



Site Condition Report

Crayford Materials Recycling Facility

6th January 2026

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Author	Jessica Easterbrook
Client Name	N+P Crayford MRF Ltd

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Jessica Easterbrook
Senior Environmental Consultant



Emily Hingston
Client and Project Manager

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Acronyms and Abbreviations

Name	Description
EA	Environment Agency
SCR	Site Condition Report
EPR	Environmental Permitting Regulations
SAC	Special Area of Conservation
SPA	Special Protection Area
SSSI	Site of Special Scientific Interest
NNR	National Nature Reserve
LNR	Local Nature Reserve
LWS	Local Wildlife Site
CWS	County Wildlife Site
PWS	Potential Wildlife Site
SINC	Site of Importance for Nature Conservation

1. INTRODUCTION

This Site Condition Report (SCR) has been prepared on behalf of N+P Crayford MRF Ltd (*'The Applicant'* or *'N+P'* hereafter) by Sol Environment Ltd in support of a Permit Variation Application under The Environmental Permitting (England and Wales) Regulations 2018 (as amended) for their site located at Crayford Materials Recycling Facility, Century Wharf, Crayford Creek, Crayford, Dartford, Kent, DA1 4HQ.

This document outlines the ground conditions at the site at the time of the permit variation application and has relied on information supplied by the site and various third-party information sources (See Section 2).

The site is currently permitted under Environmental Permit EPR/KB3806FD/V002 as a Waste Operation to accept up to 350,000 tonnes per annum of mixed waste streams. A permit variation was submitted in April 2024 to increase the tonnage to 420,000 tonnes and to update the existing permit to more accurately reflect the existing site operations and waste types accepted by site. The application has only just been allocated for determination.

N+P is making this application to carry out a variation of their existing permit under The Environmental Permitting (England and Wales) (Amendment) Regulations 2018 in order to install a new Solid Recovered Fuel (SRF) plant. The existing mini MRF on site will be upgraded and converted into a SRF line. This will allow N+P to convert a high percentage of their end-of-life materials, coming from other water processing lines on site, into an SRF material which will then be exported off site for use as a fuel.

N+P are also proposing to increase the Installation Boundary to include additional land which will be used for Welfare Facilities and additional bale storage.

As a result of the variation, due to the proposed SRF plant processing more than 75 tonnes per day to produce SRF for use as a fuel, the proposed plant meets the definition of an 'Installation' and will therefore be permitted under the following Scheduled Reference:

- Section 5.4 'Disposal, recovery or a mix of disposal and recovery of non-hazardous waste' Part A(b) (ii) – pre-treatment of waste for incineration or co-incineration.

The rest of the site activities carried out on site will remain permitted as a 'Waste Operation'.

This document has been prepared in accordance with the Environment Agency's (EA) Guidance Document H5 Site Condition Reports Guidance and Templates (Version 5.0, dated October 2014). This report provides baseline information in relation to the site.

2. SITE DETAILS

Table 2.1 Site Details

Name of the Applicant:	N+P Crayford MRF Ltd
Activity Address:	Century Wharf, Crayford Creek, Crayford, Dartford, Kent, DA1 4HQ
Grid Reference:	X (Eastings) 552902, Y (Northings) 175705.
Document References:	EP Variation Application Site Condition Report Document reference and date: SOL_25_P143_N+P_SCR_November 2025
Annexes:	Annex A: Figures Annex B: Groundsure Report 2025 Annex C: Ground Investigation Report – August 2018 Annex D: Ground Investigation Report – April 2025

2.1 Site Location and Description

The subject site is located at Crayford Materials Recycling Facility, Century Wharf, Crayford Creek, Crayford, Dartford, Kent, DA1 4HQ. The current and proposed Installation Boundary is shown in Figure 2.1 and 2.2 below.

The National Grid Reference is X (Eastings) 552892, Y (Northings) 175715.

2.2 Site Context

The site is located along the River Cray within a heavy industrial area with the railway to the northwest, and industrial properties to the south and west. The nearest residential dwellings are located along Thames Road and Iron Mill Lane approximately 400m to the southwest of the site. Table 2.2 below provides information regarding the surrounding site.

Table 2.2 Site Settings

Direction	Description
North	Open land and beyond residential properties and River Thames
North East	Open land and the River Thames beyond
East	The River Cray and the A206
South East	Industrial properties and residential properties beyond
South	Industrial properties and residential properties beyond
South West	Industrial and residential properties

West	Industrial properties and residential properties beyond
North West	Railway line, Slade Green Train Station and residential properties beyond



Figure 2.1 Existing Site Installation Boundary



Figure 2.2 Proposed Site Installation Boundary

3. CONDITION OF THE LAND AT PERMIT ISSUE

3.1 Environmental Setting

Desk-based research of the local geology, hydrogeology and surface waters has been carried out in order to establish the potential for migration of contamination onto or away from the Site, and to assess the surface water and groundwater sensitivity of the Site area. Information was obtained from a number of sources, namely:

- Environment Agency Flood Risk Map;
- Information provided by Groundsure Report (Annex B);
- Geological maps produced by the British Geological Survey (BGS) and the BGS Geology of Britain Viewer (<http://maps.bgs.ac.uk/geologyviewer>);
- MAGIC (<http://magic.defra.gov.uk>); and
- BGS Borehole Record Viewer (<http://www.bgs.ac.uk/data/boreholescans/home.html>).

3.1.1 Geology

The British Geological Survey (BGS) states that superficial deposits at the site deposits comprise the Taplow Gravel Member of the Quaternary period. The BGS describes the Taplow Gravel Member as ‘sand and gravel – sedimentary superficial deposit formed between 362 and 126 thousand years ago during the Quaternary period.’ A small proportion of the southeast of the site is alluvium superficial deposits which are classified as clay, silt, sand and peat.

The bedrock at the site is identified as the Seaford Chalk Formation which was formed during the Cretaceous period.

Made Ground

The majority of the site is constructed on Made Ground, apart from a small section in the north of the site.

Radon Potential

According to UKRadon the site is in area where some parts of the site are within the 1km square bands of elevated radon potential, maximum potential of 1-3%. The Groundsure dataset has a smaller scale (accurate to within 50m) and identifies that the site is in an area with between 1% and 3% properties affected by radon and other areas of the site are with less than 1% properties affected by radon. Radon protection measures are therefore not considered necessary.

Shrink Swells

The site is in an area where the risk from shrink swell clays is negligible for the majority of the site and low for the bottom southeast of the site.

Landslides

The maximum landslide hazard rating identified on the application site is very low.

Soluble Rocks

The maximum soluble rock hazard rating identified on the application site is very low.

Compressible Ground

The maximum compressible ground hazard rating identified on the application site is very low and negligible.

Collapsible Rocks

The maximum collapsible rocks hazard rating identified on the application site is very low and negligible.

Running Sands

The maximum running sand hazard rating identified on the application site is very low.

Mining

There are no identified underground workings within 1km of the site and no underground mining extents within 500m of the site. However, there are 14 identified non-coal mining sites within 1km of the site. The closest of which is located on site, mining for chalk.

In addition to this there are 2 records of researched mining within 500m of the site, the closest of which is located on site and identified as research for mining for stone.

3.1.2 Hydrogeology

The superficial deposits underlying the majority of the site are classified as 'Secondary A'. A small proportion of the southeast of the site is classified as 'Secondary Undifferentiated'. Secondary A is defined as 'permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers'.

The bedrock geology underlying the site is classified as a 'Principle' aquifer. This is defined as 'geology of high intergranular and/or fracture permeability, usually providing a high level of water storage and may support water supply/river base flow on a strategic scale'.

The site has high Groundwater Vulnerability.

According to the latest Groundsure report, there are 35 recorded groundwater abstractions for over 20m³ per day located within 2 km of the site, though only 8 of these are actively licenced. The closest active licence is located 595m to the east and is operated by Dartford Creek Sewage Treatment Works.

The site is not located within a Source Protection Zone.

The majority of the site has a moderate groundwater flood risk.

The site is considered to be in an area of high sensitivity in regard to groundwater due to the underlying principal aquifer.

3.1.3 Surface Waters

The nearest surface water feature is the River Cray which is located 35m to the south of the site.

There are 2 recorded licenced surface water abstractions within 2km of the site, of which none are active.

The site is not considered a Nitrate Vulnerable Zone (NVZ).

The site is located within Flood Zone 2 and 3. Flood zone 2 means that there is a 0.1% chance of flooding each year and flood zone 3 means that there is a 1% or greater chance of flooding from rivers each year and a 0.5% or greater chance of flooding each year from the sea.

The site is considered to be in an area of high sensitivity with regard to surface water due to the proximity of the River Clay.

3.1.4 Designated Sites

Environment Agency H1 and H5 guidance states that the potential impacts of the site should be assessed for the following habitat sites within 10km of the Installation:

- Special Areas of Conservations (SACs) and candidate SACs (cSACs) designated under the EC Habitats Directive;
- Special Protection Areas (SPAs) and potential SPAs designated under the EC Birds Directive; and
- Ramsar Sites designated under the Convention of Wetlands of International Importance.

It is also stated that within 2km of the Source:

- Sites of Special Scientific Interest (SSSI) established by the 1981 Wildlife and Countryside Act;
- National Nature Reserves (NNR);
- Local Nature Reserves (LNR);
- Local Wildlife Sites (LWS), County Wildlife Sites (CWS) and potential wildlife sites (PWS);
- Sites of Importance for Nature Conservation (SINC); and
- Ancient Woodland.

Information from the Multi Agency Geographic Information for the Countryside (MAGIC) website (<http://magic.defra.gov.uk/>) has been used to obtain the above information.

The only relevant designated site is the Wansunt Pit SSSI located 2km to the northwest.

The site is within the Bexley jurisdiction of the London Green Belt.

3.2 Pollution History

3.2.1 Environmental Database Records

The following information has been obtained from a search of a publicly available database of environmental information (Groundsure Report obtained is provided in Appendix B).

The database contains records of information from public registers held by environmental regulatory authorities and can be used to assess the site's sensitivity, the potential for neighbouring activities to pose a risk to the site and to determine whether specific records of pollution relate to the subject site.

3.2.2 Pollution Incidents

There are 14 recorded pollution incidents within 500m of the site. All incidents range across categories 2 to 4 for water, land and air impact and all occurred prior to or during 2003.

3.2.3 Potentially Contaminative Industrial Sites

There are 200 recorded potentially contaminative industrial sites within 250m of the application. 38 of which are classified as on site with various land uses.

3.2.4 Landfills and Waste Sites

There are no active records of landfill sites on or within 500m of the site boundary. There is a record of one closed landfill site within 500m of the site boundary, which was located to the northeast of the site.

There are two historical landfill sites within 500m of the site. One located to the southwest of the site which closed in 1960 and the other landfill site was located to the south of the site.

There are 4 historical waste sites, 16 licenced waste sites and 31 waste exemptions located within 500m of the site boundary. One historical waste site and 6 of the licenced waste sites is in relation to the Materials Recycling Facility on site.

3.2.5 Discharge Consents

There are 7 licenced discharge consents within 500m of the site to controlled waters. These are classified as trade discharges and sewage discharges.

3.2.6 Authorised or Permitted Processes

Other than the 16 active waste licences mentioned in Section 3.2.4 there are no other records of authorised or permitted processes within 500m of the site.

3.2.7 Radioactive Substance Authorisations

There are no radioactive substance authorisations within 500m of the site.

3.2.8 Historical Land Uses

The historical development of the site has been determined by reference to historical maps and Google Earth imagery. The earliest available historical mapping covering the site dates back to 1866. Historical land uses are summarised in Table 3.1 below.

Table 3.1 Summary of Historical Land Use

Date	Site	Surrounding Land Use (within 250m of the site)
1863-1868	Undeveloped land.	Predominately undeveloped, agricultural land with the main excavation pits of Brick Field located to the north and northeast of the site. Development of rail line to the sites western boundary, beyond which lie numerous Clay Pits and a Brickworks. To the south is a Saw mill beyond the River Cray.
1897-1933	The site has been developed with Tramway Sidings and an Engine House and clay pits.	Development of the Brickworks and Saw Mill to the west and south. Development of an Engine Shed to the north of the site along the rail line.
1933 - 1938	The northern area of the site is subject to spoil heaps and extension	Industrial development to the southwest expands, with addition of a Gravel Pit and Pottery works to the west.

	of rail lines, while the clay pits are infilled.	Residential development beyond the saw mills to the southwest has expanded.
1961-1962	The northern portion of the site is noted as 'unspecified heaps/refuse heaps'. An industrial Works has been developed on the southwestern area of the site, including tanks and numerous buildings.	To the west lies marshland, to the north Works and to the west and south industrial units.
1973	Expansion of the Works onsite with additional buildings centrally. This is known to be a Materials Recycling Facility began – now operated by N+P Crayford MRF Ltd	Further expansion of industrial development to the northwest.
1982 - Present	Further expansion of onsite Works.	Additional industrial development of a depot to the south

The area in which the site is located has been subject to mineral extraction and waste management activities with surrounding land uses predominately industrial in nature. Further descriptions of the land development is provided in Annex C – Ground Investigation Report – August 2018.

Based on the historical uses of the site and surrounding area there is a high risk of contamination onsite.

Potentially contaminative historical land uses have been summarised in Table 3.2 below. Please refer to Annex B Historical Maps.

Table 3.2 Potentially Contaminative Land Use

Activity	Contaminants
Onsite	
Industrial works including Brickworks, Tramway Sidings and Engine House construction	Various contaminants including heavy metals, organic and inorganics
Pits associated with the brick works	Various contaminants including heavy metals, organic and inorganics
Heaps / refuse heaps	Various contaminants including heavy metals, organic and inorganics
Offsite	
Industrial Works	Various contaminants including heavy metals, organic and inorganics
Landfill operations	Various contaminants including heavy metals, organic and inorganics

3.3 Evidence of Historic Contamination

2018 Site Investigations

A verification report for ground contamination was undertaken on site in 2018 by Caulmert Ltd. The report refers to previous ground investigation undertaken within an area at the site in 2017 which did not identify widespread contamination, though the presence of asbestos was determined in one sample. The investigation focused on the potential for contamination within imported material deposited at site, which may have been derived from historical brick making activities.

This historically imported made ground material was removed from the raised earth bund on site and was disposed of off site by an appropriate third party contractor.

This report also acknowledged to be situated on an extremely sensitive Chalk Aquifer but considered that there are no pollution pathways from the site.

Please refer to the report and its appendices provided in Annex C which detail baseline ground condition at the site.

2024 Site Investigations

Ground investigation was undertaken on site during November 2024 by Strata Geotechnics. The purpose of the investigations was to determine the subsurface ground and groundwater conditions at the site of proposed commercial development. The ground investigations included 3 rotary boreholes and 5 windowless sampled boreholes.

Soil samples were sent to i2 analytical laboratory for testing of a suite of environmental parameters. These are considered to be indicative of baseline conditions at the site. Please see the investigation report provided in Annex D for the laboratory results.

3.4 Supporting Information

The supporting documentation consists of:

- Figures detailing the location, boundary and layouts of the Installation are shown in Annex A;
- Groundsure Report, 2025, is provided in Annex B;
- Ground Investigation Reports, 2018 are provided in Annex C; and
- Ground investigation reports, 2025 are provided in Annex D.

4. PERMITTED ACTIVITIES

4.1 Proposed Activities Undertaken at the Installation

The site is currently permitted under Environmental Permit EPR/KB3806FD/V002 as a Waste Operation to accept up to 350,000 tonnes per annum of mixed waste streams. A permit variation was submitted in April 2024 to increase the tonnage to 420,000 tonnes and to update the existing permit to more accurately reflect the existing site operations and waste types accepted by site. The application has only just been allocated for determination.

N+P is making this application to carry out a variation of their existing permit under The Environmental Permitting (England and Wales) (Amendment) Regulations 2018 in order to install a new Solid Recovered Fuel (SRF) plant. The existing mini MRF on site will be upgraded and converted into a SRF line. This will allow N+P to convert a high percentage of their end-of-life materials, coming from other water processing lines on site, into an SRF material which will then be exported off site for use as a fuel.

N+P are also proposing to increase the Installation Boundary to include additional land which will be used for Welfare Facilities and additional bale storage.

As a result of the variation, due to the proposed SRF plant processing more than 75 tonnes per day to produce SRF for use as a fuel, the proposed plant meets the definition of an 'Installation' and will therefore be permitted under the following Scheduled Reference:

- Section 5.4 'Disposal, recovery or a mix of disposal and recovery of non-hazardous waste' Part A(b) (ii) – pre-treatment of waste for incineration or co-incineration.

The rest of the site activities carried out on site will remain permitted as a 'Waste Operation'.

N+P currently undertake mechanical treatment of waste on site which is detailed in further detail in Table 4.1 below.

Table 4.1 Process Description

Waste Type	Description	Mechanical Treatment Process
Mixed Recyclable Waste	Mixed recyclable waste is conveyed through a trommel, which separates materials by size. Smaller fractions (e.g. glass, shredded paper, bottle tops) fall through the holes for further treatment, while larger items (e.g. cans, bottles, cardboard) continue along the line. Ferrous and non-ferrous metals are removed using overband magnets and eddy current separators. Remaining materials are further sorted using optical sorters, ballistic separators and manual picking lines. Separated materials are then baled for storage or transport.	Trommels, Ballistic Separator, Overband Magnets, Eddy Current Separator, Optical Sorters, Baler

Plastic Waste	Plastic waste is separated from mixed materials using optical sorters, ballistic separators, and manual picking. It is then processed in the Plastic Sortation Plant, where plastics are further sorted from metals and glass using mechanical and automated systems. The separated plastics are stored in bunkers before being baled for transport.	Trommel, Ballistic Separator, Plastic Sortation Plant, Optical Sorters, Baler
Glass	Fine glass-rich fractions (<160 mm) drop through the trommel and ballistic separator paddles and are conveyed to the glass plant, where the material is screened to remove contaminants. Clean glass cullet is then transferred to bunkers or containers for onward recycling or re-melt.	Trommel, Ballistic Separator, Glass Plant, Plastic sortation Plant
Metals	Metals are separated from mixed waste streams using overband magnets for ferrous metals and an eddy current separator for non-ferrous metals such as aluminium. Additional separation may occur in the Plastic Sortation Plant. Sorted metals are then stored in designated bunkers before being transported for off-site recycling.	Trommels, Overband Magnets, Eddy Current Separator, Plastic Sortation Plant
Paper and Cardboard	Paper and cardboard are separated from mixed waste during trommel screening and further refined through ballistic separation, optical sorting, and manual picking. Clean material is then baled for storage and transport.	Trommels, Ballistic Separator, Optical Sorters, Baler

4.1.1 Proposed Permitted Wastes

The site is currently permitted to accept up to 350,000 tonnes per annum of mixed waste streams. A permit variation is currently under determination to increase the annual tonnage to 420,000 tonnes per annum.

Deliveries of waste will be restricted to the operational capacity of the site. Waste will only be accepted if there is sufficient storage capacity within the designated areas of the site.

All wastes will be accepted on site in accordance with the sites existing Operations, Development and Management Plan, a summary of which is provided within Annex E – EMS Summary.

A review of the European Waste Catalogue (EWC) codes of wastes that are accepted by the site has been carried out by N+P as part of the permit variation that is currently under determination. The updated list of EWC codes of wastes that are accepted by the site is provided in Table 4.2 below.

The SRF produced by the proposed new plant will be derived from clean Dry Mixed Recycling (DMR) which is a product from the existing activities on site. No additional wastes will be accepted by the site as a result of the new plant.

Table 4.2 Revised List of EWC Codes

Waste Code	Description
04	WASTES FROM THE LEATHER, FUR AND TEXTILE INDUSTRIES
04 02	wastes from the textile industry
04 02 09	wastes from composite materials (impregnated textile, elastomer, plastomer)
04 02 21	wastes from unprocessed textile fibres
04 02 22	wastes from processed textile fibres
10	WASTES FROM THERMAL PROCESSES
10 11	wastes from manufacture of glass and glass products
10 11 03	waste glass-based fibrous materials
10 11 12	waste glass other than those mentioned in 10 11 11
15	WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED
15 01	packaging (including separately collected municipal packaging waste)
15 01 01	paper and cardboard packaging
15 01 02	plastic packaging
15 01 03	wooden packaging
15 01 04	metallic packaging
15 01 05	composite packaging
15 01 06	mixed packaging
15 01 07	glass packaging
15 01 09	textile packaging
16	WASTES NOT OTHERWISE SPECIFIED IN THE LIST
16 01	end-of-life vehicles from different means of transport (including off-road machinery) and wastes from dismantling of end-of-life vehicles and vehicle maintenance (except 13, 14, 16 06 and 16 08)
16 01 03	end-of-life tyres
16 01 17	ferrous metal
16 01 18	non-ferrous metal
16 01 19	plastic
16 01 20	glass
16 01 22	components not otherwise specified
17	CONSTRUCTION AND DEMOLITION WASTES (INCLUDING EXCAVATED SOIL FROM CONTAMINATION SITES)
17 02	wood, glass and plastic
17 02 01	wood
17 02 02	glass
17 02 03	plastic
17 04	metals (including their alloys)

17 04 01	copper, bronze, brass
17 04 02	aluminum
17 04 03	lead
17 04 04	zinc
17 04 05	iron and steel
17 04 06	tin
17 04 07	mixed metals
17 04 11	cables other than those mentioned in 17 04 10
19	WASTES FROM WASTE MANAGEMENT FACILITIES, OFF-SITE WASTE WATER TREATMENT PLANTS AND THE PREPARATION OF WATER INTENDED FOR HUMAN CONSUMPTION AND WATER FOR INDUSTRIAL USE
19 12	wastes from the mechanical treatment of waste (for example sorting, crushing, compacting, pelletising)
19 12 01	paper and cardboard
19 12 02	ferrous metal
19 12 03	non-ferrous metal
19 12 04	plastic and rubber
19 12 05	glass
19 12 07	wood other than that mentioned in 19 12 06
19 12 08	textiles
19 12 10	combustible waste (refuse derived fuel)
19 12 12	other wastes (including mixtures of materials) from mechanical treatment of wastes other than those mentioned in 19 12 11
20	MUNICIPAL WASTES (HOUSEHOLD WASTE AND SIMILAR COMMERCIAL, INDUSTRIAL AND INSTITUTIONAL WASTES) INCLUDING SEPARATELY COLLECTED FRACTIONS
20 01	separately collected fractions (except 15 01)
20 01 01	paper and cardboard
20 01 02	glass
20 01 10	clothes
20 01 11	textiles
20 01 38	wood other than that mentioned in 20 01 37
20 01 39	plastics
20 01 40	metals
20 03	other municipal wastes
20 03 01	mixed municipal waste
20 03 02	wastes from markets

4.1.2 Drainage System

There are no process emissions to controlled waters as a result of this permit variation.

The drainage system will be updated to capture the runoff from the proposed new storage area.

The remaining drainage network on site will remain as currently permitted, with two surface water emission points (Emission Point W1 and W2).

4.1.3 *Hardstanding*

The site is located entirely on good quality concrete hardstanding.

4.1.4 *Tanks and Bunds*

All storage tanks associated with the process are constructed on sealed concrete hardstanding with secondary containment bunds in line with Environment Agency Pollution Prevention and CIRIA guidelines.

4.1.5 *Potential for Fugitive Releases to Soil, Groundwater and Surface Water*

The materials and substances used onsite are not considered to have significant potential to cause ground or groundwater contamination under general storage or operating procedures.

The following measures have been incorporated into the design of the facility to protect groundwater and soil from onsite substances;

- The waste storage and processing areas all consist of good quality hardstanding;
- Emergency Spill kits will be provided throughout the site and strategically placed in locations;
- There will be no subsurface infrastructure used for the storage or transfer of hazardous waste; and
- All potential contaminated runoff is captured within holding tanks prior to removal offsite.

Due to the protection measures mentioned above, the risk to soil and groundwater from the development is considered to be LOW as summarised in the Conceptual Site Model below. In the unlikely event that any of the above measures fail, due to all activities being carried out on impermeable hard standing, there would be no impact to soil, groundwater and surface water.

Table 4.3 Conceptual Site Model

Contaminant Source	Contaminants of Concern	Receptor	Exposure Present?	Pathway	Likelihood of Risk
Historical soil contamination – material of unknown nature imported and deposited on site	Investigations have identified asbestos fibres. Limited investigations across the wider site area leaves risk of contamination unclear	Construction Workers	Yes – although some material has been removed off site, the limited GI scope means other areas of contamination may be present onsite		Low – Use of control measures during construction work including appropriate PPE will minimise potential exposure.
		Future Site Users	No –the entire site will be constructed on good quality hardstanding.		Negligible – Hardstanding covers the processing areas on site and contamination potential is very low
		Groundwater	Yes – Leaching of any unidentified contaminants by		Low - Leaching of any contaminants within soils by infiltrating rainfall will

			infiltrating rainfall may have occurred prior to site development.	be minimal following hardstanding development
		Surface Water	Yes – Dissolution of contaminants into surface water run-off may have occurred prior to site construction	Very low – runoff from contaminants within soils will be minimal following hardstanding development
Future substances stored, used and generated onsite	Heavy metals, organics, TPH, PAH, inorganics	Future Site Users	Yes – Workers at the site may come into contact with potentially hazardous materials (namely fuels), however internal management systems will be place to mitigate any risks	Low
		Soil & Groundwater	No – All materials onsite shall be stored and processed on hardstanding. Site drainage has the ability to be isolated in the event of any spillages / need to fire water containment.	Low
		Surface Water	Yes – contaminated surface water runoff has the potential to drain from the site to nearby water courses.	Low
Potential gas produced from the surrounding environment, namely landfills and infilled pits	Hydrogen sulphide, carbon monoxide and methane	Future site users	Yes – Potential gas migration through permeable bedrock	Low – due to the proximity and management measures in place
		Air Emissions	Yes – potential gas releases can migrate onsite if high levels are experienced	Low – due to the proximity and management measures in place

In addition, the site operates a comprehensive maintenance and management system which is summarised in the application support document.

Based on this assessment, the potential for this facility to impact on soil and groundwater underlying the installation is considered to be low.

4.2 Non-permitted Activities

There are no non-permitted activities undertaken on site.

4.3 Site Plan

The site layout plans are provided in Annex A – Figures.

4.4 Environmental Risk Assessment

A full Environmental Risk Assessment has been undertaken as part of the permit variation. The risk assessment is held and maintained by N+P and will be regularly reviewed and updated when necessary.

5. CHANGES TO THE ACTIVITY

The site is currently permitted under Environmental Permit EPR/KB3806FD/V002 as a Waste Operation to accept up to 350,000 tonnes per annum of mixed waste streams. A permit variation was submitted in April 2024 to increase the tonnage to 420,000 tonnes and to update the existing permit to more accurately reflect the existing site operations and waste types accepted by site. The application was duly made on 18th August 2025 and has only just been allocated for determination.

N+P is making this application to carry out a variation of their existing permit under The Environmental Permitting (England and Wales) (Amendment) Regulations 2018 in order to install a new Solid Recovered Fuel (SRF) plant. The existing mini MRF on site will be upgraded and converted into a SRF line. This will allow N+P to convert a high percentage of their end-of-life materials, coming from other water processing lines on site, into an SRF material which will then be exported off site for use as a fuel.

N+P are also proposing to increase the Installation Boundary to include additional land which will be used for additional bale storage.

As a result of the variation, due to the proposed SRF plant processing more than 75 tonnes per day to produce SRF for use as a fuel, the proposed plant meets the definition of an 'Installation' and will therefore be permitted under the following Scheduled Reference:

- Section 5.4 'Disposal, recovery or a mix of disposal and recovery of non-hazardous waste' Part A(b) (ii) – pre-treatment of waste for incineration or co-incineration.

The rest of the site activities carried out on site will remain permitted as a 'Waste Operation'.

6. MEASURES TAKEN TO PROTECT LAND

The site has a number of pollution prevention and mitigation measures in place, and has implemented the following measures to protect the land:

- Sealed, impermeable hardstanding covering all areas of the site to prevent any accidental or incidental releases of contaminants to land.
- The site is subject to regular inspections by the site manager to ensure the concrete hardstanding remains in good condition and, where signs of degradation are detected, the necessary repairs will be undertaken. This is to ensure the site surface remains impermeable to contaminants, therefore preventing contamination of land.
- A comprehensive spills and leakages procedure is in operation on site to clean up any minor or major spills or leaks that may occur.
- All tanks are bunded and installed with secondary containment which are designed to comply with EA guidance and CIRIA 736 and CIRIA C598.

This section will be updated throughout the life of the permit with any pollution and mitigation measures that have been implemented on site.

7. POLLUTION INCIDENTS AND REMEDIATION

This section will be completed throughout the life of the permit following any pollution incidents.

Currently there have been no pollution incidents onsite.

Remediation work onsite has been limited to the removal of historical potentially contaminated earth bund in 2018. The verification report is provided in Annex C.

8. SOIL, GAS AND WATER QUALITY MONITORING

This section will be completed throughout the life of the permit with any soil, gas and water quality monitoring.

8.1 Previous Site Investigation

8.1.1 Verification Report 2018

Caulmert Ltd carried out a verification report in 2018 following completion of enabling works undertaken on site. Site investigations were undertaken during 2017 and the report issued in 2018.

The purpose of the investigation was to determine the sub-surface condition on site. The pre construction site investigations consisted of:

- Strength assessments on the existing concrete slab. This was undertaken by testing 6 concrete cores extracted from the slab;
- Four boreholes to a maximum depth of 13m on the concrete slab. These boreholes enabled geotechnical in situ and ex situ tests to be conducted;
- Assessment of nature and chemical content of soil samples;
- Two trial pits within the northern earth bund; and
- Foundation inspection pit.

All investigations identified the ground was in good condition to complete development with no visual or olfactory indications of contamination at any location or associated with any of the disturbed soil samples. However, one sample (TP01) of Made Ground from the earth bund screened for the presence of asbestos. Fibres of asbestos (chrysotile) were positively identified. Please refer to Annex C – Ground Investigation Report August 2018 for further information.

Gas Monitoring

Methane or hydrogen sulphide was not detected above the detection limit on any of the monitoring visits undertaken. However, carbon monoxide was detected at 1ppm in borehole WS02 and WS03. Water was encountered in one borehole however this was attributed to high snow/rainfall which saturated the ground conditions at the time of sampling.

Please refer to Annex C – Ground Investigation Report August 2018 for further information.

8.1.2 Factual Ground Investigation Report 2025

A factual ground investigation report was carried out by Strata Geotechnics and is provided in Annex D. Site investigations were undertaken during November 2024 and the report issued in 2025.

The purpose of the investigation was to determine the subsurface ground and groundwater conditions at the site for the proposed commercial development. The site investigations consisted of:

- 3 rotary boreholes (BH01, BH01A and BH02) to a maximum depth ranging from 25.12m to 25.33m BGL; and

- 5 windowless sampled boreholes (WS1 to WS5) to a maximum depth range of 2.0m for WS1 and 3.0m for the remaining boreholes.

The samples were sent for geo-environmental and geotechnical tests. Full details of the results are provided in Annex D.

The results of the in-situ penetration tests indicated Made ground, Alluvium Deposits and Lewes Chalk Formation were indicative of variable conditions and River Terrace Deposits were indicative of stiff to very stiff conditions. The geotechnical and geochemical results indicated inert material within the samples.

9. DECOMMISSIONING AND REMOVAL OF POLLUTION RISK

This section will be completed upon site surrender.

10. REFERENCE DATA AND REMEDIATION

This section will be completed upon site surrender.

11. STATEMENT OF SITE CONDITION

This section will be completed upon site surrender.

APPENDIX A FIGURES



Project Number: SOL_23_P046_N+P
 Doc Ref: SOL_23_P046_N+P_Site_Location
 Map Title: Site Location
 Date: 15/10/2025
 Drawn by: RM
 Checked by: JE


N+P Crayford Materials Recycling Facility
 Century Wharf
 Crayford Creek
 Crayford,
 Dartford
 DA1 4HQ

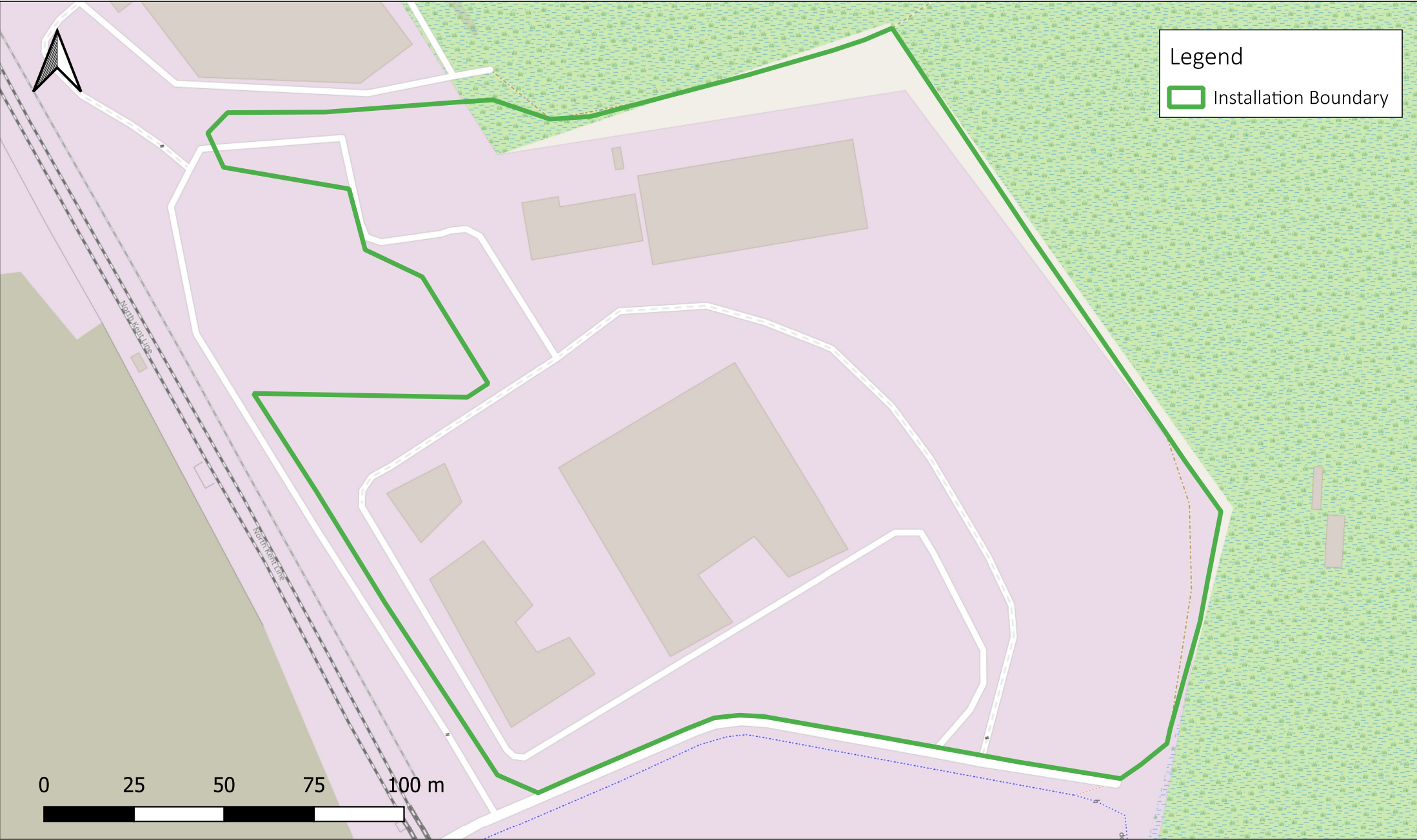
1. Do not scale off this drawing
2. All dimensions to be confirmed on site
3. This drawing is copyright of Sol Environment Ltd
4. This drawing is to be read in conjunction with relevant consultant drawings and specifications
5. QMS Reference: QMS_7.5.39_TEM - Template - GIS Drawing - Horizontal v1



a: Unit 5.3 The Paintworks, Bath Road, Bristol, BS4 3EH
 w: www.sol-environment.co.uk
 e: enquiries@sol-environment.co.uk
 t: 01684 572727

Legend

 Installation Boundary



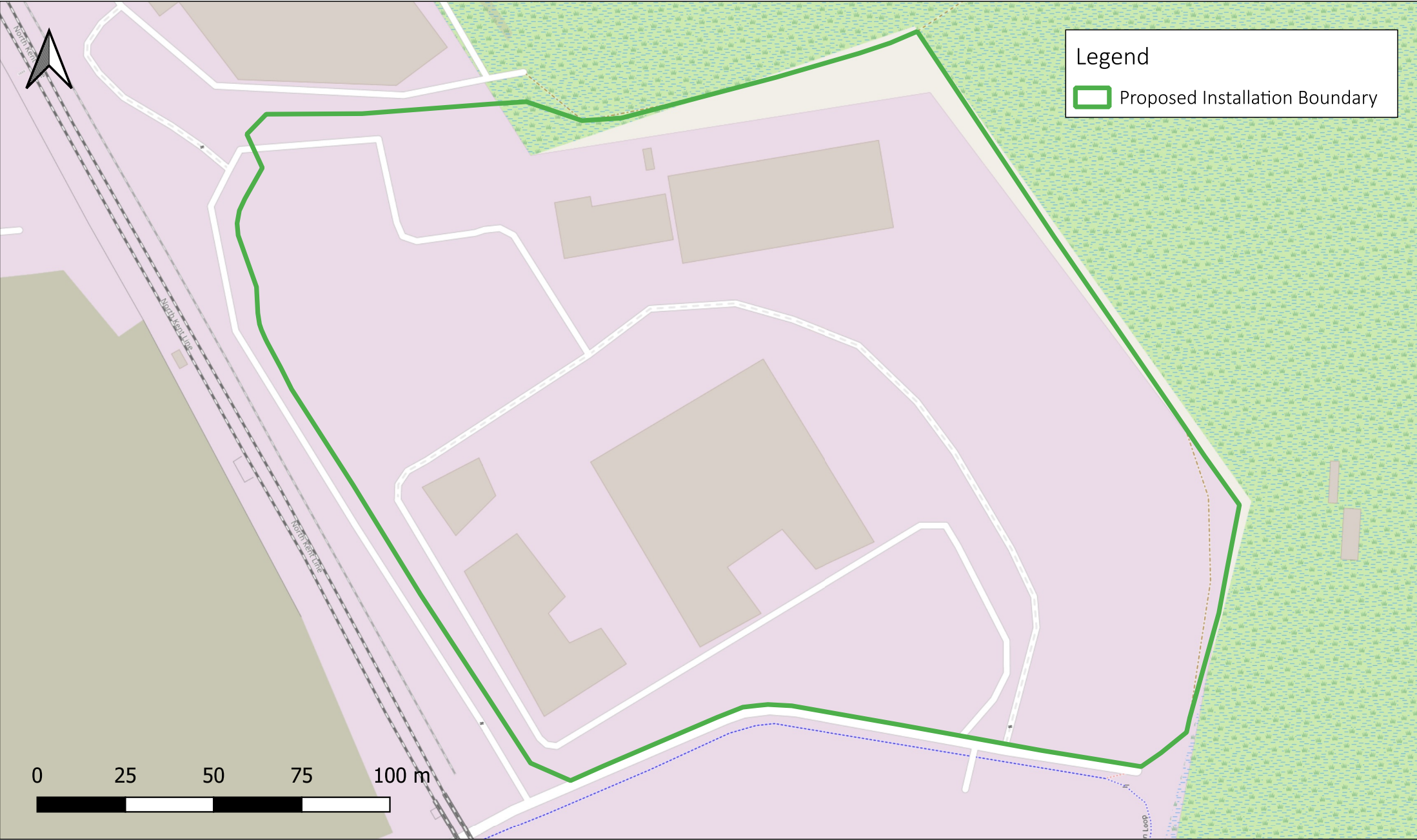
Project Number: SOL_23_P046_N+P
 Doc Ref: SOL_23_P046_N+P_Installation_Boundary
 Map Title: Installation Boundary
 Date: 15/10/2025
 Drawn by: RM
 Checked by: JE

N+P Crayford Materials Recycling Facility
 Century Wharf
 Crayford Creek
 Crayford,
 Dartford
 DA1 4HQ

1. Do not scale off this drawing
2. All dimensions to be confirmed on site
3. This drawing is copyright of Sol Environment Ltd
4. This drawing is to be read in conjunction with relevant consultant drawings and specifications
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a: Unit 5.3 The Paintworks, Bath Road, Bristol, BS4 3EH
 w: www.sol-environment.co.uk
 e: enquiries@sol-environment.co.uk
 t: 01684 572727



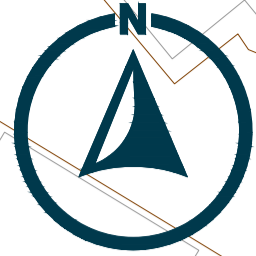
Legend

Proposed Installation Boundary

Project Number: SOL_25_P143_N+P
 Map Title: Proposed Installation Boundary
 Date: 05/12/2025
 Drawn by: RM
 Checked by: JE

Site Address:
 Crayford Materials Recycling Facility,
 Century Wharf, Crayford Creek,
 Crayford,
 Dartford,
 Kent,
 DA1 4HQ

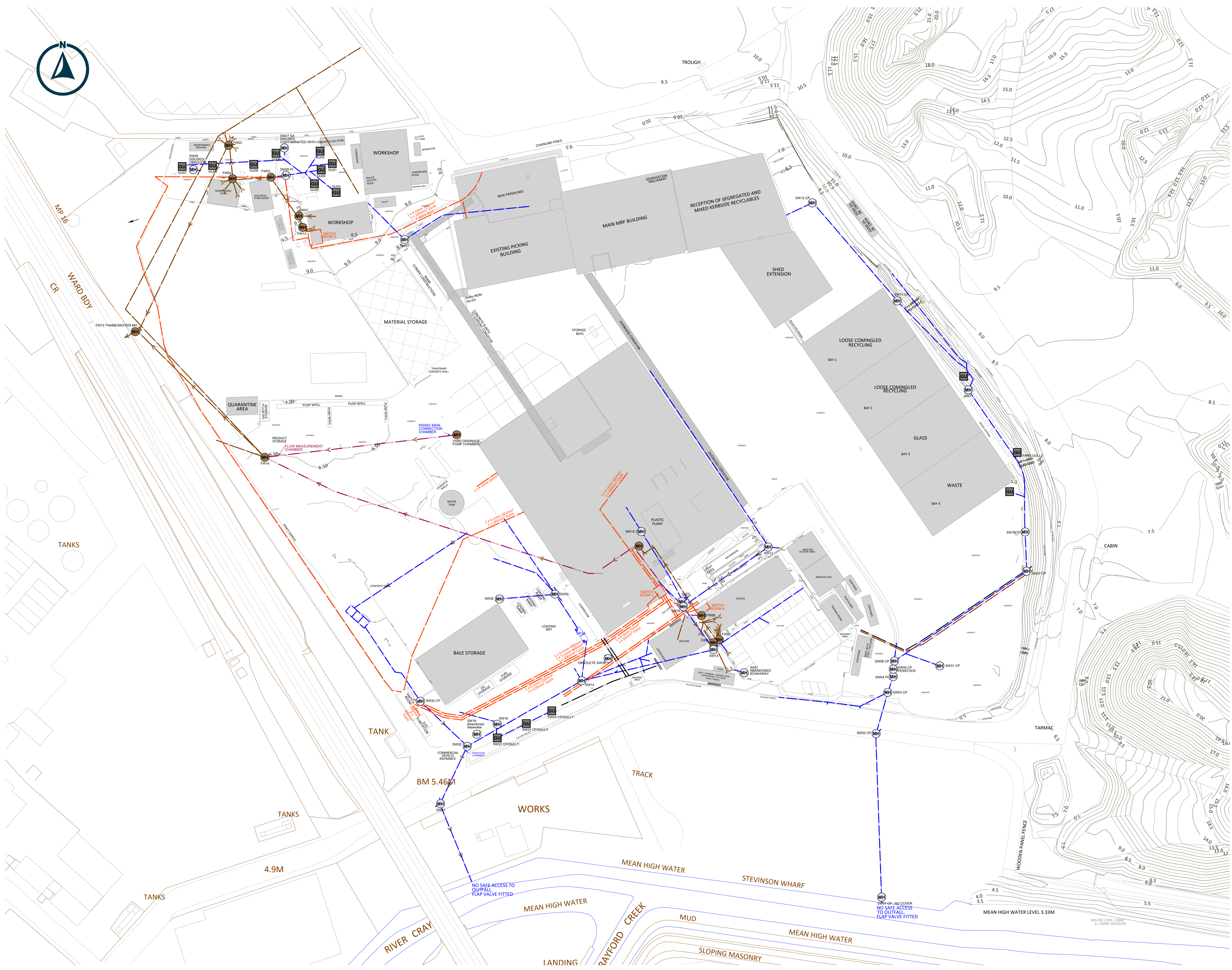
1. Do not scale off this drawing
2. All dimensions to be confirmed on site
3. This drawing is copyright of Sol Environment Ltd
4. This drawing is to be read in conjunction with relevant consultant drawings and specifications
5. QMS Reference: QMS_7.5.39_TEM - Template - GIS Drawing - Horizontal v1



LEGEND

- GENERAL ELECTRIC CABLE
- GEN ELEC UNDERGROUND
- SURFACE WATER
- SURFACE WATER CHANNEL
- RISING MAIN
- FOUL WATER
- DUCT ROUTE

MANHOLE
 FLOW MEASUREMENT CHAMBER
 GULLY
 MANHOLE
 FOUL DRAIN
 GULLY



P01	ISSUED FOR INFORMATION	EJD	AP	LB	09.05.23
REV	MODIFICATIONS	BY	RE	AP	DATE

SITE NAME:
CRAYFORD MRF

TITLE:
SITE SERVICES PLAN

DRAWN BY EJD	REVIEWED BY AP	AUTHORISED BY LB
DATE 26.04.2023	SCALE @ A1 1:500	REVISION P01

DRAWING NUMBER:
CFD MRF 1000

N+P

N+P Crayford MRF Ltd, Century Wharf, Crayford Creek, Crayford, Kent, DA1 4QG, United Kingdom

APPENDIX B GROUNDSURE REPORTS 2025

Crayford Materials Recycling Facility, Century Wharf, Crayford Creek, Crayford, Dartford, Kent, DA1 4HQ

Order Details

Date: 06/11/2025
Your ref: SOL_25_P143_NP
Our Ref: GS-SZV-B33-WWG-GN3

Site Details

Location: 552896 175711
Area: 3.92 ha
Authority: [London Borough of Bexley](#) ↗



[Summary of findings](#)

[p. 2 >](#)

[Aerial image](#)

[p. 9 >](#)

[OS MasterMap site plan](#)

[p.14 >](#)

[Insight User Guide](#) ↗

Contact us with any questions at:

info@groundsure.com ↗

01273 257 755

Summary of findings

Page	Section	Past land use >	On site	0-50m	50-250m	250-500m	500-2000m
15 >	1.1 >	Historical industrial land uses >	39	37	57	67	-
23 >	1.2 >	Historical tanks >	31	9	37	13	-
26 >	1.3 >	Historical energy features >	1	0	3	7	-
27	1.4	Historical petrol stations	0	0	0	0	-
27 >	1.5 >	Historical garages >	0	0	0	4	-
28	1.6	Historical military land	0	0	0	0	-
Page	Section	Past land use - un-grouped >	On site	0-50m	50-250m	250-500m	500-2000m
29 >	2.1 >	Historical industrial land uses >	44	60	75	88	-
39 >	2.2 >	Historical tanks >	41	16	53	20	-
44 >	2.3 >	Historical energy features >	2	0	5	10	-
45	2.4	Historical petrol stations	0	0	0	0	-
45 >	2.5 >	Historical garages >	0	0	0	4	-
Page	Section	Waste and landfill >	On site	0-50m	50-250m	250-500m	500-2000m
46 >	3.1 >	Active or recent landfill >	0	1	0	0	-
47	3.2	Historical landfill (BGS records)	0	0	0	0	-
47	3.3	Historical landfill (LA/mapping records)	0	0	0	0	-
47 >	3.4 >	Historical landfill (EA/NRW records) >	0	1	1	0	-
48 >	3.5 >	Historical waste sites >	1	0	2	1	-
49 >	3.6 >	Licensed waste sites >	6	3	3	4	-
54 >	3.7 >	Waste exemptions >	0	0	14	17	-
Page	Section	Current industrial land use >	On site	0-50m	50-250m	250-500m	500-2000m
57 >	4.1 >	Recent industrial land uses >	5	3	15	-	-
59 >	4.2 >	National Geographic Database (NGD) - Current or recent tanks >	2	1	0	-	-
59	4.3	Current or recent petrol stations	0	0	0	0	-
59	4.4	Electricity cables	0	0	0	0	-
60	4.5	Gas pipelines	0	0	0	0	-



60	4.6	Sites determined as Contaminated Land	0	0	0	0	-
60	4.7	Control of Major Accident Hazards (COMAH)	0	0	0	0	-
60	4.8	Regulated explosive sites	0	0	0	0	-
60	4.9	Hazardous substance storage/usage	0	0	0	0	-
61 >	4.10 >	<u>Historical licensed industrial activities (IPC) ></u>	0	0	0	2	-
61	4.11	Licensed industrial activities (Part A(1))	0	0	0	0	-
61 >	4.12 >	<u>Licensed pollutant release (Part A(2)/B) ></u>	0	0	0	3	-
62	4.13	Radioactive Substance Authorisations	0	0	0	0	-
62 >	4.14 >	<u>Licensed Discharges to controlled waters ></u>	0	5	1	1	-
63	4.15	Pollutant release to surface waters (Red List)	0	0	0	0	-
64 >	4.16 >	<u>Pollutant release to public sewer ></u>	0	1	0	0	-
64	4.17	List 1 Dangerous Substances	0	0	0	0	-
64	4.18	List 2 Dangerous Substances	0	0	0	0	-
64 >	4.19 >	<u>Pollution Incidents (EA/NRW) ></u>	0	0	10	4	-
66	4.20	Pollution inventory substances	0	0	0	0	-
66	4.21	Pollution inventory waste transfers	0	0	0	0	-
67	4.22	Pollution inventory radioactive waste	0	0	0	0	-
Page	Section	<u>Hydrogeology ></u>	On site	0-50m	50-250m	250-500m	500-2000m
68 >	5.1 >	<u>Superficial aquifer ></u>	Identified (within 500m)				
70 >	5.2 >	<u>Bedrock aquifer ></u>	Identified (within 500m)				
71 >	5.3 >	<u>Groundwater vulnerability ></u>	Identified (within 50m)				
73 >	5.4 >	<u>Groundwater vulnerability- soluble rock risk ></u>	Identified (within 0m)				
73	5.5	Groundwater vulnerability- local information	None (within 0m)				
74 >	5.6 >	<u>Groundwater abstractions ></u>	0	0	0	0	35
82 >	5.7 >	<u>Surface water abstractions ></u>	0	0	1	0	1
83 >	5.8 >	<u>Potable abstractions ></u>	0	0	0	0	5
84 >	5.9 >	<u>Source Protection Zones ></u>	0	0	0	2	-
84	5.10	Source Protection Zones (confined aquifer)	0	0	0	0	-
Page	Section	<u>Hydrology ></u>	On site	0-50m	50-250m	250-500m	500-2000m



85 >	6.1 >	Water Network (OS MasterMap) >	0	2	19	-	-
87 >	6.2 >	Surface water features >	0	0	2	-	-
87 >	6.3 >	WFD Surface water body catchments >	2	-	-	-	-
88 >	6.4 >	WFD Surface water bodies >	0	1	1	-	-
88 >	6.5 >	WFD Groundwater bodies >	1	-	-	-	-
Page	Section	River and coastal flooding >	On site	0-50m	50-250m	250-500m	500-2000m
90 >	7.1 >	Risk of flooding from rivers and the sea >	High (within 50m)				
91 >	7.2 >	Historical Flood Events >	0	0	2	-	-
91 >	7.3 >	Flood Defences >	1	4	5	-	-
92 >	7.4 >	Areas Benefiting from Flood Defences >	2	0	8	-	-
93	7.5	Flood Storage Areas	0	0	0	-	-
94 >	7.6 >	Flood Zone 2 >	Identified (within 50m)				
95 >	7.7 >	Flood Zone 3 >	Identified (within 50m)				
Page	Section	Surface water flooding >					
96 >	8.1 >	Surface water flooding >	1 in 30 year, 0.3m - 1.0m (within 50m)				
Page	Section	Groundwater flooding >					
98 >	9.1 >	Groundwater flooding >	Moderate (within 50m)				
Page	Section	Environmental designations >	On site	0-50m	50-250m	250-500m	500-2000m
99	10.1	Sites of Special Scientific Interest (SSSI)	0	0	0	0	0
100	10.2	Conserved wetland sites (Ramsar sites)	0	0	0	0	0
100	10.3	Special Areas of Conservation (SAC)	0	0	0	0	0
100	10.4	Special Protection Areas (SPA)	0	0	0	0	0
100	10.5	National Nature Reserves (NNR)	0	0	0	0	0
101	10.6	Local Nature Reserves (LNR)	0	0	0	0	0
101	10.7	Designated Ancient Woodland	0	0	0	0	0
101	10.8	Biosphere Reserves	0	0	0	0	0
101	10.9	Forest Parks	0	0	0	0	0
102	10.10	Marine Conservation Zones	0	0	0	0	0
102 >	10.11 >	Green Belt >	1	0	2	2	5



102	10.12	Proposed Ramsar sites	0	0	0	0	0
103	10.13	Possible Special Areas of Conservation (pSAC)	0	0	0	0	0
103	10.14	Potential Special Protection Areas (pSPA)	0	0	0	0	0
103	10.15	Nitrate Sensitive Areas	0	0	0	0	0
103 >	10.16 >	Nitrate Vulnerable Zones >	0	0	0	0	1
105	10.17	SSSI Impact Risk Zones	0	-	-	-	-
105	10.18	SSSI Units	0	0	0	0	0
Page	Section	Visual and cultural designations	On site	0-50m	50-250m	250-500m	500-2000m
106	11.1	World Heritage Sites	0	0	0	-	-
106	11.2	Area of Outstanding Natural Beauty	0	0	0	-	-
106	11.3	National Parks	0	0	0	-	-
106	11.4	Listed Buildings	0	0	0	-	-
107	11.5	Conservation Areas	0	0	0	-	-
107	11.6	Scheduled Ancient Monuments	0	0	0	-	-
107	11.7	Registered Parks and Gardens	0	0	0	-	-
Page	Section	Agricultural designations >	On site	0-50m	50-250m	250-500m	500-2000m
108 >	12.1 >	Agricultural Land Classification >	Grade 3 (within 250m)				
109	12.2	Open Access Land	0	0	0	-	-
109	12.3	Tree Felling Licences	0	0	0	-	-
109	12.4	Environmental Stewardship Schemes	0	0	0	-	-
109	12.5	Countryside Stewardship Schemes	0	0	0	-	-
Page	Section	Habitat designations >	On site	0-50m	50-250m	250-500m	500-2000m
110 >	13.1 >	Priority Habitat Inventory >	0	6	8	-	-
111 >	13.2 >	Habitat Networks >	1	3	7	-	-
112	13.3	Open Mosaic Habitat	0	0	0	-	-
112	13.4	Limestone Pavement Orders	0	0	0	-	-
Page	Section	Geology 1:10,000 scale >	On site	0-50m	50-250m	250-500m	500-2000m
113 >	14.1 >	10k Availability >	Identified (within 500m)				
114 >	14.2 >	Artificial and made ground (10k) >	1	1	0	6	-



116 >	14.3 >	Superficial geology (10k) >	2	2	1	2	-
117	14.4	Landslip (10k)	0	0	0	0	-
118 >	14.5 >	Bedrock geology (10k) >	1	0	0	0	-
119	14.6	Bedrock faults and other linear features (10k)	0	0	0	0	-
Page	Section	Geology 1:50,000 scale >	On site	0-50m	50-250m	250-500m	500-2000m
120 >	15.1 >	50k Availability >	Identified (within 500m)				
121 >	15.2 >	Artificial and made ground (50k) >	1	1	0	3	-
122 >	15.3 >	Artificial ground permeability (50k) >	1	1	-	-	-
123 >	15.4 >	Superficial geology (50k) >	2	2	1	2	-
124 >	15.5 >	Superficial permeability (50k) >	Identified (within 50m)				
124	15.6	Landslip (50k)	0	0	0	0	-
124	15.7	Landslip permeability (50k)	None (within 50m)				
125 >	15.8 >	Bedrock geology (50k) >	1	0	0	0	-
126 >	15.9 >	Bedrock permeability (50k) >	Identified (within 50m)				
126	15.10	Bedrock faults and other linear features (50k)	0	0	0	0	-
Page	Section	Boreholes >	On site	0-50m	50-250m	250-500m	500-2000m
127 >	16.1 >	BGS Boreholes >	0	3	28	-	-
Page	Section	Natural ground subsidence >					
130 >	17.1 >	Shrink swell clays >	Low (within 50m)				
132 >	17.2 >	Running sands >	Moderate (within 50m)				
134 >	17.3 >	Compressible deposits >	Moderate (within 50m)				
136 >	17.4 >	Collapsible deposits >	Very low (within 50m)				
137 >	17.5 >	Landslides >	Very low (within 50m)				
138 >	17.6 >	Ground dissolution of soluble rocks >	Low (within 50m)				
Page	Section	Mining and ground workings >	On site	0-50m	50-250m	250-500m	500-2000m
140 >	18.1 >	BritPits >	1	0	2	6	-
143 >	18.2 >	Surface ground workings >	15	20	23	-	-
145	18.3	Underground workings	0	0	0	0	0
145	18.4	Underground mining extents	0	0	0	0	-



146	18.5	Historical Mineral Planning Areas	0	0	0	0	-
146 >	18.6 >	Non-coal mining >	1	0	1	3	9
148	18.7	JPB mining areas	None (within 0m)				
148	18.8	The Coal Authority non-coal mining	0	0	0	0	-
148 >	18.9 >	Researched mining >	1	0	1	0	-
148	18.10	Mining record office plans	0	0	0	0	-
149	18.11	BGS mine plans	0	0	0	0	-
149	18.12	Coal mining	None (within 0m)				
149	18.13	Brine areas	None (within 0m)				
149	18.14	Gypsum areas	None (within 0m)				
149	18.15	Tin mining	None (within 0m)				
150	18.16	Clay mining	None (within 0m)				
Page	Section	Ground cavities and sinkholes >	On site	0-50m	50-250m	250-500m	500-2000m
151 >	19.1 >	Natural cavities >	0	0	0	2	-
152 >	19.2 >	Mining cavities >	0	0	0	2	2
152	19.3	Reported recent incidents	0	0	0	0	-
153	19.4	Historical incidents	0	0	0	0	-
Page	Section	Radon >					
154 >	20.1 >	Radon >	Between 1% and 3% (within 0m)				
Page	Section	Soil chemistry >	On site	0-50m	50-250m	250-500m	500-2000m
156 >	21.1 >	BGS Estimated Background Soil Chemistry >	6	4	-	-	-
156 >	21.2 >	BGS Estimated Urban Soil Chemistry >	11	7	-	-	-
157 >	21.3 >	BGS Measured Urban Soil Chemistry >	0	1	-	-	-
Page	Section	Railway infrastructure and projects >	On site	0-50m	50-250m	250-500m	500-2000m
159	22.1	Underground railways (London)	0	0	0	-	-
159	22.2	Underground railways (Non-London)	0	0	0	-	-
160	22.3	Railway tunnels	0	0	0	-	-
160 >	22.4 >	Historical railway and tunnel features >	18	22	24	-	-
162	22.5	Royal Mail tunnels	0	0	0	-	-



163	22.6	Historical railways	0	0	0	-	-
163 >	22.7 >	Railways >	0	12	24	-	-
164	22.8	Crossrail 2	0	0	0	0	-
165	22.9	HS2	0	0	0	0	-

Recent aerial photograph



Capture Date: 17/07/2021

Site Area: 3.92ha



Recent site history - 2016 aerial photograph



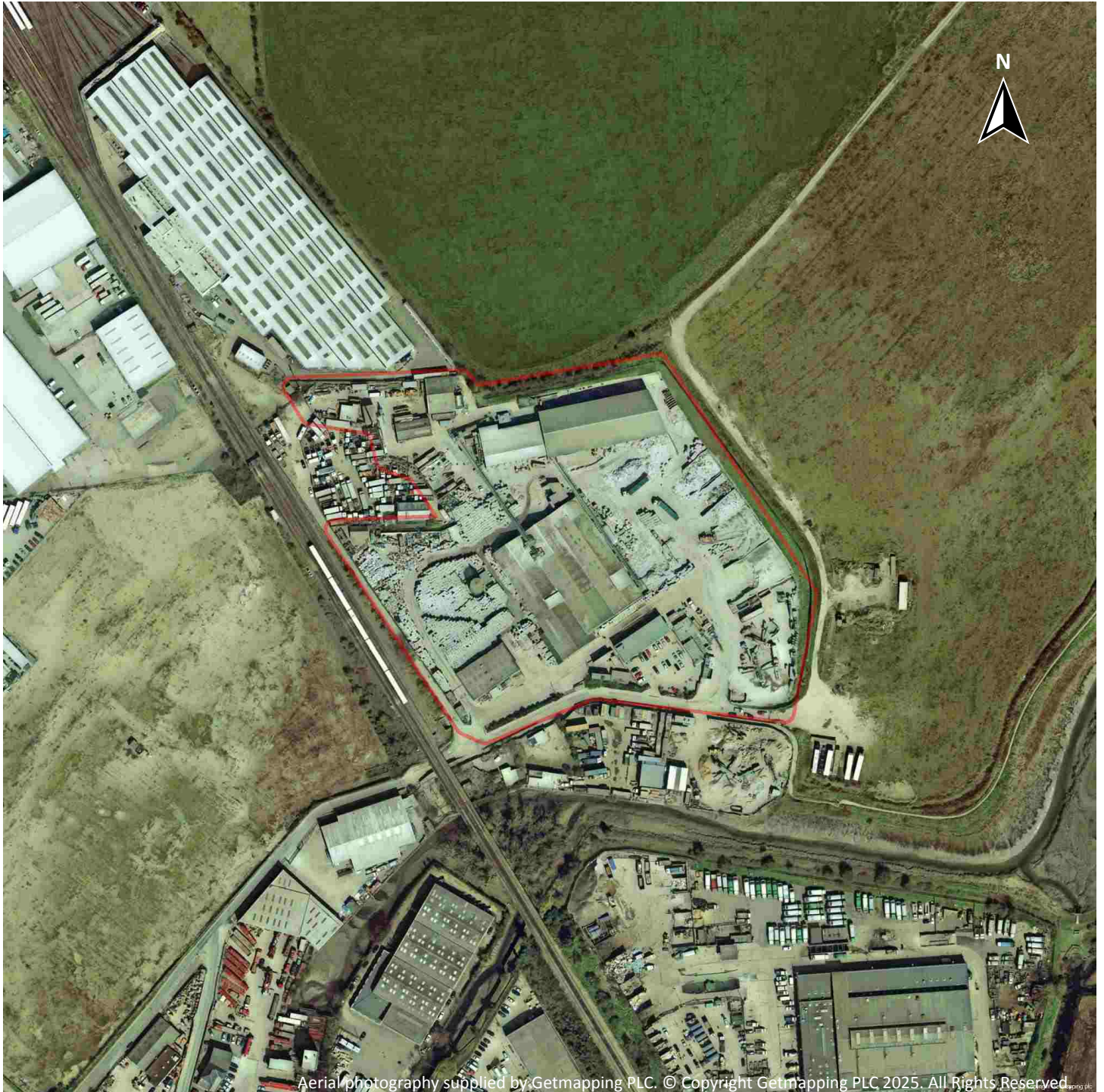
Aerial photography supplied by Getmapping PLC. © Copyright C

Capture Date: 23/09/2016

Site Area: 3.92ha



Recent site history - 2013 aerial photograph



Capture Date: 20/04/2013

Site Area: 3.92ha



Recent site history - 2005 aerial photograph

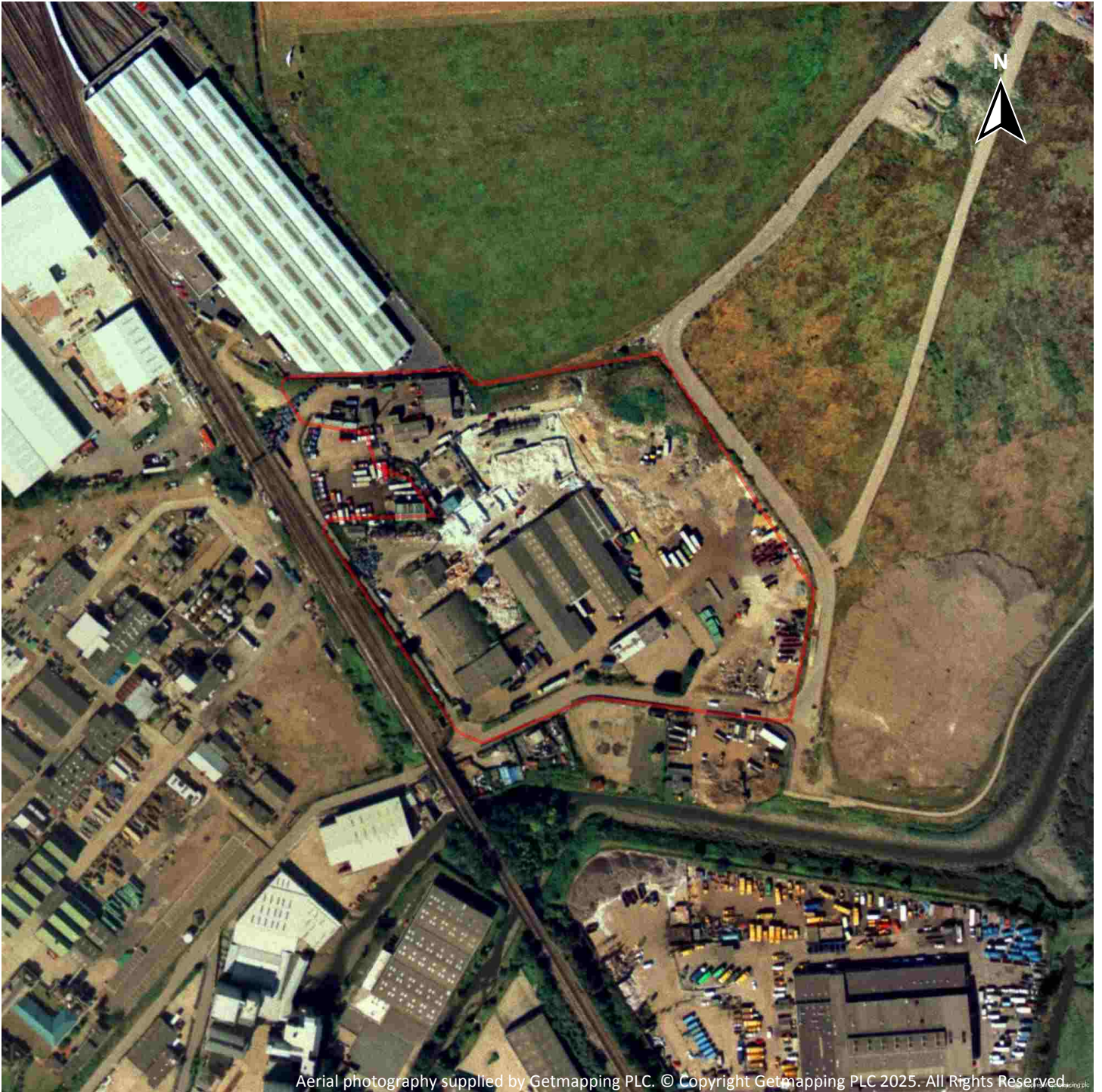


Capture Date: 29/08/2005

Site Area: 3.92ha



Recent site history - 1999 aerial photograph



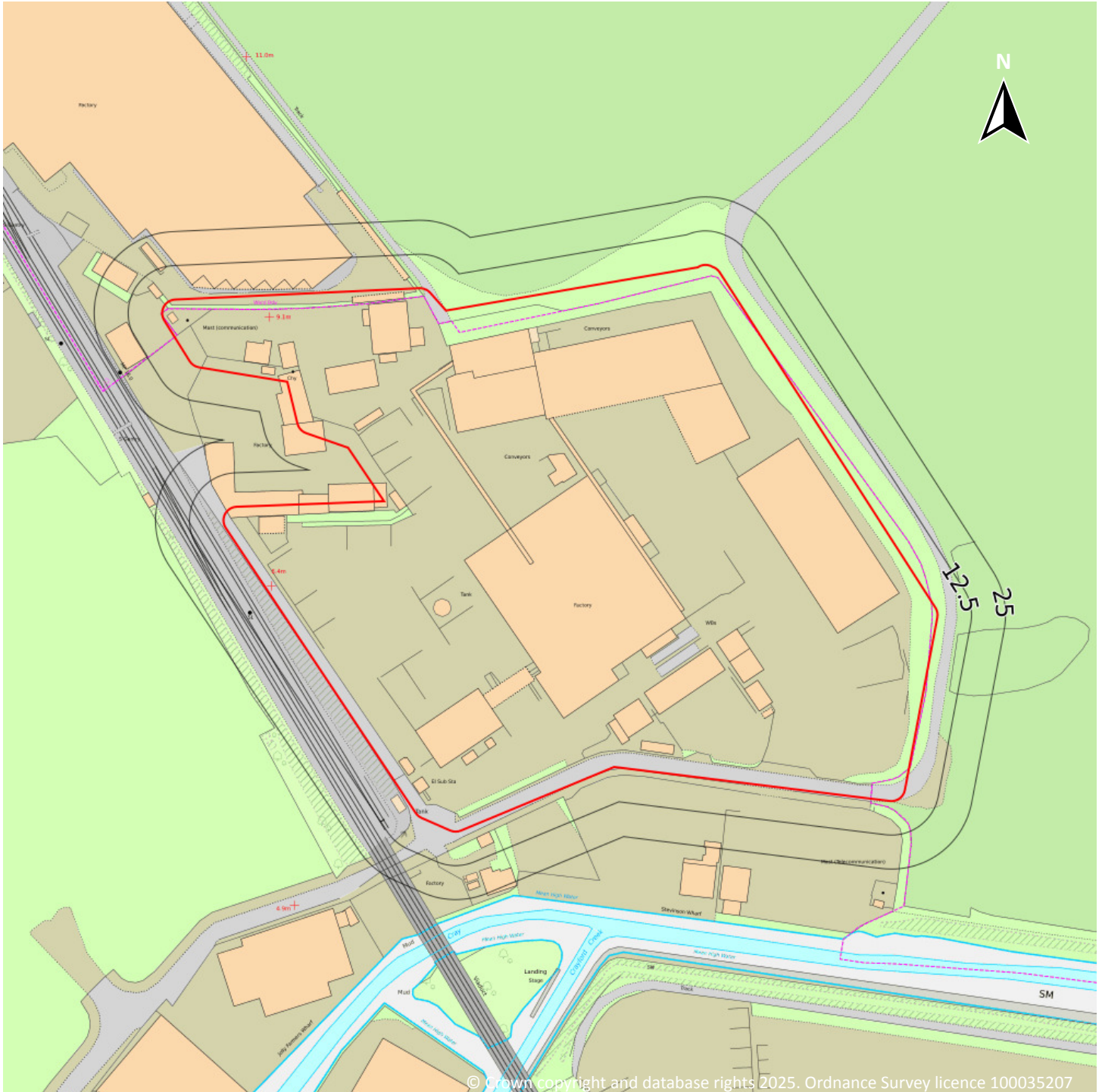
Aerial photography supplied by Getmapping PLC. © Copyright Getmapping PLC 2025. All Rights Reserved.

Capture Date: 06/09/1999

Site Area: 3.92ha



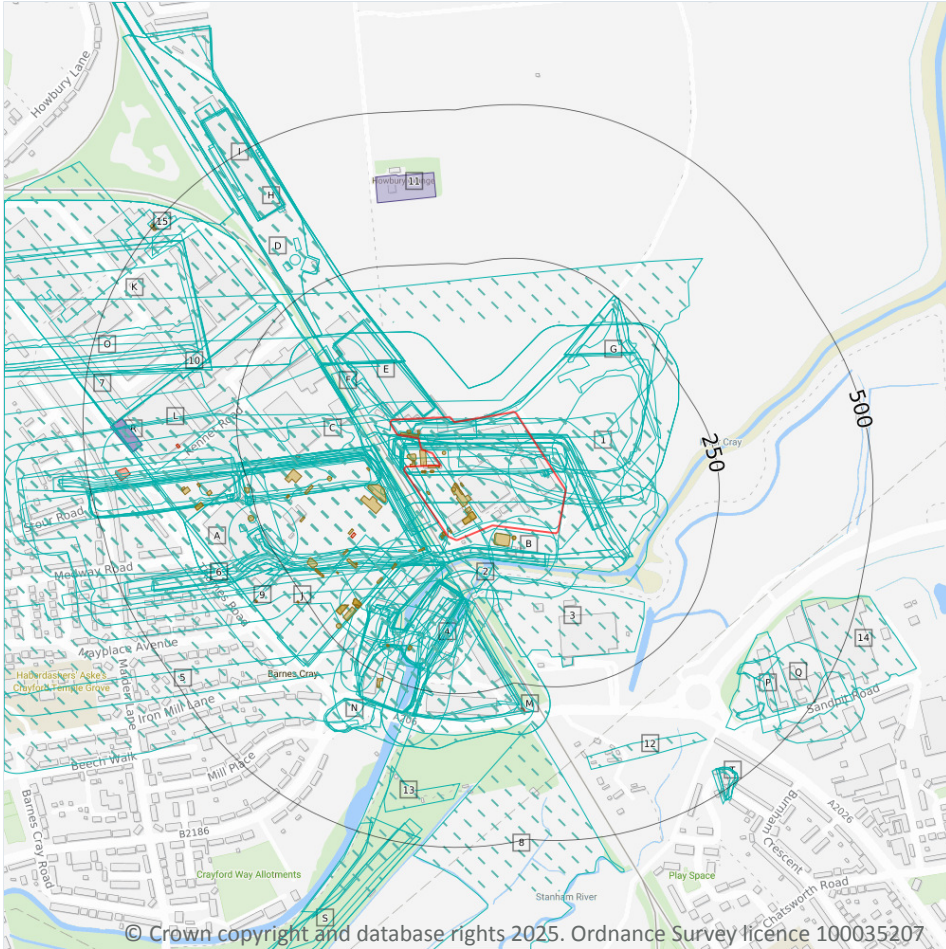
OS MasterMap site plan



Site Area: 3.92ha



1 Past land use



Site Outline

Search buffers in metres (m)

- Historical industrial land uses
- Historical tanks
- Historical energy features
- Historical garages

1.1 Historical industrial land uses

Records within 500m **200**

Potentially contaminative land use features digitised from historical Ordnance Survey mapping at 1:10,000 and 1:10,560 scale, intelligently grouped into contiguous features. To prevent misrepresentation of the size of historical features at any given time, features are only grouped if they have similar geometries within immediately preceding or succeeding map editions. See section 2 for a breakdown of grouping if required. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

Features are displayed on the Past land use map on [page 15](#) >

ID	Location	Land use	Dates present	Group ID
1	On site	Unspecified Pit	1967	2178719

ID	Location	Land use	Dates present	Group ID
A	On site	Brick Field	1866	2158552
A	On site	Pottery Works	1939	2183790
A	On site	Gravel Pit	1939	2193958
A	On site	Brick Works	1907	2202310
A	On site	Brick and Tile Works	1931	2202391
A	On site	Brick and Tile Works	1938	2202392
A	On site	Brick and Tile Works	1938	2202393
A	On site	Tramway Sidings	1895	2202609
A	On site	Engine House	1895	2203737
A	On site	Refuse Heap	1938	2212850
A	On site	Brick Works	1921	2214338
A	On site	Unspecified Works	1973 - 1995	2219368
A	On site	Unspecified Heap	1898	2230053
A	On site	Brick Works	1895	2244494
A	On site	Unspecified Heap	1931	2246696
A	On site	Tramway Sidings	1921	2249120
A	On site	Engine House	1907	2253513
A	On site	Tramway Sidings	1898	2254619
A	On site	Railway Sidings	1907	2256834
A	On site	Refuse Heap	1940	2264162
A	On site	Tramway Sidings	1938	2266988
A	On site	Railway Sidings	1939	2268547
A	On site	Engine House	1898	2269106
A	On site	Engine House	1899	2269847
A	On site	Engine House	1921	2286122
A	On site	Engine House	1899	2286147
A	On site	Tramway Sidings	1899	2289802
A	On site	Tramway Sidings	1895	2300859



ID	Location	Land use	Dates present	Group ID
A	On site	Engine House	1895	2311319
A	On site	Unspecified Heap	1938	2323680
A	On site	Unspecified Works	1967	2329362
A	On site	Engine House	1938	2332465
B	On site	Unspecified Wharf	1967	2189911
C	On site	Brick Works	1938	2253394
D	On site	Railway Sidings	1958 - 1967	2279100
D	On site	Railway Sidings	1940	2291449
D	On site	Railway Sidings	1973 - 1995	2309012
D	On site	Railway Sidings	1931 - 1938	2327313
E	1m N	Engine Shed	1958	2274053
A	3m SW	Unspecified Tank	1938 - 1939	2327962
E	3m N	Engine Shed	1931 - 1939	2323565
A	4m SW	Railway Sidings	1866	2248179
E	4m N	Unspecified Works	1995	2207506
E	4m N	Unspecified Works	1967 - 1985	2323317
A	5m SW	Unspecified Tank	1907	2222040
A	5m SW	Unspecified Tank	1931	2284792
B	5m S	Unspecified Commercial/Industrial	1985 - 1995	2314526
A	6m SW	Unspecified Tank	1938	2256082
A	6m SW	Unspecified Tank	1958	2231281
A	8m SW	Unspecified Tank	1921	2281499
B	12m S	Unspecified Tanks	1985 - 1995	2231944
A	15m S	Tramway Sidings	1938	2206975
A	15m S	Tramway Sidings	1921	2222629
A	20m SW	Tramway Sidings	1866 - 1895	2224703
A	20m SW	Brick Works	1895 - 1898	2297551
A	22m S	Tramway Sidings	1898	2275772



ID	Location	Land use	Dates present	Group ID
A	24m S	Unspecified Wharf	1895	2319909
A	25m SW	Refinery	1985 - 1995	2219081
A	26m SW	Unspecified Works	1967 - 1995	2224784
C	26m SW	Unspecified Works	1967	2235843
A	29m SW	Brick Works	1899	2207556
A	29m SW	Tramway Sidings	1899	2295767
A	38m W	Engine House	1895	2241774
A	38m W	Engine House	1907	2292664
A	39m W	Unspecified Heap	1898	2210306
A	39m SW	Unspecified Wharf	1931	2226709
A	39m SW	Unspecified Tank	1985 - 1995	2327163
A	39m W	Unspecified Heap	1938	2229559
A	40m SW	Unspecified Wharf	1967 - 1973	2222945
A	43m W	Unspecified Heap	1931	2252210
A	44m SW	Unspecified Wharf	1938	2270568
A	44m SW	Sawmills	1958	2222682
A	45m S	Unspecified Wharf	1895	2306422
A	46m SW	Unspecified Wharf	1985 - 1995	2287207
A	48m SW	Unspecified Tanks	1985 - 1995	2281434
A	51m S	Ply Works	1931	2161352
A	51m S	Unspecified Works	1939	2209772
2	54m SE	Unspecified Wharf	1985 - 1995	2217225
A	56m W	Clay Pits	1866	2200945
F	56m NW	Cuttings	1907	2236015
F	59m NW	Cuttings	1921	2326736
F	59m NW	Cuttings	1938	2280588
A	62m W	Gravel Pit	1939	2194450
A	69m S	Flour Mills	1938	2220118



ID	Location	Land use	Dates present	Group ID
A	70m S	Sawmills	1938	2285228
A	72m S	Sawmills	1907	2256863
A	72m S	Industrial Estate	1985 - 1995	2239181
A	73m SW	Flour Mills	1939	2240300
A	73m SW	Sawmills	1931	2319275
A	75m S	Unspecified Wharf	1898	2223309
A	75m S	Unspecified Mills	1895 - 1898	2304988
3	82m SE	Unspecified Depot	1985 - 1995	2288780
G	87m NE	Unspecified Ground Workings	1967	2165115
F	90m N	Railway Building	1931 - 1938	2235677
A	90m SW	Unspecified Wharf	1898	2228452
A	90m S	Railway Sidings	1958	2295336
A	93m S	Ply Work	1938	2200831
H	95m N	Railway Sidings	1907	2301130
H	95m N	Railway Sidings	1931	2301928
H	95m N	Railway Sidings	1907	2322868
4	95m S	Railway Sidings	1938	2322196
A	95m S	Railway Sidings	1931	2320916
A	95m S	Railway Sidings	1931	2246670
A	96m S	Railway Sidings	1939	2298389
F	96m N	Railway Building	1940	2261540
A	96m SW	Sawmills	1939	2292939
A	97m S	Unspecified Works	1907 - 1921	2281851
A	101m S	Disused Sugar Works	1895 - 1898	2228688
A	104m S	Unspecified Works	1958	2230643
A	118m S	Unspecified Works	1967 - 1973	2241315
A	122m S	Sawmills	1866	2327692
A	122m S	Unspecified Works	1938	2243220



ID	Location	Land use	Dates present	Group ID
G	124m NE	Refuse Heap	1931	2309840
G	125m NE	Unspecified Heap	1938	2250986
A	139m SW	Sawmills	1921	2300046
A	143m SW	Railway Sidings	1907	2248941
A	143m SW	Unspecified Mill	1967 - 1973	2206811
A	152m SW	Sawmills	1938	2204832
A	154m SW	Unspecified Tank	1866	2193264
A	156m SW	Flour Mills	1931	2287668
A	162m SW	Sawmills	1895 - 1898	2291498
I	180m NW	Railway Sidings	1921	2244891
I	180m NW	Railway Sidings	1938	2314324
A	190m SW	Mill Pond	1907	2252836
A	190m SW	Mill Pond	1895 - 1898	2308366
A	198m SW	Iron Mill	1895	2241200
A	199m SW	Mill Pond	1921	2238104
A	199m SW	Mill Pond	1938	2242971
A	224m W	Unspecified Works	1958	2257642
5	238m SW	Clay Pits	1866	2200946
6	238m SW	Tramway Sidings	1895	2245426
A	246m W	Engine House	1895	2313145
A	252m W	Engine House	1898	2275584
A	253m W	Engine House	1899	2276050
A	255m W	Unspecified Tank	1985 - 1995	2203080
A	255m SW	Iron Mill	1899	2258187
A	256m W	Engine House	1938	2211861
A	256m W	Engine House	1921	2330476
A	261m W	Tramway Sidings	1895	2278703
A	262m W	Unspecified Heap	1898	2188103



ID	Location	Land use	Dates present	Group ID
A	262m W	Unspecified Ground Workings	1899	2231401
K	264m NW	Unspecified Depot	1973	2170368
K	264m NW	Corporation Depot	1985 - 1995	2242555
K	264m NW	Unspecified Works	1967	2257164
A	266m W	Tramway Sidings	1866	2313294
A	268m W	Clay Pits	1866	2200947
A	270m W	Unspecified Ground Workings	1921	2244453
A	272m W	Unspecified Ground Workings	1938	2263129
A	273m W	Refinery	1995	2261234
D	273m NW	Cuttings	1938	2157891
L	276m W	Unspecified Works	1973	2225549
A	279m SW	Unspecified Tank	1907	2226185
A	282m SW	Unspecified Tank	1921	2220869
A	282m SW	Unspecified Tank	1938	2238504
K	290m NW	Unspecified Works	1958	2271875
D	295m NW	Railway Building	1967 - 1995	2204067
D	296m NW	Unspecified Tank	1938	2193087
N	300m SW	Unspecified Pit	1907 - 1921	2220721
N	300m SW	Old Clay Pit	1895 - 1898	2255111
K	302m W	Brick Works	1869	2282446
K	302m W	Tramway Sidings	1869	2291197
N	302m SW	Unspecified Pit	1866	2202889
K	307m W	Brick Works	1869	2273372
7	307m W	Clay Pits	1866	2200948
K	310m W	Tramway Sidings	1869	2307033
8	312m S	Marshes	1898	2201053
D	315m NW	Railway Building	1967 - 1995	2277853
10	322m W	Clay Pits	1869	2200906



ID	Location	Land use	Dates present	Group ID
O	333m W	Clay Pits	1869	2263950
N	333m SW	Unspecified Pit	1938	2210040
O	339m W	Clay Pits	1869	2227244
12	364m S	Unspecified Heap	1973	2188140
P	365m SE	Unspecified Works	1985 - 1995	2326085
Q	367m SE	Gravel Pit	1939	2243307
P	370m SE	Gravel Pit	1958	2304166
13	382m S	Unspecified Ground Workings	1985 - 1995	2302050
I	383m NW	Engine Shed	1921	2290964
I	388m NW	Engine Shed	1938	2217637
I	389m NW	Engine Shed	1931	2226114
I	389m NW	Engine Shed	1940 - 1958	2300955
I	390m NW	Unspecified Works	1967 - 1995	2303790
I	391m NW	Engine Shed	1907	2296978
P	398m SE	Railway Sidings	1939	2200668
A	410m W	Unspecified Ground Workings	1938	2307085
14	412m E	Unspecified Depot	1985 - 1995	2238369
P	415m SE	Unspecified Ground Workings	1939	2165243
P	417m SE	Unspecified Pit	1958	2178830
S	460m S	Railway Sidings	1931	2326662
T	463m SE	Unspecified Pit	1938	2278394
T	463m SE	Unspecified Pit	1921	2217397
T	465m SE	Unspecified Pit	1931	2220529
T	465m SE	Unspecified Pit	1907	2232109
T	465m SE	Unspecified Pit	1895	2274919
T	467m SE	Unspecified Ground Workings	1898	2165244
S	472m S	Unspecified Commercial/Industrial	1939	2171613
I	475m NW	Railway Building	1921	2274349



ID	Location	Land use	Dates present	Group ID
S	479m S	Railway Sidings	1939	2301193
S	479m S	Unspecified Ground Workings	1958	2165158
I	480m NW	Railway Building	1938	2210619

This data is sourced from Ordnance Survey / Groundsure.

