (e.g., pathogens)	Area adjacent to ditch at New Bridge Lane in south of site	Yes
8	Offsite: refuse tip dating from 1967 (also the site of the former Walsoken brick and tile works),	Heavy metals, total petroleum hydrocarbons (TPH), polyaromatic hydrocarbons (PAH), cyanide, ground gas (including carbon dioxide and methane), pH and other organic and inorganic compounds (for example ammonia, nitrate etc)	65m south of the site and the Walsoken Substation option, Localised made ground may be encountered associated with former building demolition	Yes

3.3 Potential receptors and exposure pathways

3.3.1 The potential receptors and associated pathways on the site have been identified in accordance with Land contamination: risk management[21], and are shown in **Table 3.2 Pathways and Receptors** below.

3.3.2 The southern portion of the Grid Connection is predominantly comprised of cables to be laid by open trenching or using horizontal directional drilling (HDD) to cross roads or watercourses. Where trenching is used, the surface soil or road surface will be reinstated at surface, or reinstatement will take the form of a joint bay with a surface access point e.g., a concrete structure with access for maintenance. This will result in very little change to the current land use, and the as-built development footprint will only occupy a small proportion of the site boundary currently under consideration. The northern portion of the Grid Connection is predominantly comprised of above ground cables on poles. Soil will need to be excavated to install the poles, and it is intended that this will also be reinstated. This will also result in very little change to the current land use. However, the risk assessment for human health receptors considered the potential change to the site post-development without any mitigation measures being applied.

Table 3.2 Pathways and Receptors

Receptors	Potential pathways
Current site users (workers, landowners, members of the public)	Dermal contact, ingestion and inhalation of dusts, vapours, asbestos fibres and gases
Future site users (workers, landowners, members of the public)	Dermal contact, ingestion and inhalation of dusts, vapours, asbestos fibres and gases
Current adjacent land users (residents, workers, members of the public)	Dermal contact, ingestion and inhalation of dusts, vapours, asbestos fibres and gases
Future adjacent land users (residents, workers, members of the public) following development	Dermal contact, ingestion and inhalation of dusts, vapours, asbestos fibres and gases
Current property (infrastructure and utilities, agricultural land including crops, grazing animals)	Direct contact, migration and accumulation of gases
Future property (infrastructure including cables and joint bays, new substation)	Direct contact, migration and accumulation of gases
Current adjacent Property (agricultural land including crops, grazing animals)	Direct contact, uptake

[21] lhttps://www.gov.uk/guidance/land-contamination-how-to-manage-the-risksast updated 23 December 2019

Receptors	Potential pathways
Future adjacent Property (agricultural land including crops, grazing animals)	Direct contact, uptake
Current controlled waters (Surface water – surface water drains)	Surface water runoff, leaching, groundwater migration
Future controlled water (Surface water – surface water drains)	Surface water runoff, leaching, groundwater migration

3.4 Exclusion from risk assessment

3.4.1 The following receptors have not been considered as part of this assessment. A detailed explanation of our rational for excluding each receptor is documented below.

Redevelopment workers

3.4.2 The CM does not consider risks to construction/site maintenance workers on the basis that risks to workers will be dealt with under the Health and Safety at Work Act (1974) and regulations made under the act. Site-specific contamination data obtained from all site investigations should be included in the pre-construction information (a requirement of Construction Design and Management (CDM) Regulations 2015) for the proposed works, to enable any contractors to address potential risk from contamination as necessary in their risk assessments and method statements. Moreover, as the exact details of the method adopted are not currently known, it is not considered appropriate to provide a wide ranging and speculative risk assessment for redevelopment workers.

Invasive species

3.4.3 Invasive species (such as Japanese knotweed and giant hogweed) are not considered within the risk assessment for contamination. However, invasive species are considered to be a constraint to remediation / redevelopment and should be assessed / addressed further in appropriate documentation relating to the remediation or contractor's method statements for ground preparation.

Unexploded ordnance (UXO)

3.4.4 The site has been assessed by Zetica[22] as having a low risk of UXO as a result of World War II bombing. Risks associated with UXO are not considered further in this report.

[22] [redacted] checked May 2021

Groundwater receptors

3.4.5 There are no sensitive aquifers underlying the site, as both superficial and bedrock aquifers as classed as unproductive strata. Groundwater may still be encountered on the site, however, as perched, discontinuous groundwater, and the potential for this to act as a contaminant migration pathway is considered in the risk assessment.

Ecological receptors

3.4.6 No ecological receptors are present onsite or within 250m of the site, ecological receptors have, therefore, been excluded from the risk assessment.

3.5 Preliminary risk assessment

3.5.1 In order for land contamination risk to be realised, a 'contaminant linkage' must exist. A contaminant linkage requires the presence of a:

- Source of contamination;
- Receptor capable of being adversely affected by the contamination; and
- Pathway capable of exposing a receptor to the contaminant.

3.5.2 A preliminary risk assessment has been undertaken for these potential contaminant linkages to identify potentially unacceptable risks on a qualitative basis. Risk is, therefore, based on a consideration of both:

- The likelihood of an event (probability – takes into account both the presence of the hazard and receptor and the integrity of the pathway).
- The severity of the potential consequence (takes into account both the potential severity of the hazard and the sensitivity of the receptor).

3.5.3 Further information on the risk assessment methodology used is given in **Appendix B**. The method of dealing with identified risks and the level of significance of those risks will be a function of site use. The risk assessment is based on the current and future proposed land use and assumes no control measures to manage the risk (e.g., source removal) have been incorporated in the development.

3.5.4 The locations of the potential contaminant sources identified on site are shown in **Graphic 3.1 Potential Sources of Contamination**.

Graphic 3.1 Potential Sources of Contamination

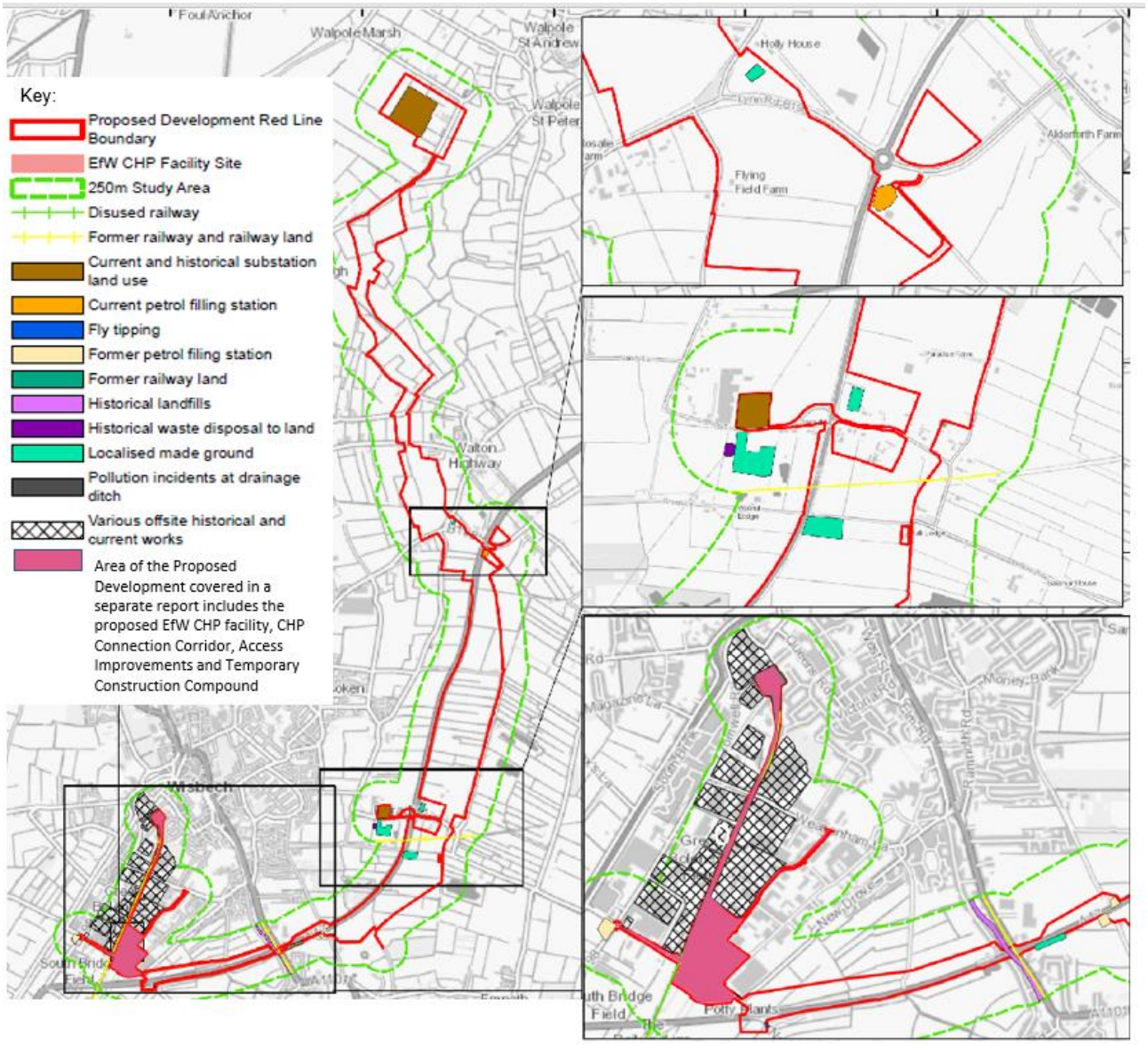


Table 3.3 Preliminary Risk Assessment – Risks to current and future site users and environment from current/historical sources