1.2 Historical tanks

Records within 500m

90

Tank features digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale, intelligently grouped into contiguous features. To prevent misrepresentation of the size of historical features at any given time, features are only grouped if they have similar geometries within immediately preceding or succeeding map editions. See section 2 for a breakdown of grouping if required. Grouped and the original ungrouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

Features are displayed on the Past land use map on [page 15 >](#)

ID	Location	Land use	Dates present	Group ID
A	On site	Tanks	1974	377199
A	On site	Tanks	1974	377200
A	On site	Tanks	1974	377203
A	On site	Tanks	1992	377205
A	On site	Unspecified Tank	1964	384853
A	On site	Unspecified Tank	1992	384859
A	On site	Tanks	1961 - 1974	400395
A	On site	Tanks	1974 - 1992	401098
A	On site	Unspecified Tank	1961	401126
A	On site	Unspecified Tank	1964	404536
A	On site	Unspecified Tank	1974	404945
A	On site	Tanks	1974 - 1992	405648
A	On site	Unspecified Tank	1974	407992
A	On site	Tanks	1974	408443
A	On site	Tanks	1974 - 1992	409249



ID	Location	Land use	Dates present	Group ID
A	On site	Tanks	1992	410396
A	On site	Unspecified Tank	1992	411779
A	On site	Unspecified Tank	1961	412867
A	On site	Unspecified Tank	1964	416596
A	On site	Tanks	1961 - 1974	416820
A	On site	Tanks	1992	419423
A	On site	Tanks	1974 - 1992	419596
A	On site	Tanks	1974 - 1992	422341
A	On site	Unspecified Tank	1961	422684
A	On site	Tanks	1974	422864
A	On site	Tanks	1961 - 1964	424734
A	On site	Tanks	1974 - 1992	425268
A	On site	Unspecified Tank	1964	425629
A	On site	Tanks	1974	430811
A	On site	Tanks	1974	430979
A	On site	Unspecified Tank	1974	431838
A	2m SW	Unspecified Tank	1961	404802
A	2m SW	Unspecified Tank	1974 - 1992	421851
A	8m SW	Unspecified Tank	1909 - 1938	414402
A	9m N	Tanks	1992	377204
B	12m S	Tanks	1974 - 1992	425911
B	13m S	Unspecified Tank	1992	384860
B	13m S	Tanks	1974	377202
A	43m SW	Tanks	1974 - 1992	425927
A	44m SW	Tanks	1974 - 1992	425676
A	56m W	Unspecified Tank	1992	384858
A	63m SW	Tanks	1974 - 1992	407103
A	95m SW	Tanks	1974 - 1992	409852



ID	Location	Land use	Dates present	Group ID
A	119m W	Tanks	1974 - 1992	415332
A	122m SW	Unspecified Tank	1974 - 1992	415603
A	126m SW	Tanks	1961 - 1974	409676
A	147m SW	Unspecified Tank	1974	415828
A	147m SW	Unspecified Tank	1961	426925
A	148m SW	Unspecified Tank	1938	384850
A	150m SW	Unspecified Tank	1938	384851
A	150m W	Tanks	1974 - 1992	406573
A	167m W	Tanks	1974	377201
A	179m SW	Tanks	1974	410145
A	179m SW	Tanks	1961	425126
A	179m SW	Unspecified Tank	1992	427730
A	179m SW	Tanks	1964	405292
A	179m SW	Unspecified Tank	1974 - 1992	428931
A	181m SW	Unspecified Tank	1974	384855
A	183m SW	Unspecified Tank	1982	410285
A	184m SW	Tanks	1983	415435
A	184m SW	Tanks	1961 - 1975	423514
A	184m SW	Tanks	1992	431561
A	187m SW	Unspecified Tank	1982 - 1992	409794
A	191m W	Tanks	1992	377206
A	192m W	Unspecified Tank	1974	384856
A	192m SW	Tanks	1983 - 1992	424534
A	197m SW	Tanks	1992	419729
A	197m SW	Tanks	1983	399580
A	201m SW	Unspecified Tank	1982	422694
A	201m SW	Unspecified Tank	1992	421144
A	202m SW	Tanks	1974 - 1992	431476



ID	Location	Land use	Dates present	Group ID
A	202m SW	Unspecified Tank	1983	429347
A	202m SW	Unspecified Tank	1975	430657
A	204m SW	Tanks	1974	420187
A	204m SW	Tanks	1992	411362
A	205m SW	Tanks	1974	424224
A	226m SW	Unspecified Tank	1975 - 1992	400146
A	252m SW	Unspecified Tank	1909	384849
A	254m SW	Tanks	1983 - 1992	430533
A	257m W	Unspecified Tank	1992	384857
J	261m SW	Unspecified Tank	1974	403579
J	261m SW	Unspecified Tank	1992	409377
A	312m W	Unspecified Tank	1968 - 1992	421077
9	316m SW	Unspecified Tank	1974 - 1992	400066
A	325m W	Unspecified Tank	1968 - 1992	404910
A	332m W	Unspecified Tank	1968	411663
A	332m W	Unspecified Tank	1985 - 1992	415155
A	343m W	Unspecified Tank	1968	384854
A	350m W	Tanks	1968	377198
15	493m NW	Tanks	1961	377207

This data is sourced from Ordnance Survey / Groundsure.

1.3 Historical energy features

Records within 500m

11

Energy features digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale, intelligently grouped into contiguous features. To prevent misrepresentation of the size of historical features at any given time, features are only grouped if they have similar geometries within immediately preceding or succeeding map editions. See section 2 for a breakdown of grouping if required. Grouped and the original ungrouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

Features are displayed on the Past land use map on [page 15 >](#)



ID	Location	Land use	Dates present	Group ID
A	On site	Electricity Substation	1974 - 1992	287059
A	123m SW	Electricity Substation	1974 - 1992	291040
F	133m NW	Electricity Substation	1992	269748
A	157m W	Electricity Substation	1974 - 1992	290826
M	289m S	Electricity Substation	1992	296626
M	289m S	Electricity Substation	1983	299064
M	289m S	Electricity Substation	1982	314202
L	344m W	Electricity Substation	1968 - 1992	322669
A	431m W	Electricity Substation	1968 - 1985	288499
A	445m W	Electricity Substation	1992	293816
Q	499m SE	Electricity Substation	1994	287652

This data is sourced from Ordnance Survey / Groundsure.

1.4 Historical petrol stations

Records within 500m

0

Petrol stations digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale, intelligently grouped into contiguous features. To prevent misrepresentation of the size of historical features at any given time, features are only grouped if they have similar geometries within immediately preceding or succeeding map editions. See section 2 for a breakdown of grouping if required. Grouped and the original ungrouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

This data is sourced from Ordnance Survey / Groundsure.

1.5 Historical garages

Records within 500m

4

Garages digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale, intelligently grouped into contiguous features. To prevent misrepresentation of the size of historical features at any given time, features are only grouped if they have similar geometries within immediately preceding or succeeding map editions. See section 2 for a breakdown of grouping if required. Grouped and the original ungrouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

Features are displayed on the Past land use map on [page 15 >](#)



ID	Location	Land use	Dates present	Group ID
11	354m N	Garage	1963	81519
R	405m W	Garage	1992	95045
R	405m W	Garage	1968	85029
R	405m W	Garage	1985	82959

This data is sourced from Ordnance Survey / Groundsure.

1.6 Historical military land

Records within 500m

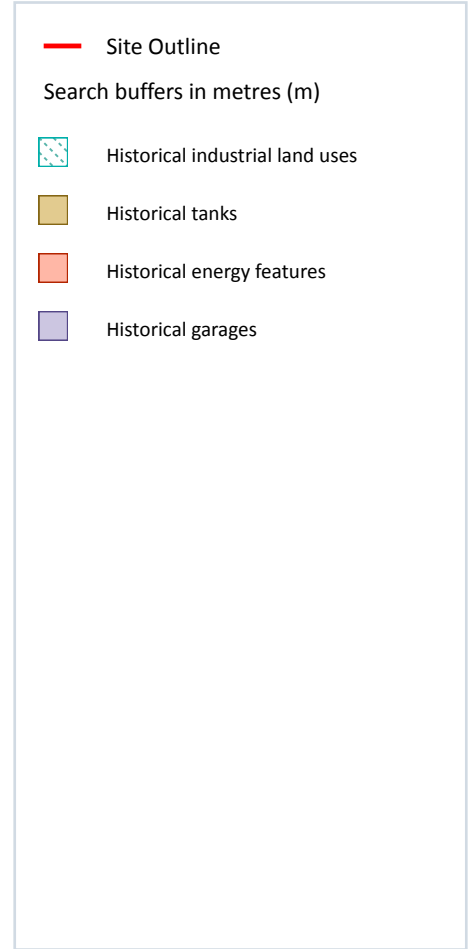
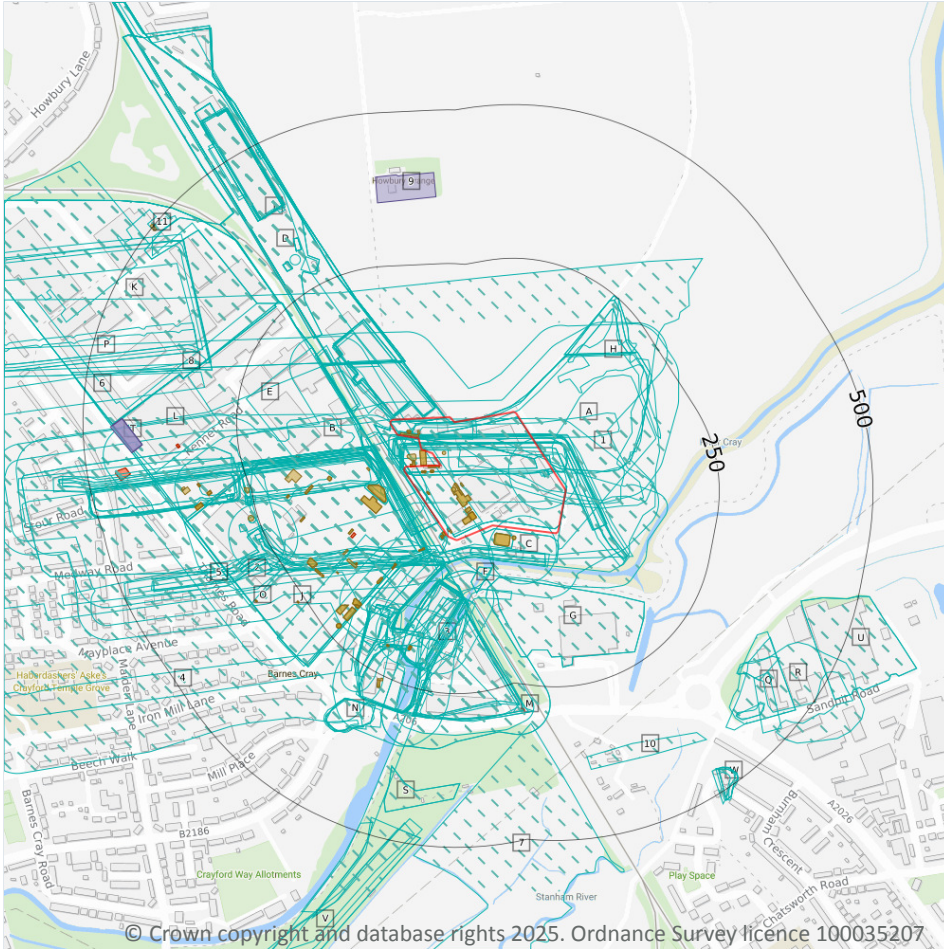
0

Areas of military land digitised from multiple sources including the National Archives, local records, MOD records and verified other sources, intelligently grouped into contiguous features.

This data is sourced from Ordnance Survey / Groundsure / other sources.



2 Past land use - un-grouped



2.1 Historical industrial land uses

Records within 500m

267

Potentially contaminative land use features digitised from historical Ordnance Survey mapping at 1:10,000 and 10,560 scale. Any records shown are available intelligently grouped in section 1. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

Features are displayed on the Past land use - un-grouped map on [page 29](#) >

ID	Location	Land Use	Date	Group ID
1	On site	Unspecified Pit	1967	2178719
A	On site	Unspecified Heap	1931	2246696
A	On site	Tramway Sidings	1938	2266988

ID	Location	Land Use	Date	Group ID
A	On site	Engine House	1938	2332465
A	On site	Railway Sidings	1939	2268547
A	On site	Railway Sidings	1931	2327313
A	On site	Engine House	1907	2253513
A	On site	Railway Sidings	1907	2256834
A	On site	Engine House	1895	2203737
A	On site	Tramway Sidings	1895	2300859
A	On site	Tramway Sidings	1895	2202609
A	On site	Engine House	1895	2311319
A	On site	Brick Works	1921	2214338
A	On site	Brick Field	1866	2158552
A	On site	Brick Works	1907	2202310
A	On site	Brick Works	1895	2244494
A	On site	Pottery Works	1939	2183790
A	On site	Engine House	1921	2286122
A	On site	Brick and Tile Works	1931	2202391
A	On site	Unspecified Heap	1898	2230053
A	On site	Engine House	1898	2269106
A	On site	Tramway Sidings	1898	2254619
A	On site	Tramway Sidings	1899	2289802
A	On site	Engine House	1899	2286147
A	On site	Tramway Sidings	1899	2289802
A	On site	Engine House	1899	2269847
A	On site	Refuse Heap	1938	2212850
A	On site	Railway Sidings	1938	2327313
A	On site	Unspecified Heap	1938	2323680
A	On site	Unspecified Works	1973	2219368
A	On site	Unspecified Works	1967	2329362



ID	Location	Land Use	Date	Group ID
A	On site	Tramway Sidings	1921	2249120
A	On site	Unspecified Works	1995	2219368
A	On site	Unspecified Works	1985	2219368
A	On site	Refuse Heap	1938	2212850
A	On site	Unspecified Heap	1938	2323680
A	On site	Gravel Pit	1939	2193958
B	On site	Brick Works	1938	2253394
C	On site	Unspecified Wharf	1967	2189911
D	On site	Railway Sidings	1973	2309012
D	On site	Railway Sidings	1967	2279100
D	On site	Railway Sidings	1958	2279100
D	On site	Railway Sidings	1995	2309012
D	On site	Railway Sidings	1985	2309012
A	1m N	Engine Shed	1958	2274053
A	3m SW	Unspecified Tank	1938	2327962
A	3m N	Engine Shed	1931	2323565
A	3m N	Engine Shed	1939	2323565
A	4m SW	Unspecified Tank	1939	2327962
A	4m SW	Railway Sidings	1866	2248179
A	4m N	Unspecified Works	1973	2323317
A	4m N	Unspecified Works	1967	2323317
A	4m N	Unspecified Works	1995	2207506
A	4m N	Unspecified Works	1985	2323317
A	5m SW	Unspecified Tank	1931	2284792
A	5m SW	Unspecified Tank	1907	2222040
C	5m S	Unspecified Commercial/Industrial	1995	2314526
C	5m S	Unspecified Commercial/Industrial	1985	2314526
A	6m SW	Unspecified Tank	1938	2256082



ID	Location	Land Use	Date	Group ID
A	6m SW	Unspecified Tank	1958	2231281
A	7m N	Engine Shed	1938	2323565
A	8m SW	Unspecified Tank	1921	2281499
C	12m S	Unspecified Tanks	1995	2231944
C	12m S	Unspecified Tanks	1985	2231944
A	15m S	Tramway Sidings	1938	2206975
A	15m S	Tramway Sidings	1921	2222629
A	20m SW	Brick Works	1895	2297551
A	20m SW	Tramway Sidings	1895	2224703
A	22m S	Tramway Sidings	1898	2275772
A	24m S	Unspecified Wharf	1895	2319909
A	25m SW	Refinery	1995	2219081
A	25m SW	Refinery	1985	2219081
A	26m SW	Unspecified Works	1973	2224784
A	26m SW	Unspecified Works	1967	2224784
B	26m SW	Unspecified Works	1967	2235843
A	27m SW	Brick and Tile Works	1938	2202392
A	27m SW	Brick and Tile Works	1938	2202393
A	29m SW	Brick Works	1898	2297551
A	29m SW	Brick Works	1899	2207556
A	29m SW	Tramway Sidings	1899	2295767
A	29m SW	Brick Works	1899	2207556
A	29m SW	Tramway Sidings	1899	2295767
A	38m W	Engine House	1907	2292664
A	38m W	Engine House	1895	2241774
A	39m W	Unspecified Heap	1898	2210306
A	39m SW	Unspecified Wharf	1931	2226709
A	39m SW	Unspecified Tank	1995	2327163



ID	Location	Land Use	Date	Group ID
A	39m SW	Unspecified Tank	1985	2327163
A	39m W	Unspecified Heap	1938	2229559
A	39m W	Unspecified Heap	1938	2229559
E	39m W	Unspecified Works	1995	2224784
E	39m W	Unspecified Works	1985	2224784
A	40m SW	Unspecified Wharf	1973	2222945
A	40m SW	Unspecified Wharf	1967	2222945
2	40m SW	Tramway Sidings	1866	2224703
A	43m W	Unspecified Heap	1931	2252210
A	44m SW	Unspecified Wharf	1938	2270568
A	44m SW	Unspecified Wharf	1938	2270568
A	44m SW	Sawmills	1958	2222682
A	45m S	Unspecified Wharf	1895	2306422
A	46m SW	Unspecified Wharf	1995	2287207
A	46m SW	Unspecified Wharf	1985	2287207
A	48m SW	Unspecified Tanks	1995	2281434
A	48m SW	Unspecified Tanks	1985	2281434
A	51m S	Unspecified Works	1939	2209772
A	51m S	Ply Works	1931	2161352
F	54m SE	Unspecified Wharf	1995	2217225
F	54m SE	Unspecified Wharf	1985	2217225
A	56m W	Clay Pits	1866	2200945
A	56m NW	Cuttings	1907	2236015
A	59m NW	Cuttings	1921	2326736
A	59m NW	Cuttings	1938	2280588
A	62m W	Gravel Pit	1939	2194450
A	69m S	Flour Mills	1938	2220118
A	70m S	Sawmills	1938	2285228



ID	Location	Land Use	Date	Group ID
A	72m S	Sawmills	1907	2256863
A	72m S	Industrial Estate	1995	2239181
A	72m S	Industrial Estate	1985	2239181
A	73m SW	Flour Mills	1939	2240300
A	73m SW	Sawmills	1931	2319275
A	75m S	Unspecified Mills	1898	2304988
A	75m S	Unspecified Wharf	1898	2223309
G	82m SE	Unspecified Depot	1995	2288780
G	82m SE	Unspecified Depot	1985	2288780
H	87m NE	Unspecified Ground Workings	1967	2165115
A	90m N	Railway Building	1931	2235677
A	90m SW	Unspecified Wharf	1898	2228452
A	90m S	Railway Sidings	1958	2295336
A	93m S	Ply Work	1938	2200831
A	94m N	Railway Building	1938	2235677
I	95m N	Railway Sidings	1940	2291449
I	95m N	Railway Sidings	1931	2301928
I	95m N	Railway Sidings	1907	2322868
I	95m N	Railway Sidings	1907	2322868
I	95m N	Railway Sidings	1907	2322868
I	95m N	Railway Sidings	1907	2301130
I	95m N	Railway Sidings	1907	2322868
3	95m S	Railway Sidings	1938	2322196
A	95m S	Railway Sidings	1931	2320916
A	95m S	Railway Sidings	1931	2246670
A	96m N	Railway Building	1940	2261540
A	96m S	Railway Sidings	1939	2298389
A	96m SW	Sawmills	1939	2292939



ID	Location	Land Use	Date	Group ID
A	97m S	Unspecified Works	1921	2281851
A	101m S	Unspecified Works	1907	2281851
A	101m S	Disused Sugar Works	1895	2228688
A	104m S	Unspecified Works	1958	2230643
I	116m NW	Railway Sidings	1938	2327313
A	118m S	Unspecified Works	1973	2241315
A	118m S	Unspecified Works	1967	2241315
A	122m S	Sawmills	1866	2327692
A	122m S	Unspecified Works	1938	2243220
H	124m NE	Refuse Heap	1940	2264162
H	124m NE	Refuse Heap	1931	2309840
H	125m NE	Unspecified Heap	1938	2250986
H	125m NE	Unspecified Heap	1938	2250986
A	139m SW	Sawmills	1921	2300046
A	143m SW	Railway Sidings	1907	2248941
A	143m SW	Unspecified Mill	1973	2206811
A	143m SW	Unspecified Mill	1967	2206811
A	149m S	Disused Sugar Works	1898	2228688
A	149m SW	Unspecified Mills	1895	2304988
A	152m SW	Sawmills	1938	2204832
A	154m SW	Unspecified Tank	1866	2193264
A	156m SW	Flour Mills	1931	2287668
A	162m SW	Sawmills	1898	2291498
A	165m SW	Sawmills	1895	2291498
I	180m NW	Railway Sidings	1938	2314324
I	180m NW	Railway Sidings	1921	2244891
A	190m SW	Mill Pond	1907	2252836
A	190m SW	Mill Pond	1895	2308366



ID	Location	Land Use	Date	Group ID
A	195m SW	Mill Pond	1898	2308366
A	198m SW	Iron Mill	1895	2241200
A	199m SW	Mill Pond	1921	2238104
A	199m SW	Mill Pond	1938	2242971
A	224m W	Unspecified Works	1958	2257642
4	238m SW	Clay Pits	1866	2200946
5	238m SW	Tramway Sidings	1895	2245426
A	246m W	Engine House	1895	2313145
A	252m W	Engine House	1898	2275584
A	253m W	Engine House	1899	2276050
A	253m W	Engine House	1899	2276050
A	255m W	Unspecified Tank	1995	2203080
A	255m W	Unspecified Tank	1985	2203080
A	255m SW	Iron Mill	1899	2258187
A	255m SW	Iron Mill	1899	2258187
A	256m W	Engine House	1938	2211861
A	256m W	Engine House	1921	2330476
A	261m W	Tramway Sidings	1895	2278703
A	262m W	Unspecified Heap	1898	2188103
A	262m W	Unspecified Ground Workings	1899	2231401
A	262m W	Unspecified Ground Workings	1899	2231401
K	264m NW	Unspecified Depot	1973	2170368
K	264m NW	Unspecified Works	1967	2257164
K	264m NW	Corporation Depot	1995	2242555
K	264m NW	Corporation Depot	1985	2242555
A	266m W	Tramway Sidings	1866	2313294
A	268m W	Clay Pits	1866	2200947
A	270m W	Unspecified Ground Workings	1921	2244453



ID	Location	Land Use	Date	Group ID
A	272m W	Unspecified Ground Workings	1938	2263129
A	273m W	Refinery	1995	2261234
D	273m NW	Cuttings	1938	2157891
L	276m W	Unspecified Works	1973	2225549
A	279m SW	Unspecified Tank	1907	2226185
A	282m SW	Unspecified Tank	1938	2238504
A	282m SW	Unspecified Tank	1921	2220869
K	290m NW	Unspecified Works	1958	2271875
D	295m NW	Railway Building	1973	2204067
D	295m NW	Railway Building	1967	2204067
D	295m NW	Railway Building	1995	2204067
D	295m NW	Railway Building	1985	2204067
D	296m NW	Unspecified Tank	1938	2193087
N	300m SW	Unspecified Pit	1907	2220721
N	300m SW	Old Clay Pit	1895	2255111
N	302m SW	Old Clay Pit	1898	2255111
K	302m W	Brick Works	1869	2282446
K	302m W	Tramway Sidings	1869	2291197
N	302m SW	Unspecified Pit	1866	2202889
N	306m SW	Unspecified Pit	1921	2220721
K	307m W	Brick Works	1869	2273372
6	307m W	Clay Pits	1866	2200948
K	310m W	Tramway Sidings	1869	2307033
7	312m S	Marshes	1898	2201053
D	315m NW	Railway Building	1973	2277853
D	315m NW	Railway Building	1967	2277853
D	315m NW	Railway Building	1995	2277853
D	315m NW	Railway Building	1985	2277853



ID	Location	Land Use	Date	Group ID
8	322m W	Clay Pits	1869	2200906
P	333m W	Clay Pits	1869	2263950
N	333m SW	Unspecified Pit	1938	2210040
P	339m W	Clay Pits	1869	2227244
10	364m S	Unspecified Heap	1973	2188140
Q	365m SE	Unspecified Works	1995	2326085
R	367m SE	Gravel Pit	1939	2243307
Q	370m SE	Gravel Pit	1958	2304166
Q	376m SE	Unspecified Works	1985	2326085
S	382m S	Unspecified Ground Workings	1995	2302050
S	382m S	Unspecified Ground Workings	1985	2302050
I	383m NW	Engine Shed	1921	2290964
I	388m NW	Engine Shed	1938	2217637
I	389m NW	Engine Shed	1940	2300955
I	389m NW	Engine Shed	1931	2226114
I	390m NW	Engine Shed	1938	2217637
I	390m NW	Unspecified Works	1973	2303790
I	390m NW	Unspecified Works	1967	2303790
I	390m NW	Engine Shed	1958	2300955
I	390m NW	Unspecified Works	1995	2303790
I	390m NW	Unspecified Works	1985	2303790
I	391m NW	Engine Shed	1907	2296978
Q	398m SE	Railway Sidings	1939	2200668
A	410m W	Unspecified Ground Workings	1938	2307085
U	412m E	Unspecified Depot	1995	2238369
U	412m E	Unspecified Depot	1985	2238369
Q	415m SE	Unspecified Ground Workings	1939	2165243
Q	417m SE	Unspecified Pit	1958	2178830



ID	Location	Land Use	Date	Group ID
V	460m S	Railway Sidings	1931	2326662
W	463m SE	Unspecified Pit	1938	2278394
W	463m SE	Unspecified Pit	1921	2217397
W	465m SE	Unspecified Pit	1931	2220529
W	465m SE	Unspecified Pit	1907	2232109
W	465m SE	Unspecified Pit	1895	2274919
W	467m SE	Unspecified Ground Workings	1898	2165244
V	472m S	Unspecified Commercial/Industrial	1939	2171613
I	475m NW	Railway Building	1921	2274349
V	479m S	Railway Sidings	1939	2301193
V	479m S	Unspecified Ground Workings	1958	2165158
I	480m NW	Railway Building	1938	2210619

This data is sourced from Ordnance Survey / Groundsure.

2.2 Historical tanks

Records within 500m

130

Tank features digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale. Any records shown are available intelligently grouped in section 1. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

Features are displayed on the Past land use - un-grouped map on [page 29 >](#)

ID	Location	Land Use	Date	Group ID
A	On site	Tanks	1992	419596
A	On site	Tanks	1992	425268
A	On site	Tanks	1992	377205
A	On site	Tanks	1992	419423
A	On site	Tanks	1992	409249
A	On site	Unspecified Tank	1992	411779
A	On site	Unspecified Tank	1992	384859
A	On site	Tanks	1992	401098



ID	Location	Land Use	Date	Group ID
A	On site	Tanks	1992	410396
A	On site	Tanks	1992	405648
A	On site	Tanks	1992	422341
A	On site	Unspecified Tank	1961	412867
A	On site	Tanks	1961	416820
A	On site	Unspecified Tank	1961	422684
A	On site	Unspecified Tank	1961	401126
A	On site	Tanks	1961	424734
A	On site	Tanks	1961	400395
A	On site	Tanks	1974	400395
A	On site	Tanks	1974	408443
A	On site	Tanks	1974	422341
A	On site	Tanks	1974	430979
A	On site	Tanks	1974	422864
A	On site	Tanks	1974	377199
A	On site	Tanks	1974	430811
A	On site	Tanks	1974	401098
A	On site	Tanks	1974	416820
A	On site	Tanks	1974	425268
A	On site	Tanks	1974	409249
A	On site	Unspecified Tank	1974	404945
A	On site	Unspecified Tank	1974	407992
A	On site	Unspecified Tank	1974	431838
A	On site	Tanks	1974	419596
A	On site	Tanks	1974	377200
A	On site	Tanks	1974	377203
A	On site	Tanks	1964	416820
A	On site	Unspecified Tank	1964	404536



ID	Location	Land Use	Date	Group ID
A	On site	Unspecified Tank	1964	425629
A	On site	Tanks	1964	400395
A	On site	Unspecified Tank	1964	384853
A	On site	Tanks	1964	424734
A	On site	Unspecified Tank	1964	416596
A	On site	Tanks	1974	405648
A	2m SW	Unspecified Tank	1961	404802
A	2m SW	Unspecified Tank	1974	421851
A	2m SW	Unspecified Tank	1992	421851
A	8m SW	Unspecified Tank	1909	414402
A	8m SW	Unspecified Tank	1933	414402
A	8m SW	Unspecified Tank	1938	414402
A	9m N	Tanks	1992	377204
C	12m S	Tanks	1992	425911
C	12m S	Tanks	1974	425911
C	13m S	Unspecified Tank	1992	384860
C	13m S	Tanks	1974	377202
A	43m SW	Tanks	1974	425927
A	43m SW	Tanks	1992	425927
A	44m SW	Tanks	1974	425676
A	44m SW	Tanks	1992	425676
A	56m W	Unspecified Tank	1992	384858
A	63m SW	Tanks	1992	407103
A	63m SW	Tanks	1974	407103
A	95m SW	Tanks	1974	409852
A	95m SW	Tanks	1992	409852
A	119m W	Tanks	1992	415332
A	119m W	Tanks	1974	415332



ID	Location	Land Use	Date	Group ID
A	122m SW	Unspecified Tank	1992	415603
A	123m SW	Unspecified Tank	1974	415603
A	126m SW	Tanks	1964	409676
A	126m SW	Tanks	1961	409676
A	126m SW	Tanks	1974	409676
A	147m SW	Unspecified Tank	1961	426925
A	147m SW	Unspecified Tank	1974	415828
A	148m SW	Unspecified Tank	1938	384850
A	150m SW	Unspecified Tank	1938	384851
A	150m W	Tanks	1992	406573
A	151m W	Tanks	1974	406573
A	167m W	Tanks	1974	377201
A	179m SW	Tanks	1961	425126
A	179m SW	Tanks	1974	410145
A	179m SW	Unspecified Tank	1992	427730
A	179m SW	Tanks	1964	405292
A	179m SW	Unspecified Tank	1992	428931
A	179m SW	Unspecified Tank	1974	428931
A	181m SW	Unspecified Tank	1974	384855
A	183m SW	Unspecified Tank	1982	410285
A	184m SW	Tanks	1983	415435
A	184m SW	Tanks	1975	423514
A	184m SW	Tanks	1961	423514
A	184m SW	Tanks	1992	431561
A	187m SW	Unspecified Tank	1992	409794
A	187m SW	Unspecified Tank	1982	409794
A	188m S	Unspecified Tank	1983	409794
A	191m W	Tanks	1992	377206



ID	Location	Land Use	Date	Group ID
A	192m W	Unspecified Tank	1974	384856
A	192m SW	Tanks	1992	424534
A	192m SW	Tanks	1983	424534
A	197m SW	Tanks	1992	419729
A	197m SW	Tanks	1983	399580
A	201m SW	Unspecified Tank	1982	422694
A	201m SW	Unspecified Tank	1992	421144
A	202m SW	Tanks	1992	431476
A	202m SW	Tanks	1974	431476
A	202m SW	Unspecified Tank	1983	429347
A	202m SW	Unspecified Tank	1975	430657
A	204m SW	Tanks	1974	420187
A	204m SW	Tanks	1992	411362
A	205m SW	Tanks	1974	424224
A	226m SW	Unspecified Tank	1982	400146
A	226m SW	Unspecified Tank	1983	400146
A	226m SW	Unspecified Tank	1975	400146
A	226m SW	Unspecified Tank	1992	400146
A	252m SW	Unspecified Tank	1909	384849
A	254m SW	Tanks	1983	430533
A	257m W	Unspecified Tank	1992	384857
A	259m SW	Tanks	1992	430533
J	261m SW	Unspecified Tank	1974	403579
J	261m SW	Unspecified Tank	1992	409377
A	312m W	Unspecified Tank	1968	421077
A	312m W	Unspecified Tank	1992	421077
A	312m W	Unspecified Tank	1985	421077
O	316m SW	Unspecified Tank	1974	400066



ID	Location	Land Use	Date	Group ID
O	317m SW	Unspecified Tank	1992	400066
A	325m W	Unspecified Tank	1992	404910
A	325m W	Unspecified Tank	1968	404910
A	326m W	Unspecified Tank	1985	404910
A	332m W	Unspecified Tank	1968	411663
A	332m W	Unspecified Tank	1992	415155
A	332m W	Unspecified Tank	1985	415155
A	343m W	Unspecified Tank	1968	384854
A	350m W	Tanks	1968	377198
11	493m NW	Tanks	1961	377207

This data is sourced from Ordnance Survey / Groundsure.

2.3 Historical energy features

Records within 500m

17

Energy features digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale. Any records shown are available intelligently grouped in section 1. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

Features are displayed on the Past land use - un-grouped map on [page 29 >](#)

ID	Location	Land Use	Date	Group ID
A	On site	Electricity Substation	1992	287059
A	On site	Electricity Substation	1974	287059
A	123m SW	Electricity Substation	1992	291040
A	124m SW	Electricity Substation	1974	291040
A	133m NW	Electricity Substation	1992	269748
A	157m W	Electricity Substation	1992	290826
A	157m W	Electricity Substation	1974	290826
M	289m S	Electricity Substation	1992	296626
M	289m S	Electricity Substation	1983	299064
M	289m S	Electricity Substation	1982	314202



ID	Location	Land Use	Date	Group ID
L	344m W	Electricity Substation	1968	322669
L	345m W	Electricity Substation	1985	322669
L	345m W	Electricity Substation	1992	322669
A	431m W	Electricity Substation	1985	288499
A	431m W	Electricity Substation	1968	288499
A	445m W	Electricity Substation	1992	293816
R	499m SE	Electricity Substation	1994	287652

This data is sourced from Ordnance Survey / Groundsure.

2.4 Historical petrol stations

Records within 500m	0
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Petrol stations digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale. Any records shown are available intelligently grouped in section 1. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

This data is sourced from Ordnance Survey / Groundsure.

2.5 Historical garages

Records within 500m	4
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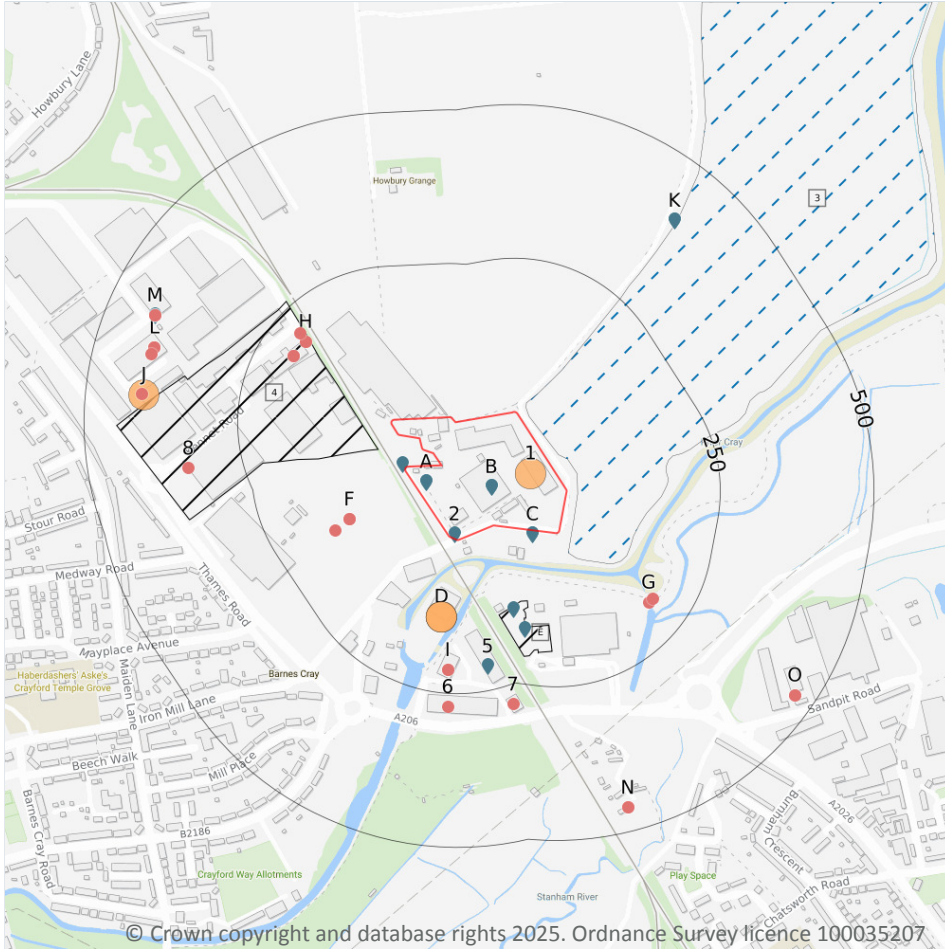
Garages digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale. Any records shown are available intelligently grouped in section 1. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

Features are displayed on the Past land use - un-grouped map on [page 29 >](#)

ID	Location	Land Use	Date	Group ID
9	354m N	Garage	1963	81519
T	405m W	Garage	1992	95045
T	405m W	Garage	1968	85029
T	405m W	Garage	1985	82959

This data is sourced from Ordnance Survey / Groundsure.

3 Waste and landfill



3.1 Active or recent landfill

Records within 500m

1

Active or recently closed landfill sites under Environment Agency/Natural Resources Wales regulation. Features are displayed on the Waste and landfill map on [page 46](#) >

ID	Location	Details	
3	14m NE	Operator: Erith Environmental Services Limited Site Address: Erith Environmental Services Limited, Off Crayford Marshes Landfill Site, Thames Road, Crayford Marshes, Slade Green, Kent, DA8 2NE	WML Number: 83226 EPR Reference: 633009 Landfill type: A05: Landfill taking Non-Biodegradable Wastes Status: Closure IPPC Reference: - EPR Number: EA/EPR/LP3990EQ

This data is sourced from the Environment Agency and Natural Resources Wales.

3.2 Historical landfill (BGS records)

Records within 500m

0

Landfill sites identified on a survey carried out on behalf of the DoE in 1973. These sites may have been closed or operational at this time.

This data is sourced from the British Geological Survey.

3.3 Historical landfill (LA/mapping records)

Records within 500m

0

Landfill sites identified from Local Authority records and high detail historical mapping.

This data is sourced from the Ordnance Survey/Groundsure and Local Authority records.

3.4 Historical landfill (EA/NRW records)

Records within 500m

2

Known historical (closed) landfill sites (e.g. sites where there is no PPC permit or waste management licence currently in force). This includes sites that existed before the waste licensing regime and sites that have been licensed in the past but where a licence has been revoked, ceased to exist or surrendered and a certificate of completion has been issued.

Features are displayed on the Waste and landfill map on [page 46 >](#)

ID	Location	Details		
4	41m SW	Site Address: Kennett Road, Dartford Licence Holder Address: -	Waste Licence: - Site Reference: 8BX015, G9 Waste Type: Inert, Industrial Environmental Permitting Regulations (Waste) Reference: - Licence Issue: - Licence Surrender: -	Operator: - Licence Holder: London Borough of Bexley First Recorded 31/12/1952 Last Recorded: 31/12/1960
E	115m S	Site Address: Depot, Thames Road Licence Holder Address: -	Waste Licence: - Site Reference: BEX012 Waste Type: - Environmental Permitting Regulations (Waste) Reference: - Licence Issue: - Licence Surrender: -	Operator: - Licence Holder: - First Recorded - Last Recorded: -

This data is sourced from the Environment Agency and Natural Resources Wales.



3.5 Historical waste sites

Records within 500m

4

Waste site records derived from Local Authority planning records and high detail historical mapping. Features are displayed on the Waste and landfill map on [page 46 >](#)

ID	Location	Address	Further Details	Date
1	On site	Site Address: Century Wharf, Crayford Creek, Crayford, Dartford, Kent, DA1 4QG	Type of Site: Materials Recycling Facility (Extension/Alterations) Planning application reference: 18/00326/FULM Description: Scheme comprises paper lines upgrade, comprising an extension to the picking building, the relocation of a compressor and the siting of a storage container, following the demolition of three single storey lean-to buildings. Scheme also includes Translucent Rooflight The associated works include sewer systems, landscaping, cable laying, infrastructure and enabling works. Data source: Historic Planning Application Data Type: Point	12/06/2018
D	103m S	Site Address: Viridor Waste Ltd, Crayford Creek, Century Wharf, Dartford, Kent, DA1 4QG	Type of Site: Material Recycling Facility Building (New/Extension) Planning application reference: 13/01474/FULM Description: Scheme comprises construction of extension of MRF building, demolition of aggregate sorting/grading area and construction of replacement MRF building. The associated works include sewer systems, landscaping, infrastructure, enabling and access roads. Data source: Historic Planning Application Data Type: Point	03/12/2013
D	103m S	Site Address: Stevensons Wharf, Crayford Creek, Crayford, DARTFORD, Kent, DA1 4QG	Type of Site: Recycling Centre (Conversion) Planning application reference: 06/01940/FUL Description: Scheme comprises change of use from a haulage yard to a recycling site, skip hire and use of associated plant and vehicles and retention of site offices. An application (ref: 06/01940/FUL) for detailed planning permission was refused by Bexley L.B. Planning decision obtained Data source: Historic Planning Application Data Type: Point	-



ID	Location	Address	Further Details	Date
J	380m W	Site Address: Unit 9, Optima Park, Thames Road, Crayford, Dartford, Kent, DA1 4QX	Type of Site: Waste Transfer (Conversion) Planning application reference: 20/00454/FULM Description: Scheme comprises change of use from a metal working facility (class B2) to a hazardous waste transfer station for the storage of waste oil. Data source: Historic Planning Application Data Type: Point	16/03/2020

This data is sourced from Ordnance Survey/Groundsure and Local Authority records.

3.6 Licensed waste sites

Records within 500m	16
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Active or recently closed waste sites under Environment Agency/Natural Resources Wales regulation.

Features are displayed on the Waste and landfill map on [page 46 >](#)

ID	Location	Details		
2	On site	Site Name: Nsm Waste Control Ltd, Bexley, Da1 Site Address: R/O Century Wharf, Off Thames Road, Crayford Creek, Bexley, Kent, DA1 4QG Correspondence Address: -	Type of Site: Physico-Chemical Treatment Facility Size: >= 25000 tonnes 75000 tonnes Environmental Permitting Regulations (Waste) Licence Number: 648041 EPR reference: EA/EPR/LP3490EZ Operator: Nsm Waste Control Limited Waste Management licence No: 83230 Annual Tonnage: 39000	Issue Date: 15/08/1991 Effective Date: 15/08/1991 Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Revoked
A	On site	Site Name: Century Wharf Site Address: Century Wharf, Crayford Creek, Crayford, Dartford, DA1 4QG Correspondence Address: Century Wharf, Crayford Creek, Crayford, Kent, DA1 4QG	Type of Site: Material Recycling Treatment Facility Size: >= 75000 tonnes Environmental Permitting Regulations (Waste) Licence Number: GRO004 EPR reference: - Operator: Grosvenor Waste Management Ltd Waste Management licence No: 83464 Annual Tonnage: 150000	Issue Date: 16/08/2004 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued



ID	Location	Details		
A	On site	Site Name: Century Wharf Site Address: Crayford Creek, Crayford, Dartford, D41 4QG Correspondence Address: 31, High Street, Fenstation, Cambridshire, PE28 9JZ	Type of Site: Material Recycling Treatment Facility Size: >= 75000 tonnes Environmental Permitting Regulations (Waste) Licence Number: GRO004 EPR reference: - Operator: Grosvenor Waste Management Waste Management licence No: 83464 Annual Tonnage: 150000	Issue Date: 16/08/2004 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued
B	On site	Site Name: Crayfords Materials Recycliing Facility Site Address: Century Wharf, Crayford Creek, Crayford, Dartford, Kent, DA1 4HQ Correspondence Address: -	Type of Site: Material Recycling Treatment Facility Size: >= 75000 tonnes Environmental Permitting Regulations (Waste) Licence Number: GRO004 EPR reference: EA/EPR/WP3190EA/V004 Operator: Viridor Waste Management Ltd Waste Management licence No: 83464 Annual Tonnage: 350000	Issue Date: 16/08/2004 Effective Date: - Modified: 12/10/2020 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Modified
B	On site	Site Name: Crayfords Materials Recycliing Facility Site Address: Century Wharf, Crayford Creek, Crayford, Dartford, Kent, DA1 4HQ Correspondence Address: -	Type of Site: Material Recycling Treatment Facility Size: >= 75000 tonnes Environmental Permitting Regulations (Waste) Licence Number: LIM001 EPR reference: EA/EPR/KB3806FD/T001 Operator: Limone Waste Ltd Waste Management licence No: 83464 Annual Tonnage: 350000	Issue Date: 16/08/2004 Effective Date: 27/11/2021 Modified: 12/10/2020 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Transferred
B	On site	Site Name: Crayfords Materials Recycliing Facility Site Address: Century Wharf, Crayford Creek, Crayford, Dartford, Kent, DA1 4HQ Correspondence Address: -	Type of Site: Material Recycling Treatment Facility Size: >= 75000 tonnes Environmental Permitting Regulations (Waste) Licence Number: 640907 EPR reference: EA/EPR/KB3806FD Operator: N&p Crayford Mrf Limited Waste Management licence No: 83464 Annual Tonnage: 350000	Issue Date: 16/08/2004 Effective Date: 16/08/2004 Modified: 28/06/2024 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued



ID	Location	Details		
C	7m S	Site Name: Anchor Bay Commercial Haulage Waste Treatment Facility Site Address: Dugdale Wharf, Crayford Creek, Crayford, Kent, DA1 4QG Correspondence Address: -	Type of Site: Material Recycling Treatment Facility Size: 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: DUG007 EPR reference: EA/EPR/GB3534AM/A001 Operator: Mr George Dugdale, Mr Mark Dugdale And Mr Steven Dugdale Waste Management licence No: 104136 Annual Tonnage: 74999	Issue Date: 01/10/2012 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued
C	7m S	Site Name: Anchor Bay Commercial Haulage Waste Treatment Facility Site Address: Dugdale Wharf, Crayford Creek, Crayford, Kent, DA1 4QG Correspondence Address: -	Type of Site: Material Recycling Treatment Facility Size: >= 25000 tonnes 75000 tonnes Environmental Permitting Regulations (Waste) Licence Number: 649741 EPR reference: EA/EPR/GB3534AM Operator: Mr George Dugdale, Mr Mark Dugdale And Mr Steven Dugdale Waste Management licence No: 104136 Annual Tonnage: 74999	Issue Date: 01/10/2012 Effective Date: 01/10/2012 Modified: 01/10/2012 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued
A	7m NW	Site Name: Nsm Waste Control Ltd, Bexley, Da1 Site Address: Century Wharf, Off Thames Rd, Crayford Creek, Bexley, Kent, DA1 4QG Correspondence Address: -	Type of Site: Physico-Chemical Treatment Facility Size: >= 75000 tonnes Environmental Permitting Regulations (Waste) Licence Number: 656277 EPR reference: EA/EPR/LP3290ET Operator: Nsm Waste Control Limited Waste Management licence No: 83231 Annual Tonnage: 114400	Issue Date: 18/06/1996 Effective Date: 18/06/1996 Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Revoked



ID	Location	Details		
E	133m S	Site Name: Thames Road Depot Site Address: Thames Road Depot, Thames Road, Crayford, Dartford, Kent, DA1 5QJ Correspondence Address: -	Type of Site: Household Waste Amenity Site Size: >= 25000 tonnes 75000 tonnes Environmental Permitting Regulations (Waste) Licence Number: 644182 EPR reference: EA/EPR/BP3494HN Operator: Bexley London Borough Council Waste Management licence No: 19563 Annual Tonnage: 74999	Issue Date: 22/09/1992 Effective Date: 22/09/1992 Modified: 22/09/1992 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued
E	162m S	Site Name: Thames Road Depot Site Address: Thames Road Depot, Thames Road, Crayford, Dartford, Kent, DA1 5QJ Correspondence Address: -	Type of Site: Household Waste Amenity Site Size: >= 25000 tonnes 75000 tonnes Environmental Permitting Regulations (Waste) Licence Number: BEX003 EPR reference: BP3494HN/V002 Operator: Bexley Council Waste Management licence No: 19563 Annual Tonnage: 74999	Issue Date: 22/09/1992 Effective Date: - Modified: 06/04/2005 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Modified
5	211m S	Site Name: Thames Road Depot Site Address: Thames Road Depot, Thames Road, Crayford, Dartford, Kent, DA1 5QJ Correspondence Address: Crayford Town Hall, 112, Crayford Road, Crayford, Kent, DA1 4ER	Type of Site: Household, Commercial & Industrial Waste T Stn Size: >= 25000 tonnes 75000 tonnes Environmental Permitting Regulations (Waste) Licence Number: BEX003 EPR reference: - Operator: Bexley Council Waste Management licence No: 19563 Annual Tonnage: 0	Issue Date: 22/09/1992 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued

ID	Location	Details		
K	404m NE	Site Name: Crayford Marshes Landfill, Erith Da8 Site Address: Erith Environmental, Crayford Marshes Landfill Site, off, Thames Road, Crayford Marshes, Slade Green, Kent, DA8 2NE Correspondence Address: -	Type of Site: Landfill taking Non-Biodegradable Wastes Size: >= 75000 tonnes Environmental Permitting Regulations (Waste) Licence Number: ERI001 EPR reference: LP3990EQ/V004 Operator: Erith Environmental Services Ltd Waste Management licence No: 83226 Annual Tonnage: 74999	Issue Date: 01/07/1988 Effective Date: - Modified: 17/05/1995 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Modified
K	404m NE	Site Name: Crayford Marshes Landfill, Erith Da8 Site Address: Erith Environmental, Crayford Marshes Landfill Site, off, Thames Road, Crayford Marshes, Slade Green, Kent, DA8 2NE Correspondence Address: -	Type of Site: Landfill taking Non-Biodegradable Wastes Size: 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: ERI001 EPR reference: EA/EPR/LP3990EQ/V004 Operator: Erith Environmental Services Ltd Waste Management licence No: 83226 Annual Tonnage: 74999	Issue Date: 01/07/1988 Effective Date: - Modified: 17/05/1995 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Closure
K	404m NE	Site Name: Crayford Marshes Landfill, Erith Da8 Site Address: off Crayford Marshes Landfill Site, Thames Road, Crayford Marshes, Slade Green, Kent, DA8 2NE Correspondence Address: -	Type of Site: Landfill taking Non-Biodegradable Wastes Size: >= 25000 tonnes 75000 tonnes Environmental Permitting Regulations (Waste) Licence Number: 633009 EPR reference: EA/EPR/LP3990EQ Operator: Erith Environmental Services Limited Waste Management licence No: 83226 Annual Tonnage: 74999	Issue Date: 01/07/1988 Effective Date: 01/07/1988 Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Closure
M	422m NW	Site Name: POLIHIM-SS UK LIMITED Site Address: Unit 9 Fao Polina Stefanova, Optima Park Thames Road, Crayford, Dartford, Kent, DA1 4QX Correspondence Address: -	Type of Site: Special Waste Transfer Station Size: Unknown Environmental Permitting Regulations (Waste) Licence Number: 663721 EPR reference: EA/EPR/WE7802AA Operator: Polihim-Ss Uk Limited Waste Management licence No: 120232 Annual Tonnage: -	Issue Date: 12/11/2020 Effective Date: 12/11/2020 Modified: 17/09/2024 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued



This data is sourced from the Environment Agency and Natural Resources Wales.

3.7 Waste exemptions

Records within 500m **31**

Activities involving the storage, treatment, use or disposal of waste that are exempt from needing a permit. Exemptions have specific limits and conditions that must be adhered to.

Features are displayed on the Waste and landfill map on [page 46 >](#)

ID	Location	Site	Reference	Category	Sub-Category	Description
F	120m SW	-	WEX413042	Storing waste exemption	Not on a farm	Storage of waste in a secure place
F	120m SW	-	WEX413042	Treating waste exemption	Not on a farm	Screening and blending of waste
F	120m SW	-	WEX413042	Using waste exemption	Not on a farm	Use of waste in construction
F	150m SW	-	WEX435511	Using waste exemption	Not on a farm	Use of waste in construction
G	186m SE	Unit 1 Thames Road Dartford Da1 4rf	EPR/EF0308U M/A001	Disposing of waste exemption	Agricultural waste only	Deposit of waste from dredging of inland waters
G	188m SE	-	WEX107303	Disposing of waste exemption	Not on a farm	Deposit of waste from dredging of inland waters
H	190m NW	13-14 Kennet Road Dartford Da1 4sd	EPR/LF0307UT /A001	Storing waste exemption	Non-agricultural waste only	Storage of waste in secure containers
H	190m NW	13-14 Kennet Road Dartford Da1 4sd	EPR/LF0307UT /A001	Storing waste exemption	Non-agricultural waste only	Storage of waste in a secure place
H	192m NW	13-14, Kennet Road, Crayford, Dartford, Da1 4sd	WEX235191	Storing waste exemption	Not on a farm	Storage of waste in a secure place
H	192m NW	Nimbus Enterprise Park, Unit 9, Liphook Way, Twenty Twenty Industrial Estate, Maidstone, Me16 0fz	WEX092170	Storing waste exemption	Not on a farm	Storage of waste in a secure place
H	192m NW	13-14, Kennet Road, Crayford, Dartford, Da1 4sd	WEX360951	Storing waste exemption	Not on a farm	Storage of waste in a secure place



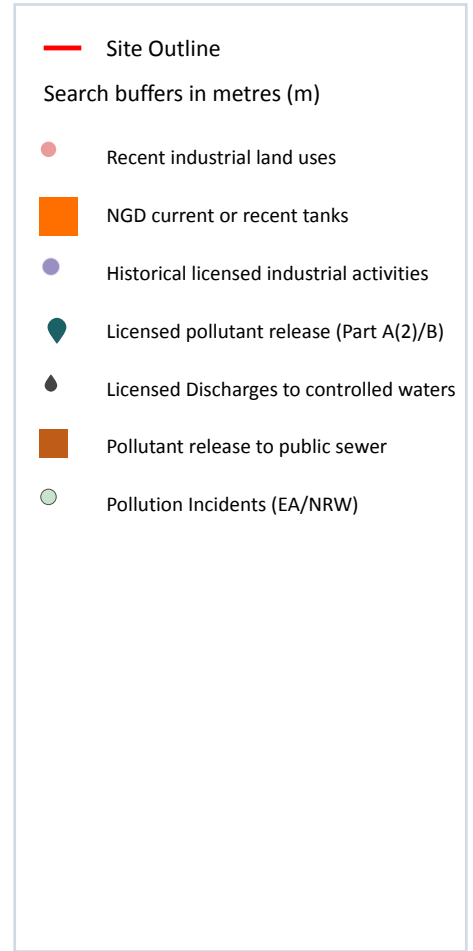
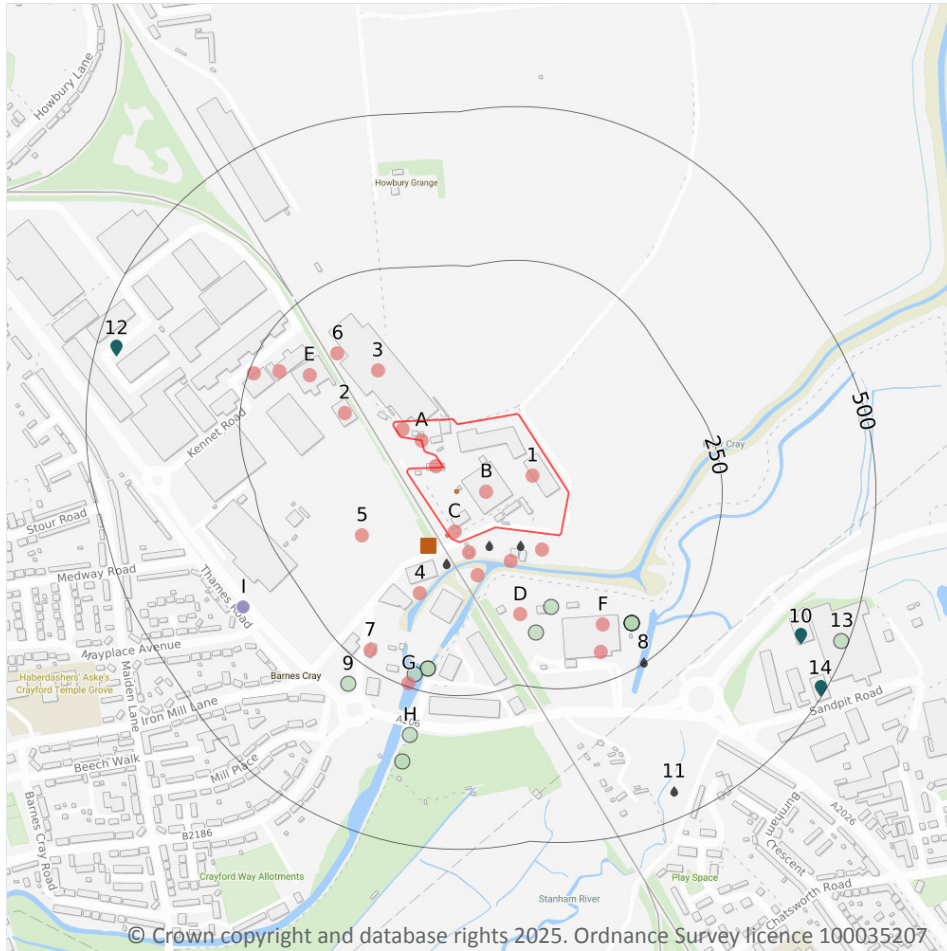
ID	Location	Site	Reference	Category	Sub-Category	Description
H	207m NW	Storage Of Furecent Tubes Waiting For Colection For Recycling	WEX268031	Storing waste exemption	Not on a farm	Storage of waste in secure containers
I	213m S	-	WEX366050	Storing waste exemption	Not on a farm	Storage of waste in a secure place
I	213m S	-	WEX239293	Storing waste exemption	Not on a farm	Storage of waste in a secure place
6	272m S	Unit 10 Distribution Point (Gdp) Lowfield Heath Da1 4rf	EPR/HE5046K A/A001	Storing waste exemption	Non-agricultural waste only	Storage of waste in a secure place
7	282m S	Unit 1 Thames Road Dartford Da1 4rf	EPR/HE5946K C/A001	Storing waste exemption	Non-agricultural waste only	Storage of waste in a secure place
8	339m W	21 Kennet Road Dartford Bexley Da1 4qn	EPR/JF0106ZX /A001	Storing waste exemption	Non-agricultural waste only	Storage of waste in a secure place
L	404m W	2 - 4, Thomas Road, Optima Park, Dartford, Da1 4qx	WEX282873	Treating waste exemption	Not on a farm	Recovery of textiles
L	404m W	Unit 26, Optima Park, Crayford, Da1 4qx	WEX285903	Storing waste exemption	Not on a farm	Storage of waste in a secure place
L	404m W	2 - 4, Thomas Road, Optima Park, Dartford, Da1 4qx	WEX282873	Storing waste exemption	Not on a farm	Storage of waste in a secure place
L	404m W	2 - 4, Thomas Road, Optima Park, Dartford, Da1 4qx	WEX282873	Treating waste exemption	Not on a farm	Preparatory treatments (baling, sorting, shredding etc)
L	404m W	Unit 26, Optima Park, Crayford, Da1 4qx	WEX417310	Storing waste exemption	Not on a farm	Storage of waste in a secure place
L	407m W	Optima Park Block B Thames Road Dartford Da1 4qx	EPR/XF0105BA /A001	Treating waste exemption	Non-agricultural waste only	Preparatory treatments (baling, sorting, shredding etc)
J	409m W	-	WEX396119	Storing waste exemption	Not on a farm	Storage of waste in secure containers
M	422m NW	Restore Datashred, Unit 4 Optima Park, Thames Road, Crayford, Da1 4qx	WEX142036	Treating waste exemption	Not on a farm	Preparatory treatments (baling, sorting, shredding etc)
M	422m NW	Restore Datashred, Unit 4 Optima Park, Thames Road, Crayford, Da1 4qx	WEX142036	Storing waste exemption	Not on a farm	Storage of waste in a secure place



ID	Location	Site	Reference	Category	Sub-Category	Description
M	422m NW	Restore Datashred, Unit 4 Optima Park, Thames Road, Crayford, Da1 4qx	WEX142036	Treating waste exemption	Not on a farm	Recovery of textiles
N	462m S	-	WEX005145	Storing waste exemption	Not on a farm	Storage of waste in a secure place
N	462m S	-	WEX005145	Storing waste exemption	Not on a farm	Storage of waste in secure containers
O	467m SE	Maxmor House Sandpit Road Dartford Kent Da1 5bu	EPR/BF0905ZC /A001	Storing waste exemption	Non- agricultural waste only	Storage of waste in secure containers
O	467m SE	Maxmor House Sandpit Road Dartford Kent Da1 5bu	EPR/BF0905ZC /A001	Storing waste exemption	Non- agricultural waste only	Storage of waste in a secure place

This data is sourced from the Environment Agency and Natural Resources Wales.

4 Current industrial land use



4.1 Recent industrial land uses

Records within 250m **23**

Current potentially contaminative industrial sites.

Features are displayed on the Current industrial land use map on [page 57](#) >

ID	Location	Company	Address	Activity	Category
1	On site	N & P Crayford M R S Ltd	Century Wharf, Crayford Creek Road, Crayford, Dartford, Greater London, DA1 4QG	Waste Storage, Processing and Disposal	Infrastructure and Facilities
A	On site	Chimney	Greater London, DA8	Chimneys	Industrial Features

ID	Location	Company	Address	Activity	Category
A	On site	Mast (Communication)	Greater London, DA8	Telecommunications Features	Infrastructure and Facilities
B	On site	Factory	Greater London, DA1	Unspecified Works Or Factories	Industrial Features
C	On site	Electricity Sub Station	Greater London, DA1	Electrical Features	Infrastructure and Facilities
A	3m N	Works	Greater London, DA8	Unspecified Works Or Factories	Industrial Features
C	21m SE	Works	Greater London, DA1	Unspecified Works Or Factories	Industrial Features
C	26m S	Mast (Telecommunication)	Greater London, DA1	Telecommunications Features	Infrastructure and Facilities
C	51m S	Stevinson Wharf	Greater London, DA1	Moorings and Unloading Facilities	Water
C	61m SE	Landing Stage	Greater London, DA1	Moorings and Unloading Facilities	Water
2	82m W	Imperial Ductwork Manufacturing	Unit 3 20, Kennet Road, Crayford, Dartford, Greater London, DA1 4QN	Cooling and Refrigeration	Industrial Products
3	89m N	Works	Greater London, DA8	Unspecified Works Or Factories	Industrial Features
4	102m SW	Jolly Farmers Wharf	Greater London, DA1	Moorings and Unloading Facilities	Water
5	117m SW	Electricity Sub Station	Greater London, DA1	Electrical Features	Infrastructure and Facilities
D	136m S	Hopper	Greater London, DA1	Hoppers and Silos	Farming
6	146m NW	Electricity Sub Station	Greater London, DA8	Electrical Features	Infrastructure and Facilities
E	158m NW	Imperial Duct Works	19, Kennet Road, Crayford, Dartford, Greater London, DA1 4QN	Cooling and Refrigeration	Industrial Products
F	162m SE	Dennis Eagle	Thames Road Depot, Thames Road, Crayford, Dartford, Greater London, DA1 5QJ	Vehicle Repair, Testing and Servicing	Repair and Servicing
F	202m S	Serco	Thames Road Depot, Thames Road, Crayford, Dartford, Greater London, DA1 5QJ	Recycling, Reclamation and Disposal	Recycling Services



ID	Location	Company	Address	Activity	Category
E	204m NW	Bradley Pulverizer	15, Kennet Road, Crayford, Dartford, Greater London, DA1 4QN	General Purpose Machinery	Industrial Products
7	224m SW	Bronzeshield Lifting	Crayford Flour Mill, Thames Road, Crayford, Dartford, Greater London, DA1 4QH	Construction and Tool Hire	Hire Services
E	242m W	Works	Greater London, DA1	Unspecified Works Or Factories	Industrial Features
G	244m S	Landing Stage	Greater London, DA1	Moorings and Unloading Facilities	Water

This data is sourced from Ordnance Survey.

4.2 National Geographic Database (NGD) - Current or recent tanks

Records within 250m

3

Current or recent tanks identified from the Ordnance Survey NGD.

Features are displayed on the Current industrial land use map on [page 57 >](#)

ID	Location	Tank description	Activity	Date first identified
B	On site	Roofed Storage Tank	Commercial Activity: Distribution Or Storage	19/07/2013
B	On site	Roofed Storage Tank	Commercial Activity: Distribution Or Storage	19/07/2013
C	2m SW	Open Storage Tank	Commercial Activity: Distribution Or Storage	04/03/2003

This data is sourced from Ordnance Survey.

4.3 Current or recent petrol stations

Records within 500m

0

Open, closed, under development and obsolete petrol stations.

This data is sourced from Experian.

4.4 Electricity cables

Records within 500m

0

High voltage underground electricity transmission cables.

This data is sourced from National Grid.



4.5 Gas pipelines

Records within 500m

0

High pressure underground gas transmission pipelines.

This data is sourced from National Grid.

4.6 Sites determined as Contaminated Land

Records within 500m

0

Contaminated Land Register of sites designated under Part 2a of the Environmental Protection Act 1990.

This data is sourced from Local Authority records.

4.7 Control of Major Accident Hazards (COMAH)

Records within 500m

0

Control of Major Accident Hazards (COMAH) sites. This data includes upper and lower tier sites, and includes a historical archive of COMAH sites and Notification of Installations Handling Hazardous Substances (NIHHS) records.

This data is sourced from the Health and Safety Executive.

4.8 Regulated explosive sites

Records within 500m

0

Sites registered and licensed by the Health and Safety Executive under the Manufacture and Storage of Explosives Regulations 2005 (MSER). The last update to this data was in April 2011.

This data is sourced from the Health and Safety Executive.

4.9 Hazardous substance storage/usage

Records within 500m

0

Consents granted for a site to hold certain quantities of hazardous substances at or above defined limits in accordance with the Planning (Hazardous Substances) Regulations 2015.

This data is sourced from Local Authority records.

4.10 Historical licensed industrial activities (IPC)

Records within 500m

2

Integrated Pollution Control (IPC) records of substance releases to air, land and water. This data represents a historical archive as the IPC regime has been superseded.

Features are displayed on the Current industrial land use map on [page 57 >](#)

ID	Location	Details	
I	343m SW	Operator: Dussek Campbell Ltd Address: Thames Road, Dartford, Kent, DA1 4QJ Process: Manufacture And Use Of Organic Chemicals Permit Number: AJ5789	Original Permit Number: IPCAPP Date Approved: 10-12-1993 Effective Date: 10-12-1993 Status: Revoked
I	343m SW	Operator: Dussek Campbell Ltd Address: Thames Road, Dartford, Kent, DA1 4QJ Process: Manufacture And Use Of Organic Chemicals Permit Number: AJ6106	Original Permit Number: IPCAPP Date Approved: 10-12-1993 Effective Date: 10-12-1993 Status: Revoked

This data is sourced from the Environment Agency and Natural Resources Wales.

4.11 Licensed industrial activities (Part A(1))

Records within 500m

0

Records of Part A(1) installations regulated under the Environmental Permitting (England and Wales) Regulations 2016 for the release of substances to the environment.

This data is sourced from the Environment Agency and Natural Resources Wales.

4.12 Licensed pollutant release (Part A(2)/B)

Records within 500m

3

Records of Part A(2) and Part B installations regulated under the Environmental Permitting (England and Wales) Regulations 2016 for the release of substances to the environment.

Features are displayed on the Current industrial land use map on [page 57 >](#)

ID	Location	Address	Details	
10	424m SE	DWS Bodyworks (Thamesmead) Ltd., Sandpit Road Dartford, DA1 5BU	Process: Respraying of Road Vehicles Status: Historical Permit Permit Type: Part B	Enforcement: No Enforcements Notified Date of enforcement: No Enforcements Notified Comment: No Enforcements Notified

ID	Location	Address	Details	
12	467m W	St Ives Print And Display, Unit 1 Optima Park, Thames Road, Crayford, Kent, DA1 4QX	Process: Printing Status: Revoked Permit Type: Part B	Enforcement: No Enforcements Notified Date of enforcement: No Enforcements Notified Comment: No Enforcements Notified
14	491m SE	DWS (Dartford) Ltd, Sondix House, Sandpit Road, Dartford, DA1 5BU	Process: Respraying of Road Vehicles Status: Historical Permit Permit Type: Part B	Enforcement: No Enforcements Notified Date of enforcement: No Enforcements Notified Comment: No Enforcements Notified

This data is sourced from Local Authority records.

4.13 Radioactive Substance Authorisations

Records within 500m	0
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Records of the storage, use, accumulation and disposal of radioactive substances regulated under the Radioactive Substances Act 1993.

This data is sourced from the Environment Agency and Natural Resources Wales.

4.14 Licensed Discharges to controlled waters

Records within 500m	7
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Discharges of treated or untreated effluent to controlled waters under the Water Resources Act 1991.

Features are displayed on the Current industrial land use map on [page 57 >](#)

ID	Location	Address	Details	
C	24m SE	GROSVENOR WASTE MANAGEMENT LTD, CENTURY WHARF, CRAYFORD CREEK, CRAYFORD, KENT, DA1 4QG	Effluent Type: TRADE DISCHARGES - SITE DRAINAGE Permit Number: CASM.0987 Permit Version: 1 Receiving Water: CRAYFORD CREEK	Status: NEW CONSENT (WRA 91, S88 & SCHED 10 AS AMENDED BY ENV ACT 1995) Issue date: 07/05/2004 Effective Date: 07/05/2004 Revocation Date: -
C	25m S	GROSVENOR WASTE MANAGEMENT LTD, CENTURY WHARF, CRAYFORD CREEK, CRAYFORD, KENT, DA1 4QG	Effluent Type: TRADE DISCHARGES - SITE DRAINAGE Permit Number: CASM.0965 Permit Version: 1 Receiving Water: CRAYFORD CREEK	Status: NEW CONSENT (WRA 91, S88 & SCHED 10 AS AMENDED BY ENV ACT 1995) Issue date: 07/05/2004 Effective Date: 07/05/2004 Revocation Date: -

ID	Location	Address	Details	
C	38m SW	JOLLY FARMERS WHARF, CRAYFORD CREEK ROAD, CRAYFORD, DARTFORD, KENT	Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - NOT WATER COMPANY Permit Number: CNTW.0756 Permit Version: 1 Receiving Water: CRAYFORD CREEK	Status: TRANSFERRED FROM WATER ACT 1989 Issue date: 10/10/1990 Effective Date: 10/10/1990 Revocation Date: -
C	41m SW	BP GLOBAL SPECIAL PRODUCTS, BP GLOBAL SPECIAL PRODUCTS, THAMES ROAD, CRAYFORD, KENT, DA1 4QJ	Effluent Type: SEWAGE & TRADE COMBINED - UNSPECIFIED Permit Number: CATM.2406 Permit Version: 1 Receiving Water: CRAYFORD CREEK	Status: SURRENDERED UNDER EPR 2010 Issue date: 28/08/1996 Effective Date: 28/08/1996 Revocation Date: 27/12/2012
C	41m SW	BP GLOBAL SPECIAL PRODUCTS, BP GLOBAL SPECIAL PRODUCTS, THAMES ROAD, CRAYFORD, KENT, DA1 4QJ	Effluent Type: TRADE DISCHARGES - COOLING WATER Permit Number: CATM.2456 Permit Version: 1 Receiving Water: CRAYFORD CREEK	Status: REVOKED (WRA 91, S88 & SCHED 10 AS AMENDED BY ENV ACT 1995) Issue date: 03/10/1996 Effective Date: 03/10/1996 Revocation Date: 15/01/2008
8	248m SE	BEXLEY CIVIC AMENITY & WASTE, BEXLEY CIVIC AMENITY & WASTE, TRANSFER STATION, THAMES ROAD DEPOT, THAMES ROAD, CRAYFORD, KENT	Effluent Type: TRADE DISCHARGES - SITE DRAINAGE Permit Number: P11338 Permit Version: 1 Receiving Water: FRESHWATER RIVER	Status: PRE NRA LEGISLATION WHERE ISSUE DATE 01-SEP-89 (HISTORIC ONLY) Issue date: 06/12/2002 Effective Date: 06/12/2002 Revocation Date: -
11	457m SE	MPHD STORM TO STANHAM, MPHD STORM TO STANHAM, KENT	Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: T02784 Permit Version: 1 Receiving Water: FRESHWATER RIVER	Status: SURRENDERED UNDER EPR 2010 Issue date: 01/04/1991 Effective Date: 01/07/1991 Revocation Date: 14/12/2023

This data is sourced from the Environment Agency and Natural Resources Wales.

4.15 Pollutant release to surface waters (Red List)

Records within 500m

0

Discharges of specified substances under the Environmental Protection (Prescribed Processes and Substances) Regulations 1991.

This data is sourced from the Environment Agency and Natural Resources Wales.



4.16 Pollutant release to public sewer

Records within 500m

1

Discharges of Special Category Effluents to the public sewer.

Features are displayed on the Current industrial land use map on [page 57 >](#)

ID	Location	Address	Details	
C	38m SW	NSM WASTE CONTROL LTD, CRAYFORD CREEK, CRAYFORD CREEK, BEXLEY, KENT	Permission reference: AB6012 Local Authority: BASSETLAW DISTRICT COUNCIL First received date: 01/06/2001	Last received date: 01/01/2018 Status: DEAD (APPLICATION)

This data is sourced from the Environment Agency and Natural Resources Wales.

4.17 List 1 Dangerous Substances

Records within 500m

0

Discharges of substances identified on List I of European Directive E 2006/11/EC, and regulated under the Environmental Damage (Prevention and Remediation) Regulations 2015.

This data is sourced from the Environment Agency and Natural Resources Wales.

4.18 List 2 Dangerous Substances

Records within 500m

0

Discharges of substances identified on List II of European Directive E 2006/11/EC, and regulated under the Environmental Damage (Prevention and Remediation) Regulations 2015.

This data is sourced from the Environment Agency and Natural Resources Wales.

4.19 Pollution Incidents (EA/NRW)

Records within 500m

14

Records of substantiated pollution incidents. Since 2006 this data has only included category 1 (major) and 2 (significant) pollution incidents.

Features are displayed on the Current industrial land use map on [page 57 >](#)

ID	Location	Details	
D	118m S	Incident Date: 23/09/2003 Incident Identification: 191862 Pollutant: Pollutant Not Identified Pollutant Description: Not Identified	Water Impact: Category 4 (No Impact) Land Impact: Category 3 (Minor) Air Impact: Category 4 (No Impact)
D	162m S	Incident Date: 25/08/2003 Incident Identification: 184743 Pollutant: Contaminated Water Pollutant Description: Firefighting Run-Off	Water Impact: Category 3 (Minor) Land Impact: Category 4 (No Impact) Air Impact: Category 3 (Minor)
F	185m SE	Incident Date: 23/12/2003 Incident Identification: 207924 Pollutant: Oils and Fuel Pollutant Description: Lubricating Oils	Water Impact: Category 2 (Significant) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
F	185m SE	Incident Date: 23/12/2003 Incident Identification: 207924 Pollutant: Oils and Fuel Pollutant Description: Diesel	Water Impact: Category 2 (Significant) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
F	185m SE	Incident Date: 23/12/2003 Incident Identification: 207924 Pollutant: Oils and Fuel:Oils and Fuel Pollutant Description: Diesel:Lubricating Oils	Water Impact: Category 2 (Significant) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
F	185m SE	Incident Date: 23/12/2003 Incident Identification: 207924 Pollutant: Oils and Fuel Pollutant Description: Diesel Lubricating Oils	Water Impact: Category 2 (Significant) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
F	185m SE	Incident Date: 23/12/2003 Incident Identification: 207924 Pollutant: Oils and Fuel Pollutant Description: Diesel :Lubricating Oils	Water Impact: Category 2 (Significant) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
G	212m S	Incident Date: 06/08/2003 Incident Identification: 179521 Pollutant: Inorganic Chemicals/Products Pollutant Description: Other Inorganic Chemical or Product	Water Impact: Category 4 (No Impact) Land Impact: Category 3 (Minor) Air Impact: Category 4 (No Impact)
G	212m S	Incident Date: 20/08/2003 Incident Identification: 183810 Pollutant: Pollutant Not Identified Pollutant Description: Not Identified	Water Impact: Category 3 (Minor) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
G	227m S	Incident Date: 01/05/2003 Incident Identification: 155262 Pollutant: Oils and Fuel Pollutant Description: Diesel	Water Impact: Category 3 (Minor) Land Impact: Category 4 (No Impact) Air Impact: Category 3 (Minor)



ID	Location	Details	
9	290m SW	Incident Date: 24/08/2003 Incident Identification: 184730 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Smoke	Water Impact: Category 3 (Minor) Land Impact: Category 3 (Minor) Air Impact: Category 3 (Minor)
H	324m S	Incident Date: 27/06/2002 Incident Identification: 87913 Pollutant: Contaminated Water Pollutant Description: Firefighting Run-Off	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
H	369m S	Incident Date: 13/03/2002 Incident Identification: 63884 Pollutant: Inert Materials and Wastes Pollutant Description: Construction and Demolition Materials and Wastes	Water Impact: Category 3 (Minor) Land Impact: Category 3 (Minor) Air Impact: Category 3 (Minor)
13	489m E	Incident Date: 16/07/2001 Incident Identification: 16663 Pollutant: Oils and Fuel Pollutant Description: Gas and Fuel Oils	Water Impact: Category 3 (Minor) Land Impact: Category 3 (Minor) Air Impact: Category 3 (Minor)

This data is sourced from the Environment Agency and Natural Resources Wales.

4.20 Pollution inventory substances

Records within 500m

0

The pollution inventory (substances) includes reporting on annual emissions of certain regulated substances to air, controlled waters and land. A reporting threshold for each substance is also included. Where emissions fall below the reporting threshold, no value will be given. The data is given for the most recent complete year available.

This data is sourced from the Environment Agency and the Scottish Environment Protection Agency.

4.21 Pollution inventory waste transfers

Records within 500m

0

The pollution inventory (waste transfers) includes reporting on annual transfers and recovery/disposal of controlled wastes from a site. A reporting threshold for each waste type is also included. Where releases fall below the reporting threshold, no value will be given. The data is given for the most recent complete year available.

This data is sourced from the Environment Agency and the Scottish Environment Protection Agency.



4.22 Pollution inventory radioactive waste

Records within 500m

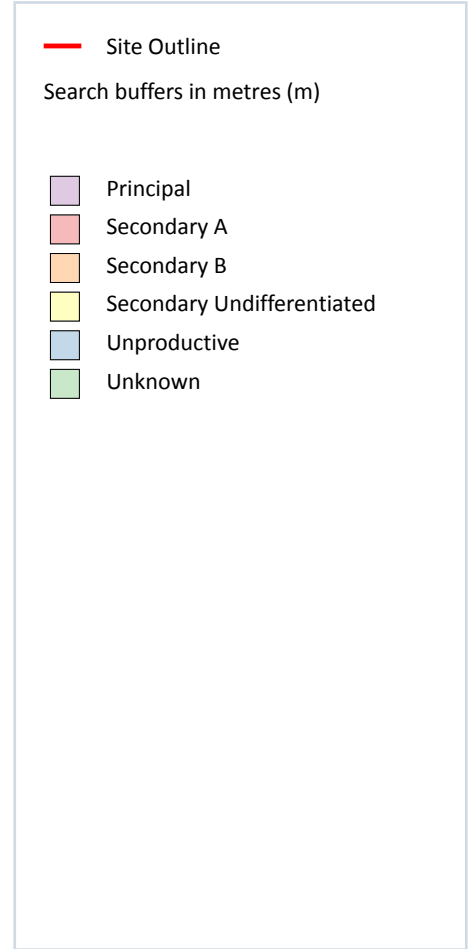
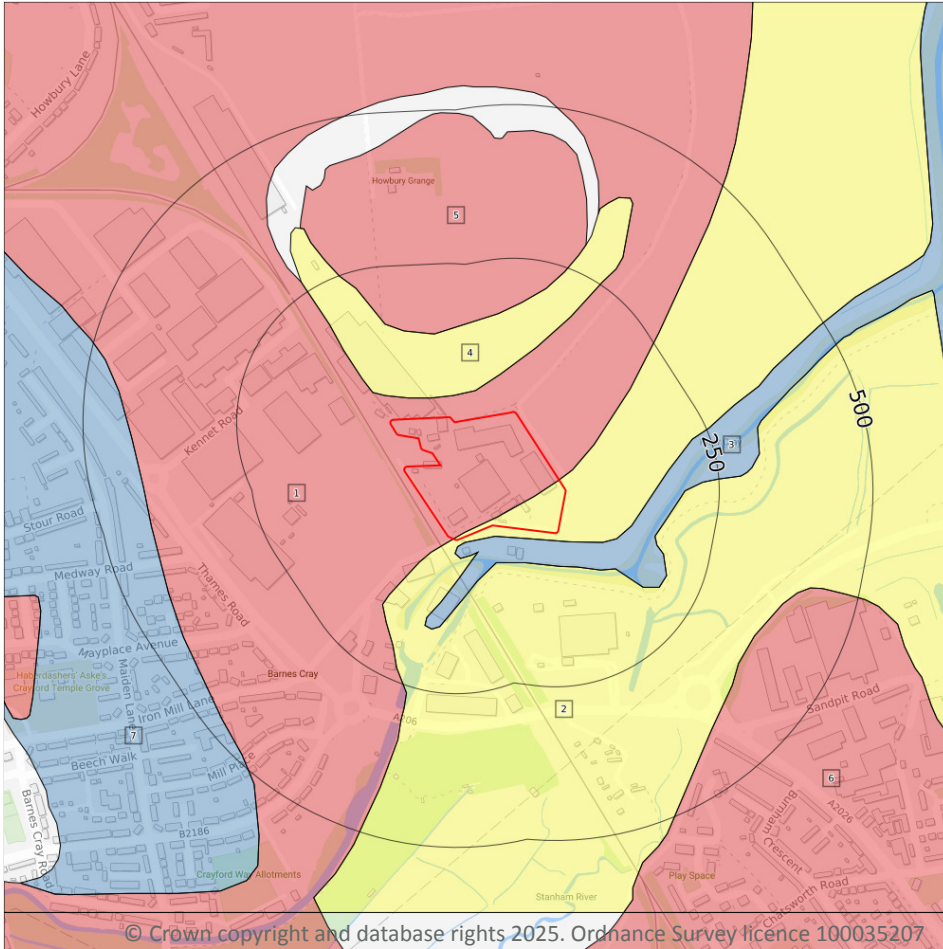
0

The pollution inventory (radioactive wastes) includes reporting on annual releases of radioactive substances from a site, including the means of release. Where releases fall below the reporting threshold, no value will be given. The data is given for the most recent complete year available.

This data is sourced from the Environment Agency and the Scottish Environment Protection Agency.



5 Hydrogeology - Superficial aquifer



5.1 Superficial aquifer

Records within 500m

7

Aquifer status of groundwater held within superficial geology.

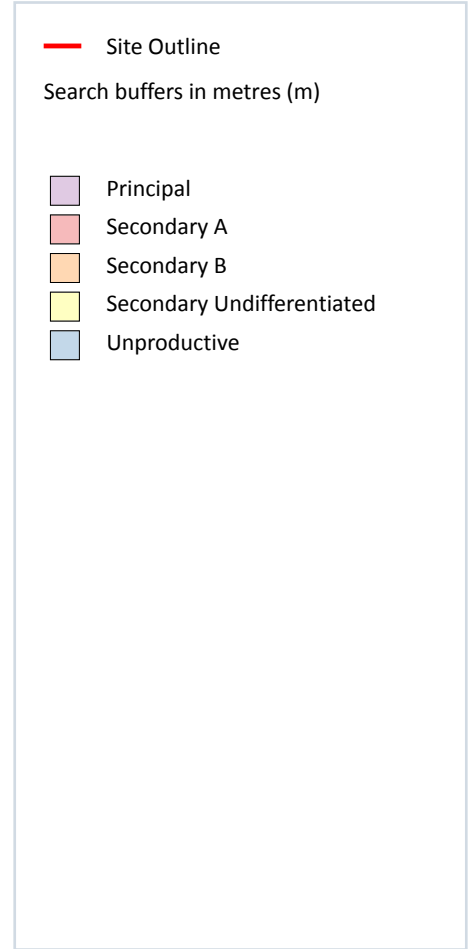
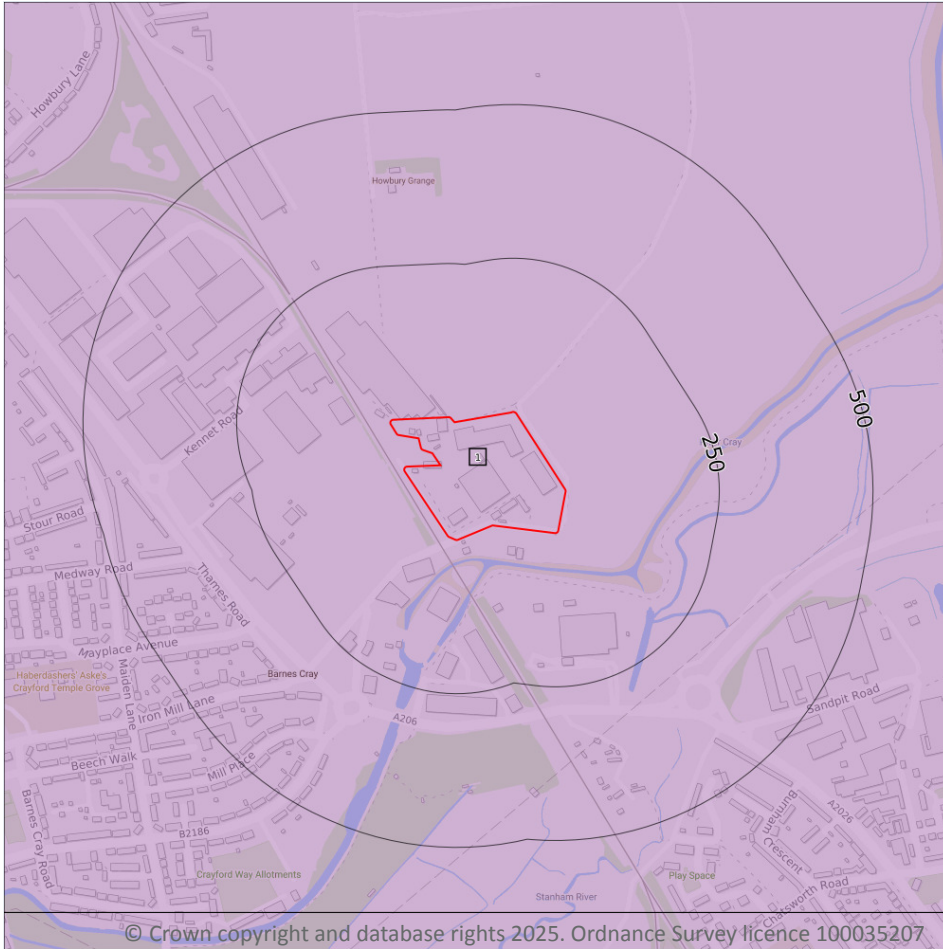
Features are displayed on the Hydrogeology map on [page 68](#) >

ID	Location	Designation	Description
1	On site	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers
2	On site	Secondary Undifferentiated	Assigned where it is not possible to attribute either category A or B to a rock type. In general these layers have previously been designated as both minor and non-aquifer in different locations due to the variable characteristics of the rock type

ID	Location	Designation	Description
3	8m SE	Unproductive	These are rock layers or drift deposits with low permeability that have negligible significance for water supply or river base flow
4	33m N	Secondary Undifferentiated	Assigned where it is not possible to attribute either category A or B to a rock type. In general these layers have previously been designated as both minor and non-aquifer in different locations due to the variable characteristics of the rock type
5	136m N	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers
6	362m SE	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers
7	415m W	Unproductive	These are rock layers or drift deposits with low permeability that have negligible significance for water supply or river base flow

This data is sourced from the British Geological Survey, the Environment Agency and Natural Resources Wales.