Item No.	Potential Source	Potential Pollutant	Potential Receptors	Potential Pathways to Receptors	Associated Hazard [severity]	Likelihood of Occurrence	Risk/ Significance	Comment
1	Source 1: Onsite historical landfill at former Wisbech Canal (waste possibly extending to 4m in depth)	Asbestos, heavy metals, total petroleum hydrocarbons (TPH), polyaromatic hydrocarbons (PAH), cyanide, ground gas (including carbon dioxide and methane), pH and other organic and inorganic compounds (for example ammonia, nitrate etc)	Current site users (workers, landowners, members of the public)	Dermal contact, ingestion and inhalation of dusts, vapours, asbestos fibres or gases	Health Hazard [Medium]	Low Likelihood	Moderate / Low	Available reports indicate that the landfill has been investigated on or in the vicinity of the site and was not assessed to be Part 2A EPA 'contaminated land'.
2	Source 1: Onsite historical landfill at former Wisbech Canal (waste possibly extending to 4m in depth)	Asbestos, heavy metals, total petroleum hydrocarbons (TPH), polyaromatic hydrocarbons (PAH), cyanide, ground gas (including carbon dioxide and	Future site users (workers, landowners, members of the public)	Dermal contact, ingestion and inhalation of dusts, vapours, asbestos fibres or gases	Health Hazard [Medium]	Low Likelihood	Moderate / Low	It is likely that the landfill can be avoided by the use of horizontal directional drilling (HDD) and therefore the Proposed Development will not result in any change to the ground

Item No.	Potential Source	Potential Pollutant	Potential Receptors	Potential Pathways to Receptors	Associated Hazard [severity]	Likelihood of Occurrence	Risk/ Significance	Comment
		methane), pH and other organic and inorganic compounds (for example ammonia, nitrate etc)						conditions at the landfill.
3	Source 1: Onsite historical landfill at former Wisbech Canal (waste possibly extending to 4m in depth)	Asbestos, heavy metals, total petroleum hydrocarbons (TPH), polyaromatic hydrocarbons (PAH), cyanide, ground gas (including carbon dioxide and methane), pH and other organic and inorganic compounds (for example ammonia, nitrate etc)	Current adjacent land users (residents, workers, members of the public)	Inhalation of dusts, vapours, asbestos fibres or gases	Health Hazard [Medium]	Unlikely	Low	Available reports indicate that the landfill has been investigated on or in the vicinity of the site and was not assessed to be Part 2A EPA 'contaminated land'.
4	Source 1: Onsite historical landfill at former	Asbestos, heavy metals, total petroleum hydrocarbons (TPH),	Future adjacent land users (residents, workers, members of the public)	Inhalation of dusts, vapours, asbestos fibres or gases	Health Hazard [Medium]	Unlikely	Low	It is likely that the landfill can be avoided by the use of horizontal directional drilling (HDD) and therefore

Item No.	Potential Source	Potential Pollutant	Potential Receptors	Potential Pathways to Receptors	Associated Hazard [severity]	Likelihood of Occurrence	Risk/ Significance	Comment
	Wisbech Canal (waste possibly extending to 4m in depth)	polyaromatic hydrocarbons (PAH), cyanide, ground gas (including carbon dioxide and methane), pH and other organic and inorganic compounds (for example ammonia, nitrate etc)	following development					the Proposed Development will not result in any change to the ground conditions at the landfill.
5	Source 1: Onsite historical landfill at former Wisbech Canal (waste possibly extending to 4m in depth)	Heavy metals, total petroleum hydrocarbons (TPH), polyaromatic hydrocarbons (PAH), cyanide, ground gas (including carbon dioxide and methane), pH and other organic and inorganic compounds (for example ammonia, nitrate etc)	Current property (infrastructure and utilities)	Direct contact, migration and accumulation of gases	Direct contact & gas accumulation, explosion [Severe]	Unlikely	Moderate/low	Properties present adjacent to the former canal during and post-landfilling with no impacts on services known to have occurred. Ground gas expected to be limited due to landfill materials mainly being inert.

Item No.	Potential Source	Potential Pollutant	Potential Receptors	Potential Pathways to Receptors	Associated Hazard [severity]	Likelihood of Occurrence	Risk/ Significance	Comment
6	Source 1: Onsite historical landfill at former Wisbech Canal (waste possibly extending to 4m in depth)	Heavy metals, total petroleum hydrocarbons (TPH), polyaromatic hydrocarbons (PAH), cyanide, ground gas (including carbon dioxide and methane), pH and other organic and inorganic compounds (for example ammonia, nitrate etc)	Future property (infrastructure including cables and joint bays, new substation)	Direct contact, migration and accumulation of gases	Direct contact & gas accumulation, explosion [Severe]	Low likelihood	Moderate/low	Risk assessment assumes the new infrastructure is at a level below the landfilled waste. Leachate is possible, and there is limited potential for vertical groundwater migration, but it can't be ruled out. Ground gas expected to be limited due to landfill materials mainly being inert.
7	Source 1: Onsite historical landfill at former Wisbech Canal (waste possibly extending to 4m in depth)	Heavy metals, total petroleum hydrocarbons (TPH), polyaromatic hydrocarbons (PAH), cyanide, ground gas (including carbon dioxide and methane), pH and other organic and	Current Controlled Waters – Surface water – surface water drains	Surface water run-off, leaching from soils and migration in groundwater	Surface Water pollution [Medium]	Low likelihood	Moderate/low	ESI report confirms there is no landfill liner or cap, and leachate migration from the landfill to groundwater which is likely to be in hydraulic continuity with surface water is possible, therefore some impact on surface water quality is possible.

Item No.	Potential Source	Potential Pollutant	Potential Receptors	Potential Pathways to Receptors	Associated Hazard [severity]	Likelihood of Occurrence	Risk/ Significance	Comment
		inorganic compounds (for example ammonia, nitrate etc)						
8	Source 1: Onsite historical landfill at former Wisbech Canal (waste possibly extending to 4m in depth)	Heavy metals, total petroleum hydrocarbons (TPH), polyaromatic hydrocarbons (PAH), cyanide, ground gas (including carbon dioxide and methane), pH and other organic and inorganic compounds (for example ammonia, nitrate etc)	Future Controlled Waters – Surface water – surface water drains	Surface water run-off, leaching from soils and migration in groundwater	Surface Water pollution [Medium]	Low likelihood	Moderate/low	It is likely that the landfill can be avoided by the use of horizontal directional drilling (HDD) and therefore the Proposed Development will not result in any change to the ground conditions at the landfill.
9	Source 2: Onsite localised made ground (including A74 embankment, former railway line, demolished farm buildings,	Asbestos, heavy metals, total petroleum hydrocarbons (TPH), polyaromatic hydrocarbons (PAH), cyanide, ground gas	Current site users (workers, landowners, members of the public)	Dermal contact, ingestion and inhalation of dusts, vapours, asbestos fibres or gases	Health Hazard [Medium]	Unlikely	Low	Areas are generally unlikely to be used regularly by anyone other than maintenance workers/ farm workers, sources likely to be limited in extent, ground likely

Item No.	Potential Source	Potential Pollutant	Potential Receptors	Potential Pathways to Receptors	Associated Hazard [severity]	Likelihood of Occurrence	Risk/ Significance	Comment
	former kilns, disused/ demolished poultry houses) and onsite fly tipping at New Bridge Lane	(including carbon dioxide and methane), pH and other organic and inorganic compounds (for example ammonia, nitrate etc)						to be currently covered by vegetation.
10	Source 2: Onsite localised made ground (including A74 embankment, former railway line, demolished farm buildings, former kilns, disused/ demolished poultry houses) and onsite fly tipping at New Bridge Lane	Asbestos, heavy metals, total petroleum hydrocarbons (TPH), polyaromatic hydrocarbons (PAH), cyanide, ground gas (including carbon dioxide and methane), pH and other organic and inorganic compounds (for example ammonia, nitrate etc)	Future site users (workers, landowners, members of the public)	Dermal contact, ingestion and inhalation of dusts, vapours, asbestos fibres or gases	Health Hazard [Medium]	Low likelihood	Moderate/low	If not adequately identified and controlled, there may be potential for contaminative materials to be disturbed, mobilised or mixed with surface soils by the development.
11	Source 2: Onsite localised made ground (including A74	Asbestos, heavy metals, total petroleum hydrocarbons (TPH),	Current adjacent land users (residents, workers,	Inhalation of dusts, vapours, asbestos	Health Hazard [Medium]	Unlikely	Low	Limited potential for dust migration from the source area and adjacent site users

Item No.	Potential Source	Potential Pollutant	Potential Receptors	Potential Pathways to Receptors	Associated Hazard [severity]	Likelihood of Occurrence	Risk/ Significance	Comment
	embankment, former railway line, demolished farm buildings, former kilns, disused/ demolished poultry houses) and onsite fly tipping at New Bridge Lane	polyaromatic hydrocarbons (PAH), cyanide, ground gas (including carbon dioxide and methane), pH and other organic and inorganic compounds (for example ammonia, nitrate etc)	members of the public)	fibres or gases				are generally unlikely to come into contact with impacted groundwater or leachate.
12	Source 2: Onsite localised made ground (including A74 embankment, former railway line, demolished farm buildings, former kilns, disused/ demolished poultry houses) and onsite fly tipping at New Bridge Lane	Asbestos, heavy metals, total petroleum hydrocarbons (TPH), polyaromatic hydrocarbons (PAH), cyanide, ground gas (including carbon dioxide and methane), pH and other organic and inorganic compounds (for example ammonia, nitrate etc)	Future adjacent land users (residents, workers, members of the public)	Inhalation of dusts, vapours, asbestos fibres or gases	Health Hazard [Medium]	Unlikely	Low	Areas are generally unlikely to be used regularly by anyone other than maintenance workers/ farm workers, sources likely to be limited in extent, ground likely to be currently covered by vegetation. development, or gas ingress.