Bedrock aquifer



5.2 Bedrock aquifer

Records within 500m

1

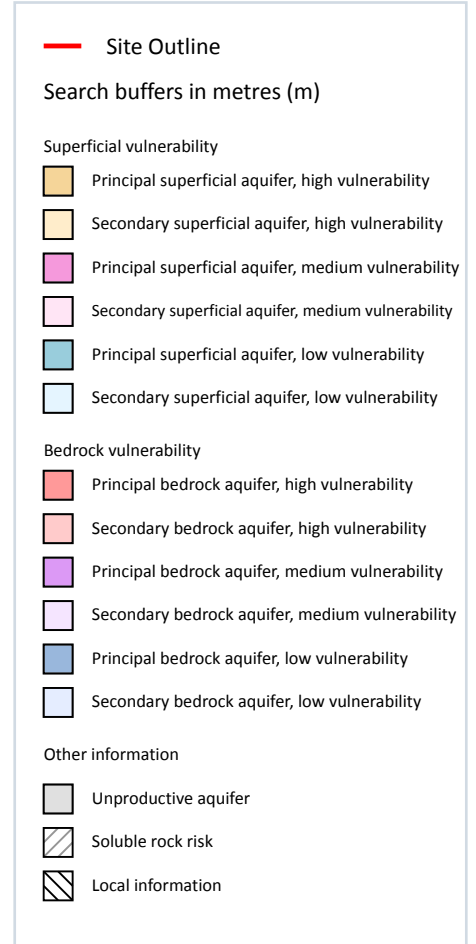
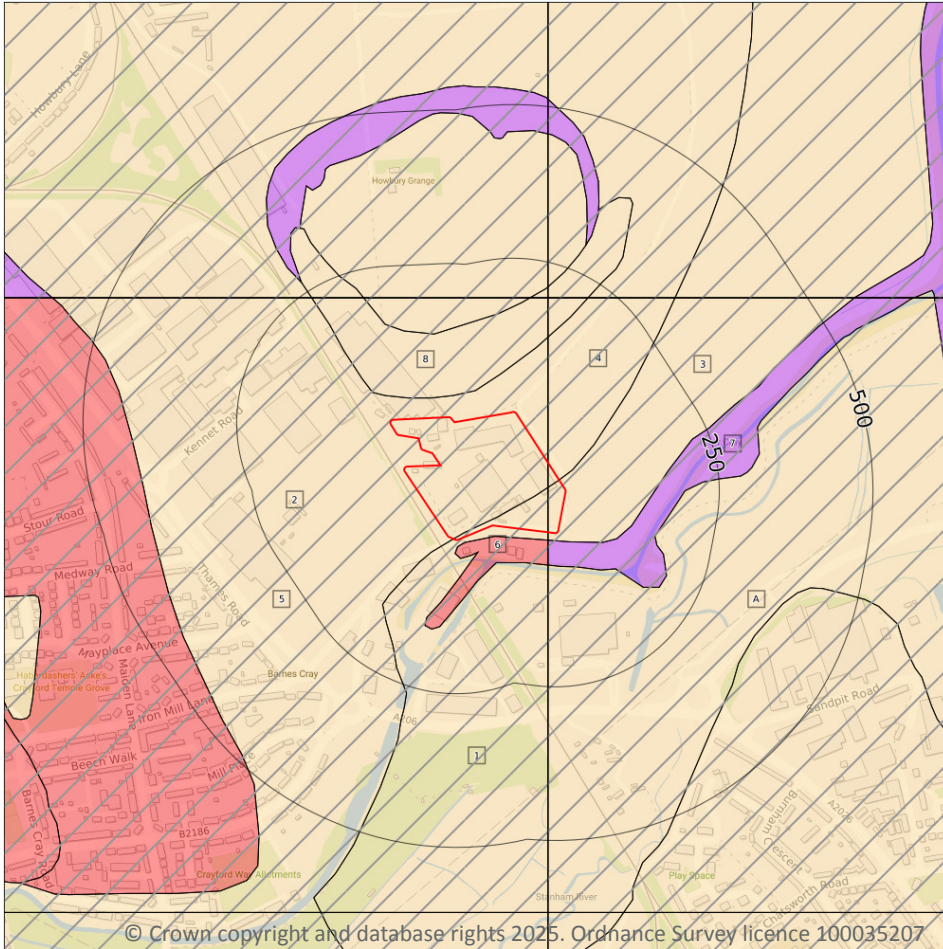
Aquifer status of groundwater held within bedrock geology.

Features are displayed on the Bedrock aquifer map on [page 70](#) >

ID	Location	Designation	Description
1	On site	Principal	Geology of high intergranular and/or fracture permeability, usually providing a high level of water storage and may support water supply/river base flow on a strategic scale. Generally principal aquifers were previously major aquifers

This data is sourced from the British Geological Survey, the Environment Agency and Natural Resources Wales.

Groundwater vulnerability



5.3 Groundwater vulnerability

Records within 50m

7

An assessment of the vulnerability of groundwater to a pollutant discharged at ground level based on the hydrological, geological, hydrogeological and soil properties within a one kilometre square grid. Groundwater vulnerability is described as High, Medium or Low as follows:

- High - Areas able to easily transmit pollution to groundwater. They are likely to be characterised by high leaching soils and the absence of low permeability superficial deposits.
- Medium - Intermediate between high and low vulnerability.
- Low - Areas that provide the greatest protection from pollution. They are likely to be characterised by low leaching soils and/or the presence of superficial deposits characterised by a low permeability.

Features are displayed on the Groundwater vulnerability map on [page 71 >](#)

ID	Location	Summary	Soil / surface	Superficial geology	Bedrock geology
1	On site	Summary Classification: Secondary superficial aquifer - High Vulnerability Combined classification: Productive Bedrock Aquifer, Productive Superficial Aquifer	Leaching class: Intermediate Infiltration value: >70% Dilution value: <300mm/year	Vulnerability: High Aquifer type: Secondary Thickness: 3-10m Patchiness value: <90% Recharge potential: High	Vulnerability: High Aquifer type: Principal Flow mechanism: Well connected fractures
2	On site	Summary Classification: Secondary superficial aquifer - High Vulnerability Combined classification: Productive Bedrock Aquifer, Productive Superficial Aquifer	Leaching class: Intermediate Infiltration value: >70% Dilution value: <300mm/year	Vulnerability: High Aquifer type: Secondary Thickness: 3-10m Patchiness value: <90% Recharge potential: High	Vulnerability: High Aquifer type: Principal Flow mechanism: Well connected fractures
3	On site	Summary Classification: Secondary superficial aquifer - High Vulnerability Combined classification: Productive Bedrock Aquifer, Productive Superficial Aquifer	Leaching class: High Infiltration value: >70% Dilution value: <300mm/year	Vulnerability: High Aquifer type: Secondary Thickness: 3-10m Patchiness value: >90% Recharge potential: Medium	Vulnerability: Medium Aquifer type: Principal Flow mechanism: Well connected fractures
4	On site	Summary Classification: Secondary superficial aquifer - High Vulnerability Combined classification: Productive Bedrock Aquifer, Productive Superficial Aquifer	Leaching class: High Infiltration value: >70% Dilution value: <300mm/year	Vulnerability: High Aquifer type: Secondary Thickness: 3-10m Patchiness value: >90% Recharge potential: Medium	Vulnerability: Medium Aquifer type: Principal Flow mechanism: Well connected fractures
6	8m SE	Summary Classification: Principal bedrock aquifer - High Vulnerability Combined classification: Productive Bedrock Aquifer, Unproductive Superficial Aquifer	Leaching class: Intermediate Infiltration value: >70% Dilution value: <300mm/year	Vulnerability: Unproductive Aquifer type: Unproductive Thickness: 3-10m Patchiness value: <90% Recharge potential: High	Vulnerability: High Aquifer type: Principal Flow mechanism: Well connected fractures
7	12m S	Summary Classification: Principal bedrock aquifer - Medium Vulnerability Combined classification: Productive Bedrock Aquifer, Unproductive Superficial Aquifer	Leaching class: High Infiltration value: >70% Dilution value: <300mm/year	Vulnerability: Unproductive Aquifer type: Unproductive Thickness: 3-10m Patchiness value: >90% Recharge potential: Medium	Vulnerability: Medium Aquifer type: Principal Flow mechanism: Well connected fractures



ID	Location	Summary	Soil / surface	Superficial geology	Bedrock geology
8	33m N	Summary Classification: Secondary superficial aquifer - High Vulnerability Combined classification: Productive Bedrock Aquifer, Productive Superficial Aquifer	Leaching class: Intermediate Infiltration value: >70% Dilution value: <300mm/year	Vulnerability: High Aquifer type: Secondary Thickness: 3-10m Patchiness value: <90% Recharge potential: High	Vulnerability: High Aquifer type: Principal Flow mechanism: Well connected fractures

This data is sourced from the British Geological Survey, the Environment Agency and Natural Resources Wales.

5.4 Groundwater vulnerability- soluble rock risk

Records on site	2
------------------------	----------

This dataset identifies areas where solution features that enable rapid movement of a pollutant may be present within a 1km grid square.

ID	Maximum soluble risk category	Percentage of grid square covered by maximum risk
5	Very significant soluble rocks are likely to be present with a high possibility of localised subsidence or dissolution-related degradation of bedrock occurring naturally, especially in adverse conditions such as concentrated surface or subsurface water flow.	13.0%
A	Significant soluble rocks are likely to be present. Low possibility of localised subsidence or dissolution-related degradation of bedrock occurring naturally, but may be possible in adverse conditions such as high surface or subsurface water flow.	1.0%

This data is sourced from the British Geological Survey and the Environment Agency.

5.5 Groundwater vulnerability- local information

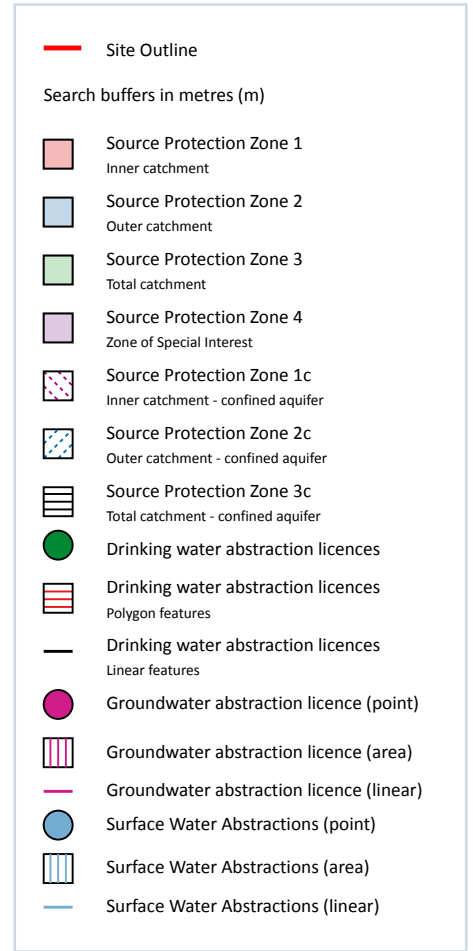
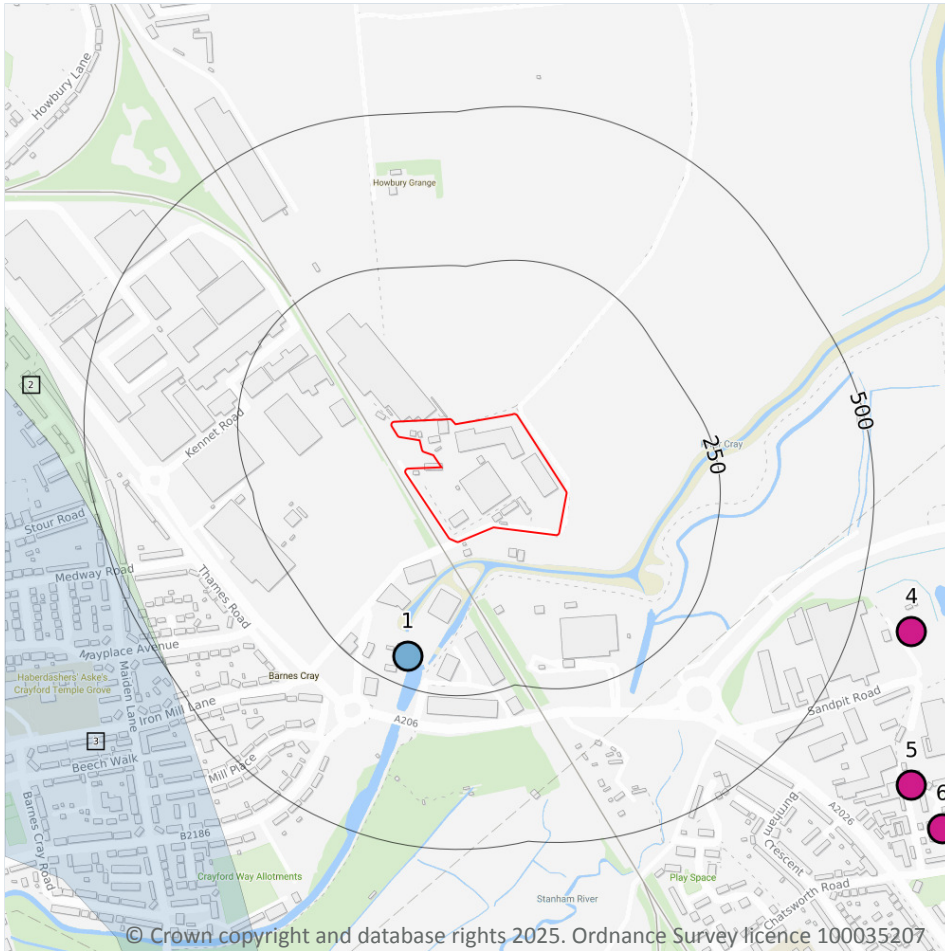
Records on site	0
------------------------	----------

This dataset identifies areas where additional local information affecting vulnerability is held by the Environment Agency. Further information can be obtained by contacting the Environment Agency local Area groundwater team through the Environment Agency National Customer Call Centre on 03798 506 506 or by email on enquiries@environment-agency.gov.uk ↗.

This data is sourced from the British Geological Survey and the Environment Agency.



Abstractions and Source Protection Zones



5.6 Groundwater abstractions

Records within 2000m

35

Licensed groundwater abstractions for sites extracting more than 20 cubic metres of water a day and includes active and historical records. The data may be for a single abstraction point, between two points (line data) or a larger area.

Features are displayed on the Abstractions and Source Protection Zones map on [page 74 >](#)

ID	Location	Details	
4	595m E	Status: Active Licence No: 9/40/01/0002/B/GR Details: General Washing/Process Washing Direct Source: Southern Region Groundwater Point: DARTFORD CREEK SEWAGE TREATMENT WORKS Data Type: Point Name: Thames Water Utilities Ltd Easting: 553590 Northing: 175460	Annual Volume (m ³): 10001 Max Daily Volume (m ³): 36.4 Original Application No: WR.0901 Original Start Date: 02/02/1966 Expiry Date: - Issue No: 102 Version Start Date: 30/10/2006 Version End Date: -
5	705m SE	Status: Historical Licence No: 9/40/01/0032/GR Details: Process Water Direct Source: Southern Region Groundwater Point: POINT A, BOREHOLE AT DARTFORD PAPER MILL Data Type: Point Name: Arjo Wiggins Carbonless Papers Ltd Easting: 553590 Northing: 175210	Annual Volume (m ³): - Max Daily Volume (m ³): 5500 Original Application No: - Original Start Date: - Expiry Date: - Issue No: 101 Version Start Date: 30/10/2006 Version End Date: -
6	787m SE	Status: Historical Licence No: 9/40/01/0032/GR Details: Process Water Direct Source: Southern Region Groundwater Point: POINT B, BOREHOLE AT DARTFORD PAPER MILL Data Type: Point Name: Arjo Wiggins Carbonless Papers Ltd Easting: 553640 Northing: 175140	Annual Volume (m ³): - Max Daily Volume (m ³): 5500 Original Application No: - Original Start Date: - Expiry Date: - Issue No: 101 Version Start Date: 30/10/2006 Version End Date: -
-	982m E	Status: Active Licence No: SO/040/0037/028 Details: General Washing/Process Washing Direct Source: Southern Region Groundwater Point: TAPLOW GRAVEL FORMATION AT JOYCE GREEN QUARRY Data Type: Point Name: Ingrebourne Valley Limited Easting: 553948 Northing: 176031	Annual Volume (m ³): 459790 Max Daily Volume (m ³): 3056.9 Original Application No: NPS/WR/032232 Original Start Date: 12/02/2020 Expiry Date: 31/03/2026 Issue No: 1 Version Start Date: 12/02/2020 Version End Date: -
-	982m E	Status: Active Licence No: SO/040/0037/028 Details: Dust Suppression Direct Source: Southern Region Groundwater Point: TAPLOW GRAVEL FORMATION AT JOYCE GREEN QUARRY Data Type: Point Name: Ingrebourne Valley Limited Easting: 553948 Northing: 176031	Annual Volume (m ³): 459790 Max Daily Volume (m ³): 3056.9 Original Application No: NPS/WR/032232 Original Start Date: 12/02/2020 Expiry Date: 31/03/2026 Issue No: 1 Version Start Date: 12/02/2020 Version End Date: -



ID	Location	Details	
-	982m E	Status: Active Licence No: SO/040/0037/028 Details: Mineral Washing Direct Source: Southern Region Groundwater Point: TAPLOW GRAVEL FORMATION AT JOYCE GREEN QUARRY Data Type: Point Name: Ingrebourne Valley Limited Easting: 553948 Northing: 176031	Annual Volume (m ³): 459790 Max Daily Volume (m ³): 3056.9 Original Application No: NPS/WR/032232 Original Start Date: 12/02/2020 Expiry Date: 31/03/2026 Issue No: 1 Version Start Date: 12/02/2020 Version End Date: -
-	1023m SE	Status: Historical Licence No: 9/40/01/0032/GR Details: Process water Direct Source: Southern Region Groundwater Point: POINT C, BOREHOLE AT DARTFORD PAPER MILL Data Type: Point Name: Arjo Wiggins Carbonless Papers Ltd Easting: 553830 Northing: 175000	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: - Expiry Date: - Issue No: 100 Version Start Date: 02/07/1993 Version End Date: -
-	1037m SE	Status: Historical Licence No: 9/40/01/0032/GR Details: Process water Direct Source: Southern Region Groundwater Point: POINT D, BOREHOLE AT DARTFORD PAPER MILL Data Type: Point Name: Arjo Wiggins Carbonless Papers Ltd Easting: 553840 Northing: 174990	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: - Expiry Date: - Issue No: 100 Version Start Date: 02/07/1993 Version End Date: -
-	1055m SW	Status: Historical Licence No: 9/40/01/0205 Details: Process water Direct Source: Southern Region Groundwater Point: BOREHOLE AT SAMAS RONEO, CRAYFORD WORKS Data Type: Point Name: Samas Roneo Ltd Easting: 552290 Northing: 174710	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: - Expiry Date: - Issue No: 100 Version Start Date: 08/12/1992 Version End Date: -
-	1057m SE	Status: Historical Licence No: 9/40/01/0032/GR Details: Process water Direct Source: Southern Region Groundwater Point: POINT E, BOREHOLE AT DARTFORD PAPER MILL Data Type: Point Name: Arjo Wiggins Carbonless Papers Ltd Easting: 553850 Northing: 174970	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: - Expiry Date: - Issue No: 100 Version Start Date: 02/07/1993 Version End Date: -



ID	Location	Details	
-	1129m SE	Status: Historical Licence No: 9/40/01/0032/GR Details: Process water Direct Source: Southern Region Groundwater Point: POINT F, BOREHOLE AT DARTFORD PAPER MILL Data Type: Point Name: Arjo Wiggins Carbonless Papers Ltd Easting: 553940 Northing: 174970	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: - Expiry Date: - Issue No: 100 Version Start Date: 02/07/1993 Version End Date: -
-	1207m SE	Status: Historical Licence No: 9/40/01/0032/GR Details: Process water Direct Source: Southern Region Groundwater Point: POINT G, BOREHOLE AT DARTFORD PAPER MILL Data Type: Point Name: Arjo Wiggins Carbonless Papers Ltd Easting: 553970 Northing: 174880	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: - Expiry Date: - Issue No: 100 Version Start Date: 02/07/1993 Version End Date: -
-	1312m SE	Status: Active Licence No: SO/040/0037/026/1 Details: General Washing/Process Washing Direct Source: Southern Region Groundwater Point: ELIS DARTFORD Data Type: Point Name: Elis UK Limited Easting: 554150 Northing: 174960	Annual Volume (m ³): 187200 Max Daily Volume (m ³): 720 Original Application No: NPS/WR/042653 Original Start Date: 06/07/2020 Expiry Date: 31/03/2026 Issue No: 2 Version Start Date: 26/06/2024 Version End Date: -
-	1312m SE	Status: Historical Licence No: SO/040/0037/026 Details: General Washing/Process Washing Direct Source: Southern Region Groundwater Point: ELIS DARTFORD Data Type: Point Name: Elis UK Limited Easting: 554150 Northing: 174960	Annual Volume (m ³): 187200 Max Daily Volume (m ³): 720 Original Application No: - Original Start Date: 06/07/2020 Expiry Date: 31/03/2026 Issue No: 1 Version Start Date: 06/07/2020 Version End Date: -
-	1485m E	Status: Historical Licence No: 9/40/01/0045/B/GR Details: Non-Evaporative Cooling Direct Source: Southern Region Groundwater Point: BOREHOLE A AT GLAXOSMITHKLINE, TEMPLE HILL, DARTFORD Data Type: Point Name: GlaxoSmithKline Plc Easting: 554400 Northing: 175080	Annual Volume (m ³): - Max Daily Volume (m ³): 10910 Original Application No: - Original Start Date: - Expiry Date: - Issue No: 102 Version Start Date: 30/10/2006 Version End Date: -



ID	Location	Details	
-	1485m E	Status: Historical Licence No: 9/40/01/0045/B/GR Details: Evaporative Cooling Direct Source: Southern Region Groundwater Point: BOREHOLE A AT GLAXOSMITHKLINE, TEMPLE HILL, DARTFORD Data Type: Point Name: GlaxoSmithKline Plc Easting: 554400 Northing: 175080	Annual Volume (m ³): 150000 Max Daily Volume (m ³): 700 Original Application No: - Original Start Date: - Expiry Date: - Issue No: 103 Version Start Date: 19/01/2010 Version End Date: -
-	1485m E	Status: Historical Licence No: 9/40/01/0045/B/GR Details: Process Water Direct Source: Southern Region Groundwater Point: BOREHOLE A AT GLAXOSMITHKLINE, TEMPLE HILL, DARTFORD Data Type: Point Name: GlaxoSmithKline Plc Easting: 554400 Northing: 175080	Annual Volume (m ³): 150000 Max Daily Volume (m ³): 700 Original Application No: - Original Start Date: - Expiry Date: - Issue No: 103 Version Start Date: 19/01/2010 Version End Date: -
-	1541m SW	Status: Active Licence No: 9/40/01/0129/GR Details: Potable Water Supply - Direct Direct Source: Southern Region Groundwater Point: BOREHOLE 3 AT CRAYFORD PUMPING STATION Data Type: Point Name: Thames Water Utilities Ltd Easting: 551740 Northing: 174530	Annual Volume (m ³): 4977870 Max Daily Volume (m ³): 13638 Original Application No: WR.0955 Original Start Date: 30/12/1966 Expiry Date: - Issue No: 102 Version Start Date: 22/11/2006 Version End Date: -
-	1541m SW	Status: Historical Licence No: 9/40/01/0129/GR Details: Potable Water Supply - Direct Direct Source: Southern Region Groundwater Point: BOREHOLE A AT CRAYFORD PUMPING STATION Data Type: Point Name: Thames Water Utilities Ltd Easting: 551740 Northing: 174530	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: - Expiry Date: - Issue No: 100 Version Start Date: 30/12/1966 Version End Date: -
-	1568m SW	Status: Active Licence No: 9/40/01/0129/GR Details: Potable Water Supply - Direct Direct Source: Southern Region Groundwater Point: BOREHOLE 1 AT CRAYFORD PUMPING STATION Data Type: Point Name: Thames Water Utilities Ltd Easting: 551710 Northing: 174523	Annual Volume (m ³): 4977870 Max Daily Volume (m ³): 13638 Original Application No: WR.0955 Original Start Date: 30/12/1966 Expiry Date: - Issue No: 102 Version Start Date: 22/11/2006 Version End Date: -



ID	Location	Details	
-	1569m SW	Status: Active Licence No: 9/40/01/0129/GR Details: Potable Water Supply - Direct Direct Source: Southern Region Groundwater Point: BOREHOLE 2 AT CRAYFORD PUMPING STATION Data Type: Point Name: Thames Water Utilities Ltd Easting: 551721 Northing: 174510	Annual Volume (m ³): 4977870 Max Daily Volume (m ³): 13638 Original Application No: WR.0955 Original Start Date: 30/12/1966 Expiry Date: - Issue No: 102 Version Start Date: 22/11/2006 Version End Date: -
-	1577m SW	Status: Historical Licence No: 9/40/01/0129/GR Details: Potable Water Supply - Direct Direct Source: Southern Region Groundwater Point: BOREHOLE B AT CRAYFORD PUMPING STATION Data Type: Point Name: Thames Water Utilities Ltd Easting: 551720 Northing: 174500	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: - Expiry Date: - Issue No: 100 Version Start Date: 30/12/1966 Version End Date: -
-	1641m SE	Status: Historical Licence No: 9/40/01/0045/B/GR Details: Non-Evaporative Cooling Direct Source: Southern Region Groundwater Point: BOREHOLE C AT GLAXOSMITHKLINE, TEMPLE HILL, DARTFORD Data Type: Point Name: GlaxoSmithKline Plc Easting: 554500 Northing: 174920	Annual Volume (m ³): - Max Daily Volume (m ³): 10910 Original Application No: - Original Start Date: - Expiry Date: - Issue No: 102 Version Start Date: 30/10/2006 Version End Date: -
-	1641m SE	Status: Historical Licence No: 9/40/01/0045/B/GR Details: Process Water Direct Source: Southern Region Groundwater Point: BOREHOLE C AT GLAXOSMITHKLINE, TEMPLE HILL, DARTFORD Data Type: Point Name: GlaxoSmithKline Plc Easting: 554500 Northing: 174920	Annual Volume (m ³): 150000 Max Daily Volume (m ³): 700 Original Application No: - Original Start Date: - Expiry Date: - Issue No: 103 Version Start Date: 19/01/2010 Version End Date: -
-	1641m SE	Status: Historical Licence No: 9/40/01/0045/B/GR Details: Evaporative Cooling Direct Source: Southern Region Groundwater Point: BOREHOLE C AT GLAXOSMITHKLINE, TEMPLE HILL, DARTFORD Data Type: Point Name: GlaxoSmithKline Plc Easting: 554500 Northing: 174920	Annual Volume (m ³): 150000 Max Daily Volume (m ³): 700 Original Application No: - Original Start Date: - Expiry Date: - Issue No: 103 Version Start Date: 19/01/2010 Version End Date: -



ID	Location	Details	
-	1739m SE	Status: Historical Licence No: 9/40/01/0069/B/GR Details: Process Water Direct Source: Southern Region Groundwater Point: B/H 4 BUILDING 72, GLAXOWELLCOME, TEMPLE HILL, DARTFORD Data Type: Point Name: Glaxo Wellcome Operations Ltd Easting: 554460 Northing: 174650	Annual Volume (m ³): 1513818 Max Daily Volume (m ³): 4146 Original Application No: - Original Start Date: - Expiry Date: - Issue No: 100 Version Start Date: 22/11/2006 Version End Date: -
-	1784m SE	Status: Historical Licence No: 9/40/01/0045/B/GR Details: Process water Direct Source: Southern Region Groundwater Point: BOREHOLE 1 AT GLAXO WELLCOME, DARTFORD Data Type: Point Name: Glaxo Wellcome Operations Ltd Easting: 554380 Northing: 174470	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: - Expiry Date: - Issue No: 100 Version Start Date: 05/06/1996 Version End Date: -
-	1845m SE	Status: Historical Licence No: 9/40/01/0045/B/GR Details: Process water Direct Source: Southern Region Groundwater Point: BOREHOLE 3 AT GLAXO WELLCOME, DARTFORD Data Type: Point Name: Glaxo Wellcome Operations Ltd Easting: 554580 Northing: 174640	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: - Expiry Date: - Issue No: 100 Version Start Date: 05/06/1996 Version End Date: -
-	1845m SE	Status: Historical Licence No: 9/40/01/0045/B/GR Details: Non-Evaporative Cooling Direct Source: Southern Region Groundwater Point: BOREHOLE C AT GLAXOSMITHKLINE, TEMPLE HILL, DARTFORD Data Type: Point Name: GlaxoSmithKline Plc Easting: 554580 Northing: 174640	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: - Expiry Date: - Issue No: 101 Version Start Date: 28/08/2001 Version End Date: -
-	1845m SE	Status: Historical Licence No: 9/40/01/0045/B/GR Details: Evaporative Cooling Direct Source: Southern Region Groundwater Point: BOREHOLE C AT GLAXOSMITHKLINE, TEMPLE HILL, DARTFORD Data Type: Point Name: GlaxoSmithKline Plc Easting: 554580 Northing: 174640	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: - Expiry Date: - Issue No: 101 Version Start Date: 28/08/2001 Version End Date: -



ID	Location	Details	
-	1845m SE	Status: Historical Licence No: 9/40/01/0045/B/GR Details: Process water Direct Source: Southern Region Groundwater Point: BOREHOLE C AT GLAXOSMITHKLINE, TEMPLE HILL, DARTFORD Data Type: Point Name: GlaxoSmithKline Plc Easting: 554580 Northing: 174640	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: - Expiry Date: - Issue No: 101 Version Start Date: 28/08/2001 Version End Date: -
-	1962m SE	Status: Historical Licence No: 9/40/01/0045/B/GR Details: Process water Direct Source: Southern Region Groundwater Point: BOREHOLE 2 AT GLAXO WELLCOME, DARTFORD Data Type: Point Name: Glaxo Wellcome Operations Ltd Easting: 554680 Northing: 174580	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: - Expiry Date: - Issue No: 100 Version Start Date: 05/06/1996 Version End Date: -
-	1962m SE	Status: Historical Licence No: 9/40/01/0045/B/GR Details: Non-Evaporative Cooling Direct Source: Southern Region Groundwater Point: BOREHOLE B AT GLAXOSMITHKLINE, TEMPLE HILL, DARTFORD Data Type: Point Name: GlaxoSmithKline Plc Easting: 554680 Northing: 174580	Annual Volume (m ³): - Max Daily Volume (m ³): 10910 Original Application No: - Original Start Date: - Expiry Date: - Issue No: 102 Version Start Date: 30/10/2006 Version End Date: -
-	1962m SE	Status: Historical Licence No: 9/40/01/0045/B/GR Details: Evaporative Cooling Direct Source: Southern Region Groundwater Point: BOREHOLE B AT GLAXOSMITHKLINE, TEMPLE HILL, DARTFORD Data Type: Point Name: GlaxoSmithKline Plc Easting: 554680 Northing: 174580	Annual Volume (m ³): 150000 Max Daily Volume (m ³): 700 Original Application No: - Original Start Date: - Expiry Date: - Issue No: 103 Version Start Date: 19/01/2010 Version End Date: -



ID	Location	Details	
-	1962m SE	Status: Historical Licence No: 9/40/01/0045/B/GR Details: Process Water Direct Source: Southern Region Groundwater Point: BOREHOLE B AT GLAXOSMITHKLINE, TEMPLE HILL, DARTFORD Data Type: Point Name: GlaxoSmithKline Plc Easting: 554680 Northing: 174580	Annual Volume (m ³): 150000 Max Daily Volume (m ³): 700 Original Application No: - Original Start Date: - Expiry Date: - Issue No: 103 Version Start Date: 19/01/2010 Version End Date: -

This data is sourced from the Environment Agency and Natural Resources Wales.

5.7 Surface water abstractions

Records within 2000m	2
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Licensed surface water abstractions for sites extracting more than 20 cubic metres of water a day and includes active and historical records. The data may be for a single abstraction point, a stretch of watercourse or a larger area.

Features are displayed on the Abstractions and Source Protection Zones map on [page 74 >](#)

ID	Location	Details	
1	203m SW	Status: Historical Licence No: 9/40/01/0097/SR Details: General Cooling (Existing Licences Only) (High Loss) Direct Source: Southern Region Surface Waters Point: RIVER CRAY AT DUSSEK CAMPBELL Data Type: Point Name: BP Global Special Products Limited Easting: 552770 Northing: 175420	Annual Volume (m ³): 386410 Max Daily Volume (m ³): 1136.5 Original Application No: - Original Start Date: - Expiry Date: - Issue No: 101 Version Start Date: 01/08/2001 Version End Date: -
-	1801m SE	Status: Historical Licence No: 9/40/01/0045/A/SR Details: Non-Evaporative Cooling Direct Source: Southern Region Surface Waters Point: RIVER DARENT AT GLAXO WELLCOME, DARTFORD Data Type: Point Name: Glaxo Wellcome Operations Ltd Easting: 554360 Northing: 174420	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: - Expiry Date: - Issue No: 100 Version Start Date: 05/06/1996 Version End Date: -

This data is sourced from the Environment Agency and Natural Resources Wales.



5.8 Potable abstractions

Records within 2000m

5

Licensed potable water abstractions for sites extracting more than 20 cubic metres of water a day and includes active and historical records. The data may be for a single abstraction point, a stretch of watercourse or a larger area.

Features are displayed on the Abstractions and Source Protection Zones map on [page 74 >](#)

ID	Location	Details	
-	1541m SW	Status: Active Licence No: 9/40/01/0129/GR Details: Potable Water Supply - Direct Direct Source: Southern Region Groundwater Point: BOREHOLE 3 AT CRAYFORD PUMPING STATION Data Type: Point Name: Thames Water Utilities Ltd Easting: 551740 Northing: 174530	Annual Volume (m ³): 4977870 Max Daily Volume (m ³): 13638 Original Application No: WR.0955 Original Start Date: 30/12/1966 Expiry Date: - Issue No: 102 Version Start Date: 22/11/2006 Version End Date: -
-	1541m SW	Status: Historical Licence No: 9/40/01/0129/GR Details: Potable Water Supply - Direct Direct Source: Southern Region Groundwater Point: BOREHOLE A AT CRAYFORD PUMPING STATION Data Type: Point Name: Thames Water Utilities Ltd Easting: 551740 Northing: 174530	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: - Expiry Date: - Issue No: 100 Version Start Date: 30/12/1966 Version End Date: -
-	1568m SW	Status: Active Licence No: 9/40/01/0129/GR Details: Potable Water Supply - Direct Direct Source: Southern Region Groundwater Point: BOREHOLE 1 AT CRAYFORD PUMPING STATION Data Type: Point Name: Thames Water Utilities Ltd Easting: 551710 Northing: 174523	Annual Volume (m ³): 4977870 Max Daily Volume (m ³): 13638 Original Application No: WR.0955 Original Start Date: 30/12/1966 Expiry Date: - Issue No: 102 Version Start Date: 22/11/2006 Version End Date: -
-	1569m SW	Status: Active Licence No: 9/40/01/0129/GR Details: Potable Water Supply - Direct Direct Source: Southern Region Groundwater Point: BOREHOLE 2 AT CRAYFORD PUMPING STATION Data Type: Point Name: Thames Water Utilities Ltd Easting: 551721 Northing: 174510	Annual Volume (m ³): 4977870 Max Daily Volume (m ³): 13638 Original Application No: WR.0955 Original Start Date: 30/12/1966 Expiry Date: - Issue No: 102 Version Start Date: 22/11/2006 Version End Date: -



ID	Location	Details	
-	1577m SW	Status: Historical Licence No: 9/40/01/0129/GR Details: Potable Water Supply - Direct Direct Source: Southern Region Groundwater Point: BOREHOLE B AT CRAYFORD PUMPING STATION Data Type: Point Name: Thames Water Utilities Ltd Easting: 551720 Northing: 174500	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: - Expiry Date: - Issue No: 100 Version Start Date: 30/12/1966 Version End Date: -

This data is sourced from the Environment Agency and Natural Resources Wales.

5.9 Source Protection Zones

Records within 500m	2
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Source Protection Zones define the sensitivity of an area around a potable abstraction site to contamination. Features are displayed on the Abstractions and Source Protection Zones map on [page 74 >](#)

ID	Location	Type	Description
2	475m W	3	Total catchment
3	487m SW	2	Outer catchment

This data is sourced from the Environment Agency and Natural Resources Wales.

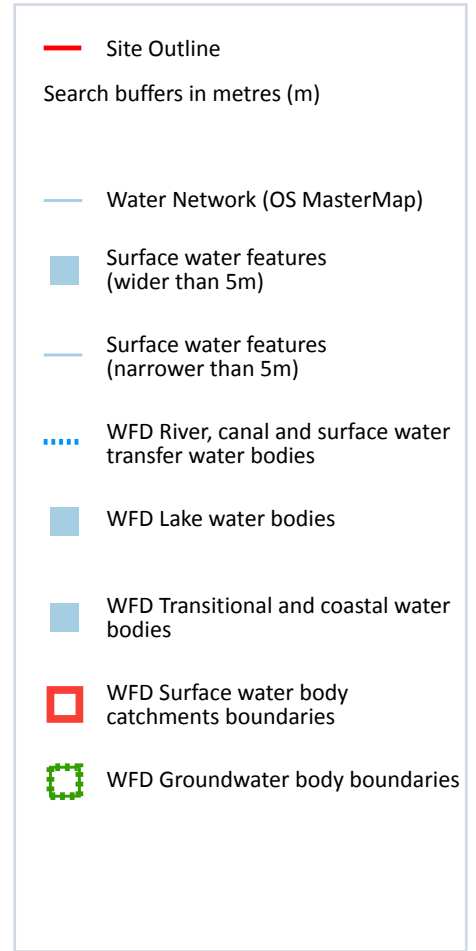
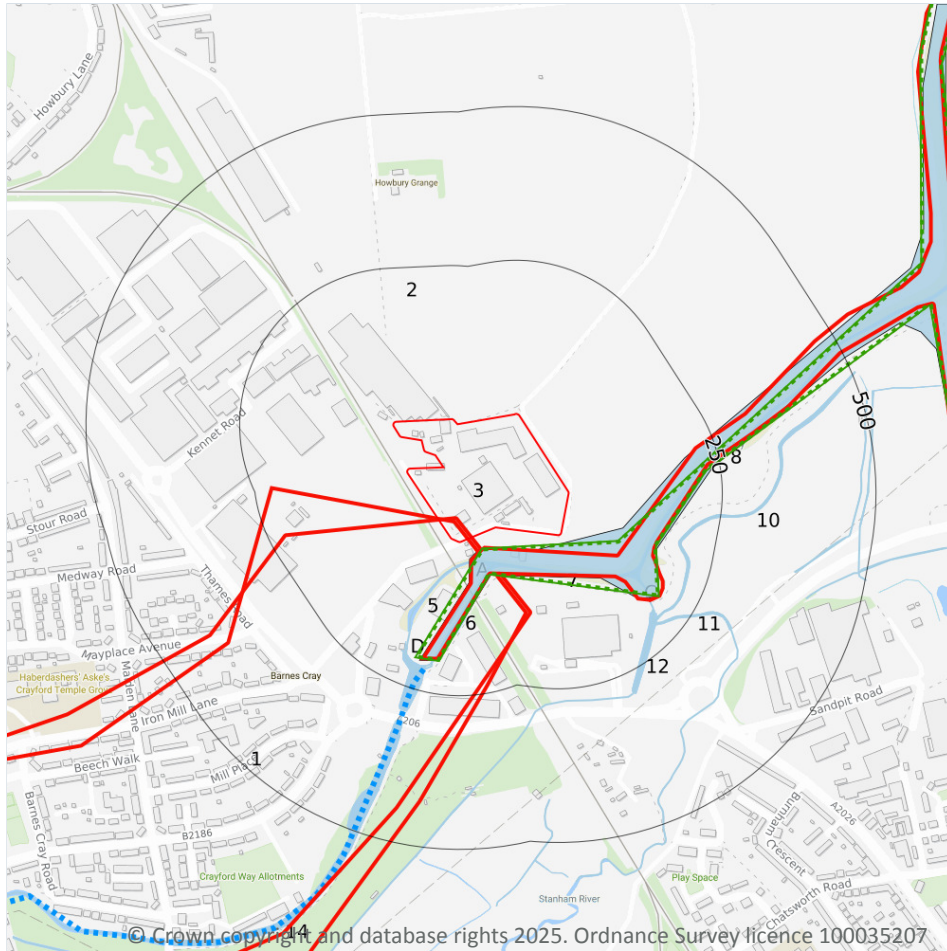
5.10 Source Protection Zones (confined aquifer)

Records within 500m	0
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Source Protection Zones in the confined aquifer define the sensitivity around a deep groundwater abstraction to contamination. A confined aquifer would normally be protected from contamination by overlying geology and is only considered a sensitive resource if deep excavation/drilling is taking place.

This data is sourced from the Environment Agency and Natural Resources Wales.

6 Hydrology



6.1 Water Network (OS MasterMap)

Records within 250m

21

Detailed water network of Great Britain showing the flow and precise central course of every river, stream, lake and canal.

Features are displayed on the Hydrology map on [page 85 >](#)

ID	Location	Type of water feature	Ground level	Permanence	Name
A	35m S	Tidal river or stream.	On ground surface	Watercourse contains water year round (in normal circumstances)	River Cray

ID	Location	Type of water feature	Ground level	Permanence	Name
5	45m S	Tidal river or stream.	On ground surface	Watercourse contains water year round (in normal circumstances)	River Cray
6	55m SE	Tidal river or stream.	On ground surface	Watercourse contains water year round (in normal circumstances)	River Cray
A	55m SE	Tidal river or stream.	On ground surface	Watercourse contains water year round (in normal circumstances)	River Cray
7	56m SE	Tidal river or stream.	On ground surface	Watercourse contains water year round (in normal circumstances)	River Cray
8	136m SE	Tidal river or stream.	On ground surface	Watercourse contains water year round (in normal circumstances)	River Cray
C	136m SE	Tidal river or stream.	On ground surface	Watercourse contains water year round (in normal circumstances)	Stanham River
D	166m SW	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	River Cray
C	172m SE	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	Stanham River
D	186m SW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	River Cray
10	193m E	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
C	194m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Stanham River
D	201m S	Tidal river or stream.	On ground surface	Watercourse contains water year round (in normal circumstances)	River Cray
D	201m S	Tidal river or stream.	On ground surface	Watercourse contains water year round (in normal circumstances)	River Cray



ID	Location	Type of water feature	Ground level	Permanence	Name
D	205m S	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	River Cray
D	205m S	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	River Cray
11	208m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Stanham River
12	208m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
D	208m S	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	River Cray
D	212m S	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	River Cray
14	220m S	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	River Cray

This data is sourced from the Ordnance Survey.

6.2 Surface water features

Records within 250m

2

Covering rivers, streams and lakes (some overlap with OS MasterMap Water Network data in previous section) but additionally covers smaller features such as ponds. Rivers and streams narrower than 5m are represented as a single line. Lakes, ponds and rivers or streams wider than 5m are represented as polygons.

Features are displayed on the Hydrology map on [page 85 >](#)

This data is sourced from the Ordnance Survey.

6.3 WFD Surface water body catchments

Records on site

2

The Water Framework Directive is an EU-led framework for the protection of inland surface waters, estuaries, coastal waters and groundwater through river basin-level management planning. In terms of surface water, these basins are broken down into smaller units known as management, operational and water body catchments.



Features are displayed on the Hydrology map on [page 85 >](#)

ID	Location	Type	Water body catchment	Water body ID	Operational catchment	Management catchment
1	On site	River	Lower Cray	GB106040024150	Cray and Shuttle	Darent and Cray
2	On site	Coastal Catchment	Not part of a river WB catchment	128	Land area part of London Management Catchment draining to the Tidal Thames	London

This data is sourced from the Environment Agency and Natural Resources Wales.

6.4 WFD Surface water bodies

Records identified	2
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Surface water bodies under the Directive may be rivers, lakes, estuary or coastal. To achieve the purpose of the Directive, environmental objectives have been set and are reported on for each water body. The progress towards delivery of the objectives is then reported on by the relevant competent authorities at the end of each six-year cycle. The river water body directly associated with the catchment listed in the previous section is detailed below, along with any lake, canal, coastal or artificial water body within 250m of the site. Click on the water body ID in the table to visit the EA Catchment Explorer to find out more about each water body listed.

Features are displayed on the Hydrology map on [page 85 >](#)

ID	Location	Type	Name	Water body ID	Overall rating	Chemical rating	Ecological rating	Year
4	14m S	Transi	THAMES MIDDLE	GB530603911402 ↗	Moderate	Fail	Moderate	2019
13	208m S	River	Lower Cray	GB106040024150 ↗	Moderate	Fail	Moderate	2019

This data is sourced from the Environment Agency and Natural Resources Wales.

6.5 WFD Groundwater bodies

Records on site	1
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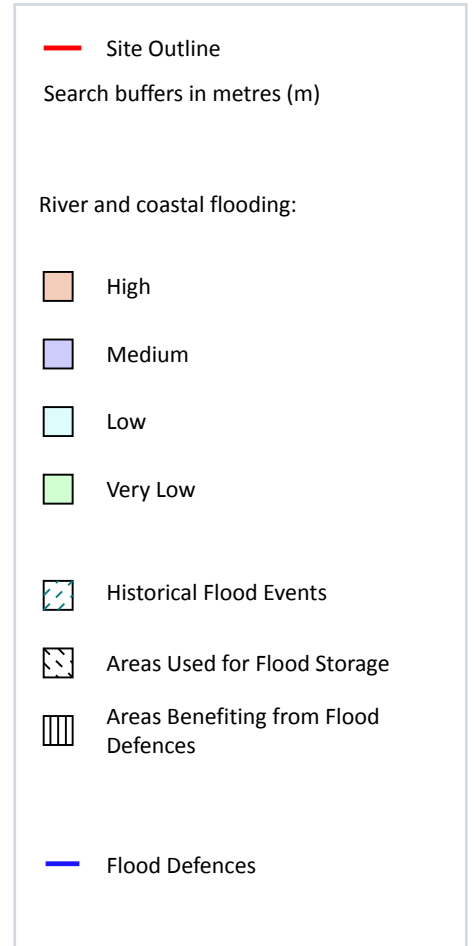
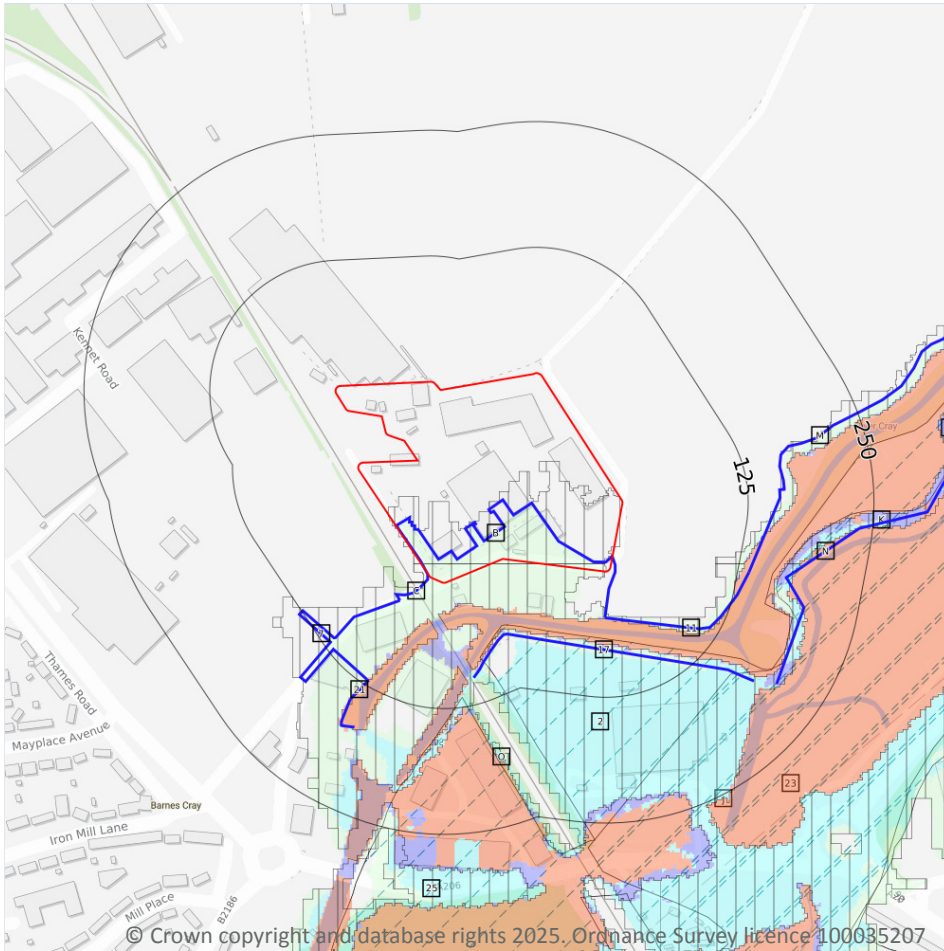
Groundwater bodies are also covered by the Directive and the same regime of objectives and reporting detailed in the previous section is in place. Click on the water body ID in the table to visit the EA Catchment Explorer to find out more about each groundwater body listed.

Features are displayed on the Hydrology map on [page 85 >](#)

ID	Location	Name	Water body ID	Overall rating	Chemical rating	Quantitative	Year
3	On site	West Kent Darent and Cray Chalk	GB40601G501800 ↗	Poor	Poor	Poor	2019

This data is sourced from the Environment Agency and Natural Resources Wales.

7 River and coastal flooding



7.1 Risk of flooding from rivers and the sea

Records within 50m

24

The chance of flooding from rivers and/or the sea in any given year, based on cells of 50m within the Risk of Flooding from Rivers and Sea (RoFRaS)/Flood Risk Assessment Wales (FRAW) models. Each cell is allocated one of four flood risk categories, taking into account flood defences and their condition. The risk categories for RoFRaS for rivers and the sea and FRAW for rivers are; Very low (less than 1 in 1000 chance in any given year), Low (less than 1 in 100 but greater than or equal to 1 in 1000 chance), Medium (less than 1 in 30 but greater than or equal to 1 in 100 chance) or High (greater than or equal to 1 in 30 chance). The risk categories for FRAW for the sea are; Very low (less than 1 in 1000 chance in any given year), Low (less than 1 in 200 but greater than or equal to 1 in 1000 chance), Medium (less than 1 in 30 but greater than or equal to 1 in 200 chance) or High (greater than or equal to 1 in 30 chance).

Features are displayed on the River and coastal flooding map on [page 90](#) >

Distance	Flood risk category
On site	Very Low
0 - 50m	High

This data is sourced from the Environment Agency and Natural Resources Wales.

7.2 Historical Flood Events

Records within 250m	2
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Records of historic flooding from rivers, the sea, groundwater and surface water. Records began in 1946 when predecessor bodies started collecting detailed information about flooding incidents, although limited details may be included on flooding incidents prior to this date. Takes into account the presence of defences, structures, and other infrastructure where they existed at the time of flooding, and includes flood extents that may have been affected by overtopping, breaches or blockages.

Features are displayed on the River and coastal flooding map on [page 90 >](#)

ID	Location	Event name	Date of flood	Flood source	Flood cause	Type of flood
J	61m SE	07337e200_Sept1968_Cray_Da rtford	1968-09-14 1968-09-14	Main river	Channel capacity exceeded (no raised defences)	Fluvial
23	158m E	07301e900_Feb1953_Dartford /swanscombe	1953-01-31 1953-02-01	Sea	Overtopping of defences	Tidal

This data is sourced from the Environment Agency and Natural Resources Wales.

7.3 Flood Defences

Records within 250m	10
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Records of flood defences owned, managed or inspected by the Environment Agency and Natural Resources Wales. Flood defences can be structures, buildings or parts of buildings. Typically these are earth banks, stone and concrete walls, or sheet-piling that is used to prevent or control the extent of flooding.

Features are displayed on the River and coastal flooding map on [page 90 >](#)

ID	Location	Update
B	On site	08/11/2022
C	15m SW	08/11/2022
C	23m SW	08/11/2022
7	38m SW	08/11/2022



ID	Location	Update
11	46m S	08/11/2022
17	70m SE	08/11/2022
21	120m SW	08/11/2022
M	136m E	08/11/2022
G	145m SW	08/11/2022
N	174m E	08/11/2022

This data is sourced from the Environment Agency and Natural Resources Wales.

7.4 Areas Benefiting from Flood Defences

Records within 250m

10

Areas that would benefit from the presence of flood defences in a 1 in 100 (1%) chance of flooding each year from rivers or 1 in 200 (0.5%) chance of flooding each year from the sea.

Features are displayed on the River and coastal flooding map on [page 90](#) >

ID	Location	
2	On site	Area benefiting from flood defences
B	On site	Area benefiting from flood defences
M	101m E	Area benefiting from flood defences
D	133m S	Area benefiting from flood defences
D	144m S	Area benefiting from flood defences
O	165m S	Area benefiting from flood defences
K	172m E	Area benefiting from flood defences
F	200m S	Area benefiting from flood defences
F	222m S	Area benefiting from flood defences
25	224m S	Area benefiting from flood defences

This data is sourced from the Environment Agency and Natural Resources Wales.



7.5 Flood Storage Areas

Records within 250m

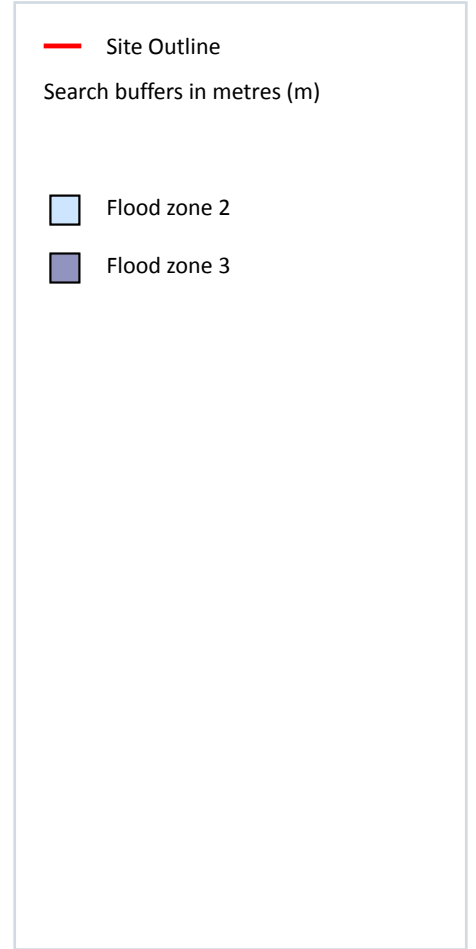
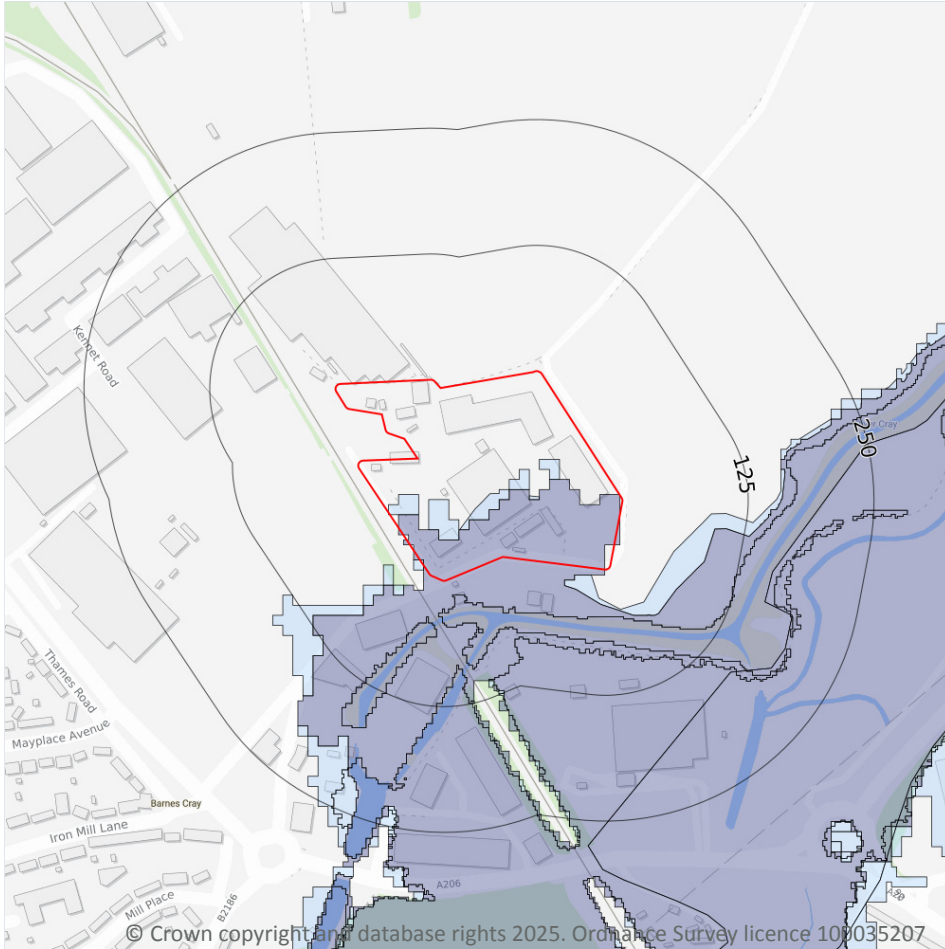
0

Areas that act as a balancing reservoir, storage basin or balancing pond to attenuate an incoming flood peak to a flow level that can be accepted by the downstream channel or to delay the timing of a flood peak so that its volume is discharged over a longer period.

This data is sourced from the Environment Agency and Natural Resources Wales.



River and coastal flooding - Flood Zones



7.6 Flood Zone 2

Records within 50m

1

Areas of land at risk of flooding, when the presence of flood defences are ignored. Covering land between Flood Zone 3 (see next section) and the extent of the flooding from rivers or the sea with a 1 in 1000 (0.1%) chance of flooding each year.

Features are displayed on the River and coastal flooding map on [page 90 >](#)

Location	Type
On site	Zone 2 - (Fluvial /Tidal Models)

This data is sourced from the Environment Agency and Natural Resources Wales.

7.7 Flood Zone 3

Records within 50m

1

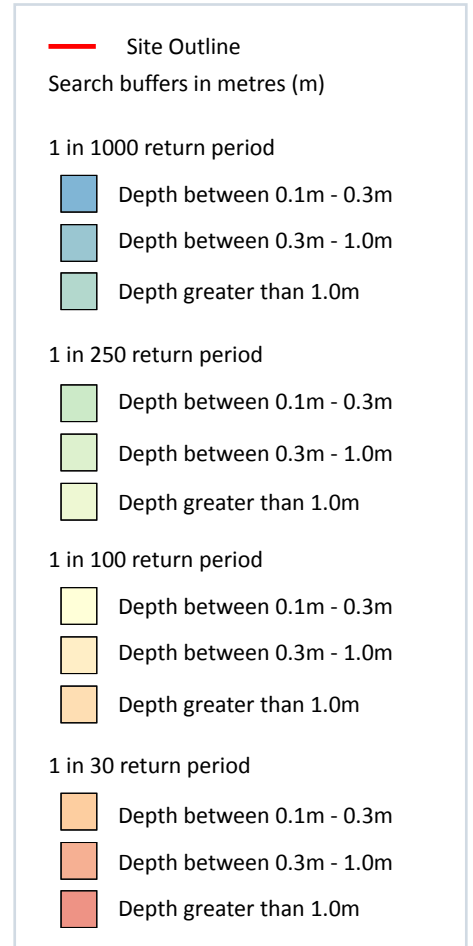
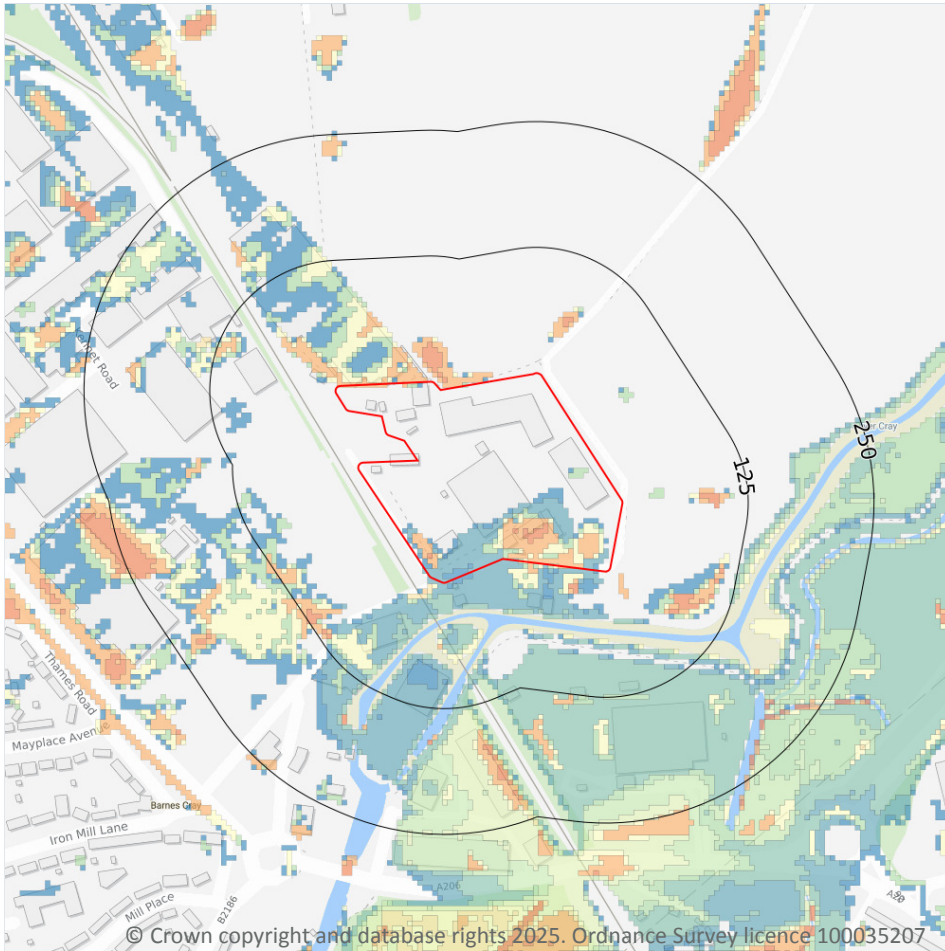
Areas of land at risk of flooding, when the presence of flood defences are ignored. Covering land with a 1 in 100 (1%) or greater chance of flooding each year from rivers or a 1 in 200 (0.5%) or greater chance of flooding each year from the sea.

Features are displayed on the River and coastal flooding map on [page 90 >](#)

Location	Type
On site	Zone 3 - (Fluvial /Tidal Models)

This data is sourced from the Environment Agency and Natural Resources Wales.

8 Surface water flooding



8.1 Surface water flooding

Highest risk on site

1 in 30 year, 0.3m - 1.0m

Highest risk within 50m

1 in 30 year, 0.3m - 1.0m

Ambiental Risk Analytics surface water (pluvial) FloodMap identifies areas likely to flood as a result of extreme rainfall events, i.e. land naturally vulnerable to surface water ponding or flooding. This data set was produced by simulating 1 in 30 year, 1 in 100 year, 1 in 250 year and 1 in 1,000 year rainfall events. Modern urban drainage systems are typically built to cope with rainfall events between 1 in 20 and 1 in 30 years, though some older ones may flood in a 1 in 5 year rainfall event.

Features are displayed on the Surface water flooding map on [page 96 >](#)

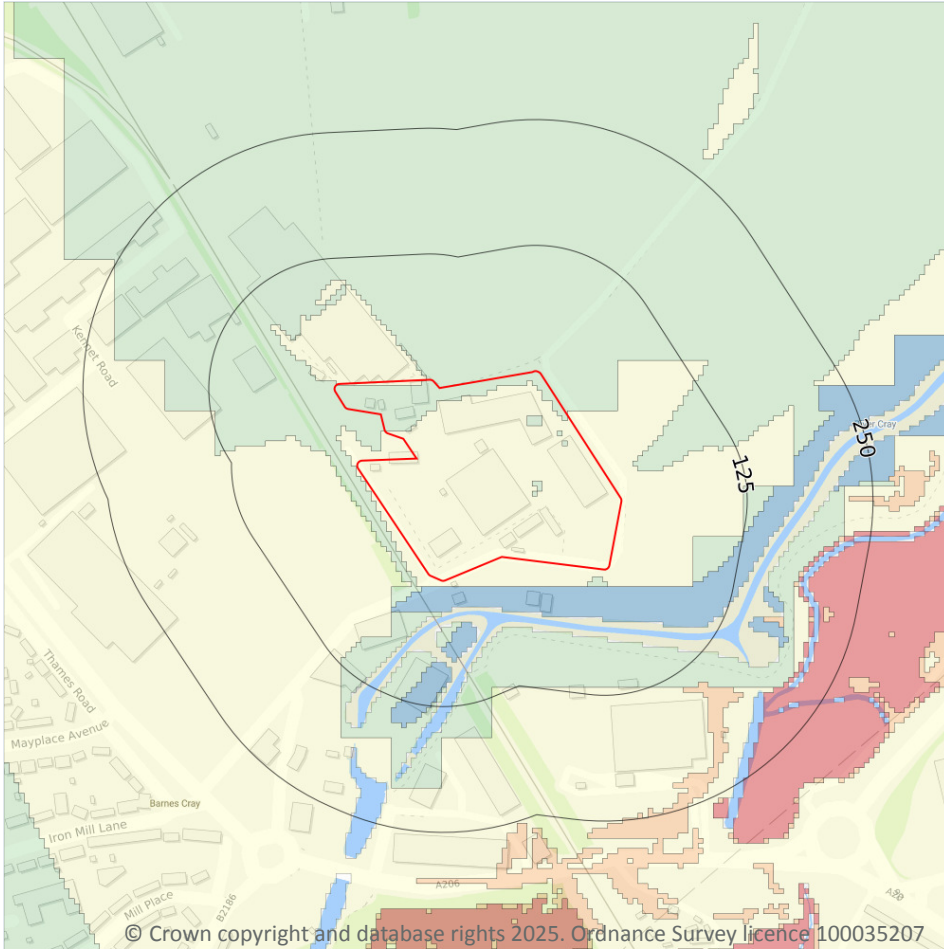
The data shown on the map and in the table above shows the highest likelihood of flood events happening at the site. Lower likelihood events may have greater flood depths and hence a greater potential impact on a site.

The table below shows the maximum flood depths for a range of return periods for the site.

Return period	Maximum modelled depth
1 in 1000 year	Between 0.3m and 1.0m
1 in 250 year	Between 0.3m and 1.0m
1 in 100 year	Between 0.3m and 1.0m
1 in 30 year	Between 0.3m and 1.0m

This data is sourced from Ambiental Risk Analytics.

9 Groundwater flooding



9.1 Groundwater flooding

Highest risk on site

Moderate

Highest risk within 50m

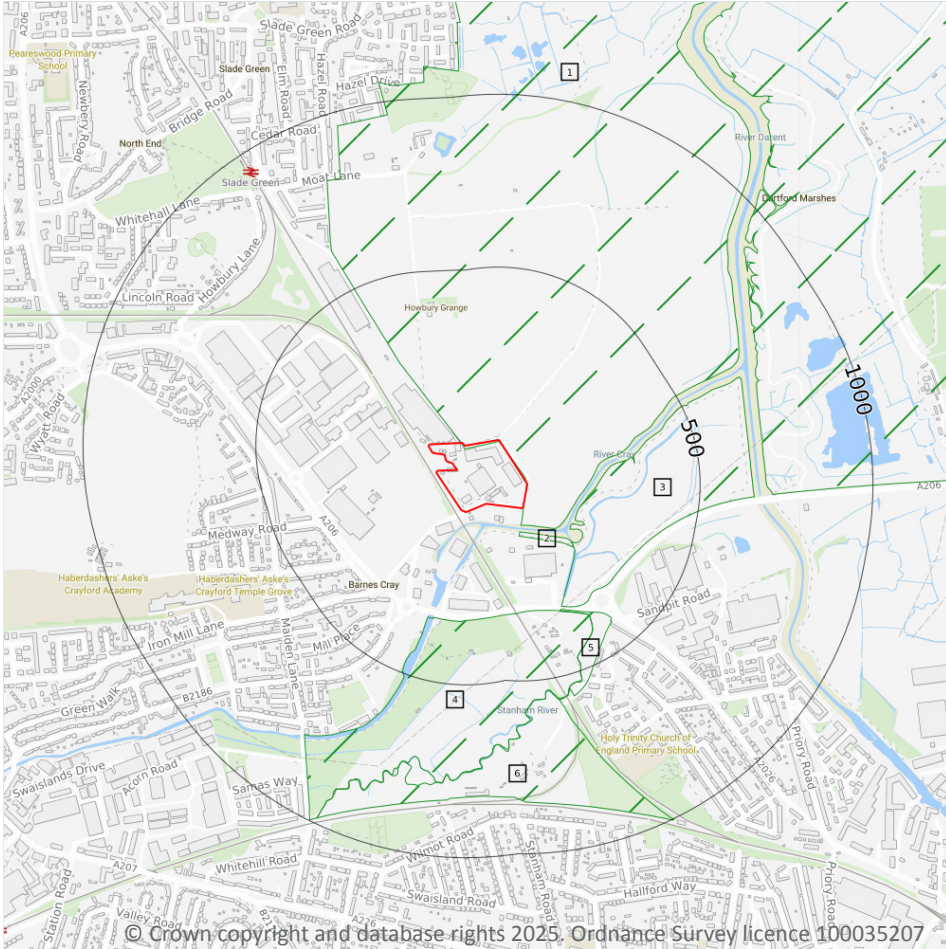
Moderate

Groundwater flooding is caused by unusually high groundwater levels. It occurs when the water table rises above the ground surface or within underground structures such as basements or cellars. Groundwater flooding tends to exhibit a longer duration than surface water flooding, possibly lasting for weeks or months, and as a result it can cause significant damage to property. This risk assessment is based on a 1 in 100 year return period and a 5m Digital Terrain Model (DTM).

Features are displayed on the Groundwater flooding map on [page 98](#) >

This data is sourced from Ambiantal Risk Analytics.

10 Environmental designations



10.1 Sites of Special Scientific Interest (SSSI)

Records within 2000m

0

Sites providing statutory protection for the best examples of UK flora, fauna, or geological or physiographical features. Originally notified under the National Parks and Access to the Countryside Act 1949, SSSIs were re-notified under the Wildlife and Countryside Act 1981. Improved provisions for the protection and management of SSSIs were introduced by the Countryside and Rights of Way Act 2000 (in England and Wales) and (in Scotland) by the Nature Conservation (Scotland) Act 2004 and the Wildlife and Natural Environment (Scotland) Act 2010.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

10.2 Conserved wetland sites (Ramsar sites)

Records within 2000m

0

Ramsar sites are designated under the Convention on Wetlands of International Importance, agreed in Ramsar, Iran, in 1971. They cover all aspects of wetland conservation and wise use, recognizing wetlands as ecosystems that are extremely important for biodiversity conservation in general and for the well-being of human communities. These sites cover a broad definition of wetland; marsh, fen, peatland or water, whether natural or artificial, permanent or temporary, with water that is static or flowing, fresh, brackish or salt, and even some marine areas.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

10.3 Special Areas of Conservation (SAC)

Records within 2000m

0

Areas which have been identified as best representing the range and variety within the European Union of habitats and (non-bird) species listed on Annexes I and II to the Directive. SACs are designated under the EC Habitats Directive.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

10.4 Special Protection Areas (SPA)

Records within 2000m

0

Sites classified by the UK Government under the EC Birds Directive, SPAs are areas of the most important habitat for rare (listed on Annex I to the Directive) and migratory birds within the European Union.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

10.5 National Nature Reserves (NNR)

Records within 2000m

0

Sites containing examples of some of the most important natural and semi-natural terrestrial and coastal ecosystems in Great Britain. They are managed to conserve their habitats, provide special opportunities for scientific study or to provide public recreation compatible with natural heritage interests.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.



10.6 Local Nature Reserves (LNR)

Records within 2000m

0

Sites managed for nature conservation, and to provide opportunities for research and education, or simply enjoying and having contact with nature. They are declared by local authorities under the National Parks and Access to the Countryside Act 1949 after consultation with the relevant statutory nature conservation agency.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

10.7 Designated Ancient Woodland

Records within 2000m

0

Ancient woodlands are classified as areas which have been wooded continuously since at least 1600 AD. This includes semi-natural woodland and plantations on ancient woodland sites. 'Wooded continuously' does not mean there is or has previously been continuous tree cover across the whole site, and not all trees within the woodland have to be old.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

10.8 Biosphere Reserves

Records within 2000m

0

Biosphere Reserves are internationally recognised by UNESCO as sites of excellence to balance conservation and socioeconomic development between nature and people. They are recognised under the Man and the Biosphere (MAB) Programme with the aim of promoting sustainable development founded on the work of the local community.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

10.9 Forest Parks

Records within 2000m

0

These are areas managed by the Forestry Commission designated on the basis of recreational, conservation or scenic interest.

This data is sourced from the Forestry Commission.

10.10 Marine Conservation Zones

Records within 2000m

0

A type of marine nature reserve in UK waters established under the Marine and Coastal Access Act (2009). They are designated with the aim to protect nationally important, rare or threatened habitats and species.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

10.11 Green Belt

Records within 2000m

10

Areas designated to prevent urban sprawl by keeping land permanently open.

Features are displayed on the Environmental designations map on [page 99](#) >

ID	Location	Name	Local Authority name
1	On site	London Green Belt	Bexley
2	69m S	London Green Belt	Bexley
3	148m E	London Green Belt	Dartford
4	299m S	London Green Belt	Bexley
5	314m S	London Green Belt	Dartford
6	532m S	London Green Belt	Dartford
7	688m E	London Green Belt	Dartford
-	1938m SW	London Green Belt	Dartford
-	1959m SW	London Green Belt	Bexley
-	1970m N	London Green Belt	Bexley

This data is sourced from the Ministry of Housing, Communities and Local Government.

10.12 Proposed Ramsar sites

Records within 2000m

0

Ramsar sites are areas listed as a Wetland of International Importance under the Convention on Wetlands of International Importance especially as Waterfowl Habitat (the Ramsar Convention) 1971. The sites here supplied have a status of 'Proposed' having been identified for potential adoption under the framework.

This data is sourced from Natural England.



10.13 Possible Special Areas of Conservation (pSAC)

Records within 2000m

0

Special Areas of Conservation are areas which have been identified as best representing the range and variety within the European Union of habitats and (non-bird) species listed on Annexes I and II to the Directive. SACs are designated under the EC Habitats Directive. Those sites supplied here are those with a status of 'Possible' having been identified for potential adoption under the framework.

This data is sourced from Natural England and Natural Resources Wales.

10.14 Potential Special Protection Areas (pSPA)

Records within 2000m

0

Special Protection Areas (SPAs) are areas designated (or 'classified') under the European Union Wild Birds Directive for the protection of nationally and internationally important populations of wild birds. Those sites supplied here are those with a status of 'Potential' having been identified for potential adoption under the framework.

This data is sourced from Natural England.

10.15 Nitrate Sensitive Areas

Records within 2000m

0

Areas where nitrate concentrations in drinking water sources exceeded or was at risk of exceeding the limit of 50 mg/l set by the 1980 EC Drinking Water Directive. Voluntary agricultural measures as a means of reducing the levels of nitrate were introduced by DEFRA as MAFF, with payments being made to farmers who complied. The scheme was started as a pilot in 1990 in ten areas, later implemented within 32 areas. The scheme was closed to further new entrants in 1998, although existing agreements continued for their full term. All Nitrate Sensitive Areas fell within the areas designated as Nitrate Vulnerable Zones (NVZs) in 1996 under the EC Nitrate Directive (91/676/EEC).

This data is sourced from Natural England.

10.16 Nitrate Vulnerable Zones

Records within 2000m

1

Areas at risk from agricultural nitrate pollution designated under the EC Nitrate Directive (91/676/EEC). These are areas of land that drain into waters polluted by nitrates. Farmers operating within these areas have to follow mandatory rules to tackle nitrate loss from agriculture.

Location	Name	Type	NVZ ID	Status
1919m SW	North Kent	Groundwater	65	Existing



This data is sourced from Natural England and Natural Resources Wales.



SSSI Impact Zones and Units

10.17 SSSI Impact Risk Zones

Records on site

0

Developed to allow rapid initial assessment of the potential risks to SSSIs posed by development proposals. They define zones around each SSSI which reflect the particular sensitivities of the features for which it is notified and indicate the types of development proposal which could potentially have adverse impacts.

This data is sourced from Natural England.

10.18 SSSI Units

Records within 2000m

0

Divisions of SSSIs used to record management and condition details. Units are the smallest areas for which Natural England gives a condition assessment, however, the size of units varies greatly depending on the types of management and the conservation interest.

This data is sourced from Natural England and Natural Resources Wales.

11 Visual and cultural designations

11.1 World Heritage Sites

Records within 250m

0

Sites designated for their globally important cultural or natural interest requiring appropriate management and protection measures. World Heritage Sites are designated to meet the UK's commitments under the World Heritage Convention.

This data is sourced from Historic England, Cadw and Historic Environment Scotland.

11.2 Area of Outstanding Natural Beauty

Records within 250m

0

Areas of Outstanding Natural Beauty (AONB) are conservation areas, chosen because they represent 18% of the finest countryside. Each AONB has been designated for special attention because of the quality of their flora, fauna, historical and cultural associations, and/or scenic views. The National Parks and Access to the Countryside Act of 1949 created AONBs and the Countryside and Rights of Way Act, 2000 added further regulation and protection. There are likely to be restrictions to some developments within these areas.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

11.3 National Parks

Records within 250m

0

In England and Wales, the purpose of National Parks is to conserve and enhance landscapes within the countryside whilst promoting public enjoyment of them and having regard for the social and economic well-being of those living within them. In Scotland National Parks have the additional purpose of promoting the sustainable use of the natural resources of the area and the sustainable social and economic development of its communities. The National Parks and Access to the Countryside Act 1949 established the National Park designation in England and Wales, and The National Parks (Scotland) Act 2000 in Scotland.

This data is sourced from Natural England, Natural Resources Wales and the Scottish Government.

11.4 Listed Buildings

Records within 250m

0

Buildings listed for their special architectural or historical interest. Building control in the form of 'listed building consent' is required in order to make any changes to that building which might affect its special interest. Listed buildings are graded to indicate their relative importance, however building controls apply to all buildings equally, irrespective of their grade, and apply to the interior and exterior of the building in its entirety, together with any curtilage structures.



This data is sourced from Historic England, Cadw and Historic Environment Scotland.

11.5 Conservation Areas

Records within 250m

0

Local planning authorities are obliged to designate as conservation areas any parts of their own area that are of special architectural or historic interest, the character and appearance of which it is desirable to preserve or enhance. Designation of a conservation area gives broader protection than the listing of individual buildings. All the features within the area, listed or otherwise, are recognised as part of its character. Conservation area designation is the means of recognising the importance of all factors and of ensuring that planning decisions address the quality of the landscape in its broadest sense.

This data is sourced from Historic England, Cadw and Historic Environment Scotland.

11.6 Scheduled Ancient Monuments

Records within 250m

0

A scheduled monument is an historic building or site that is included in the Schedule of Monuments kept by the Secretary of State for Digital, Culture, Media and Sport. The regime is set out in the Ancient Monuments and Archaeological Areas Act 1979. The Schedule of Monuments has c.20,000 entries and includes sites such as Roman remains, burial mounds, castles, bridges, earthworks, the remains of deserted villages and industrial sites. Monuments are not graded, but all are, by definition, considered to be of national importance.

This data is sourced from Historic England, Cadw and Historic Environment Scotland.

11.7 Registered Parks and Gardens

Records within 250m

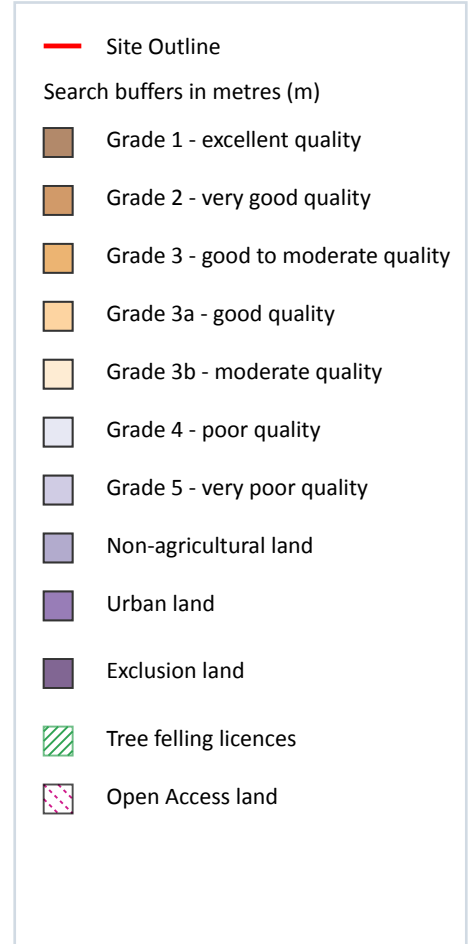
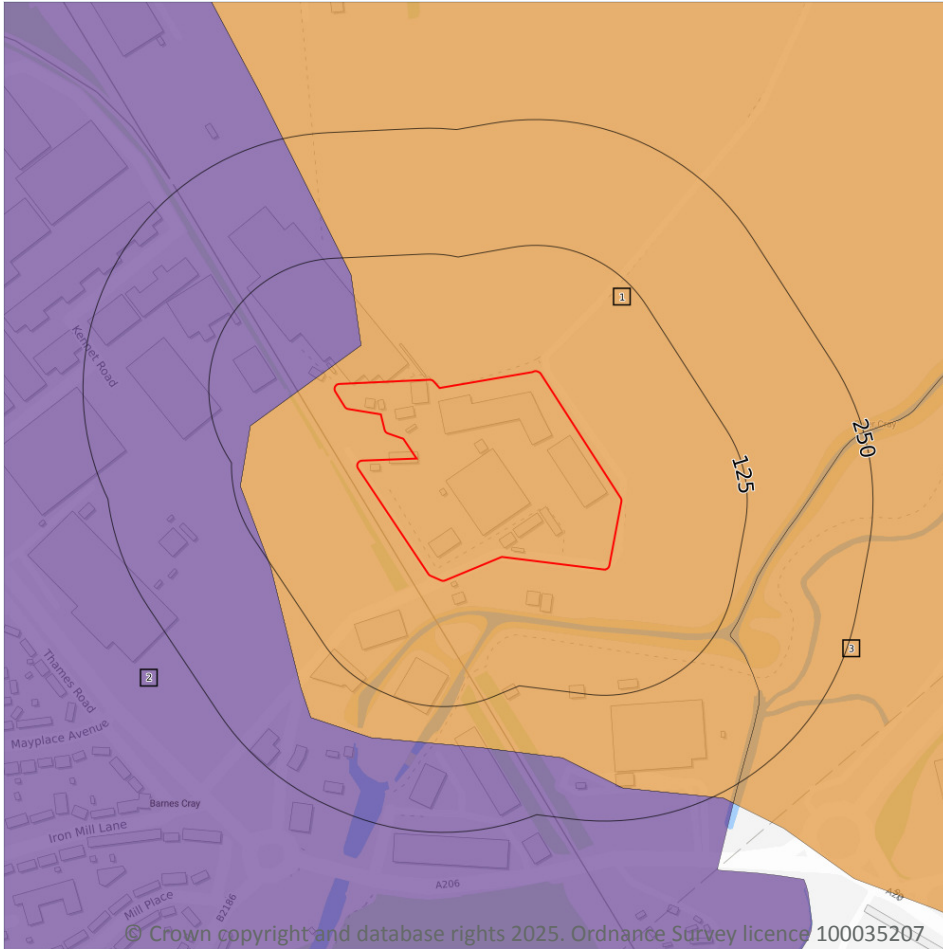
0

Parks and gardens assessed to be of particular interest and of special historic interest. The emphasis being on 'designed' landscapes, rather than on planting or botanical importance. Registration is a 'material consideration' in the planning process, meaning that planning authorities must consider the impact of any proposed development on the special character of the landscape.

This data is sourced from Historic England, Cadw and Historic Environment Scotland.



12 Agricultural designations



12.1 Agricultural Land Classification

Records within 250m

3

Classification of the quality of agricultural land taking into consideration multiple factors including climate, physical geography and soil properties. It should be noted that the categories for the grading of agricultural land are not consistent across England, Wales and Scotland.

Features are displayed on the Agricultural designations map on [page 108](#) >

ID	Location	Classification	Description
1	On site	Grade 3	Good to moderate quality agricultural land. Land with moderate limitations which affect the choice of crops, timing and type of cultivation, harvesting or the level of yield. Where more demanding crops are grown yields are generally lower or more variable than on land in Grades 1 and 2.
2	18m NW	Urban	Non-agricultural/no quality assigned



ID	Location	Classification	Description
3	138m SE	Grade 3	Good to moderate quality agricultural land. Land with moderate limitations which affect the choice of crops, timing and type of cultivation, harvesting or the level of yield. Where more demanding crops are grown yields are generally lower or more variable than on land in Grades 1 and 2.

This data is sourced from Natural England.

12.2 Open Access Land

Records within 250m

0

The Countryside and Rights of Way Act 2000 (CROW Act) gives a public right of access to land without having to use paths. Access land includes mountains, moors, heaths and downs that are privately owned. It also includes common land registered with the local council and some land around the England Coast Path. Generally permitted activities on access land are walking, running, watching wildlife and climbing.

This data is sourced from Natural England and Natural Resources Wales.

12.3 Tree Felling Licences

Records within 250m

0

Felling Licence Application (FLA) areas approved by Forestry Commission England. Anyone wishing to fell trees must ensure that a licence or permission under a grant scheme has been issued by the Forestry Commission before any felling is carried out or that one of the exceptions apply.

This data is sourced from the Forestry Commission.

12.4 Environmental Stewardship Schemes

Records within 250m

0

Environmental Stewardship covers a range of schemes that provide financial incentives to farmers, foresters and land managers to look after and improve the environment. The schemes identified may be historical schemes that have now expired, or may still be active.

This data is sourced from Natural England.

12.5 Countryside Stewardship Schemes

Records within 250m

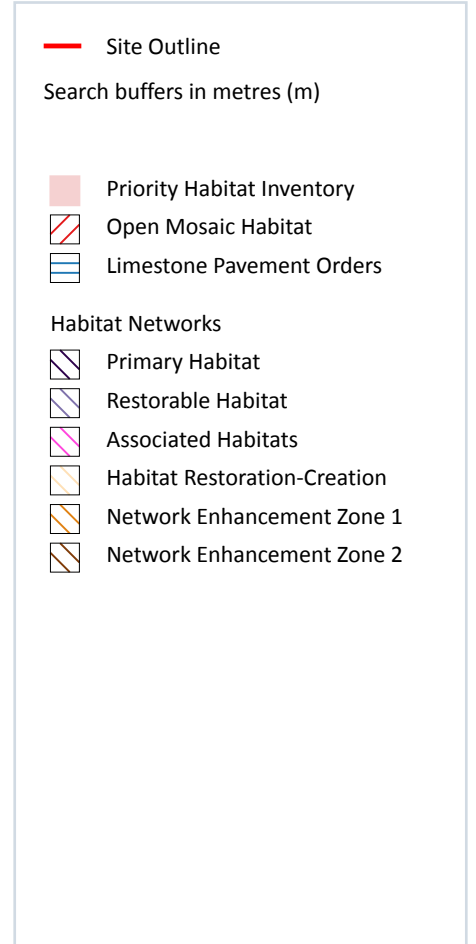
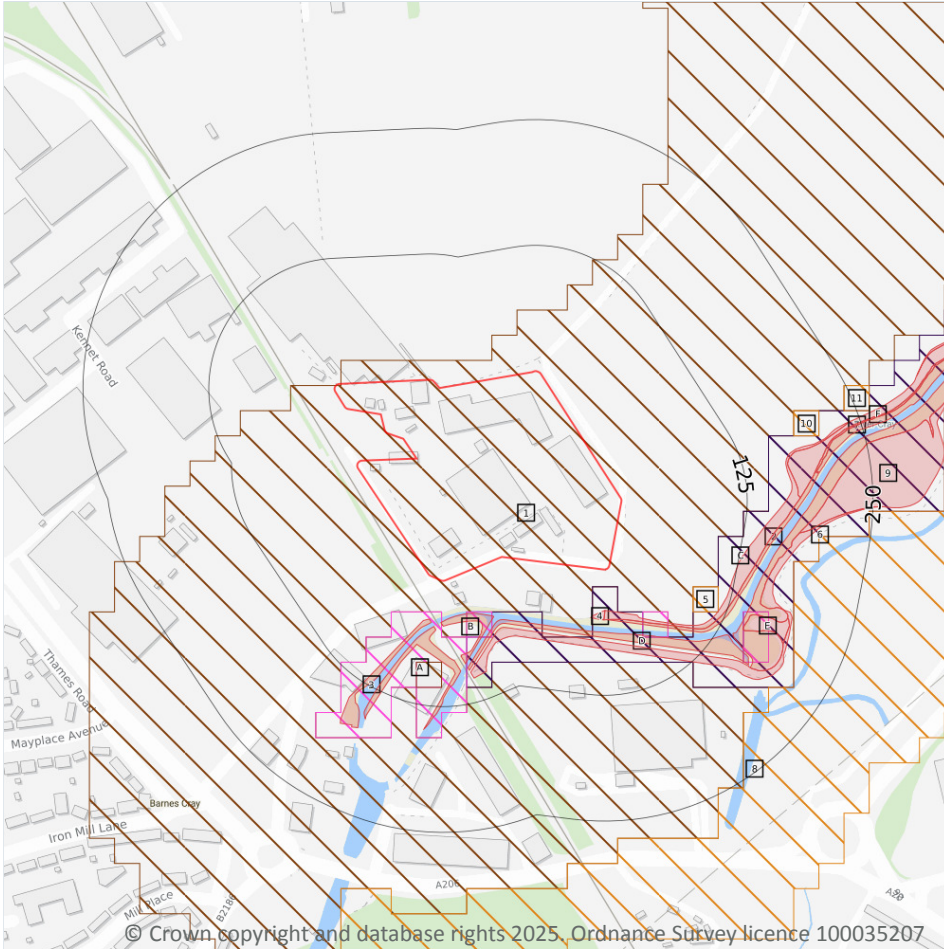
0

Countryside Stewardship covers a range of schemes that provide financial incentives to farmers, foresters and land managers to look after and improve the environment. Main objectives are to improve the farmed environment for wildlife and to reduce diffuse water pollution.

This data is sourced from Natural England.



13 Habitat designations



13.1 Priority Habitat Inventory

Records within 250m

14

Habitats of principal importance as named under Natural Environment and Rural Communities Act (2006) Section 41.

Features are displayed on the Habitat designations map on [page 110](#) >

ID	Location	Main Habitat	Other habitats
B	37m S	Mudflats	Main habitat: MUDFL (INV > 50%)
3	40m S	Mudflats	Main habitat: MUDFL (INV > 50%)
4	41m S	Coastal saltmarsh	Main habitat: SALTM (INV > 50%)
C	41m S	Coastal saltmarsh	Main habitat: SALTM (INV > 50%)

ID	Location	Main Habitat	Other habitats
A	46m S	Mudflats	Main habitat: MUDFL (INV > 50%)
C	50m S	Coastal saltmarsh	Main habitat: MUDFL (INV > 50%); SALTM (INV > 50%)
D	57m SE	Mudflats	Main habitat: MUDFL (INV > 50%)
D	65m SE	Coastal saltmarsh	Main habitat: SALTM (INV > 50%)
6	140m SE	Mudflats	Main habitat: MUDFL (INV > 50%); Additional: SALTM (INV 50%)
E	147m SE	Coastal saltmarsh	Main habitat: SALTM (INV > 50%)
7	169m E	Coastal saltmarsh	Main habitat: SALTM (INV > 50%)
9	180m E	Coastal saltmarsh	Main habitat: SALTM (INV > 50%)
F	195m E	Coastal saltmarsh	Main habitat: SALTM (INV > 50%)
F	196m E	Coastal saltmarsh	Main habitat: MUDFL (INV > 50%); SALTM (INV > 50%)

This data is sourced from Natural England.

13.2 Habitat Networks

Records within 250m

11

Habitat networks for 18 priority habitat networks (based primarily, but not exclusively, on the priority habitat inventory) and areas suitable for the expansion of networks through restoration and habitat creation.

Features are displayed on the Habitat designations map on [page 110 >](#)

ID	Location	Type	Habitat
1	On site	Network Enhancement Zone 2	Not specified
2	17m S	Primary Habitat	Saltmarsh
A	31m S	Associated Habitats	Other associated habitats
B	37m SE	Associated Habitats	Other associated habitats
D	56m SE	Associated Habitats	Other associated habitats
A	81m S	Network Enhancement Zone 2	Not specified
5	86m E	Network Enhancement Zone 1	Not specified
E	141m E	Associated Habitats	Other associated habitats
8	179m E	Network Enhancement Zone 1	Not specified
10	183m E	Network Enhancement Zone 1	Not specified



ID	Location	Type	Habitat
11	238m E	Network Enhancement Zone 1	Not specified

This data is sourced from Natural England.

13.3 Open Mosaic Habitat

Records within 250m

0

Sites verified as Open Mosaic Habitat. Mosaic habitats are brownfield sites that are identified under the UK Biodiversity Action Plan as a priority habitat due to the habitat variation within a single site, supporting an array of invertebrates.

This data is sourced from Natural England.

13.4 Limestone Pavement Orders

Records within 250m

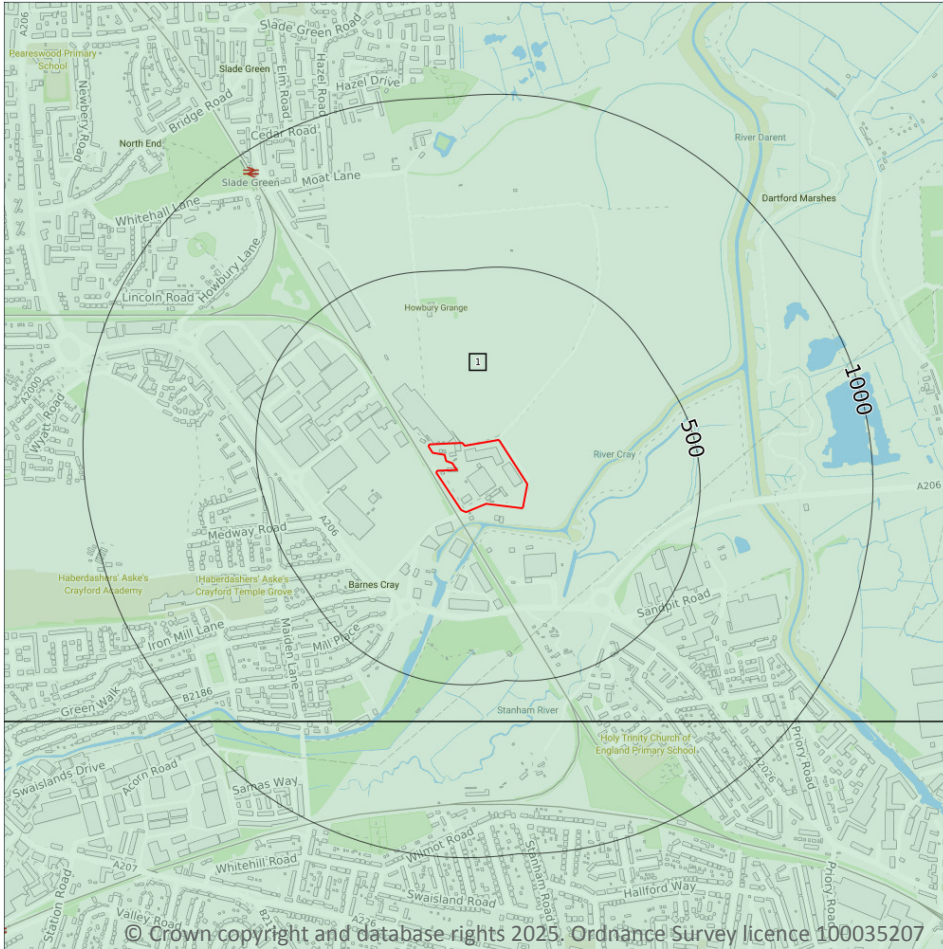
0

Limestone pavements are outcrops of limestone where the surface has been worn away by natural means over millennia. These rocks have the appearance of paving blocks, hence their name. Not only do they have geological interest, they also provide valuable habitats for wildlife. These habitats are threatened due to their removal for use in gardens and water features. Many limestone pavements have been designated as SSSIs which affords them some protection. In addition, Section 34 of the Wildlife and Countryside Act 1981 gave them additional protection via the creation of Limestone Pavement Orders, which made it a criminal offence to remove any part of the outcrop. The associated Limestone Pavement Priority Habitat is part of the UK Biodiversity Action Plan priority habitat in England.

This data is sourced from Natural England.



14 Geology 1:10,000 scale - Availability



— Site Outline
 Search buffers in metres (m)

- Full coverage
- Partial coverage
- No coverage

14.1 10k Availability

Records within 500m

1

An indication on the coverage of 1:10,000 scale geology data for the site, the most detailed dataset provided by the British Geological Survey. Either 'Full', 'Partial' or 'No coverage' for each geological theme.

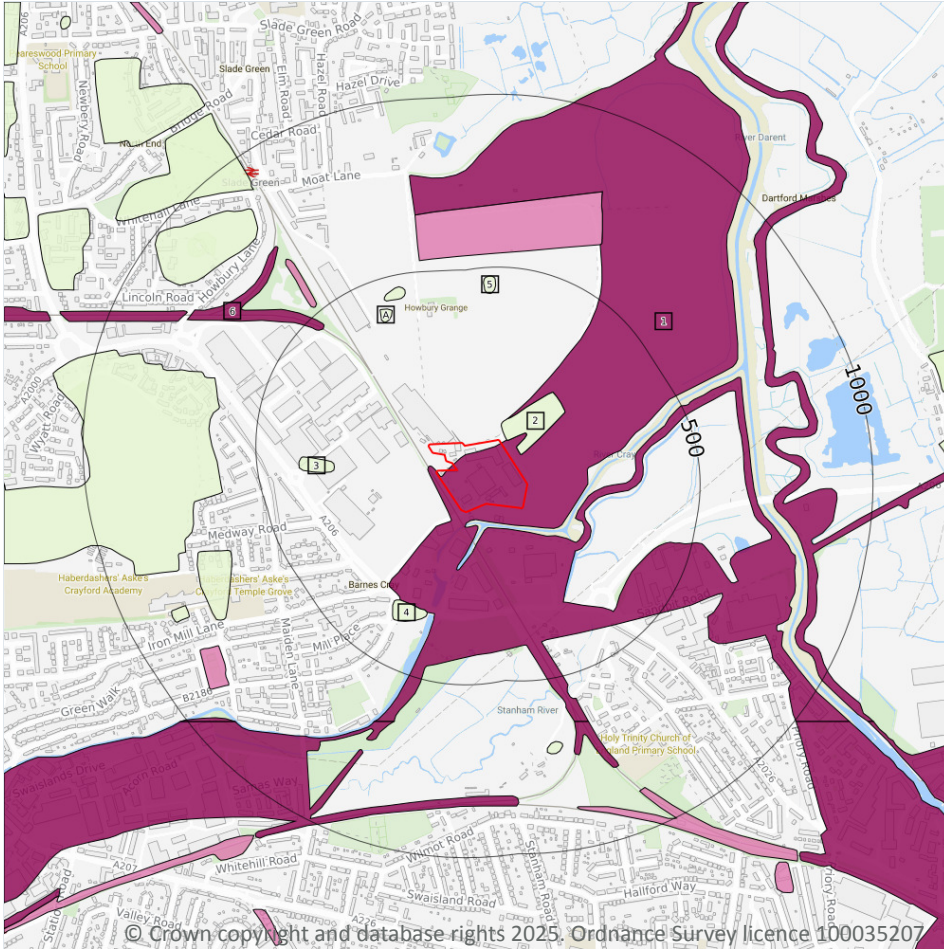
Features are displayed on the Geology 1:10,000 scale - Availability map on [page 113](#) >

ID	Location	Artificial	Superficial	Bedrock	Mass movement	Sheet No.
1	On site	Full	Full	Full	No coverage	TQ57NW

This data is sourced from the British Geological Survey.



Geology 1:10,000 scale - Artificial and made ground



14.2 Artificial and made ground (10k)

Records within 500m

8

Details of made, worked, infilled, disturbed and landscaped ground at 1:10,000 scale. Artificial ground can be associated with potentially contaminated material, unpredictable engineering conditions and instability.

Features are displayed on the Geology 1:10,000 scale - Artificial and made ground map on [page 114](#) >

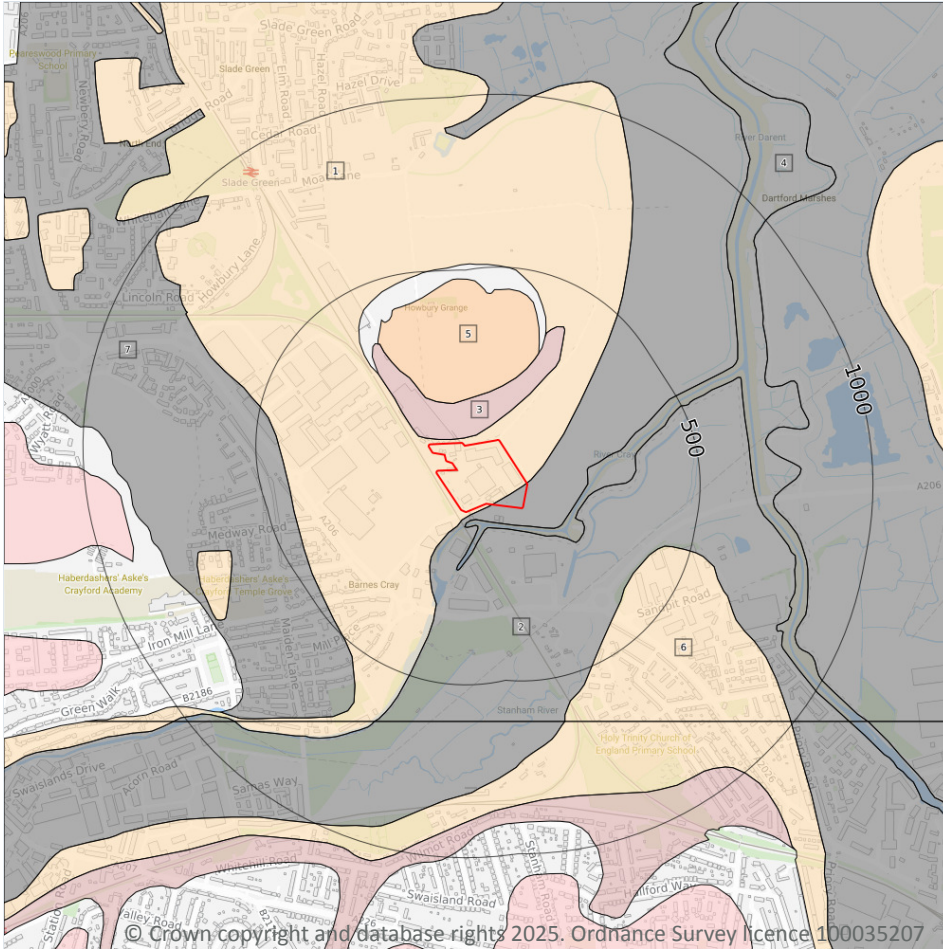
ID	Location	LEX Code	Description	Rock description
1	On site	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
2	19m NE	WMGR-ARTDP	Infilled Ground	Artificial Deposit
3	279m W	WMGR-ARTDP	Infilled Ground	Artificial Deposit
4	307m S	WMGR-ARTDP	Infilled Ground	Artificial Deposit


ID	Location	LEX Code	Description	Rock description
A	376m N	WMGR-ARTDP	Infilled Ground	Artificial Deposit
5	424m N	WMGR-ARTDP	Infilled Ground	Artificial Deposit
A	430m N	WMGR-ARTDP	Infilled Ground	Artificial Deposit
6	455m NW	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit

This data is sourced from the British Geological Survey.



Geology 1:10,000 scale - Superficial



- Site Outline
- Search buffers in metres (m)
-  Landslip (10k)
- Superficial geology (10k)
Please see table for more details.

14.3 Superficial geology (10k)

Records within 500m

7

Superficial geological deposits at 1:10,000 scale. Also known as 'drift', these are the youngest geological deposits, formed during the Quaternary. They rest on older deposits or rocks referred to as bedrock.

Features are displayed on the Geology 1:10,000 scale - Superficial map on [page 116 >](#)

ID	Location	LEX Code	Description	Rock description
1	On site	TPGR-XSV	Taplow Gravel Formation - Sand And Gravel	Sand And Gravel
2	On site	ALV-Z	Alluvium - Silt (unlithified Deposits Coding Scheme)	Silt
3	11m N	HEAD-XVSZ	Head - Gravel, Sand And Silt	Gravel, Sand And Silt
4	28m SE	TRD-Z	Tidal River Or Creek Deposits - Silt	Silt



ID	Location	LEX Code	Description	Rock description
5	115m N	HAGR-XSV	Hackney Gravel Member - Sand And Gravel	Sand And Gravel
6	372m SE	TPGR-XSV	Taplow Gravel Formation - Sand And Gravel	Sand And Gravel
7	420m W	CFSI-CZ	Crayford Silt Member - Silty Clay	Clay, Silty

This data is sourced from the British Geological Survey.

14.4 Landslip (10k)

Records within 500m

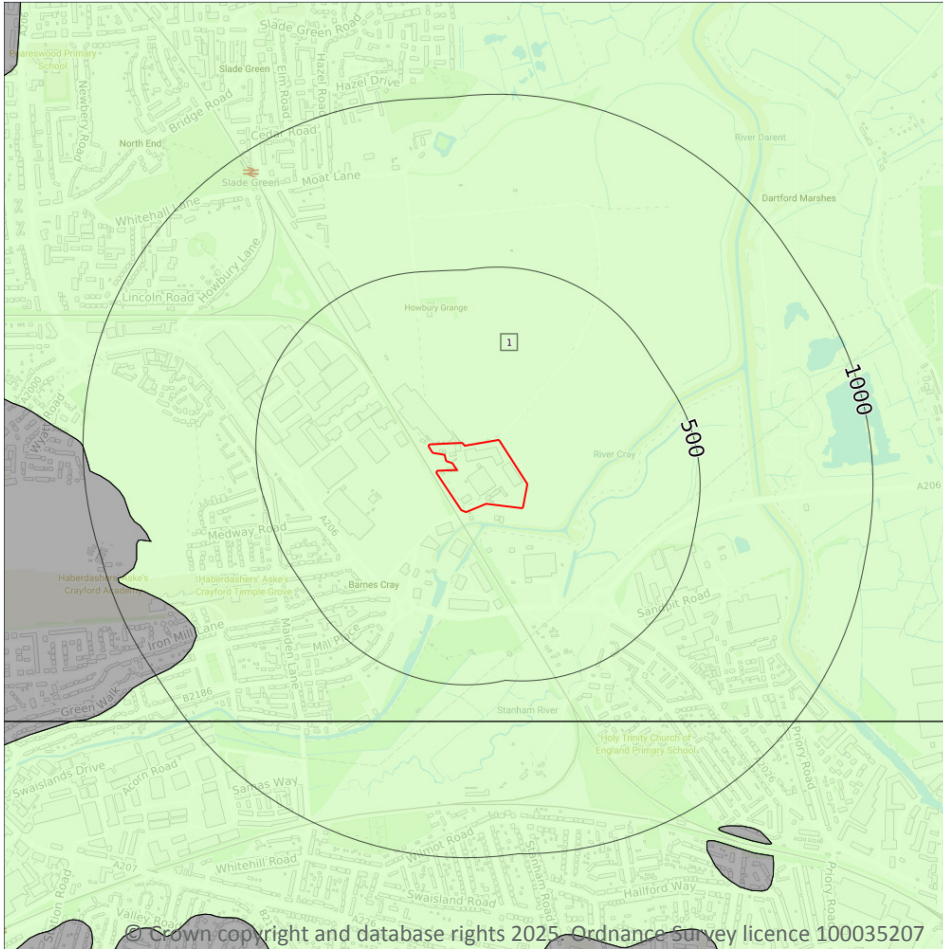
0

Mass movement deposits on BGS geological maps at 1:10,000 scale. Primarily superficial deposits that have moved down slope under gravity to form landslips. These affect bedrock, other superficial deposits and artificial ground.

This data is sourced from the British Geological Survey.



Geology 1:10,000 scale - Bedrock



- Site Outline
- Search buffers in metres (m)
- Bedrock faults and other linear features (10k)
- Bedrock geology (10k)
Please see table for more details.

14.5 Bedrock geology (10k)

Records within 500m

1

Bedrock geology at 1:10,000 scale. The main mass of rocks forming the Earth and present everywhere, whether exposed at the surface in outcrops or concealed beneath superficial deposits or water.

Features are displayed on the Geology 1:10,000 scale - Bedrock map on [page 118](#) >

ID	Location	LEX Code	Description	Rock age
1	On site	SECK-CHLK	Seaford Chalk Formation - Chalk	Santonian Age - Coniacian Age

This data is sourced from the British Geological Survey.



14.6 Bedrock faults and other linear features (10k)

Records within 500m

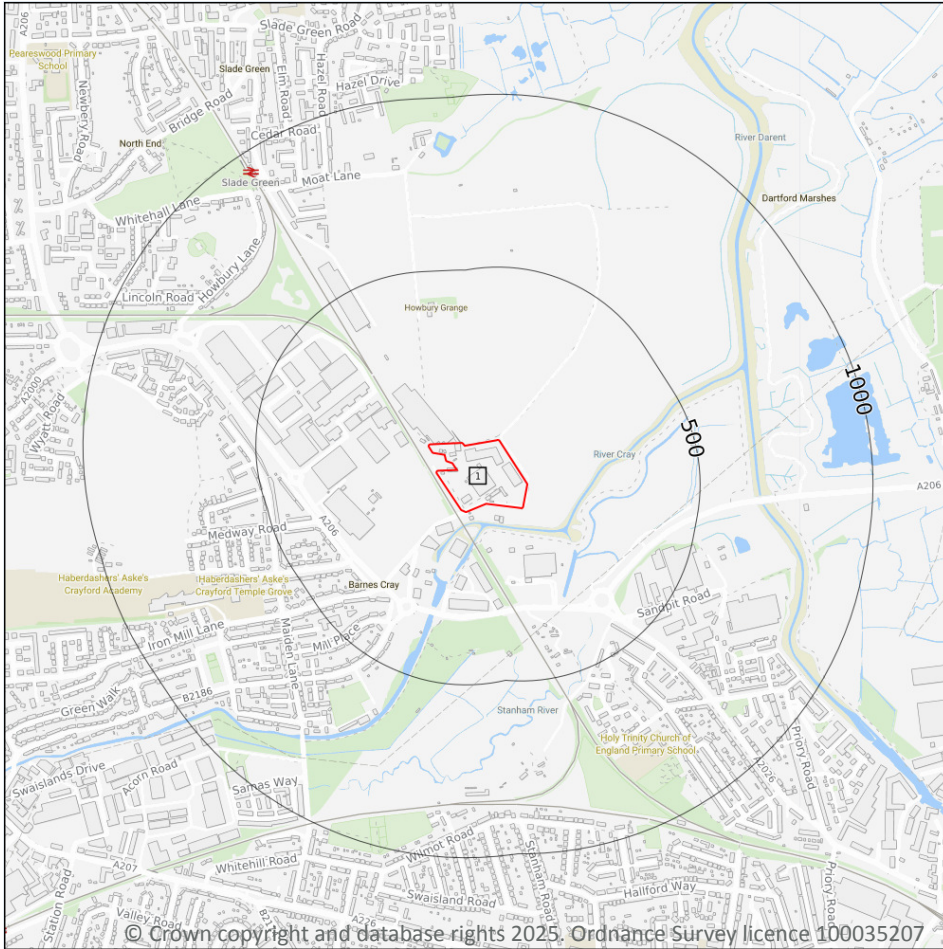
0

Linear features at the ground or bedrock surface at 1:10,000 scale of six main types; rock, fault, fold axis, mineral vein, alteration area or landform. Features are either observed or inferred, and relate primarily to bedrock.

This data is sourced from the British Geological Survey.



15 Geology 1:50,000 scale - Availability



— Site Outline
 Search buffers in metres (m)

□ Geological map tile

15.1 50k Availability

Records within 500m

1

An indication on the coverage of 1:50,000 scale geology data for the site. Either 'Full' or 'No coverage' for each geological theme.

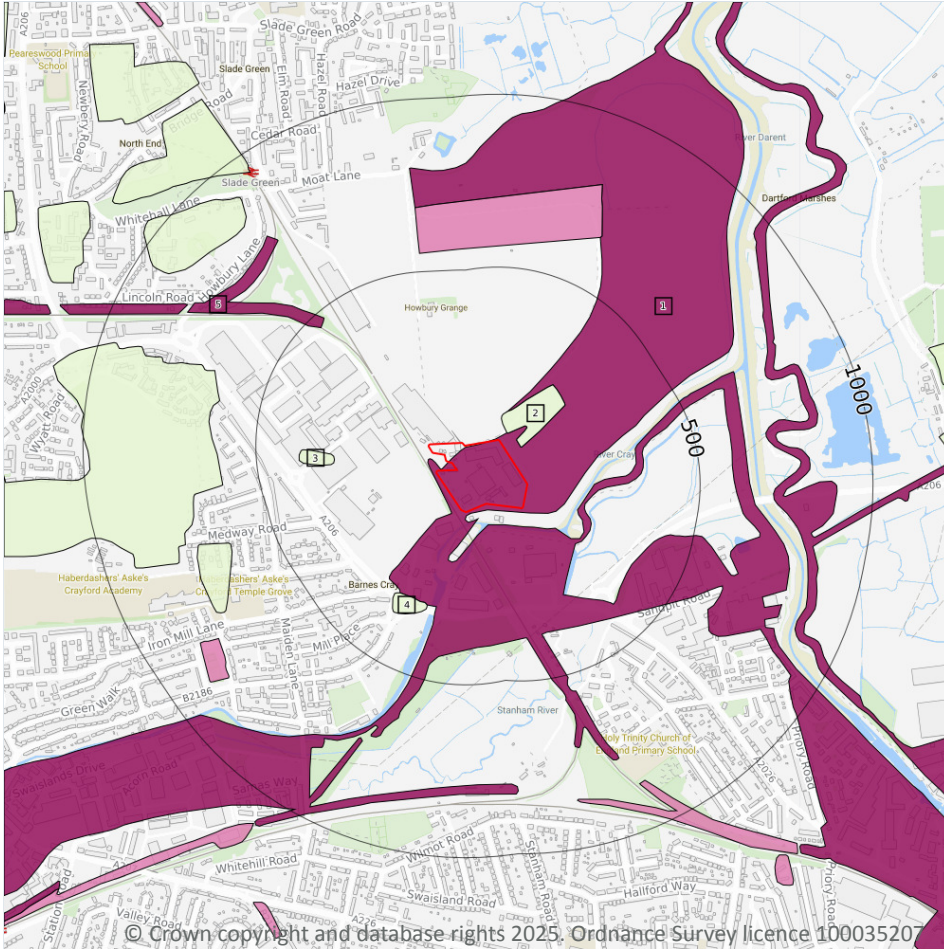
Features are displayed on the Geology 1:50,000 scale - Availability map on [page 120](#) >

ID	Location	Artificial	Superficial	Bedrock	Mass movement	Sheet No.
1	On site	Full	Full	Full	Full	EW271_dartford_v4

This data is sourced from the British Geological Survey.



Geology 1:50,000 scale - Artificial and made ground



15.2 Artificial and made ground (50k)

Records within 500m

5

Details of made, worked, infilled, disturbed and landscaped ground at 1:50,000 scale. Artificial ground can be associated with potentially contaminated material, unpredictable engineering conditions and instability.

Features are displayed on the Geology 1:50,000 scale - Artificial and made ground map on [page 121](#) >

ID	Location	LEX Code	Description	Rock description
1	On site	MGR-ARTDP	MADE GROUND (UNDIVIDED)	ARTIFICIAL DEPOSIT
2	32m NE	WMGR-ARTDP	INFILLED GROUND	ARTIFICIAL DEPOSIT
3	275m W	WMGR-ARTDP	INFILLED GROUND	ARTIFICIAL DEPOSIT
4	287m SW	WMGR-ARTDP	INFILLED GROUND	ARTIFICIAL DEPOSIT



ID	Location	LEX Code	Description	Rock description
5	461m NW	MGR-ARTDP	MADE GROUND (UNDIVIDED)	ARTIFICIAL DEPOSIT

This data is sourced from the British Geological Survey.

15.3 Artificial ground permeability (50k)

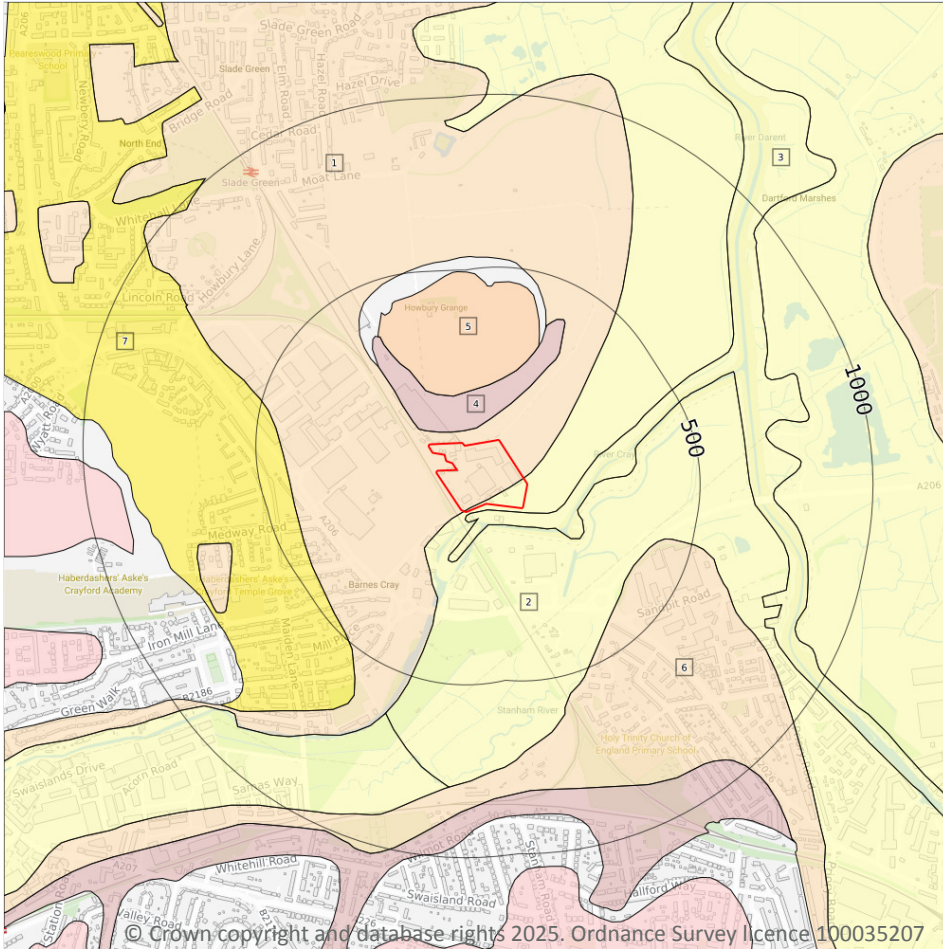
Records within 50m	2
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A qualitative classification of estimated rates of vertical movement of water from the ground surface through the unsaturated zone of any artificial deposits (the zone between the land surface and the water table).

Location	Flow type	Maximum permeability	Minimum permeability
On site	Mixed	Very High	Low
32m NE	Mixed	Very High	Low

This data is sourced from the British Geological Survey.

Geology 1:50,000 scale - Superficial



- Site Outline
- Search buffers in metres (m)
-  Landslip (50k)
- Superficial geology (50k)
Please see table for more details.

15.4 Superficial geology (50k)

Records within 500m

7

Superficial geological deposits at 1:50,000 scale. Also known as 'drift', these are the youngest geological deposits, formed during the Quaternary. They rest on older deposits or rocks referred to as bedrock.

Features are displayed on the Geology 1:50,000 scale - Superficial map on [page 123 >](#)

ID	Location	LEX Code	Description	Rock description
1	On site	TPGR-XSV	TAPLOW GRAVEL MEMBER	SAND AND GRAVEL
2	On site	ALV-XCZSP	ALLUVIUM	CLAY, SILT, SAND AND PEAT
3	8m SE	TRD-XCZ	TIDAL RIVER OR CREEK DEPOSITS	CLAY AND SILT



ID	Location	LEX Code	Description	Rock description
4	33m N	HEAD-XCZSV	HEAD	CLAY, SILT, SAND AND GRAVEL
5	136m N	HAGR-XSV	HACKNEY GRAVEL MEMBER	SAND AND GRAVEL
6	362m SE	TPGR-XSV	TAPLOW GRAVEL MEMBER	SAND AND GRAVEL
7	415m W	CFSI-XCZ	CRAYFORD SILT MEMBER	CLAY AND SILT

This data is sourced from the British Geological Survey.

15.5 Superficial permeability (50k)

Records within 50m	4
---------------------------	----------

A qualitative classification of estimated rates of vertical movement of water from the ground surface through the unsaturated zone of any superficial deposits (the zone between the land surface and the water table).

Location	Flow type	Maximum permeability	Minimum permeability
On site	Intergranular	Very High	High
On site	Intergranular	Moderate	Very Low
8m SE	Intergranular	Low	Very Low
33m N	Mixed	High	Very Low

This data is sourced from the British Geological Survey.

15.6 Landslip (50k)

Records within 500m	0
----------------------------	----------

Mass movement deposits on BGS geological maps at 1:50,000 scale. Primarily superficial deposits that have moved down slope under gravity to form landslips. These affect bedrock, other superficial deposits and artificial ground.

This data is sourced from the British Geological Survey.

15.7 Landslip permeability (50k)

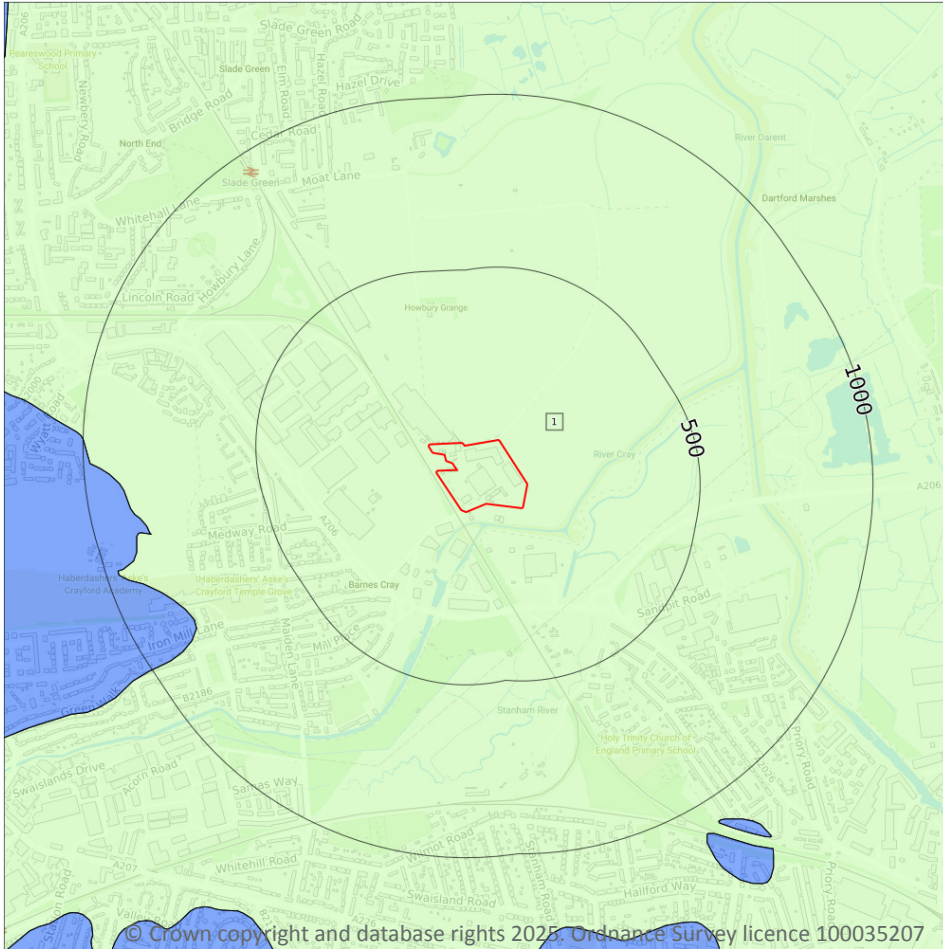
Records within 50m	0
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A qualitative classification of estimated rates of vertical movement of water from the ground surface through the unsaturated zone of any landslip deposits (the zone between the land surface and the water table).

This data is sourced from the British Geological Survey.



Geology 1:50,000 scale - Bedrock



- Site Outline
- Search buffers in metres (m)
- Bedrock faults and other linear features (50k)
- Bedrock geology (50k)
Please see table for more details.

15.8 Bedrock geology (50k)

Records within 500m

1

Bedrock geology at 1:50,000 scale. The main mass of rocks forming the Earth and present everywhere, whether exposed at the surface in outcrops or concealed beneath superficial deposits or water.

Features are displayed on the Geology 1:50,000 scale - Bedrock map on [page 125 >](#)

ID	Location	LEX Code	Description	Rock age
1	On site	LSNCK-CHLK	LEWES NODULAR CHALK FORMATION, SEAFORD CHALK FORMATION AND NEWHAVEN CHALK FORMATION (UNDIFFERENTIATED) - CHALK	TURONIAN

This data is sourced from the British Geological Survey.



15.9 Bedrock permeability (50k)

Records within 50m	1
---------------------------	----------

A qualitative classification of estimated rates of vertical movement of water from the ground surface through the unsaturated zone of bedrock (the zone between the land surface and the water table).

Location	Flow type	Maximum permeability	Minimum permeability
On site	Fracture	Very High	Very High

This data is sourced from the British Geological Survey.

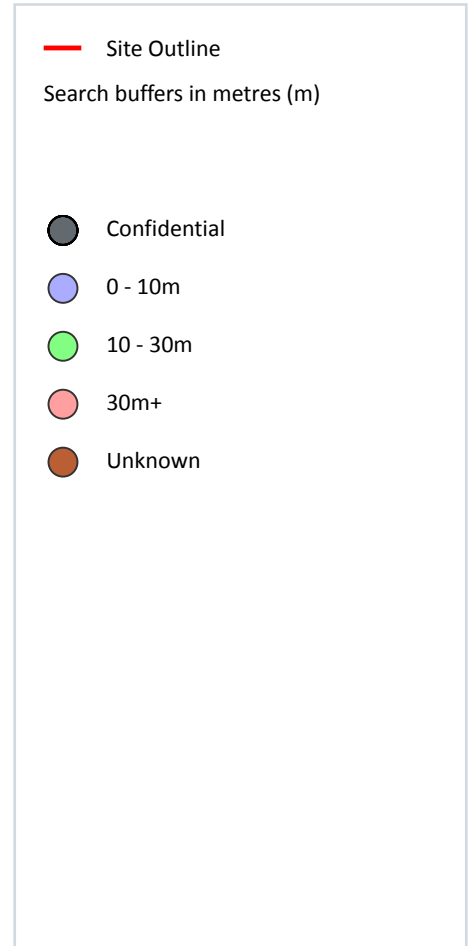
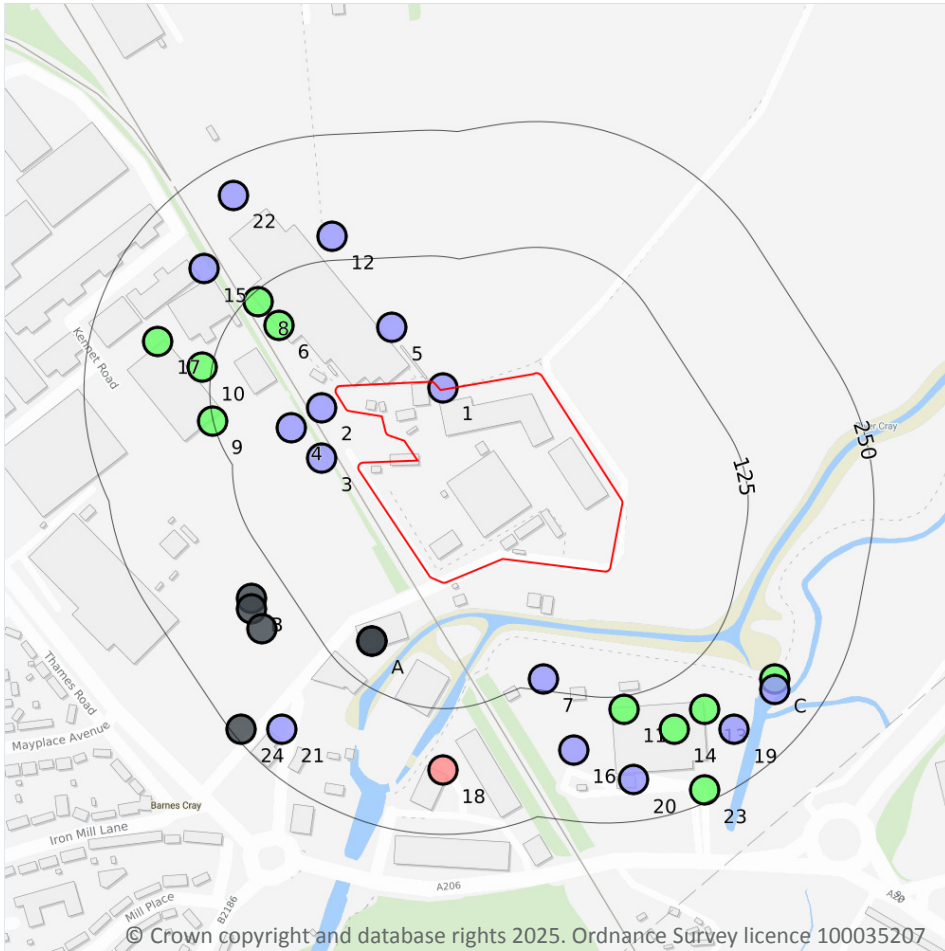
15.10 Bedrock faults and other linear features (50k)

Records within 500m	0
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Linear features at the ground or bedrock surface at 1:50,000 scale of six main types; rock, fault, fold axis, mineral vein, alteration area or landform. Features are either observed or inferred, and relate primarily to bedrock.

This data is sourced from the British Geological Survey.

16 Boreholes



16.1 BGS Boreholes

Records within 250m

31

The Single Onshore Boreholes Index (SOBI); an index of over one million records of boreholes, shafts and wells from all forms of drilling and site investigation work held by the British Geological Survey. Covering onshore and nearshore boreholes dating back to at least 1790 and ranging from one to several thousand metres deep.

Features are displayed on the Boreholes map on [page 127 >](#)

ID	Location	Grid reference	Name	Length	Confidential	Web link
1	2m N	552850 175800	TRUNK FOUL SEWER 30A	6.0	N	845418 ↗
2	20m SW	552730 175780	TRUNK FOUL SEWER 31A	5.0	N	845419 ↗
3	37m W	552730 175730	TRUNK FOUL SEWER 33A	4.0	N	845421 ↗

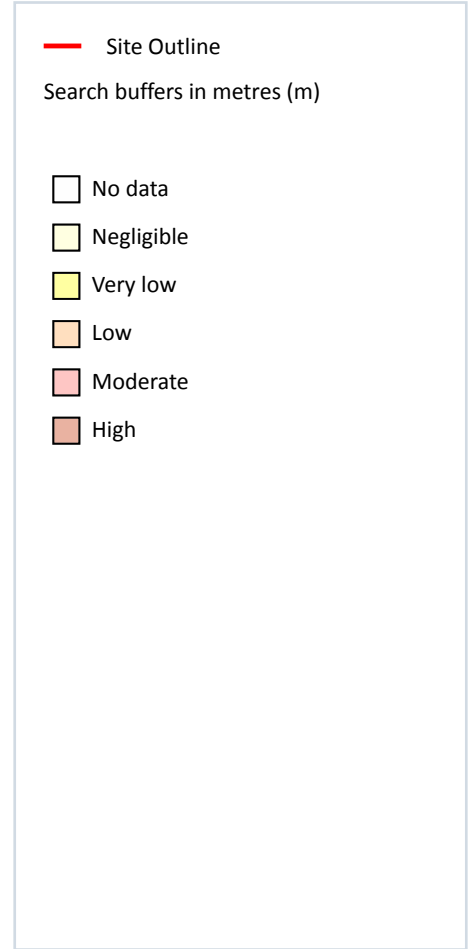
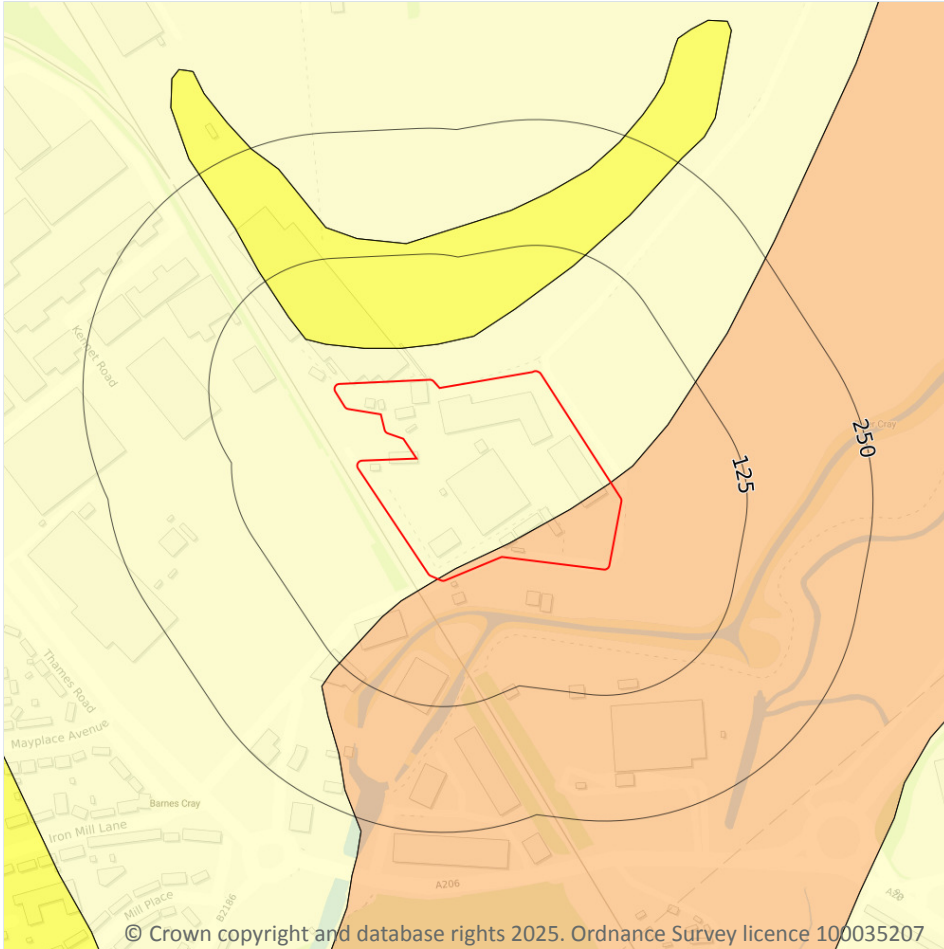
ID	Location	Grid reference	Name	Length	Confidential	Web link
4	56m SW	552700 175760	TRUNK FOUL SEWER 32A	5.0	N	845420 ↗
5	56m N	552800 175860	TRUNK FOUL SEWER 29A	6.0	N	845417 ↗
6	85m NW	552687 175862	SLADE GREEN REPAIR SHOP 2	20.45	N	845602 ↗
A	86m SW	552780 175548	JOLLY FARMERS WHF, CRAYFORD 1	-	Y	N/A
A	86m SW	552780 175548	JOLLY FARMERS WHF, CRAYFORD 2	-	Y	N/A
7	114m S	552950 175510	THAMES ROAD 8	5.0	N	845427 ↗
8	115m NW	552667 175885	SLADE GREEN REPAIR SHOP 1	13.45	N	845601 ↗
9	126m W	552621 175767	20 KENNET ROAD CRAYFORD KENT 3	12.9	N	15623957 ↗
10	135m W	552611 175820	20 KENNET ROAD CRAYFORD KENT 2	12.9	N	15623956 ↗
11	138m S	553030 175480	THAMES ROAD 5	15.0	N	845424 ↗
12	149m N	552740 175950	TRUNK FOUL SEWER 28A	6.0	N	845416 ↗
B	160m SW	552660 175590	THAMES ROAD CRAYFORD 6	-	Y	N/A
B	165m SW	552660 175580	THAMES ROAD CRAYFORD 4	-	Y	N/A
13	168m SE	553110 175480	THAMES ROAD 6	15.0	N	845425 ↗
B	168m SW	552670 175560	THAMES ROAD CRAYFORD 5	-	Y	N/A
14	171m SE	553080 175460	THAMES ROAD 7	18.0	N	845426 ↗
15	177m NW	552613 175918	14 KENNET ROAD DARTFORD 1	5.0	N	20237480 ↗
16	180m S	552980 175440	THAMES ROAD 9	5.0	N	845428 ↗
17	183m W	552567 175846	20 KENNET ROAD CRAYFORD KENT 1	13.0	N	15623955 ↗
18	186m S	552850 175420	WILLIAM MALLINSON & SONS LTD CRAYFORD	60.96	N	845194 ↗
C	197m SE	553180 175510	THAMES ROAD DEPOT 1	13.72	N	845463 ↗
19	202m SE	553140 175460	THAMES ROAD 12	5.0	N	845431 ↗
C	203m SE	553180 175500	THAMES ROAD DEPOT 2	9.14	N	845464 ↗
20	209m S	553040 175410	THAMES ROAD 10	5.0	N	845429 ↗
21	212m SW	552690 175460	TRUNK FOUL SEWER 34A	4.0	N	845422 ↗
22	217m NW	552642 175991	SLADE GREEN FLOODLIGHTING 7	1.0	N	845609 ↗



ID	Location	Grid reference	Name	Length	Confidential	Web link
23	238m SE	553110 175400	THAMES ROAD 11	15.0	N	845430 ↗
24	241m SW	552650 175460	THAMES ROAD CRAYFORD 3	-	Y	N/A

This data is sourced from the British Geological Survey.

17 Natural ground subsidence - Shrink swell clays



17.1 Shrink swell clays

Records within 50m

3

The potential hazard presented by soils that absorb water when wet (making them swell), and lose water as they dry (making them shrink). This shrink-swell behaviour is controlled by the type and amount of clay in the soil, and by seasonal changes in the soil moisture content (related to rainfall and local drainage).

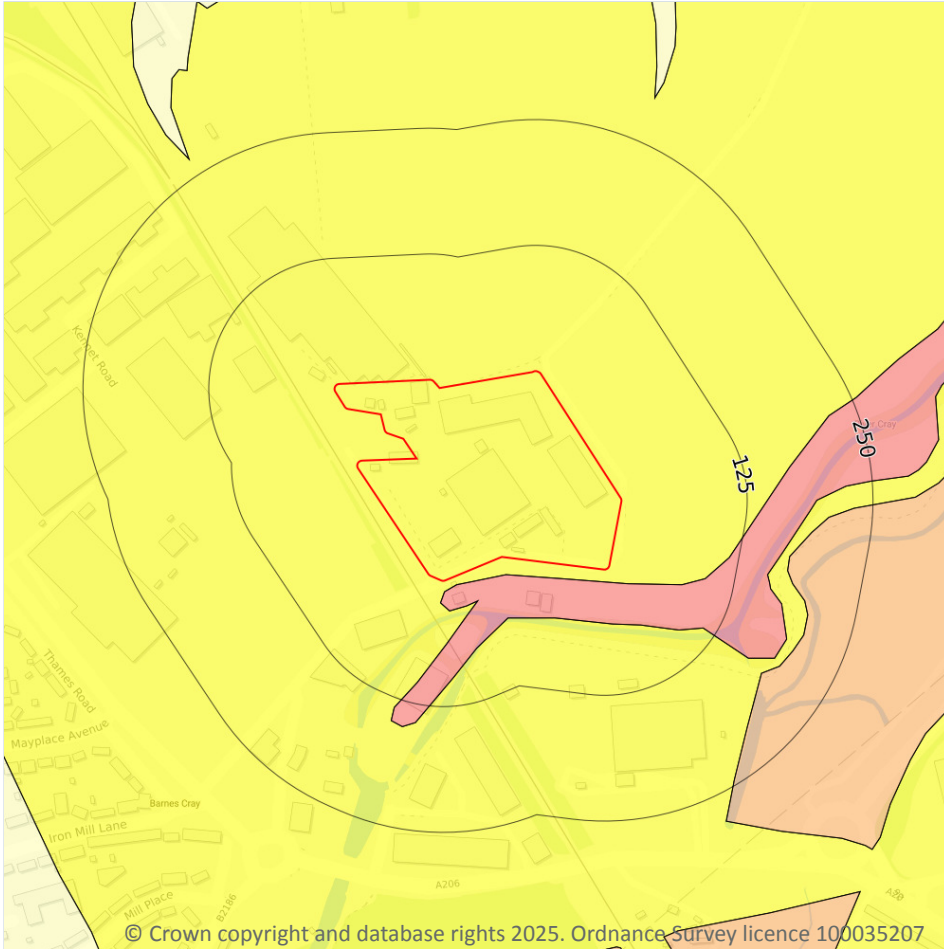
Features are displayed on the Natural ground subsidence - Shrink swell clays map on [page 130 >](#)

Location	Hazard rating	Details
On site	Negligible	Ground conditions predominantly non-plastic.
On site	Low	Ground conditions predominantly medium plasticity.
33m N	Very low	Ground conditions predominantly low plasticity.

This data is sourced from the British Geological Survey.



Natural ground subsidence - Running sands



17.2 Running sands

Records within 50m

2

The potential hazard presented by rocks that can contain loosely-packed sandy layers that can become fluidised by water flowing through them. Such sands can 'run', removing support from overlying buildings and causing potential damage.

Features are displayed on the Natural ground subsidence - Running sands map on [page 132 >](#)

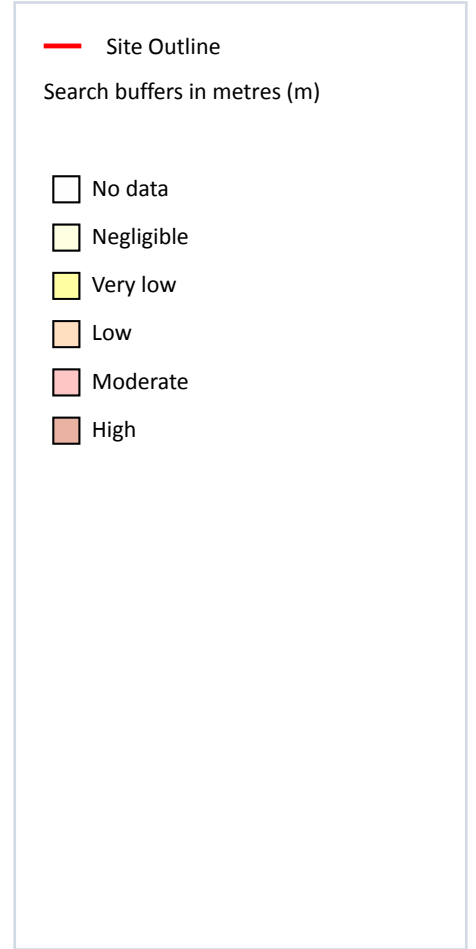
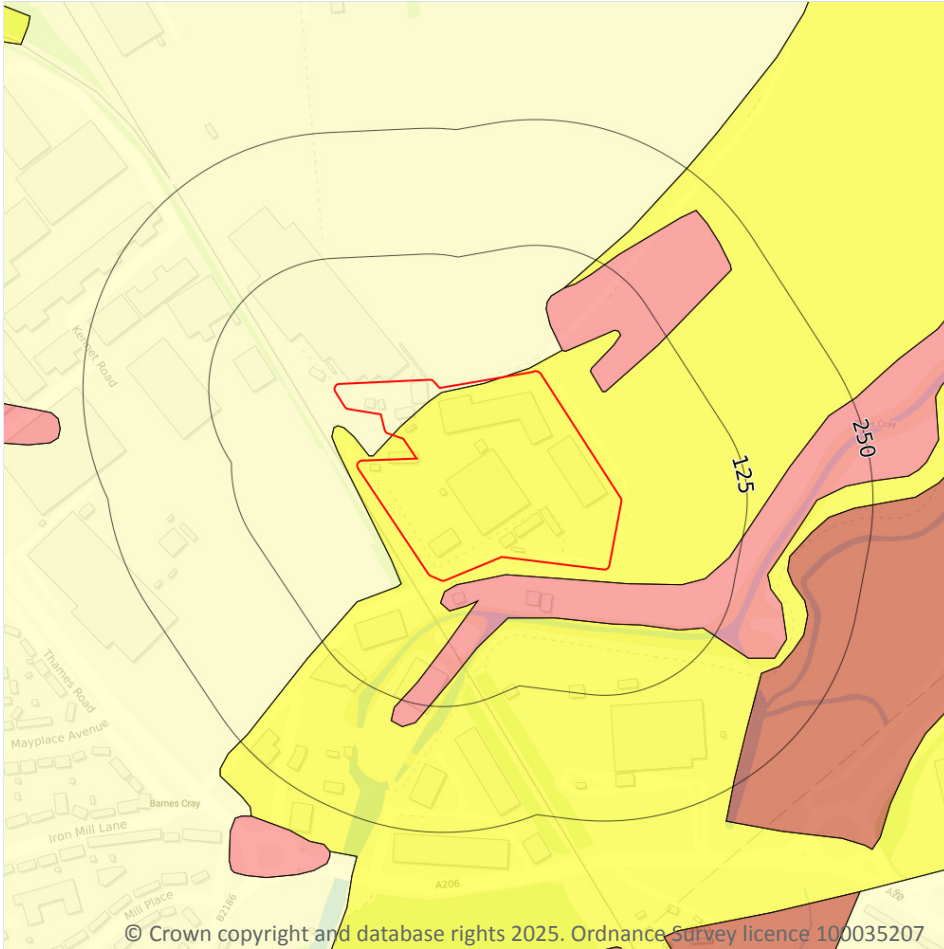
Location	Hazard rating	Details
On site	Very low	Running sand conditions are unlikely. No identified constraints on land use due to running conditions unless water table rises rapidly.

Location	Hazard rating	Details
8m SE	Moderate	Running sand conditions are probably present. Constraints may apply to land uses involving excavation or the addition or removal of water.

This data is sourced from the British Geological Survey.



Natural ground subsidence - Compressible deposits



17.3 Compressible deposits

Records within 50m

4

The potential hazard presented by types of ground that may contain layers of very soft materials like clay or peat and may compress if loaded by overlying structures, or if the groundwater level changes, potentially resulting in depression of the ground and disturbance of foundations.

Features are displayed on the Natural ground subsidence - Compressible deposits map on [page 134](#) >

Location	Hazard rating	Details
On site	Negligible	Compressible strata are not thought to occur.
On site	Very low	Compressibility and uneven settlement problems are not likely to be significant on the site for most land uses.

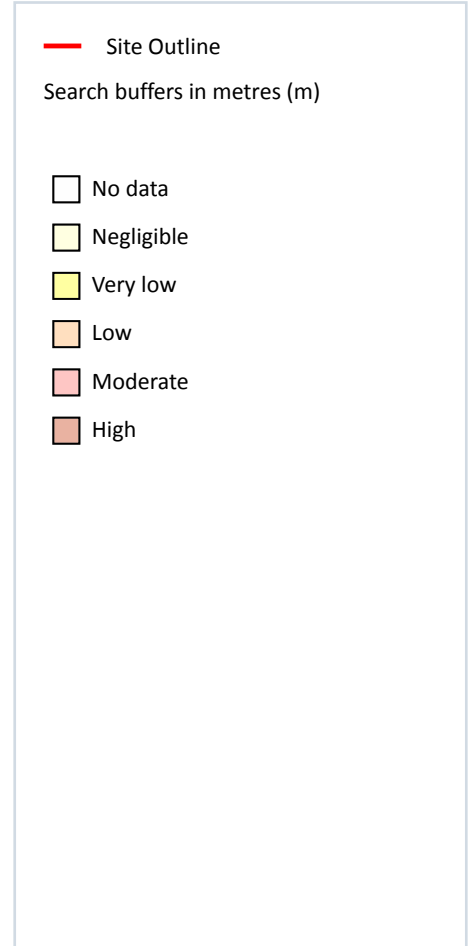
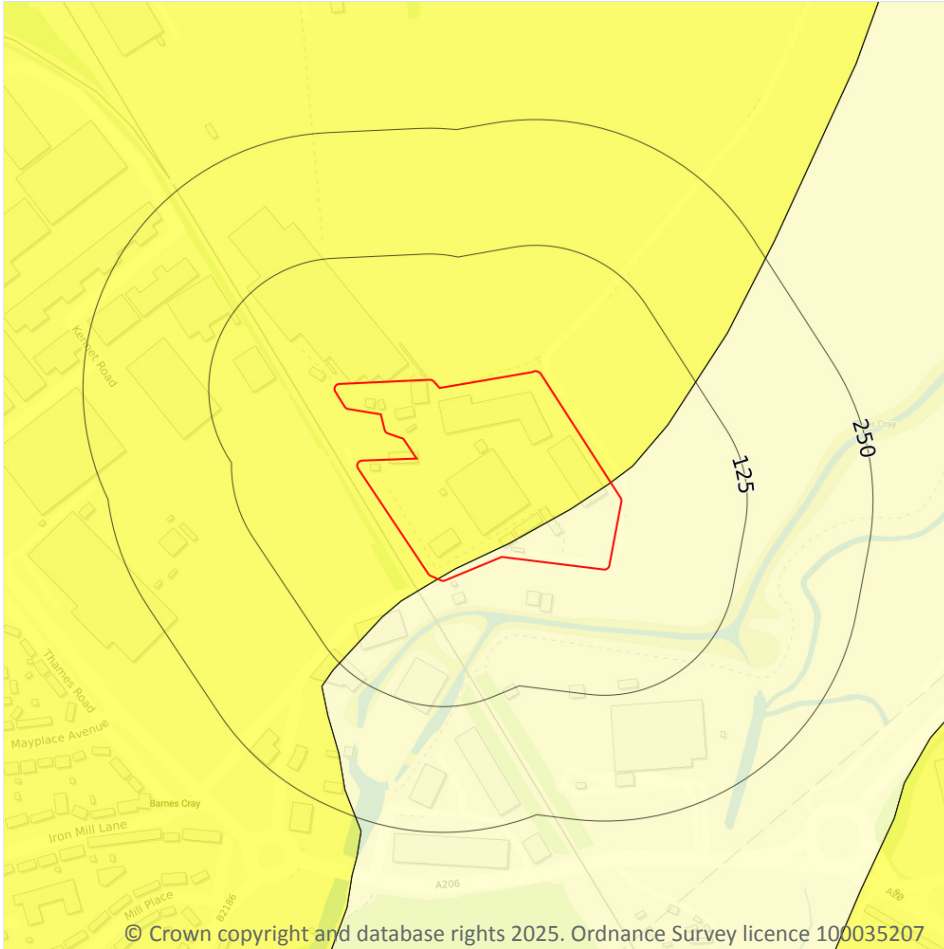


Location	Hazard rating	Details
8m SE	Moderate	Compressibility and uneven settlement hazards are probably present. Land use should consider specifically the compressibility and variability of the site.
32m NE	Moderate	Compressibility and uneven settlement hazards are probably present. Land use should consider specifically the compressibility and variability of the site.

This data is sourced from the British Geological Survey.



Natural ground subsidence - Collapsible deposits



17.4 Collapsible deposits

Records within 50m

2

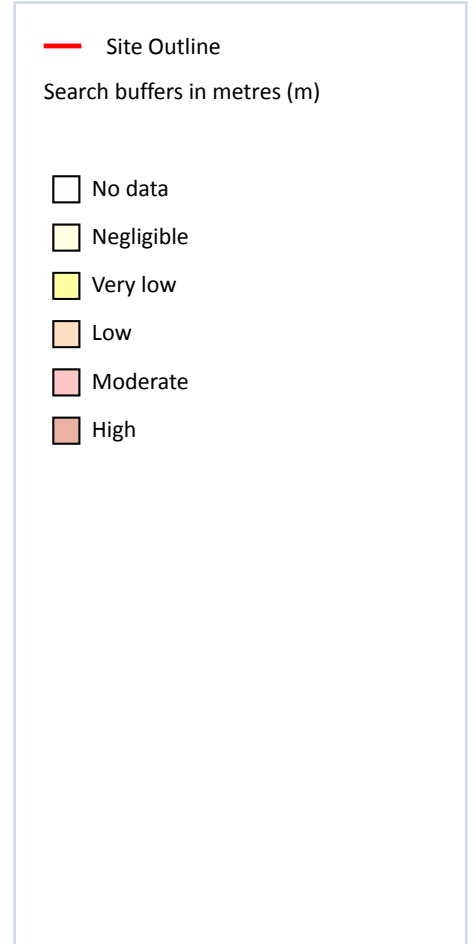
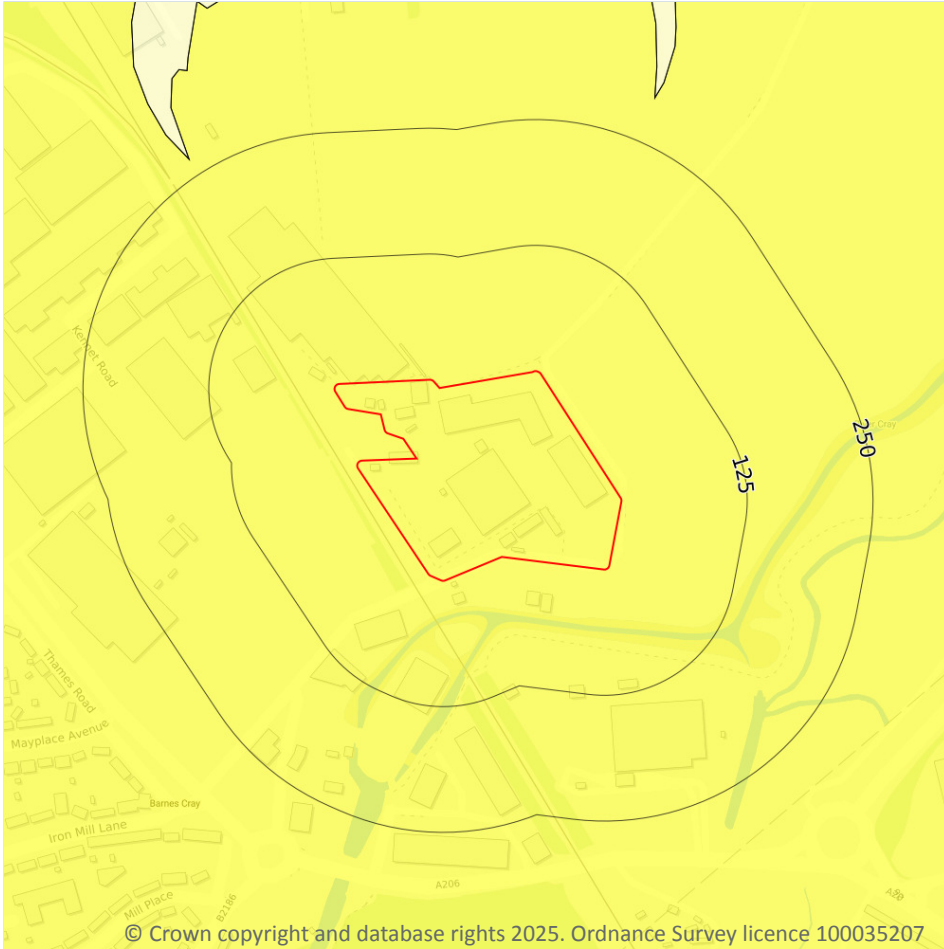
The potential hazard presented by natural deposits that could collapse when a load (such as a building) is placed on them or they become saturated with water.

Features are displayed on the Natural ground subsidence - Collapsible deposits map on [page 136 >](#)

Location	Hazard rating	Details
On site	Negligible	Deposits with potential to collapse when loaded and saturated are believed not to be present.
On site	Very low	Deposits with potential to collapse when loaded and saturated are unlikely to be present.

This data is sourced from the British Geological Survey.

Natural ground subsidence - Landslides



17.5 Landslides

Records within 50m

1

The potential for landsliding (slope instability) to be a hazard assessed using 1:50,000 scale digital maps of superficial and bedrock deposits, combined with information from the BGS National Landslide Database and scientific and engineering reports.

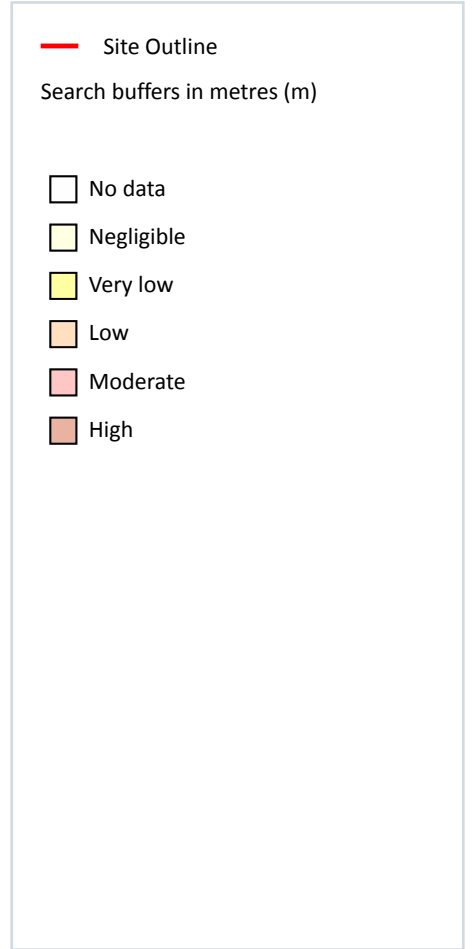
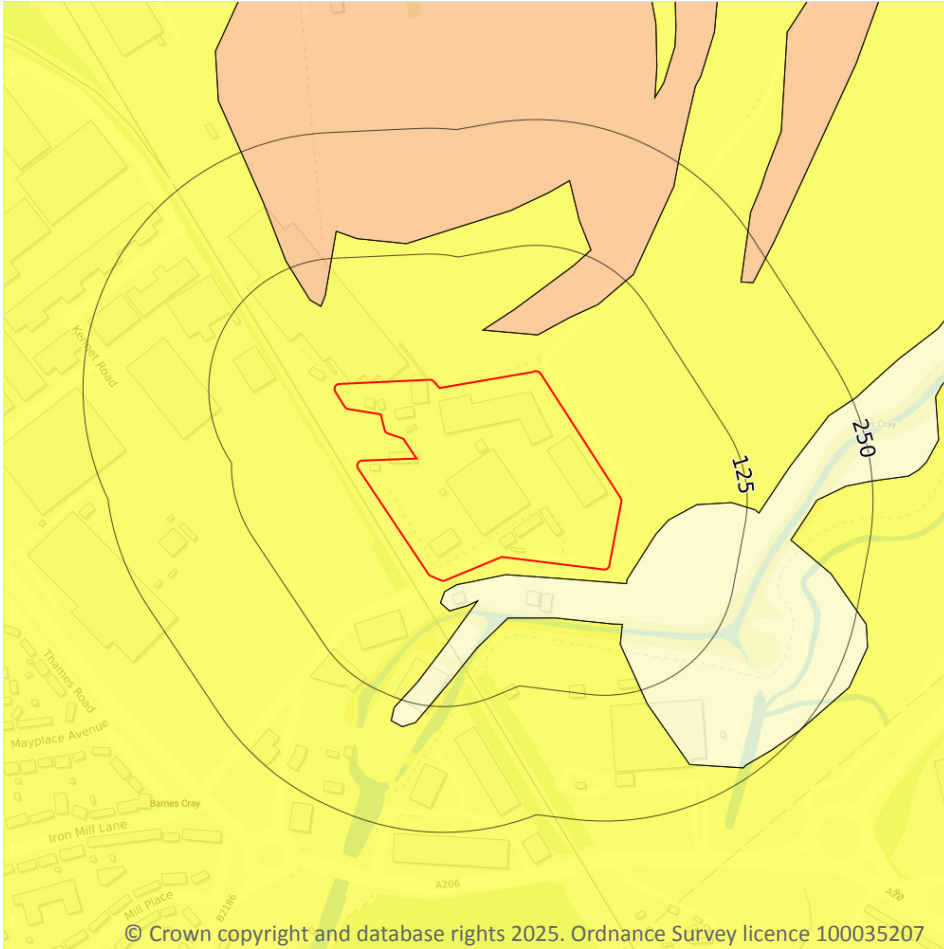
Features are displayed on the Natural ground subsidence - Landslides map on [page 137](#) >

Location	Hazard rating	Details
On site	Very low	Slope instability problems are not likely to occur but consideration to potential problems of adjacent areas impacting on the site should always be considered.

This data is sourced from the British Geological Survey.



Natural ground subsidence - Ground dissolution of soluble rocks



17.6 Ground dissolution of soluble rocks

Records within 50m

3

The potential hazard presented by ground dissolution, which occurs when water passing through soluble rocks produces underground cavities and cave systems. These cavities reduce support to the ground above and can cause localised collapse of the overlying rocks and deposits.

Features are displayed on the Natural ground subsidence - Ground dissolution of soluble rocks map on [page 138](#) >

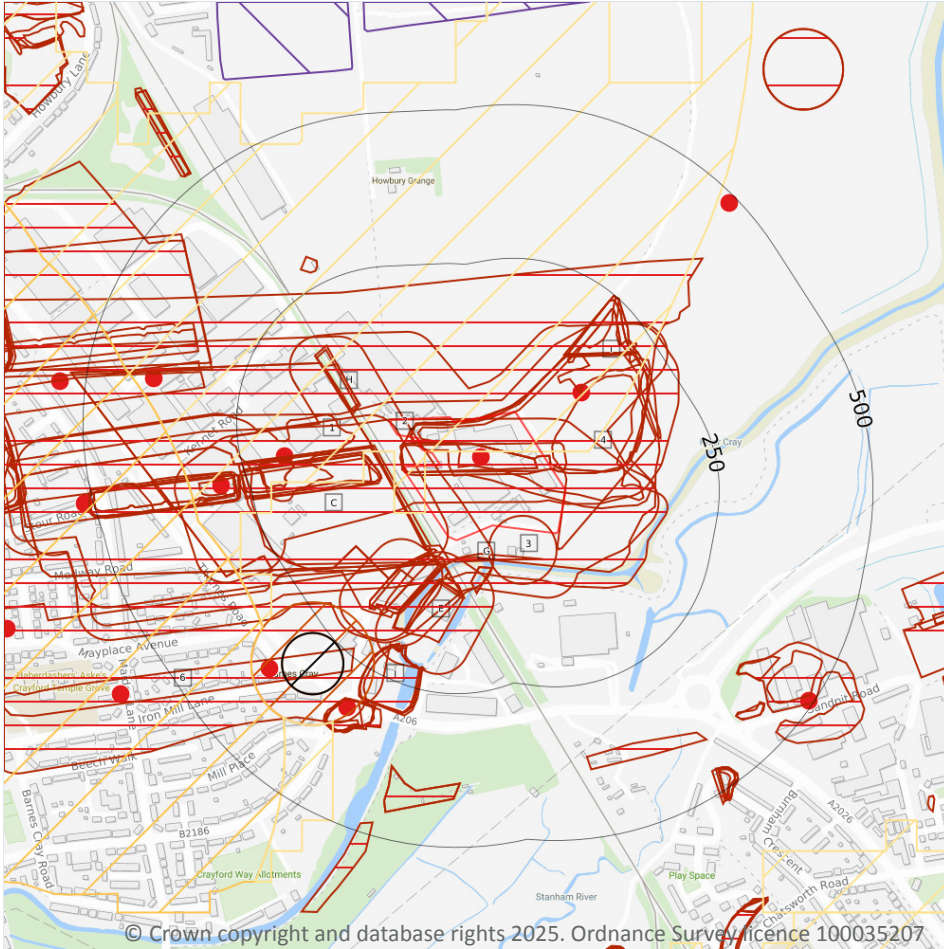
Location	Hazard rating	Details
On site	Very low	Soluble rocks are present within the ground. Few dissolution features are likely to be present. Potential for difficult ground conditions or localised subsidence are at a level where they need not be considered.

Location	Hazard rating	Details
8m SE	Negligible	Soluble rocks are either not thought to be present within the ground, or not prone to dissolution. Dissolution features are unlikely to be present.
36m N	Low	Soluble rocks are present within the ground. Some dissolution features may be present. Potential for difficult ground conditions are at a level where they may be considered, localised subsidence need not be considered except in exceptional circumstances.

This data is sourced from the British Geological Survey.



18 Mining and ground workings



- Site Outline
- Search buffers in metres (m)
- BritPits
- Surface ground workings
- Underground workings
- Underground mining extents
- Historical mineral planning areas
- TCA non-coal mining
- Non Coal Mining
- Sporadic underground mining of restricted extent possible
- Localised small scale underground mining possible
- Small scale mining possible
- Underground mining known or likely within or in close proximity
- Underground mining known within or in very close proximity

18.1 BritPits

Records within 500m

9

BritPits (an abbreviation of British Pits) is a database maintained by the British Geological Survey of currently active and closed surface and underground mineral workings. Details of major mineral handling sites, such as wharfs and rail depots are also held in the database.

Features are displayed on the Mining and ground workings map on [page 140](#) >

ID	Location	Details	Description
A	On site	Name: Perry Street Farm Clay Pits, East Address: Barnes Cray, CRAYFORD, Kent Commodity: Clay & Shale Status: Ceased	Type: A surface mineral working. It may be termed Quarry, Delf, Delph, Gravel Pit, Sand Pit, Sand and Gravel Pit, Clay Pit, Pit, Opencast Coal Site or Surface Mine. It may be mapped as Worked Ground or Worked and Made Ground on BGS mapping. Status description: Site which has ceased to extract minerals. May be considered as 'Closed' by operator. May be considered to have 'Active', 'Dormant' or 'Expired' planning permissions by the Mineral Planning Authority.
B	108m NE	Name: Perry Street Farm Clay Pits, East Address: Barnes Cray, CRAYFORD, Kent Commodity: Clay & Shale Status: Ceased	Type: A surface mineral working. It may be termed Quarry, Delf, Delph, Gravel Pit, Sand Pit, Sand and Gravel Pit, Clay Pit, Pit, Opencast Coal Site or Surface Mine. It may be mapped as Worked Ground or Worked and Made Ground on BGS mapping. Status description: Site which has ceased to extract minerals. May be considered as 'Closed' by operator. May be considered to have 'Active', 'Dormant' or 'Expired' planning permissions by the Mineral Planning Authority.
F	181m W	Name: Thames Road Gravel Pit Address: Thames Road, Barnes Cray, CRAYFORD, Kent Commodity: Sand & Gravel Status: Ceased	Type: A surface mineral working. It may be termed Quarry, Delf, Delph, Gravel Pit, Sand Pit, Sand and Gravel Pit, Clay Pit, Pit, Opencast Coal Site or Surface Mine. It may be mapped as Worked Ground or Worked and Made Ground on BGS mapping. Status description: Site which has ceased to extract minerals. May be considered as 'Closed' by operator. May be considered to have 'Active', 'Dormant' or 'Expired' planning permissions by the Mineral Planning Authority.
D	293m W	Name: Thames Road Clay Pits Address: Perry Street Farm, Barnes Cray, CRAYFORD, Kent Commodity: Clay & Shale Status: Ceased	Type: A surface mineral working. It may be termed Quarry, Delf, Delph, Gravel Pit, Sand Pit, Sand and Gravel Pit, Clay Pit, Pit, Opencast Coal Site or Surface Mine. It may be mapped as Worked Ground or Worked and Made Ground on BGS mapping. Status description: Site which has ceased to extract minerals. May be considered as 'Closed' by operator. May be considered to have 'Active', 'Dormant' or 'Expired' planning permissions by the Mineral Planning Authority.



ID	Location	Details	Description
M	323m SW	Name: Crayford Marshes Clay Pit Address: Barnes Cray, CRAYFORD, Kent Commodity: Chalk Status: Ceased	Type: A surface mineral working. It may be termed Quarry, Delf, Delph, Gravel Pit, Sand Pit, Sand and Gravel Pit, Clay Pit, Pit, Opencast Coal Site or Surface Mine. It may be mapped as Worked Ground or Worked and Made Ground on BGS mapping. Status description: Site which has ceased to extract minerals. May be considered as 'Closed' by operator. May be considered to have 'Active', 'Dormant' or 'Expired' planning permissions by the Mineral Planning Authority.
11	362m SW	Name: Perry Street Farm Clay Pits Address: Perry Street Farm, Barnes Cray, CRAYFORD, Kent Commodity: Clay & Shale Status: Ceased	Type: A surface mineral working. It may be termed Quarry, Delf, Delph, Gravel Pit, Sand Pit, Sand and Gravel Pit, Clay Pit, Pit, Opencast Coal Site or Surface Mine. It may be mapped as Worked Ground or Worked and Made Ground on BGS mapping. Status description: Site which has ceased to extract minerals. May be considered as 'Closed' by operator. May be considered to have 'Active', 'Dormant' or 'Expired' planning permissions by the Mineral Planning Authority.
O	392m W	Name: Perry Street Farm Clay Pits Address: Perry Street Farm, Barnes Cray, CRAYFORD, Kent Commodity: Clay & Shale Status: Ceased	Type: A surface mineral working. It may be termed Quarry, Delf, Delph, Gravel Pit, Sand Pit, Sand and Gravel Pit, Clay Pit, Pit, Opencast Coal Site or Surface Mine. It may be mapped as Worked Ground or Worked and Made Ground on BGS mapping. Status description: Site which has ceased to extract minerals. May be considered as 'Closed' by operator. May be considered to have 'Active', 'Dormant' or 'Expired' planning permissions by the Mineral Planning Authority.
15	487m NE	Name: Crayford Marshes Address: Crayford Marshes, CRAYFORD, Kent Commodity: Clay & Shale Status: Ceased	Type: A surface mineral working. It may be termed Quarry, Delf, Delph, Gravel Pit, Sand Pit, Sand and Gravel Pit, Clay Pit, Pit, Opencast Coal Site or Surface Mine. It may be mapped as Worked Ground or Worked and Made Ground on BGS mapping. Status description: Site which has ceased to extract minerals. May be considered as 'Closed' by operator. May be considered to have 'Active', 'Dormant' or 'Expired' planning permissions by the Mineral Planning Authority.



ID	Location	Details	Description
Q	492m SE	Name: Burnham Road Gravel Pit Address: Burnham Road, DARTFORD, Kent Commodity: Sand & Gravel Status: Ceased	Type: A surface mineral working. It may be termed Quarry, Delf, Delph, Gravel Pit, Sand Pit, Sand and Gravel Pit, Clay Pit, Pit, Opencast Coal Site or Surface Mine. It may be mapped as Worked Ground or Worked and Made Ground on BGS mapping. Status description: Site which has ceased to extract minerals. May be considered as 'Closed' by operator. May be considered to have 'Active', 'Dormant' or 'Expired' planning permissions by the Mineral Planning Authority.

This data is sourced from the British Geological Survey.

18.2 Surface ground workings

Records within 250m	58
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Historical land uses identified from Ordnance Survey mapping that involved ground excavation at the surface. These features may or may not have been subsequently backfilled.

Features are displayed on the Mining and ground workings map on [page 140](#) >

ID	Location	Land Use	Year of mapping	Mapping scale
1	On site	Brick Works	1938	1:10560
2	On site	Brick and Tile Works	1931	1:10560
3	On site	Unspecified Wharf	1967	1:10560
4	On site	Unspecified Pit	1967	1:10560
A	On site	Unspecified Heap	1938	1:10560
A	On site	Unspecified Heap	1938	1:10560
A	On site	Unspecified Heap	1898	1:10560
B	On site	Unspecified Heap	1931	1:10560
B	On site	Refuse Heap	1938	1:10560
B	On site	Gravel Pit	1939	1:10560
B	On site	Refuse Heap	1938	1:10560
C	On site	Brick Works	1921	1:10560
C	On site	Brick Works	1907	1:10560
D	On site	Brick Field	1866	1:10560



ID	Location	Land Use	Year of mapping	Mapping scale
D	On site	Brick Works	1895	1:10560
C	20m SW	Brick Works	1895	1:10560
E	24m S	Unspecified Wharf	1895	1:10560
F	27m SW	Brick and Tile Works	1938	1:10560
F	27m SW	Brick and Tile Works	1938	1:10560
G	29m S	Pond	1895	1:10560
C	29m SW	Brick Works	1898	1:10560
D	29m SW	Brick Works	1899	1:10560
D	29m SW	Brick Works	1899	1:10560
F	39m W	Unspecified Heap	1898	1:10560
E	39m SW	Unspecified Wharf	1931	1:10560
F	39m W	Unspecified Heap	1938	1:10560
F	39m W	Unspecified Heap	1938	1:10560
E	40m SW	Unspecified Wharf	1973	1:10000
E	40m SW	Unspecified Wharf	1967	1:10560
F	43m W	Unspecified Heap	1931	1:10560
E	44m SW	Unspecified Wharf	1938	1:10560
E	44m SW	Unspecified Wharf	1938	1:10560
E	45m S	Unspecified Wharf	1895	1:10560
E	46m SW	Unspecified Wharf	1995	1:10000
E	46m SW	Unspecified Wharf	1985	1:10000
G	54m SE	Unspecified Wharf	1995	1:10000
G	54m SE	Unspecified Wharf	1985	1:10000
F	56m W	Clay Pits	1866	1:10560
H	56m NW	Cuttings	1907	1:10560
H	59m NW	Cuttings	1921	1:10560
H	59m NW	Cuttings	1938	1:10560
F	62m W	Gravel Pit	1939	1:10560



ID	Location	Land Use	Year of mapping	Mapping scale
E	75m S	Unspecified Wharf	1898	1:10560
I	87m NE	Unspecified Ground Workings	1967	1:10560
E	90m SW	Unspecified Wharf	1898	1:10560
I	124m NE	Refuse Heap	1940	1:10560
I	124m NE	Refuse Heap	1931	1:10560
I	125m NE	Unspecified Heap	1938	1:10560
I	125m NE	Unspecified Heap	1938	1:10560
F	172m SW	Pond	1973	1:10000
F	172m SW	Pond	1967	1:10560
J	190m SW	Mill Pond	1907	1:10560
J	190m SW	Mill Pond	1895	1:10560
J	191m SW	Pond	1866	1:10560
J	195m SW	Mill Pond	1898	1:10560
J	199m SW	Mill Pond	1938	1:10560
J	199m SW	Mill Pond	1921	1:10560
6	238m SW	Clay Pits	1866	1:10560

This is data is sourced from Ordnance Survey/Groundsure.

18.3 Underground workings

Records within 1000m

0

Historical land uses identified from Ordnance Survey mapping that indicate the presence of underground workings e.g. mine shafts.

This is data is sourced from Ordnance Survey/Groundsure.

18.4 Underground mining extents

Records within 500m

0

This data identifies underground mine workings that could present a potential risk, including adits and seam workings. These features have been identified from BGS Geological mapping and mine plans sourced from the BGS and various collections and sources.

This data is sourced from Groundsure.



18.5 Historical Mineral Planning Areas

Records within 500m

0

Boundaries of mineral planning permissions for England and Wales. This data was collated between the 1940s (and retrospectively to the 1930s) and the mid 1980s. The data includes permitted, withdrawn and refused permissions.

This data is sourced from the British Geological Survey.

18.6 Non-coal mining

Records within 1000m

14

The potential for historical non-coal mining to have affected an area. The assessment is drawn from expert knowledge and literature in addition to the digital geological map of Britain. Mineral commodities may be divided into seven general categories - vein minerals, chalk, oil shale, building stone, bedded ores, evaporites and 'other' commodities (including ball clay, jet, black marble, graphite and chert).