Item No.	Potential Source	Potential Pollutant	Potential Receptors	Potential Pathways to Receptors	Associated Hazard [severity]	Likelihood of Occurrence	Risk/ Significance	Comment
13	Source 2: Onsite localised made ground (including A74 embankment, former railway line, demolished farm buildings, former kilns, disused/ demolished poultry houses) and onsite fly tipping at New Bridge Lane	Heavy metals, total petroleum hydrocarbons (TPH), polyaromatic hydrocarbons (PAH), cyanide, ground gas (including carbon dioxide and methane), pH and other organic and inorganic compounds (for example ammonia, nitrate etc)	Current property (infrastructure and utilities)	Direct contact, degradation of services	Direct contact & gas accumulation, explosion [Severe]	Unlikely	Moderate/low	Limited properties present in the surrounding area, no issues known of with services. Large quantities of hydrocarbon vapours or ground gas including methane are unlikely from the identified sources.
14	Source 2: Onsite localised made ground (including A74 embankment, former railway line, demolished farm buildings, former kilns, disused/ demolished poultry houses)	Heavy metals, total petroleum hydrocarbons (TPH), polyaromatic hydrocarbons (PAH), cyanide, ground gas (including carbon dioxide and methane), pH and other organic and inorganic	Future property (infrastructure including cables and joint bays, new substation)	Direct contact, degradation of services	Direct contact & gas accumulation, explosion [Severe]	Unlikely	Moderate/low	Some potential for impacts on new infrastructure where this is buried however sources expected to be limited in extent. Large quantities of hydrocarbon vapours or ground gas including methane are unlikely from the identified sources.

Item No.	Potential Source	Potential Pollutant	Potential Receptors	Potential Pathways to Receptors	Associated Hazard [severity]	Likelihood of Occurrence	Risk/ Significance	Comment
	and onsite fly tipping at New Bridge Lane	compounds (for example ammonia, nitrate etc)						
15	Source 2: Onsite localised made ground (including A74 embankment, former railway line, demolished farm buildings, former kilns, disused/ demolished poultry houses) and onsite fly tipping at New Bridge Lane	Heavy metals, total petroleum hydrocarbons (TPH), polyaromatic hydrocarbons (PAH), cyanide, ground gas (including carbon dioxide and methane), pH and other organic and inorganic compounds (for example ammonia, nitrate etc)	Current adjacent Property (agricultural land including crops, grazing animals)	Direct contact, uptake	Damage to crops or livestock health [Mild]	Unlikely	Very low	No issues known of on agricultural land.
16	Source 2: Onsite localised made ground (including A74 embankment, former railway line, demolished farm buildings,	Heavy metals, total petroleum hydrocarbons (TPH), polyaromatic hydrocarbons (PAH), cyanide, ground gas	Future adjacent Property (agricultural land including crops, grazing animals)	Direct contact, uptake	Damage to crops or livestock health [Mild]	Low likelihood	Low	If not adequately identified and controlled, there may be potential for contaminative materials to be disturbed, mobilised or mixed with surface soils by

Item No.	Potential Source	Potential Pollutant	Potential Receptors	Potential Pathways to Receptors	Associated Hazard [severity]	Likelihood of Occurrence	Risk/ Significance	Comment
	former kilns, disused/ demolished poultry houses) and onsite fly tipping at New Bridge Lane	(including carbon dioxide and methane), pH and other organic and inorganic compounds (for example ammonia, nitrate etc)						the development.
17	Source 2: Onsite localised made ground (including A74 embankment, former railway line, demolished farm buildings, former kilns, disused/ demolished poultry houses) and onsite fly tipping at New Bridge Lane	Heavy metals, total petroleum hydrocarbons (TPH), polyaromatic hydrocarbons (PAH), cyanide, ground gas (including carbon dioxide and methane), pH and other organic and inorganic compounds (for example ammonia, nitrate etc)	Current Controlled Waters – Surface water – surface water drains	Surface water run-off, leaching from soils and migration in groundwater	Surface Water pollution [Medium]	Low likelihood	Moderate/low	Some migration of contaminants from made ground to nearby surface drains is possible.

Item No.	Potential Source	Potential Pollutant	Potential Receptors	Potential Pathways to Receptors	Associated Hazard [severity]	Likelihood of Occurrence	Risk/ Significance	Comment
18	Source 2: Onsite localised made ground (including A74 embankment, former railway line, demolished farm buildings, former kilns, disused/ demolished poultry houses) and onsite fly tipping at New Bridge Lane	Heavy metals, total petroleum hydrocarbons (TPH), polyaromatic hydrocarbons (PAH), cyanide, ground gas (including carbon dioxide and methane), pH and other organic and inorganic compounds (for example ammonia, nitrate etc)	Future Controlled Waters – Surface water – surface water drains	Surface water run-off, leaching from soils and migration in groundwater	Surface Water pollution [Medium]	Low likelihood	Moderate/low	Following development, the risk of contaminant migration to surface water is unlikely to increase significantly.
19	Source 3: Onsite Walpole and Walsoken Substations	Total petroleum hydrocarbons, polyaromatic hydrocarbons (PAHs), polychlorinated biphenyls (PCBs), asbestos	Current site users (workers, visitors)	Dermal contact, ingestion and inhalation of dusts or vapours	Health Hazard [Medium]	Low likelihood	Moderate/low	Substations assumed to be secure and accessed only by workers and other authorised personnel. No previous assessments available.

Item No.	Potential Source	Potential Pollutant	Potential Receptors	Potential Pathways to Receptors	Associated Hazard [severity]	Likelihood of Occurrence	Risk/ Significance	Comment
20	Source 3: Onsite Walpole and Walsoken Substations	Total petroleum hydrocarbons, polyaromatic hydrocarbons (PAHs), polychlorinated biphenyls (PCBs), asbestos	Future site users (workers, visitors)	Dermal contact, ingestion and inhalation of dusts or vapours	Health Hazard [Medium]	Low likelihood	Moderate/low	Following development, substations assumed to be secure and accessed only by workers and other authorised personnel. Assessment of ground conditions needed to confirm land is suitable for new substation development.
21	Source 3: Onsite Walpole and Walsoken Substations	Total petroleum hydrocarbons, polyaromatic hydrocarbons (PAHs), polychlorinated biphenyls (PCBs), asbestos	Current adjacent land users (workers, members of the public)	Inhalation of dusts, vapours	Health Hazard [Medium]	Unlikely	Low	Limited potential for dust migration from the source area, no buildings directly adjacent and adjacent site users are generally unlikely to come into contact with impacted groundwater or leachate.

Item No.	Potential Source	Potential Pollutant	Potential Receptors	Potential Pathways to Receptors	Associated Hazard [severity]	Likelihood of Occurrence	Risk/ Significance	Comment
22	Source 3: Onsite Walpole and Walsoken Substations	Total petroleum hydrocarbons, polyaromatic hydrocarbons (PAHs), polychlorinated biphenyls (PCBs), asbestos	Future adjacent land users (workers, members of the public)	Inhalation of dusts, vapours	Health Hazard [Medium]	Unlikely	Low	Limited potential for dust migration from the source area, no buildings directly adjacent and adjacent site users are generally unlikely to come into contact with impacted groundwater or leachate.
23	Source 3: Onsite Walpole and Walsoken Substations	Total petroleum hydrocarbons, polyaromatic hydrocarbons (PAHs), polychlorinated biphenyls (PCBs)	Current property (infrastructure and utilities)	Direct contact, migration and accumulation of gases	Direct contact & gas accumulation [Mild]	Low likelihood	Low	Limited properties present in the surrounding area, no issues known of with services. Hydrocarbon vapours unlikely to be present in sufficient quantities to cause explosion following accumulation.
24	Source 3: Onsite Walpole and Walsoken Substations	Total petroleum hydrocarbons, polyaromatic hydrocarbons (PAHs),	Future property (infrastructure including cables and joint bays, new substation)	Downward migration	Direct contact & gas accumulation [Mild]	Low likelihood	Low	Assessment of ground conditions needed to confirm ground conditions suitable for new infrastructure.

Item No.	Potential Source	Potential Pollutant	Potential Receptors	Potential Pathways to Receptors	Associated Hazard [severity]	Likelihood of Occurrence	Risk/ Significance	Comment
		polychlorinated biphenyls (PCBs)						Hydrocarbon vapours unlikely to be present in sufficient quantities to cause explosion following accumulation.
25	Source 3: Onsite Walpole and Walsoken Substations	Total petroleum hydrocarbons, polyaromatic hydrocarbons (PAHs), polychlorinated biphenyls (PCBs)	Current Controlled Waters – Surface water – surface water drains	Surface water run-off, leaching from soils and migration in groundwater	Surface Water pollution [Medium]	Unlikely	Low	No pollution incidents identified relating to oils from substations entering surface water.
26	Source 3: Onsite Walpole and Walsoken Substations	Total petroleum hydrocarbons, polyaromatic hydrocarbons (PAHs), polychlorinated biphenyls (PCBs)	Future Controlled Waters – Surface water – surface water drains	Surface water run-off, leaching from soils and migration in groundwater	Surface Water pollution [Medium]	Low likelihood	Moderate/low	Assessment of ground conditions needed to confirm development will not result in a contaminant linkage to surface water.
27	Source 4: Onsite former petrol filling stations	Total petroleum hydrocarbons, benzene, toluene,	Current site users (workers, members	Dermal contact, ingestion and inhalation of	Health Hazard [Medium]	Unlikely	Low	Site users will generally be unlikely to come into contact

Item No.	Potential Source	Potential Pollutant	Potential Receptors	Potential Pathways to Receptors	Associated Hazard [severity]	Likelihood of Occurrence	Risk/ Significance	Comment
		ethyl benzene and xylenes (BTEX)	of the public)	dusts or vapours				with impacted soil or groundwater.
28	Source 4: Onsite former petrol filling stations	Total petroleum hydrocarbons, benzene, toluene, ethyl benzene and xylenes (BTEX)	Future site users (workers, members of the public)	Dermal contact, ingestion and inhalation of dusts or vapours	Health Hazard [Medium]	Low likelihood	Moderate/low	No buildings are proposed in this area of the site, however there may be potential for vapour migration into enclosed spaces (e.g., joint bays). Site users will generally be unlikely to come into contact with impacted soil or groundwater.
29	Source 4: Onsite former petrol filling stations	Total petroleum hydrocarbons, benzene, toluene, ethyl benzene and xylenes (BTEX)	Current adjacent land users (residents, workers, members of the public)	Inhalation of dusts, vapours, asbestos fibres or gases	Health Hazard [Medium]	Unlikely	Low	Nearest property is c.70m away, no known issues relating to fuel contamination and filling station is now only used for car washing.

Item No.	Potential Source	Potential Pollutant	Potential Receptors	Potential Pathways to Receptors	Associated Hazard [severity]	Likelihood of Occurrence	Risk/ Significance	Comment
30	Source 4: Onsite former petrol filling stations	Total petroleum hydrocarbons, benzene, toluene, ethyl benzene and xylenes (BTEX)	Future adjacent land users (residents, workers, members of the public)	Inhalation of dusts, vapours, asbestos fibres or gases	Health Hazard [Medium]	Unlikely	Low	Nearest property is c.70m away, no known issues relating to fuel contamination and filling station is now only used for car washing.
31	Source 4: Onsite former petrol filling stations	Total petroleum hydrocarbons, benzene, toluene, ethyl benzene and xylenes (BTEX)	Current property (infrastructure and utilities)	Direct contact, migration and accumulation of gases	Direct contact & gas accumulation, explosion [Severe]	Unlikely	Moderate/low	Limited properties present in the surrounding area, no issues known of with services.
32	Source 4: Onsite former petrol filling stations	Total petroleum hydrocarbons, benzene, toluene, ethyl benzene and xylenes (BTEX)	Future property (infrastructure including cables and joint bays)	Direct contact, migration and accumulation of gases	Direct contact & gas accumulation, explosion [Severe]	Unlikely	Moderate/low	Some potential for impacts on new infrastructure where this is buried however sources expected to be limited in extent. Explosion due to accumulation of vapours is unlikely due to the nature of the development and former tanks

Item No.	Potential Source	Potential Pollutant	Potential Receptors	Potential Pathways to Receptors	Associated Hazard [severity]	Likelihood of Occurrence	Risk/ Significance	Comment
								being likely to be empty if still in situ.
33	Source 4: Onsite former petrol filling stations	Total petroleum hydrocarbons, benzene, toluene, ethyl benzene and xylenes (BTEX)	Current adjacent Property (agricultural land including crops, grazing animals)	Direct contact, uptake	Damage to crops or livestock health [Mild]	Unlikely	Very low	No issues known of on agricultural land.
34	Source 4: Onsite former petrol filling stations	Total petroleum hydrocarbons, benzene, toluene, ethyl benzene and xylenes (BTEX)	Future adjacent Property (agricultural land including crops, grazing animals)	Direct contact, uptake	Damage to crops or livestock health [Mild]	Unlikely	Very low	No issues on agricultural land likely to arise as a result of the development.
35	Source 4: Onsite former petrol filling stations	Total petroleum hydrocarbons, benzene, toluene, ethyl benzene and xylenes (BTEX)	Current Controlled Waters – Surface water – surface water drains	Surface water run-off, leaching from soils and migration in groundwater	Surface Water pollution [Medium]	Unlikely	Low	No pollution incidents to controlled water noted in proximity to the former filling stations.
36	Source 4: Onsite former petrol filling stations	Total petroleum hydrocarbons, benzene, toluene, ethyl benzene and xylenes (BTEX)	Future Controlled Waters – Surface water – surface water drains	Surface water run-off, leaching from soils and migration in groundwater	Surface Water pollution [Medium]	Low likelihood	Moderate/low	Assessment of ground conditions needed to confirm development will not result in a contaminant linkage to surface water.

Item No.	Potential Source	Potential Pollutant	Potential Receptors	Potential Pathways to Receptors	Associated Hazard [severity]	Likelihood of Occurrence	Risk/ Significance	Comment
37	Source 5: Onsite natural peat deposits	Ground gas (including carbon dioxide and methane)	Current site users (workers, visitors)	Inhalation, asphyxiation	Health Hazard [Severe]	Unlikely	Moderate/low	No issues relating to ground gas known of on the site.
38	Source 5: Onsite natural peat deposits	Ground gas (including carbon dioxide and methane)	Future site users (workers, visitors)	Inhalation, asphyxiation	Health Hazard [Severe]	Unlikely	Moderate/low	Gas monitoring and/or gas protection measures would be needed to demonstrate that ground gas levels do not pose a risk in any new enclosed spaces, however peat deposits are likely to be limited in extent/thickness and enclosed spaces limited to joint bays and substations.
39	Source 5: Onsite natural peat deposits	Ground gas (including carbon dioxide and methane)	Current property (infrastructure and utilities)	Gas ingress and accumulation	Gas accumulation, explosion [Severe]	Unlikely	Moderate/low	No issues relating to ground gas known of on the site.
40	Source 5: Onsite natural peat deposits	Ground gas (including carbon dioxide and methane)	Future property (infrastructure including cables and joint bays, new substation)	Gas ingress and accumulation	Gas accumulation, explosion [Severe]	Unlikely	Moderate/low	Enclosed spaces limited to joint bays and substations. Gas monitoring and/or gas protection measures would be needed to

Item No.	Potential Source	Potential Pollutant	Potential Receptors	Potential Pathways to Receptors	Associated Hazard [severity]	Likelihood of Occurrence	Risk/ Significance	Comment
								demonstrate that ground gas levels do not pose a risk in any new enclosed spaces
40	Source 6: Offsite petrol station within 50m	Total petroleum hydrocarbons, benzene, toluene, ethyl benzene and xylenes (BTEX)	Current site users (workers, landowners, members of the public)	Dermal contact, ingestion and inhalation of dusts or vapours	Health Hazard [Medium]	Unlikely	Low	Site users will generally be unlikely to come into contact with impacted soil or groundwater.
41	Source 6: Offsite petrol station within 50m	Total petroleum hydrocarbons, benzene, toluene, ethyl benzene and xylenes (BTEX)	Future site users (workers, landowners, members of the public)	Dermal contact, ingestion and inhalation of dusts or vapours	Health Hazard [Medium]	Low likelihood	Moderate/low	Site users will generally be unlikely to come into contact with impacted soil or groundwater, however the closest petrol station is only 30m from the site and migration in groundwater is possible.
42	Source 6: Offsite petrol station within 50m	Total petroleum hydrocarbons, benzene, toluene, ethyl benzene and xylenes (BTEX)	Current property (infrastructure and utilities)	Direct contact, migration and accumulation of gases	Direct contact & gas accumulation [Severe]	Unlikely	Moderate/low	Limited properties/services likely to be present. No impacts on services known of. Distance to the petrol station lowers

Item No.	Potential Source	Potential Pollutant	Potential Receptors	Potential Pathways to Receptors	Associated Hazard [severity]	Likelihood of Occurrence	Risk/ Significance	Comment
								the risk from vapours.
43	Source 6: Offsite petrol station within 50m	Total petroleum hydrocarbons, benzene, toluene, ethyl benzene and xylenes (BTEX)	Future property (infrastructure including cables and joint bays, new substation)	Direct contact, migration and accumulation of gases	Direct contact & gas accumulation, explosion [Severe]	Unlikely	Moderate/low	Some potential for impacts on new infrastructure where this is buried. Distance to the petrol station lowers the risk from vapours.
44	Source 7: Offsite pollution incident at the drainage ditch north of the site	Ammonia, biological contaminants (e.g., pathogens)	Current site users (workers, landowners, members of the public)	Dermal contact, ingestion and inhalation	Health Hazard [Medium]	Unlikely	Low	Site users will generally be unlikely to come into contact with impacted soil or groundwater.
45	Source 7: Offsite pollution incident at the drainage ditch north of the site	Ammonia, biological contaminants (e.g., pathogens)	Future site users (workers, landowners, members of the public)	Dermal contact, ingestion and inhalation	Health Hazard [Medium]	Low likelihood	Moderate/low	Workers could potentially come into contact with contaminated material during maintenance activity.
46	Source 8: Offsite refuse tip dating from 1967 (also the	Heavy metals, total petroleum hydrocarbons (TPH),	Current site users (workers, landowners,	Dermal contact, ingestion and inhalation of	Health Hazard [Medium]	Unlikely	Low	No issues known of contaminants migrating from the refuse tip area onto

Item No.	Potential Source	Potential Pollutant	Potential Receptors	Potential Pathways to Receptors	Associated Hazard [severity]	Likelihood of Occurrence	Risk/ Significance	Comment
	site of the former Walsoken brick and tile works), localised made ground e.g., former tramway sidings immediately south of the site	polyaromatic hydrocarbons (PAH), cyanide, ground gas (including carbon dioxide and methane), pH and other organic and inorganic compounds (for example ammonia, nitrate etc)	members of the public)	dusts or vapours				the existing Walsoken Substation site are known of.
47	Source 8: Offsite refuse tip dating from 1967 (also the site of the former Walsoken brick and tile works), localised made ground e.g., former tramway sidings immediately south of the site	Heavy metals, total petroleum hydrocarbons (TPH), polyaromatic hydrocarbons (PAH), cyanide, ground gas (including carbon dioxide and methane), pH and other organic and inorganic compounds (for example ammonia, nitrate etc)	Future site users (workers, visitors)	Dermal contact, ingestion and inhalation of dusts or vapours	Health Hazard [Medium]	Low likelihood	Moderate/low	Site users will generally be unlikely to come into contact with impacted soil or groundwater, the new substation construction is unlikely to create any significant new pollutant migration pathways. However, investigation may be prudent to confirm no onsite migration is occurring.