Features are displayed on the Mining and ground workings map on [page 140 >](#)

ID	Location	Name	Commodity	Class	Likelihood
5	On site	Not available	Chalk	A	Underground mine workings are uncommon, although the geology is similar to that worked elsewhere. Potential for difficult ground conditions are unlikely and are at a level where they need not be considered.
K	202m SW	Thames Road	Chalk	D	Underground mining is considered likely to have occurred within or close to the area. The location, extent and nature of mining should be considered in any site investigation. Potential for difficult ground conditions should be considered.
K	252m SW	Thames Road	Chalk	E	Underground mining is known or considered likely within or very close to the area. The location, extent and nature of mining should be considered in any site investigation. Potential for difficult ground conditions should be considered.
9	319m SW	Not available	Chalk	B	Underground mine workings may have occurred in the past or current mines may be working at significant depth to modern engineering standards. Potential for difficult ground conditions are unlikely and are at a level where they need not be considered.
10	355m SW	Not available	Chalk	A	Underground mine workings are uncommon, although the geology is similar to that worked elsewhere. Potential for difficult ground conditions are unlikely and are at a level where they need not be considered.



ID	Location	Name	Commodity	Class	Likelihood
20	617m SE	Not available	Chalk	A	Underground mine workings are uncommon, although the geology is similar to that worked elsewhere. Potential for difficult ground conditions are unlikely and are at a level where they need not be considered.
22	693m S	Not available	Chalk	A	Underground mine workings are uncommon, although the geology is similar to that worked elsewhere. Potential for difficult ground conditions are unlikely and are at a level where they need not be considered.
-	723m S	Not available	Chalk	B	Underground mine workings may have occurred in the past or current mines may be working at significant depth to modern engineering standards. Potential for difficult ground conditions are unlikely and are at a level where they need not be considered.
25	728m SE	Not available	Chalk	A	Underground mine workings are uncommon, although the geology is similar to that worked elsewhere. Potential for difficult ground conditions are unlikely and are at a level where they need not be considered.
-	744m W	Gascoyne Drive	Chalk	D	Underground mining is considered likely to have occurred within or close to the area. The location, extent and nature of mining should be considered in any site investigation. Potential for difficult ground conditions should be considered.
-	794m W	Gascoyne Drive	Chalk	E	Underground mining is known or considered likely within or very close to the area. The location, extent and nature of mining should be considered in any site investigation. Potential for difficult ground conditions should be considered.
-	819m SW	Not available	Chalk	A	Underground mine workings are uncommon, although the geology is similar to that worked elsewhere. Potential for difficult ground conditions are unlikely and are at a level where they need not be considered.
-	859m W	Crayford	Chalk	D	Underground mining is considered likely to have occurred within or close to the area. The location, extent and nature of mining should be considered in any site investigation. Potential for difficult ground conditions should be considered.
-	909m W	Crayford	Chalk	E	Underground mining is known or considered likely within or very close to the area. The location, extent and nature of mining should be considered in any site investigation. Potential for difficult ground conditions should be considered.

This data is sourced from the British Geological Survey.



18.7 JPB mining areas

Records on site

0

Areas which could be affected by former coal and other mining. This data includes some mine plans unavailable to the Coal Authority.

This data is sourced from Johnson Poole and Bloomer.

18.8 The Coal Authority non-coal mining

Records within 500m

0

This data provides an indication of the potential zone of influence of recorded underground non-coal mining workings. Any and all analysis and interpretation of Coal Authority Data in this report is made by Groundsure, and is in no way supported, endorsed or authorised by the Coal Authority. The use of the data is restricted to the terms and provisions contained in this report. Data reproduced in this report may be the copyright of the Coal Authority and permission should be sought from Groundsure prior to any re-use.

This data is sourced from The Coal Authority.

18.9 Researched mining

Records within 500m

2

This data indicates areas of potential mining identified from alternative or archival sources, including; BGS Geological paper maps, Lidar data, aerial photographs (from World War II onwards), archaeological data services, websites, Tithe maps, and various text/plans from collected books and reports. Some of this data is approximate and Groundsure have interpreted the resultant risk area and, where possible, specific areas of risk have been captured.

Location	Mineral type
On site	Stone
216m SW	Unspecified

This data is sourced from Groundsure.

18.10 Mining record office plans

Records within 500m

0

This dataset is representative of Mining Record Office and/or plan extents held by Groundsure and should be considered approximate. Where possible, plans have been located and any specific areas of risk they depict have been captured.

This data is sourced from Groundsure.



18.11 BGS mine plans

Records within 500m

0

This dataset is representative of BGS mine plans held by Groundsure and should be considered approximate. Where possible, plans have been located and any specific areas of risk they depict have been captured.

This data is sourced from Groundsure.

18.12 Coal mining

Records on site

0

Areas which could be affected by past, current or future coal mining.

This data is sourced from the Coal Authority.

18.13 Brine areas

Records on site

0

The Cheshire Brine Compensation District indicates areas that may be affected by salt and brine extraction in Cheshire and where compensation would be available where damage from this mining has occurred. Damage from salt and brine mining can still occur outside this district, but no compensation will be available.

This data is sourced from the Cheshire Brine Subsidence Compensation Board.

18.14 Gypsum areas

Records on site

0

Generalised areas that may be affected by gypsum extraction.

This data is sourced from British Gypsum.

18.15 Tin mining

Records on site

0

Generalised areas that may be affected by historical tin mining.

This data is sourced from Groundsure.



18.16 Clay mining

Records on site

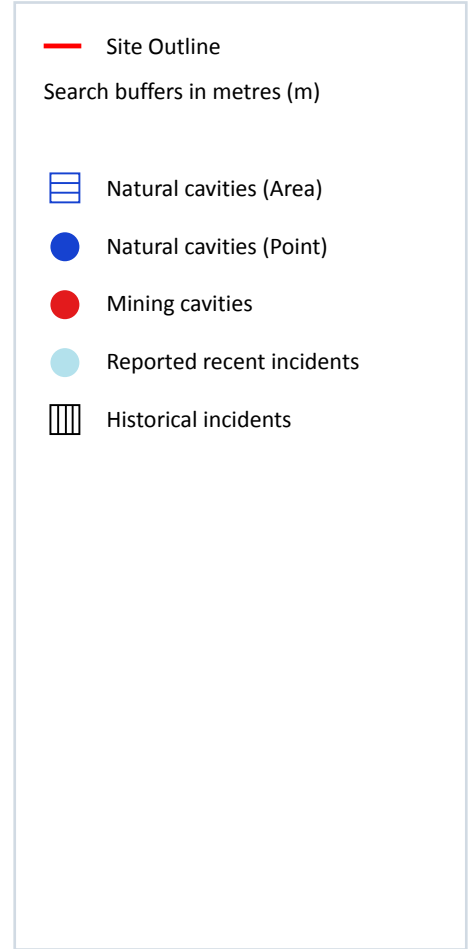
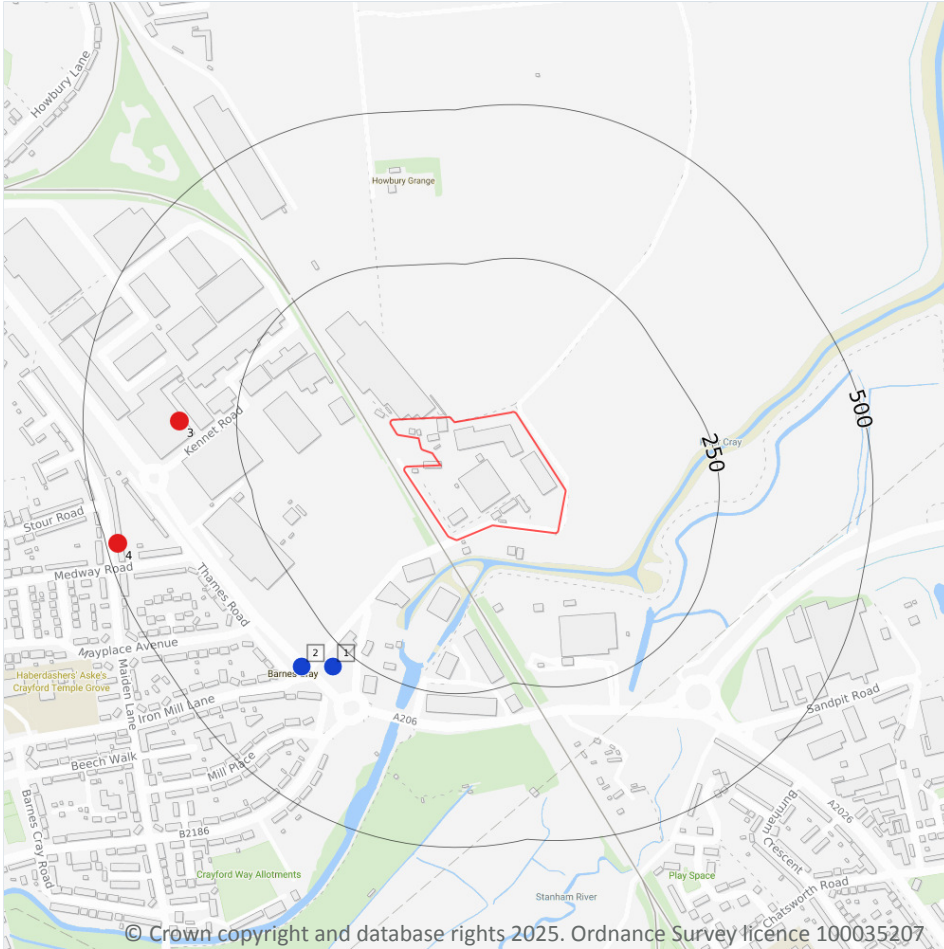
0

Generalised areas that may be affected by kaolin and ball clay extraction.

This data is sourced from the Kaolin and Ball Clay Association (UK).



19 Ground cavities and sinkholes



19.1 Natural cavities

Records within 500m

2

Industry recognised national database of natural cavities. Sinkholes and caves are formed by the dissolution of soluble rock, such as chalk and limestone, gulls and fissures by cambering. Ground instability can result from movement of loose material contained within these cavities, often triggered by water.

Features are displayed on the Ground cavities and sinkholes map on [page 151](#) >

ID	Location	Details
1	283m SW	Type: Sinkhole x 1, Solution Pipe x 1 Superficial Geology: Taplow Gravel Bedrock Geology: Chalk Group

ID	Location	Details
2	318m SW	Type: Swallow Hole x 1 Superficial Geology: Taplow Gravel Bedrock Geology: Chalk Group

This data is sourced from Stantec UK Ltd.

19.2 Mining cavities

Records within 1000m	4
-----------------------------	----------

Industry recognised national database of mining cavities. Degraded mines may result in hazardous subsidence (crown holes). Climatic conditions and water escape can also trigger subsidence over mine entrances and workings.

Features are displayed on the Ground cavities and sinkholes map on [page 151 >](#)

ID	Location	Mine Address	Mineral
3	344m W	Crayford, Kent	Chalk
4	481m W	Crayford, Kent	Chalk
-	944m W	Spurrells Holes, Crayford, Kent	Chalk
-	944m W	Crayford, Kent	Chalk

This data is sourced from Stantec UK Ltd.

19.3 Reported recent incidents

Records within 500m	0
----------------------------	----------

This data identifies sinkhole information gathered from media reports and Groundsure's own records. This data goes back to 2014 and includes relative accuracy ratings for each event and links to the original data sources. The data is updated on a regular basis and should not be considered a comprehensive catalogue of all sinkhole events. The absence of data in this database does not mean a sinkhole definitely has not occurred during this time.

This data is sourced from Groundsure.

19.4 Historical incidents

Records within 500m

0

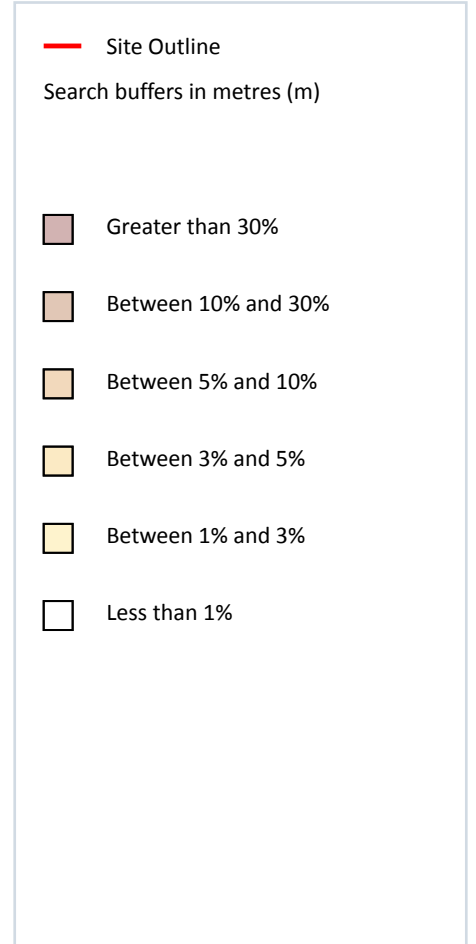
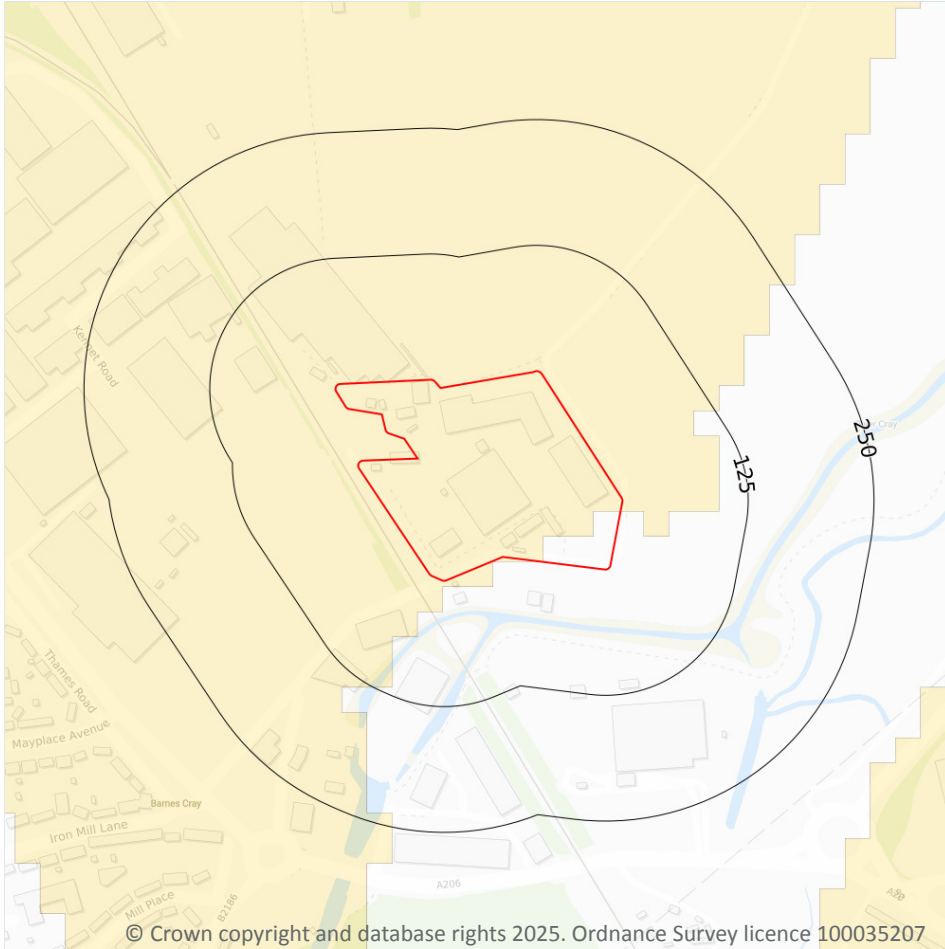
This dataset comprises an extract of 1:10,560, 1:10,000, 1:2,500 and 1:1,250 scale historical Ordnance Survey maps held by Groundsure, dating back to the 1840s. It shows shakeholes, deneholes and other 'holes' as noted on these maps. Dene holes are medieval chalk extraction pits, usually comprising a narrow shaft with a number of chambers at the base of the shaft. Shakeholes are an alternative name for suffusion sinkholes, most commonly found in the limestone landscapes of North Yorkshire but also extensively noted around the Brecon Beacons National Park.

Not all 'holes' noted on Ordnance Survey mapping will necessarily be present within this dataset.

This data is sourced from Groundsure.



20 Radon



20.1 Radon

Records on site

2

The Radon Potential data classifies areas based on their likelihood of a property having a radon level at or above the Action Level in Great Britain. The dataset is intended for use at 1:50,000 scale and was derived from both geological assessments and indoor radon measurements (more than 560,000 records). A minimum 50m buffer should be considered when searching the maps, as the smallest detectable feature at this scale is 50m. The findings of this section should supersede any estimations derived from the Indicative Atlas of Radon in Great Britain (1:100,000 scale).

Features are displayed on the Radon map on [page 154](#) >

Location	Estimated properties affected	Radon Protection Measures required
On site	Between 1% and 3%	None

Location	Estimated properties affected	Radon Protection Measures required
On site	Less than 1%	None

This data is sourced from the British Geological Survey and UK Health Security Agency.



21 Soil chemistry

21.1 BGS Estimated Background Soil Chemistry

Records within 50m

10

The estimated values provide the likely background concentration of the potentially harmful elements Arsenic, Cadmium, Chromium, Lead and Nickel in topsoil. The values are estimated primarily from rural topsoil data collected at a sample density of approximately 1 per 2 km². In areas where rural soil samples are not available, estimation is based on stream sediment data collected from small streams at a sampling density of 1 per 2.5 km²; this is the case for most of Scotland, Wales and southern England. The stream sediment data are converted to soil-equivalent concentrations prior to the estimation.

Location	Arsenic	Bioaccessible Arsenic	Lead	Bioaccessible Lead	Cadmium	Chromium	Nickel
On site	No data	No data	100 - 200 mg/kg	60 - 120 mg/kg	1.8 mg/kg	No data	No data
On site	No data	No data	100 - 200 mg/kg	60 - 120 mg/kg	1.8 mg/kg	No data	No data
On site	No data	No data	100 - 200 mg/kg	60 - 120 mg/kg	1.8 mg/kg	No data	No data
On site	No data	No data	100 - 200 mg/kg	60 - 120 mg/kg	1.8 mg/kg	No data	No data
On site	No data	No data	100 - 200 mg/kg	60 - 120 mg/kg	1.8 mg/kg	No data	No data
On site	No data	No data	100 - 200 mg/kg	60 - 120 mg/kg	1.8 mg/kg	No data	No data
8m SE	No data	No data	100 - 200 mg/kg	60 - 120 mg/kg	1.8 mg/kg	No data	No data
12m S	No data	No data	100 - 200 mg/kg	60 - 120 mg/kg	1.8 mg/kg	No data	No data
13m S	No data	No data	100 - 200 mg/kg	60 - 120 mg/kg	1.8 mg/kg	No data	No data
33m N	No data	No data	100 - 200 mg/kg	60 - 120 mg/kg	1.8 mg/kg	No data	No data

This data is sourced from the British Geological Survey.

21.2 BGS Estimated Urban Soil Chemistry

Records within 50m

18

Estimated topsoil chemistry of Arsenic, Cadmium, Chromium, Copper, Nickel, Lead, Tin and Zinc and bioaccessible Arsenic and Lead in 23 urban centres across Great Britain. These estimates are derived from interpolation of the measured urban topsoil data referred to above and provide information across each city between the measured sample locations (4 per km²).



Location	Arsenic (mg/kg)	Bioaccessible Arsenic (mg/kg)	Lead (mg/kg)	Bioaccessible Lead (mg/kg)	Cadmium (mg/kg)	Chromium (mg/kg)	Copper (mg/kg)	Nickel (mg/kg)	Tin (mg/kg)
On site	16	2.8	187	128	0.7	64	59	26	20
On site	16	2.8	178	122	0.7	63	52	24	19
On site	16	2.8	164	113	0.7	63	47	23	17
On site	16	2.8	167	115	0.7	64	52	26	17
On site	16	2.8	173	119	0.7	63	47	22	18
On site	16	2.8	174	120	0.7	63	46	22	19
On site	16	2.8	158	109	0.7	65	56	29	15
On site	16	2.8	167	115	0.7	64	51	25	17
On site	16	2.8	171	117	0.7	63	48	23	18
On site	16	2.8	145	100	0.6	69	70	40	12
On site	16	2.8	151	104	0.6	69	69	39	13
6m S	15	2.6	172	118	0.7	63	57	28	18
17m S	15	2.6	133	91	0.6	66	57	33	12
18m S	15	2.6	152	104	0.7	64	56	30	15
37m NE	16	2.8	159	109	0.6	67	62	32	14
38m SW	15	2.6	186	128	0.7	63	58	27	20
44m W	16	2.8	182	125	0.7	63	59	25	19
44m W	16	2.8	153	105	0.7	64	50	23	16

This data is sourced from the British Geological Survey.

21.3 BGS Measured Urban Soil Chemistry

Records within 50m	1
---------------------------	----------

The locations and measured total concentrations (mg/kg) of Arsenic, Cadmium, Chromium, Copper, Nickel, Lead, Tin and Zinc in urban topsoil samples from 23 urban centres across Great Britain. These are collected at a sample density of 4 per km².

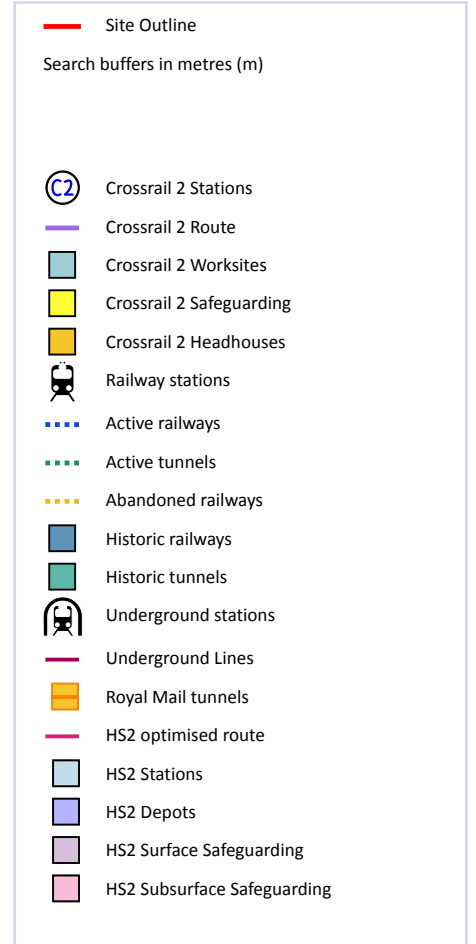
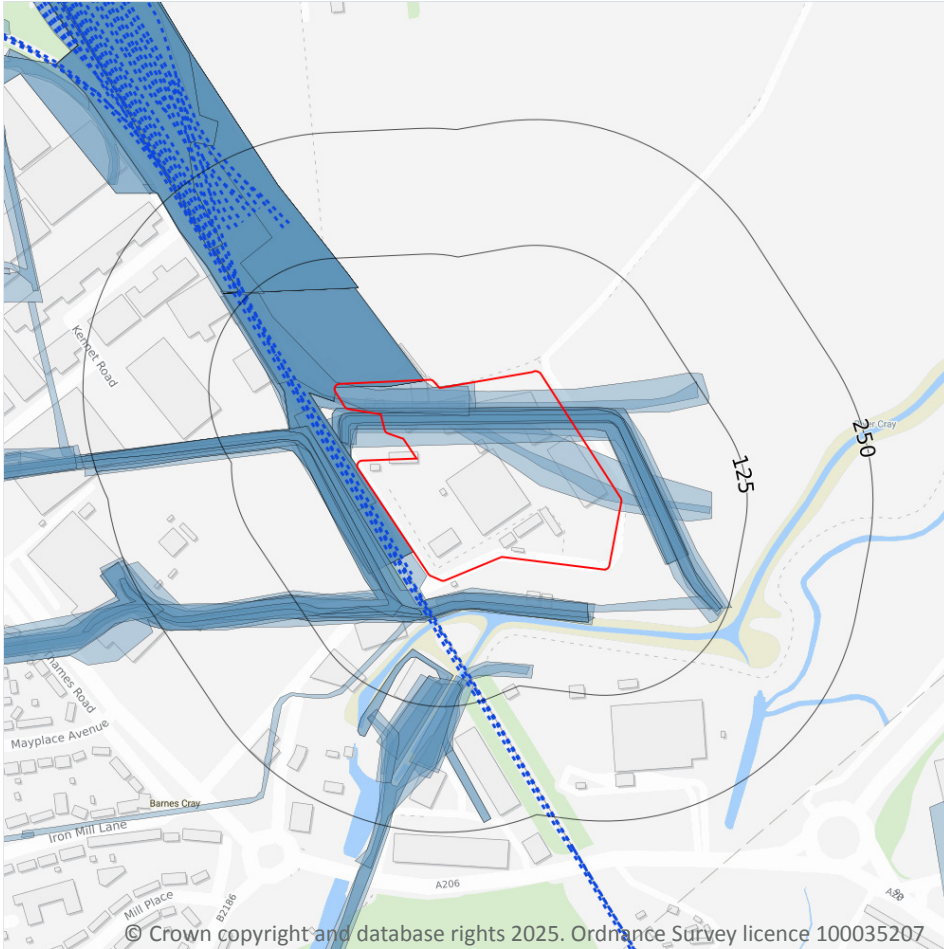
Location	Arsenic (mg/kg)	Cadmium (mg/kg)	Chromium (mg/kg)	Copper (mg/kg)	Nickel (mg/kg)	Lead (mg/kg)	Tin (mg/kg)	Sample Type
21m N	15.9	0.7	62.5	45.5	21.4	175.3	19.0	Topsoil



This data is sourced from the British Geological Survey.



22 Railway infrastructure and projects



22.1 Underground railways (London)

Records within 250m

0

Details of all active London Underground lines, including approximate tunnel roof depth and operational hours.

This data is sourced from publicly available information by Groundsure.

22.2 Underground railways (Non-London)

Records within 250m

0

Details of the Merseyrail system, the Tyne and Wear Metro and the Glasgow Subway. Not all parts of all systems are located underground. The data contains location information only and does not include a depth assessment.



This data is sourced from publicly available information by Groundsure.

22.3 Railway tunnels

Records within 250m

0

Railway tunnels taken from contemporary Ordnance Survey mapping.

This data is sourced from the Ordnance Survey.

22.4 Historical railway and tunnel features

Records within 250m

64

Railways and tunnels digitised from historical Ordnance Survey mapping as scales of 1:1,250, 1:2,500, 1:10,000 and 1:10,560.

Features are displayed on the Railway infrastructure and projects map on [page 159 >](#)

Location	Land Use	Year of mapping	Mapping scale
On site	Railway Sidings	1938	10560
On site	Railway Sidings	1985	10000
On site	Railway Sidings	1995	10000
On site	Railway Sidings	1958	10560
On site	Railway Sidings	1967	10560
On site	Railway Sidings	1973	10000
On site	Tramway Sidings	1898	10560
On site	Tramway Sidings	1899	10560
On site	Tramway Sidings	1921	10560
On site	Tramway Sidings	1895	10560
On site	Tramway Sidings	1938	10560
On site	Railway Sidings	1907	10560
On site	Railway Sidings	1931	10560
On site	Railway Sidings	1939	10560
On site	Railway Sidings	1933	2500
On site	Railway Sidings	1938	2500
On site	Tramway Sidings	1909	2500



Location	Land Use	Year of mapping	Mapping scale
On site	Tramway Sidings	1897	2500
2m SW	Railway Sidings	1961	1250
2m SW	Railway Sidings	1964	2500
3m SW	Railway Sidings	1974	1250
4m SW	Railway Sidings	1866	10560
4m SW	Railway Sidings	1992	1250
15m S	Tramway Sidings	1921	10560
15m S	Tramway Sidings	1938	10560
20m SW	Tramway Sidings	1895	10560
21m SW	Railway Sidings	1961	1250
21m SW	Railway Sidings	1974	1250
21m S	Tramway Sidings	1868	2500
21m SW	Railway Sidings	1992	1250
22m S	Tramway Sidings	1898	10560
23m S	Tramway Sidings	1897	2500
25m S	Tramway Sidings	1909	2500
26m SW	Railway Sidings	1909	2500
26m SW	Railway Sidings	1933	2500
26m SW	Railway Sidings	1938	2500
26m SW	Railway Sidings	1897	2500
29m SW	Tramway Sidings	1899	10560
33m SW	Railway Sidings	1868	2500
40m SW	Tramway Sidings	1866	10560
74m SW	Railway Sidings	1933	2500
74m SW	Railway Sidings	1938	2500
90m S	Railway Sidings	1958	10560
95m N	Railway Sidings	1940	10560
95m N	Railway Sidings	1931	10560



Location	Land Use	Year of mapping	Mapping scale
95m N	Railway Sidings	1907	10560
95m S	Railway Sidings	1938	10560
95m S	Railway Sidings	1931	10560
95m S	Railway Sidings	1931	10560
96m S	Railway Sidings	1939	10560
116m NW	Railway Sidings	1938	10560
143m SW	Railway Sidings	1907	10560
150m SW	Railway Sidings	1909	2500
155m NW	Railway Sidings	1933	2500
155m NW	Railway Sidings	1938	2500
160m N	Railway Sidings	1992	1250
170m NW	Railway Sidings	1909	2500
180m NW	Railway Sidings	1938	10560
180m NW	Railway Sidings	1921	10560
217m NW	Railway Sidings	1963	2500
218m NW	Railway Sidings	1961	1250
218m NW	Railway Sidings	1992	1250
218m NW	Railway Sidings	1973	-
238m SW	Tramway Sidings	1895	10560

This data is sourced from Ordnance Survey/Groundsure.

22.5 Royal Mail tunnels

Records within 250m

0

The Post Office Railway, otherwise known as the Mail Rail, is an underground railway running through Central London from Paddington Head District Sorting Office to Whitechapel Eastern Head Sorting Office. The line is 10.5km long. The data includes details of the full extent of the tunnels, the depth of the tunnel, and the depth to track level.

This data is sourced from Groundsure/the Postal Museum.



22.6 Historical railways

Records within 250m

0

Former railway lines, including dismantled lines, abandoned lines, disused lines, historic railways and razed lines.

This data is sourced from OpenStreetMap.

22.7 Railways

Records within 250m

36

Currently existing railway lines, including standard railways, narrow gauge, funicular, trams and light railways.

Features are displayed on the Railway infrastructure and projects map on [page 159 >](#)

Location	Name	Type
8m SW	Dartford or East Headshunt	rail
12m SW	Not given	Multi Track
12m SW	North Kent Line	rail
16m SW	North Kent Line	rail
18m SW	Not given	Multi Track
20m SW	North Kent Line	rail
23m SW	North Kent Line	rail
24m SW	North Kent Line	rail
28m SW	North Kent Line	rail
34m W	Not given	Multi Track
35m S	North Kent Line	rail
37m SW	North Kent Line	rail
50m S	North Kent Line	rail
51m S	North Kent Line	rail
59m NW	Not given	Multi Track
66m NW	Slade Green Depot	rail
101m NW	Slade Green Depot	rail
114m S	Not given	Multi Track



Location	Name	Type
114m S	North Kent Line	rail
117m S	North Kent Line	rail
130m NW	Slade Green Depot	rail
138m NW	Slade Green Depot	rail
163m NW	Not given	Multi Track
165m N	Slade Green Depot	rail
167m N	Slade Green Depot	rail
176m NW	Slade Green Depot	rail
185m NW	Slade Green Depot	rail
186m NW	Slade Green Depot	rail
187m NW	Slade Green Depot	rail
188m NW	Slade Green Depot	rail
188m NW	Slade Green Depot	rail
190m NW	Slade Green Depot	rail
191m NW	Slade Green Depot	rail
198m NW	Slade Green Depot	rail
203m NW	Slade Green Depot	rail
212m NW	Slade Green Depot	rail

This data is sourced from Ordnance Survey and OpenStreetMap.

22.8 Crossrail 2

Records within 500m

0

Crossrail 2 is a proposed railway linking the national rail networks in Surrey and Hertfordshire via an underground tunnel through London.

This data is sourced from publicly available information by Groundsure.



22.9 HS2

Records within 500m

0

HS2 is a proposed high speed rail network running from London to Manchester and Leeds via Birmingham. Main civils construction on Phase 1 (London to Birmingham) of the project began in 2019, and it is currently anticipated that this phase will be fully operational by 2026. Construction on Phase 2a (Birmingham to Crewe) is anticipated to commence in 2021, with the service fully operational by 2027. Construction on Phase 2b (Crewe to Manchester and Birmingham to Leeds) is scheduled to begin in 2023 and be operational by 2033.

This data is sourced from HS2 Ltd.



Data providers

Groundsure works with respected data providers to bring you the most relevant and accurate information. To find out who they are and their areas of expertise see <https://www.groundsure.com/sources-reference> ↗.

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APPENDIX C GROUND INVESTIGATION REPORT - 2018

CAULMERT LIMITED

Engineering, Environmental & Planning

Consultancy Services

Crayford Materials Recycling Facility

Viridor Waste Management Ltd

Paper Lines Upgrade

Verification Report

Prepared by:

Caulmert Limited

8 St Georges Business Park
Altrincham Business Park,
Dairyhouse Lane,
Altrincham,
Cheshire,
WA14 5UA

Doc ref: 3064-CAU-XX-XX-RP-V-0303-A0.C1

August 2018



APPROVAL RECORD

Site: Viridor Waste Management Ltd

Client: Crayford Materials Recycling Facility

Project Title: Paper Lines Upgrade

Document Title: 3064-CAU-XX-XX-RP-V-0303-A0.C1

Report Status: **Final**

Project Manager: Chris Davies

Caulmert Limited: 8 St Georges Business Park, Altrincham Business Park, Dairyhouse Lane, Altrincham, WA14 5UA

Tel: 0161 928 6886

Author	Celia Pendlebury SiLC SQP	Date	August 2018
Reviewer	Celia Pendlebury SiLC SQP	Date	August 2018
Approved	Chris Davies	Date	August 2018

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1 INTRODUCTION

1.1 Details of Commission

- 1.1.1 Caulmert Ltd was commissioned by Viridor Waste Management Limited (“the Client”) to undertake a Verification Report following the completion of the first, enabling phase of the planned Paper Lines Upgrade scheme, at an area situated at the rear (north) of the Crayford Materials Recycling Facility located at Century Wharf, Crayford Creek, Dartford. Its location is illustrated in Figure 1.
- 1.1.2 The planned Paper Lines Upgrade scheme is being delivered under planning authorization 18/00326/FULM which was granted by the London Borough of Bexley on 12th June 2018.
- 1.1.3 All of the operations undertaken at the Crayford Materials Recycling Facility, including that at the Paper Lines, are closely regulated by means of an Environmental Permit with the Environment Agency. That Permit includes the commitment to undertake stringent monitoring and control activities of the operations’ environmental impacts. The improvements planned at the Paper Lines building will allow these environmental monitoring obligations to be more efficiently realised.
- 1.1.4 In detail, the Paper Lines Upgrade scheme comprises the extension to an existing “picking building”, the relocation of an existing compressor, and the siting of a storage container to the rear (north) of the MRF to house the installation of additional plant. A plan of the planned extension is provided as Figure 2.
- 1.1.5 The first, enabling phase of the scheme, which involved groundworks, was completed between April and July 2018. The remainder of the programme is planned to be completed in November 2018.
- 1.1.6 For the purpose of this report, the area encompassed by this Paper Lines upgrade scheme is referred to as “the development site” or “the Site”. The wider Materials Recycling Facility, of which the Site is a small part, is termed the “MRF” throughout this document.

1.2 Purpose and Objective of Verification Report

- 1.2.1 This verification report is intended to document the sub-surface condition of the Site at the close of the first, enabling stage of the construction programme, which involved groundworks. It firstly summarizes the provisional Conceptual Site Model (CSM) which was derived prior to the commencement of the scheme and which was submitted in support of the request for planning authorization. The report details the groundworks that were undertaken, and describes the means by which betterment of the Site’s sub-surface conditions has been, or will

be, achieved by the completion of the programme. Finally, the CSM is also updated accordingly.

1.2.2 This report therefore provides a statement regarding the Site's current status with regards to the Contaminated Land Regulations 2002. It represents assurance that the derivation of the Site's current status has been derived in conformance with the procedures and processes as outlined in CLR11 "*Model Procedures for the Management of Land Contamination*" published by EA/DEFRA in 2004.

1.2.3 This verification report is therefore submitted to the London Borough of Bexley with the intention of securing confirmation that planning condition 6 of the scheme's planning authorization has been discharged.

1.3 Limitations

1.3.1 This Verification Report is solely for the use of Viridor Waste Management Limited and should not be relied upon by third parties without prior written consent from Caulmert.

1.3.2 Information used within this report has been gathered from data sets compiled by third party organisations and purchased on behalf of Viridor Waste Management Limited. The validity and accuracy of this third-party information is outside the control of Caulmert.

1.3.3 Interpretation and recommendations contained within this report should not be assumed valid for adjacent areas of land or alternative land uses, and are based upon the current use of the Site as described at the date of this report.

2 ENVIRONMENTAL SETTING OF THE SITE

2.1 Site Location

- 2.1.1 The Site is located within the Crayford Materials Recycling Facility (MRF) which is situated to the north of the River Cray, in Kent. The approximate centre of the Crayford MRF is at National Grid Reference (NGR) TQ 552895, 175729. The total area of the MRF covers approximately 3.57 Hectares (Ha) and is accessed from the west by means of a byway leading off Thames Road. Its location is illustrated in the location plan presented as Figure 1.
- 2.1.2 The Site is situated at the rear (north) of the MRF and is accessed from its southwest side by means of a ramp leading from the main MRF. The development Site is rectangular in shape and covers an area of approximately 750m². A plan showing its layout and that of the planned upgrade is provided as Figure 2.
- 2.1.3 Photographs taken prior to the start of the upgrade scheme are presented as Appendix 1. Photographs taken during and at the completion of the enabling groundworks phase that is described in this report, are presented as Appendix 6.

2.2 Previous Environmental Assessments

- 2.2.1 A "Phase 1" Desk Study report of the development site (final version) was issued by Caulmert in February 2017 (document reference 3064-CAU-XX-XX-RP-V-0301.A0.C2). This document referred to three reports completed by third parties within the wider MRF site (which fall beyond the current development Site), namely:
- Ground investigation (entitled "*Factual Ground Investigation Report, Report No. END 12-98*") in June 2012. This documented the completion of 2 no. window sample boreholes located 85m to south-east of the Site by CET Safehouse, with associated California Bearing Ratio (CBR) testing;
 - Phase I Desk Study report (entitled "*Building Extension for Baled Paper, ref: 2198.2.VWM.DEO.PAC.A0*") dated December 2014, for the proposed extension to the existing baled paper storage area (110m to south-west of target site); and,
 - Phase II Interpretative Ground Investigation Report (entitled "*Building Extension for Baled Paper, ref: 2198.11.VWM.DEO.PAC.B0*") dated July 2015, for the proposed extension to the existing baled paper storage area (110m to south-west of target site).
- 2.2.2 This report also referred to two earlier reports prepared by Caulmert also outside the current development Site; namely,

- Ground Investigation and letter report (entitled “*Report on Ground Investigation findings and Recommendations, Crayford MRF*”) document reference: 2659.CAU.XX.XX.RP.O.0300.SO.P3”, dated August 2016, relating to the planned upgrade of existing welfare facilities (137m to south of target site) and;
- Ground investigation in relation to a proposed water tank dated October 2017, at a location 160m to south west of the Site.

2.2.3 The locations of the sample points described in these reports in relation to the proposed development Site were included in the Desk Study and are also shown in Figure 4 of this document. The findings of these reports and their significance to the Site were outlined in the Desk Study report and were incorporated into its preliminary conceptual site model (CSM).

2.2.4 An intrusive investigation was subsequently undertaken by Caulmert on the development Site between the dates of 15th and 17th November 2017. This was documented in the first version of the report entitled “*Phase II geo-environmental report*”, document reference 3064-CAU-XX-XX-RP-V-0302.A0.C1, issued in February 2018. A subsequent version of this report (document reference 3064-CAU-XX-XX-RP-V-0302.A0.C2) was issued in May 2018 which included the results of a supplementary gas monitoring programme conducted between November and March 2018.

2.2.5 In line with CLR11, all of these reports incorporated versions of a Conceptual Site Model (CSM) for the Site, which in each case, was updated as more data became available. It is the CSM which was derived at the close of the Phase I (Desk Study) and II investigative phases of work, prior to the start of the construction programme, which is described in the rest of this section.

2.3 History and Environmental Setting of the Site

2.3.1 Information on the history and the Site’s environmental setting was obtained by Caulmert by means of the Desk Study initiated in November 2017. This section constitutes a precis only of the salient findings which were established during this Desk Study. Full details are to be found by referring to that report.

2.3.2 The land uses immediately surrounding the Site are associated with either the existing MRF or various surrounding land uses, which are all classified as “industrial” or “commercial”. The MRF itself to the south of the Site, which accepts, stores and processes waste materials, consists of several buildings. Most are dedicated to these waste recycling operations and are mainly built of steel or concrete-framed warehouses with associated storage areas. There is also a one-storey brick-built building present which is used for office administration. The structure in the north of the MRF, to which the Site is intended to form an extension, is a Paper Lines building and is constructed from a steel frame with corrugated roof and shuttering on its western,

northern and eastern sides. Its southern façade, where recycled waste materials are sorted, is partly open. The remainder of the MRF comprises access roads, including an asphalt road at the entrance to the offices, and storage areas for storing dry waste materials such as baled paper, which are mostly laid to concrete hardstanding. Photographs taken at the time of the Desk Study are presented as Appendix 1.

- 2.3.3 Off-site land uses were also documented. To the north and northwest off-site beyond the MRF, beyond but immediately adjacent to the Site and at a higher elevation, is a railway engine yard or marshalling yard with an engine house, interspersed with open grassland. To the east of the MRF is a closed landfill site. This occupies a former gravel pit whose boundary is mapped as extending up to 14 metres from the Site's eastern boundary. This landfill was operated under the Environmental Permitting Regulations (Waste) reference ERI001, and accepted non-biodegradable wastes. It was managed by Erith Environmental Services and currently features on Environment Agency records as a "closed landfill", although to date, its date of closure has not been established. To the south of the MRF is a haulage and aggregate recycling company which is separated from the MRF by a public footpath. The River Cray is located beyond this, and it lies within a wooded wildlife corridor although this is not documented as being ecologically sensitive and is not protected. To the west of the MRF, along its boundary, is a railway line, with Erith Industrial Estate and areas of derelict land beyond. The latter corresponds with a former oil depot and is topographically down gradient from the Site.
- 2.3.4 Review of historical Ordnance Survey maps dating from 1863 indicates that the Site was undeveloped (Greenfield) at that date. There was a small stream present in its south-east corner which flowed southwards into the River Cray or Crayford Creek beyond.
- 2.3.5 Nevertheless, despite being undeveloped in 1863, this Site was situated within environs in which natural mineral resources were being extensively exploited. The Phase I Desk Study identified records of 22 no. former extraction activities within 1km of the Site, targeting clay, shale, chalk or sand & gravels. The Site is shown in the 1863 map to lie at the western margin of a Brickworks which remained active up until the 1930's. Its main excavation pits seem to have been distanced from the Site, away to the north and northeast, but by 1877, the associated infrastructure has encroached onto the Site itself. This included tramways, engine houses and a number of square "pits". The precise purpose of these pits is unclear. They may have been clay settling pits but they could alternatively have been used to hold aggregates, coal or the fired bricks themselves. These pits were progressively abandoned and from the 1930's onwards, they seem to have been buried under material introduced from the north. By 1961, the Site and entire northern part of the MRF site had been buried under this unspecified imported material which was described as an area of "unspecified heaps/refuse heaps" and by 1962, is depicted on maps as hummocky rough grassland.

- 2.3.6 By 1973, the MRF site was developed by means of the lowering of the ground level and this seems to have involved the removal off-site of this imported material. The northern perimeter of the MRF, corresponding with that of the Site, has been sculpted into a slope to differentiate it from the adjacent higher land beyond, which remains apparently unused. This slope depicted on the maps corresponds with the earth bund present now at the Site's northern perimeter.
- 2.3.7 As well as the mineral extractive and waste management activities described above, additional developments occurred over the wider area at this time which were of an industrial nature. One of these was an oil depot comprising a number of large circular storage tanks, built in 1962 on a site 110m south-west of the MRF. This was demolished in 2002 and is now partly redeveloped as Erith Industrial Estate. The Phase I Desk Study additionally reported records of 48 no. "potentially contaminative industrial sites" within 250m of the Site, of which 44 are of land uses unconnected with the MRF.
- 2.3.8 As well as the closed landfill to the north east of the Site, there is another closed landfill located 35m south west of the Site, which is down gradient from the Site. This was operated by the London Borough of Bexley from 1952 onwards, accepting inert and industrial wastes up until December 1960. There are a further 13 no. former landfill sites in Environment Agency (EA) records within 1.5km of the Site as well as 21 no. current or former licensed waste management sites, which are located essentially in all compass directions from the Site.
- 2.3.9 As for the MRF itself, this was progressively developed and upgraded from the 1960's onwards. The MRF's main building is shown occupying the centre of the MRF by 1962 and it has been progressively extended and altered since then. The current main Paper Lines picking building which is the subject of the current construction scheme, is depicted as a distinct unit in maps after 2010 and supplemented by a further steel portal framed structure with concrete legio blocks constructed to its east by 2014.
- 2.3.10 At the time of Caulmert's Phase I and Phase II investigations in November 2017, the rear of the picking building (the development Site) consisted of equipment installed directly on a series of connected concrete slabs in open air (see photos in Appendix 1). In its south-western corner was a compressor and along its eastern side were conveyor belts. The concrete floor on which these conveyor belts were installed were approximately 1 metre lower than the remainder and was inappropriately termed "pit" in Caulmert's Phase I Desk Study report.
- 2.3.11 Beyond the northern edge of this slab, along the MRF's northern boundary, there is an earth bund rising 3 to 4 metres above the Site which is evidently composed of imported soil and Made Ground (fill) material. Review of the historical maps suggests that this material might have been emplaced between the 1930's and 1950's and that this earth bund was created when the MRF was developed in the early 1970's, when much of the imported material

formerly covering the Site was apparently removed to create a level surface for development. The base of this earth bund was supported by a retaining wall made of vertical concrete slabs (photos 2, 5 and 10). Between the retaining wall and the Site's installations, was a 5 metre wide concrete hardstanding which served as access to the de-stoner plant (photo 2). The top of the earth bund was maintained as rough grassland (photos 3 and 4).

- 2.3.12 From the topographical survey conducted in November 2017, the ground elevation at the base of this retaining wall in the north was measured to be approximately 8.72 metres above Ordnance Datum (mAOD). The direction of natural topographical fall across the Site is towards the south, falling gently towards the existing main MRF building, where its elevation was approximately 8.20 mAOD.
- 2.3.13 An underground services survey was completed which incorporated the use of CCTV and Ground Penetrating Radar (GPR). This identified the presence of high voltage electrical cables entering the Site from the south-west into a square manhole chamber (photo 9), and then turning 90° towards the main MRF to the south. Surface water drains also enter the Site from west to east and are accessed via a round manhole chamber lid (photos 10 & 11), although these could not be surveyed or inspected due to the presence of blockages.
- 2.3.14 The nearest surface water feature to the Site in the direction of topographic fall (south) is the River Cray which is located the other side of the main MRF building, approximately 38m south from the boundary of the MRF.
- 2.3.15 The Site is located within a zone vulnerable to flooding. It lies within 250m of an Environment Agency indicative Zone 2 and 3 flood plain of which there are 12 no. flood plain records for zone 2, one of which is located on Site as Fluvial/Tidal models. There are also 26 no. flood plain records for zone 3, one of which is located on the Site for fluvial models. The risk of flooding from Rivers and the Sea is therefore designated to be "High" for the Site. There are 5 no. flood defences within 250 m of the Site of which one is located on the Site. The area benefits from flood defences within 250m of the Site. The Site lies within 50m of a British Geological Survey (BGS) groundwater flooding susceptibility area, and relates to 'Clearwater' flooding. The highest susceptibility to groundwater flooding is designated 'Potential Below Surface'. The BGS confidence for groundwater flooding rating is "High".
- 2.3.16 Published geological maps contained no information on the extent of man-made fill material on the site. However, the historical Ordnance Survey maps indicated that material of an unknown nature was imported onto the entire northern part of the MRF from the c.1890's to c. 1960's, but that during the development of the plot of land which the MRF now occupies (by 1973) some of this material was removed to make a level development plot. The extent,

thickness and nature of made ground beneath the Site, at the time of the Phase I Desk Study, was unknown.

- 2.3.17 From published data, it is known that the natural geology beneath the Site consisted of sands and gravels of the Taplow Gravel Formation. This was underlain by bedrock which is the Seaford Chalk Formation & Newhaven Chalk Formation (undifferentiated) of Upper Cretaceous (Campanian/Coniacian) age. Alluvium silt deposits are located 155m to the south-east of the Site, but are not recorded beneath the Site itself. However, previous intrusive investigations by third parties (referenced above) undertaken within the MRF and no further than 85m from the Site, encountered Made Ground (fill) of variable thickness overlying superficial deposits of Alluvium comprising clay, silt, sand and gravel. Chalk rockhead was encountered at shallow depth in the northern part of the MRF (1.35 mbgl in BH1 as documented in the June 2012 ground investigation report) and at slightly deeper depths (4.54mbgl DS01 as documented in the August 2016 ground investigation report) towards the southern part of the MRF.
- 2.3.18 A British Geological Survey (BGS) borehole record from a position located 8m to the north east (and up gradient) of the Site, documented firm clay to 2.40m underlain by very hard chalk to 4.4m, and then putty chalk with flints to the total depth drilled of 6.00mBGL.
- 2.3.19 These third party sources therefore confirmed the presence of Chalk rockhead at shallow depths (between 1.35 and 4.54 mbgl) beneath the immediate environs of the Site and therefore it can be reasonably assumed Chalk is at shallow depth beneath the Site itself. None of these third party sources provided any data on the quality of either the unsaturated Chalk bedrock, or the depth and quality of groundwater within.
- 2.3.20 The Chalk bedrock is designated, by the Environment Agency, as a “Principal Aquifer” (previously known as a “Major aquifer”) and the Site lies within a Source Protection Zone (SPZ) 2 which is defined as an “Outer catchment”. The soils at the site are classified on published maps as having “high leaching potential”, i.e. those that readily transmit liquid discharges directly to underlying strata.
- 2.3.21 The Desk Study established that the Site is located in a sensitive location in terms of the water environment. There are records of 4 no. active groundwater abstraction licences within 2km of the Site. The closest is located 593m east of the Site and is held by Thames Water Utilities Ltd for the purpose of “general washing / process washing” at Dartford Creek Sewage Treatment Works (maximum annual volume 1001 m³). The remaining 3 no. abstraction licenses are all for potable use, with the nearest being located 1.5km south west the Site and held by Thames Water Utilities Ltd (maximum annual volume 4,977,870 m³). All of these extract groundwater from the underlying Chalk aquifer.

2.3.22 The Desk Study established that there are no current surface water abstraction licences located within 2 km of the site.

2.4 Pre-Construction Intrusive Investigation

2.4.1 The intrusive investigations conducted by Caulmert in November 2017 were specifically in preparation for the described, authorized construction programme, namely, the planned upgrade of the current paper picking lines at the Site.

2.4.2 The intrusive investigations included strength assessments of the integrity of the existing concrete slab. This was achieved by the testing of six concrete cores (CC1 and CC2 and WS01 to WS04) extracted from the slab and associated testing.

2.4.3 In addition, at four of these locations (WS01 to WS04), boreholes were advanced through the slab to the soils below, a maximum depth of 13 metres below grade, using the dynamic probe drilling technique. This was conducted under “safe” drilling practices designed to minimize cross-contamination and prevent the introduction of pollutants to deeper levels. These boreholes enabled in situ and ex situ tests to be conducted to ascertain the geotechnical properties of the underlying ground. The data obtained was documented in the original “Phase II” report and informed the decision to construct the new building on the top of the existing concrete slab. These details are not reproduced in this document.

2.4.4 The phase of intrusive investigations completed in November 2017 also included the assessment of the nature and chemical content of the underlying ground conditions by means of the collection and testing of disturbed soil samples. The samples of soil beneath the concrete slab were retrieved using a window sampler from depths of up to 5.0 metres below grade (mbg). Following their logging and field testing, selected samples were submitted for chemical analysis under controlled conditions. All concrete cores and boreholes were immediately backfilled following sample collection and made good, with the exception of boreholes WS01, WS02 and WS03. These three boreholes were partially backfilled to depths of 2.07m, 2.10m and 1.46m respectively and completed as gas monitoring wells by installing uPVC pipe and slotted screen, with a washed gravel annulus.

2.4.5 In addition to the advancing of the boreholes as described, two additional trial pits (TP01 and TP02) were excavated into the earth bund along the northern perimeter, using a mechanical digger. The observed stratigraphy was logged and recorded. Disturbed soil samples were also collected from these pits, and after logging and field testing, these were also submitted for chemical analysis under controlled conditions.

- 2.4.6 Lastly, a foundation inspection pit (FP01) was also advanced by both hand and machine in the corner of the concrete foundation slab, and one disturbed soil sample was collected from here for analysis of chemical contaminants.
- 2.4.7 The locations of all exploratory holes are shown in Figure 3. .
- 2.4.8 All these intrusive investigations were supervised, and all soil descriptions were logged, by an experienced geo-environmental engineer from Caulmert. The resulting borehole and trial pit logs are presented as Appendix 2 and the findings outlined in more detail below.
- 2.4.9 The surfaces of the concrete slabs (at all elevations) were found to be in good condition. There was no evidence of damage or signs of cracking and no evidence that the strength or impermeability of the concrete was compromised. Thicknesses of the concrete slabs were measured to be between 110mm and 290mm and it contained reinforcement steel. A damp-proof membrane was encountered directly beneath the concrete in WS03 only. Compression tests were undertaken on six samples of concrete and their results (presented in the Phase II investigation report) confirmed the suitability of the slab to be re-used as the floor for the planned development. Consequently, its excavation, and any uncovering of the underlying ground surface, was not necessary as part of the ensuing construction works.
- 2.4.10 The foundation inspection pit (FP01) advanced by Caulmert at the north-east corner of the existing building established that the concrete floor here was 110mm thick and underlain by made ground (fill) material. This consisted of loose to medium dense sand and gravel with fragments of brick, concrete, vitreous clay pipe and localised ash, to a depth of 0.87m. Beneath it was dense sand and gravel which was interpreted to be the Taplow Gravel deposits. A 150mm diameter plastic surface water pipe was encountered at this location encased in concrete and blocked with debris. This was re-instated prior to the backfilling of the trench.
- 2.4.11 The trial pits (TP1 and TP2) advanced into the earth bund along the Site's northern perimeter encountered soil which was interpreted to be entirely of introduced Made Ground (fill) material. This was described as being overall granular, comprising sand and gravel, with ash, brick, concrete and stone masonry including waste materials of metallic and plastic fragments. The maximum depth advanced into the earth bund by the digger was 0.90m and the base of this material was not proven. Any deeper excavation was not possible due to access constraints.
- 2.4.12 The geologic logs of the two trial pits (TP1 and TP2) and the four dynamic probe holes advanced through the concrete slab (WS01, WS02, WS03, WS04), are presented in Appendix 2. The following stratigraphic sequence was developed from this data. Overall, the Made Ground (fill)

strata encountered beneath the concrete slab differed in content to that of the earth bund and was conjectured to have come from a different source.

- 2.4.13 The Made Ground (fill) lying immediately beneath the concrete slab was overall of a granular nature, but heterogeneous, being described as largely a medium dense brown, very clayey sand and gravel, with brick, concrete, and localised ash. In WS02 there was a distinct a stratum medium dense light brown clayey sandy gravel of chert and flint between depths of 0.38m and 3.50m. In WS03, from 0.20m, was a stratum of soft, becoming firm, brown, sandy gravelly clay with localised brick fragments, above a concrete obstruction at 1.50m.
- 2.4.14 In WS01, the Made Ground was underlain by natural superficial deposits of sand and gravel, interpreted to be the Taplow Gravel deposits. This stratum was 1.6 metres thick and was described as being a medium dense, light brown clayey, sandy, angular to rounded, fine to coarse sand and gravel of chert and flint. This stratum was absent in WS02 and WS04 but was also encountered during the advancing of inspection pit FP01.
- 2.4.15 Bedrock, consisting of a (putty) chalk, was encountered in all three boreholes advanced to full depth, from depths of 1.2m (in WS04) to 3.5m (in WS02) up to the total depth drilled. This was interpreted to be the Sleaford Chalk Formation and was described as being a structureless chalk which was firm, becoming stiff with depth, brown or mottled yellowish-brown (becoming greyish white with depth) silty gravelly clay. Based on field descriptions and laboratory testing data, the weathering grade of the chalk was classed as grade 'Dm' as outlined in CIRIA C574 "Engineering in Chalk" (2002).
- 2.4.16 A summary of the lithologies encountered in each trial pit and borehole is presented below.

Summary of stratigraphy.
Full trial pit and borehole logs were included in the Phase II report

Expl. Hole Ref	Elevation at surface (mAOD)	Depth of Stratum (mBGL)				Comments
		Concrete	Made Ground (mixed lithology)	Taplow Gravels	Seaford Chalk	
WS01	8.73	0.00 – 0.29	0.29 – 1.20	1.20 – 2.80	2.80 – 3.50	Drilled through concrete slab at Site
WS02	8.39	0.00 – 0.20	0.20 – 3.50	Not present	3.50 – 5.00	
WS03	8.09	0.00 – 0.20	0.20 – 1.50	Refused at 1.5m against concrete obstruction		
WS04	8.55	0.00 – 0.28	0.28 – 1.20	Not present	1.20 – 2.45	
FP01	8.05	0.00 – 0.11, 0.87 – 1.82	0.11 – 0.87	1.29 – 1.50	-	Foundation test pit at the side of concrete slab of MRF building
TP01	11.02	Not present	0.00 – 0.70	Not encountered		Earth bund north of Site
TP02	11.14	Not present	0.00 – 0.90	Not encountered		
CC1		0.20	Not advanced through concrete slab			For testing concrete only
CC2		0.29	Not advanced through concrete slab			

- 2.4.17 No visual or olfactory indications of contamination were observed at any location or associated with any of the disturbed soil samples retrieved during the intrusive investigation.
- 2.4.18 No groundwater strikes were encountered during the investigation.
- 2.4.19 During the investigation works, a total of 7 no. disturbed soil samples were retrieved. These were: 2 no. samples collected from the earth bund, and a further 5 no. samples collected by window sampler from beneath the concrete slab. During their collection, industry standard procedures were followed to minimize cross-contamination and contamination from external sources.
- 2.4.20 All seven soil samples were submitted, by Caulmert, under controlled conditions for chemical testing to an accredited environmental analytical laboratory. This laboratory was Concept Life Sciences Ltd, (UKAS Testing Laboratory Reference No. 1549, December 2012). A summary of the test schedule and the results is presented in the table below and the Laboratory Certification is presented as Appendix 3.

Summary of Test Schedule of Soils collected November 2017.

Location Ref.	Depth (m)	CLEA Metals*	Speciated TPH	PAH USEPA 16	SOM	Asbestos	Full WAC Suite (2 Stage)	pH	SO ₄ (2:1 water soluble)
TP01	0.20 – 0.70	Y	Y	Y	Y	Y		Y	Y
TP02	0.20 – 0.90						Y		
FP01	0.50	Y	Y	Y	Y	Y		Y	Y
WS02	0.30	Y	Y	Y	Y	Y		Y	Y
WS02	3.60 – 4.00							Y	Y
WS03	1.00							Y	Y
WS04	1.50	Y	Y	Y	Y	Y		Y	Y

- 2.4.21 * CLEA metals: arsenic, cadmium, copper, chromium (III+VI), mercury, nickel, lead, selenium, zinc, boron, beryllium, vanadium.
- 2.4.22 In line with current guidance, the results of this chemical analysis were compared against a series of Generic Assessment Criteria (GAC) derived by Caulmert using current industry guidance. Depending on the chemical contaminant, these are derived from Category 4 screening levels (C4SLs) as published by the DEFRA, and where unavailable, against other suitable guidance as published by LQM/CIEH and other sources. As the Soil Organic Matter (SOM) concentrations were between 0.1% and 7.7%, a SOM of 1.0% was assumed for the purposes of the assessment against the GAC threshold values for industrial land use. The resulting table comparing laboratory results with the GAC threshold values is presented as Appendix 4.
- 2.4.23 The pH values of the soil samples were between 8.0 and 10.0, which is moderately alkaline to alkaline.
- 2.4.24 None of the four soil samples analysed for the analytical suite (heavy metals, polyaromatic

hydrocarbons (PAHs) and speciated total petroleum hydrocarbons (TPH)) contained any of those parameters exceeding the generic assessment criteria which were all selected given the site's current and ongoing land use category (commercial / industrial).

- 2.4.25 Of the four samples of Made Ground screened for the presence of asbestos, fibres of asbestos (chrysotile) were positively identified in one sample which was derived from the earth bund, TP01.

2.5 Pre-Construction Gas and Groundwater Monitoring Programme

- 2.5.1 Following the intrusive investigation, a gas monitoring programme was conducted on the three boreholes, WS01, WS02 and WS03, completed as permanent gas monitoring wells. As stipulated in CIRIA C665, six rounds of gas monitoring were undertaken on separate dates, including one in which the ambient air pressure was below 1000mb. The programme was conducted between 27 November 2017 and 7 March 2018. The monitoring was completed using a Geotech GA10111 gas analyser (calibration records have been maintained by Caulmert) and the results are summarized in the following tables.

Summary of Gas Monitoring Results

BH identity	Round 1 27/11/17	Round 2 06/12/17	Round 3 12/12/17	Round 4 02/01/18	Round 5 11/01/18	Round 6 07/03/18
WS01						
O ₂ (%) peak	14.7	15.0	14.9	19.9	13.6	Not Possible
CO ₂ (%) peak	6.0	5.8	5.2	2.1	5.4	Not Possible
CH ₄ (%) peak	ND	ND	ND	ND	ND	Not Possible
H ₂ S (%) peak	ND	ND	ND	ND	ND	Not Possible
CO (ppm) peak	ND	ND	ND	ND	ND	Not Possible
Peak Flow Rate (l/hr) [q]	0.0	0.0	-0.1	0.0	0.1	Not Possible
Barometric Pressure (mb)	1010	1029	1009	1012	1019	993

BH identity	Round 1 27/11/17	Round 2 06/12/17	Round 3 12/12/17	Round 4 02/01/18	Round 5 11/01/18	Round 6 07/03/18
WS02						
O ₂ (%) peak	8.4	11.9	17.6	10.6	19.4	8.2
CO ₂ (%) peak	6.7	5.5	1.7	3.4	0.7	7.1
CH ₄ (%) peak	ND	ND	ND	ND	ND	ND
H ₂ S (%) peak	ND	ND	ND	ND	ND	ND
CO (ppm) peak	ND	ND	1	ND	ND	ND
Peak Flow Rate (l/hr) [q]	0.0	0.1	0.1	-0.1	0.0	0.0
Barometric Pressure (mb)	1010	1029	1009	1012	1019	993
WS03						
O ₂ (%) peak	16.1	20.0	18.8	18.9	18.3	15.4
CO ₂ (%) peak	0.7	0.6	0.7	0.5	0.4	0.9
CH ₄ (%) peak	ND	ND	ND	ND	ND	ND
H ₂ S (%) peak	ND	ND	ND	ND	ND	ND
CO (ppm) peak	ND	ND	1	ND	ND	ND
Peak Flow Rate (l/hr) [q]	0.0	0.0	0.0	0.0	0.0	0.0
Barometric Pressure (mb)	1010	1029	1009	1012	1019	993

- 2.5.2 Neither methane nor hydrogen sulphide was detected above the detection limit on any of the visits. On the third monitoring visit, carbon monoxide (CO) was detected at 1ppm in boreholes WS02 and WS03.
- 2.5.3 The Characteristic Gas Situation for the Site was calculated using the procedure outlined in BS8485:2015 and is detailed overleaf.

Determination of Characteristic Gas Situation

BH ref		Round 1 27/11/17	Round 2 06/12/17	Round 3 12/12/17	Round 4	Round 5	Round 6
WS01	Q _{hg} CH ₄	0.006	0.006	Negative flow	0.002	0.005	Not Recorded
	Q _{hg} CO ₂	0.0	0.0	0.0	0.0	0.0	0.0
WS02	Q _{hg} CH ₄	0.0	0.0	0.0	0.0	0.0	0.0
	Q _{hg} CO ₂	0.007	0.006	0.002	Negative flow	0.0007	0.007
WS03	Q _{hg} CH ₄	0.0	0.0	0.0	0.0	0.0	0.0
	Q _{hg} CO ₂	0.0007	0.0006	0.0007	0.0005	0.0004	0.0009
GSV (CH ₄)	0.0						
GSV (CO ₂)	0.007						
CS (CH ₄)	1						
CS (CO ₂)	1						

Q_{hg} = borehole hazardous gas flow rate (l/hr) calculated for each gas, borehole and monitoring event using the following equation from BS 8485:2015:

$$Q_{hg} = q (C_{hg}/100)$$

GSV = Gas Screening Value for entire site for each gas, assumed from the highest Q_{hg}

CS = Characteristic Gas Situation for CO₂ and CH₄ determined from Table 2 in BS 8485:2015

Note: Where no gas flow has been recorded in a borehole, the BS8485:2015 recommends that the limit of detection of the monitoring equipment should be used for the purposes of the calculations. Therefore a flow rate of 0.1 l/hr has been used.

- 2.5.4 The derived Characteristic Site Situation (CS) derived for both methane and carbon dioxide was 1, and given that the type of building is Type D: commercial/industrial, according to Table 4 of BS 8485:2015, the minimum gas protection score would be 0. According to Table 5 in BS 8485, the required floor and substructure design is precast suspended segmental subfloor (i.e. beam and block) and no further gas protection measures would be required.
- 2.5.5 All three gas monitoring wells were dry during the first four visits. However, borehole WS01 contained a 10cm water column on the fifth visit. On the visit, this borehole was flooded and was unable to be monitored. On this same last occasion, boreholes WS02 and WS03 also contained some water in their bases. Given the findings from the intrusive investigation, this is not thought to represent formation water. According to the MRF management, the Site has never flooded. This water was therefore thought to represent surface-derived water derived from recent heavy rainfall / snow melt, which infiltrated via areas of unmade ground and was perched within local granular strata of the Made Ground (fill).
- 2.5.6 Whilst this represents a limitation to the gas monitoring programme, given the low gas readings otherwise derived and the unlikelihood of there being any gas migration pathway as derived from the geologic stratigraphy encountered, the gas characterization that is proposed is considered valid and appropriate.

2.6 Provisional, Pre-Construction Conceptual Site Model

- 2.6.1 This section assesses the likelihood of any contamination to be present and if so, and the risk it may pose to human health, the natural environment or the built environment.
- 2.6.2 In the United Kingdom, the legislative regime for identifying and dealing with contaminated land is set out in Part IIA of the Environmental Protection Act 1990. The Act, together with associated Regulations and Guidance (published separately for England, Wales, Scotland and Northern Ireland), describe the regulatory functions and actions aimed at identifying contaminated land, and defining the persons liable for voluntary or enforced remediation.
- 2.6.3 The methodology recommended for identifying contaminated land is outlined in the DEFRA / EA published guidance document, CLR11 "*Model Procedures for the Management of Land Contamination*" (2004). The methodology takes the form of the identification of potential contaminant sources, pathways and sensitive receptors and their likely predilection to be linked. Under the guidance, this is termed a "pollutant linkage".
- 2.6.4 For there to be a potential risk from contamination, a complete-source-pathway-receptor pollutant linkage must exist, or potentially exist, during and after development of the site. Risk can be defined as the combination of the consequence of a harmful effect and the probability of its occurrence. Each aspect of the pollutant linkage is defined below:
- Source (contaminant): A substance that is in or under the land that has the potential to cause harm to the receptor.
 - Pathway: The route(s) or means via which a receptor can be exposed to, or affected by, a contaminant.
 - Receptor: The factor (person, built environment or ecosystems) that might adversely be affected by the source.
- 2.6.5 The potential sources, pathways and receptors for each site are encapsulated into a conceptual site model. A Conceptual Site Model (CSM) is the means by which the sources, pathways and receptors are systematically considered; and either discounted, or else earmarked as potentially valid and warranting further investigation.
- 2.6.6 In accordance with the approach advocated in CLR11, a provisional conceptual site model (CSM) was derived for the Site and presented in the final desk study report (reference: 3064-CAU-XX-XX-RP-V-0301.A0-C1) dated December 2017.
- 2.6.7 The Conceptual Site Model (CSM) was updated following the completion of the described investigation activities and is presented as Table 2.1 below. This assumes a continued land use of industrial/commercial.

Table 2.1. – Summary of Potential Pollutant Linkages (Updated Conceptual Site Model)

Potential Source	Potential Contaminant	Potential Pathways	Potential Receptor	Pollutant Linkage Present	Comments
Material of unknown nature which has been imported and deposited over the Site, and then partly removed at a later date but still forms the bund in the northern perimeter. May reflect material derived at least in part historical brick-making activities.	Organic and inorganic contaminants, asbestos fibres.	Inhalation / ingestion	Construction workers	Likely	The materials sampled from the bund were ash, brick, concrete, masonry stone, with metallic and plastic fragments. Similar material was also encountered beneath the concrete slab to a maximum depth of 3.5 meters below grade. One sample from the bund contained asbestos but none of the samples analysed contained any elevated concentrations of organic or inorganic contaminants. Construction workers should mitigate risks by using appropriate PPE and hygiene procedures, with methods to damp down and control against dusts.
		Inhalation / ingestion	Future users of the Site	Unlikely	None of the samples analysed contained any elevated concentrations of organic or inorganic contaminants. This risk will be mitigated by the presence of hardstanding which will act as a barrier between the Made Ground and future users.
		Vertical migration	Principal aquifer	Possible	No elevated concentrations of mobile organic or inorganic contaminants have been sampled so far, but the Chalk aquifer is as little as 1.20 m below ground and would therefore be a sensitive receptor to surface or near-surface derived mobile contaminants. This risk will be mitigated by the maintenance of hardstanding which will act as a barrier to any downward percolating contaminants. Surface water drainage should be engineered such that there are no infiltration points or soakaways to the ground.

Potential Source	Potential Contaminant	Potential Pathways	Potential Receptor	Pollutant Linkage Present	Comments
	Mobile organic and inorganic contaminants	Lateral flow	River Cray is 36m south of the MRF	Possible	No elevated concentrations of mobile organic or inorganic contaminants have been sampled so far, but these imported materials should be managed to reduce the risk of surface water run-off.
	Sulphates and pH	Direct Contact	Building Materials Durability	Unlikely	The pH values of the soils found them to be slightly to moderately alkaline. Concentrations of sulphate (2:1 extract) were all found to be less than 0.1g/l.
Organic contaminants derived from a former oil refinery 110m to the south east of the Site.	Mobile organic contaminants.	Lateral migration / Inhalation / ingestion	Human Health – on site worker, construction workers Principal aquifer River Cray is 36m south of the MRF	Unlikely	The Site is up gradient from this former land use. No evidence of mobile organic contaminants from this source.
Potential for gas producing material from imported material to north and east, and the closed landfill to the north east	Methane, carbon dioxide	Migration through made ground, superficial deposits and bedrock	Human Health – future residents	Unlikely	The gas monitoring completed in accordance with CIRIA C665 (six rounds) reported no detectable methane and peak concentration of carbon dioxide (maximum 6.7%). A maximum flow of 0.1 L/hr was recorded during the six monitoring visits. The site is classified as CS1, where no gas protection measures are required.

2.6.8 The CSM concluded that the historically imported material making up the earth bund in the north of the site had the potential to contain organic and inorganic contaminants of unknown nature. Although the concentrations of organic and inorganic parameters did not exceed relevant guidance levels in the samples analysed during the investigation, the material was heterogenous and of unknown origin, so the potential remained. As some of the material from this earth bund was required to be removed as part of the enabling works for the scheme, any contaminants, if present, could come into direct contact with construction workers. There were also potential environmental implications associated with its transportation to its future destination. The following measures were therefore recommended to be adopted for the planned groundworks:

- Normal precautions would be required for managing potentially contaminated soils, including the use of personal protective equipment (PPE), appropriate handling and storage procedures, dust control, and hygiene.
- An initial assessment of the material in the earth bund indicated that it might not be suitable for disposal to landfill due to the high loss on ignition (LOI) content and total organic carbon (TOC) content. If confirmed, the material would require pre-treatment before it could be disposed to landfill. Its suitability would have to be confirmed with the waste haulage / disposal company in advance.
- One sample of soil from the earth bund contained asbestos in low quantities. There was the potential for further asbestos to be present elsewhere in the earth bund which could be encountered during its removal. The planned construction programme was required to incorporate provisions as recommended in the Control of Asbestos Regulations 2012 (CAR 2012) and CL:AIRE document CAR-SOIL 2012 "*Interpretation for Managing and Working with Asbestos in Soil and Construction and Demolition Materials*", including provision for a watching brief, and a procedure to be implemented in the event of suspect asbestos containing materials being unexpectedly uncovered.

2.6.9 The underlying chalk bedrock was encountered at depths of 1.2 metres. The chalk is overlain by a thin stratum of gravel (Taplow Gravel Foundation), and then historically imported material which comprises the sub-base to the existing concrete slab. The intervening gravel deposits were discontinuous and did not constitute a protective layer. Consequently, the Chalk was identified in the CSM as being highly sensitive to detrimental impact through the downward infiltration of surface or near-surface -derived pollutants.

- 2.6.10 However, no formation groundwater was encountered up to depths of 5 metres drilled during the investigation. In addition, the samples of Made Ground (fill) analysed contained no pollutant substances in concentrations which exceeded the stringent generic assessment criteria for the current and planned landuse. This concrete slab was not expected to be disturbed during the construction programme. There was to be no piling into the Chalk, or any other excavation, and the final design for the scheme specifies complete encapsulation of the area with engineered drainage systems to ensure all surface water run-off will be managed within the Site's existing closed system. The risk of pollutants entering the ground, provided normal precautions were taken, was considered to be low and the underlying Chalk was not therefore considered to be at risk. Provided no preferential pathways were introduced which would have the potential to introduce pollutants into the underlying chalk, it would remain protected from infiltration of surface-derived pollutants.
- 2.6.11 A gas monitoring programme completed in accordance with current technical guidance concluded that the site could be designated as Characteristic Situation 1 (CS1), and that no special gas protection measures were required.
- 2.6.12 The conclusion from the CSM was that the Site in its existing state constituted no unacceptable risk to human health, property (existing or proposed), adjoining land, groundwater and surface water or ecological systems, and that therefore, no remediation was required. Provided those recommendations stated above were followed during the planned groundworks, neither they nor the final design will introduce any risks, nor cause detrimental impact, to human health or the environment.
- 2.6.13 During the final gas monitoring programme completed in March 2018, the gas wells were found to contain water which was thought to have been from recent high rainfall / snowfall. In order to ensure these wells do not act as preferential pathways for surface-derived pollutants in the future, Viridor have confirmed their intention to decommission these wells at the close of the construction programme.

3 CONSTRUCTION SCHEME

3.1 Description of Entire Authorized Construction Scheme

3.1.1 The construction scheme which is authorized as planning authorization reference 18/00326/FULM dated 12th June 2018, scheme relates to the “proposed paper lines upgrade, comprising an extension to the existing picking building, the relocation of an existing compressor and the siting of a storage container, following the demolition of three single storey lean-to buildings”.

3.1.2 In detail, the scheme involves the following activities:-

- i) Installation of additional plant on existing hardstanding immediately north of the existing picking building;
- ii) Enclosure of additional plant within a new steel portal framed extension to the existing picking building.
- iii) Removal of the existing bund and retaining wall, and replacement of a retaining wall immediately north of the proposed development, the purpose of which to provide access for maintenance;
- iv) Relocation of compressor;
- v) Installation of storage container, and;
- vi) Associated drainage infrastructure.

3.1.3 A layout of the entire scheme is presented as Figure 2.

3.1.4 In order that the base of the existing concrete slab could be extended along its northern side by approximately 4 metres, some additional surface area was required to be won from the area of the adjacent earth bund. This constituted the “enabling works”, activity no. iii) from the list above, namely, the removal and replacement of the earth bund and retaining wall. This phase of work was initiated in April 2018.

3.1.5 The planning authorization received included a condition which required that an updated site investigation report and a proposed “remediation strategy” should be submitted and approved prior to any “remediation” commencing on site. However, since the CSM identified no valid pollutant pathways, no specific “remediation” work was planned. Viridor shared their decision to commence the enabling works without submitting any such “remediation strategy” with the Planning authority. This decision was outlined in an email from Howard Jones of Caulmert to

Claire Harris, Planning Officer of London Borough of Bexley, dated 25th April 2018. Acceptance of this approach was subsequently received by Viridor. Details of the commercial background behind the programme was also shared with the Planning Officer at this time.

- 3.1.6 This enabling works has now been completed. At the time of writing, this area continues to be used for access so this area has yet to be finished in terms of clearance, final grading of topsoil and seeding.
- 3.1.7 Photographs taken during and at the close of this phase of groundworks, are provided as Appendix 6, and further information is presented in the following section.

3.2 Description of Enabling Groundworks and Aftercare

- 3.2.1 As part of the pre-construction information exchange process for the project, Caulmert's ground investigation report, including the laboratory certification contained therein (Appendixes 3 and 5 in this document), was provided in full to the appointed Principal Contractor (Nationwide). This included the results of Waste Acceptance Criteria (WAC) testing (see Appendix 3).
- 3.2.2 One conclusion stated in this ground investigation report was that the testing of the earth bund had indicated that the material might not be suitable for disposal to landfill due to its high loss on ignition (LOI) content and total organic carbon (TOC) content. The entire report was passed on by the Principal Contractor to the chosen disposal contractor / landfill operator, with the subsequent asbestos test results (Appendix 5) also being supplied on the 9th March 2018. This was followed by further photographs of the trial holes which were sent 29th March 2018. The contract with the disposal contractor / landfill operator was based upon the receipt of all of this information and the final quotation was based on this full exchange of data. This material (concrete and soil) was therefore classified by the disposal contractor / landfill operator on the basis of the full disclosure of all relevant information, and it was classified by the disposal contractor / landfill operator as being of "low contamination". This entire correspondence has been documented and maintained by Nationwide and has been shared with Viridor and Caulmert.
- 3.2.3 The Principal Contractor and his nominated sub-contractors (where relevant) also prepared their risk assessments and method statements using the information contained in the Caulmert investigation report. These RAMS for the excavation and removal of the earth bund material were approved by the project team and Principal Designer, and lodged in the Construction Plan.

- 3.2.4 The Principal Contractor and his nominated sub-contractors (where relevant) initiated and completed the excavation and removal of spoil material from site as detailed in the RAMS and in conformance with their internal quality assurance procedures.
- 3.2.5 The earth bund was acknowledged to be heterogenous in nature and of unknown source. Caulmert's environmental team were technically "on call" during this stage in the event of anything unexpected uncovered during its excavation and removal.
- 3.2.6 The existing concrete retaining wall was first removed and classified as "inert" waste. Subsequently, between the dates of 3rd March 2018 and 6th April 2018, twenty-three loads of waste described as "bricks and stones, clean muck away", and also classified as "inert", were removed from this earth bund by Anchor Bay Commercials, and taken to Inovert in Barking. The corresponding waste transfer notes for all loads are included as Appendix 7 and the total tonnage moved has been reported by the Principal Contractor to amount to approximately 980 tons.
- 3.2.7 The bund removal process was monitored continuously by a "banks man" and regularly checked personally by the Principal Contractor's on-site Project Manager. No unusual observations were made such that any additional procedure was required to be followed and all indications suggested that the material conformed to that originally inspected and sampled.
- 3.2.8 Where possible and where not affected by the works, the remainder of the earth bund was left as existing and was not touched. All works were completed as detailed within the contractor provided RAMS, and there were no incidents of an environmental nature requiring reporting and / or remedial action.
- 3.2.9 The newly exposed face of the earth bund was immediately stabilized by means of gabion walls. At the time of writing it is yet to be covered in topsoil and seeded and this will be done once the construction programme is completed and the area is no longer required for construction traffic. The 1.2m metre gap between the building extension and the new gabion has been finished as a concrete footpath (photos 6, 9, 13) in Appendix 6.
- 3.2.10 It is intended that upon completion of this enabling works, none of the underlying Made Ground (fill) material will be left exposed. It will either be wholly encapsulated beneath hardstanding or protected behind the retaining wall, or else, remaining in situ within the earth bund and waiting to be covered in soil and seeded. All materials excavated from the earth bund have been removed from the MRF property and no material was re-used anywhere else on the Site or the MRF property. With the exception of clean inert soil, which will be placed on top of the earth bund at the close of the construction programme, no additional material shall be introduced in the future.

3.2.11 The groundworks described were undertaken in accordance with current legislation and best practice. The Principal Contractor was Nationwide Limited who were selected by Viridor following close scrutiny of their credentials including that of their environmental criteria. Engineering, planning and environmental advisory services were provided by Caulmert. Both Nationwide and Caulmert operate under an environmental management system which is accredited to ISO 14001 and their certificates are provided as Appendix 8.

3.3 Details of Continuing Construction Programme and Site Improvements

3.3.1 Following completion of these enabling works, work began on the construction of the new building. The site investigation completed by Caulmert assessed the strength of the existing concrete slab and its foundation capacity, and was able to confirm that no piling, underpinning or other intrusive work was required. The new building could therefore be built directly over the existing concrete slab without requiring any significant modification to it.

3.3.2 Consequently, neither the lower level of concrete slab which houses the compressor (inappropriately described as a “pit” in Caulmert’s Phase I report) nor the upper level, have needed to be compromised or altered in any way during the subsequent construction programme. Where they have been strengthened, this has been achieved without breaking out and exposing any of the underlying ground.

3.3.3 The Site has never reportedly flooded, and there have been no incidents of flooding during the construction programme. There have been no incidents involving the release of any liquids during the construction programme and there has been no requirement to advance excavations below the current ground surface during the construction programme.

3.3.4 The appearance of water in the gas monitoring wells in March 2018 was attributed to high snow / rainfall and saturated ground conditions at the time, which would have infiltrated into the wells from temporary areas of unmade ground or blocked drains, all of which shall be encapsulated and reconditioned by the end of the construction programme.

3.3.5 Viridor are cognizant of the sensitivity of the underlying Chalk aquifer, and has undertaken to ensure that all three gas monitoring wells installed by Caulmert shall be safely decommissioned by the close of the construction programme, at which time the final floor surface shall be made good. Viridor have also confirmed that all of the operations to be undertaken inside the picking building shall be completely dry, with no liquids used at any stage. Consequently, there will be no risk of liquid pollutants passing through the concrete slab into the underlying ground.

3.4 Benefits of the Construction Scheme

- 3.4.1 The waste recycling operations undertaken at the Site are undertaken under an existing Environmental Permit that Viridor currently holds with the Environment Agency. Under this permit, Viridor are required to control the deposition of litter on neighbouring property. One of the benefits of this upgrade to the Paperlines Building will be that the entire operation may be enclosed under roof, making this control much easier to achieve. Another benefit to be gained from this scheme will be improved vermin control.
- 3.4.2 There remain no areas of unmade ground which could come into direct contact with the users of the Site. All previously uncovered areas of Made Ground exposed during the removal of the earth bund have now been encapsulated in concrete at floor level, or else enclosed behind a retaining gabion wall.
- 3.4.3 Surface water drainage across the entire MRF is entirely controlled by engineered drainage system whose outlet is controlled by a penstock. All site-wide collected surface water is collected and removed on a weekly basis by road tanker for offsite disposal. The surface water drains in the vicinity of the Site (the new Paper Lines Building), as surveyed in November 2017, are currently unserviceable and roof water from the existing building is currently conveyed to the adjacent RSG1 building. However, an improvement programme is in progress which will include the roof water from Paperlines, and all roof areas, into the existing site-wide system. Nevertheless, at present, all surface water in the vicinity of the Site is now controlled and encapsulated and none is capable of finding its way into nearby surface watercourses or the underlying Chalk aquifer.

4 FINAL CONCEPTUAL SITE MODEL

4.1 Final Conceptual Site Model

- 4.1.1 This section updates the provisional conceptual site model (CSM) which was developed in section 2. The updates reflect the completion of the groundworks stage of the construction programme, as well as the final designs of the planned improvements to the Site.
- 4.1.2 It is not envisaged that there has been any alteration to the status, chemical or otherwise, of the ground conditions beneath the concrete slab. These are therefore considered to be unchanged from those conditions specified in the pre-construction CSM.
- 4.1.3 The updates which have been made to this CSM are indicated in the table below in ***bold and italic***.

Table 4.1. – Summary of Potential Pollutant Linkages (Updated Conceptual Site Model)

Potential Source	Potential Contaminant	Potential Pathways	Potential Receptor	Pollutant Linkage Present	Comments
<p>Material of unknown nature which has been imported and deposited over the Site, and then partly removed at a later date but still forms the bund in the northern perimeter. May reflect material derived at least in part historical brick-making activities. The materials sampled from the bund were ash, brick, concrete, masonry stone, with metallic and plastic fragments. Similar material was also encountered beneath the concrete slab to a maximum depth of 3.5 meters below grade.</p> <p>One sample from the bund contained asbestos but none of the samples analysed contained any elevated concentrations of organic or inorganic contaminants.</p>	Organic and inorganic contaminants, asbestos fibres.	Inhalation / ingestion	Construction workers	<i>Unlikely</i>	Construction programme is now complete and no further groundworks planned.
		Inhalation / ingestion	Future users of the Site	Unlikely	None of the samples analysed contained any elevated concentrations of organic or inorganic contaminants. This risk continues to be mitigated by the presence of hardstanding which will act as a barrier between the Made Ground and future users.
		Vertical migration	Principal aquifer	<i>Unlikely</i>	No elevated concentrations of mobile organic or inorganic contaminants have been sampled so far, but the Chalk aquifer is as little as 1.20 m below ground and would therefore be a sensitive receptor to surface or near-surface derived mobile contaminants. This risk has been reduced through the maintenance and extension of hardstanding which will act as a barrier to any downward percolating contaminants. There are no soakaways and no infiltration points to the underlying aquifer.
	Mobile organic and inorganic contaminants	Lateral flow	River Cray is 36m south of the MRF	<i>Unlikely</i>	No elevated concentrations of mobile organic or inorganic contaminants have been sampled. All surface water is conveyed into the engineered site-wide system and removed from site via road tanker. The site is not prone to flooding and no risk to off-site watercourses.
	Sulphates and pH	Direct Contact	Building Materials Durability	Unlikely	The pH values of the soils found them to be slightly to moderately alkaline. Concentrations of sulphate (2:1 extract) were all found to be less than 0.1g/l.

Potential Source	Potential Contaminant	Potential Pathways	Potential Receptor	Pollutant Linkage Present	Comments
Organic contaminants derived from a former oil refinery 110m to the south east of the Site.	Mobile organic contaminants.	Lateral migration / Inhalation / ingestion	Human Health – on site worker, construction workers Principal aquifer River Cray is 36m south of the MRF	Unlikely	The Site is up gradient from this former land use. No evidence of mobile organic contaminants from this source.
Potential for gas producing material from imported material to north and east, and the closed landfill to the north east	Methane, carbon dioxide	Migration through made ground, superficial deposits and bedrock	Human Health – future residents	Unlikely	The gas monitoring completed in accordance with CIRIA C665 (six rounds) reported no detectable methane and peak concentration of carbon dioxide (maximum 6.7%). A maximum flow of 0.1 L/hr was recorded during the six monitoring visits. The site is classified as CS1, where no gas protection measures are required.

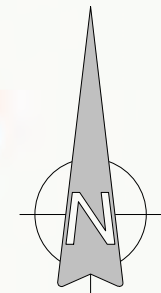
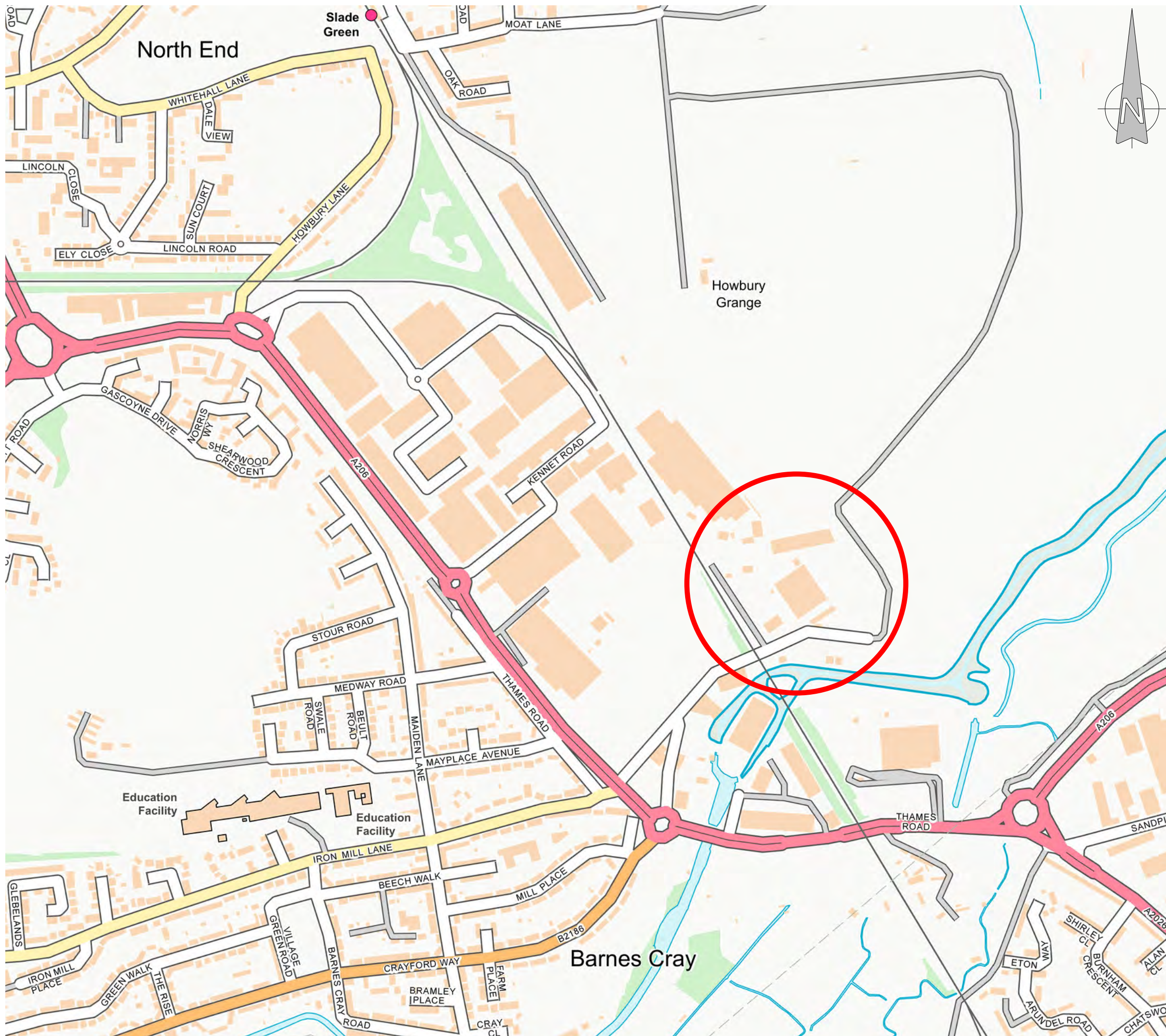
4.2 Conclusion

- 4.2.1 The groundworks completed were part of a wider scheme to effect improvements to a current waste recycling operation, with associated efficiencies benefitting its eventual performance. The operations are currently undertaken under an Environmental Permit as regulated by the Environment Agency. The improvements will allow the Site's environmental monitoring obligations to be better realised.
- 4.2.2 The entire scheme and its stages of construction are not expected to cause any detrimental impact to the ground or groundwater conditions in any way.
- 4.2.3 The historically imported made ground material removed from the raised earth bund was transported off site by an appropriately certified haulier to an appropriate destination, under full disclosure of its contents. This was completed under controlled conditions, with full and tracked disclosure of the chemical sampling data, and in accordance with current Waste Management Legislation.
- 4.2.4 The Site is acknowledged to be situated on an extremely sensitive Chalk aquifer. The pre-existing concrete hardstanding was re-used as the base for the extension and the ground surface beneath the concrete was not required to be broken into. As the planned waste recycling operations to be undertaken within the extension are an entirely dry process, there is conjectured to be no risk of pollutants entering the underlying ground or off-site watercourses.
- 4.2.5 The works were completed in an environmentally responsible manner by reputable organizations holding currently accredited environmental management systems. No environmental incidents occurred.
- 4.2.6 The updated CSM indicates that once the construction and the planned surface water drainage upgrades are complete, there will be no valid potential pollution pathways, and that the scheme will have succeeded in achieving betterment of the environmental status of the Site.

5 REFERENCES

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- [2] National House Builders Council, Environment Agency and Chartered Institute of Environmental Health (2008). *Guidance for the Safe Development of Housing on Land Affected by Contamination*. R & D Publication 66.
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- [5] British Standards Institution (2013): *Code of practice for the investigation of potentially contaminated sites*. BS 10175:2011+A1:2013.
- [6] British Standards Institution (2015): *Code of practice for ground investigations*. BS 5930:2015.
- [7] Building Research Establishment (2005): *Concrete in aggressive ground*. BRE Special Digest 1. Third Edition.
- [8] Department of Food and Rural Affairs (2012). *Environmental Protection Act 1990: Part 2A, Contaminated Land Statutory Guidance*.
- [9] CL:AIRE (2012): *CAR-SOIL, Interpretation for Managing and Working with Asbestos in Soil and Construction and Demolition Materials*.
- [10] CL:AIRE (2008): *Definition of Waste: Development Industry Code of Practice* (September 2008).
- [11] BS8485:2015 - *Code of Practice for the Design of Protective Measures for Methane and Carbon Dioxide Ground Gases for New Buildings*.
- [12] CIRIA C665:2007 - *Assessing the risk posed by hazardous ground gases to buildings*.
- [13] Environment Agency website ‘What’s in my backyard’ www.environment-agency.gov.uk
- [14] CIRIA C574:2002 - *Engineering in Chalk*.

FIGURES



LEGEND:-

 INDICATIVE SITE LOCATION

ISSUED FOR PLANNING

P2	ISSUED FOR PLANNING PERMISSION	LLM	HJ	CD	30.01.18
P1	ISSUED FOR COMMENT	LLM	DRM	CD	13.12.17
REV	MODIFICATIONS	BY	RE	AP	DATE

CLIENT
VIRIDOR

PROJECT
CRAYFORD PAPER LINES UPGRADE

TITLE
INDICATIVE SITE LOCATION

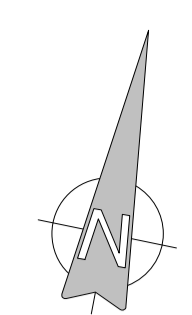
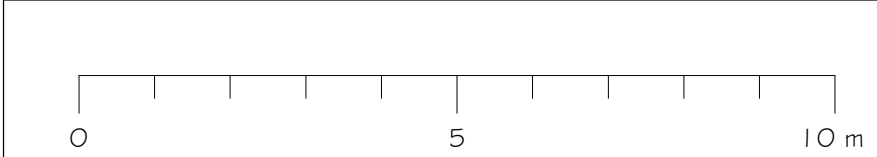
DRAWN BY LLM	DATE 13.12.2017
REVIEWED BY DRM	SCALE @ A3 As indicated
APPROVED BY CD	STATUS S4
	JOB REF: 3064
	REVISION P2

DRAWING NUMBER
3064-CAU-XX-XX-DR-T-1800



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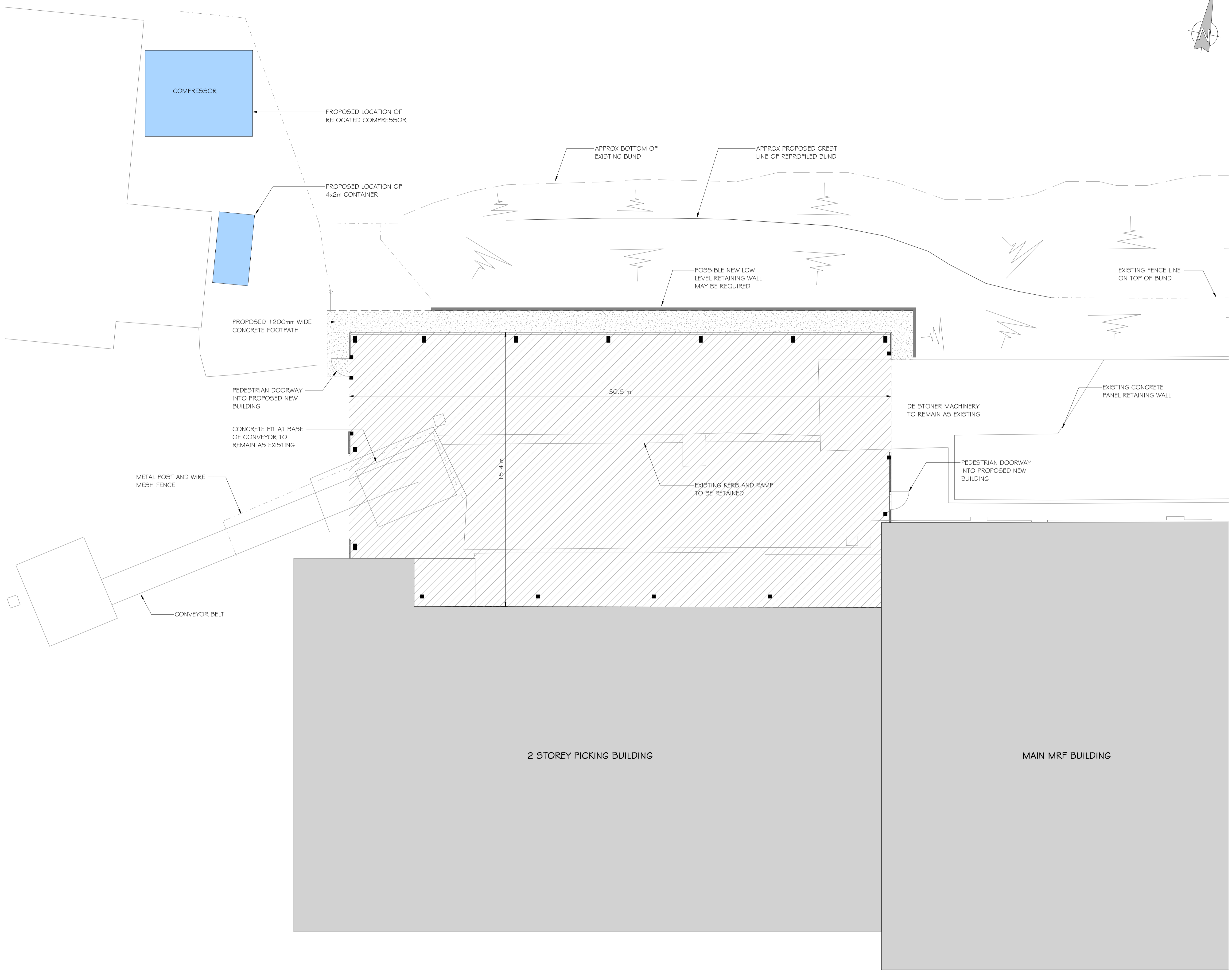


NOTE

- DO NOT SCALE FROM THIS DRAWING, WORK FROM FIGURED DIMENSIONS ONLY. ALL DIMENSIONS ARE IN MILLIMETRES AND ALL LEVELS ARE IN METRES ABOVE ORDNANCE DATUM U.N.O.
- NO DEVIATION FROM THE DETAILS SHOWN ON THIS DRAWING WILL BE ALLOWED WITHOUT THE PRIOR PERMISSION IN WRITING.
- THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECTS, ENGINEERS AND SPECIALIST DRAWINGS AND SPECIFICATIONS.

LEGEND:-

- DENOTES PROPOSED COLUMN LOCATION
- ▨ PROPOSED BUILDING FOOTPRINT



2 STOREY PICKING BUILDING

MAIN MRF BUILDING

PROPOSED PLAN
SCALE 1 : 100

ISSUED FOR PLANNING

P2	ISSUED FOR PLANNING PERMISSION	LLM	HJ	CD	30.01.18
P1	ISSUED FOR COMMENT	LLM	DRM	CD	13.12.17
REV	MODIFICATIONS	BY	RE	AP	DATE

CLIENT					
VIRIDOR					
PROJECT					
CRAYFORD PAPER LINES UPGRADE					
TITLE					
PROPOSED PLAN					
DRAWN BY		DATE			
LLM		13.12.2017			
REVIEWED BY		SCALE (@ A1)		JOB REF:	
DRM		As indicated		3064	
APPROVED BY		STATUS		REVISION	
CD		S4		P2	
DRAWING NUMBER					
3064-CAU-XX-XX-DR-T-4201					



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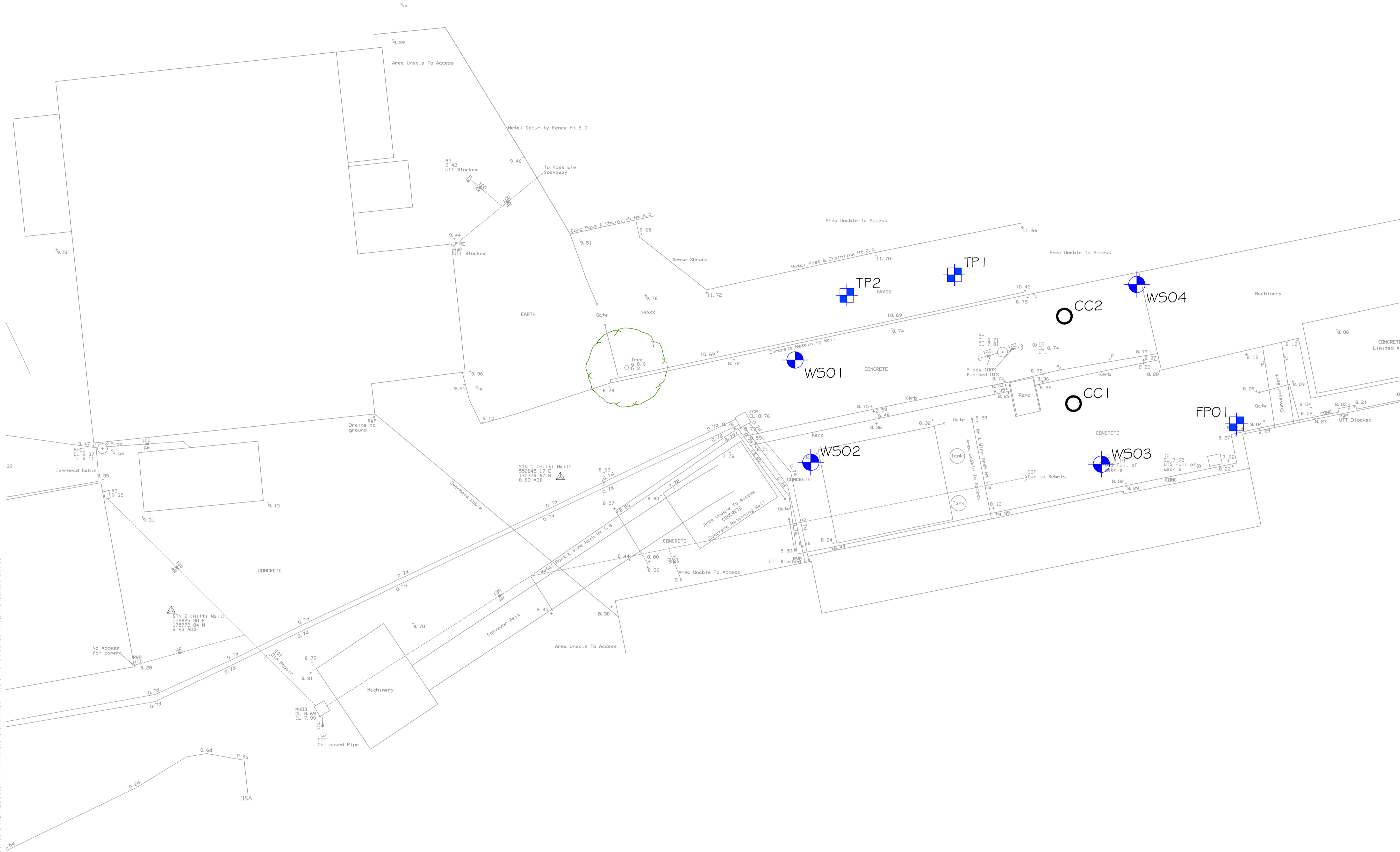
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P1	ISSUED FOR INFORMATION	LLM	DO	DO	18.12.17
REV	MODIFICATIONS	BY	RE	AP	DATE



PROJECT:
**CRAYFORD
 PAPER LINES UPGRADE**

TITLE:
**FIGURE 3
 EXPLORATORY HOLE
 LOCATION PLAN**

DRAWN BY	LLM	DATE	18.12.2017
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REVIEWED BY	DO	SCALE @ A1	1:100	JOB REF:	3064
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AUTHORISED BY	DO	ISSUE	S1	REVISION	P1
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DRAWING NUMBER
 3064-CAU-XX-XX-DR-C-1805



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REV	MODIFICATIONS	BY	RE	AP	DATE

Viridor

PROJECT: **CRAYFORD PAPER LINES UPGRADE**

TITLE: **PREVIOUS & CURRENT GROUND INVESTIGATIONS (FIGURE 4)**

DRAWN BY: EJD	DATE: 14-12-2017
REVIEWED BY: DO	SCALE @ A1: 1:500
AUTHORISED BY: DO	JOB REF: 3064
ISSUE: SO	REVISION: PI

DRAWING NUMBER: 3064-CAU-XX-XX-DR-C-1804

Caulmert
engineering environmental planning

Registered Office: In Tec, Parc Menai, Bangor, Gwynedd, LL57 4FG Company Registered No: 0671 6319
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APPENDIX 1

Photos of Site Before Construction Programme

Facility Name: Crayford MRF	Site Location: Crayford MRF Paper Line Upgrade Century Wharf, Crayford Creek, Dartford	Project No. 3064
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Photo No. 1	Date: Nov 2017
Direction Photo Taken: South west	

Description:

View of Site at location of planned upgrade, showing its access way from the main MRF to the right.

Conveyor is placed on a concrete slab at a lower level.

Photograph taken from the top of the earth bund.



Photo No. 2	Date: Nov 2017
Direction Photo Taken: East	

Description:

To the right of the unmade roadway is bordered is the concrete slab on the lower elevation on which the conveyor belt is positioned.

Retaining wall to the left is 2 metres high and constructed of steel beams and concrete panelling. Behind it is the grassed earth bund behind.



Facility Name: Crayford MRF	Site Location: Crayford MRF Paper Line Upgrade Century Wharf, Crayford Creek, Dartford	Project No. 3064
---------------------------------------	---	----------------------------

Photo No. 3	Date: Nov 2017
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Direction Photo Taken:

East

Description:

View looking east of the earth bund to the north of the site through a gap in the perimeter fence. There is also a fence line along the top of the earth bund. The retaining wall to the right of the picture is not visible.



Photo No. 4	Date: Nov 2017
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Direction Photo Taken:

East

Description:

Photo taken from top of earth bund which is grassed and slopes southwards towards the development Site.



Facility Name: Crayford MRF	Site Location: Crayford MRF Paper Line Upgrade Century Wharf, Crayford Creek, Dartford	Project No. 3064
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Photo No. 5	Date: Nov 2017
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Direction Photo Taken: West

Description:

View of the retaining wall and the earth bund along the north of the development Site.



Photo No. 6	Date: Nov 2017
------------------------------	--------------------------

Direction Photo Taken: South
--

Description:

Picking building located to the south of the proposed development Site, to which the new extension will be tied. The compressor is housed within the blue shipping container. The concrete slab is laid at two elevations with approximately 0.50m difference and this step is visible along the front of the view pictured.



Facility Name: Crayford MRF	Site Location: Crayford MRF Paper Line Upgrade Century Wharf, Crayford Creek, Dartford	Project No. 3064
---------------------------------------	---	----------------------------

Photo No. 7	Date: Nov 2017
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Direction Photo Taken:
South east

Description:
Concrete slab laid to different elevations with the step down visible between the retaining wall and the picking building. Current picking operations shown in the left of the photo. The main MRF is visible in the distance.



Photo No. 8	Date: Nov 2017
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Direction Photo Taken:
North-east

Description:
Closer view of the lower level of concrete hardstanding housing the conveyor. It is 1 metre lower than the surrounding.



Facility Name: Crayford MRF	Site Location: Crayford MRF Paper Line Upgrade Century Wharf, Crayford Creek, Dartford	Project No. 3064
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Photo No. 9	Date: Nov 2017
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Direction Photo Taken:

N/A

Description:

Close up of a manhole chamber containing electrical cables feeding into the MRF building



Photo No. 10	Date: Nov 2017
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Direction Photo Taken:

West

Description:

Concrete access ramp at the base of the retaining wall which is slightly higher than that housing the operations to the left. In the foreground is a drain cover.



Facility Name: Crayford MRF	Site Location: Crayford MRF Paper Line Upgrade Century Wharf, Crayford Creek, Dartford	Project No. 3064
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Photo No. 11	Date: Nov 2017
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Direction Photo Taken:

N/A


Description:

The inside of the drainage manhole from photo 10, which was blocked



APPENDIX 2

Borehole and Trial Pit Logs


		Project: Crayford MRF – Paper Lines Upgrade		Ref: WS01	
Boring date: 15/11/2017		Logged by: DEO		Client: Viridor Waste Management Ltd	
Elevation (mAOD) 8.73		Coordinates		E: 552857.152, N: 175785.640	
Depth (m/mAOD) from to		Description			
0.00 0.25 (8.48)		MADE GROUND: Grey reinforced CONCRETE. Gravel matrix is angular to subrounded medium to coarse mixed lithologies including flint. Reinforcement 0.18m below surface. 10mm diameter.			
0.25 1.20 (7.53)		MADE GROUND: Medium dense dark brown very clayey fine to coarse SAND and angular to subangular fine to coarse GRAVEL of mixed lithologies including chert and flint and brick fragments.			
1.20 2.80 (5.93)		Medium dense light brown clayey sandy angular to rounded fine to coarse GRAVEL of mixed lithologies including chert and flint.			
2.80 3.50 (5.23)		Structureless CHALK, recovered as a stiff greyish white locally mottled yellowish brown silty gravelly CLAY. Gravel is angular to subrounded fine coarse low-density chalk with occasional very angular to angular fine to coarse gravel of chert and flint. Grade Dm. (SEAFORD CHALK FORMATION). Window sample run 2 – 3 refused at 2.80m on cobble of flint. SPT from 2.8 to attempt to break/push through. Window sample 2.8 – 3.2 refused on cobble again.			

Window sampler refused at 3.20m depth, hole terminated on dynamic probe refusal at 3.50m.



Notes.	Borehole locations set out by Caulmert and Earth Engineering Ltd
	Window Samples formed by Earth Engineering Ltd under supervision of Caulmert Limited
	Groundwater not encountered.
	50mm plain from GL – 1.20m with bentonite surround, 50mm slotted from 1.20 – 2.00m with gravel filter.

Sampling & Recovery Details (m)				SPT and DPSH test details				
Depth (m) from	Depth (m) to	Recovery (%)	comments	Depth (m)	Blow count	N	Depth (m)	Blow count
1.2	2	90	1B 1.20 – 2.0	1.2	2,3/4,3,4,5	16		
2	2.8	40		2	11,13/12,11, 10, 11	44		
2.8	3.2	90	2D 2.80 – 3.20	2.8	10,12/14,15,12,9/60mm	50		
				3.2	4,22,50/80mm			

		Project: Crayford MRF – Paper Lines Upgrade		Ref: WS02	
Boring date: 16/11/2017	Logged by: DEO	Client: Viridor Waste Management Ltd		Project ID: 3064	
Elevation (mAOD)	8.39	Coordinates	E: 552857.957, N: 175780.419		


Depth (m)		Description
from	to	
0.00	0.20 (8.19)	MADE GROUND: Grey reinforced CONCRETE. Gravel matrix is angular to subrounded medium to coarse mixed lithologies including flint. Reinforcement 75mm below surface. 8mm diameter.
0.20	0.38 (8.01)	MADE GROUND: Medium dense brown very clayey fine to coarse SAND and angular to subangular fine to coarse GRAVEL of mixed lithologies including chert and flint and brick fragments.
0.38	3.50 (4.89)	POSSIBLE MADE GROUND: Medium dense light brown clayey sandy angular to rounded fine to coarse GRAVEL of mixed lithologies including chert and flint. Flint cobble at 2.50m.
3.50	5.00 (3.39)	Structureless CHALK, recovered as a stiff greyish white locally mottled yellowish brown silty gravelly CLAY. Gravel is angular to subrounded fine coarse low-density chalk with occasional very angular to angular fine to coarse gravel of chert and flint. Grade Dm. (SEAFORD CHALK FORMATION) Flint cobble at 3.90m.

End of Window sampler at 5.45m depth, dynamic probing to 12.0mbgl.



Notes.	Borehole locations set out by Caulmert and Earth Engineering Ltd
	Window Samples formed by Earth Engineering Ltd under supervision of Caulmert Limited
	Groundwater not encountered.
	50mm plain from GL – 1.20m with bentonite surround, 50mm slotted from 1.20 – 2.00m with gravel filter.

Sampling & Recovery Details (m)				SPT and DPSH test details				
Depth (m)		Recovery (%)	comments	Depth (m)	Blow count	N	Depth (m)	Blow count
from	to							
1.2	2	90		1.2	6,7/8,9,9,9	35	5.5 – 6.0	4,4,4,3,5,5
2	3	50		2	5,4/5,3,3,3	14	6.0 – 7.0	4,3,2,3,4,5,4,1,0,2
3	4	60	1D 3.60 – 4.00m	3	1,1/2,2,3,4	11	7.0 – 8.0	4,1,1,0,1,0,0,1,0,1
4	5	90	2U 4.50 – 5.00,	4	9,4/2,4,3,4	13	8.0 – 9.0	1,0,1,2,4,4,4,6,6,6
			3D 5.0 – 5.45	5	4,3/3,5,5,4	17	9.0 – 10.0	5,4,4,3,6,7,9,6,9,7
							10.0 – 11.0	5,5,5,4,6,13,7,6,7
							11.0 – 12.0	10,13,9,7,10,10,8,9,10,14

		Project: Crayford MRF – Paper Lines Upgrade		Ref: WS04	
Boring date: 16/11/2017	Logged by: DEO	Client: Viridor Waste Management Ltd		Project ID: 3064	
Elevation (mAOD)	8.55	Coordinates	E: 552874.608, N: 175789.496		


Depth (m)		Description
from	to	
0.00	0.27 (8.28)	MADE GROUND: Grey reinforced CONCRETE. Gravel matrix is angular to subrounded medium to coarse mixed lithologies including flint. Reinforcement 0.95mm below surface. 7mm diameter.
0.27	1.2 (7.35)	MADE GROUND: Brown sandy angular to subangular fine to coarse GRAVEL of crushed brick, concrete and mixed lithologies.
1.20	2.00 (6.55)	Firm brown locally mottled cream sandy, gravelly CLAY. Gravel is angular to subangular fine to coarse chalk and flint.
2.0	2.45 (6.10)	Structureless CHALK, recovered as a stiff greyish white mottled yellowish brown and brown silty gravelly CLAY. Gravel is angular to subrounded fine coarse low-density chalk with occasional very angular to angular fine to coarse gravel of chert and flint. Grade Dm. (SEAFORD CHALK FORMATION)

End of Window sampler at 2.45m depth.



Notes.	Borehole locations set out by Caulmert and Earth Engineering Ltd
	Window Samples formed by Earth Engineering Ltd under supervision of Caulmert Limited
	Groundwater not encountered.
	Borehole backfilled with arisings and bentonite

Sampling & Recovery Details (m)				SPT and DPSH test details				
Depth (m)	Recovery (%)	comments	Depth (m)	Blow count	N	Depth (m)	Blow count	
from	to							
1.2	2.0	60	1ES 1.50, 2D 1.60	1.2	2,2/3,3,4,6	16	7.0 – 8.0	2,3,4,5,2,1,1,2,0,2
				2	13,12/ ⁶⁰ /19,22,9/ ²⁰	50	8.0 – 9.0	3,1,2,3,1,2,3,2,3,4
				2.4 - 3.0	8,27,23,14,8,9,20,11		9.0 – 10.0	4,4,3,2,1,3,3,3,4,4
				3.0 – 4.0	6,7,8,8,7,8,7,4,6,9		10.0 – 11.0	6,5,4,3,5,4,4,3,4,4
				4.0 – 5.0	6,7,5,6,6,5,6,4,4,4		11.0 – 12.0	6,6,6,5,6,7,8,7,7,7
				5.0 – 6.0	3,4,4,4,3,3,3,4,2,3		12.0 – 13.0	7,2,5,6,7,10,12,14,15,15
				6.0 – 7.0	4,4,2,2,4,4,2,3,7,9			


		Project: Crayford MRF – Paper lines upgrade		Trial Pit: FP01	
Excavation date: 15 - 17/11/2017		Logged by: DEO	Client: Viridor Waste Management Ltd		Project ID: 3064
Elevation (mAOD)		8.05	Coordinates	E: 552879.704, N: 175782.386	
Depth (m)		Description		Samples	
From	To				
0	0.11	MADE GROUND: Grey CONCRETE. Gravel matrix is angular to subangular fine to coarse mixed lithologies including flint. Reinforcement encountered in northwest corner of pit.			
0.11	0.87	MADE GROUND: Loose to medium dense brown very clayey fine to coarse SAND and angular to subangular fine to coarse GRAVEL of brick, concrete, vitreous clay pipe, flint and localised ash. Northwest corner of pit: Made ground: medium dense brown clayey fine to coarse SAND and angular to subangular fine to coarse GRAVEL of flint and localised brick fragments.		1ES 0.50	
0.87	1.29/1.82	0.87 – 1.29m concrete surrounding a, plastic 150mm diameter surface water pipe blocked with debris. MADE GROUND: Grey CONCRETE. Gravel matrix is angular to subangular fine to coarse mixed lithologies including flint. No reinforcement encountered. (Concrete foundation) Depth of concrete beneath existing building not proven.			
1.29	1.50	Brown medium dense fine to coarse SAND and angular to subangular fine to coarse GRAVEL of chert and flint.			
Trial pit terminated at 1.50m depth.					
Excavated by – 3 tonne mini digger Plan Dimensions of Pit – 1.52m x 1.53m Groundwater – none. Stability – Sides stable Contamination – No visual or olfactory evidence of contamination					

Trial Pit Photographs: Face A




Trial Pit Photographs:



		Project: Crayford MRF – Paper lines upgrade		Trial Pit: TP01	
Excavation date: 15 - 17/11/2017		Logged by: DEO	Client: Viridor Waste Management Ltd		Project ID: 3064
Elevation (mAOD)		11.02	Coordinates	E: 552865.297, N: 175789.990	
Depth (m)		Description			Samples
From	To				
0	0.70	MADE GROUND: Grass over loose to medium dense, brown clayey fine to medium SAND and angular to subangular fine to coarse GRAVEL of ash, brick, concrete, masonry stone, with metallic and plastic fragments (Bund)			1ES 0.20 -0.70m
Trial pit terminated at 0.70m depth.					
Excavated by – 3 tonne mini digger Plan Dimensions of Pit – 1.0m x 3.0m Groundwater – none. Stability – Sides stable Contamination – No visual or olfactory evidence of contamination					

Trial Pit Photographs: Face A



		Project: Crayford MRF – Paper lines upgrade		Trial Pit: TP02	
Excavation date: 15 - 17/11/2017		Logged by: DEO	Client: Viridor Waste Management Ltd		Project ID: 3064
Elevation (mAOD)		11.14	Coordinates	E: 552859.802, N: 175788.942	
Depth (m)		Description			Samples
From	To				
0	0.90	MADE GROUND: Grass over loose to medium dense, brown clayey fine to medium SAND and angular to subangular fine to coarse GRAVEL of ash, brick, concrete, masonry stone, with metallic and plastic fragments (Bund)			1ES 0.20 -0.90m
Trial pit terminated at 0.90m depth.					
Excavated by – 3 tonne mini digger Plan Dimensions of Pit – 1.0m x 3.0m Groundwater – none. Stability – Sides stable Contamination – No visual or olfactory evidence of contamination					

Trial Pit Photographs:



APPENDIX 3

Laboratory Certification – Soil Samples



CONCEPT LIFE SCIENCES
DELIVERING SCIENCE

Concept Life Sciences is a trading name of
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Services Limited registered in England and
Wales (No 2514788)

Concept Life Sciences

Certificate of Analysis

Hadfield House
Hadfield Street
Cornbrook
Manchester
M16 9FE
Tel : 0161 874 2400
Fax : 0161 874 2468

Report Number: 697961-1

Date of Report: 07-Dec-2017

Customer: Caulmert Ltd.
8 St Georges Court
Altrincham Business Park
Dairyhouse Lane
Altrincham
Cheshire
WA14 5UA

Customer Contact: Mr Dominic Ostafijczuk

Customer Job Reference: 3064

Customer Purchase Order: 14349

Customer Site Reference: Crayford - Extension Area

Date Job Received at Concept: 20-Nov-2017

Date Analysis Started: 21-Nov-2017

Date Analysis Completed: 07-Dec-2017

The results reported relate to samples received in the laboratory and may not be representative of a whole batch.

Opinions and interpretations expressed herein are outside the scope of UKAS accreditation

This report should not be reproduced except in full without the written approval of the laboratory

Tests covered by this certificate were conducted in accordance with Concept Life Sciences SOPs

All results have been reviewed in accordance with Section 25 of the Concept Life Sciences, Analytical Services Quality Manual



1549



Report checked
and authorised by :
Sara Abou-Shakra
Customer Service Manager

Issued by :
Sara Abou-Shakra
Customer Service Manager

Waste Acceptance Criteria

Customer Sample Reference : TP02/ES1
 SAL Sample Reference : 697961 002
 Project Site : Crayford - Extension Area
 Customer Reference : 3064
 Bottom Depth : 0.90
 Top Depth : 0.20
 Test Portion Mass (g) : 175
 Date Sampled : 15-NOV-2017
 Matrix Class : Topsoil

Soil Summary					Result	Inert Waste Landfill	Stable non reactive	Hazardous Waste Landfill
Determinand	Technique	LOD	Units	Symbol				
Acid Neutralising Capacity (pH 4)	Titration	2.0	Mol/kg	N	<2.0			
Acid Neutralising Capacity (pH 7)	Titration	2.0	Mol/kg	N	<2.0			
BTEX (Sum)	Calc	0.040	mg/kg	U	<0.040	6.0		
Loss on Ignition	Grav	0.1	%	N	11			10.0
Moisture	Grav	0.1	%	N	7.2			
PAH (Sum)	Calc	1.6	mg/kg	N	15	100.0		
PCB EC7 (Sum)	Calc	0.007	mg/kg	U	⁽⁹⁾ <0.070	1.0		
pH	Probe			M	8.0		>6.0	
Total Organic Carbon	OX/IR	0.1	%	N	14	3.0	5.0	6.0
TPH C10-C40 (sum)	Calc	1	mg/kg	N	(13) 340	500.0		

10:1 Leachate					Result	Inert Waste Landfill	Stable non reactive	Hazardous Waste Landfill
Determinand	Technique	LOD	Units	Symbol				
Arsenic (Dissolved)	Calc / ICP/MS (Filtered)	0.0020	mg/kg	N	0.026	0.5	2.0	25.0
Barium (Dissolved)	Calc / ICP/MS (Filtered)	0.010	mg/kg	N	0.52	20.0	100.0	300.0
Molybdenum (Dissolved)	Calc / ICP/MS (Filtered)	0.010	mg/kg	N	0.089	0.5	10.0	30.0
Total Dissolved Solids	Calc	100	mg/kg	N	1600	4000.0	60000.0	100000.0
Phenols(Mono)	Calc / Colorimetry	1.0	mg/kg	N	<1.0	1.0		
Dissolved Organic Carbon	Calc / OX/IR	10	mg/kg	N	45	500.0	800.0	1000.0
Antimony (Dissolved)	Calc / ICP/MS (Filtered)	0.010	mg/kg	N	0.12	0.06	0.7	5.0
Cadmium (Dissolved)	Calc / ICP/MS (Filtered)	0.00020	mg/kg	N	0.00046	0.04	1.0	5.0
Chromium (Dissolved)	Calc / ICP/MS (Filtered)	0.010	mg/kg	N	0.024	0.5	10.0	70.0
Copper (Dissolved)	Calc / ICP/MS (Filtered)	0.0050	mg/kg	N	0.13	2.0	50.0	100.0
Lead (Dissolved)	Calc / ICP/MS (Filtered)	0.0030	mg/kg	N	0.031	0.5	10.0	50.0
Mercury (Dissolved)	Calc / ICP/MS (Filtered)	0.00050	mg/kg	N	0.00057	0.01	0.2	2.0
Nickel (Dissolved)	Calc / ICP/MS (Filtered)	0.010	mg/kg	N	0.015	0.4	10.0	40.0
Selenium (Dissolved)	Calc / ICP/MS (Filtered)	0.0050	mg/kg	N	<0.0050	0.1	0.5	7.0
Zinc (Dissolved)	Calc / ICP/MS (Filtered)	0.020	mg/kg	N	0.090	4.0	50.0	200.0
Chloride	Calc / Discrete Analyser	10	mg/kg	N	13	800.0	15000.0	25000.0
Fluoride	Calc / Discrete Analyser	0.50	mg/kg	N	3.2	10.0	150.0	500.0
Sulphate	Calc / Discrete Analyser	5.0	mg/kg	N	720	1000.0	20000.0	50000.0

From: EC Directive 99/31/EC and Landfill Regulations 2002 (as amended)

Notes:- Cumulative release at L/S=10 (mg/kg of dry matter) in accordance with BS EN 12457. Soil leaching procedure is not covered by our UKAS accreditation

As detailed in- Waste Classification. Guidance on the classification and assessment of waste. Technical Guidance WM3:

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/427077/LIT_10121.pdf

Landfill WAC analysis (specifically leaching test results) should not be used for hazardous waste classification purposes. This analysis is only applicable for hazardous waste landfill acceptance and does not give any indication as to whether a waste may be hazardous or non-hazardous.

Concept Reference: 697961									
Project Site: Crayford - Extension Area									
Customer Reference: 3064									
Soil Analysed as Soil									
MCERTS Preparation									
Concept Reference		697961 001	697961 002	697961 003	697961 004	697961 005			
Customer Sample Reference		TP01/ES1	TP02/ES1	FP01/ES1	WS02/ES1	WS02/ES2			
Test Sample		AR	AR	AR	AR	AR			
Bottom Depth		0.70	0.90	0.50	0.30	4.00			
Top Depth		0.20	0.20			3.60			
Date Sampled		15-NOV-2017	15-NOV-2017	15-NOV-2017	16-NOV-2017	16-NOV-2017			
Matrix Class		Topsoil	Topsoil	Sandy Soil	Sandy Soil	Clay			
Determinand	Method	LOD	Units	Symbol					
Moisture @105C	Grav (1 Dec) (105 C)	0.1	%	N	5.8	7.2	12	14	20

Concept Reference: 697961									
Project Site: Crayford - Extension Area									
Customer Reference: 3064									
Soil Analysed as Soil									
MCERTS Preparation									
Concept Reference		697961 006	697961 007						
Customer Sample Reference		WS03/ES2	WS04/ES1						
Test Sample		AR	AR						
Bottom Depth		1.00	1.50						
Top Depth									
Date Sampled		16-NOV-2017	16-NOV-2017						
Matrix Class		Sandy Soil	Sandy Soil						
Determinand	Method	LOD	Units	Symbol					
Moisture @105C	Grav (1 Dec) (105 C)	0.1	%	N	11	11			

Concept Reference: 697961									
Project Site: Crayford - Extension Area									
Customer Reference: 3064									
Soil Analysed as Soil									
MCERTS Preparation									
Concept Reference		697961 001	697961 002	697961 003	697961 004	697961 005			
Customer Sample Reference		TP01/ES1	TP02/ES1	FP01/ES1	WS02/ES1	WS02/ES2			
Test Sample		M40	M40	M40	M40	M40			
Bottom Depth		0.70	0.90	0.50	0.30	4.00			
Top Depth		0.20	0.20			3.60			
Date Sampled		15-NOV-2017	15-NOV-2017	15-NOV-2017	16-NOV-2017	16-NOV-2017			
Matrix Class		Topsoil	Topsoil	Sandy Soil	Sandy Soil	Clay			
Determinand	Method	LOD	Units	Symbol					
Retained on 10mm sieve	Grav	0.1	%	N	<0.1	<0.1	<0.1	<0.1	<0.1

Concept Reference: 697961									
Project Site: Crayford - Extension Area									
Customer Reference: 3064									
Soil Analysed as Soil									
MCERTS Preparation									
Concept Reference		697961 006	697961 007						
Customer Sample Reference		WS03/ES2	WS04/ES1						
Test Sample		M40	M40						
Bottom Depth		1.00	1.50						
Top Depth									
Date Sampled		16-NOV-2017	16-NOV-2017						
Matrix Class		Sandy Soil	Sandy Soil						
Determinand	Method	LOD	Units	Symbol					
Retained on 10mm sieve	Grav	0.1	%	N	<0.1	<0.1			

Concept Reference: 697961								
Project Site: Crayford - Extension Area								
Customer Reference: 3064								
Soil Analysed as Soil								
Metals Suite								
Concept Reference					697961 001	697961 003	697961 004	697961 007
Customer Sample Reference					TP01/ES1	FP01/ES1	WS02/ES1	WS04/ES1
Test Sample					AR	AR	AR	AR
Bottom Depth					0.70	0.50	0.30	1.50
Top Depth					0.20			
Date Sampled					15-NOV-2017	15-NOV-2017	16-NOV-2017	16-NOV-2017
Matrix Class					Topsoil	Sandy Soil	Sandy Soil	Sandy Soil
Determinand	Method	LOD	Units	Symbol				
Boron (water-soluble)	ICP/OES	1	mg/kg	N	<1	<1	<1	<1
Chromium VI	ICP/OES	1	mg/kg	N	<1	<1	<1	<1
Chromium (trivalent)	Calc	2	mg/kg	N	<2	<2	<2	<2

Concept Reference: 697961								
Project Site: Crayford - Extension Area								
Customer Reference: 3064								
Soil Analysed as Soil								
Metals Suite								
Concept Reference					697961 001	697961 003	697961 004	697961 007
Customer Sample Reference					TP01/ES1	FP01/ES1	WS02/ES1	WS04/ES1
Test Sample					M40	M40	M40	M40
Bottom Depth					0.70	0.50	0.30	1.50
Top Depth					0.20			
Date Sampled					15-NOV-2017	15-NOV-2017	16-NOV-2017	16-NOV-2017
Matrix Class					Topsoil	Sandy Soil	Sandy Soil	Sandy Soil
Determinand	Method	LOD	Units	Symbol				
Arsenic	ICP/OES	2	mg/kg	M	21	10	10	7
Cadmium	ICP/OES	1	mg/kg	M	1	<1	<1	<1
Chromium	ICP/OES	1	mg/kg	M	32	22	18	14
Copper	ICP/OES	1	mg/kg	M	210	37	110	8
Lead	ICP/OES	1	mg/kg	M	670	96	60	8
Mercury	ICP/OES	1	mg/kg	M	1	<1	<1	<1
Nickel	ICP/OES	1	mg/kg	M	33	17	18	14
Selenium	ICP/OES	3	mg/kg	M	<3	<3	<3	<3
Vanadium	ICP/OES	1	mg/kg	M	41	35	30	22
Zinc	ICP/OES	1	mg/kg	M	780	170	72	27

Concept Reference: 697961								
Project Site: Crayford - Extension Area								
Customer Reference: 3064								
Soil Analysed as Soil								
SOM								
Concept Reference					697961 001	697961 003	697961 004	697961 007
Customer Sample Reference					TP01/ES1	FP01/ES1	WS02/ES1	WS04/ES1
Test Sample					A40	A40	A40	A40
Bottom Depth					0.70	0.50	0.30	1.50
Top Depth					0.20			
Date Sampled					15-NOV-2017	15-NOV-2017	16-NOV-2017	16-NOV-2017
Matrix Class					Topsoil	Sandy Soil	Sandy Soil	Sandy Soil
Determinand	Method	LOD	Units	Symbol				
Soil Organic Matter	Calc TOC/0.58	0.1	%	N	7.7	5.7	0.9	0.1

Concept Reference: 697961					
Project Site: Crayford - Extension Area					
Customer Reference: 3064					
Soil Analysed as Soil					
Asbestos ID					
Concept Reference		697961 001	697961 003	697961 004	697961 007
Customer Sample Reference		TP01/ES1	FP01/ES1	WS02/ES1	WS04/ES1
Test Sample		AR	AR	AR	AR
Bottom Depth		0.70	0.50	0.30	1.50
Top Depth		0.20			
Date Sampled		15-NOV-2017	15-NOV-2017	16-NOV-2017	16-NOV-2017
Matrix Class		Topsoil	Sandy Soil	Sandy Soil	Sandy Soil
Determinand	Method	LOD	Units	Symbol	
Asbestos ID	PLM			SU	Chrysotile Detected - N.D. N.D. N.D.

Concept Reference: 697961									
Project Site: Crayford - Extension Area									
Customer Reference: 3064									
Soil Analysed as Soil									
pH and Sulphates									
Concept Reference		697961 001	697961 003	697961 004	697961 005	697961 006			
Customer Sample Reference		TP01/ES1	FP01/ES1	WS02/ES1	WS02/ES2	WS03/ES2			
Test Sample		A40	A40	A40	A40	A40			
Bottom Depth		0.70	0.50	0.30	4.00	1.00			
Top Depth		0.20			3.60				
Date Sampled		15-NOV-2017	15-NOV-2017	16-NOV-2017	16-NOV-2017	16-NOV-2017			
Matrix Class		Topsoil	Sandy Soil	Sandy Soil	Clay	Sandy Soil			
Determinand	Method	LOD	Units	Symbol					
Sulphate (Total)	ICP/OES	0.01	%	N	0.20	0.56	0.05	0.05	0.03

Concept Reference: 697961					
Project Site: Crayford - Extension Area					
Customer Reference: 3064					
Soil Analysed as Soil					
pH and Sulphates					
Concept Reference		697961 007			
Customer Sample Reference		WS04/ES1			
Test Sample		A40			
Bottom Depth		1.50			
Top Depth					
Date Sampled		16-NOV-2017			
Matrix Class		Sandy Soil			
Determinand	Method	LOD	Units	Symbol	
Sulphate (Total)	ICP/OES	0.01	%	N	0.06

Concept Reference: 697961									
Project Site: Crayford - Extension Area									
Customer Reference: 3064									
Soil Analysed as Soil									
pH and Sulphates									
Concept Reference		697961 001	697961 003	697961 004	697961 005	697961 006			
Customer Sample Reference		TP01/ES1	FP01/ES1	WS02/ES1	WS02/ES2	WS03/ES2			
Test Sample		AR	AR	AR	AR	AR			
Bottom Depth		0.70	0.50	0.30	4.00	1.00			
Top Depth		0.20			3.60				
Date Sampled		15-NOV-2017	15-NOV-2017	16-NOV-2017	16-NOV-2017	16-NOV-2017			
Matrix Class		Topsoil	Sandy Soil	Sandy Soil	Clay	Sandy Soil			
Determinand	Method	LOD	Units	Symbol					
Sulphate(2:1)	ICP/OES	0.1	g/l	N	<0.1	<0.1	<0.1	<0.1	<0.1
pH	Probe			M	8.2	10.0	8.2	8.3	8.2

Concept Reference: 697961					
Project Site: Crayford - Extension Area					
Customer Reference: 3064					
Soil Analysed as Soil					
pH and Sulphates					
Concept Reference					697961 007
Customer Sample Reference					WS04/ES1
Test Sample					AR
Bottom Depth					1.50
Top Depth					
Date Sampled					16-NOV-2017
Matrix Class					Sandy Soil
Determinand	Method	LOD	Units	Symbol	
Sulphate(2:1)	ICP/OES	0.1	g/l	N	<0.1
pH	Probe			M	8.2

Concept Reference: 697961									
Project Site: Crayford - Extension Area									
Customer Reference: 3064									
Soil Analysed as Soil									
Cyanides									
Concept Reference		697961 001	697961 003	697961 004	697961 007				
Customer Sample Reference		TP01/ES1	FP01/ES1	WS02/ES1	WS04/ES1				
Test Sample		AR	AR	AR	AR				
Bottom Depth		0.70	0.50	0.30	1.50				
Top Depth		0.20							
Date Sampled		15-NOV-2017	15-NOV-2017	16-NOV-2017	16-NOV-2017				
Matrix Class		Topsoil	Sandy Soil	Sandy Soil	Sandy Soil				
Determinand	Method	LOD	Units	Symbol					
Cyanide(free)	Colorimetry (CF)	1	mg/kg	M	<1	<1	<1	<1	
Cyanide (Total)	Colorimetry (CF)	1	mg/kg	M	2	<1	<1	<1	

Concept Reference: 697961					
Project Site: Crayford - Extension Area					
Customer Reference: 3064					
Soil Analysed as Soil					
BTEX					
Concept Reference					697961 002
Customer Sample Reference					TP02/ES1
Test Sample					M105
Bottom Depth					0.90
Top Depth					0.20
Date Sampled					15-NOV-2017
Matrix Class					Topsoil
Determinand	Method	LOD	Units	Symbol	
Benzene	GC/MS (Head Space)(MCERTS)	10	µg/kg	M	⁽¹³⁾ <10
Toluene	GC/MS (Head Space)(MCERTS)	10	µg/kg	M	<10
EthylBenzene	GC/MS (Head Space)(MCERTS)	10	µg/kg	M	<10
Meta/Para-Xylene	GC/MS (Head Space)(MCERTS)	10	µg/kg	M	<10
Ortho-Xylene	GC/MS (Head Space)(MCERTS)	10	µg/kg	M	<10

Concept Reference: 697961					
Project Site: Crayford - Extension Area					
Customer Reference: 3064					
Soil Analysed as Soil					
PCB EC7					
Concept Reference					697961 002
Customer Sample Reference					TP02/ES1
Test Sample					M105
Bottom Depth					0.90
Top Depth					0.20
Date Sampled					15-NOV-2017
Matrix Class					Topsoil
Determinand	Method	LOD	Units	Symbol	
Polychlorinated biphenyl BZ#28	GC/MS (HR) (MCERTS)	0.05	µg/kg	M	(26,9) <10
Polychlorinated biphenyl BZ#52	GC/MS (HR) (MCERTS)	0.05	µg/kg	M	(9,26) <10
Polychlorinated biphenyl BZ#101	GC/MS (HR) (MCERTS)	0.05	µg/kg	M	(9,26) <10
Polychlorinated biphenyl BZ#118	GC/MS (HR) (MCERTS)	0.05	µg/kg	M	(9,26) <10
Polychlorinated biphenyl BZ#153	GC/MS (HR) (MCERTS)	0.05	µg/kg	M	(9,26) <10
Polychlorinated biphenyl BZ#138	GC/MS (HR) (MCERTS)	0.05	µg/kg	M	(26,9) <10
Polychlorinated biphenyl BZ#180	GC/MS (HR) (MCERTS)	0.05	µg/kg	M	(9,26) <10

Concept Reference: 697961					
Project Site: Crayford - Extension Area					
Customer Reference: 3064					
Soil Analysed as Soil					
Total and Speciated USEPA16 PAH					
Concept Reference					697961 002
Customer Sample Reference					TP02/ES1
Test Sample					M105
Bottom Depth					0.90
Top Depth					0.20
Date Sampled					15-NOV-2017
Matrix Class					Topsoil
Determinand	Method	LOD	Units	Symbol	
Naphthalene	GC/MS (MCERTS)	0.1	mg/kg	M	0.1
Acenaphthylene	GC/MS (MCERTS)	0.1	mg/kg	U	0.1
Acenaphthene	GC/MS (MCERTS)	0.1	mg/kg	M	<0.1
Fluorene	GC/MS (MCERTS)	0.1	mg/kg	M	<0.1
Phenanthrene	GC/MS (MCERTS)	0.1	mg/kg	M	0.9
Anthracene	GC/MS (MCERTS)	0.1	mg/kg	U	0.2
Fluoranthene	GC/MS (MCERTS)	0.1	mg/kg	M	2.5
Pyrene	GC/MS (MCERTS)	0.1	mg/kg	M	2.2
Benzo(a)Anthracene	GC/MS (MCERTS)	0.1	mg/kg	M	1.2
Chrysene	GC/MS (MCERTS)	0.1	mg/kg	M	1.2
Benzo(b/k)Fluoranthene	GC/MS (MCERTS)	0.1	mg/kg	M	2.5
Benzo(a)Pyrene	GC/MS (MCERTS)	0.1	mg/kg	M	1.3
Indeno(123-cd)Pyrene	GC/MS (MCERTS)	0.1	mg/kg	M	0.9
Dibenzo(ah)Anthracene	GC/MS (MCERTS)	0.1	mg/kg	M	0.2
Benzo(ghi)Perylene	GC/MS (MCERTS)	0.1	mg/kg	M	1.2
Polyaromatic Hydrocarbons (Total)	GC/MS (MCERTS)	0.1	mg/kg	U	15
Coronene	GC/MS	0.1	mg/kg	N	<0.1
Phenol	GC/MS (MCERTS)	0.1	mg/kg	M	<0.1

Concept Reference: 697961								
Project Site: Crayford - Extension Area								
Customer Reference: 3064								
Soil Analysed as Soil								
PAH US EPA 16 (B and K split)								
Concept Reference					697961 001	697961 003	697961 004	697961 007
Customer Sample Reference					TP01/ES1	FP01/ES1	WS02/ES1	WS04/ES1
Test Sample					M105	M105	M105	M105
Bottom Depth					0.70	0.50	0.30	1.50
Top Depth					0.20			
Date Sampled					15-NOV-2017	15-NOV-2017	16-NOV-2017	16-NOV-2017
Matrix Class					Topsoil	Sandy Soil	Sandy Soil	Sandy Soil
Determinand	Method	LOD	Units	Symbol				
Naphthalene	GC/MS (MCERTS)	0.1	mg/kg	M	⁽⁹⁾ <1.0	⁽⁹⁾ <1.0	<0.1	<0.1
Acenaphthylene	GC/MS (MCERTS)	0.1	mg/kg	U	⁽⁹⁾ <1.0	⁽⁹⁾ <1.0	<0.1	<0.1
Acenaphthene	GC/MS (MCERTS)	0.1	mg/kg	M	⁽⁹⁾ <1.0	⁽⁹⁾ <1.0	<0.1	<0.1
Fluorene	GC/MS (MCERTS)	0.1	mg/kg	M	0.1	⁽⁹⁾ <1.0	<0.1	<0.1
Phenanthrene	GC/MS (MCERTS)	0.1	mg/kg	M	1.9	⁽⁹⁾ <1.0	<0.1	<0.1
Anthracene	GC/MS (MCERTS)	0.1	mg/kg	U	⁽⁹⁾ <1.0	⁽⁹⁾ <1.0	<0.1	<0.1
Fluoranthene	GC/MS (MCERTS)	0.1	mg/kg	M	3.3	1.6	<0.1	<0.1
Pyrene	GC/MS (MCERTS)	0.1	mg/kg	M	2.9	1.4	<0.1	<0.1
Benzo(a)Anthracene	GC/MS (MCERTS)	0.1	mg/kg	M	1.3	⁽⁹⁾ <1.0	<0.1	<0.1
Chrysene	GC/MS (MCERTS)	0.1	mg/kg	M	1.5	⁽⁹⁾ <1.0	<0.1	<0.1
Benzo(b)fluoranthene	GC/MS (MCERTS)	0.1	mg/kg	M	1.3	⁽⁹⁾ <1.0	<0.1	<0.1
Benzo(k)fluoranthene	GC/MS (MCERTS)	0.1	mg/kg	M	1.1	⁽⁹⁾ <1.0	<0.1	<0.1
Benzo(a)Pyrene	GC/MS (MCERTS)	0.1	mg/kg	M	1.5	⁽⁹⁾ <1.0	<0.1	<0.1
Indeno(123-cd)Pyrene	GC/MS (MCERTS)	0.1	mg/kg	M	1.1	⁽⁹⁾ <1.0	<0.1	<0.1
Dibenzo(ah)Anthracene	GC/MS (MCERTS)	0.1	mg/kg	M	0.4	⁽⁹⁾ <1.0	<0.1	<0.1
Benzo(ghi)Perylene	GC/MS (MCERTS)	0.1	mg/kg	M	1.5	⁽⁹⁾ <1.0	<0.1	<0.1
Polyaromatic Hydrocarbons (Total)	GC/MS (MCERTS)	0.1	mg/kg	U	18	3.0	<0.1	<0.1

Concept Reference: 697961								
Project Site: Crayford - Extension Area								
Customer Reference: 3064								
Soil Analysed as Soil								
TPH (CWG) with MTBE, BTEX								
Concept Reference					697961 001	697961 003	697961 004	697961 007
Customer Sample Reference					TP01/ES1	FP01/ES1	WS02/ES1	WS04/ES1
Test Sample					M105	M105	M105	M105
Bottom Depth					0.70	0.50	0.30	1.50
Top Depth					0.20			
Date Sampled					15-NOV-2017	15-NOV-2017	16-NOV-2017	16-NOV-2017
Matrix Class					Topsoil	Sandy Soil	Sandy Soil	Sandy Soil
Determinand	Method	LOD	Units	Symbol				
Benzene	GC/MS (Head Space)(MCERTS)	10	µg/kg	M	⁽¹³⁾ <10	⁽¹³⁾ <10	⁽¹³⁾ <10	⁽¹³⁾ <10
Toluene	GC/MS (Head Space)(MCERTS)	10	µg/kg	M	<10	<10	<10	<10
EthylBenzene	GC/MS (Head Space)(MCERTS)	10	µg/kg	M	<10	<10	<10	<10
Meta/Para-Xylene	GC/MS (Head Space)(MCERTS)	10	µg/kg	M	<10	<10	<10	<10
Ortho-Xylene	GC/MS (Head Space)(MCERTS)	10	µg/kg	M	<10	<10	<10	<10
Methyl tert-Butyl Ether	GC/MS (Head Space)(MCERTS)	10	µg/kg	M	<10	<10	<10	<10
Total Petroleum Hydrocarbons (C5 - C6 aliphatic)	GC/MS (Head Space)(MCERTS)	100	µg/kg	N	<100	<100	<100	<100
Total Petroleum Hydrocarbons (C6-C8 aliphatic)	GC/MS (Head Space)(MCERTS)	100	µg/kg	N	<100	<100	<100	<100
Total Petroleum Hydrocarbons (C8-C10 aliphatic)	GC/MS (Head Space)(MCERTS)	100	µg/kg	N	<100	<100	<100	<100
Total Petroleum Hydrocarbons (C10-C12 aliphatic)	GCxGC	1	mg/kg	M	⁽¹³⁾ <1	⁽¹³⁾ <1	⁽¹³⁾ <1	⁽¹³⁾ <1
Total Petroleum Hydrocarbons (C12-C16 aliphatic)	GCxGC	1	mg/kg	M	⁽¹³⁾ <1	⁽¹³⁾ <1	⁽¹³⁾ <1	⁽¹³⁾ <1
Total Petroleum Hydrocarbons (C16-C21 aliphatic)	GCxGC	1	mg/kg	M	⁽¹³⁾ <1	⁽¹³⁾ <1	⁽¹³⁾ <1	⁽¹³⁾ <1
Total Petroleum Hydrocarbons (C21-C35 aliphatic)	GCxGC	2	mg/kg	M	⁽¹³⁾ <2	⁽¹³⁾ <2	⁽¹³⁾ <2	⁽¹³⁾ <2
Total Petroleum Hydrocarbons (C6 - C7 aromatic)	GC/MS (Head Space)(MCERTS)	100	µg/kg	N	<100	<100	<100	<100
Total Petroleum Hydrocarbons (C7-C8 aromatic)	GC/MS (Head Space)(MCERTS)	100	µg/kg	N	<100	<100	<100	<100
Total Petroleum Hydrocarbons (C8-C10 aromatic)	GC/MS (Head Space)(MCERTS)	100	µg/kg	N	<100	<100	<100	<100
Total Petroleum Hydrocarbons (C10-C12 aromatic)	GCxGC	2	mg/kg	M	⁽¹³⁾ <2	⁽¹³⁾ <2	⁽¹³⁾ <2	⁽¹³⁾ <2
Total Petroleum Hydrocarbons (C12-C16 aromatic)	GCxGC	1	mg/kg	M	⁽¹³⁾ <1	⁽¹³⁾ <1	⁽¹³⁾ <1	⁽¹³⁾ <1
Total Petroleum Hydrocarbons (C16-C21 aromatic)	GCxGC	1	mg/kg	M	(13) 2	⁽¹³⁾ <1	⁽¹³⁾ <1	⁽¹³⁾ <1
Total Petroleum Hydrocarbons (C21-C35 aromatic)	GCxGC	1	mg/kg	M	⁽¹³⁾ <1	⁽¹³⁾ <1	⁽¹³⁾ <1	⁽¹³⁾ <1

Concept Reference: 697961					
Project Site: Crayford - Extension Area					
Customer Reference: 3064					
Soil Analysed as Soil					
Total Petroleum Hydrocarbons					
Concept Reference					697961 002
Customer Sample Reference					TP02/ES1
Test Sample					M105
Bottom Depth					0.90
Top Depth					0.20
Date Sampled					15-NOV-2017
Matrix Class					Topsoil
Determinand	Method	LOD	Units	Symbol	
Total Petroleum Hydrocarbons	GC/FID	1	mg/kg	M	(13) 290
Total Petroleum Hydrocarbons (C35-C40)	GC/FID	1	mg/kg	N	(13) 50

Index to symbols used in 697961-1

Value	Description
2:1	Leachate to BS EN 12457-3 (2:1)
M105	Analysis conducted on an "as received" aliquot. Results are reported on a dry weight basis where moisture content was determined by assisted drying of sample at 105C
M40	Analysis conducted on sample assisted dried at no more than 40C. Results are reported on a dry weight basis.
8:1	Leachate to BS EN 12457-3 (8:1)
AR	As Received
A40	Assisted dried < 40C
N.D.	Not Detected
13	Results have been blank corrected.
26	LOD raised because the analysis was performed by an alternative technique
9	LOD raised due to dilution of sample
S	Analysis was subcontracted
M	Analysis is MCERTS accredited
U	Analysis is UKAS accredited
N	Analysis is not UKAS accredited

Notes

Asbestos subcontracted to REC Asbestos

APPENDIX 4

Comparison of Soils Analysis against Generic Assessment Criteria

Viridor - Crayford MRF Paper Lines Upgrade: Soil Testing Results

Determinand		Commercial / Industrial	Sample ID	TP01/ES1	TP02/ES1	FP01/ES1	WS02/ES1	WS02/ES2	WS03/ES2	WS04/ES1
	Sample ID	1.0 % SOM	Depth (m)	0.20 - 0.70	0.20 - 0.90	0.50	0.30	3.60 - 4.00	1.00	1.50
	Units	Threshold Values (mg/kg)	Relevant Standard	Made Ground (Topsoil)	Made Ground (Topsoil)	Made Ground	Made Ground	Clay	Made Ground	Made Ground
ACM Type		-	-	Chrysotile	-	-	-	-	-	-
Asbestos Identification	%	-	-	YES	-	ND	ND	-	-	ND
Sulphate(2:1)	g/l	-	-	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1
Sulphate (Total)	%	-	-	0.2	-	0.56	0.05	0.05	0.03	0.06
pH	units	-	-	8.2	8.0	10.0	8.2	8.3	8.2	8.2
Soil Organic Matter	%	-	-	7.7	-	5.7	0.9	-	-	0.1
Moisture Content	%	-	-	5.8	7.2	12	14	20	11	11
Cyanide (Free)	mg/kg	-	-	<1	-	<1	-	<1	-	<1
Cyanide (Total)	mg/kg	-	-	2	-	<1	-	<1	-	<1
Arsenic	mg/kg	640	LQM/C4SL/SGV	21	-	10	10	-	-	7
Boron (water soluble)	mg/kg	240,000	LQM	<1	-	<1	<1	-	-	<1
Cadmium	mg/kg	190	LQM	1	-	<1	<1	-	-	<1
Chromium	mg/kg	-	-	32	-	22	18	-	-	14
Chromium (Trivalent)	mg/kg	8,600	LQM	<2	-	<2	<2	-	-	<2
Chromium (Hexavalent)	mg/kg	33	LQM	<1	-	<1	<1	-	-	<1
Copper	mg/kg	68,000	LQM	210	-	37	110	-	-	8
Mercury	mg/kg	58	LQM	1	-	<1	<1	-	-	<1
Nickel	mg/kg	980	LQM	33	-	17	18	-	-	14
Lead	mg/kg	2,330	C4SL	670	-	96	60	-	-	8
Selenium	mg/kg	12,000	LQM	<3	-	<3	<3	-	-	<3
Vanadium	mg/kg	9,000	LQM	41	-	35	30	-	-	22
Zinc	mg/kg	730,000	LQM	780	-	170	72	-	-	27
Aliphatic TPH >C5-C6	mg/kg	3,200	LQM	<100	-	<100	<100	-	-	<100
Aliphatic TPH >C6-C8	mg/kg	7,800	LQM	<100	-	<100	<100	-	-	<100
Aliphatic TPH >C8-C10	mg/kg	2,000	LQM	<100	-	<100	<100	-	-	<100
Aliphatic TPH >C10-C12	mg/kg	9,700	LQM	<1	-	<1	<1	-	-	<1
Aliphatic TPH >C12-C16	mg/kg	59,000	LQM	<1	-	<1	<1	-	-	<1
Aliphatic TPH >C16-C21	mg/kg	1,600,000	LQM	<1	-	<1	<1	-	-	<1
Aliphatic TPH >C21-C35	mg/kg	1,600,000	LQM	<2	-	<2	<2	-	-	<2
Aromatic TPH >C5-C7	µg/kg	26,000	LQM	<100	-	<100	<100	-	-	<100
Aromatic TPH >C7-C8	µg/kg	56,000	LQM	<100	-	<100	<100	-	-	<100
Aromatic TPH >C8-C10	µg/kg	3,500	LQM	<100	-	<100	<100	-	-	<100
Aromatic TPH >C10-C12	mg/kg	16,000	LQM	<2	-	<2	<2	-	-	<2
Aromatic TPH >C12-C16	mg/kg	36,000	LQM	<1	-	<1	<1	-	-	<1
Aromatic TPH >C16-C21	mg/kg	28,000	LQM	2	-	<1	<1	-	-	<1
Aromatic TPH >C21-C35	mg/kg	28,000	LQM	<1	-	<1	<1	-	-	<1
Naphthalene	mg/kg	190	LQM	<1.0	0.1	<1.0	<0.1	-	-	<0.1
Acenaphthylene	mg/kg	83,000	LQM	<1.0	0.1	<1.0	<0.1	-	-	<0.1
Acenaphthene	mg/kg	84,000	LQM	<1.0	<0.1	<1.0	<0.1	-	-	<0.1
Fluorene	mg/kg	63,000	LQM	0.1	<0.1	<1.0	<0.1	-	-	<0.1
Phenanthrene	mg/kg	22,000	LQM	1.9	0.9	<1.0	<0.1	-	-	<0.1
Anthracene	mg/kg	520,000	LQM	<1.0	0.2	<1.0	<0.1	-	-	<0.1
Fluoranthene	mg/kg	23,000	LQM	3.3	2.5	1.6	<0.1	-	-	<0.1
Pyrene	mg/kg	54,000	LQM	2.9	2.2	1.4	<0.1	-	-	<0.1
Benzo[a]anthracene	mg/kg	170	LQM	1.3	1.2	<1.0	<0.1	-	-	<0.1
Chrysene	mg/kg	350	LQM	1.5	1.2	<1.0	<0.1	-	-	<0.1
Benzo[b]fluoranthene	mg/kg	44	LQM	-	2.5	-	-	-	-	-
Benzo[k]fluoranthene	mg/kg	1,200	LQM	1.5	1.3	<1.0	<0.1	-	-	<0.1
Benzo[a]pyrene	mg/kg	35	LQM	1.1	0.9	<1.0	<0.1	-	-	<0.1
Indeno(1,2,3-c,d)Pyrene	mg/kg	500	LQM	0.4	0.2	<1.0	<0.1	-	-	<0.1
Dibenz(a,h)Anthracene	mg/kg	3.5	LQM	1.5	1.2	<1.0	<0.1	-	-	<0.1
Benzo[g,h,i]perylene	mg/kg	3,900	LQM	18	15	3	<0.1	-	-	<0.1
Total of 16 PAH	mg/kg	-	-	-	<0.1	-	-	-	-	-
Phenol	mg/kg	1,500	LQM	-	<0.1	-	-	-	-	-
Coronene	mg/kg	-	-	-	<0.1	-	-	-	-	-
Benzene	µg/kg	27	LQM	<10	<10	<10	<10	-	-	<10
Toluene	µg/kg	56,000	LQM	<10	<10	<10	<10	-	-	<10
EthylBenzene	µg/kg	5,700	LQM	<10	<10	<10	<10	-	-	<10
Meta/Para-Xylene	µg/kg	6,200	LQM	<10	<10	<10	<10	-	-	<10
Ortho-Xylene	µg/kg	6,600	LQM	<10	<10	<10	<10	-	-	<10
Polychlorinated biphenyl BZ#28	µg/kg	-	-	-	<10	-	-	-	-	-
Polychlorinated biphenyl BZ#52	µg/kg	-	-	-	<10	-	-	-	-	-
Polychlorinated biphenyl BZ#101	µg/kg	-	-	-	<10	-	-	-	-	-
Polychlorinated biphenyl BZ#118	µg/kg	-	-	-	<10	-	-	-	-	-
Polychlorinated biphenyl BZ#153	µg/kg	-	-	-	<10	-	-	-	-	-
Polychlorinated biphenyl BZ#138	µg/kg	-	-	-	<10	-	-	-	-	-
Polychlorinated biphenyl BZ#180	µg/kg	-	-	-	<10	-	-	-	-	-

Exceeds Generic Assessment Criteria

Generic Assessment Criteria Source	
SGV	Soil Guidance Values published by the EA Nickel value withdrawn.
C4SL	Category 4 Screening Levels, DEFRA December 2014
LQM	LQM/CIEH Suitable for Use Levels for Human Health Risk Assessment (S4UL), November 2014. (Copyright Land Quality Management Limited, reduced with permission; Publication Number S4UL3059. Assumed no free product present in VOCs.
EIC	EIC/AGS/CL:AIRE Soil Generic Assessment Criteria for Human Health Risk Assessment derived using CLEA Not soil organic matter dependent
ND	Not Derived.
Skin	Direct skin contact with phenol

APPENDIX 5

Asbestos Quantification Certificate



CONCEPT LIFE SCIENCES
DELIVERING SCIENCE

Concept Life Sciences is a trading name of
Concept Life Sciences Analytical & Development
Services Limited registered in England and
Wales (No 2514788)

Concept Life Sciences

Certificate of Analysis

Hadfield House
Hadfield Street
Cornbrook
Manchester
M16 9FE
Tel : 0161 874 2400
Fax : 0161 874 2468

Report Number: 703632-1

Date of Report: 03-Jan-2018

Customer: Caulmert Ltd.
8 St Georges Court
Altrincham Business Park
Dairyhouse Lane
Altrincham
Cheshire
WA14 5UA

Customer Contact: Mr Dominic Ostafijczuk

Customer Job Reference: 3064

Customer Purchase Order: 14349

Customer Site Reference: Crayford - Extension Area

Date Job Received at Concept: 20-Nov-2017

Date Analysis Started: 15-Dec-2017

Date Analysis Completed: 03-Jan-2018

The results reported relate to samples received in the laboratory and may not be representative of a whole batch.

This report should not be reproduced except in full without the written approval of the laboratory

Tests covered by this certificate were conducted in accordance with Concept Life Sciences SOPs

All results have been reviewed in accordance with Section 25 of the Concept Life Sciences, Analytical Services Quality Manual

Report checked
and authorised by :
Sara Abou-Shakra
Customer Service Manager

Issued by :
Sara Abou-Shakra
Customer Service Manager

Concept Reference: 703632					
Project Site: Crayford - Extension Area					
Customer Reference: 3064					
Soil		Analysed as Soil			
Miscellaneous					
Concept Reference					703632 001
Customer Sample Reference					TP01/ES1 (697961-001)
Date Sampled					15-NOV-2017
Determinand	Method	Test Sample	LOD	Units	
Asbestos Quantification	T27	AR	0.001	%	Chrysotile Fibres Detected <0.001

Index to symbols used in 703632-1

Value	Description
AR	As Received
S	Analysis was subcontracted
U	Analysis is UKAS accredited

Notes

Asbestos subcontracted to REC Asbestos

Method Index

Value	Description
T27	PLM

Accreditation Summary

Determinand	Method	Test Sample	LOD	Units	Symbol	Concept References
Asbestos Quantification	T27	AR	0.001	%	SU	001

APPENDIX 6

Photographs During and After Groundworks

Facility Name: Crayford MRF	Site Location: Crayford MRF Paper Line Upgrade Century Wharf, Crayford Creek, Dartford	Project No. 3064
---------------------------------------	---	----------------------------

Photo No. 1	Date: 01/05/18
------------------------------	--------------------------

Direction Photo Taken: North
--

Description: View of earth bund being exposed as part of the enabling works for the paper line upgrade.



Photo No. 2	Date: 01/05/18
------------------------------	--------------------------

Direction Photo Taken: N/A
--

Description: Close-up of material exposed in the earth bund.
--



Facility Name: Crayford MRF	Site Location: Crayford MRF Paper Line Upgrade Century Wharf, Crayford Creek, Dartford	Project No. 3064
---------------------------------------	---	----------------------------

Photo No. 3	Date: 01/05/18
------------------------------	--------------------------

Direction Photo Taken:
 East

Description:
 Enabling works for the paper line upgrade:
 Installing gabions at the base of the earth bund along the northern side of the Site.



Photo No. 4	Date: 01/05/18
------------------------------	--------------------------

Direction Photo Taken:
 East

Description:
 Wider view of gabions being installed at the base of the reduced earth bund along the northern side of the Site.



Facility Name: Crayford MRF	Site Location: Crayford MRF Paper Line Upgrade Century Wharf, Crayford Creek, Dartford	Project No. 3064
---------------------------------------	---	----------------------------

Photo No.
5

Date:
18/06/18

Direction Photo Taken:
East

Description:
View of reduced bund behind the installed Gabion wall. Top soil being laid to form levels



Photo No.
6

Date:
18/06/18

Direction Photo Taken:
South-west

Description:
View of new footpath to building side of new Gabion wall. Note concrete upstand reflects the building line



Facility Name: Crayford MRF	Site Location: Crayford MRF Paper Line Upgrade Century Wharf, Crayford Creek, Dartford	Project No. 3064
---------------------------------------	---	----------------------------

Photo No. 7	Date: 11/07/18
------------------------------	--------------------------

Direction Photo Taken:

Southwest

Description:

View of the paper line extension under construction, being built over existing concrete floor. North Elevation of structure adjacent to new Gabion wall (external view)



Photo No. 8	Date: 11/07/18
------------------------------	--------------------------

Direction Photo Taken:

North-east

Description:

View of the paper line extension under construction on existing concrete floor, top of gabion visible and base of earth bund.



Facility Name: Crayford MRF		Site Location: Crayford MRF Paper Line Upgrade Century Wharf, Crayford Creek, Dartford	Project No. 3064
---------------------------------------	--	---	----------------------------

Photo No. 9	Date: 31/05/11	
Direction Photo Taken: N/A		
Description: View of the paper line extension under construction on existing concrete floor. North Elevation of structure adjacent to new Gabion wall (internal view)		

Photo No. 10	Date: 31/05/11	
Direction Photo Taken: N/A		
Description: Bottom of concrete column bolted down and set into floor slab. Concrete infill to floor slab to complete works		

Facility Name: Crayford MRF	Site Location: Crayford MRF Paper Line Upgrade Century Wharf, Crayford Creek, Dartford	Project No. 3064
---------------------------------------	---	----------------------------

Photo No. 11	Date: 11/07/18
-------------------------------	--------------------------

Direction Photo Taken:

East

Description:

View of the paper line extension under construction on existing concrete floor. North Elevation of structure adjacent to new Gabion wall (external view)



Photo No. 12	Date: 01/08/18
-------------------------------	--------------------------

Direction Photo Taken:

East

Description:

Same view as above, after enclosure of steel skin around structure.

Re-profiled bund behind Gabion wall. Area to be re-graded and seeded to a final finish once site works have been completed



Facility Name: Crayford MRF	Site Location: Crayford MRF Paper Line Upgrade Century Wharf, Crayford Creek, Dartford	Project No. 3064
---------------------------------------	---	----------------------------

Photo No. 13	Date: 01/08/18
-------------------------------	--------------------------

Direction Photo Taken: East

Description:
 View of the new footpath along the northern wall of the extension. Construction debris will be removed once access for construction is complete.



Photo No. 14	Date: 01/08/18
-------------------------------	--------------------------

Direction Photo Taken: West

Description:
 Re-profiled bund behind Gabion wall. Area to be re-graded and seeded to a final finish once site works have been completed. Footpath is hidden between gabion wall and the building face.



APPENDIX 7

Waste Documentation

CONVEYANCE/CONTROLLED WASTE TRANSFER NOTE



ANCHOR BAY COMMERCIALS

Dugdale Wharf, Crayford Creek, Crayford, Kent DA1 4QG
Tel.: 01322 359196 Fax: 01322 333095

W.I.F. CODE

S.I.C. CODE 41/201

No. 172051	<input type="checkbox"/> 17.01.01 CONCRETE
VEHICLE REGISTRATION NUMBER ZW14 KPO	<input type="checkbox"/> 17.01.02 BRICKS
NAME OF PERSON IN CHARGE OF VEHICLE A-CORLESS	<input type="checkbox"/> 17.02.01 WOOD
WASTE HOLDER / DELIVERY ADDRESS Acorn Waste Co Unit 3000 Center 3 Wharf DA1 4QG	<input type="checkbox"/> 17.03.02 TARMAC
TRANSFER ADDRESS Enovert Barling BA180054	<input checked="" type="checkbox"/> 17.05.04 BRICKS & STONES-CLEAN MUCK AWAY
GROSS	<input type="checkbox"/> 17.01.07 MIXED CONCRETE & BRICKS-HARDCORE/RUBBLE
TARE	<input type="checkbox"/> 17.09.04 MIXED CONSTRUCTION & DEMOLITION HARDCORE/WOOD/PLASTIC/PLASTERBOARD
NET	<input type="checkbox"/> 20.02.01 GARDEN / PARK WASTE / TREE ROOTS
DESCRIPTION OF MATERIAL Inactive Sub Soil	<input type="checkbox"/> 20.03.01 MIXED HOUSEHOLD/COMMERCIAL/ INDUSTRIAL WASTE
DELIVERY DATE	<input type="checkbox"/> 16.01.02 WASTE TYRES
DELIVERY TIME	<input type="checkbox"/> 17.06.05 CONSTRUCTION MATERIALS CONTAINING ASBESTOS
	<input type="checkbox"/> 17.05.03 CONTAMINATED SOIL & STONE CONTAMINATED MUCK AWAY
	<input type="checkbox"/> 17.01.06 CONTAMINATED MIXED CONCRETE & BRICKS CONTAMINATED HARDCORE / RUBBLE
	DESCRIPTION
	LOAD CAPACITY 8 Wheel

I declare that we have applied the Waste Management Hierarchy.

Signed by Driver [Signature]

Signed on behalf of Customer [Signature]

Date 3-3-18

PLEASE PRINT C mylon

Customers ordering vehicles off the public roads do so entirely at their own risk
Registered Waste Carrier No: CBDN54572 Control of Pollution Act (as amended) 1989

CONVEYANCE/CONTROLLED WASTE TRANSFER NOTE



ANCHOR BAY COMMERCIALS

Dugdale Wharf, Crayford Creek, Crayford, Kent DA1 4QG
Tel.: 01322 359196 Fax: 01322 333095

W.I.F. CODE

S.I.C. CODE 41/201

No. 172253	<input type="checkbox"/> 17.01.01 CONCRETE
VEHICLE REGISTRATION NUMBER EX61 DGU	<input type="checkbox"/> 17.01.02 BRICKS
NAME OF PERSON IN CHARGE OF VEHICLE MATT SMITH	<input type="checkbox"/> 17.02.01 WOOD
WASTE HOLDER / DELIVERY ADDRESS Acorn Waste Co Unit 3000 Center 3 Wharf Crayford DA1 4QG	<input type="checkbox"/> 17.03.02 TARMAC
TRANSFER ADDRESS ENOVERT BARLING BA180054.	<input checked="" type="checkbox"/> 17.05.04 BRICKS & STONES-CLEAN MUCK AWAY
GROSS	<input type="checkbox"/> 17.01.07 MIXED CONCRETE & BRICKS-HARDCORE/RUBBLE
TARE	<input type="checkbox"/> 17.09.04 MIXED CONSTRUCTION & DEMOLITION HARDCORE/WOOD/PLASTIC/PLASTERBOARD
NET	<input type="checkbox"/> 20.02.01 GARDEN / PARK WASTE / TREE ROOTS
DESCRIPTION OF MATERIAL INACTIVE SUB SOIL	<input type="checkbox"/> 20.03.01 MIXED HOUSEHOLD/COMMERCIAL/ INDUSTRIAL WASTE
DELIVERY DATE	<input type="checkbox"/> 16.01.02 WASTE TYRES
DELIVERY TIME	<input type="checkbox"/> 17.06.05 CONSTRUCTION MATERIALS CONTAINING ASBESTOS
	<input type="checkbox"/> 17.05.03 CONTAMINATED SOIL & STONE CONTAMINATED MUCK AWAY
	<input type="checkbox"/> 17.01.06 CONTAMINATED MIXED CONCRETE & BRICKS CONTAMINATED HARDCORE / RUBBLE
	DESCRIPTION
	LOAD CAPACITY 1542

I declare that we have applied the Waste Management Hierarchy.

Signed by Driver [Signature]

Signed on behalf of Customer [Signature]

Date 3/4/18

PLEASE PRINT G mylon

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Registered Waste Carrier No: CBDN54572 Control of Pollution Act (as amended) 1989



ANCHOR BAY COMMERCIALS

Dugdale Wharf, Crayford Creek, Crayford, Kent DA1 4QG
Tel.: 01322 359196 Fax: 01322 333095

W.I.F. CODE BA 180054

S.I.C. CODE 4120/1

No. 176683	<input type="checkbox"/> 17.01.01 CONCRETE
VEHICLE REGISTRATION NUMBER EU63 FXJ	<input type="checkbox"/> 17.01.02 BRICKS
NAME OF PERSON IN CHARGE OF VEHICLE TREV	<input type="checkbox"/> 17.02.01 WOOD
WASTE HOLDER / DELIVERY ADDRESS ACORN WASTE WILRADOR WASTE ENCOURT CENTURY WHARF CRAYFORD	<input type="checkbox"/> 17.03.02 TARMAC
TRANSFER ADDRESS INACTIVE SUB SOIL AWAY CORYS BARLING BA180054	<input checked="" type="checkbox"/> 17.05.04 BRICKS & STONES-CLEAN MUCK AWAY
	<input type="checkbox"/> 17.01.07 MIXED CONCRETE & BRICKS-HARDCORE/RUBBLE
	<input type="checkbox"/> 17.09.04 MIXED CONSTRUCTION & DEMOLITION HARDCORE/WOOD/PLASTIC/PLASTERBOARD
	<input type="checkbox"/> 20.02.01 GARDEN / PARK WASTE / TREE ROOTS
	<input type="checkbox"/> 20.03.01 MIXED HOUSEHOLD/COMMERCIAL/ INDUSTRIAL WASTE
	<input type="checkbox"/> 16.01.02 WASTE TYRES
	<input type="checkbox"/> 17.06.05 CONSTRUCTION MATERIALS CONTAINING ASBESTOS
	<input type="checkbox"/> 17.05.03 CONTAMINATED SOIL & STONE CONTAMINATED MUCK AWAY
	<input type="checkbox"/> 17.01.06 CONTAMINATED MIXED CONCRETE & BRICKS CONTAMINATED HARDCORE / RUBBLE
GROSS	
TARE	DESCRIPTION
NET	LOAD CAPACITY
DESCRIPTION OF MATERIAL	DELIVERY DATE
	DELIVERY TIME

I declare that we have applied the Waste Management Hierarchy.

Signed by Driver

Signed on behalf of Customer

Date

PLEASE PRINT C. mylon

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Registered Waste Carrier No: CBDN54572 Control of Pollution Act (as amended) 1989



ANCHOR BAY COMMERCIALS

Dugdale Wharf, Crayford Creek, Crayford, Kent DA1 4QG
Tel.: 01322 359196 Fax: 01322 333095

W.I.F. CODE

S.I.C. CODE 41/201

No. 175048	<input type="checkbox"/> 17.01.01 CONCRETE
VEHICLE REGISTRATION NUMBER EX62 EWG	<input type="checkbox"/> 17.01.02 BRICKS
NAME OF PERSON IN CHARGE OF VEHICLE MARK	<input type="checkbox"/> 17.02.01 WOOD
WASTE HOLDER / DELIVERY ADDRESS CORYS BARLING	<input type="checkbox"/> 17.03.02 TARMAC
TRANSFER ADDRESS ACORN CENTURY WHARF CRAYFORD DA1 4QG.	<input type="checkbox"/> 17.05.04 BRICKS & STONES-CLEAN MUCK AWAY
	<input type="checkbox"/> 17.01.07 MIXED CONCRETE & BRICKS-HARDCORE/RUBBLE
	<input type="checkbox"/> 17.09.04 MIXED CONSTRUCTION & DEMOLITION HARDCORE/WOOD/PLASTIC/PLASTERBOARD
	<input type="checkbox"/> 20.02.01 GARDEN / PARK WASTE / TREE ROOTS
	<input type="checkbox"/> 20.03.01 MIXED HOUSEHOLD/COMMERCIAL/ INDUSTRIAL WASTE
	<input type="checkbox"/> 16.01.02 WASTE TYRES
	<input type="checkbox"/> 17.06.05 CONSTRUCTION MATERIALS CONTAINING ASBESTOS
	<input type="checkbox"/> 17.05.03 CONTAMINATED SOIL & STONE CONTAMINATED MUCK AWAY
	<input type="checkbox"/> 17.01.06 CONTAMINATED MIXED CONCRETE & BRICKS CONTAMINATED HARDCORE / RUBBLE
GROSS	
TARE	DESCRIPTION
NET	LOAD CAPACITY
DESCRIPTION OF MATERIAL	DELIVERY DATE
	DELIVERY TIME

I declare that we have applied the Waste Management Hierarchy.