Item No.	Potential Source	Potential Pollutant	Potential Receptors	Potential Pathways to Receptors	Associated Hazard [severity]	Likelihood of Occurrence	Risk/ Significance	Comment
48	Source 8: Offsite refuse tip dating from 1967 (also the site of the former Walsoken brick and tile works), localised made ground e.g., former tramway sidings immediately south of the site	Heavy metals, total petroleum hydrocarbons (TPH), polyaromatic hydrocarbons (PAH), cyanide, ground gas (including carbon dioxide and methane), pH and other organic and inorganic compounds (for example ammonia, nitrate etc)	Current property (infrastructure and utilities)	Direct contact, migration and accumulation of gases	Direct contact & gas accumulation, explosion [Severe]	Unlikely	Moderate/low	No impacts on existing services at Walsoken Substation are known of. Site appears to be in current commercial use with no ground gas issues.
49	Source 8: Offsite refuse tip dating from 1967 (also the site of the former Walsoken brick and tile works), localised made ground e.g., former tramway sidings immediately south of the site	Total petroleum hydrocarbons, benzene, toluene, ethyl benzene and xylenes (BTEX)	Future property (infrastructure including cables and joint bays, new substation)	Direct contact, migration and accumulation of gases	Direct contact & gas accumulation, explosion [Severe]	Unlikely	Moderate/low	Assessment of ground conditions would be needed to confirm no onsite migration of contaminants including ground gas or leachate/contaminated groundwater. Significant sources of ground gas are not anticipated.

4. Geotechnical Review

4.1 Overview

4.1.1 Information from the previous Ground Investigation carried out on the proposed Medworth EfW CHP site, as well as historical information from the BGS borehole logs and the Groundsure report have been used for this geotechnical review, to obtain an understanding of the anticipated ground and groundwater conditions, and to identify the potential geotechnical risks and constraints that may be present within the site.

4.1.2 The key geotechnical considerations with regards to the proposed development of the site are discussed in the following sub-sections.

4.2 Ground Conditions

4.2.1 Although made ground is not indicated on the BGS mapping, the boreholes at the EfW CHP site encountered made ground, and the possibility for made ground to exist within the remainder of the site cannot be discounted.

4.2.2 Based on the reviewed information, ground conditions are anticipated to comprise the following:

- Made Ground – may be present locally, the depth, extent and nature will depend on previous land use.
- Tidal Flat Deposits – comprising sandy silty clay or silty sand, with occasional peat bands being possible at near surface levels. The thickness of the deposits may be in excess of 20m in some locations.
- Glaciofluvial Deposits – Encountered beneath the tidal flat deposits at the EfW CHP site and may be present on a more widespread scale. Thicknesses of up to 5.3m encountered at the EfW CHP site. Strat comprises dense silty gravelly sand or sandy gravel.
- Glacial Till - Encountered beneath the glaciofluvial deposits at the EFW CHP site and may be present on a more widespread scale. Comprises very stiff to hard silty sandy gravelly clay, with localised bands of stiff thinly laminated clay. Thicknesses of up to 8.4m encountered at EfW CHP site.
- Ampthill Clay – Comprising very stiff to hard laminated silty clay, becoming very weak, weathered mudstone. Encountered at depths of between 30.8m and 33.0m bgl at the EfW CHP site.

4.3 Groundwater Conditions

4.3.1 Based on the observations made at the EfW CHP site, it is expected that groundwater will be present at shallow depths across the site, this should be confirmed by ground investigation and monitoring.

4.4 Geotechnical Properties

4.4.1 Detailed *in situ* and laboratory geotechnical testing data is available from the ground investigation carried out on the Medworth EfW CHP site, and this is summarised in **Table 4.1 Summary of Characteristic Geotechnical Parameters** below:

Table 4.1 Summary of Characteristic Geotechnical Parameters

Stratum	Bulk Density, ɣ (kN/m3)	Cu (kPa)	mv (m2/MN)	ϕ' (°)	c' (kPa)	Eu (MPa)	E' (MPa)
Made ground	17	-	-	-	-	-	-
Cohesive Tidal Flat Deposits	17 (Peat = 10)	25 (above 0.00m AOD) 12 (below 0.00m AOD)	0.800 (above 0.0m AOD) 0.400 (below 0.0m AOD)	20	0	5.0 (above 0.0m AOD) 3.0 (below 0.0m AOD)	3.0 (above 0.0m AOD) 1.8 (below 0.0m AOD)
Granular Tidal Flat Deposits	17	-	-	29 (-1.0 to -8.0m OD) 32 (> - 8m below OD)	-	-	5+3.3z (-1.0m to -8m below AOD) 28 (> -8m below OD)
Glaciofluvial Sand and Gravel	20	-	-	35	-	-	70
Glacial Deposits	20	230 (above -26.0m AOD) 130 (below -26.0m AOD)	0.044 (above -26.0m AOD) 0.077 (below -26.0m AOD)	25	0	140 (above -26.0m AOD) 80 (below -26.0m AOD)	84 (above -26.0m AOD) 48 (below -26.0m AOD)
Ampthill Clay	21	200	0.05	19	10	120	72

4.5 Ground Hazards

Ground Stability

4.5.1 The Groundsure report gives hazard ratings for natural ground subsidence. The primary natural ground subsidence hazards on site are related to the Tidal Flat Deposits.

4.5.2 The report cites a moderate hazard for Compressible deposits and for running sand, both of which were observed on the EfW CHP site. A moderate rating is also given for shrink and swelling of clays.

4.5.3 The ratings for other hazards are either low or negligible.

Mining, ground workings and natural cavities

4.5.4 The online Coal Authority Interactive Map Viewer[23] shows that the site is not within a Coal Mining Reporting area.

4.5.5 No current or historical mineral extraction has taken place within the site boundaries, although it has been identified that a brick and tile works, with accompanying extraction site (more recently a refuse tip) exist adjacent to the site at Walsoken sub-station.

4.6 Geotechnical Issues and Constraints

4.6.1 Based on the geotechnical review findings, the following geotechnical issues and constraints have been identified.

- Uncertainty of ground and groundwater conditions due to absence of site-specific ground investigation data. This is required to fully assess the ground and groundwater conditions and to identify all site-specific geotechnical issues and constraints.
- Presence of soft and compressible deposits at shallow depth, which may be unsuitable for use as a bearing stratum
- Potential for running / blowing sand in the Tidal Flat deposits, potentially leading to collapse and / or uplift of excavations.
- Potential for volume change of clays in proximity to trees, such as adjacent to the Walpole and Walsoken sub-stations. This may potentially lead to heave.
- Potential for high groundwater table and potential for flooding of excavations, and site. This may be of particular importance at key locations such as HDD launch/reception pits, joint bays and the sub-station option sites.
- Potential for ground conditions aggressive to buried concrete, due to soils with high sulphate and oxidisable sulphide concentrations.

[redacted] accessed June 2021

- Potential for sporadic deposits of made ground of unknown depth, extent and composition, due to previous on-site activities, particularly the infilling of ponds, drains and the former Wisbech canal.

4.6.2 A preliminary Geotechnical Risk Register (GRR) has been prepared and is included as **Appendix C**. The GRR summarises all the geotechnical risks and hazards identified during this desk study phase and provides mitigation measures for further investigation and assessment to control and / or mange these risks to an acceptable level, as the development progresses to the next phases.

4.6.3 The preliminary GRR is considered a live document that needs to be reviewed and updated during the subsequent phases of the Proposed Development. developed in line the next phases of the study and project. In this way, the risk register can continue to be used to update and manage geotechnical risks.

4.6.4 The GRR has been developed in general accordance with the guidance presented in the ICE/DETR Document 'Managing Geotechnical Risk' (2001)[24].

[24] Clayton C.R.I. (2001): Managing Geotechnical Risk: improving Productivity in UK Building and Construction

5. Conclusions and recommendations

5.1 Conclusions

Contamination

5.1.1 The initial conceptual model and preliminary risk assessment has identified no significant risks (ranked moderate or higher), however there are 28 potential contaminant linkages representing moderate/low risks that may require further investigation, as follows:

- Moderate/low risks to **current and future site users**, **current and future property** and **current and future surface water** associated with the onsite historical landfill at the former Wisbech Canal.
- Moderate/low risk to **future site users, current and future property** associated with onsite localised made ground (including A74 embankment, former railway line, demolished farm buildings, former kilns, disused/demolished poultry houses) and onsite fly tipping at New Bridge Lane, and moderate/low risks to current and **future surface water**.
- Moderate/low risks to **current and future site users**, and **current and future surface water**, associated with the two onsite substations, as no previous site investigation reports are available confirming the ground conditions on these sites.
- Moderate/low risks to **future site users**, **current and future property**, and **future surface water**, associated with the former petrol stations at Meadowgate Lane.
- Moderate/low risks to **future site users** and **current and future property** associated with potential ground gas from onsite peat layers in natural soil, the risk level is due to the severity of the potential consequence (gas explosion).
- Moderate/low risks to **future site users** and **current and future property** associated with the offsite petrol station 30m east.
- Moderate/low risks to **future site users** associated with contamination in proximity to the land drain north of the site due to a historical pollution incident close to the site boundary.
- Moderate/low risks to **future site users** and **current and future property** associated with contamination in an offsite refuse tip dating from 1967 (also the site of the former Walsoken brick and tile works), and localised made ground e.g., former tramway sidings immediately south of the site.

5.1.2 It would be prudent to investigate the identified sources as part of the detailed design process to confirm whether there is a contaminant linkage and whether remedial measures are needed for the Proposed Development.

Geotechnical

5.1.3 A geotechnical review has identified several potential hazards and constraints (see **Appendix C**). These are generally in relation to the limited data on ground conditions, the presence of potentially soft and poor ground, and the groundwater regime. In addition, there is no information on the ground and groundwater conditions in the location of the proposed trenchless road and watercourse crossings which will require temporary works design for launch and reception pits.

5.1.4 These constraints will require further assessment as part of the detailed design process.

5.2 Recommendations

5.2.1 Based on the available information for the site and the preliminary risk assessment, several moderate/low risk contaminant linkages and potential geotechnical hazards and constraints have been identified. A Phase 2 intrusive site investigation is considered prudent as part of the detailed design process to:

- Characterise the onsite historical landfill (Wisbech Canal).
- Characterise made ground in other areas where infilling/upfilling has taken place.
- Confirm or discount any potential contaminant linkages in relation to the historical landfills and made ground.
- Investigate the depth to groundwater onsite.
- Investigate the potential impacts on groundwater and surface water quality from the onsite sources including a historical landfill, made ground/area of fly tipping, onsite substations, former onsite petrol stations, and offsite sources including the location of a pollution incident close to the site boundary, an offsite refuse tip and other made ground.
- Allow *in situ* geotechnical testing.
- Install monitoring standpipes and groundwater level monitoring.
- Collect soil and groundwater samples.
- Carry out laboratory analysis of soil and groundwater for potential contamination.
- Carry out geotechnical laboratory testing of soils.
- Allow interpretative reporting to inform the temporary works design and the detailed design of the Proposed Development.

Appendix A
BGS Borehole Records

British Geological Survey

Version 2.0.6.3

BGS ID: 505696 : BGS Reference: TF40NE16
British National Grid (27700) : 548000,309200

Report an issue with this borehole

[redacted]

May Gurney — May Gurney (Technical Services) Limited — JOB No. 44575

LOCATION: PROPOSED HOUSING DEVELOPMENT, STAITHE ROAD, WISBECH (TG 480092)

COMMENCED: 26.1.88 COMPLETED: 26.1.88 DIAMETER: 150mm BOREHOLE No. 2 Sheet 1

GROUNDWATER: (see notes below) Struck i 1.70 ii ..... Standing iii 1.70 iv ..... (m. depth)

DESCRIPTION	LEGEND	DEPTH (m)	REDUCED LEVEL	SAMPLE/ TEST	DEPTH (m)	REMARKS
GROUND LEVEL		0.00	99.89			
MADE GROUND - brown silty fine SAND with brick, tarmac & concrete rubble		0.30	99.59	J1 B1	0.30 0.30-1.50	
LOOSE brown silty fine SAND				CPT	0.70	N = 10
				CPT J2 B2	1.50 1.50 1.50-2.10	N = 7
VERY LOOSE dark grey to black silty fine SAND with occasional timber fragments		2.10	97.79	CPT J3 B3	2.20 2.10 2.10-3.00	N = 4
				CPT J4 B4	3.00 3.00 3.00-4.50	N = 4
...becoming LOOSE & very silty				CPT J5 B5	4.50 4.50 4.50-6.20	N = 6
MEDIUM DENSE dark grey to brown silty fine SAND		6.20	93.29	CPT J6 B6	6.00 6.20 6.20-7.50	N = 12
...becoming brown				CPT J7 B7	7.50 7.50 7.50-9.00	N = 17
				CPT J8 B8	9.00 9.00 9.00-10.50	N = 20
CONTINUED		10.00	89.89			

J = Jar disturbed sample
B = Bulk disturbed sample
U = 100mm dia. undisturbed sample
P = 100mm dia. piston sample
W = Water sample
SPT = Standard Penetration Test
CPT = Cone Penetration Test
N = No. blows per 300mm penetration
FHT = Falling Head Test (results elsewhere)
V = Vane test

GROUNDWATER NOTES

Ref	Date/time	Casing depth
i	26.1/0750	1.50m
ii		
iii	26.1/0800	1.50m
iv		

TF 40 NE 16 480092

British Geological Survey

Version 2.0.6.3

BGS ID: 505696 : BGS Reference: TF40NE16
British National Grid (27700) : 548000,309200

Report an issue with this borehole

[redacted]

May Gurney — May Gurney (Technical Services) Limited — JOB No. 44575

LOCATION: PROPOSED HOUSING DEVELOPMENT, STAITHE ROAD, WISBECH (TG 480092)

COMMENCED: 26.1.88 COMPLETED: 26.1.88 DIAMETER: 150mm BOREHOLE No. 2 Sheet 2

GROUNDWATER: (see notes below) Struck i 1.70 ii ..... Standing iii 1.70 iv ..... (m. depth)

DESCRIPTION	LEGEND	DEPTH (m)	REDUCED LEVEL	SAMPLE/ TEST	DEPTH (m)	REMARKS
CONTINUED						
MEDIUM DENSE brown silty FINE SAND		10.00	89.89			
DENSE brown slightly silty fine SAND with shell fragments		10.50	89.49	CPT J9 B9	10.50 10.50 10.50-12.00	N = 35
				CPT J10 B10	12.00 12.00 12.00-13.50	N = 39
				CPT J11 B11	13.50 13.50 13.50-15.00	N = 38
END OF BOREHOLE		15.00	84.89	CPT W1	15.00 15.00	N = 42

J = Jar disturbed sample
B = Bulk disturbed sample
U = 100mm dia. undisturbed sample
P = 100mm dia. piston sample
W = Water sample

SPT = Standard Penetration Test
CPT = Cone Penetration Test
N = No. blows per 300mm penetration
FHT = Falling Head Test (results elsewhere)
V = Vane test

GROUNDWATER NOTES

Ref	Date/time	Casing depth
i	26.1/0750	1.50m
ii		
iii	26.1/0800	1.50m
iv		

TF40NE16

British Geological Survey

Version 2.0.6.3

BGS ID: 505696 : BGS Reference: TF40NE16
British National Grid (27700) : 548000,309200

Report an issue with this borehole

[redacted]

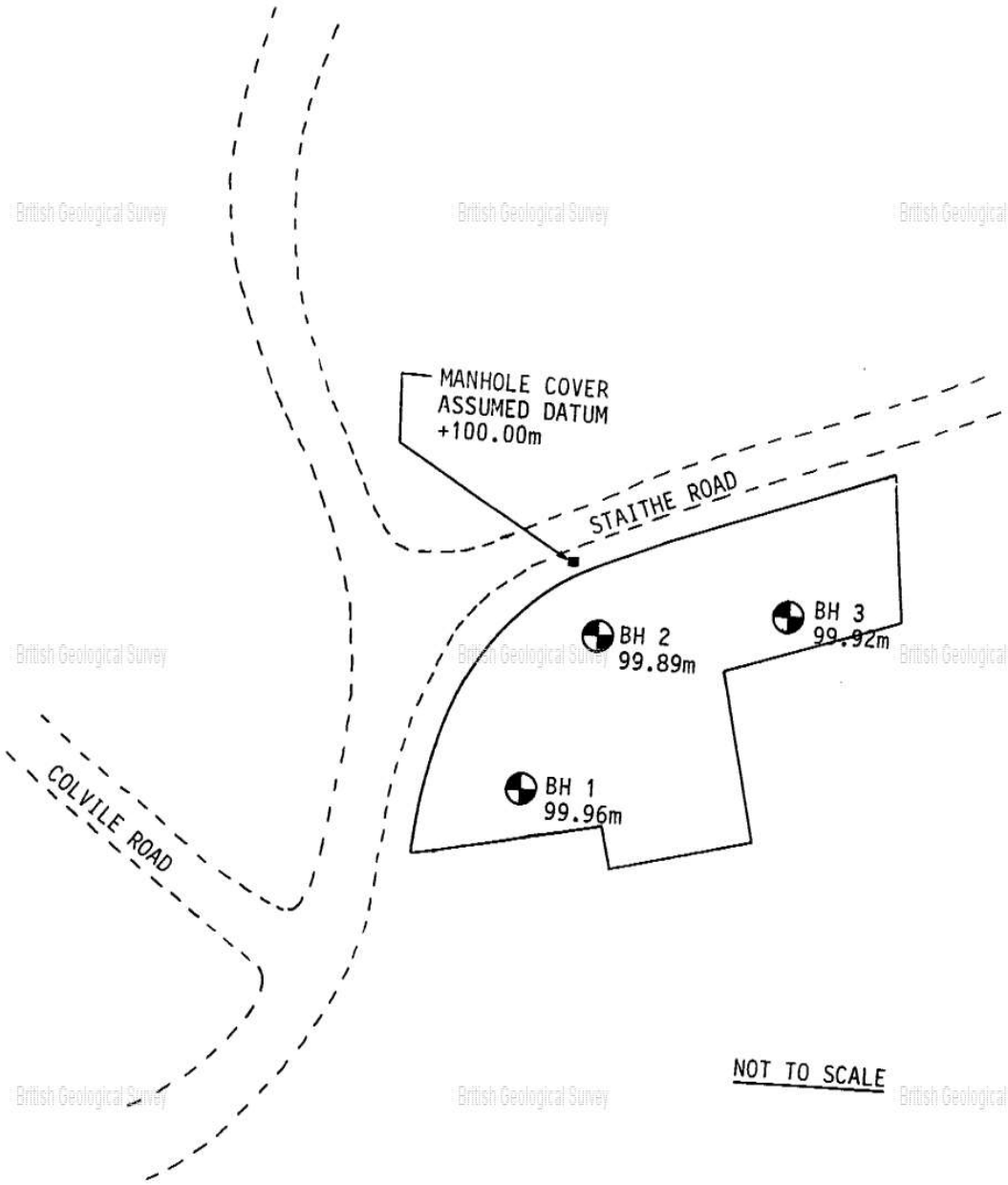
AY GURNEY (TECHNICAL SERVICES) LTD.,

Site plan showing approximate borehole positions and site datum

job no 44575

Staithe Road, Wisbech

TF40NE/15-17



British Geological Survey

Version 2.0.6.3

BGS ID: 505815 : BGS Reference: TF41NE77
British National Grid (27700) : 548450,316750

Report an issue with this borehole

[redacted]

RECORD OF BOREHOLE No: SB11

START DATE: 07-01-97
DRILLING METHOD: CABLE PERCUSSION
EQUIPMENT: DANDO 2000

CASING DETAILS: 150 mm to 24.20 m
200 mm to 13.50 m
BOREHOLE DIA: 150 mm to 30.00 m
200 mm to 14.00 m

SHEET 1 OF 3
GROUND LEVEL 3.60 approx m.O.D.
TF 41 NE/77

Date & Time	Casing Depth (m)	Depth to Water (m)	SAMPLE Depth (m) At/From	To	Type	No.	U100 Blows Test Length (mm)	U100 Rec.(m) SPT Blows /N	DESCRIPTION OF STRATA	Depth (Thickness) (m)	Level (m.O.D.)	Strata Symbol
07/10			0.40	1.80	B	1			(Firm) friable, brown slightly clayey SILT, locally with thin to thick laminae of firm brown, grey mottled, slightly sandy (fine and medium) silty clay. To 0.40m; driller notes sandy topsoil.	(1.80)		
										1.80	1.80	
			2.40		W	4			Brown grey silty fine and medium SAND with a few organic(?) fragments <5mm.	(9.30)		
			9.50	10.00	B	2						
07/10									(Continued.....)			