Signed by Driver

Signed on behalf of Customer

Date

PLEASE PRINT C. mylon

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Registered Waste Carrier No: CBDN54572 Control of Pollution Act (as amended) 1989

Tuesday 3-4-18

BA180054

17.05.04

INACTIVE SUBSOIL

1 LOAD

CONVEYANCE/CONTROLLED WASTE TRANSFER NOTE



ANCHOR BAY COMMERCIALS

Dugdale Wharf, Crayford Creek, Crayford, Kent DA1 4QG
Tel.: 01322 359196 Fax: 01322 333095

W.I.F. CODE

S.I.C. CODE 412011

No.	128286	
VEHICLE REGISTRATION NUMBER	GL64ELO	
NAME OF PERSON IN CHARGE OF VEHICLE	MARK	
WASTE HOLDER / DELIVERY ADDRESS	Anchor Waste Co VICTOR CENTART WHARF CRAYFORD DA1 4QG	
TRANSFER ADDRESS	ENOVERT BARLING BA150054	
GROSS		
TARE	DESCRIPTION	
NET	LOAD CAPACITY	
DESCRIPTION OF MATERIAL	DELIVERY DATE	DELIVERY TIME
1x load intensive sub soil Ash	3/4/18	

- 17.01.01 CONCRETE
- 17.01.02 BRICKS
- 17.02.01 WOOD
- 17.03.02 TARMAC
- 17.05.04 BRICKS & STONES-CLEAN MUCK AWAY
- 17.01.07 MIXED CONCRETE & BRICKS-HARDCORE/RUBBLE
- 17.09.04 MIXED CONSTRUCTION & DEMOLITION HARDCORE/WOOD/PLASTIC/PLASTERBOARD
- 20.02.01 GARDEN / PARK WASTE / TREE ROOTS
- 20.03.01 MIXED HOUSEHOLD/COMMERCIAL/ INDUSTRIAL WASTE
- 16.01.02 WASTE TYRES
- 17.06.05 CONSTRUCTION MATERIALS CONTAINING ASBESTOS
- 17.05.03 CONTAMINATED SOIL & STONE CONTAMINATED MUCK AWAY
- 17.01.06 CONTAMINATED MIXED CONCRETE & BRICKS CONTAMINATED HARDCORE / RUBBLE

I declare that we have applied the Waste Management Hierarchy.

Signed by Driver

Signed on behalf of Customer

Date **3/4/18**

PLEASE PRINT **C myra**

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Registered Waste Carrier No: CB/CN5216LT Control of Pollution Act (as amended) 1989



ANCHOR BAY COMMERCIALS

Dugdale Wharf, Crayford Creek, Crayford, Kent DA1 4QG
Tel.: 01322 359196 Fax: 01322 333095

W.I.F. CODE

S.I.C. CODE 41/201

No. 155648	<input type="checkbox"/> 17.01.01 CONCRETE
VEHICLE REGISTRATION NUMBER Sub3EXH	<input type="checkbox"/> 17.01.02 BRICKS
NAME OF PERSON IN CHARGE OF VEHICLE Sam Cooper	<input type="checkbox"/> 17.02.01 WOOD
WASTE HOLDER / DELIVERY ADDRESS Acorn waste Village wharf Crayford	<input type="checkbox"/> 17.03.02 TARMAC
TRANSFER ADDRESS 1X Load inactive sub soil away Enoverit Barina Bal 80054	<input checked="" type="checkbox"/> 17.05.04 BRICKS & STONES-CLEAN MUCK AWAY
GROSS	<input type="checkbox"/> 17.01.07 MIXED CONCRETE & BRICKS-HARDCORE/RUBBLE
TARE	<input type="checkbox"/> 17.09.04 MIXED CONSTRUCTION & DEMOLITION HARDCORE/WOOD/PLASTIC/PLASTERBOARD
NET	<input type="checkbox"/> 20.02.01 GARDEN / PARK WASTE / TREE ROOTS
DESCRIPTION OF MATERIAL Soil + Stone	<input type="checkbox"/> 20.03.01 MIXED HOUSEHOLD/COMMERCIAL/ INDUSTRIAL WASTE
DELIVERY DATE	<input type="checkbox"/> 16.01.02 WASTE TYRES
DELIVERY TIME	<input type="checkbox"/> 17.06.05 CONSTRUCTION MATERIALS CONTAINING ASBESTOS
	<input type="checkbox"/> 17.05.03 CONTAMINATED SOIL & STONE CONTAMINATED MUCK AWAY
	<input type="checkbox"/> 17.01.06 CONTAMINATED MIXED CONCRETE & BRICKS CONTAMINATED HARDCORE / RUBBLE
	DESCRIPTION
	LOAD CAPACITY 15m²

I declare that we have applied the Waste Management Hierarchy.

Signed by Driver

Signed on behalf of Customer

Date **5-4-18**

PLEASE PRINT **C. mylon**

Customers ordering vehicles off the public roads do so entirely at their own risk
Registered Waste Carrier No: CB/CN5216LT Control of Pollution Act (as amended) 1989



ANCHOR BAY COMMERCIALS

Dugdale Wharf, Crayford Creek, Crayford, Kent DA1 4QG
Tel.: 01322 359196 Fax: 01322 333095

W.I.F. CODE

S.I.C. CODE 41/201

WEDNESDAY - 4-4-18

No. 172255	<input type="checkbox"/> 17.01.01 CONCRETE
VEHICLE REGISTRATION NUMBER EX61 DGU	<input type="checkbox"/> 17.01.02 BRICKS
NAME OF PERSON IN CHARGE OF VEHICLE MATT SMITH	<input type="checkbox"/> 17.02.01 WOOD
WASTE HOLDER / DELIVERY ADDRESS Acorn waste of Village wharf Crayford.	<input type="checkbox"/> 17.03.02 TARMAC
TRANSFER ADDRESS ENOVERT BARLING	<input type="checkbox"/> 17.05.04 BRICKS & STONES-CLEAN MUCK AWAY
GROSS	<input checked="" type="checkbox"/> 17.01.07 MIXED CONCRETE & BRICKS-HARDCORE/RUBBLE
TARE	<input type="checkbox"/> 17.09.04 MIXED CONSTRUCTION & DEMOLITION HARDCORE/WOOD/PLASTIC/PLASTERBOARD
NET	<input type="checkbox"/> 20.02.01 GARDEN / PARK WASTE / TREE ROOTS
DESCRIPTION OF MATERIAL INACTIVE SUB SOIL	<input type="checkbox"/> 20.03.01 MIXED HOUSEHOLD/COMMERCIAL/ INDUSTRIAL WASTE
DELIVERY DATE	<input type="checkbox"/> 16.01.02 WASTE TYRES
DELIVERY TIME	<input type="checkbox"/> 17.06.05 CONSTRUCTION MATERIALS CONTAINING ASBESTOS
	<input type="checkbox"/> 17.05.03 CONTAMINATED SOIL & STONE CONTAMINATED MUCK AWAY
	<input type="checkbox"/> 17.01.06 CONTAMINATED MIXED CONCRETE & BRICKS CONTAMINATED HARDCORE / RUBBLE
	DESCRIPTION
	LOAD CAPACITY 15m²

I declare that we have applied the Waste Management Hierarchy.

Signed by Driver

Signed on behalf of Customer

Date **5/4/18**

PLEASE PRINT **C. mylon**

Customers ordering vehicles off the public roads do so entirely at their own risk
Registered Waste Carrier No: CBDN54572 Control of Pollution Act (as amended) 1989



ANCHOR BAY COMMERCIALS

Dugdale Wharf, Crayford Creek, Crayford, Kent DA1 4QG
Tel.: 01322 359196 Fax: 01322 333095

W.I.F. CODE

S.I.C. CODE 41/201

No. 155648	<input type="checkbox"/> 17.01.01 CONCRETE
VEHICLE REGISTRATION NUMBER Sub3EXH	<input type="checkbox"/> 17.01.02 BRICKS
NAME OF PERSON IN CHARGE OF VEHICLE Sam Cooper	<input type="checkbox"/> 17.02.01 WOOD
WASTE HOLDER / DELIVERY ADDRESS Acorn waste Village wharf Crayford	<input type="checkbox"/> 17.03.02 TARMAC
TRANSFER ADDRESS 1x Lead inactive sub soil away Enovert Barling Bal 80054	<input checked="" type="checkbox"/> 17.05.04 BRICKS & STONES-CLEAN MUCK AWAY
GROSS	<input type="checkbox"/> 17.01.07 MIXED CONCRETE & BRICKS-HARDCORE/RUBBLE
TARE	<input type="checkbox"/> 17.09.04 MIXED CONSTRUCTION & DEMOLITION HARDCORE/WOOD/PLASTIC/PLASTERBOARD
NET	<input type="checkbox"/> 20.02.01 GARDEN / PARK WASTE / TREE ROOTS
DESCRIPTION OF MATERIAL Soil + Stone	<input type="checkbox"/> 20.03.01 MIXED HOUSEHOLD/COMMERCIAL/ INDUSTRIAL WASTE
DELIVERY DATE	<input type="checkbox"/> 16.01.02 WASTE TYRES
DELIVERY TIME	<input type="checkbox"/> 17.06.05 CONSTRUCTION MATERIALS CONTAINING ASBESTOS
	<input type="checkbox"/> 17.05.03 CONTAMINATED SOIL & STONE CONTAMINATED MUCK AWAY
	<input type="checkbox"/> 17.01.06 CONTAMINATED MIXED CONCRETE & BRICKS CONTAMINATED HARDCORE / RUBBLE
	DESCRIPTION
	LOAD CAPACITY 15m²

I declare that we have applied the Waste Management Hierarchy.

Signed by Driver

Signed on behalf of Customer

Date **5-4-18**

PLEASE PRINT **C. mylon**

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Registered Waste Carrier No: CB/CN5216LT Control of Pollution Act (as amended) 1989



ANCHOR BAY COMMERCIALS

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W.I.F. CODE

S.I.C. CODE 41/201

WEDNESDAY - 4-4-18

No. 172255	<input type="checkbox"/> 17.01.01 CONCRETE
VEHICLE REGISTRATION NUMBER EX61 DGU	<input type="checkbox"/> 17.01.02 BRICKS
NAME OF PERSON IN CHARGE OF VEHICLE MATT SMITH	<input type="checkbox"/> 17.02.01 WOOD
WASTE HOLDER / DELIVERY ADDRESS Acorn waste of Village wharf Crayford.	<input type="checkbox"/> 17.03.02 TARMAC
TRANSFER ADDRESS ENOVERT BARLING	<input type="checkbox"/> 17.05.04 BRICKS & STONES-CLEAN MUCK AWAY
GROSS	<input checked="" type="checkbox"/> 17.01.07 MIXED CONCRETE & BRICKS-HARDCORE/RUBBLE
TARE	<input type="checkbox"/> 17.09.04 MIXED CONSTRUCTION & DEMOLITION HARDCORE/WOOD/PLASTIC/PLASTERBOARD
NET	<input type="checkbox"/> 20.02.01 GARDEN / PARK WASTE / TREE ROOTS
DESCRIPTION OF MATERIAL INACTIVE SUB SOIL	<input type="checkbox"/> 20.03.01 MIXED HOUSEHOLD/COMMERCIAL/ INDUSTRIAL WASTE
DELIVERY DATE	<input type="checkbox"/> 16.01.02 WASTE TYRES
DELIVERY TIME	<input type="checkbox"/> 17.06.05 CONSTRUCTION MATERIALS CONTAINING ASBESTOS
	<input type="checkbox"/> 17.05.03 CONTAMINATED SOIL & STONE CONTAMINATED MUCK AWAY
	<input type="checkbox"/> 17.01.06 CONTAMINATED MIXED CONCRETE & BRICKS CONTAMINATED HARDCORE / RUBBLE
	DESCRIPTION
	LOAD CAPACITY 15m²

I declare that we have applied the Waste Management Hierarchy.

Signed by Driver

Signed on behalf of Customer

Date **5/4/18**

PLEASE PRINT **C. mylon**

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Registered Waste Carrier No: CBDN54572 Control of Pollution Act (as amended) 1989



ANCHOR BAY COMMERCIALS

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Tel.: 01322 359196 Fax: 01322 333095

W.I.F. CODE

S.I.C. CODE 41/201

No. 171652	<input type="checkbox"/> 17.01.01 CONCRETE
VEHICLE REGISTRATION NUMBER ES14 ZGA	<input type="checkbox"/> 17.01.02 BRICKS
NAME OF PERSON IN CHARGE OF VEHICLE KEVIN	<input type="checkbox"/> 17.02.01 WOOD
WASTE HOLDER / DELIVERY ADDRESS ACORN WASTE CO VIRADOR CENTURY WHARF CRAYFORD DA14QG	<input type="checkbox"/> 17.03.02 TARMAC
TRANSFER ADDRESS ENOVERT BARLING BR180054	<input checked="" type="checkbox"/> 17.05.04 BRICKS & STONES-CLEAN MUCK AWAY
	<input type="checkbox"/> 17.01.07 MIXED CONCRETE & BRICKS-HARDCORE/RUBBLE
	<input type="checkbox"/> 17.09.04 MIXED CONSTRUCTION & DEMOLITION HARDCORE/WOOD/PLASTIC/PLASTERBOARD
	<input type="checkbox"/> 20.02.01 GARDEN / PARK WASTE / TREE ROOTS
	<input type="checkbox"/> 20.03.01 MIXED HOUSEHOLD/COMMERCIAL/ INDUSTRIAL WASTE
	<input type="checkbox"/> 16.01.02 WASTE TYRES
	<input type="checkbox"/> 17.06.05 CONSTRUCTION MATERIALS CONTAINING ASBESTOS
	<input type="checkbox"/> 17.05.03 CONTAMINATED SOIL & STONE CONTAMINATED MUCK AWAY
	<input type="checkbox"/> 17.01.06 CONTAMINATED MIXED CONCRETE & BRICKS CONTAMINATED HARDCORE / RUBBLE
GROSS	DESCRIPTION
TARE	LOAD CAPACITY
NET 1 x LOAD	DELIVERY DATE
DESCRIPTION OF MATERIAL INACTIVE SUB SOIL	DELIVERY TIME

I declare that we have applied the Waste Management Hierarchy.

Signed by Driver 

Signed on behalf of Customer 

Date **4.4.18.**

PLEASE PRINT **G Mylon**

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Registered Waste Carrier No: CBDN54572 Control of Pollution Act (as amended) 1989



ANCHOR BAY COMMERCIALS

Dugdale Wharf, Crayford Creek, Crayford, Kent DA1 4QG
Tel.: 01322 359196 Fax: 01322 333095

W.I.F. CODE

S.I.C. CODE 41/201

No. 172254	<input type="checkbox"/> 17.01.01 CONCRETE
VEHICLE REGISTRATION NUMBER EX61 DGU	<input type="checkbox"/> 17.01.02 BRICKS
NAME OF PERSON IN CHARGE OF VEHICLE MATT SMITH	<input type="checkbox"/> 17.02.01 WOOD
WASTE HOLDER / DELIVERY ADDRESS ACORN WASTE COF VIRADOR WASTE CENTURY WHARF CRAYFORD DA14QG	<input type="checkbox"/> 17.03.02 TARMAC
TRANSFER ADDRESS ENOVERT BARLING BA180054	<input checked="" type="checkbox"/> 17.05.04 BRICKS & STONES-CLEAN MUCK AWAY
	<input type="checkbox"/> 17.01.07 MIXED CONCRETE & BRICKS-HARDCORE/RUBBLE
	<input type="checkbox"/> 17.09.04 MIXED CONSTRUCTION & DEMOLITION HARDCORE/WOOD/PLASTIC/PLASTERBOARD
	<input type="checkbox"/> 20.02.01 GARDEN / PARK WASTE / TREE ROOTS
	<input type="checkbox"/> 20.03.01 MIXED HOUSEHOLD/COMMERCIAL/ INDUSTRIAL WASTE
	<input type="checkbox"/> 16.01.02 WASTE TYRES
	<input type="checkbox"/> 17.06.05 CONSTRUCTION MATERIALS CONTAINING ASBESTOS
	<input type="checkbox"/> 17.05.03 CONTAMINATED SOIL & STONE CONTAMINATED MUCK AWAY
	<input type="checkbox"/> 17.01.06 CONTAMINATED MIXED CONCRETE & BRICKS CONTAMINATED HARDCORE / RUBBLE
GROSS	DESCRIPTION
TARE	LOAD CAPACITY 15M³
NET	DELIVERY DATE 4/4/18.
DESCRIPTION OF MATERIAL INACTIVE SUB SOIL	DELIVERY TIME

I declare that we have applied the Waste Management Hierarchy.

Signed by Driver 

Signed on behalf of Customer 

Date **4/4/18.**

PLEASE PRINT **G Mylon**

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Registered Waste Carrier No: CBDN54572 Control of Pollution Act (as amended) 1989



ANCHOR BAY COMMERCIALS

Dugdale Wharf, Crayford Creek, Crayford, Kent DA1 4QG
Tel.: 01322 359196 Fax: 01322 333095

W.I.F. CODE

S.I.C. CODE 41/201

No. 171652	<input type="checkbox"/> 17.01.01 CONCRETE
VEHICLE REGISTRATION NUMBER ES14 ZGA	<input type="checkbox"/> 17.01.02 BRICKS
NAME OF PERSON IN CHARGE OF VEHICLE KEVIN	<input type="checkbox"/> 17.02.01 WOOD
WASTE HOLDER / DELIVERY ADDRESS ACORN WASTE CO VIRADOR. CENTURY WHARF CRAYFORD DA14QG	<input type="checkbox"/> 17.03.02 TARMAC
TRANSFER ADDRESS ENOVERT BARLING. BR180054	<input checked="" type="checkbox"/> 17.05.04 BRICKS & STONES-CLEAN MUCK AWAY
	<input type="checkbox"/> 17.01.07 MIXED CONCRETE & BRICKS-HARDCORE/RUBBLE
	<input type="checkbox"/> 17.09.04 MIXED CONSTRUCTION & DEMOLITION HARDCORE/WOOD/PLASTIC/PLASTERBOARD
	<input type="checkbox"/> 20.02.01 GARDEN / PARK WASTE / TREE ROOTS
	<input type="checkbox"/> 20.03.01 MIXED HOUSEHOLD/COMMERCIAL/ INDUSTRIAL WASTE
	<input type="checkbox"/> 16.01.02 WASTE TYRES
	<input type="checkbox"/> 17.06.05 CONSTRUCTION MATERIALS CONTAINING ASBESTOS
	<input type="checkbox"/> 17.05.03 CONTAMINATED SOIL & STONE CONTAMINATED MUCK AWAY
	<input type="checkbox"/> 17.01.06 CONTAMINATED MIXED CONCRETE & BRICKS CONTAMINATED HARDCORE / RUBBLE
GROSS	DESCRIPTION
TARE	LOAD CAPACITY
NET 1 x LOAD	DELIVERY DATE
DESCRIPTION OF MATERIAL INACTIVE SUB SOIL	DELIVERY TIME

I declare that we have applied the Waste Management Hierarchy.

Signed by Driver

Signed on behalf of Customer

Date **4.4.18.**

PLEASE PRINT **G Mylon**

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Registered Waste Carrier No: CBDN54572 Control of Pollution Act (as amended) 1989



ANCHOR BAY COMMERCIALS

Dugdale Wharf, Crayford Creek, Crayford, Kent DA1 4QG
Tel.: 01322 359196 Fax: 01322 333095

W.I.F. CODE

S.I.C. CODE 41/201

No. 172254	<input type="checkbox"/> 17.01.01 CONCRETE
VEHICLE REGISTRATION NUMBER EX61 DGU	<input type="checkbox"/> 17.01.02 BRICKS
NAME OF PERSON IN CHARGE OF VEHICLE MATT SMITH	<input type="checkbox"/> 17.02.01 WOOD
WASTE HOLDER / DELIVERY ADDRESS ACORN WASTE COF VIRADOR WASTE CENTURY WHARF CRAYFORD DA14QG	<input type="checkbox"/> 17.03.02 TARMAC
TRANSFER ADDRESS ENOVERT BARLING BA180054	<input checked="" type="checkbox"/> 17.05.04 BRICKS & STONES-CLEAN MUCK AWAY
	<input type="checkbox"/> 17.01.07 MIXED CONCRETE & BRICKS-HARDCORE/RUBBLE
	<input type="checkbox"/> 17.09.04 MIXED CONSTRUCTION & DEMOLITION HARDCORE/WOOD/PLASTIC/PLASTERBOARD
	<input type="checkbox"/> 20.02.01 GARDEN / PARK WASTE / TREE ROOTS
	<input type="checkbox"/> 20.03.01 MIXED HOUSEHOLD/COMMERCIAL/ INDUSTRIAL WASTE
	<input type="checkbox"/> 16.01.02 WASTE TYRES
	<input type="checkbox"/> 17.06.05 CONSTRUCTION MATERIALS CONTAINING ASBESTOS
	<input type="checkbox"/> 17.05.03 CONTAMINATED SOIL & STONE CONTAMINATED MUCK AWAY
	<input type="checkbox"/> 17.01.06 CONTAMINATED MIXED CONCRETE & BRICKS CONTAMINATED HARDCORE / RUBBLE
GROSS	DESCRIPTION
TARE	LOAD CAPACITY 15M³
NET	DELIVERY DATE 4/4/18.
DESCRIPTION OF MATERIAL INACTIVE SUB SOIL	DELIVERY TIME

I declare that we have applied the Waste Management Hierarchy.

Signed by Driver

Signed on behalf of Customer

Date **4/4/18.**

PLEASE PRINT **G Mylon**

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Registered Waste Carrier No: CBDN54572 Control of Pollution Act (as amended) 1989

CONVEYANCE/CONTROLLED WASTE TRANSFER NOTE



ANCHOR BAY COMMERCIALS

Dugdale Wharf, Crayford Creek, Crayford, Kent DA1 4QG
Tel.: 01322 359196 Fax: 01322 333095

W.I.F. CODE

S.I.C. CODE 41201

No. 171701	<input type="checkbox"/> 17.01.01 CONCRETE
VEHICLE REGISTRATION NUMBER EUB6GVM	<input type="checkbox"/> 17.01.02 BRICKS
NAME OF PERSON IN CHARGE OF VEHICLE D BARKHOLMEN	<input type="checkbox"/> 17.02.01 WOOD
WASTE HOLDER / DELIVERY ADDRESS AGRICULTURAL CENTRE WHARF (CRAYFORD) DA14QG	<input type="checkbox"/> 17.03.02 TARMAC
TRANSFER ADDRESS E LOVER BARLING BA180054	<input checked="" type="checkbox"/> 17.05.04 BRICKS & STONES-CLEAN MUCK AWAY
	<input type="checkbox"/> 17.01.07 MIXED CONCRETE & BRICKS-HARDCORE/RUBBLE
	<input type="checkbox"/> 17.09.04 MIXED CONSTRUCTION & DEMOLITION HARDCORE/WOOD/PLASTIC/PLASTERBOARD
	<input type="checkbox"/> 20.02.01 GARDEN / PARK WASTE / TREE ROOTS
	<input type="checkbox"/> 20.03.01 MIXED HOUSEHOLD/COMMERCIAL/ INDUSTRIAL WASTE
	<input type="checkbox"/> 16.01.02 WASTE TYRES
	<input type="checkbox"/> 17.06.05 CONSTRUCTION MATERIALS CONTAINING ASBESTOS
	<input type="checkbox"/> 17.05.03 CONTAMINATED SOIL & STONE CONTAMINATED MUCK AWAY
	<input type="checkbox"/> 17.01.06 CONTAMINATED MIXED CONCRETE & BRICKS CONTAMINATED HARDCORE / RUBBLE
GROSS	
TARE	DESCRIPTION 1 LOAD
NET	LOAD CAPACITY
DESCRIPTION OF MATERIAL INACTIVE SUB SOIL AWAY	DELIVERY DATE
	DELIVERY TIME

I declare that we have applied the Waste Management Hierarchy.

Signed by Driver [Signature]

Signed on behalf of Customer [Signature]

Date **4.4.18**

PLEASE PRINT **CARY MYTON**

Customers ordering vehicles off the public roads do so entirely at their own risk

Registered Waste Carrier No: CBDN54572 Control of Pollution Act (as amended) 1989

CONVEYANCE/CONTROLLED WASTE TRANSFER NOTE



ANCHOR BAY COMMERCIALS

Dugdale Wharf, Crayford Creek, Crayford, Kent DA1 4QG
Tel.: 01322 359196 Fax: 01322 333095

W.I.F. CODE 17-0504

S.I.C. CODE 41-201

No. 172052	<input type="checkbox"/> 17.01.01 CONCRETE
VEHICLE REGISTRATION NUMBER EUI4-KPO	<input type="checkbox"/> 17.01.02 BRICKS
NAME OF PERSON IN CHARGE OF VEHICLE ANDY CARLESS	<input type="checkbox"/> 17.02.01 WOOD
WASTE HOLDER / DELIVERY ADDRESS ACORN WASTE ENOVERT CENTRY WHARF CRAYFORD	<input type="checkbox"/> 17.03.02 TARMAC
TRANSFER ADDRESS Corys Barling BA180054	<input checked="" type="checkbox"/> 17.05.04 BRICKS & STONES-CLEAN MUCK AWAY
	<input type="checkbox"/> 17.01.07 MIXED CONCRETE & BRICKS-HARDCORE/RUBBLE
	<input type="checkbox"/> 17.09.04 MIXED CONSTRUCTION & DEMOLITION HARDCORE/WOOD/PLASTIC/PLASTERBOARD
	<input type="checkbox"/> 20.02.01 GARDEN / PARK WASTE / TREE ROOTS
	<input type="checkbox"/> 20.03.01 MIXED HOUSEHOLD/COMMERCIAL/ INDUSTRIAL WASTE
	<input type="checkbox"/> 16.01.02 WASTE TYRES
	<input type="checkbox"/> 17.06.05 CONSTRUCTION MATERIALS CONTAINING ASBESTOS
	<input type="checkbox"/> 17.05.03 CONTAMINATED SOIL & STONE CONTAMINATED MUCK AWAY
	<input type="checkbox"/> 17.01.06 CONTAMINATED MIXED CONCRETE & BRICKS CONTAMINATED HARDCORE / RUBBLE
GROSS	
TARE	DESCRIPTION X 1 load AWAY
NET	LOAD CAPACITY
DESCRIPTION OF MATERIAL INACTIVE SUB SOIL	DELIVERY DATE
	DELIVERY TIME

I declare that we have applied the Waste Management Hierarchy.

Signed by Driver [Signature]

Signed on behalf of Customer [Signature]

Date **4-4-18**

PLEASE PRINT **C. Myton**

Customers ordering vehicles off the public roads do so entirely at their own risk

Registered Waste Carrier No: CBDN54572 Control of Pollution Act (as amended) 1989



ANCHOR BAY COMMERCIALS

Dugdale Wharf, Crayford Creek, Crayford, Kent DA1 4QG
Tel.: 01322 359196 Fax: 01322 333095

W.I.F. CODE

S.I.C. CODE 41/201

No. 171653	<input type="checkbox"/> 17.01.01 CONCRETE
VEHICLE REGISTRATION NUMBER ES14ZGA	<input type="checkbox"/> 17.01.02 BRICKS
NAME OF PERSON IN CHARGE OF VEHICLE KEVIN	<input type="checkbox"/> 17.02.01 WOOD
WASTE HOLDER / DELIVERY ADDRESS ACORN WASTE Co VIRIDOR CENTURY WHARF CRAYFORD DA14QG	<input type="checkbox"/> 17.03.02 TARMAC
TRANSFER ADDRESS ENOVERT BARLING BR 180054	<input checked="" type="checkbox"/> 17.05.04 BRICKS & STONES-CLEAN MUCK AWAY
	<input type="checkbox"/> 17.01.07 MIXED CONCRETE & BRICKS-HARDCORE/RUBBLE
	<input type="checkbox"/> 17.09.04 MIXED CONSTRUCTION & DEMOLITION HARDCORE/WOOD/PLASTIC/PLASTERBOARD
	<input type="checkbox"/> 20.02.01 GARDEN / PARK WASTE / TREE ROOTS
	<input type="checkbox"/> 20.03.01 MIXED HOUSEHOLD/COMMERCIAL/ INDUSTRIAL WASTE
	<input type="checkbox"/> 16.01.02 WASTE TYRES
	<input type="checkbox"/> 17.06.05 CONSTRUCTION MATERIALS CONTAINING ASBESTOS
	<input type="checkbox"/> 17.05.03 CONTAMINATED SOIL & STONE CONTAMINATED MUCK AWAY
	<input type="checkbox"/> 17.01.06 CONTAMINATED MIXED CONCRETE & BRICKS CONTAMINATED HARDCORE / RUBBLE
GROSS	
TARE	DESCRIPTION
NET 1 X LOAD	LOAD CAPACITY
DESCRIPTION OF MATERIAL INACTIVE SUB-SOIL	DELIVERY DATE
	DELIVERY TIME

I declare that we have applied the Waste Management Hierarchy.

Signed by Driver

Signed on behalf of Customer

Date **4.4.18**

PLEASE PRINT

C. Myton

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Registered Waste Carrier No: CBDN54572 Control of Pollution Act (as amended) 1989



ANCHOR BAY COMMERCIALS

Dugdale Wharf, Crayford Creek, Crayford, Kent DA1 4QG
Tel.: 01322 359196 Fax: 01322 333095

W.I.F. CODE

S.I.C. CODE 41/201

No. 171959	<input type="checkbox"/> 17.01.01 CONCRETE
VEHICLE REGISTRATION NUMBER BN12FKX	<input type="checkbox"/> 17.01.02 BRICKS
NAME OF PERSON IN CHARGE OF VEHICLE	<input type="checkbox"/> 17.02.01 WOOD
WASTE HOLDER / DELIVERY ADDRESS Acorn Waste Co VIRIDOR Century Wharf DA14QG	<input type="checkbox"/> 17.03.02 TARMAC
TRANSFER ADDRESS ENOVERT Barling Ba 180054	<input checked="" type="checkbox"/> 17.05.04 BRICKS & STONES-CLEAN MUCK AWAY
	<input type="checkbox"/> 17.01.07 MIXED CONCRETE & BRICKS-HARDCORE/RUBBLE
	<input type="checkbox"/> 17.09.04 MIXED CONSTRUCTION & DEMOLITION HARDCORE/WOOD/PLASTIC/PLASTERBOARD
	<input type="checkbox"/> 20.02.01 GARDEN / PARK WASTE / TREE ROOTS
	<input type="checkbox"/> 20.03.01 MIXED HOUSEHOLD/COMMERCIAL/ INDUSTRIAL WASTE
	<input type="checkbox"/> 16.01.02 WASTE TYRES
	<input type="checkbox"/> 17.06.05 CONSTRUCTION MATERIALS CONTAINING ASBESTOS
	<input type="checkbox"/> 17.05.03 CONTAMINATED SOIL & STONE CONTAMINATED MUCK AWAY
	<input type="checkbox"/> 17.01.06 CONTAMINATED MIXED CONCRETE & BRICKS CONTAMINATED HARDCORE / RUBBLE
GROSS	
TARE	DESCRIPTION
NET	LOAD CAPACITY 8. Wheel
DESCRIPTION OF MATERIAL Inactive Sub Soil	DELIVERY DATE
	DELIVERY TIME

I declare that we have applied the Waste Management Hierarchy.

Signed by Driver

Signed on behalf of Customer

Date **4-4-18**

PLEASE PRINT

C. Myton

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Registered Waste Carrier No: CBDN54572 Control of Pollution Act (as amended) 1989



ANCHOR BAY COMMERCIALS

Dugdale Wharf, Crayford Creek, Crayford, Kent DA1 4QG
Tel.: 01322 359196 Fax: 01322 333095

W.I.F. CODE

S.I.C. CODE 41/201

No. 155448	<input type="checkbox"/> 17.01.01 CONCRETE
VEHICLE REGISTRATION NUMBER EU14 KPL	<input type="checkbox"/> 17.01.02 BRICKS
NAME OF PERSON IN CHARGE OF VEHICLE C. Whiteman	<input type="checkbox"/> 17.02.01 WOOD
WASTE HOLDER / DELIVERY ADDRESS Acorn Waste c/o Virador Wase Cef Enovort Century Wharf Crayford	<input type="checkbox"/> 17.03.02 TARMAC
TRANSFER ADDRESS enovort barling 41/201 Bal 80054	<input checked="" type="checkbox"/> 17.05.04 BRICKS & STONES-CLEAN MUCK AWAY
GROSS	<input type="checkbox"/> 17.01.07 MIXED CONCRETE & BRICKS-HARDCORE/RUBBLE
TARE	<input type="checkbox"/> 17.09.04 MIXED CONSTRUCTION & DEMOLITION HARDCORE/WOOD/PLASTIC/PLASTERBOARD
NET	<input type="checkbox"/> 20.02.01 GARDEN / PARK WASTE / TREE ROOTS
DESCRIPTION OF MATERIAL Inactive sub soil	<input type="checkbox"/> 20.03.01 MIXED HOUSEHOLD/COMMERCIAL/ INDUSTRIAL WASTE
DELIVERY DATE	<input type="checkbox"/> 16.01.02 WASTE TYRES
DELIVERY TIME	<input type="checkbox"/> 17.06.05 CONSTRUCTION MATERIALS CONTAINING ASBESTOS
	<input type="checkbox"/> 17.05.03 CONTAMINATED SOIL & STONE CONTAMINATED MUCK AWAY
	<input type="checkbox"/> 17.01.06 CONTAMINATED MIXED CONCRETE & BRICKS CONTAMINATED HARDCORE / RUBBLE

I declare that we have applied the Waste Management Hierarchy.

Signed by Driver

Signed on behalf of Customer

Date 4/4/18

PLEASE PRINT Raymond

Customers ordering vehicles off the public roads do so entirely at their own risk
Registered Waste Carrier No: CB/CN5216LT Control of Pollution Act (as amended) 1989



ANCHOR BAY COMMERCIALS

Dugdale Wharf, Crayford Creek, Crayford, Kent DA1 4QG
Tel.: 01322 359196 Fax: 01322 333095

W.I.F. CODE

S.I.C. CODE 41/201

No. 155251	<input type="checkbox"/> 17.01.01 CONCRETE
VEHICLE REGISTRATION NUMBER GL64 ELU	<input type="checkbox"/> 17.01.02 BRICKS
NAME OF PERSON IN CHARGE OF VEHICLE A. THORNS	<input type="checkbox"/> 17.02.01 WOOD
WASTE HOLDER / DELIVERY ADDRESS ENOVORT BARLING BA180054	<input type="checkbox"/> 17.03.02 TARMAC
TRANSFER ADDRESS ACORN WASTE C/O VIRADOR C/O ENOVORT CENTURY WHARF CRAYFORD DA1 4QG.	<input checked="" type="checkbox"/> 17.05.04 BRICKS & STONES-CLEAN MUCK AWAY
GROSS	<input type="checkbox"/> 17.01.07 MIXED CONCRETE & BRICKS-HARDCORE/RUBBLE
TARE	<input type="checkbox"/> 17.09.04 MIXED CONSTRUCTION & DEMOLITION HARDCORE/WOOD/PLASTIC/PLASTERBOARD
NET	<input type="checkbox"/> 20.02.01 GARDEN / PARK WASTE / TREE ROOTS
DESCRIPTION OF MATERIAL INACTIVE SUB SOIL	<input type="checkbox"/> 20.03.01 MIXED HOUSEHOLD/COMMERCIAL/ INDUSTRIAL WASTE
DELIVERY DATE	<input type="checkbox"/> 16.01.02 WASTE TYRES
DELIVERY TIME	<input type="checkbox"/> 17.06.05 CONSTRUCTION MATERIALS CONTAINING ASBESTOS
	<input type="checkbox"/> 17.05.03 CONTAMINATED SOIL & STONE CONTAMINATED MUCK AWAY
	<input type="checkbox"/> 17.01.06 CONTAMINATED MIXED CONCRETE & BRICKS CONTAMINATED HARDCORE / RUBBLE

I declare that we have applied the Waste Management Hierarchy.

Signed by Driver

Signed on behalf of Customer

Date 4/4/18

PLEASE PRINT C. Milton

Customers ordering vehicles off the public roads do so entirely at their own risk
Registered Waste Carrier No: CB/CN5216LT Control of Pollution Act (as amended) 1989



ANCHOR BAY COMMERCIALS

Dugdale Wharf, Crayford Creek, Crayford, Kent DA1 4QG
Tel.: 01322 359196 Fax: 01322 333095

W.I.F. CODE 17-05-04

S.I.C. CODE 412 01

No. 172057	<input type="checkbox"/> 17.01.01 CONCRETE
VEHICLE REGISTRATION NUMBER EU14-KPO	<input type="checkbox"/> 17.01.02 BRICKS
NAME OF PERSON IN CHARGE OF VEHICLE ANDY COLESS	<input type="checkbox"/> 17.02.01 WOOD
WASTE HOLDER / DELIVERY ADDRESS ACORN WASTE ENOVERT CENTURY WHARF CRAYFORD	<input type="checkbox"/> 17.03.02 TARMAC
TRANSFER ADDRESS ENOVERT BARLING ESSEX BA 180054	<input checked="" type="checkbox"/> 17.05.04 BRICKS & STONES-CLEAN MUCK AWAY
GROSS	<input type="checkbox"/> 17.01.07 MIXED CONCRETE & BRICKS-HARDCORE/RUBBLE
TARE	<input type="checkbox"/> 17.09.04 MIXED CONSTRUCTION & DEMOLITION HARDCORE/WOOD/PLASTIC/PLASTERBOARD
NET	<input type="checkbox"/> 20.02.01 GARDEN / PARK WASTE / TREE ROOTS
DESCRIPTION OF MATERIAL INACTIVE SUB SOIL	<input type="checkbox"/> 20.03.01 MIXED HOUSEHOLD/COMMERCIAL/ INDUSTRIAL WASTE
	<input type="checkbox"/> 16.01.02 WASTE TYRES
	<input type="checkbox"/> 17.06.05 CONSTRUCTION MATERIALS CONTAINING ASBESTOS
	<input type="checkbox"/> 17.05.03 CONTAMINATED SOIL & STONE CONTAMINATED MUCK AWAY
	<input type="checkbox"/> 17.01.06 CONTAMINATED MIXED CONCRETE & BRICKS CONTAMINATED HARDCORE / RUBBLE
	DESCRIPTION X 1 load away
	LOAD CAPACITY 8 wheeler.
	DELIVERY DATE
	DELIVERY TIME

I declare that we have applied the Waste Management Hierarchy.

Signed by Driver

Signed on behalf of Customer

Date 5-4-18

PLEASE PRINT

C m/jon

Customers ordering vehicles off the public roads do so entirely at their own risk

Registered Waste Carrier No: CBDN54572 Control of Pollution Act (as amended) 1989



ANCHOR BAY COMMERCIALS

Dugdale Wharf, Crayford Creek, Crayford, Kent DA1 4QG
Tel.: 01322 359196 Fax: 01322 333095

W.I.F. CODE

S.I.C. CODE 41/201

THURSDAY 5/4/18

No. 172257	<input type="checkbox"/> 17.01.01 CONCRETE
VEHICLE REGISTRATION NUMBER EXG1 DGU	<input type="checkbox"/> 17.01.02 BRICKS
NAME OF PERSON IN CHARGE OF VEHICLE MATT SMITH	<input type="checkbox"/> 17.02.01 WOOD
WASTE HOLDER / DELIVERY ADDRESS ACORN WASTE COF VENADOR WASTE COF ENOVERT CENTURY WHARF CRAYFORD	<input type="checkbox"/> 17.03.02 TARMAC
TRANSFER ADDRESS ENOVERT BARLING	<input checked="" type="checkbox"/> 17.05.04 BRICKS & STONES-CLEAN MUCK AWAY
GROSS	<input type="checkbox"/> 17.01.07 MIXED CONCRETE & BRICKS-HARDCORE/RUBBLE
TARE	<input type="checkbox"/> 17.09.04 MIXED CONSTRUCTION & DEMOLITION HARDCORE/WOOD/PLASTIC/PLASTERBOARD
NET	<input type="checkbox"/> 20.02.01 GARDEN / PARK WASTE / TREE ROOTS
DESCRIPTION OF MATERIAL INACTIVE SUB SOIL	<input type="checkbox"/> 20.03.01 MIXED HOUSEHOLD/COMMERCIAL/ INDUSTRIAL WASTE
	<input type="checkbox"/> 16.01.02 WASTE TYRES
	<input type="checkbox"/> 17.06.05 CONSTRUCTION MATERIALS CONTAINING ASBESTOS
	<input type="checkbox"/> 17.05.03 CONTAMINATED SOIL & STONE CONTAMINATED MUCK AWAY
	<input type="checkbox"/> 17.01.06 CONTAMINATED MIXED CONCRETE & BRICKS CONTAMINATED HARDCORE / RUBBLE
	DESCRIPTION
	LOAD CAPACITY 15m ³
	DELIVERY DATE 5/4/18
	DELIVERY TIME

I declare that we have applied the Waste Management Hierarchy.

Signed by Driver

Signed on behalf of Customer

Date 5/4/18

PLEASE PRINT

C m/jon

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CONTROLLED WASTE TRANSFER NOTE

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No. 155449	<input type="checkbox"/> 17.01.01 CONCRETE
VEHICLE REGISTRATION NUMBER EU14 KPL	<input type="checkbox"/> 17.01.02 BRICKS
NAME OF PERSON IN CHARGE OF VEHICLE C Whiteman	<input type="checkbox"/> 17.02.01 WOOD
WASTE HOLDER / DELIVERY ADDRESS A corn waste of virador waste of enover century wharf Crayford	<input type="checkbox"/> 17.03.02 TARMAC
TRANSFER ADDRESS enover barling BA180054	<input checked="" type="checkbox"/> 17.05.04 BRICKS & STONES-CLEAN MUCK AWAY
GROSS	<input type="checkbox"/> 17.01.07 MIXED CONCRETE & BRICKS-HARDCORE/RUBBLE
TARE	<input type="checkbox"/> 17.09.04 MIXED CONSTRUCTION & DEMOLITION HARDCORE/WOOD/PLASTIC/PLASTERBOARD
NET	<input type="checkbox"/> 20.02.01 GARDEN / PARK WASTE / TREE ROOTS
DESCRIPTION OF MATERIAL Inactive Sub Soil	<input type="checkbox"/> 20.03.01 MIXED HOUSEHOLD/COMMERCIAL/ INDUSTRIAL WASTE
	<input type="checkbox"/> 16.01.02 WASTE TYRES
	<input type="checkbox"/> 17.06.05 CONSTRUCTION MATERIALS CONTAINING ASBESTOS
	<input type="checkbox"/> 17.05.03 CONTAMINATED SOIL & STONE CONTAMINATED MUCK AWAY
	<input type="checkbox"/> 17.01.06 CONTAMINATED MIXED CONCRETE & BRICKS CONTAMINATED HARDCORE / RUBBLE
	DESCRIPTION
	LOAD CAPACITY
	DELIVERY DATE
	DELIVERY TIME

I declare that we have applied the Waste Management Hierarchy.

Signed by Driver

Signed on behalf of Customer

Date 5.4.18

PLEASE PRINT

G. mitch

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Registered Waste Carrier No: CB/CN5216LT Control of Pollution Act (as amended) 1989

CONVEYANCE/CONTROLLED WASTE TRANSFER NOTE



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W.I.F. CODE 17-05-04

S.I.C. CODE 41 201

No. 172053	<input type="checkbox"/> 17.01.01 CONCRETE
VEHICLE REGISTRATION NUMBER EU14-KPO	<input type="checkbox"/> 17.01.02 BRICKS
NAME OF PERSON IN CHARGE OF VEHICLE ANDY Carless	<input type="checkbox"/> 17.02.01 WOOD
WASTE HOLDER / DELIVERY ADDRESS Acorn waste enover Century Wharf Crayford	<input type="checkbox"/> 17.03.02 TARMAC
TRANSFER ADDRESS enover Barling Essex BA180054	<input checked="" type="checkbox"/> 17.05.04 BRICKS & STONES-CLEAN MUCK AWAY
GROSS	<input type="checkbox"/> 17.01.07 MIXED CONCRETE & BRICKS-HARDCORE/RUBBLE
TARE	<input type="checkbox"/> 17.09.04 MIXED CONSTRUCTION & DEMOLITION HARDCORE/WOOD/PLASTIC/PLASTERBOARD
NET	<input type="checkbox"/> 20.02.01 GARDEN / PARK WASTE / TREE ROOTS
DESCRIPTION OF MATERIAL INACTIVE sub soil	<input type="checkbox"/> 20.03.01 MIXED HOUSEHOLD/COMMERCIAL/ INDUSTRIAL WASTE
	<input type="checkbox"/> 16.01.02 WASTE TYRES
	<input type="checkbox"/> 17.06.05 CONSTRUCTION MATERIALS CONTAINING ASBESTOS
	<input type="checkbox"/> 17.05.03 CONTAMINATED SOIL & STONE CONTAMINATED MUCK AWAY
	<input type="checkbox"/> 17.01.06 CONTAMINATED MIXED CONCRETE & BRICKS CONTAMINATED HARDCORE / RUBBLE
	DESCRIPTION X 1 load AWAY
	LOAD CAPACITY 8 wheeler.
	DELIVERY DATE
	DELIVERY TIME

I declare that we have applied the Waste Management Hierarchy.

Signed by Driver

Signed on behalf of Customer

Date 5-4-18

PLEASE PRINT

G. mitch

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Registered Waste Carrier No: CBDN54572 Control of Pollution Act (as amended) 1989



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S.I.C. CODE 41/201

No. 172259	<input type="checkbox"/> 17.01.01 CONCRETE
VEHICLE REGISTRATION NUMBER EX 61 DGU	<input type="checkbox"/> 17.01.02 BRICKS
NAME OF PERSON IN CHARGE OF VEHICLE MATT SMITH	<input type="checkbox"/> 17.02.01 WOOD
WASTE HOLDER / DELIVERY ADDRESS ACORN WASTE CO VIRADOR CRAYFORD CREEK DARTFORD	<input type="checkbox"/> 17.03.02 TARMAC
TRANSFER ADDRESS ENOVERT BARLING	<input checked="" type="checkbox"/> 17.05.04 BRICKS & STONES-CLEAN MUCK AWAY
BA1800SG	<input type="checkbox"/> 17.01.07 MIXED CONCRETE & BRICKS-HARDCORE/RUBBLE
GROSS	<input type="checkbox"/> 17.09.04 MIXED CONSTRUCTION & DEMOLITION HARDCORE/WOOD/PLASTIC/PLASTERBOARD
TARE	<input type="checkbox"/> 20.02.01 GARDEN / PARK WASTE / TREE ROOTS
NET	<input type="checkbox"/> 20.03.01 MIXED HOUSEHOLD/COMMERCIAL/ INDUSTRIAL WASTE
DESCRIPTION OF MATERIAL SUB SOIL 0.1% ASBESTOS	<input type="checkbox"/> 16.01.02 WASTE TYRES
DELIVERY DATE 7/4/18	<input type="checkbox"/> 17.06.05 CONSTRUCTION MATERIALS CONTAINING ASBESTOS
DELIVERY TIME	<input type="checkbox"/> 17.05.03 CONTAMINATED SOIL & STONE CONTAMINATED MUCK AWAY
	<input type="checkbox"/> 17.01.06 CONTAMINATED MIXED CONCRETE & BRICKS CONTAMINATED HARDCORE / RUBBLE

I declare that we have applied the Waste Management Hierarchy.

Signed by Driver [Signature] Signed on behalf of Customer [Signature]

Date 7/4/18 PLEASE PRINT C m/j

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Registered Waste Carrier No: CBDN54572 Control of Pollution Act (as amended) 1989

6/4/18
FRIDAY

(S)



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S.I.C. CODE 41/201

No. 155252	<input type="checkbox"/> 17.01.01 CONCRETE
VEHICLE REGISTRATION NUMBER G164 ELU	<input type="checkbox"/> 17.01.02 BRICKS
NAME OF PERSON IN CHARGE OF VEHICLE A. THORNTON	<input type="checkbox"/> 17.02.01 WOOD
WASTE HOLDER / DELIVERY ADDRESS ENOVERT, BARLING BA1800SG	<input type="checkbox"/> 17.03.02 TARMAC
TRANSFER ADDRESS ACORN WASTE C/O VIRADOR CRAYFORD CREEK CRAYFORD	<input checked="" type="checkbox"/> 17.05.04 BRICKS & STONES-CLEAN MUCK AWAY
GROSS	<input type="checkbox"/> 17.01.07 MIXED CONCRETE & BRICKS-HARDCORE/RUBBLE
TARE	<input type="checkbox"/> 17.09.04 MIXED CONSTRUCTION & DEMOLITION HARDCORE/WOOD/PLASTIC/PLASTERBOARD
NET	<input type="checkbox"/> 20.02.01 GARDEN / PARK WASTE / TREE ROOTS
DESCRIPTION OF MATERIAL SUB SOIL INVERT	<input type="checkbox"/> 20.03.01 MIXED HOUSEHOLD/COMMERCIAL/ INDUSTRIAL WASTE
DELIVERY DATE	<input type="checkbox"/> 16.01.02 WASTE TYRES
DELIVERY TIME	<input type="checkbox"/> 17.05.05 CONSTRUCTION MATERIALS CONTAINING ASBESTOS
	<input type="checkbox"/> 17.05.03 CONTAMINATED SOIL & STONE CONTAMINATED MUCK AWAY
	<input type="checkbox"/> 17.01.06 CONTAMINATED MIXED CONCRETE & BRICKS CONTAMINATED HARDCORE / RUBBLE

I declare that we have applied the Waste Management Hierarchy.

Signed by Driver [Signature] Signed on behalf of Customer [Signature]

Date 6/4/18 PLEASE PRINT C m/j

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S.I.C. CODE 41/20/1

No. 181176	<input type="checkbox"/> 17.01.01 CONCRETE
VEHICLE REGISTRATION NUMBER EY18 HBD	<input type="checkbox"/> 17.01.02 BRICKS
NAME OF PERSON IN CHARGE OF VEHICLE P. WOODRUFF	<input type="checkbox"/> 17.02.01 WOOD
WASTE HOLDER / DELIVERY ADDRESS CRAYFORD MATERIAL W/12.001 CRAYFORD CREEK, CANTONERS	<input type="checkbox"/> 17.03.02 TARMAC S.I. Asbestos
TRANSFER ADDRESS G. B.O. ACOON WASTE 1 INVERT BARLING	<input checked="" type="checkbox"/> 17.05.04 BRICKS & STONES-CLEAN MUCK AWAY
GROSS	<input type="checkbox"/> 17.01.07 MIXED CONCRETE & BRICKS-HARDCORE/RUBBLE
TARE	<input type="checkbox"/> 17.09.04 MIXED CONSTRUCTION & DEMOLITION HARDCORE/WOOD/PLASTIC/PLASTERBOARD
NET	<input type="checkbox"/> 20.02.01 GARDEN / PARK WASTE / TREE ROOTS
DESCRIPTION OF MATERIAL 1 load	<input type="checkbox"/> 20.03.01 MIXED HOUSEHOLD/COMMERCIAL/ INDUSTRIAL WASTE
DELIVERY DATE	<input type="checkbox"/> 16.01.02 WASTE TYRES
DELIVERY TIME	<input type="checkbox"/> 17.06.05 CONSTRUCTION MATERIALS CONTAINING ASBESTOS
	<input type="checkbox"/> 17.05.03 CONTAMINATED SOIL & STONE CONTAMINATED MUCK AWAY
	<input type="checkbox"/> 17.01.06 CONTAMINATED MIXED CONCRETE & BRICKS CONTAMINATED HARDCORE / RUBBLE

BA180056
Subsoil c/w Asbestos
0.1%

I declare that we have applied the Waste Management Hierarchy.

Signed by Driver

Signed on behalf of Customer

Date **6-4-18**

PLEASE PRINT

C. mifon

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W.I.F. CODE

S.I.C. CODE 4120/1

No. 153643	<input type="checkbox"/> 17.01.01 CONCRETE
VEHICLE REGISTRATION NUMBER EU16 GVL	<input type="checkbox"/> 17.01.02 BRICKS
NAME OF PERSON IN CHARGE OF VEHICLE KEITH ABC	<input type="checkbox"/> 17.02.01 WOOD
WASTE HOLDER / DELIVERY ADDRESS ACORN WASTE TO CRAYFORD MATERIAL RECYCLING VIRIDIAN CRAYFORD CREEK DARTFORD DA14EG	<input type="checkbox"/> 17.03.02 TARMAC
TRANSFER ADDRESS ENGLISH BARLING BA180056	<input checked="" type="checkbox"/> 17.05.04 BRICKS & STONES-CLEAN MUCK AWAY
GROSS	<input type="checkbox"/> 17.01.07 MIXED CONCRETE & BRICKS-HARDCORE/RUBBLE
TARE	<input type="checkbox"/> 17.09.04 MIXED CONSTRUCTION & DEMOLITION HARDCORE/WOOD/PLASTIC/PLASTERBOARD
NET	<input type="checkbox"/> 20.02.01 GARDEN / PARK WASTE / TREE ROOTS
DESCRIPTION OF MATERIAL Subsoil c/w 0.1% Asbestos	<input type="checkbox"/> 20.03.01 MIXED HOUSEHOLD/COMMERCIAL/ INDUSTRIAL WASTE
DELIVERY DATE	<input type="checkbox"/> 16.01.02 WASTE TYRES
DELIVERY TIME	<input type="checkbox"/> 17.06.05 CONSTRUCTION MATERIALS CONTAINING ASBESTOS
	<input type="checkbox"/> 17.05.03 CONTAMINATED SOIL & STONE CONTAMINATED MUCK AWAY
	<input type="checkbox"/> 17.01.06 CONTAMINATED MIXED CONCRETE & BRICKS CONTAMINATED HARDCORE / RUBBLE

1 LOAD

I declare that we have applied the Waste Management Hierarchy.

Signed by Driver

Signed on behalf of Customer

Date **6-4-2018**

PLEASE PRINT

C. mifon

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S.I.C. CODE 41/201

No. 155370	<input type="checkbox"/> 17.01.01 CONCRETE
VEHICLE REGISTRATION NUMBER EUB3EXH	<input type="checkbox"/> 17.01.02 BRICKS
NAME OF PERSON IN CHARGE OF VEHICLE Sam Cooper	<input type="checkbox"/> 17.02.01 WOOD
WASTE HOLDER / DELIVERY ADDRESS Acorn waste C/O Clansford VIZI DOE Clansford Creek	<input type="checkbox"/> 17.03.02 TARMAC
TRANSFER ADDRESS IXload West Awan Berina	<input checked="" type="checkbox"/> 17.05.04 BRICKS & STONES-CLEAN MUCK AWAY
GROSS	<input type="checkbox"/> 17.01.07 MIXED CONCRETE & BRICKS-HARDCORE/RUBBLE
TARE	<input type="checkbox"/> 17.09.04 MIXED CONSTRUCTION & DEMOLITION HARDCORE/WOOD/PLASTIC/PLASTERBOARD
NET BA180054	<input type="checkbox"/> 20.02.01 GARDEN / PARK WASTE / TREE ROOTS
DESCRIPTION OF MATERIAL BA180056	<input type="checkbox"/> 20.03.01 MIXED HOUSEHOLD/COMMERCIAL/ INDUSTRIAL WASTE
LOAD CAPACITY 15	<input type="checkbox"/> 16.01.02 WASTE TYRES
DELIVERY DATE	<input type="checkbox"/> 17.06.05 CONSTRUCTION MATERIALS CONTAINING ASBESTOS
DELIVERY TIME	<input type="checkbox"/> 17.05.03 CONTAMINATED SOIL & STONE CONTAMINATED MUCK AWAY
	<input type="checkbox"/> 17.01.06 CONTAMINATED MIXED CONCRETE & BRICKS CONTAMINATED HARDCORE / RUBBLE

I declare that we have applied the Waste Management Hierarchy.

Signed by Driver

Signed on behalf of Customer

Date

9-4-18

PLEASE PRINT

[Signature]
C MJA

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Registered Waste Carrier No: CB/CN5216LT Control of Pollution Act (as amended) 1989

CONVEYANCE/CONTROLLED WASTE TRANSFER NOTE



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S.I.C. CODE 41/201

09/04/18
Mond

Acorn waste
MATERIAL RECYCLING
VICI DOE CRAYFORD
CRICK DARTFORD

SO. 19/2 ASBESTOS
INERT

No. 184400	<input type="checkbox"/> 17.01.01 CONCRETE
VEHICLE REGISTRATION NUMBER EV16SUS	<input type="checkbox"/> 17.01.02 BRICKS
NAME OF PERSON IN CHARGE OF VEHICLE E. HUNT	<input type="checkbox"/> 17.02.01 WOOD
WASTE HOLDER / DELIVERY ADDRESS Acorn waste C/O Clansford VIZI DOE CRAYFORD CRICK DARTFORD	<input type="checkbox"/> 17.03.02 TARMAC
TRANSFER ADDRESS ENOURET BARLING BA180056	<input checked="" type="checkbox"/> 17.05.04 BRICKS & STONES-CLEAN MUCK AWAY
GROSS	<input type="checkbox"/> 17.01.07 MIXED CONCRETE & BRICKS-HARDCORE/RUBBLE
TARE	<input type="checkbox"/> 17.09.04 MIXED CONSTRUCTION & DEMOLITION HARDCORE/WOOD/PLASTIC/PLASTERBOARD
NET SUB SOIL clw	<input type="checkbox"/> 20.02.01 GARDEN / PARK WASTE / TREE ROOTS
DESCRIPTION OF MATERIAL SO. 19/2 ASBESTOS INERT	<input type="checkbox"/> 20.03.01 MIXED HOUSEHOLD/COMMERCIAL/ INDUSTRIAL WASTE
LOAD CAPACITY	<input type="checkbox"/> 16.01.02 WASTE TYRES
DELIVERY DATE	<input type="checkbox"/> 17.06.05 CONSTRUCTION MATERIALS CONTAINING ASBESTOS
DELIVERY TIME	<input type="checkbox"/> 17.05.03 CONTAMINATED SOIL & STONE CONTAMINATED MUCK AWAY
	<input type="checkbox"/> 17.01.06 CONTAMINATED MIXED CONCRETE & BRICKS CONTAMINATED HARDCORE / RUBBLE

I declare that we have applied the Waste Management Hierarchy.

Signed by Driver

Signed on behalf of Customer

Date

9/4/18

PLEASE PRINT

[Signature]
KEVIN

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Registered Waste Carrier No: CBDN54572 Control of Pollution Act (as amended) 1989

CONVEYANCE/CONTROLLED WASTE TRANSFER NOTE



ANCHOR BAY COMMERCIALS

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S.I.C. CODE 4/201

No. 163770		<input type="checkbox"/> 17.01.01 CONCRETE
VEHICLE REGISTRATION NUMBER EU14 KPN		<input type="checkbox"/> 17.01.02 BRICKS
NAME OF PERSON IN CHARGE OF VEHICLE Ben Colegate		<input type="checkbox"/> 17.02.01 WOOD
WASTE HOLDER / DELIVERY ADDRESS acorn waste co Crayford materials recycling Crayford Creek Dartford		<input type="checkbox"/> 17.03.02 TARMAC
TRANSFER ADDRESS Barling BA18 056 EWC 17054		<input checked="" type="checkbox"/> 17.05.04 BRICKS & STONES-CLEAN MUCK AWAY
		<input type="checkbox"/> 17.01.07 MIXED CONCRETE & BRICKS-HARDCORE/RUBBLE
		<input type="checkbox"/> 17.09.04 MIXED CONSTRUCTION & DEMOLITION HARDCORE/WOOD/PLASTIC/PLASTERBOARD
		<input type="checkbox"/> 20.02.01 GARDEN / PARK WASTE / TREE ROOTS
		<input type="checkbox"/> 20.03.01 MIXED HOUSEHOLD/COMMERCIAL/ INDUSTRIAL WASTE
		<input type="checkbox"/> 16.01.02 WASTE TYRES
		<input type="checkbox"/> 17.06.05 CONSTRUCTION MATERIALS CONTAINING ASBESTOS
		<input type="checkbox"/> 17.05.03 CONTAMINATED SOIL & STONE CONTAMINATED MUCK AWAY
		<input type="checkbox"/> 17.01.06 CONTAMINATED MIXED CONCRETE & BRICKS CONTAMINATED HARDCORE / RUBBLE
GROSS		
TARE	DESCRIPTION inert Soil + Stone	
NET	LOAD CAPACITY	
DESCRIPTION OF MATERIAL inert soil + stone	DELIVERY DATE 9/4/18	DELIVERY TIME

I declare that we have applied the Waste Management Hierarchy.

Signed by Driver

Signed on behalf of Customer

Date **9/4/18**

PLEASE PRINT

C. Myer

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 Registered Waste Carrier No: CBDN54572 Control of Pollution Act (as amended) 1989



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Tel.: 01322 359196 Fax: 01322 333095

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S.I.C. CODE 41/201

No. 163771	<input type="checkbox"/> 17.01.01 CONCRETE
VEHICLE REGISTRATION NUMBER EU14 KPN	<input type="checkbox"/> 17.01.02 BRICKS
NAME OF PERSON IN CHARGE OF VEHICLE Ben Colegate	<input type="checkbox"/> 17.02.01 WOOD
WASTE HOLDER / DELIVERY ADDRESS Acorn Waste c/o Crayford Materials Recycling Crayford Creek Dartford	<input type="checkbox"/> 17.03.02 TARMAC
TRANSFER ADDRESS Barling BA180056 EWC 17054	<input checked="" type="checkbox"/> 17.05.04 BRICKS & STONES-CLEAN MUCK AWAY
	<input type="checkbox"/> 17.01.07 MIXED CONCRETE & BRICKS-HARDCORE/RUBBLE
	<input type="checkbox"/> 17.09.04 MIXED CONSTRUCTION & DEMOLITION HARDCORE/WOOD/PLASTIC/PLASTERBOARD
	<input type="checkbox"/> 20.02.01 GARDEN / PARK WASTE / TREE ROOTS
	<input type="checkbox"/> 20.03.01 MIXED HOUSEHOLD/COMMERCIAL/ INDUSTRIAL WASTE
	<input type="checkbox"/> 16.01.02 WASTE TYRES
	<input type="checkbox"/> 17.06.05 CONSTRUCTION MATERIALS CONTAINING ASBESTOS
	<input type="checkbox"/> 17.05.03 CONTAMINATED SOIL & STONE CONTAMINATED MUCK AWAY
	<input type="checkbox"/> 17.01.06 CONTAMINATED MIXED CONCRETE & BRICKS CONTAMINATED HARDCORE / RUBBLE
GROSS	DESCRIPTION
TARE Sub Soil etc	LOAD CAPACITY
NET < 0.1% Asbestos	DELIVERY DATE
DESCRIPTION OF MATERIAL	DELIVERY TIME

I declare that we have applied the Waste Management Hierarchy.

Signed by Driver

Signed on behalf of Customer

Date 10/4/18

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Registered Waste Carrier No: CBDN54572 Control of Pollution Act (as amended) 1989

CONVEYANCE/CONTROLLED WASTE TRANSFER NOTE



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BA 180056 S.I.C. CODE 41/201

No. 171705	<input type="checkbox"/> 17.01.01 CONCRETE
VEHICLE REGISTRATION NUMBER EU16 GVM	<input type="checkbox"/> 17.01.02 BRICKS
NAME OF PERSON IN CHARGE OF VEHICLE Jim Wilson	<input type="checkbox"/> 17.02.01 WOOD
WASTE HOLDER / DELIVERY ADDRESS Acorn Waste/Crayford Recycling Material Under Crayford Creek Dartford	<input type="checkbox"/> 17.03.02 TARMAC
TRANSFER ADDRESS Barling tip Essex	<input checked="" type="checkbox"/> 17.05.04 BRICKS & STONES-CLEAN MUCK AWAY
	<input type="checkbox"/> 17.01.07 MIXED CONCRETE & BRICKS-HARDCORE/RUBBLE
	<input type="checkbox"/> 17.09.04 MIXED CONSTRUCTION & DEMOLITION HARDCORE/WOOD/PLASTIC/PLASTERBOARD
	<input type="checkbox"/> 20.02.01 GARDEN / PARK WASTE / TREE ROOTS
	<input type="checkbox"/> 20.03.01 MIXED HOUSEHOLD/COMMERCIAL/ INDUSTRIAL WASTE
	<input type="checkbox"/> 16.01.02 WASTE TYRES
	<input type="checkbox"/> 17.06.05 CONSTRUCTION MATERIALS CONTAINING ASBESTOS
	<input type="checkbox"/> 17.05.03 CONTAMINATED SOIL & STONE CONTAMINATED MUCK AWAY
	<input type="checkbox"/> 17.01.06 CONTAMINATED MIXED CONCRETE & BRICKS CONTAMINATED HARDCORE / RUBBLE
GROSS 1 load	DESCRIPTION
TARE	LOAD CAPACITY
NET	DELIVERY DATE
DESCRIPTION OF MATERIAL INSTR ALTA	DELIVERY TIME

I declare that we have applied the Waste Management Hierarchy.

Signed by Driver

Signed on behalf of Customer

Date 10-4-18

PLEASE PRINT

Customers ordering vehicles off the public roads do so entirely at their own risk

Registered Waste Carrier No: CBDN54572 Control of Pollution Act (as amended) 1989



ANCHOR BAY COMMERCIALS

Dugdale Wharf, Crayford Creek, Crayford, Kent DA1 4QG
Tel.: 01322 359196 Fax: 01322 333095

W.I.F. CODE

S.I.C. CODE 41/201

No. 172002	<input type="checkbox"/> 17.01.01 CONCRETE
VEHICLE REGISTRATION NUMBER EUI69W	<input type="checkbox"/> 17.01.02 BRICKS
NAME OF PERSON IN CHARGE OF VEHICLE E HUNT	<input type="checkbox"/> 17.02.01 WOOD
WASTE HOLDER / DELIVERY ADDRESS ACORN WASTE C/O CRAYFORD MATERIAL RECYCLING UNIT CRAYFORD CREEK DARTFORD	<input type="checkbox"/> 17.03.02 TARMAC
TRANSFER ADDRESS ENOUBRT BARLING BA 180056	<input checked="" type="checkbox"/> 17.05.04 BRICKS & STONES-CLEAN MUCK AWAY
GROSS	<input type="checkbox"/> 17.01.07 MIXED CONCRETE & BRICKS-HARDCORE/RUBBLE
TARE Sub Soil c/w	<input type="checkbox"/> 17.09.04 MIXED CONSTRUCTION & DEMOLITION HARDCORE/WOOD/PLASTIC/PLASTERBOARD
NET < 0.1% Asbestos	<input type="checkbox"/> 20.02.01 GARDEN / PARK WASTE / TREE ROOTS
DESCRIPTION OF MATERIAL INERT	<input type="checkbox"/> 20.03.01 MIXED HOUSEHOLD/COMMERCIAL/ INDUSTRIAL WASTE
DELIVERY DATE 10/4/18	<input type="checkbox"/> 16.01.02 WASTE TYRES
DELIVERY TIME	<input type="checkbox"/> 17.06.05 CONSTRUCTION MATERIALS CONTAINING ASBESTOS
	<input type="checkbox"/> 17.05.03 CONTAMINATED SOIL & STONE CONTAMINATED MUCK AWAY
	<input type="checkbox"/> 17.01.06 CONTAMINATED MIXED CONCRETE & BRICKS CONTAMINATED HARDCORE / RUBBLE

I declare that we have applied the Waste Management Hierarchy.

Signed by Driver: *E Hunt* Signed on behalf of Customer: *A Ryan*

Date: 10/4/18 PLEASE PRINT

Customers ordering vehicles off the public roads do so entirely at their own risk
Registered Waste Carrier No: CBDN54572 Control of Pollution Act (as amended) 1989

CONVEYANCE/CONTROLLED WASTE TRANSFER NOTE



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W.I.F. CODE

S.I.C. CODE 41/201

No. 163772	<input type="checkbox"/> 17.01.01 CONCRETE
VEHICLE REGISTRATION NUMBER EUI4 LPU	<input type="checkbox"/> 17.01.02 BRICKS
NAME OF PERSON IN CHARGE OF VEHICLE Ben Colegate	<input type="checkbox"/> 17.02.01 WOOD
WASTE HOLDER / DELIVERY ADDRESS Acorn Waste of Crayford Materials Recycling Crayford Creek Dartford	<input type="checkbox"/> 17.03.02 TARMAC
TRANSFER ADDRESS Barling BA 180056 EWC 17054	<input checked="" type="checkbox"/> 17.05.04 BRICKS & STONES-CLEAN MUCK AWAY
GROSS	<input type="checkbox"/> 17.01.07 MIXED CONCRETE & BRICKS-HARDCORE/RUBBLE
TARE Sub Soil c/w	<input type="checkbox"/> 17.09.04 MIXED CONSTRUCTION & DEMOLITION HARDCORE/WOOD/PLASTIC/PLASTERBOARD
NET < 0.1% Asbestos	<input type="checkbox"/> 20.02.01 GARDEN / PARK WASTE / TREE ROOTS
DESCRIPTION OF MATERIAL	<input type="checkbox"/> 20.03.01 MIXED HOUSEHOLD/COMMERCIAL/ INDUSTRIAL WASTE
DELIVERY DATE	<input type="checkbox"/> 16.01.02 WASTE TYRES
DELIVERY TIME	<input type="checkbox"/> 17.06.05 CONSTRUCTION MATERIALS CONTAINING ASBESTOS
	<input type="checkbox"/> 17.05.03 CONTAMINATED SOIL & STONE CONTAMINATED MUCK AWAY
	<input type="checkbox"/> 17.01.06 CONTAMINATED MIXED CONCRETE & BRICKS CONTAMINATED HARDCORE / RUBBLE

I declare that we have applied the Waste Management Hierarchy.

Signed by Driver: *Ben Colegate* Signed on behalf of Customer: *A Ryan*

Date: 10/4/18 PLEASE PRINT

Customers ordering vehicles off the public roads do so entirely at their own risk
Registered Waste Carrier No: CBDN54572 Control of Pollution Act (as amended) 1989



ANCHOR BAY COMMERCIALS

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S.I.C. CODE 41/201

No. 172002	<input type="checkbox"/> 17.01.01 CONCRETE
VEHICLE REGISTRATION NUMBER EUI69W	<input type="checkbox"/> 17.01.02 BRICKS
NAME OF PERSON IN CHARGE OF VEHICLE E HUNT	<input type="checkbox"/> 17.02.01 WOOD
WASTE HOLDER / DELIVERY ADDRESS ACORN WASTE C/O CRAYFORD MATERIAL RECYCLING UNIT CRAYFORD CREEK DARTFORD	<input type="checkbox"/> 17.03.02 TARMAC
TRANSFER ADDRESS ENOUBRT BARLING BA 180056	<input checked="" type="checkbox"/> 17.05.04 BRICKS & STONES-CLEAN MUCK AWAY
GROSS	<input type="checkbox"/> 17.01.07 MIXED CONCRETE & BRICKS-HARDCORE/RUBBLE
TARE Sub Soil c/w	<input type="checkbox"/> 17.09.04 MIXED CONSTRUCTION & DEMOLITION HARDCORE/WOOD/PLASTIC/PLASTERBOARD
NET < 0.1% Asbestos	<input type="checkbox"/> 20.02.01 GARDEN / PARK WASTE / TREE ROOTS
DESCRIPTION OF MATERIAL INERT	<input type="checkbox"/> 20.03.01 MIXED HOUSEHOLD/COMMERCIAL/ INDUSTRIAL WASTE
DELIVERY DATE 10/4/18	<input type="checkbox"/> 16.01.02 WASTE TYRES
DELIVERY TIME	<input type="checkbox"/> 17.06.05 CONSTRUCTION MATERIALS CONTAINING ASBESTOS
	<input type="checkbox"/> 17.05.03 CONTAMINATED SOIL & STONE CONTAMINATED MUCK AWAY
	<input type="checkbox"/> 17.01.06 CONTAMINATED MIXED CONCRETE & BRICKS CONTAMINATED HARDCORE / RUBBLE

I declare that we have applied the Waste Management Hierarchy.

Signed by Driver: *E Hunt* Signed on behalf of Customer: *A Ryan*

Date: 10/4/18 PLEASE PRINT

Customers ordering vehicles off the public roads do so entirely at their own risk
Registered Waste Carrier No: CBDN54572 Control of Pollution Act (as amended) 1989

CONVEYANCE/CONTROLLED WASTE TRANSFER NOTE



ANCHOR BAY COMMERCIALS

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Tel.: 01322 359196 Fax: 01322 333095

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S.I.C. CODE 41/201

No. 163772	<input type="checkbox"/> 17.01.01 CONCRETE
VEHICLE REGISTRATION NUMBER EUI4 LPU	<input type="checkbox"/> 17.01.02 BRICKS
NAME OF PERSON IN CHARGE OF VEHICLE Ben Colegate	<input type="checkbox"/> 17.02.01 WOOD
WASTE HOLDER / DELIVERY ADDRESS Acorn Waste of Crayford Materials Recycling Crayford Creek Dartford	<input type="checkbox"/> 17.03.02 TARMAC
TRANSFER ADDRESS Barling BA 180056 EWC 17054	<input checked="" type="checkbox"/> 17.05.04 BRICKS & STONES-CLEAN MUCK AWAY
GROSS	<input type="checkbox"/> 17.01.07 MIXED CONCRETE & BRICKS-HARDCORE/RUBBLE
TARE Sub Soil c/w	<input type="checkbox"/> 17.09.04 MIXED CONSTRUCTION & DEMOLITION HARDCORE/WOOD/PLASTIC/PLASTERBOARD
NET < 0.1% Asbestos	<input type="checkbox"/> 20.02.01 GARDEN / PARK WASTE / TREE ROOTS
DESCRIPTION OF MATERIAL	<input type="checkbox"/> 20.03.01 MIXED HOUSEHOLD/COMMERCIAL/ INDUSTRIAL WASTE
DELIVERY DATE	<input type="checkbox"/> 16.01.02 WASTE TYRES
DELIVERY TIME	<input type="checkbox"/> 17.06.05 CONSTRUCTION MATERIALS CONTAINING ASBESTOS
	<input type="checkbox"/> 17.05.03 CONTAMINATED SOIL & STONE CONTAMINATED MUCK AWAY
	<input type="checkbox"/> 17.01.06 CONTAMINATED MIXED CONCRETE & BRICKS CONTAMINATED HARDCORE / RUBBLE

I declare that we have applied the Waste Management Hierarchy.

Signed by Driver: *Ben Colegate* Signed on behalf of Customer: *A Ryan*

Date: 10/4/18 PLEASE PRINT

Customers ordering vehicles off the public roads do so entirely at their own risk
Registered Waste Carrier No: CBDN54572 Control of Pollution Act (as amended) 1989

CONVEYANCE/CONTROLLED WASTE TRANSFER NOTE



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S.I.C. CODE 4120/1

No. 153649	<input type="checkbox"/> 17.01.01 CONCRETE
VEHICLE REGISTRATION NUMBER EU16 GVL	<input type="checkbox"/> 17.01.02 BRICKS
NAME OF PERSON IN CHARGE OF VEHICLE KEVIN ABC	<input type="checkbox"/> 17.02.01 WOOD
WASTE HOLDER / DELIVERY ADDRESS ACORN WASTE CLOCKED MATERIAL KEY CHARLTON BRIDGE DUGDALE DA14QG	<input type="checkbox"/> 17.03.02 TARMAC
TRANSFER ADDRESS ENOVERT BARLING BA 180056	<input checked="" type="checkbox"/> 17.05.04 BRICKS & STONES-CLEAN MUCK AWAY
GROSS	<input type="checkbox"/> 17.01.07 MIXED CONCRETE & BRICKS-HARDCORE/RUBBLE
TARE	<input type="checkbox"/> 17.09.04 MIXED CONSTRUCTION & DEMOLITION HARDCORE/WOOD/PLASTIC/PLASTERBOARD
NET	<input type="checkbox"/> 20.02.01 GARDEN / PARK WASTE / TREE ROOTS
DESCRIPTION OF MATERIAL SUBSOIL 4W 0.1% HASTONES	<input type="checkbox"/> 20.03.01 MIXED HOUSEHOLD/COMMERCIAL/ INDUSTRIAL WASTE
DELIVERY DATE 11-4-18	<input type="checkbox"/> 16.01.02 WASTE TYRES
DELIVERY TIME	<input type="checkbox"/> 17.06.05 CONSTRUCTION MATERIALS CONTAINING ASBESTOS
	<input type="checkbox"/> 17.05.03 CONTAMINATED SOIL & STONE CONTAMINATED MUCK AWAY
	<input type="checkbox"/> 17.01.06 CONTAMINATED MIXED CONCRETE & BRICKS CONTAMINATED HARDCORE / RUBBLE

I declare that we have applied the Waste Management Hierarchy.

Signed by Driver

Signed on behalf of Customer

Date **11-4-2018**

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Registered Waste Carrier No: CB/CN5216LT Control of Pollution Act (as amended) 1989

WEDNESDAY
11-4-18

CONVEYANCE/CONTROLLED WASTE TRANSFER NOTE



ANCHOR BAY COMMERCIALS

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No. 171654	<input type="checkbox"/> 17.01.01 CONCRETE
VEHICLE REGISTRATION NUMBER ES 14 ZGA	<input type="checkbox"/> 17.01.02 BRICKS
NAME OF PERSON IN CHARGE OF VEHICLE KEVIN	<input type="checkbox"/> 17.02.01 WOOD
WASTE HOLDER / DELIVERY ADDRESS ACORN WASTE 40 VIRIDOR CENTURY WHARF CRAYFORD DA1	<input type="checkbox"/> 17.03.02 TARMAC
TRANSFER ADDRESS ENOVERT BARLING 180054	<input checked="" type="checkbox"/> 17.05.04 BRICKS & STONES-CLEAN MUCK AWAY
GROSS	<input type="checkbox"/> 17.01.07 MIXED CONCRETE & BRICKS-HARDCORE/RUBBLE
TARE	<input type="checkbox"/> 17.09.04 MIXED CONSTRUCTION & DEMOLITION HARDCORE/WOOD/PLASTIC/PLASTERBOARD
NET	<input type="checkbox"/> 20.02.01 GARDEN / PARK WASTE / TREE ROOTS
DESCRIPTION OF MATERIAL INACTIVE SUB-SOIL	<input type="checkbox"/> 20.03.01 MIXED HOUSEHOLD/COMMERCIAL/ INDUSTRIAL WASTE
DELIVERY DATE	<input type="checkbox"/> 16.01.02 WASTE TYRES
DELIVERY TIME	<input type="checkbox"/> 17.06.05 CONSTRUCTION MATERIALS CONTAINING ASBESTOS
	<input type="checkbox"/> 17.05.03 CONTAMINATED SOIL & STONE CONTAMINATED MUCK AWAY
	<input type="checkbox"/> 17.01.06 CONTAMINATED MIXED CONCRETE & BRICKS CONTAMINATED HARDCORE / RUBBLE

I declare that we have applied the Waste Management Hierarchy.

Signed by Driver

Signed on behalf of Customer

Date **11-4-18.**

PLEASE PRINT **KEVIN**

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Registered Waste Carrier No: CBDN54572 Control of Pollution Act (as amended) 1989



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No. 172003	<input type="checkbox"/> 17.01.01 CONCRETE
VEHICLE REGISTRATION NUMBER EU169VJ	<input type="checkbox"/> 17.01.02 BRICKS
NAME OF PERSON IN CHARGE OF VEHICLE E. HUNT	<input type="checkbox"/> 17.02.01 WOOD
WASTE HOLDER / DELIVERY ADDRESS ACCOUNT WASTE C/O CRAYFORD MATERIAL RECYCLING UNIDOR CRAYFORD CREEK DARTFORD	<input type="checkbox"/> 17.03.02 TARMAC
TRANSFER ADDRESS ENO VERT BARLING BA 180056	<input checked="" type="checkbox"/> 17.05.04 BRICKS & STONES-CLEAN MUCK AWAY
GROSS	<input type="checkbox"/> 17.01.07 MIXED CONCRETE & BRICKS-HARDCORE/RUBBLE
TARE SUBSOIL C/O	<input type="checkbox"/> 17.09.04 MIXED CONSTRUCTION & DEMOLITION HARDCORE/WOOD/PLASTIC/PLASTERBOARD
NET CO.1% ASBESTOS	<input type="checkbox"/> 20.02.01 GARDEN / PARK WASTE / TREE ROOTS
DESCRIPTION OF MATERIAL INERT	<input type="checkbox"/> 20.03.01 MIXED HOUSEHOLD/COMMERCIAL/ INDUSTRIAL WASTE
DELIVERY DATE 11/4/18	<input type="checkbox"/> 16.01.02 WASTE TYRES
DELIVERY TIME	<input type="checkbox"/> 17.06.05 CONSTRUCTION MATERIALS CONTAINING ASBESTOS
	<input type="checkbox"/> 17.05.03 CONTAMINATED SOIL & STONE CONTAMINATED MUCK AWAY
	<input type="checkbox"/> 17.01.06 CONTAMINATED MIXED CONCRETE & BRICKS CONTAMINATED HARDCORE / RUBBLE

I declare that we have applied the Waste Management Hierarchy.

Signed by Driver [Signature] Signed on behalf of Customer A Ryan
Date 11/4/18 PLEASE PRINT

Customers ordering vehicles off the public roads do so entirely at their own risk
Registered Waste Carrier No: CBDN54572 Control of Pollution Act (as amended) 1989

CONVEYANCE/CONTROLLED WASTE TRANSFER NOTE



ANCHOR BAY COMMERCIALS

Dugdale Wharf, Crayford Creek, Crayford, Kent DA1 4QG
Tel.: 01322 359196 Fax: 01322 333095

W.I.F. CODE

S.I.C. CODE 41/201

No. 163773	<input type="checkbox"/> 17.01.01 CONCRETE
VEHICLE REGISTRATION NUMBER EU14 KPN	<input type="checkbox"/> 17.01.02 BRICKS
NAME OF PERSON IN CHARGE OF VEHICLE Ben Colegate	<input type="checkbox"/> 17.02.01 WOOD
WASTE HOLDER / DELIVERY ADDRESS Account waste c/o Crayford Materials Recycling Crayford Creek Dartford	<input type="checkbox"/> 17.03.02 TARMAC
TRANSFER ADDRESS Barling BA 180056	<input checked="" type="checkbox"/> 17.05.04 BRICKS & STONES-CLEAN MUCK AWAY
GROSS	<input type="checkbox"/> 17.01.07 MIXED CONCRETE & BRICKS-HARDCORE/RUBBLE
TARE Sub Soil c/o	<input type="checkbox"/> 17.09.04 MIXED CONSTRUCTION & DEMOLITION HARDCORE/WOOD/PLASTIC/PLASTERBOARD
NET CO.1% Asbestos	<input type="checkbox"/> 20.02.01 GARDEN / PARK WASTE / TREE ROOTS
DESCRIPTION OF MATERIAL	<input type="checkbox"/> 20.03.01 MIXED HOUSEHOLD/COMMERCIAL/ INDUSTRIAL WASTE
DELIVERY DATE	<input type="checkbox"/> 16.01.02 WASTE TYRES
DELIVERY TIME	<input type="checkbox"/> 17.06.05 CONSTRUCTION MATERIALS CONTAINING ASBESTOS
	<input type="checkbox"/> 17.05.03 CONTAMINATED SOIL & STONE CONTAMINATED MUCK AWAY
	<input type="checkbox"/> 17.01.06 CONTAMINATED MIXED CONCRETE & BRICKS CONTAMINATED HARDCORE / RUBBLE

I declare that we have applied the Waste Management Hierarchy.

Signed by Driver [Signature] Signed on behalf of Customer A Ryan
Date 11/4/18 PLEASE PRINT

Customers ordering vehicles off the public roads do so entirely at their own risk
Registered Waste Carrier No: CBDN54572 Control of Pollution Act (as amended) 1989

CONVEYANCE/CONTROLLED WASTE TRANSFER NOTE



ANCHOR BAY COMMERCIALS

Dugdale Wharf, Crayford Creek, Crayford, Kent DA1 4QG
 Tel.: 01322 359196 Fax: 01322 333095

W.I.F. CODE

S.I.C. CODE 41/201

No. 176520	<input type="checkbox"/> 17.01.01 CONCRETE <input type="checkbox"/> 17.01.02 BRICKS <input type="checkbox"/> 17.02.01 WOOD <input type="checkbox"/> 17.03.02 TARMAC <input checked="" type="checkbox"/> 17.05.04 BRICKS & STONES-CLEAN MUCK AWAY <input type="checkbox"/> 17.01.07 MIXED CONCRETE & BRICKS-HARDCORE/RUBBLE <input type="checkbox"/> 17.09.04 MIXED CONSTRUCTION & DEMOLITION HARDCORE/WOOD/PLASTIC/PLASTERBOARD <input type="checkbox"/> 20.02.01 GARDEN / PARK WASTE / TREE ROOTS <input type="checkbox"/> 20.03.01 MIXED HOUSEHOLD/COMMERCIAL/ INDUSTRIAL WASTE <input type="checkbox"/> 16.01.02 WASTE TYRES <input type="checkbox"/> 17.05.05 CONSTRUCTION MATERIALS CONTAINING ASBESTOS <input type="checkbox"/> 17.05.03 CONTAMINATED SOIL & STONE CONTAMINATED MUCK AWAY <input type="checkbox"/> 17.01.06 CONTAMINATED MIXED CONCRETE & BRICKS CONTAMINATED HARDCORE / RUBBLE
VEHICLE REGISTRATION NUMBER EUB3 EXK	
NAME OF PERSON IN CHARGE OF VEHICLE Peter Ansell	
WASTE HOLDER / DELIVERY ADDRESS cb ACORN WASTE cb CRAYFORD MATERIAL RECYCLING (VICIDOLE)	
TRANSFER ADDRESS CRAYFORD CREEK DARKFORD TO ENOVERT BARLING LANDFILL BA 180056	
GROSS WEIGHT 1XLOAD	
TARE WEIGHT 343 SOIL C/W	
NET WEIGHT Del. % Asbestos	
DESCRIPTION OF MATERIAL INERT	DESCRIPTION
	LOAD CAPACITY
	DELIVERY DATE
	DELIVERY TIME

I declare that we have applied the Waste Management Hierarchy.

Signed by Driver **P Ansell**

Signed on behalf of Customer

Date **11 4 18**

A Ryan
PLEASE PRINT

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 Registered Waste Carrier No: CBDN54572 Control of Pollution Act (as amended) 1989

CONVEYANCE/CONTROLLED WASTE TRANSFER NOTE



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W.I.F. CODE

S.I.C. CODE 4120/1

No. 160650	<input type="checkbox"/> 17.01.01 CONCRETE
VEHICLE REGISTRATION NUMBER EY18 HBC	<input type="checkbox"/> 17.01.02 BRICKS
NAME OF PERSON IN CHARGE OF VEHICLE MOGSU	<input type="checkbox"/> 17.02.01 WOOD
WASTE HOLDER / DELIVERY ADDRESS SOACORN WASTE VIRADORE WASTE Crayford Kent	<input type="checkbox"/> 17.03.02 TARMAC
TRANSFER ADDRESS Envolet Bar Stoubury Ness BA180056	<input type="checkbox"/> 17.05.04 BRICKS & STONES-CLEAN MUCK AWAY
GROSS	<input type="checkbox"/> 17.01.07 MIXED CONCRETE & BRICKS-HARDCORE/RUBBLE
TARE	<input type="checkbox"/> 17.09.04 MIXED CONSTRUCTION & DEMOLITION HARDCORE/WOOD/PLASTIC/PLASTERBOARD
NET	<input type="checkbox"/> 20.02.01 GARDEN / PARK WASTE / TREE ROOTS
DESCRIPTION OF MATERIAL Subsoil 4w0.1% Asbestos	<input type="checkbox"/> 20.03.01 MIXED HOUSEHOLD/COMMERCIAL/ INDUSTRIAL WASTE
DELIVERY DATE	<input type="checkbox"/> 16.01.02 WASTE TYRES
DELIVERY TIME	<input type="checkbox"/> 17.06.05 CONSTRUCTION MATERIALS CONTAINING ASBESTOS
	<input type="checkbox"/> 17.05.03 CONTAMINATED SOIL & STONE CONTAMINATED MUCK AWAY
	<input type="checkbox"/> 17.01.06 CONTAMINATED MIXED CONCRETE & BRICKS CONTAMINATED HARDCORE / RUBBLE

I declare that we have applied the Waste Management Hierarchy.