REMARKS:
1. Prior to boring, a Cable Avoidance Tool (CAT) survey was carried out.
2. Groundwater was encountered during boring and monitored when the borehole was at 12.00m depth. The water was bailed out to 6.85m and the level rose to 6.78m after 5 mins, 6.70m after 10 mins, 6.60m after 15 mins and to 6.53m after 20 mins.
3. Water was added to facilitate boring from 1.80m to 20.00m.
4. The borehole was advanced by chiselling from 20.20m to 20.40m (0.5 hrs); 20.50m to 20.60m (0.25 hrs); 23.40m to 23.60m (0.75 hrs); 26.70m to 26.80 (0.25 hrs) and 29.40m to 29.60m (0.75 hrs).

SCALE 1:50

Logged by DPS/jh | Date 10/01
Checked by [redacted] | 4/2
Approved by

FOUNDATION & EXPLORATION SERVICES

SUTTON BRIDGE
WALPOLE 400kV O.H.L.

CONTRACT No. 3421
FIGURE:

British Geological Survey

Version 2.0.6.3

BGS ID: 505815 : BGS Reference: TF41NE77
British National Grid (27700) : 548450,316750

Report an issue with this borehole

[redacted]

RECORD OF BOREHOLE No: SB11

START DATE: 07-01-97
DRILLING METHOD: CABLE PERCUSSION
EQUIPMENT: DANDO 2000

CASING DETAILS: 150 mm to 24.20 m; 200 mm to 13.50 m
BOREHOLE DIA: 150 mm to 30.00 m; 200 mm to 14.00 m

SHEET 2 OF 3
GROUND LEVEL: 3.60 approx m.O.D.
TF 41 NE/77

Date & Time	Casing Depth (m)	Depth to Water (m)	SAMPLE Depth (m) At/From	SAMPLE Depth (m) To	Type	No.	U100 Blows Test Length (mm)	U100 Rec.(m) SPT Blows /N	DESCRIPTION OF STRATA	Depth (Thickness) (m)	Level (m.O.D.)	Strata Symbol
07/10									(....cont.) Brown grey silty SAND.			
			11.10		D	3			(Soft to firm) dark grey slightly silty CLAY with a slight organic odour.	11.10 (0.40)	-7.50	
									Dark grey fine and medium SAND. A slight organic odour. Driller notes 'with clayey layers'. 11.50m to 14.00m; with some pockets(?) up to 40mm rarely up to 120mm of slightly silty clay with a few shells and shell fragments up to 20mm.	11.50	-7.90	
07/10 08/01	13.50 13.50	- 2.60							Below 14.00m; rare shells and shell fragments up to 12mm and rare black organic fragments up to 3mm.	(7.70)		
			15.00		B	5						
			17.60		D	6			Below 17.60m; driller notes 'firm brown silty CLAY with organics'. At 17.60m; Stiff dark green grey slightly silty CLAY with a few woody plant remains up to 30mm and a strong organic odour. From 17.60m to 18.00m; with a little angular fine and medium flint gravel and with a few pockets(?) up to 50mm of firm to stiff dark grey clay. 18.00m to 18.50m; with a little to some angular fine to coarse flint gravel. Below 18.50m; with much gravel.			
										19.20	-15.60	
08/01	19.80	GL	19.80	20.12	D		175	C 50	(Very dense) dark brown grey sandy (fine to coarse) angular to subrounded fine to coarse (mainly medium) flint GRAVEL.	(0.80) 20.00	-16.40	

REMARKS:
5. On completion, the borehole was backfilled with arisings to the surface. A concrete block was placed over the hole at approximately 0.50m depth.
6. See also Notes and Key sheets.
7. Ground level provided by National Grid.

Logged by DPS/jh | Date 10/01
Checked by [redacted] | 4/2

SCALE 1:50

FOUNDATION & EXPLORATION SERVICES

SUTTON BRIDGE
WALPOLE 400kV O.H.L.

CONTRACT No. 3421
FIGURE:

[redacted]

British Geological Survey

Version 2.0.6.3

BGS ID: 505815 : BGS Reference: TF41NE77
British National Grid (27700) : 548450,316750

Report an issue with this borehole

[redacted]

RECORD OF BOREHOLE No: SB11

START DATE: 07-01-97
DRILLING METHOD: CABLE PERCUSSION
EQUIPMENT: DANDO 2000

CASING DETAILS: 150 mm to 24.20 m; 200 mm to 13.50 m
BOREHOLE DIA: 150 mm to 30.00 m; 200 mm to 14.00 m

SHEET 3 OF 3
GROUND LEVEL 3.60 approx m.O.D.
TF 41 NE/77

Date & Time	Casing Depth (m)	Depth to Water (m)	SAMPLE Depth (m) At/From	SAMPLE Depth (m) To	Type	No.	U100 Blows Test Length (mm)	U100 Rec.(m) SPT Blows /N	DESCRIPTION OF STRATA	Depth (Thickness) (m)	Level (m.O.D.)	Strata Symbol
08/01			20.00	20.50	B	7			Very dense brown fine to coarse SAND with some to much angular and subangular fine and medium flint gravel. With rare shells and shell fragments up to 15mm.	20.00	-16.40	
	20.80	GL	20.80	21.25	D			C 40	Below 21.00m; with much angular to subrounded fine to coarse mainly flint with quartz and sandstone gravel.			
	22.00	GL	22.00	22.34	D		195	C 50		(3.60)		
	23.00	GL	23.00	23.60	D		150	S 50				
			23.60		D	8				23.60	-20.00	
	23.80	3.40	23.80	25.00	B	10	235	S 50	Very stiff grey slightly sandy (medium and coarse chalk) silty CLAY with a little angular to subrounded fine and medium occasionally coarse, mainly chalk with flint gravel.			
			23.80	24.07	D	9						
	24.20	6.10	25.00	25.45	D	11		S 51				
08/01	24.20	6.60	26.00	26.43	D	12	280	S 50				
09/01	24.20	3.50										
	24.20	6.10	27.00	27.39	D	13	245	S 50		(6.40)		
	24.20	6.90	28.00	28.37	D	14	220	S 50				
	24.20	8.20	29.00	29.33	D	15	185	S 50				
09/01	24.20	9.10	30.00	30.34	D	16	190	S 50	END OF BOREHOLE	30.00	-26.40	

REMARKS:

Logged by DPS/jh
Date 10/01
Checked by [redacted]
Approved by

SCALE 1:50

FOUNDATION & EXPLORATION SERVICES

SUTTON BRIDGE
WALPOLE 400kV O.H.L.

CONTRACT No. 3421
FIGURE:

Appendix B
Risk Assessment Methodology

The environmental risk assessment aims to assess the significance of each potential contaminant linkage. The key to the classification is that the designation of risk is based upon the consideration of both:

- **The magnitude of the potential consequence (i.e., severity).** It takes into account both the potential severity of the hazard and the sensitivity of the receptor.
- **The magnitude of probability (i.e., likelihood).** It takes into account both the presence of the hazard and receptor and the integrity of the pathway.

The definitions for the qualitative risk assessment have been taken from "Guidance for the Safe Development of Housing on Land Affected by Contamination" Annex 4 R&D Publication 66: 2008 Volume 2.

The Likelihood Probability Classifications of SPR Linkage being realised is presented in **Table B.1 Likelihood Probability Classifications of SPR Linkage being realised.**

Table B.1 Likelihood Probability Classifications of SPR Linkage being realised

Classification	Definition	Examples
Unlikely	There is pollutant linkage, but circumstances are such that it is improbable that an event would occur even in the very long-term.	a) Elevated concentrations of toxic contaminants are present below hardstanding. b) Light industrial unit <10 yrs old containing a double skinned UST with annual integrity testing results available.
Low Likelihood	There is pollutant linkage and circumstances are possible under which an event could occur. However, it is by no means certain that even over a long period such an event would take place and is less likely in the shorter term.	a) Elevated concentrations of toxic contaminants are present in soils at depths >1m in a residential garden, or 0.5-1.0m in public open space. b) Ground/groundwater contamination could be present on a light industrial unit constructed in the 1990s containing a UST in operation over the last 10 years – the tank is double skinned but there is no integrity testing or evidence of leakage.
Likely	There is pollutant linkage, and all the elements are present and in the right place which means that it is probable that an event will occur. Circumstances are such that an event is not inevitable, but possible in the short-term and likely over the long-term.	a) Elevated concentrations of toxic contaminants are present in soils at depths of 0.5-1.0m in a residential garden, or the top 0.5m in public open space. b) Ground/ groundwater contamination could be present from an industrial site containing a UST present between 1970 and 1990. The tank is known to be single skin. There is no evidence of leakage although there are no records of integrity tests.

Classification	Definition	Examples
High Likelihood	There is pollutant linkage, and an event would appear very likely in the short-term and almost inevitable over the long-term, or there is evidence at the receptor of harm or pollution	a) Elevated concentrations of toxic contaminants are present in soils in the top 0.5m in a residential garden. b) Ground/groundwater contamination could be present from chemical works, containing a number of USTs, having been in operation on the same site for over 50 years. b)

"Potential Consequence of Contaminant Linkage" gives an indication of the sensitivity of a given receptor to a particular source or contaminant of concern under consideration. It is based on full exposure via the particular linkage being examined. The classification of consequence is presented in **Table B.2**.

Table B.2 Outline of Hazard Consequence Classifications for Receptor Types from Contamination Impact:

Classification	Human Health	Controlled Water	Ecology	Property Structures/ Crops and animals	Examples
Severe	Highly elevated concentrations likely to result in "significant harm" to human health as defined by the EPA 1990, Part 2A, if exposure occurs.	Equivalent to EA Category 1 pollution incident including persistent and/or extensive effects on water quality; leading to closure of a potable abstraction point; major impact on amenity value or major damage to agriculture or commerce.	Major damage to aquatic or other ecosystems, which is likely to result in a substantial adverse change in its functioning or harm to a species of special interest that endangers the long-term maintenance of the population.	Catastrophic damage to crops, buildings or property.	Significant harm to humans is defined in circular 01/2006 as death, disease*, serious injury, genetic mutation, birth defects or the impairment of reproductive functions. Major fish kill in surface water from large spillage of contaminants from site. Highly elevated concentrations of Hazardous or priority substances present in groundwater close to small potable abstraction (high sensitivity). Explosion, causing building collapse (can also equate to immediate human health risk if buildings are occupied).
Medium	Elevated concentrations which could result in "significant harm" to human health as defined by the EPA 1990, Part 2A if exposure occurs.	Equivalent to EA Category 2 pollution incident including significant effect on water quality; notification required to abstractors; reduction in amenity value or significant damage to agriculture or commerce.	Significant damage to aquatic or other ecosystems, which may result in a substantial adverse change in its functioning or harm to a species of special interest that may endanger the long-term maintenance of the population.	Significant damage to crops, buildings or property.	Significant harm to humans is defined in circular 01/2006 as death, disease*, serious injury, genetic mutation, birth defects or the impairment of reproductive functions. Damage to building rendering it unsafe to occupy e.g., foundation damage resulting in instability. Ingress of contaminants through plastic potable water pipes.

Classification	Human Health	Controlled Water	Ecology	Property Structures/ Crops and animals	Examples
Mild	Exposure to human health unlikely to lead to "significant harm".	Equivalent to EA Category 3 pollution incident including minimal or short lived effect on water quality; marginal effect on amenity value, agriculture or commerce.	Minor or short lived damage to aquatic or other ecosystems, which is unlikely to result in a substantial adverse change in its functioning or harm to a species of special interest that would endanger the long-term maintenance of the population.	Minor damage to crops, buildings or property.	Exposure could lead to slight short-term effects (e.g., mild skin rash). Surface spalling of concrete.
Minor	No measurable effects on humans	Equivalent to insubstantial pollution incident with no observed effect on water quality or ecosystems.	Equivalent to insubstantial pollution incident with no observed effect on water quality or ecosystems.	Repairable effects of damage to buildings, structures and services.	The loss of plants in a landscaping scheme. Discoloration of concrete.

The risk matrix to link the likelihood and consequence is shown in **Table B.3 Risk Matrix.**

Table B.3 Risk Matrix

Likelihood:	Unlikely	Low Likelihood	Likely	High Likelihood
Potential Consequence:				
Severe	Moderate/low risk	**Moderate Risk**	**High Risk**	**Very High Risk**
Medium	Low	Moderate/low risk	**Moderate Risk**	**High Risk**
Mild	Very low risk	Low Risk	Moderate/low risk	**Moderate Risk**
Minor	Very low risk	Very low risk	Low Risk	Low Risk

The overall risk definitions are summarised in **Table B.4 Risk Definitions.**

Table B.4 Risk Definitions

Risk	Definition
Very Low	It is a low possibility that harm could arise to a designated receptor, but it is likely at worst, that this harm if realised would normally be mild or minor.
Low	It is possible that harm could arise to a designated receptor from identified hazard, but it is likely at worst, that this harm if realised would normally be mild. It is unlikely that the site owner/or occupier would face substantial liabilities from such a risk. Further investigative work (which is likely to be limited) to clarify the risk may be required. Any subsequent remediation works are likely to be relatively limited.
Moderate	It is possible that harm could arise to a designated receptor from an identified hazard. However, it is either relatively unlikely that any such harm would be severe, and if any harm were to occur it is more likely, that the harm would be relatively mild. Further investigative work is normally required to clarify the risk and to determine the potential liability to site owner/occupier. Some remediation works may be required in the longer term.
High	Harm is likely to arise to a designated receptor from an identified hazard at the site without remediation action. Realisation of the risk is likely to present a substantial liability to the site owner/or occupier. Investigation is required as a matter of urgency to clarify the risk. Remediation works may be necessary in the short-term and are likely over the longer term.
Very High	There is a high probability that severe harm could arise to a designated receptor from an identified hazard at the site without remediation action OR there is evidence that severe harm to a designated receptor is already occurring. Realisation of that risk is likely to present a substantial liability to be site owner/or occupier. Investigation is required as a matter of urgency and remediation works likely to follow in the short-term.

Appendix C
Geotechnical Risk Register

The risk register is a means of documenting perceived risks and their importance and recording actions taken to manage them. The key elements of a geotechnical risk register are as follows:			
1.	Identify the geotechnical risks.		
2.	Identify the methods of construction that may be incorporated into the project.		
3.	Scale the risks according to probability and impact.		
4.	Based on the severity of each risk, decide on the type of action.		
5.	Identify how each risk should be managed.		
6.	Record the actions taken to manage the risk.		
7.	Reassess the severity of each risk after action has been taken.		
8.	Review the risk register at regular intervals and communicate.		
The risk register is a live document and should be reviewed on a regular basis and at the end of each stage of the project.			
The probability (P) that a given event will occur is given by the following:			
Scale		Probability (Likelihood)	Chance per section of work
			(Amend to suit local conditions and to be agreed with the Client)
1		Negligible	< 1 in 100
2		Unlikely	1 in 100 to 1 in 10
3		Possible	1 in 10 to 1 in 5
4		Probable	1 in 5 to 1 in 2
5		Almost certain	> 1 in 2
The impact (I) of a given event is given by the following:			
Scale		Impact (Effect)	Increase in cost or time (% increase)
			(Amend to suit local conditions and to be agreed with the Client)
1		Negligible	< 1%
2		Very low	1% to 4%
3		Low	4% to 8%
4		High	8% to 15%
5		Very high	> 15%
The risk after the application of risk control measures should be reviewed in the light of the following table:			
Degree of Risk		Risk Level	Action Required
1 - 4		Trivial	None
5 - 9		Tolerable	Consider more cost-effective solutions or improvements
10 - 15		Substantial	Work must not start until risk has been reduced
16 - 25		Intolerable	Work must not start until risk has been reduced. If risk cannot be reduced, project should not proceed.
The risks and their potential impacts may vary between the various stages of the project, such as the risk to and from buried services, where the impact can be much higher during a ground investigation than during a desk study.			

Stage	Risk No	Hazard	Prior to RCM			Risk Control Measure (RCM)	After RCM		
			Probability (P)	Impact (I)	Risk (R = P x I)		Probability (P)	Impact (I)	Risk (R = P x I)
Completion of Desk Study	DS1	Made ground of unknown composition, depth and extent	4	3	12	Undertake an intrusive site investigation to identify and delineate the made ground and determine its composition and thickness.	4	1	4
	DS2	Soft and Compressible deposits at shallow depth, unsuitable as a bearing stratum	4	4	16	Undertake an intrusive site investigation including *in situ* and laboratory testing to determine the depth and extent of any soft clay deposits, and geotechnical properties for use in foundation and groundworks design.	4	1	4
	DS3	Presence of sulphate and other chemicals in soils and groundwater that may lead to sulphate or thaumasite attack on buried concrete	3	3	9	Undertake an intrusive ground investigation including sampling and chemical testing to determine level of chemical aggressivity to construction materials and the concrete classification in accordance with the relevant BRE Digest.	3	1	3
	DS4	Damage to existing underground and overhead services.	4	4	16	Use best practice to identify all utilities onsite prior to any intrusive investigation or construction. This may include obtaining service plans and call out all service providers, carry out CAT/GPR scans, and hand excavated inspection pits at all intrusive locations.	4	1	4
	DS5	High groundwater table and potential for flooding.	3	3	9	Undertake an intrusive ground investigation to confirm groundwater levels at key points onsite, including HDD launch/reception points, substation development area and joint bays.	3	1	3
	DS6	Shrink/swell potential of soft cohesive soils leading to potential settlement and heave	2	3	6	Perform specialist geotechnical testing to determine potential shrink/swell parameters of the soft cohesive layers.	2	1	2

Stage	Risk No	Hazard	Prior to RCM			Risk Control Measure (RCM)	After RCM		
			Probability (P)	Impact (I)	Risk (R = P x I)		Probability (P)	Impact (I)	Risk (R = P x I)
	DS7	Stability of temporary excavations in Made ground and / or soft clay	3	2	6	Undertake an intrusive site investigation including *in situ* and laboratory testing to determine the ground conditions and derive geotechnical parameters necessary for stability assessments of excavations and design of any temporary support.	3	1	3
	DS8	Proximity of Trees	3	3	9	Undertake intrusive ground investigation to assess the risk of shrink / swell conditions. Undertake tree survey to record species and maturity of trees. Geotechnical design to include mitigation measures as appropriate in accordance with NHBC Standards.	3	1	3