Signed by Driver

Signed on behalf of Customer

Date 12/4/18

PLEASE PRINT

G. Minton

Customers ordering vehicles off the public roads do so entirely at their own risk
Registered Waste Carrier No: CBDN54572 Control of Pollution Act (as amended) 1989

CONVEYANCE/CONTROLLED WASTE TRANSFER NOTE



ANCHOR BAY COMMERCIALS

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Tel.: 01322 359196 Fax: 01322 333095

W.I.F. CODE

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No. 153650	<input type="checkbox"/> 17.01.01 CONCRETE
VEHICLE REGISTRATION NUMBER EUI6 GVL	<input type="checkbox"/> 17.01.02 BRICKS
NAME OF PERSON IN CHARGE OF VEHICLE IGYH ASC	<input type="checkbox"/> 17.02.01 WOOD
WASTE HOLDER / DELIVERY ADDRESS ACORN WASTE CRAYFORD WASTE CRAYFORD DARTFORD DA14QG	<input type="checkbox"/> 17.03.02 TARMAC
TRANSFER ADDRESS ENVOLET BARNESS BA180056	<input checked="" type="checkbox"/> 17.05.04 BRICKS & STONES-CLEAN MUCK AWAY
GROSS	<input type="checkbox"/> 17.01.07 MIXED CONCRETE & BRICKS-HARDCORE/RUBBLE
TARE	<input type="checkbox"/> 17.09.04 MIXED CONSTRUCTION & DEMOLITION HARDCORE/WOOD/PLASTIC/PLASTERBOARD
NET	<input type="checkbox"/> 20.02.01 GARDEN / PARK WASTE / TREE ROOTS
DESCRIPTION OF MATERIAL Subsoil 4w0.1% Asbestos	<input type="checkbox"/> 20.03.01 MIXED HOUSEHOLD/COMMERCIAL/ INDUSTRIAL WASTE
DELIVERY DATE 12/4/18	<input type="checkbox"/> 16.01.02 WASTE TYRES
DELIVERY TIME	<input type="checkbox"/> 17.06.05 CONSTRUCTION MATERIALS CONTAINING ASBESTOS
	<input type="checkbox"/> 17.05.03 CONTAMINATED SOIL & STONE CONTAMINATED MUCK AWAY
	<input type="checkbox"/> 17.01.06 CONTAMINATED MIXED CONCRETE & BRICKS CONTAMINATED HARDCORE / RUBBLE

I declare that we have applied the Waste Management Hierarchy.

Signed by Driver

Signed on behalf of Customer

Date 12-4-2018

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Registered Waste Carrier No: CB/CN5216LT Control of Pollution Act (as amended) 1989

Thursday 12-4-18

Friday
13-6-18



ANCHOR BAY COMMERCIALS

Dugdale Wharf, Crayford Creek, Crayford, Kent DA1 4QG
Tel.: 01322 359196 Fax: 01322 333095

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S.I.C. CODE

No.	176689	
VEHICLE REGISTRATION NUMBER	EUG3EXT	
NAME OF PERSON IN CHARGE OF VEHICLE	TRW	
WASTE HOLDER / DELIVERY ADDRESS	ACORN WASTE VIRADOR WASTE CENTURY WHARF CRAYFORD	
TRANSFER ADDRESS	CONCRETE AWAY	
GROSS		
TARE	DESCRIPTION	
NET	LOAD CAPACITY	
DESCRIPTION OF MATERIAL	DELIVERY DATE	DELIVERY TIME

- 17.01.01 CONCRETE
- 17.01.02 BRICKS
- 17.02.01 WOOD
- 17.03.02 TARMAC
- 17.05.04 BRICKS & STONES-CLEAN MUCK AWAY
- 17.01.07 MIXED CONCRETE & BRICKS-HARDCORE/RUBBLE
- 17.09.04 MIXED CONSTRUCTION & DEMOLITION HARDCORE/WOOD/PLASTIC/PLASTERBOARD
- 20.02.01 GARDEN / PARK WASTE / TREE ROOTS
- 20.03.01 MIXED HOUSEHOLD/COMMERCIAL/ INDUSTRIAL WASTE
- 16.01.02 WASTE TYRES
- 17.06.05 CONSTRUCTION MATERIALS CONTAINING ASBESTOS
- 17.05.03 CONTAMINATED SOIL & STONE CONTAMINATED MUCK AWAY
- 17.01.06 CONTAMINATED MIXED CONCRETE & BRICKS CONTAMINATED HARDCORE / RUBBLE

I declare that we have applied the Waste Management Hierarchy.

Signed by Driver

Signed on behalf of Customer

Date

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No.	173543	
VEHICLE REGISTRATION NUMBER	EU16 BVL	
NAME OF PERSON IN CHARGE OF VEHICLE	165TH ABC	
WASTE HOLDER / DELIVERY ADDRESS	ACORN WASTE CRAYFORD MAT RECYCLING CRAYFORD CREEK DARTFORD DA1 4QG	
TRANSFER ADDRESS	ENOVSLE Bairinc BA180054	
GROSS		
TARE	DESCRIPTION	
NET	LOAD CAPACITY (1600)	
DESCRIPTION OF MATERIAL	DELIVERY DATE	DELIVERY TIME

- 17.01.01 CONCRETE
- 17.01.02 BRICKS
- 17.02.01 WOOD
- 17.03.02 TARMAC
- 17.05.04 BRICKS & STONES-CLEAN MUCK AWAY
- 17.01.07 MIXED CONCRETE & BRICKS-HARDCORE/RUBBLE
- 17.09.04 MIXED CONSTRUCTION & DEMOLITION HARDCORE/WOOD/PLASTIC/PLASTERBOARD
- 20.02.01 GARDEN / PARK WASTE / TREE ROOTS
- 20.03.01 MIXED HOUSEHOLD/COMMERCIAL/ INDUSTRIAL WASTE
- 16.01.02 WASTE TYRES
- 17.06.05 CONSTRUCTION MATERIALS CONTAINING ASBESTOS
- 17.05.03 CONTAMINATED SOIL & STONE CONTAMINATED MUCK AWAY
- 17.01.06 CONTAMINATED MIXED CONCRETE & BRICKS CONTAMINATED HARDCORE / RUBBLE

I declare that we have applied the Waste Management Hierarchy.

Signed by Driver

Signed on behalf of Customer

Date

PLEASE PRINT

Customers ordering vehicles off the public roads do so entirely at their own risk
Registered Waste Carrier No: CBDN54572 Control of Pollution Act (as amended) 1989

CONVEYANCE/CONTROLLED WASTE TRANSFER NOTE



ANCHOR BAY COMMERCIALS

Dugdale Wharf, Crayford Creek, Crayford, Kent DA1 4QG
Tel.: 01322 359196 Fax: 01322 333095

W.I.F. CODE

S.I.C. CODE 41/201

No. 184393	<input type="checkbox"/> 17.01.01 CONCRETE
VEHICLE REGISTRATION NUMBER EV169VJ	<input type="checkbox"/> 17.01.02 BRICKS
NAME OF PERSON IN CHARGE OF VEHICLE R HUNT	<input type="checkbox"/> 17.02.01 WOOD
WASTE HOLDER / DELIVERY ADDRESS ACORN WASTE CO CRAYFORD MATERIAL RECYCLING VIA DOOR CRAYFORD	<input type="checkbox"/> 17.03.02 TARMAC
TRANSFER ADDRESS ENOUBRT BARLING	<input checked="" type="checkbox"/> 17.05.04 BRICKS & STONES-CLEAN MUCK AWAY
GROSS	<input type="checkbox"/> 17.01.07 MIXED CONCRETE & BRICKS-HARDCORE/RUBBLE
TARE	<input type="checkbox"/> 17.09.04 MIXED CONSTRUCTION & DEMOLITION HARDCORE/WOOD/PLASTIC/PLASTERBOARD
NET SUBSOIL C/W	<input type="checkbox"/> 20.02.01 GARDEN / PARK WASTE / TREE ROOTS
DESCRIPTION OF MATERIAL CO. 1% ASBESTOS NET	<input type="checkbox"/> 20.03.01 MIXED HOUSEHOLD/COMMERCIAL/ INDUSTRIAL WASTE
LOAD CAPACITY	<input type="checkbox"/> 16.01.02 WASTE TYRES
DELIVERY DATE 6/4/18	<input type="checkbox"/> 17.06.05 CONSTRUCTION MATERIALS CONTAINING ASBESTOS
DELIVERY TIME	<input type="checkbox"/> 17.05.03 CONTAMINATED SOIL & STONE CONTAMINATED MUCK AWAY
	<input type="checkbox"/> 17.01.06 CONTAMINATED MIXED CONCRETE & BRICKS CONTAMINATED HARDCORE / RUBBLE

I declare that we have applied the Waste Management Hierarchy.

Signed by Driver

[Signature]

Signed on behalf of Customer

[Signature]

Date **6/4/18**

PLEASE PRINT

Customers ordering vehicles off the public roads do so entirely at their own risk

Registered Waste Carrier No: CBDN54572 Control of Pollution Act (as amended) 1989

APPENDIX 8

ISO 14001 Certificates

Certificate of Registration

This is to certify that the Management System of:

Caulmert Limited

Unit G3, InTec, Parc Menai, Bangor, Gwynedd, LL57 4FG

and as detailed on the annex to this certificate

has been approved by Alcumus ISOQAR and is compliant with the requirements of:

ISO 14001: 2015, ISO 9001: 2015



Certificate Number:	9113-EMS/QMS - 001
Initial Registration Date:	26 July 2013
Re-issue Date:	28 March 2017
Expiry Date:	31 March 2020

Scope of Registration:

Engineering, Environmental and Planning Consultancy Services.

Signed:
Steve Stubley, Technical Director
(on behalf of Alcumus ISOQAR)



This certificate will remain current subject to the company maintaining its system to the required standard. This will be monitored regularly by Alcumus ISOQAR. Further clarification regarding the scope of this certificate and the applicability of the relevant standards' requirements may be obtained by consulting Alcumus ISOQAR. This certificate is one of several issued to registration number 9113.



**CERTIFICATE of REGISTRATION
ISO 14001: 2015**

This is to certify that:

**Nationwide Plant Hire Limited
51 Water Street
Radcliffe
Manchester
M26 3DE**

Holds Certificate No: **GB.15/364**

And operates an Environmental Management System which complies with the requirements of **ISO 14001:2015** for the following scope:

“The Provision of Project Management and Other Related Services, including Civil and Building Contracting Activities”.

For and on behalf of Premier Verifications Limited


Director, Premier Verifications Limited.

Originally registered: **30.01.15** Latest issue: **30.01.18** Expiry date: **29.01.21**

This Certificate remains valid while the holder maintains the Environmental Management Systems in accordance with the Standards and Guidelines of ISO 14001:2015 and subject to satisfactory surveillance by Premier Verifications Limited.

Premier Verifications Limited, 93 Ellerbeck Crescent, Worsley, Manchester, M28 7GP, UK.
Tel: 0161 799 4576.



Registered Office: InTec, Parc Menai, Bangor, Gwynedd, LL57 4FG

Tel: 01248 672666

Fax: 01248 672601

Email: contact@caulmert.com

Web: www.caulmert.com

APPENDIX D GROUND INVESTIGATION REPORT - 2025


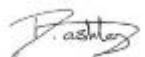

Factual Ground Investigation Report

Crayford MRF

Client: (N+P) Crayford MRF Limited

Project Number: 242600

Date of Issue: 14/04/2025

Project Title	Crayford MRF			Project Ref	242600	
Prepared By	Max Noble, BSc, Assistant Geotechnical Engineer.					
Checked By	David Ashton MGeoSci, FGS, IAEG, Senior Geotechnical Engineer					
Approved By	Andy Johnston CEng, MICE, Geotechnical Consultant					
Issue No	Status	Reason	Date	Prep.	Check	Approval
001	DRAFT	For Client Comment	14/04/2025	MN	DA	AJ

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1 Introduction

1.1 Appointment

Strata Geotechnics was appointed to undertake a ground investigation at the Crayford MRF site in Dartford by (N+P) Crayford MRF. The specification for the works was provided by the client's Investigation Supervisor Stuart Wood. Instruction to proceed with the work was received on 25/10/2024, order no CRA-003373.

This report presents a site-wide factual account of the site works undertaken.

1.2 Site Location and Description

The site is located off Century Wharf, Crayford Creek Road, Dartford DA1 4QG. The site is located at approximate central grid reference E:552892, N:175715.

The site is broadly square in shape. The site is approximately 110m by 100m in size. At the time of the investigation the site was predominantly occupied by commercial buildings serving recycling processes.

A site location plan is included in Appendix A.

1.3 Purpose of Investigation

The purpose of this investigation was to determine the subsurface ground and groundwater conditions at the site of the proposed commercial development. It is understood that the development will comprise of additional buildings that may require pile design. This information was obtained from a combination of intrusive investigation techniques and laboratory testing.

1.4 Scope of the Investigation

The Ground Investigation was carried out between 19/11/2024 and 30/11/2024. The works comprised:

- 3 no. rotary boreholes (denoted BH01, BH01A & BH02) to a maximum depth ranging from 25.12m to 25.33m BGL. BH01A was undertaken due to early refusal of BH01 as specified by the client's Investigation Supervisor.

- 5 no. windowless sampled boreholes (denoted WS1 to WS5) to a maximum depth range of 2.0m (WS1) → 3.0m BGL (WS2 → WS5) as specified by the Investigation Supervisor.

1.4.1 In-situ testing

1.4.1.1 Standard Penetration Tests (SPTs)

In-situ Standard Penetration Tests (SPTs) were conducted within the boreholes to ascertain 'N' values of the various lithologies encountered. This test acts as a proxy to ascertain the relative density of granular material. Relative density is determined in accordance with BS5930 table 10 for granular materials only. For fine grained or cohesive deposits consistency has been derived by hand field tests carried out by the logging engineer rather than from SPT results. SPT 'N' values detailed in this report have not been corrected for overburden pressure or hammer energy efficiency.

1.4.2 Service Clearance

Before any intrusive works, all the locations were scanned utilising a CAT (Cable Avoidance Tool) and associated generator by an approved sub-contractor using both ground penetrating radar (GPR) and electromagnetic (CAT) methods. As a final precaution a hand inspection pit was dug to 1.20m bgl for every borehole location, while trial pits were scanned at 300mm intervals up to and including 1.20m bgl.

1.4.3 Sampling Provision

During the investigation Environmental jar samples (ES) were recovered at pre-determined intervals for contamination testing purposes. Disturbed (D) and Bulk (B), samples were also recovered at specified depths and at every strata change for descriptive purposes and for geotechnical testing. Rotary Core (C) sampling was requested upon reaching appropriate strata at requested depths for descriptive purposes and for geotechnical testing.

The exploratory hole logs are presented in Appendix B.

1.4.4 Laboratory testing

Laboratory testing was requested by the client comprising geo-environmental and geotechnical testing as follows:

1.4.4.1 *Geo-Environmental*

Two geo-environmental suites have been requested by the client across 2no. Schedules. The determinands within these suites were detailed by the client's specification and include:

- Soil Suite E - Inc TPHCWG
- Soil Suite H
- WAC Suite

Please see Appendix C for Suite Constituents.

1.4.4.2 *Geo-chemical*

The client has requested the following geo-chemical testing has been requested across 1no. Schedules.

- BRE Suite D – Brownfield Pyrite present

Please see Appendix C for Suite Constituents.

1.4.4.3 *Geotechnical*

The client has requested the following geotechnical testing has been requested across 2no. Schedules.

- Moisture Content (MC)
- Atterberg Limits (Liquid Limit/Plastic Limit/Plasticity Index)
- Particle Size Distribution by Wet Sieve and Sedimentation by Pipette (PSD)
- Saturated Moisture Content
- Unconfined Compressive Strength of Soil/Rock

All the above tests have been carried out in accordance with the relevant standards at UKAS and MCERTS accredited laboratories. Standards adhered to include: BS1377:1990-2022, BS EN 17892 (where appropriate) and BRE SD1 for sulphate suites.

Samples collected during this investigation will be retained on the premises of Strata Geotechnics for a period of six weeks from the date of issue of the final factual report. Should any additional laboratory tests be required, please contact Strata Geotechnics prior to the above disposal date.

2 Limitations of Study

Strata Geotechnics are a wholly owned subsidiary of Van Elle Limited (VEL).

This report is for the sole use and benefit of (N+P) Crayford MRF in accordance with their brief and should not be relied upon or used by other parties without explicit prior written agreement from VEL. VEL disclaim any responsibility to the client and others in respect of any matters outside the above scope.

The investigation has been carried out to our understanding of current legislation and best practice; designed to produce information adequate for the appraisal of potential site conditions in relation to the proposed future use of the site. This investigation generally adhered to the guidelines outlined in BS5930:2015+A1:2020, Code of Practice for Site Investigations. In regard to testing of soils, the investigation generally adheres to guidance outlined in BS1377:1990 to 2022 and Testing of Soils for Civil Engineering Purposes and BS EN 17892 where appropriate.

New information, legislation, local authority planning conditions or changes to best practice may necessitate further fieldworks and revision/reissue of the ground investigation report after the date of this report issue. Further assessment, investigation or construction activities over time may reveal conditions that were not found during the period of these investigations and, therefore, could not have been taken into account in the preparation of the report. VEL reserves the right to amend their conclusions and recommendations in the light of further information that may become available.

Interpretation and recommendations should not be assumed valid for either adjacent areas of land or alternative land uses. Should the proposed site use change, the findings of this report should be re-assessed for the new end-use.

Intrusive investigations can only investigate ground beneath a small proportion of the total site area. Attention is drawn to the fact that the findings are based on data obtained from the borehole samples and in-situ testing. Where comments are made based on information obtained from third parties, VEL assumes that all third-party information is true and correct. No independent action has been undertaken to validate the findings of third-party information, unless specifically stated. The possibility of variation in ground conditions around the borehole should not be overlooked. As such these do not necessarily address all aspects of the ground behaviour on site. Any opinion or diagram of a possible configuration of strata beyond the borehole or extrapolated to greater depth is conjectural and given for guidance only, no responsibility is accepted as to its accuracy. No liability can be accepted for such variations.

This investigation was undertaken in good faith with regards to the request and requirements of (N+P) Crayford MRF at the time of quotation, it does not constitute a full interpretative report with regards to the geotechnical or environmental status of the site. There may be other sources of information not included in this report that hold data relevant to the site that could materially affect the conclusions made in this report.

Where applicable this report should be presented to the relevant statutory authority, planning body, or design engineers as soon as possible for their review, comment and/or acceptance.

It is possible therefore that the intrusive investigation undertaken by VEL, whilst fully appropriate, may not have encountered all significant subsurface conditions. Consequently, no liability can be accepted for conditions not revealed by the exploratory holes.

3 Results of the Ground Investigation

3.1 Published Ground Conditions

The published geological records available from the British Geological Survey indicates that the Site is underlain by Alluvium and the Taplow Gravel Member which are superficial deposits often comprising clay, silt, sand and peat from the Quaternary period. The underlying solid bedrock geology is listed as the Lewes Nodular Chalk Formation, which comprises of Chalk with abundant Flints, and is of the (upper) Cretaceous Period – 100.5 – 66.0 Mya.

3.2 Encountered Ground Conditions

Table 3-1 Summary of ground conditions encountered

Location	Strata Encountered			
	Made Ground Including hardstanding	Alluvium Very soft clay and peat	River Terrace sand, gravel, silt, clay & peat	Lewes Chalk Fm. White Chalk subgroup
BH01	GL – 3.00*	N/A	N/A	N/A
BH01A	GL – 3.70	N/A	N/A	3.70 – 25.33*
BH02	GL – 2.10	2.10 – 4.55	N/A	4.55 – 25.12*
WS1	GL – 1.20	1.20 – 1.80	N/A	1.80 – 2.00*
WS2	GL – 1.00	N/A	1.00 – 1.60	1.60 – 3.00*
WS3	GL – 0.70	N/A	1.00 – 1.15	1.15 – 3.00*
WS4	GL – 1.20	N/A	1.20 – 1.70	1.70 – 3.00*
WS5	GL – 1.00	N/A	1.00 – 1.45	1.45 – 3.00*

*base of strata not encountered

All depths given in meters below ground level (m BGL)

3.2.1 Made Ground

Concrete hardstanding was encountered from surface at all exploratory locations. Made Ground was encountered from the surface at all exploratory locations.

The concrete had a thickness range of 0.16 – 0.30mBGL, across all exploratory locations.

The Made Ground had a thickness range of 0.70 – 3.70mBGL, across all exploratory locations.

The made ground generally consisted of clayey and sandy gravel. Gravel constituents include: Concrete, Red Brick, Slag, Quartzite, Clinker, Flint, Limestone (type 1), Coal, Sandstone and Mudstone. Less common gravels include Metal, Wood and Plastic.

More Made Ground was found within the area(s) containing BH01, BH01A and BH02 (Made Ground thickness of 2.10 - 3.70mBGL) versus the area(s) containing all window sampled boreholes (Made Ground thickness of 0.70 – 1.20mBGL).

3.2.2 Alluvium Deposits

Within WS1 and BH02 only, superficial Alluvium deposits were found, immediately underlying the Made Ground, clays, silts and sands were recorded.

The Alluvium on site generally consisted of soft to stiff clays, silts and sands with gravels of flint and chalk, and persisted in WS1 from 1.20 – 1.80mBGL and in BH02 from 2.10 – 4.50mBGL.

3.2.3 River Terrace Deposits

Within WS2, WS3, WS4 & WS5 only, superficial Taplow Gravel Member deposits were found, immediately underlying the Made Ground, sands and gravels were recorded.

The Taplow Gravel Member deposits on site generally consisted of sands and gravels containing flint and some quartzite and ranged in thickness from 0.15 – 0.60m on site (in the previously mentioned WS locations).

3.2.4 Lewes Chalk Formation

The Lewes Chalk Formation was encountered in all exploratory locations, except BH01 which was terminated early at 3.0mBGL due to refusal.

The Lewes Chalk was encountered between 1.15mBGL – 4.55mBGL, the base of this geological unit was not encountered, thus we cannot comment on its maximum depth. However, Lewes Chalk was recorded at both BH01A and BH02 at their respective termination depths (25.33 & 25.12mBGL).

Please refer to the exploratory hole logs in Appendix B for a more detailed account of the conditions encountered during the investigation.

3.3 In-situ Tests

3.3.1 In-situ Standard Penetration Tests (SPT)

Standard penetration tests (SPT's) were carried out with the use of a normal solid cone or split spoon sampler in the solid deposits encountered within the boreholes in order to determine the relative strength / density of the materials tested. Where the full penetration depth could not be achieved, the bottom sampling depth is indicated as less than 0.45m from the top (start of test), with the actual depth of penetration being recorded in millimetres. The results are shown as 'N' values on the graphic borehole record sheets, these have not been corrected for hammer efficiency or over burden pressure. Where possible a disturbed sample was collected also.

A summary of SPT results by geological unit is presented below:

Table 3-2 – Summary of SPT Results.

Strata	SPT Range ('N')	Notes
Made Ground	17 - 50	Indicative of variable conditions.
Alluvium Deposits	7 - 50	Indicative of variable conditions.
River Terrace Deposits	22 - 40	Indicative of stiff to very stiff conditions.
Lewes Chalk Fm.	10 - 50	Indicative of variable conditions.

3.4 Laboratory Testing

The laboratory test results indicate that the soils at the site are:

Table 3-3 – Summary of Geotechnical and Geochemical results.

Geotechnical	Made Ground	Granular Natural Deposits	Cohesive Natural Deposits	Lewes Chalk Formation
Water Content %	5.20 - 15	5.50	9.10 – 11.70	20.20 – 26.70
PSD – Gravel %	N/A	71	N/A	N/A
PSD – Sand %	N/A	19	N/A	N/A
PSD – Silt %	N/A	5	N/A	N/A
PSD – Clay %	N/A	5	N/A	N/A
Plasticity Index %	N/A	N/A	14 - 19	13
Shear Strength (MPa)	34.70 – 64.30	N/A	N/A	N/A
Saturated Water Content %	N/A	N/A	N/A	20 - 21
Geochemical	Made Ground	Granular Natural Deposits	Cohesive Natural Deposits	Lewes Chalk Formation
pH	8.60 – 11.10	9.80	N/A	9.20 – 9.40
Water Soluble sulphate mg/l	104 - 604	118	N/A	120 - 140
Total Sulphur %	0.03 – 0.42	N/A	N/A	0.03 – 0.05

Table 3-4 – Summary of Geotechnical and Geochemical results.

Geoenvironmental	Made Ground	Granular Natural Deposits	Cohesive Natural Deposits	Lewes Chalk Formation
WAC (Inert)	Inert (See results)	N/A	N/A	N/A

4 References

- British Geological Survey (BGS – formerly the Institute of Geological Sciences (IGS))
www.bgs.ac.uk and BGS Geindex: <http://mapapps2.bgs.ac.uk/geoindex/home.html>.
- BS 5930:2015 A1 - 2020 Code of Practice for Site Investigations.
- BS EN ISO 14688 Identification, Description and classification of soils
- BS EN ISO 14689 Identification, Description and classification of rocks
- BS1377:1990-2022, Methods for Testing of Soils for Civil Engineering Purposes.
- BS EN ISO 17892, Geotechnical investigation and testing. Laboratory testing of soil
- BS 8574:2014- Geotechnical Data Management
- CIRIA C574 Engineering in chalk.

APPENDICES

Appendix A: Drawings

Project ID:	G242600	Title	Site Plan
Project Title:	Crayford MRF, Dartford	Scale	1:900
Location:	Crayford MRF, Century Wharf, Crayford Road, Dartford, Kent, DA1 4QG	Engineer	LD
Client:	N & P Crayford MRF Limited	Contractor	Strata Geotechnics



Legend Key

- Locations By Type - Empty
- Locations By Type - RO
- ▼ Locations By Type - WS












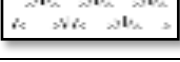






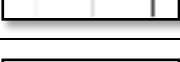
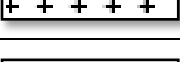





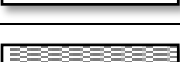


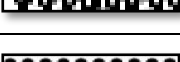
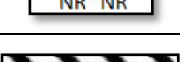




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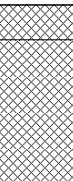


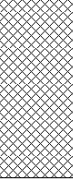
Appendix B: Exploratory Hole Records



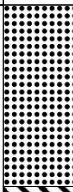





















Legends:
















U	Undisturbed driven tube sample, 100mm nominal diameter unless noted
UT	Undisturbed thin wall tube sample, 100mm nominal diameter unless noted
P	Undisturbed pushed piston sample, 100mm nominal diameter unless noted
CBR	CBR mould sample
BLK	Block sample
D	Small disturbed sample
B	Disturbed bulk sample
SD	Standard Penetration Test liner sample
ES	Soil sample for environmental testing
W	Water sample
L	Liner, dynamic/windowless sample
C	Core sample
CSS	Core sub sample
	Test results
N (S)	Standard penetration test, split spoon sampler (uncorrected)
N (C)	Standard penetration test, solid cone (uncorrected)
K	Field permeability test, kFH indicates falling head, kPI indicates packer injection
HV	Hand vane test [peak/residual], kPa, Undrained Shear Strength
I _a or I _d	Point load strength quoted for axial (a) and diameter (d), MPa Point Load Index
PP	Pocket Penetrometer, kPa, Unconfined Compressive Strength
LMP	Lump sample for laboratory testing
Non-Intact	Core recovered in sections less than one full diameter without signs of weathering




Soil, Rock and Backfill Legends:


Topsoil		MADE GROUND	
Concrete		Bituminous Material	
Clay		Silt	
Sand		Gravel	
Cobbles		Peat	
Sandstone		Mudstone	
Siltstone		Coal	
Breccia		Fine grained Igneous	
Limestone		Medium grained Igneous	
Conglomerate		Coarse grained Igneous	
Clean Ballast		Fine grained Metamorphic	
Slightly dirty Ballast		Medium grained Metamorphic	
Dirty Ballast		Coarse grained Metamorphic	
Broken Ground		No Recovery	
Cement Bentonite		Bentonite	
Arisings		Grout	



	Contract Name: Crayford MRF, Dartford			Client: N & P Crayford MRF Limited			Borehole ID: BH01							
	Contract Number: G242600	Date Started: 19/11/2024	Date Completed: 20/11/2024	Logged: MN	Checked: LD	Status: FINAL	Sheet 1 of 1							
Rotary Open Hole Borehole Log		Easting: 552859.7	Northing: 175742.3	Ground Level: 6.42m (OD)	Plant Used: Comacchio 305	Print Date: 01/04/2025	Scale: 1:50							
Weather: Sunny		Rig Crew: Jack Woodhead		Termination: Lead length of casing snapped off - unable to retrieve.			SPT Hammer: AR2501 Energy Ratio: 66%							
Samples & In Situ Testing				Strata Details					Groundwater					
Depth	Sample ID	Test Result	Level (mAOD)	Depth (m) (Thickness)	Legend	Strata Description			Water Strike	Backfill/Installation				
0.00 - 1.20	B7		6.19	0.23		MADE GROUND: Strong multi coloured CONCRETE with 75-80% aggregate of sub rounded to rounded, fine to coarse gravel and 5-10% small voids (5-10mm).			1					
0.50 0.50	D5 ES3			(0.97)		MADE GROUND: Multi coloured slightly clayey slightly sandy subangular to angular fine to coarse GRAVEL of concrete, red brick, limestone (type 1), mudstone, sandstone, coal, slag, occasional plastic fragments (upto 50mm) and occasional wood fragments (upto 300mm in length). Sand is fine to coarse. Frequent cobbles of angular red brick.								
1.00 1.00 1.20 - 1.65	D6 ES4 D1	SPT(S) 1.20m, N=4 (2,1/1,1,1,1)	5.22	1.20		AZCL: Driller notes normal drilling.								
				(0.60)										
			4.62	1.80		MADE GROUND: Brown mottled red clayey subangular to subrounded fine to coarse GRAVEL of red brick, concrete, and coal.			2					
2.00 - 2.05	D2	SPT(S) 2.00m, 50 (25 for 30mm/50 for 20mm)		(1.20)		2.00: Single cobble of concrete								
			3.42	3.00		End of Borehole at 3.000m			3					
									4					
									5					
									6					
									7					
									8					
									9					
									10					
Start & End of Shift Observations					Borehole Diameter		Casing Diameter		Remarks:					
Date	Time	Depth (m)	Casing (m)	Water (m)	Depth (m)	Dia (mm)	Depth (m)	Dia (mm)	Hand dug inspection pit to 1.20m bgl. No groundwater strike was encountered during the drilling. Borehole continually collapsing back from 3m to 2m bgl. Lead length of casing also snapped off and unable to retrieve to advance drilling - borehole terminated. Backfilled with bentonite upon completion.					
19-11-2024	17:00	0.00	0.00											
19-11-2024	23:55	3.00	2.00	2.00										
Flush Information					Installation				Water Strike					
Top (m)	Base (m)	Flush Type	Return %	Flush Colour	Top (m)	Base (m)	Type	Dia (mm)	Strike (m)	Casing (m)	Sealed (m)	Time (mins)	Rose to (m)	Remarks
2.00	3.00		0	No return										


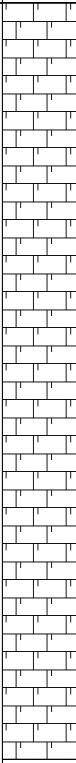

	Contract Name: Crayford MRF, Dartford			Client: N & P Crayford MRF Limited			Borehole ID: BH01A							
	Contract Number: G242600	Date Started: 20/11/2024	Date Completed: 21/11/2024	Logged: MN	Checked: LD	Status: FINAL	Sheet 1 of 3							
Rotary Open Hole Borehole Log		Easting: 552859.7	Northing: 175742.3	Ground Level: 6.42m (OD)	Plant Used: Comacchio 305	Print Date: 01/04/2025	Scale: 1:50							
Weather: Fine		Rig Crew: Jack Woodhead		Termination: Target Depth			SPT Hammer: AR2501 Energy Ratio: 66%							
Samples & In Situ Testing				Strata Details					Groundwater					
Depth	Sample ID	Test Result	Level (mAOD)	Depth (m) (Thickness)	Legend	Strata Description			Water Strike	Backfill/Installation				
0.00 - 0.25	CC19		6.19	0.23		MADE GROUND: Strong multi coloured CONCRETE with 75-80% aggregate of sub rounded to rounded, fine to coarse gravel and 5-10% small voids (5-10mm).								
				(0.97)		MADE GROUND: Multi coloured slightly clayey slightly sandy subangular to angular fine to coarse GRAVEL of concrete, red brick, limestone (type 1), mudstone, sandstone, coal, slag, occasional plastic fragments (upto 50mm) and occasional wood fragments (upto 300mm in length). Sand is fine to coarse. Frequent cobbles of angular red brick.			1					
				5.22	1.20		AZCL: Driller notes normal drilling.							
				(0.60)										
				4.62	1.80		MADE GROUND: Brown mottled red clayey subangular to subrounded fine to coarse GRAVEL of red brick, concrete and coal.			2				
				4.42	2.00		Open hole drilling: 0% flush returns. 2.00: 1no cobble of concrete.							
				(1.00)										
-3.00 - 3.45	D1	SPT(S) 3.00m, N=17 (5,4/7,5,2,3)	3.42	3.00		AZCL: Driller notes normal drilling.			3					
				(0.50)										
				2.92	3.50		MADE GROUND: Brown mottled red clayey subangular to subrounded fine to coarse GRAVEL of red brick, concrete and coal.			4				
-4.00 - 4.45	D2	SPT(S) 4.00m, N=13 (3,4/3,4,3,3)	2.72	3.70		Structure less CHALK composed of extremely weak cream mottled black gravelly silt. Clasts are moderately weak subrounded to angular, fine to coarse of flint and chalk (putty chalk). (Distinct smell of hydrocarbon contamination). [WHITE CHALK SUBGROUP]								
				(2.30)		4.34 - 4.40: Single cobble of chalk								
-5.00 - 5.45	D3	SPT(S) 5.00m, N=13 (3,3/3,4,3,3)							5					
-6.00 - 6.45	D4	SPT(S) 6.00m, N=12 (3,2/1,3,4,4)	0.42	6.00		Structure less CHALK composed of extremely weak cream gravelly silt. Clasts are moderately weak subrounded to angular, fine to coarse of chalk and flint (no presence of contamination). [WHITE CHALK SUBGROUP]			6					
				(1.00)										
-7.00 - 7.45	D5	SPT(S) 7.00m, N=17 (5,3/3,4,4,6)	-0.58	7.00		AZCL: Driller notes normal drilling.			7					
				(0.30)										
				-0.88	7.30		Structure less CHALK composed of extremely weak cream mottled black gravelly silt. Clasts are moderately weak subrounded to angular, fine to coarse of flint and chalk (putty chalk). (Distinct smell of hydrocarbon contamination) [WHITE CHALK SUBGROUP]			8				
				(2.70)										
-9.00 - 9.45	D6	SPT(S) 9.00m, N=18 (3,4/3,4,5,6)							9					
				(2.70)										
				-3.58	10.00					10				
Start & End of Shift Observations			Borehole Diameter		Casing Diameter		Remarks:							
Date	Time	Depth (m)	Casing (m)	Water (m)	Depth (m)	Dia (mm)	Depth (m)	Dia (mm)	Hand dug inspection pit to 1.20m bgl. No groundwater strike was encountered during the drilling. Backfilled with bentonite upon completion.					
20-11-2024	18:00	0.00	0.00											
20-11-2024	23:55	13.00	6.00	13.00										
21-11-2024	18:00	13.00	6.00	13.00										
21-11-2024	23:55	25.33	19.00	13.00										
Flush Information				Installation				Water Strike						
Top (m)	Base (m)	Flush Type	Return %	Flush Colour	Top (m)	Base (m)	Type	Dia (mm)	Strike (m)	Casing (m)	Sealed (m)	Time (mins)	Rose to (m)	Remarks
1.20	3.00		100	grey										
13.00	14.50		100	grey										
14.50	16.00		100	grey										









	Contract Name: Crayford MRF, Dartford			Client: N & P Crayford MRF Limited			Borehole ID: BH01A							
	Contract Number: G242600	Date Started: 20/11/2024	Date Completed: 21/11/2024	Logged: MN	Checked: LD	Status: FINAL	Sheet 2 of 3							
Rotary Open Hole Borehole Log		Easting: 552859.7	Northing: 175742.3	Ground Level: 6.42m (OD)	Plant Used: Comacchio 305	Print Date: 01/04/2025	Scale: 1:50							
Weather: Fine		Rig Crew: Jack Woodhead		Termination: Target Depth			SPT Hammer: AR2501 Energy Ratio: 66%							
Samples & In Situ Testing				Strata Details					Groundwater					
Depth	Sample ID	Test Result	Level (mAOD)	Depth (m) (Thickness)	Legend	Strata Description			Water Strike	Backfill/ Installation				
10.00 - 10.45	D7	SPT(S) 10.00m, N=44 (6,6/6,9,12,17)	-4.58	(1.00)		Structure less CHALK composed of extremely weak cream gravelly silt. Clasts are moderately weak subrounded to angular, fine to coarse of chalk and flint. [WHITE CHALK SUBGROUP]								
11.00 - 11.45	D8	SPT(S) 11.00m, N=35 (6,10/8,7,10,10)		11.00			Structure less CHALK composed of extremely weak cream mottled black gravelly silt. Clasts are moderately weak subrounded to angular, fine to coarse of flint and chalk (putty chalk). [WHITE CHALK SUBGROUP]							
12.00 - 12.45	D9	SPT(S) 12.00m, N=31 (7,7/9,6,5,11)												
13.00 - 13.43	D10	SPT(S) 13.00m, 50 (7,7/10,9,13,18 for 50mm)												
14.50 - 14.72	D11	SPT(S) 14.50m, 50 (9,9/10,12,13,15 for 70mm)												
16.00 - 16.44	D12	SPT(S) 16.00m, 50 (7,9/10,11,13,16 for 65mm)												
17.50 - 17.75	D13	SPT(S) 17.50m, 50 (5,19/23,27 for 25mm)												
19.00 - 19.27	D14	SPT(S) 19.00m, 49 (9,7/14,24,11 for -30mm)												
				(14.33)										
														
														
														
														
Start & End of Shift Observations					Borehole Diameter		Casing Diameter		Remarks:					
Date	Time	Depth (m)	Casing (m)	Water (m)	Depth (m)	Dia (mm)	Depth (m)	Dia (mm)	Hand dug inspection pit to 1.20m bgl. No groundwater strike was encountered during the drilling. Backfilled with bentonite upon completion.					
Flush Information					Installation				Water Strike					
Top (m)	Base (m)	Flush Type	Return %	Flush Colour	Top (m)	Base (m)	Type	Dia (mm)	Strike (m)	Casing (m)	Sealed (m)	Time (mins)	Rose to (m)	Remarks
16.00	17.50		100	white										
17.50	19.00		100	clear										
19.00	20.50		100	white										

	Contract Name: Crayford MRF, Dartford			Client: N & P Crayford MRF Limited			Borehole ID: BH01A							
	Contract Number: G242600	Date Started: 20/11/2024	Date Completed: 21/11/2024	Logged: MN	Checked: LD	Status: FINAL	Sheet 3 of 3							
Rotary Open Hole Borehole Log		Easting: 552859.7	Northing: 175742.3	Ground Level: 6.42m (OD)	Plant Used: Comacchio 305	Print Date: 01/04/2025	Scale: 1:50							
Weather: Fine		Rig Crew: Jack Woodhead		Termination: Target Depth		SPT Hammer: AR2501 Energy Ratio: 66%								
Samples & In Situ Testing			Strata Details					Groundwater						
Depth	Sample ID	Test Result	Level (mAOD)	Depth (m) (Thickness)	Legend	Strata Description		Water Strike	Backfill/Installation					
20.50 - 20.88	D15	SPT(S) 20.50m, 41 (8,9/11,15,15,0 for 0mm)				Structure less CHALK composed of extremely weak cream mottled black gravelly silt. Clasts are moderately weak subrounded to angular, fine to coarse of flint and chalk (putty chalk). [WHITE CHALK SUBGROUP]								
22.00 - 22.30	D16	SPT(S) 22.00m, 50 (14,11 for 60mm/13,27,10 for 15mm)												
23.50 - 23.80	D17	SPT(S) 23.50m, 50 (15,10/16,30,4 for 0mm)												
25.00 - 25.33	D18	SPT(S) 25.00m, 50 (12,11/15,19,16 for 30mm)	-18.91	25.33										
					End of Borehole at 25.330m									
Start & End of Shift Observations			Borehole Diameter		Casing Diameter		Remarks:							
Date	Time	Depth (m)	Casing (m)	Water (m)	Depth (m)	Dia (mm)	Depth (m)	Dia (mm)	Hand dug inspection pit to 1.20m bgl. No groundwater strike was encountered during the drilling. Backfilled with bentonite upon completion.					
Flush Information					Installation				Water Strike					
Top (m)	Base (m)	Flush Type	Return %	Flush Colour	Top (m)	Base (m)	Type	Dia (mm)	Strike (m)	Casing (m)	Sealed (m)	Time (mins)	Rose to (m)	Remarks
20.50	22.00		100	clear										
22.00	23.50		100	white										
23.50	25.00		100	white										

		Contract Name: Crayford MRF, Dartford			Client: N & P Crayford MRF Limited			Borehole ID: BH02						
		Contract Number: G242600	Date Started: 29/11/2024	Date Completed: 30/11/2024	Logged: MN	Checked: LD	Status: FINAL	Sheet 1 of 3						
Rotary Open Hole Borehole Log		Easting: 552882.7	Northing: 175757.3	Ground Level: 7.10m (OD)	Plant Used: Comacchio 305/ Comacchio 602	Print Date: 01/04/2025	Scale: 1:50							
Weather: Fine		Rig Crew: Jack Woodhead		Termination: Target Depth		SPT Hammer: AR3920 Energy Ratio: 58%								
Samples & In Situ Testing				Strata Details				Groundwater						
Depth	Sample ID	Test Result	Level (mAOD)	Depth (m) (Thickness)	Legend	Strata Description	Water Strike	Backfill/Installation						
0.00 - 0.25	CC21					MADE GROUND: Blackish brown clayey subangular to rounded fine to coarse GRAVEL of concrete, type 1, coal, sandstone, mudstone, flint, quartzite, red brick, and slag. Medium cobble content of red brick and concrete.								
0.50	ES19			(1.20)		0.00 - 1.20: Occasional wood, metal, and plastic fragments <200mm.								
1.00	ES20						1							
1.20 - 1.65	D1	SPT(S) 1.20m, N=16 (1,3/5,5,4,2)	5.90	1.20		MADE GROUND: Orangish brown slightly gravelly clayey fine to coarse SAND. Gravel is angular to subangular, fine to coarse of chalk and type 1.								
				(0.90)										
2.00 - 2.45	D2	SPT(S) 2.00m, N=17 (3,3/3,4,5,5)	5.00	2.10		Firm to stiff light orangish brown very sandy gravelly CLAY with medium cobble content of flint <10x100x60mm. Sand is fine to coarse. Gravel is angular to subangular, fine to coarse of flint, sandstone, limestone, and chalk.								
2.20	ES23			(0.30)		2.30 - 2.40: Flint cobble reconstructed from gravel fragments.								
2.30 - 2.40	D22		4.70	2.40										
2.50 - 2.70	D24		4.40	2.70		Soft orangish brown slightly gravelly sandy SILT. Sand is fine. Gravel is angular to rounded, fine to coarse of flint and quartzite.								
				(0.30)										
3.00	ES25	SPT(S) 3.00m, N=7 (2,1/1,2,2,2)	4.11	3.00		[ALLUVIUM]								
3.10 - 3.30	D26			(0.60)		No Recovery: Driller notes normal drilling.								
3.30 - 3.60	B27		3.50	3.60		Soft orangish brown locally cream slightly gravelly sandy SILT. Sand is fine. Gravel is angular to rounded, fine to coarse of flint and quartzite.								
				(0.40)		[ALLUVIUM]								
4.00	ES28	SPT(S) 4.00m, N=15 (3,3/3,4,4,4)	3.10	4.00		3.30 - 3.60: Surface layer of structureless CHALK composed of cream slightly gravelly SILT <10mm thick. Grade Dm.								
4.00 - 4.45	D3			(0.55)		No Recovery: Driller notes normal drilling.								
4.00 - 4.55	B30		2.56	4.55		Light orangish brown very clayey gravelly SAND. Sand is fine to coarse. Gravel is angular to rounded, fine to coarse of flint, quartzite and rare chalk.								
4.10 - 4.30	D29		2.40	4.70		[ALLUVIUM]								
4.55 - 4.70	D31		2.10	5.00		Structureless CHALK composed of cream slightly gravelly soft SILT. Clasts are angular to subangular, fine to coarse of chalk and flint, Grade Dm.								
5.00 - 5.45	D4	SPT(S) 5.00m, N=15 (4,4/3,3,4,5)	2.10	5.00		[WHITE CHALK SUBGROUP]								
5.00 - 6.00	B32			(4.00)		No Recovery: Driller notes normal drilling.								
6.00 - 6.45	D5	SPT(S) 6.00m, N=20 (3,5/4,5,5,6)				Structureless CHALK composed of cream locally mottled light brown and light grey slightly gravelly becoming gravelly soft SILT with medium cobble content of flint. Clasts are angular to subangular, fine to coarse of chalk and flint, Grade Dm.								
6.25 - 7.00	B33					[WHITE CHALK SUBGROUP]								
6.50	ES34					5.00 - 11.50: Hydrocarbon odour and light grey mottling from contamination.								
						6.00 - 6.25: No Recovery: Driller notes normal drilling.								
7.00 - 7.45	D6	SPT(S) 7.00m, N=15 (2,3/3,4,4,4)				6.25: Becomes gravelly.								
7.00 - 7.75	B36													
7.50	ES35					7.75 - 8.00: No Recovery: Driller notes normal drilling.								
8.00 - 8.45	D7	SPT(S) 8.00m, N=21 (4,4/5,6,5,5)												
8.00 - 9.00	B38													
8.50	ES37													
9.00	ES39	SPT(S) 9.00m, N=17 (2,3/3,4,5,5)	-1.90	9.00		Structureless CHALK composed of greyish white silty gravel. Clasts are angular to subangular, fine to coarse of chalk and flint. Grade Dc.								
9.00 - 9.35	D40					[WHITE CHALK SUBGROUP]								
9.00 - 9.45	D8													
9.35 - 10.00	B41													
Start & End of Shift Observations			Borehole Diameter		Casing Diameter		Remarks:							
Date	Time	Depth (m)	Casing (m)	Water (m)	Depth (m)	Dia (mm)	Depth (m)	Dia (mm)						
22-11-2024	18:00	0.00	0.00		10.00	101	9.00	146	Hand dug inspection pit to 1.20m bgl. No groundwater strike was encountered during the drilling. Backfilled with bentonite upon completion.					
22-11-2024	23:55	1.20	0.00		11.50	87								
29-11-2024	17:00				12.00	77								
29-11-2024	23:55	19.00	9.00	13.00	14.50	121								
30-11-2024	18:00	19.00	9.00	9.00	19.00	140								
30-11-2024	23:55	0.00												
Flush Information					Installation				Water Strike					
Top (m)	Base (m)	Flush Type	Return %	Flush Colour	Top (m)	Base (m)	Type	Dia (mm)	Strike (m)	Casing (m)	Sealed (m)	Time (mins)	Rose to (m)	Remarks
1.20	2.00		100	brown										
12.00	13.00	Air/Mist	100	white										
13.00	14.50	Air/Mist	100	white										

	Contract Name: Crayford MRF, Dartford			Client: N & P Crayford MRF Limited			Borehole ID: BH02							
	Contract Number: G242600	Date Started: 29/11/2024	Date Completed: 30/11/2024	Logged: MN	Checked: LD	Status: FINAL	Sheet 2 of 3							
Rotary Open Hole Borehole Log		Easting: 552882.7	Northing: 175757.3	Ground Level: 7.10m (OD)	Plant Used: Comacchio 305/ Comacchio 602	Print Date: 01/04/2025	Scale: 1:50							
Weather: Fine		Rig Crew: Jack Woodhead		Termination: Target Depth		SPT Hammer: AR3920 Energy Ratio: 58%								
Samples & In Situ Testing				Strata Details				Groundwater						
Depth	Sample ID	Test Result	Level (mAOD)	Depth (m) (Thickness)	Legend	Strata Description		Water Strike	Backfill/Installation					
10.00 - 10.45	D9	SPT(S) 10.00m, N=33 (3,5/7,8,8,10)				Structureless CHALK composed of greyish white silty gravel. Clasts are angular to subangular, fine to coarse of chalk and flint. Grade Dc. [WHITE CHALK SUBGROUP]								
10.00 - 11.50	D43							11						
10.50 - 11.50	ES42													
11.50 - 11.95	D10	SPT(S) 11.50m, N=36 (2,6/8,8,10,10)						12						
11.50 - 12.00	B44													
						11.50 - 25.00: Logged from disturbed SPT samples and flush return.								
13.00 - 13.45	D11	SPT(S) 13.00m, N=45 (4,9/9,10,13,13)					13							
14.50 - 14.95	D12	SPT(S) 14.50m, N=49 (7,10/10,11,13,15)					14							
16.00 - 16.30	D13	SPT(S) 16.00m, 50 (5,18/22,26,2 for 0mm)					15							
17.50 - 17.77	D14	SPT(S) 17.50m, 50 (7,15/24,26 for 40mm)		(16.00)			16							
19.00 - 19.32	D15	SPT(S) 19.00m, 50 (13,11/16,24,10 for 20mm)					17							
							18							
							19							
							20							
Start & End of Shift Observations			Borehole Diameter		Casing Diameter		Remarks:							
Date	Time	Depth (m)	Casing (m)	Water (m)	Depth (m)	Dia (mm)	Depth (m)	Dia (mm)	Hand dug inspection pit to 1.20m bgl. No groundwater strike was encountered during the drilling. Backfilled with bentonite upon completion.					
					10.00	101	9.00	146						
					11.50	87								
					12.00	77								
					14.50	121								
					19.00	140								
Flush Information					Installation				Water Strike					
Top (m)	Base (m)	Flush Type	Return %	Flush Colour	Top (m)	Base (m)	Type	Dia (mm)	Strike (m)	Casing (m)	Sealed (m)	Time (mins)	Rose to (m)	Remarks
14.50	16.00	Air/Mist	100	white										
16.00	17.50	Air/Mist	100	white										
17.50	19.00	Air/Mist	100	white										

	Contract Name: Crayford MRF, Dartford			Client: N & P Crayford MRF Limited			Borehole ID: BH02							
	Contract Number: G242600	Date Started: 29/11/2024	Date Completed: 30/11/2024	Logged: MN	Checked: LD	Status: FINAL	Sheet 3 of 3							
Rotary Open Hole Borehole Log	Easting: 552882.7	Northing: 175757.3	Ground Level: 7.10m (OD)	Plant Used: Comacchio 305/ Comacchio 602		Print Date: 01/04/2025	Scale: 1:50							
	Weather: Fine		Rig Crew: Jack Woodhead	Termination: Target Depth		SPT Hammer: AR3920 Energy Ratio: 58%								
Samples & In Situ Testing			Strata Details					Groundwater						
Depth	Sample ID	Test Result	Level (mAOD)	Depth (m) (Thickness)	Legend	Strata Description		Water Strike	Backfill/ Installation					
20.50 - 20.80	D16	SPT(S) 20.50m, 50 (9,15/21,26,3 for 0mm)				Structureless CHALK composed of greyish white silty gravel. Clasts are angular to subangular, fine to coarse of chalk and flint. Grade Dc. [WHITE CHALK SUBGROUP]								
		SPT(S) 22.00m, 50 (25 for 55mm/50 for 30mm)												
23.50 - 23.65	D17	SPT(S) 23.50m, 50 (25 for 70mm/41,9 for 0mm)												
25.00 - 25.12	D18	SPT(S) 25.00m, 50 (24,1 for 0mm/50 for 40mm)	-17.90	25.00		End of Borehole at 25.120m								
Start & End of Shift Observations			Borehole Diameter		Casing Diameter		Remarks:							
Date	Time	Depth (m)	Casing (m)	Water (m)	Depth (m)	Dia (mm)	Depth (m)	Dia (mm)	Hand dug inspection pit to 1.20m bgl. No groundwater strike was encountered during the drilling. Backfilled with bentonite upon completion.					
					10.00	101	9.00	146						
					11.50	87								
					12.00	77								
					14.50	121								
					19.00	140								
Flush Information					Installation				Water Strike					
Top (m)	Base (m)	Flush Type	Return %	Flush Colour	Top (m)	Base (m)	Type	Dia (mm)	Strike (m)	Casing (m)	Sealed (m)	Time (mins)	Rose to (m)	Remarks
19.00	20.50		100	white										
20.50	25.00		100	white										

	Contract Name: Crayford MRF, Dartford			Client: N & P Crayford MRF Limited			Borehole ID: WS2						
	Contract Number: G242600	Date Started: 20/11/2024	Date Completed: 20/11/2024	Logged: MN	Checked: LD	Status: FINAL	Sheet 1 of 1						
Dynamic Sample Drilling Log	Easting: 552906.4	Northing: 175759.5	Ground Level: 6.32m (OD)	Plant Used: Dart351		Print Date: 01/04/2025	Scale: 1:50						
	Weather: Fine		Rig Crew: Curtis Thrasher	Termination: Target Depth.			SPT Hammer: DART351 Energy Ratio: 73%						
Samples & In Situ Testing				Strata Details					Groundwater				
Depth	Sample	Test Result	TCR	SCR	RQD	FI/IF	Level (mAOD)	Depth (m) (Thickness)	Legend	Strata Description	Water Strike	Backfill/Installation	
0.00 - 0.15 0.00 - 1.20	CC1 B7						6.16	0.16		MADE GROUND: Strong multicoloured CONCRETE with 75-80% aggregate of subrounded to rounded, fine to coarse gravel, 5-10% small voids.			
0.50 0.50	D2 ES5						(0.84)		MADE GROUND: Light brown mottled dark brown slightly clayey slightly sandy angular to well rounded fine to coarse GRAVEL of concrete, type 1 limestone, quartzite, flint and mudstone. Sand is fine to coarse.				
1.00 1.00 - 2.00 1.20 - 1.65	ES6 B8 D3	SPT(SPT(C)) 1.20m, N=22 (4,4/5,5,6,6)					5.32	1.00		Medium dense multi coloured slightly clayey slightly sandy rounded to angular fine to coarse GRAVEL of quartzite and flint. Sand is fine to coarse. [TAPLOW GRAVEL MEMBER]	1		
2.00 - 2.45 2.00 - 3.00	D5 B9	SPT(SPT(S)) 2.00m, N=24 (5,4/3,5,10,6)					4.72	1.60		Structure less CHALK composed of extremely weak cream slightly gravelly silt. Clasts are moderately weak subrounded, fine to medium of chalk only (putty chalk/no flints). [WHITE CHALK SUBGROUP]	2		
							4.32	2.00		Structure less CHALK composed of extremely weak cream speckled black gravelly silt. Clasts are moderately weak subrounded to angular, fine to coarse of chalk and flint (putty chalk). [WHITE CHALK SUBGROUP]	3		
							3.32	3.00		End of Borehole at 3.00m			
											4		
											5		
											6		
											7		
											8		
											9		
											10		
Start & End of Shift Observations			Flush Return Information					Remarks:					
Date	Time	Depth (m)	Casing (m)	Water (m)	Top	Base	Min %	Max %	Type	Colour	Hand dug inspection pit to 1.20m bgl. No groundwater strike was encountered during the drilling. Backfilled with bentonite upon completion.		
20-11-24	17:00	0.00	0.00										
20-11-24	20:50	3.00	1.20										
Borehole Diameter			Casing Diameter		Coring Information				Water Strike				
Depth (m)	Dia (mm)	Depth (m)	Dia (mm)	Top (m)	Base (m)	Dia (mm)	Barrel Type	Strike (m)	Casing (m)	Sealed (m)	Time (mins)	Rose to (m)	Remarks
3.00	127	1.20	107										
<small>Fracture Index (FI) - Fractures per meter; Fracture Spacing (IF) - reported in mm as Min, Average and Max values. TCR, SCR and RQD reported as %. Hand vane (HV) reports Undrained Shear Strength (Su). Pocket penetrometer (PP) reports Unconfined Compressive Strength (UCS)</small>													

Appendix C: Laboratory results

Table C-1 – Soil Suite H Determinands.

Soil Suite H		
Volatile organic compounds (VOCs)		
1,1 Dichloroethylene	1,4-dichlorobenzene	Hexachlorobutadiene
1,1,1,2-tetrachloroethane	2,2-dichloropropane	Isopropylbenzene
1,1,1-trichloroethane	2-chlorotoluene	m+p-Xylene
1,1,2-trichloroethane	4-chlorotoluene	Naphthalene
1,1-dichloroethane	Benzene	n-butylbenzene
1,1-dichloropropene	Bromobenzene	n-propylbenzene
1,2,3-trichlorobenzene	Bromochloromethane	o-Xylene
1,2,3-trichloropropane	Bromodichloromethane	p-isopropyltoluene
1,2,4-trichlorobenzene	Bromoform	sec-butylbenzene
1,2,4-trimethylbenzene	Carbon tetrachloride	Styrene
1,2-dibromo-3-chloropropane	Chlorobenzene	Tert-butylbenzene
1,2-dibromoethane	Chloroform	Tetrachloroethylene
1,2-dichlorobenzene	Cis-1,2-dichloroethylene	Toluene
1,2-dichloroethane	cis-1,3-dichloropropene	Trans-1,2-dichloroethylene
1,2-dichloropropane	Dibromochloromethane	trans-1,3-dichloropropene
1,3,5-trimethylbenzene	Dibromomethane	Trichloroethylene
1,3-dichlorobenzene	Ethylbenzene	Vinyl Chloride
Semi volatile organic compounds (SVOCs)		
1,2,4-Trichlorobenzene	4-Nitrophenol	Diethylphthalate
1,2-Dinitrobenzene	Acenaphthene	Dimethylphthalate
1,3-Dinitrobenzene	Acenaphthylene	Di-n-butylphthalate
1,4-Dinitrobenzene	Aniline	Di-n-octylphthalate
2,3,4,6-Tetrachlorophenol	Anthracene	Diphenylamine
2,3,5,6-Tetrachlorophenol	Azobenzene	Fluoranthene
2,4,5-Trichlorophenol	Benzo(a)anthracene	Fluorene
2,4,6-Trichlorophenol	Benzo(a)pyrene	Hexachlorobenzene
2,4-Dichlorophenol	Benzo(b)fluoranthene	Hexachlorocyclopentadiene
2,4-Dimethylphenol	Benzo(ghi)perylene	Indeno(123cd)pyrene
2,4-Dinitrotoluene	Benzo(k)fluoranthene	Naphthalene
2,6-Dinitrotoluene	Benzyl Alcohol	Pentachlorophenol
2-Chloronaphthalene	Bis(2-chloroisopropyl)ether	Phenanthrene
2-Chlorophenol	Bis(2-ethylhexyl)phthalate	Phenol
2-Methyl-4,6-Dinitrophenol	Bis-(dichloroethoxy)methane	Pyrene
2-Methylnaphthalene	Butylbenzylphthalate	
2-Methylphenol	Carbazole	
2-Nitroaniline	Chrysene	
3&4-Methylphenol	Dibenzo(ah)anthracene	
3-Nitroaniline	Dibenzofuran	

Table C-2 – Soil Suite G Determinands.

Soil Suite G		
Arsenic (As)	Copper (Cu)	Speciated Mercury (inorganic/organic/elemental.
Asbestos presence/absence and ID	Cyanide (total)	Speciated PAH (EPA 16)
Asbestos quantification	Lead (Pb)	Total organic matter (TOC)
Barium (Ba)	Mercury (Hg)	Total Petroleum Hydrocarbons, Criterial Working Group (TPH CWG) C5-C35/40 RBCA banding
Boron (B) water soluble	Nickle (Ni)	Vanadium (V)
BTEX/MTBE	pH	Water soluble sulphate (as SO ₄)
Cadmium (Cd)	Phenol	Zinc (Zn)
Chromium (Cr) III & IV		

Table C-3 – Soil Suite E Determinands.

Soil Suite E		
Arsenic (aqua regia extractable)	Mercury (aqua regia extractable)	TPH : EPH (C10 – C40)
Boron - Water Soluble	Nickel (aqua regia extractable)	PAH - Speciated (EPA 16) INC Total- (see appendix for full technical spec)
Cadmium (aqua regia extractable)	Zinc (aqua regia extractable)	Phenols - Total (monohydric)
Chromium (aqua regia extractable)	pH	Cyanide - Total
Copper (aqua regia extractable)	Sulphate (as SO ₄) - Water Soluble (2:1) -Leachate Equivalent	Asbestos Screen & ID
Lead (aqua regia extractable)	Organic Matter	

Table C-4 – WAC Suite Determinands.

WAC Suite		
WAC (Inert)		
Leachate preparation WAC (10:1)	Molybdenum (dissolved)	Fluoride
Arsenic (dissolved)	Nickel (dissolved)	Sulphate as SO ₄
Barium (dissolved)	Lead (dissolved)	Dissolved Solids
Cadmium (dissolved)	Antimony (dissolved)	Phenols - Total (monohydric)
Chromium (dissolved)	Selenium (dissolved)	Total Organic Carbon (TOC)
Copper (dissolved)	Zinc (dissolved)	
Mercury (dissolved)	Chloride	
WAC Hazardous Suite		
Total Organic Carbon (TOC)	Loss on Ignition @ 450oC	pH
Acid Neutralisation Capacity		
WAC Stable, Non-reactive suite		
Total Organic Carbon (TOC)	pH	Acid Neutralisation Capacit



Van Elle
Kirkby Lane
Pinxton
Nottinghamshire
NG16 6JA

t: 01773 580 580

e: labs@stratageo.co.uk
labs@stratageo.co.uk

i2 Analytical Ltd.
7 Woodshots Meadow,
Croxley Green
Business Park,
Watford,
Herts,
WD18 8YS

t: 01923 225404
f: 01923 237404
e: reception@i2analytical.com

Analytical Report Number : 24-056193

Project / Site name:	Crayford	Samples received on:	22/11/2024
Your job number:	G242600	Samples instructed on/ Analysis started on:	22/11/2024
Your order number:	VE325506	Analysis completed by:	03/12/2024
Report Issue Number:	1	Report issued on:	03/12/2024
Samples Analysed:	1 soil sample - 1 leachate sample		

Signed: 

Matthew O'Connell
Key Account 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: 24-056193
 Project / Site name: Crayford
 Your Order No: VE325506

Lab Sample Number				392236
Sample Reference				WS2
Sample Number				None Supplied
Water Matrix				N/A
Depth (m)				0.50
Date Sampled				20/11/2024
Time Taken				None Supplied
Analytical Parameter (Soil Analysis)	Units	Test Limit of detection	Test Accreditation Status	

Stone Content	%	0.1	NONE	< 0.1
Moisture Content	%	0.01	NONE	5.2
Total mass of sample received	kg	0.1	NONE	0.2

General Inorganics

Total Organic Carbon (TOC) - Automated	%	0.1	MCERTS	0.6
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Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	0.19
Acenaphthylene	mg/kg	0.05	MCERTS	0.06
Acenaphthene	mg/kg	0.05	MCERTS	0.08
Fluorene	mg/kg	0.05	MCERTS	0.14
Phenanthrene	mg/kg	0.05	MCERTS	0.63
Anthracene	mg/kg	0.05	MCERTS	0.15
Fluoranthene	mg/kg	0.05	MCERTS	0.84
Pyrene	mg/kg	0.05	MCERTS	0.74
Benzo(a)anthracene	mg/kg	0.05	MCERTS	0.38
Chrysene	mg/kg	0.05	MCERTS	0.38
Benzo(b)fluoranthene	mg/kg	0.05	ISO 17025	0.41
Benzo(k)fluoranthene	mg/kg	0.05	ISO 17025	0.15
Benzo(a)pyrene	mg/kg	0.05	MCERTS	0.42
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	0.22
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	0.27
Coronene	mg/kg	0.05	NONE	0.12

Total PAH

Total WAC-17 PAHs	mg/kg	0.85	NONE	5.17
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Petroleum Hydrocarbons

Mineral Oil (EC10 - EC40) <small>BH_CU_ID_AL</small>	mg/kg	10	NONE	140
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VOCs

Benzene	µg/kg	5	MCERTS	< 5.0
Toluene	µg/kg	5	MCERTS	< 5.0
Ethylbenzene	µg/kg	5	MCERTS	< 5.0
p & m-Xylene	µg/kg	8	MCERTS	< 8.0
o-Xylene	µg/kg	5	MCERTS	< 5.0

Total BTEX	µg/kg	10	MCERTS	< 10
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Analytical Report Number: 24-056193
 Project / Site name: Crayford
 Your Order No: VE325506

Lab Sample Number				392236
Sample Reference				WS2
Sample Number				None Supplied
Water Matrix				N/A
Depth (m)				0.50
Date Sampled				20/11/2024
Time Taken				None Supplied
Analytical Parameter (Soil Analysis)	Units	Test Limit of detection	Test Accreditation Status	

PCBs by GC-MS

PCB Congener 28	mg/kg	0.001	MCERTS	0.005
PCB Congener 52	mg/kg	0.001	MCERTS	< 0.001
PCB Congener 101	mg/kg	0.001	MCERTS	0.003
PCB Congener 118	mg/kg	0.001	MCERTS	0.004
PCB Congener 138	mg/kg	0.001	MCERTS	0.005
PCB Congener 153	mg/kg	0.001	MCERTS	0.003
PCB Congener 180	mg/kg	0.001	MCERTS	0.002

Total PCBs	mg/kg	0.007	MCERTS	0.022
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U/S = Unsuitable Sample I/S = Insufficient Sample ND = Not detected



4041



Environmental Science

i2 Analytical7 Woodshots Meadow
Croxley Green Business Park
Watford, WD18 8YSTelephone: 01923 225404
Fax: 01923 237404
email:reception@i2analytical.com

Waste Acceptance Criteria Analytical Results						
Report No:	24-056193					
				Client: VAN ELLE		
Location	Crayford					
Lab Reference (Sample Number)	392236			Landfill Waste Acceptance Criteria		
Sampling Date	20/11/2024			Limits		
Sample ID	WS2			Inert Waste Landfill	Stable Non-reactive HAZARDOUS waste in non-hazardous Landfill	Hazardous Waste Landfill
Depth (m)	0.50					
Solid Waste Analysis						
TOC (%)**	0.6			3%	5%	6%
Loss on Ignition (%)**	-			--	--	10%
BTEX (µg/kg)**	< 10			6000	--	--
Sum of PCBs (mg/kg)**	0.022			1	--	--
Mineral Oil (mg/kg) <small>EH, IO, CU, AL</small>	140			500	--	--
Total PAH (WAC-17) (mg/kg)	5.17			100	--	--
pH (units)**	-			--	>6	--
Acid Neutralisation Capacity (mmol / kg)	-			--	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 *	0.00714			0.0714	0.5	2
Barium *	0.00573			0.0573	20	100
Cadmium *	< 0.000100			< 0.00100	0.04	1
Chromium *	< 0.00040			< 0.0040	0.5	10
Copper *	0.011			0.11	2	50
Mercury *	< 0.000500			< 0.00500	0.01	0.2
Molybdenum *	0.0176			0.176	0.5	10
Nickel *	0.0017			0.017	0.4	10
Lead *	< 0.0010			< 0.010	0.5	10
Antimony	< 0.0017 [†]			< 0.017 [†]	0.06	0.7
Selenium *	< 0.0040			< 0.040	0.1	0.5
Zinc *	0.0031			0.031	4	50
Chloride *	4.0			40	800	15000
Fluoride*	0.52			5.2	10	150
Sulphate *	19			190	1000	20000
TDS*	93			930	4000	60000
Phenol Index (Monohydric Phenols) *	< 0.010			< 0.10	1	-
DOC	17.3			173	500	800
Leach Test Information						
Stone Content (%)	< 0.1					
Sample Mass (kg)	0.2					
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)						
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.



Analytical Report Number : 24-056193
Project / Site name: Crayford

* 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 *
392236	WS2	None Supplied	0.5	Brown sand with gravel and vegetation

Analytical Report Number : 24-056193

Project / Site name: Crayford

Water matrix abbreviations:

Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters Heating/Cooling (PrW) DI Process Water (DI PrW)

Final Sewage Effluent (FSE) Landfill Leachate (LL)

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 (Walkley Black Method)	In-house method	L009B	D	MCERTS
Moisture Content	Moisture content, determined gravimetrically (up to 30°C)	In-house method	L019B	W	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.	L019B	D	NONE
PCB's By GC-MS in soil	Determination of PCB by extraction with hexane followed by GC-MS	In-house method based on USEPA 8082	L027B	D	MCERTS
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	L031B	W	ISO 17025
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	W	ISO 17025
Dissolved organic carbon 10:1 WAC	Determination of dissolved organic carbon in leachate by TOC/DOC NDIR Analyser	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L037B	W	NONE
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	L039B	W	ISO 17025
Sample Preparation		In-house method	L043B	W	NONE
Speciated PAHs and/or Semi-volatile organic compounds in soil	Determination of semi-volatile organic compounds (including PAH) in soil by extraction in dichloromethane and hexane followed by GC-MS	In-house method based on USEPA 8270	L064B	D	MCERTS
BTEX and/or Volatile organic compounds in soil	Determination of volatile organic compounds in soil by headspace GC-MS	In-house method based on USEPA 8260	L073B	W	MCERTS
Total petroleum hydrocarbons by GC-FID/GC-MS HS in soil	Determination of total petroleum hydrocarbons in soil by GC-FID/GC-MS HS	In-house method	L076B/L088-PL	D/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

Analytical Report Number : 24-056193
 Project / Site name: Crayford

Water matrix abbreviations:
 Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters Heating/Cooling (PrW) DI Process Water (DI PrW)
 Final Sewage Effluent (FSE) Landfill Leachate (LL)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Chloride 10:1 WAC	Determination of Chloride colorimetrically by discrete analyser	In-house based on MEWAM Method ISBN 0117516260	L082B	W	ISO 17025

For method numbers ending in 'UK' or 'A' analysis have been carried out in our laboratory in the United Kingdom (Watford).
 For method numbers ending in 'F' analysis have been carried out in our laboratory in the United Kingdom (East Kilbride).
 For method numbers ending in 'PL' or 'B' 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.
 Unless otherwise indicated, site information, order number, project number, sampling date, time, sample reference and depth are provided by the client. The instructed on date indicates the date on which this information was provided to the laboratory.

Quality control parameter failure associated with individual result applies to calculated sum of individuals.
 The result for sum should be interpreted with caution

- Quality control parameter failure associated with this result; other checks applied prior to reporting the data have been accepted. The result should be considered as deviating and should be interpreted with caution. The result is not accredited.



Van Elle
Kirkby Lane
Pinxton
Nottinghamshire
NG16 6JA

i2 Analytical Ltd.
7 Woodshots Meadow,
Croxley Green
Business Park,
Watford,
Herts,
WD18 8YS

t: 01773 580 580

t: 01923 225404

e: labs@stratageo.co.uk

f: 01923 237404

e: reception@i2analytical.com

Analytical Report Number : 24-057544

Project / Site name:	Crayford	Samples received on:	05/12/2024
Your job number:	G242600	Samples instructed on/ Analysis started on:	05/12/2024
Your order number:	VE325977	Analysis completed by:	11/12/2024
Report Issue Number:	1	Report issued on:	11/12/2024
Samples Analysed:	2 soil samples		

Signed: _____

Anna Goc
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
air - once the analysis is complete

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: 24-057544

Project / Site name: Crayford

Your Order No: VE325977

Lab Sample Number				398554	398556
Sample Reference				BH02	WS5
Sample Number				19	6
Water Matrix				N/A	N/A
Depth (m)				0.50-0.50	1.00-1.00
Date Sampled				22/11/2024	22/11/2024
Time Taken				None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Test Limit of detection	Test Accreditation Status		

Stone Content	%	0.1	NONE	< 0.1	41.5
Moisture Content	%	0.01	NONE	11	5.5
Total mass of sample received	kg	0.1	NONE	0.3	0.3

Asbestos

Asbestos in Soil Detected/Not Detected	Type	N/A	ISO 17025	Not-detected	Not-detected
Asbestos Analyst ID	N/A	N/A	N/A	PDO	PDO

General Inorganics

pH (L099)	pH Units	N/A	MCERTS	8.6	9.8
Total Cyanide	mg/kg	1	MCERTS	< 1.0	< 1.0
Water Soluble Sulphate as SO ₄ 16hr extraction (2:1)	mg/kg	2.5	MCERTS	210	240
Water Soluble SO ₄ 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	104	118
Organic Matter (automated)	%	0.1	MCERTS	0.4	< 0.1

Total Phenols

Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0	< 1.0
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Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	0.06	0.07
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	0.28	0.32
Anthracene	mg/kg	0.05	MCERTS	0.07	0.09
Fluoranthene	mg/kg	0.05	MCERTS	0.53	0.65
Pyrene	mg/kg	0.05	MCERTS	0.46	0.59
Benzo(a)anthracene	mg/kg	0.05	MCERTS	0.24	0.31
Chrysene	mg/kg	0.05	MCERTS	0.27	0.37
Benzo(b)fluoranthene	mg/kg	0.05	ISO 17025	0.35	0.56
Benzo(k)fluoranthene	mg/kg	0.05	ISO 17025	0.14	0.2
Benzo(a)pyrene	mg/kg	0.05	MCERTS	0.29	0.45
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	0.12	0.21
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	0.12	0.21

Total PAH

Speciated Total EPA-16 PAHs	mg/kg	0.8	ISO 17025	2.93	4.09
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Heavy Metals / Metalloids

Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	8.2	6
Boron (water soluble)	mg/kg	0.2	MCERTS	1.4	1.1
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	0.3	< 0.2
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	46	39
Copper (aqua regia extractable)	mg/kg	1	MCERTS	29	10
Lead (aqua regia extractable)	mg/kg	1	MCERTS	72	9.4
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	< 0.3
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	18	12
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	150	24

Analytical Report Number: 24-057544

Project / Site name: Crayford

Your Order No: VE325977

Lab Sample Number				398554	398556
Sample Reference				BH02	WS5
Sample Number				19	6
Water Matrix				N/A	N/A
Depth (m)				0.50-0.50	1.00-1.00
Date Sampled				22/11/2024	22/11/2024
Time Taken				None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Test Limit of detection	Test Accreditation Status		

Petroleum Hydrocarbons

TPHCWG - Aliphatic >EC5 - EC6 HS_1D_AL	mg/kg	0.01	MCERTS	< 0.010	< 0.010
TPHCWG - Aliphatic >EC6 - EC8 HS_1D_AL	mg/kg	0.01	MCERTS	< 0.010	< 0.010
TPHCWG - Aliphatic >EC8 - EC10 HS_1D_AL	mg/kg	0.01	MCERTS	< 0.010	< 0.010
TPHCWG - Aliphatic >EC10 - EC12 EH_CU_1D_AL	mg/kg	1	MCERTS	< 1.0	< 1.0
TPHCWG - Aliphatic >EC12 - EC16 EH_CU_1D_AL	mg/kg	2	MCERTS	< 2.0	< 2.0
TPHCWG - Aliphatic >EC16 - EC21 EH_CU_1D_AL	mg/kg	8	MCERTS	< 8.0	< 8.0
TPHCWG - Aliphatic >EC21 - EC35 EH_CU_1D_AL	mg/kg	8	MCERTS	< 8.0	23
TPHCWG - Aliphatic >EC5 - EC35 EH_CU+HS_1D_AL	mg/kg	10	NONE	< 10	23

TPHCWG - Aromatic >EC5 - EC7 HS_1D_AR	mg/kg	0.01	MCERTS	< 0.010	< 0.010
TPHCWG - Aromatic >EC7 - EC8 HS_1D_AR	mg/kg	0.01	MCERTS	< 0.010	< 0.010
TPHCWG - Aromatic >EC8 - EC10 HS_1D_AR	mg/kg	0.02	MCERTS	< 0.020	< 0.020
TPHCWG - Aromatic >EC10 - EC12 EH_CU_1D_AR	mg/kg	1	MCERTS	< 1.0	< 1.0
TPHCWG - Aromatic >EC12 - EC16 EH_CU_1D_AR	mg/kg	2	MCERTS	< 2.0	< 2.0
TPHCWG - Aromatic >EC16 - EC21 EH_CU_1D_AR	mg/kg	10	MCERTS	< 10	< 10
TPHCWG - Aromatic >EC21 - EC35 EH_CU_1D_AR	mg/kg	10	MCERTS	< 10	10
TPHCWG - Aromatic >EC5 - EC35 EH_CU+HS_1D_AR	mg/kg	10	NONE	< 10	10

VOCs

MTBE (Methyl Tertiary Butyl Ether)	µg/kg	5	MCERTS	< 5.0	< 5.0
Benzene	µg/kg	5	MCERTS	< 5.0	< 5.0
Toluene	µg/kg	5	MCERTS	< 5.0	< 5.0
Ethylbenzene	µg/kg	5	MCERTS	< 5.0	< 5.0
p & m-Xylene	µg/kg	8	MCERTS	< 8.0	< 8.0
o-Xylene	µg/kg	5	MCERTS	< 5.0	< 5.0

U/S = Unsuitable Sample I/S = Insufficient Sample ND = Not detected



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Analytical Report Number : 24-057544

Project / Site name: Crayford

* 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 *
398554	BH02	19	0.50-0.50	Brown clay with gravel
398556	W55	6	1.00-1.00	Brown sand with gravel and stones

Analytical Report Number : 24-057544

Project / Site name: Crayford

Water matrix abbreviations:

Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters Heating/Cooling (PrW) DI Process Water (DI PrW)

Final Sewage Effluent (FSE) Landfill Leachate (LL)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Asbestos identification in Soil	Asbestos Identification with the use of polarised light microscopy in conjunction with dispersion staining techniques	In-house method based on HSG 248, 2021	A001B	D	ISO 17025
Organic matter (Automated) in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate (Walkley Black Method)	In-house method	L009B	D	MCERTS
Moisture Content	Moisture content, determined gravimetrically (up to 30°C)	In-house method	L019B	W	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.	L019B	D	NONE
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	L038B	D	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	L038B	D	MCERTS
Sulphate, water soluble, in soil (16hr extraction)	Sulphate, water soluble, in soil (16hr extraction)	In-house method	L038B	D	MCERTS
Speciated PAHs and/or Semi-volatile organic compounds in soil	Determination of semi-volatile organic compounds (including PAH) in soil by extraction in dichloromethane and hexane followed by GC-MS	In-house method based on USEPA 8270	L064B	D	MCERTS
BTEX and/or Volatile organic compounds in soil	Determination of volatile organic compounds in soil by headspace GC-MS	In-house method based on USEPA 8260	L073B	W	MCERTS
Total petroleum hydrocarbons with carbon banding by GC-FID/GC-MS HS in soil	Determination of total petroleum hydrocarbons in soil by GC-FID/GC-MS HS with carbon banding aliphatic and aromatic	In-house method	L076B/L088-PL	D/W	MCERTS
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	L080-PL	W	MCERTS
Total cyanide in soil	Determination of total cyanide by distillation followed by colorimetry	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L080-PL	W	MCERTS

Analytical Report Number : 24-057544

Project / Site name: Crayford

Water matrix abbreviations:

Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters Heating/Cooling (PrW) DI Process Water (DI PrW)

Final Sewage Effluent (FSE) Landfill Leachate (LL)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
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

For method numbers ending in 'UK' or 'A' analysis have been carried out in our laboratory in the United Kingdom (Watford).

For method numbers ending in 'F' analysis have been carried out in our laboratory in the United Kingdom (East Kilbride).

For method numbers ending in 'PL' or 'B' 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.

Unless otherwise indicated, site information, order number, project number, sampling date, time, sample reference and depth are provided by the client. The instructed on date indicates the date on which this information was provided to the laboratory.

Quality control parameter failure associated with individual result applies to calculated sum of individuals.

The result for sum should be interpreted with caution

Sample Deviation Report



Analytical Report Number : 24-057544

Project / Site name: Crayford

This deviation report indicates the sample and test deviations that apply to the samples submitted for analysis. Please note that the associated result(s) may be unreliable and should be interpreted with care.

Key: a - No sampling date b - Incorrect container c - Holding time d - Headspace e - Temperature

Sample ID	Other ID	Sample Type	Lab Sample Number	Sample Deviation	Test Name	Test Ref	Test Deviation
BH02	19	S	398554	c	BTEX and/or Volatile organic compounds in soil	L073B	c
BH02	19	S	398554	c	Speciated PAHs and/or Semi-volatile organic compounds in soil	L064B	c
BH02	19	S	398554	c	Total cyanide in soil	L080-PL	c
BH02	19	S	398554	c	Total petroleum hydrocarbons with carbon banding by GC-FID/GC-MS HS in soil	L076B/L088-PL	c
WS5	6	S	398556	c	BTEX and/or Volatile organic compounds in soil	L073B	c
WS5	6	S	398556	c	Speciated PAHs and/or Semi-volatile organic compounds in soil	L064B	c
WS5	6	S	398556	c	Total cyanide in soil	L080-PL	c
WS5	6	S	398556	c	Total petroleum hydrocarbons with carbon banding by GC-FID/GC-MS HS in soil	L076B/L088-PL	c



Van Elle
Kirkby Lane
Pinxton
Nottinghamshire
NG16 6JA

i2 Analytical Ltd.
7 Woodshots Meadow,
Croxley Green
Business Park,
Watford,
Herts,
WD18 8YS

t: 01773 580 580

t: 01923 225404

e: labs@stratageo.co.uk

f: 01923 237404

e: reception@i2analytical.com

Analytical Report Number : 24-057546

Project / Site name:	Crayford	Samples received on:	05/12/2024
Your job number:	G242600	Samples instructed on/ Analysis started on:	05/12/2024
Your order number:	VE325977	Analysis completed by:	12/12/2024
Report Issue Number:	1	Report issued on:	12/12/2024
Samples Analysed:	10:1 WAC sample		

Signed: _____

Anna Goc
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
air - once the analysis is complete

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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: 24-057546

Project / Site name: Crayford

Your Order No: VE325977

Lab Sample Number				398555
Sample Reference				WS3
Sample Number				5
Water Matrix				N/A
Depth (m)				0.50-0.50
Date Sampled				22/11/2024
Time Taken				None Supplied
Analytical Parameter (Soil Analysis)	Units	Test Limit of detection	Test Accreditation Status	

Stone Content	%	0.1	NONE	< 0.1
Moisture Content	%	0.01	NONE	12
Total mass of sample received	kg	0.1	NONE	0.3

General Inorganics

Total Organic Carbon (TOC) - Automated	%	0.1	MCERTS	< 0.1
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Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	0.08
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	0.13
Anthracene	mg/kg	0.05	MCERTS	< 0.05
Fluoranthene	mg/kg	0.05	MCERTS	0.14
Pyrene	mg/kg	0.05	MCERTS	0.12
Benzo(a)anthracene	mg/kg	0.05	MCERTS	0.06
Chrysene	mg/kg	0.05	MCERTS	0.06
Benzo(b)fluoranthene	mg/kg	0.05	ISO 17025	0.1
Benzo(k)fluoranthene	mg/kg	0.05	ISO 17025	< 0.05
Benzo(a)pyrene	mg/kg	0.05	MCERTS	0.09
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
Coronene	mg/kg	0.05	NONE	< 0.05

Total PAH

Total WAC-17 PAHs	mg/kg	0.85	NONE	< 0.85
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Petroleum Hydrocarbons

Mineral Oil (EC10 - EC40) <small>EH_CU_1D_AL</small>	mg/kg	10	NONE	61
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VOCs

Benzene	µg/kg	5	MCERTS	< 5.0
Toluene	µg/kg	5	MCERTS	< 5.0
Ethylbenzene	µg/kg	5	MCERTS	< 5.0
p & m-Xylene	µg/kg	8	MCERTS	< 8.0
o-Xylene	µg/kg	5	MCERTS	< 5.0

Total BTEX	µg/kg	10	MCERTS	< 10
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Analytical Report Number: 24-057546

Project / Site name: Crayford

Your Order No: VE325977

Lab Sample Number				398555
Sample Reference				WS3
Sample Number				5
Water Matrix				N/A
Depth (m)				0.50-0.50
Date Sampled				22/11/2024
Time Taken				None Supplied
Analytical Parameter (Soil Analysis)	Units	Test Limit of detection	Test Accreditation Status	

PCBs by GC-MS

PCB Congener 28	mg/kg	0.001	MCERTS	< 0.001
PCB Congener 52	mg/kg	0.001	MCERTS	< 0.001
PCB Congener 101	mg/kg	0.001	MCERTS	< 0.001
PCB Congener 118	mg/kg	0.001	MCERTS	< 0.001
PCB Congener 138	mg/kg	0.001	MCERTS	< 0.001
PCB Congener 153	mg/kg	0.001	MCERTS	< 0.001
PCB Congener 180	mg/kg	0.001	MCERTS	< 0.001

Total PCBs	mg/kg	0.007	MCERTS	< 0.007
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U/S = Unsuitable Sample I/S = Insufficient Sample ND = Not detected

i2 Analytical

7 Woodshots Meadow
Croxley Green Business Park
Watford, WD18 8YS

Telephone: 01923 225404
Fax: 01923 237404
email:reception@i2analytical.com

Waste Acceptance Criteria Analytical Results							
Report No:	24-057546						
				Client: VAN ELLE			
Location	Crayford						
Lab Reference (Sample Number)	398555			Landfill Waste Acceptance Criteria			
Sampling Date	22/11/2024			Limits			
Sample ID	WS3 5			Inert Waste Landfill	Stable Non-reactive HAZARDOUS waste in non-hazardous Landfill	Hazardous Waste Landfill	
Depth (m)	0.50-0.50						
Solid Waste Analysis							
TOC (%)**	< 0.1				3%	5%	6%
Loss on Ignition (%) **	-				--	--	10%
BTEX (µg/kg) **	< 10				6000	--	--
Sum of PCBs (mg/kg) **	< 0.007				1	--	--
Mineral Oil (mg/kg) <small>EH_ID_CU_AL</small>	61				500	--	--
Total PAH (WAC-17) (mg/kg)	< 0.85				100	--	--
pH (units)**	-				--	>6	--
Acid Neutralisation Capacity (mmol / kg)	-				--	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 *	0.00553			0.0553	0.5	2	25
Barium *	0.00683			0.0683	20	100	300
Cadmium *	< 0.000100			< 0.00100	0.04	1	5
Chromium *	0.00098			0.0098	0.5	10	70
Copper *	0.0047			0.047	2	50	100
Mercury *	< 0.000500			< 0.00500	0.01	0.2	2
Molybdenum *	0.00285			0.0285	0.5	10	30
Nickel *	0.00062			0.0062	0.4	10	40
Lead *	0.0036			0.036	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 *	0.0020			0.020	4	50	200
Chloride *	1.7			17	800	15000	25000
Fluoride*	0.31			3.1	10	150	500
Sulphate *	12			120	1000	20000	50000
TDS*	76			760	4000	60000	100000
Phenol Index (Monohydric Phenols) *	< 0.010			< 0.10	1	-	-
DOC	10.3			103	500	800	1000
Leach Test Information							
Stone Content (%)	< 0.1						
Sample Mass (kg)	0.3						
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)							
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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Analytical Report Number : 24-057546

Project / Site name: Crayford

* 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 *
398555	WS3	5	0.50-0.50	Brown clay with gravel

Analytical Report Number : 24-057546

Project / Site name: Crayford

Water matrix abbreviations:

Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters Heating/Cooling (PrW) DI Process Water (DI PrW)

Final Sewage Effluent (FSE) Landfill Leachate (LL)

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 (Walkley Black Method)	In-house method	L009B	D	MCERTS
Moisture Content	Moisture content, determined gravimetrically (up to 30°C)	In-house method	L019B	W	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.	L019B	D	NONE
PCB's By GC-MS in soil	Determination of PCB by extraction with hexane followed by GC-MS	In-house method based on USEPA 8082	L027B	D	MCERTS
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	L031B	W	ISO 17025
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	W	ISO 17025
Dissolved organic carbon 10:1 WAC	Determination of dissolved organic carbon in leachate by TOC/DOC NDIR Analyser	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L037B	W	NONE
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	L039B	W	ISO 17025
Sample Preparation		In-house method	L043B	W	NONE
Speciated PAHs and/or Semi-volatile organic compounds in soil	Determination of semi-volatile organic compounds (including PAH) in soil by extraction in dichloromethane and hexane followed by GC-MS	In-house method based on USEPA 8270	L064B	D	MCERTS
BTEX and/or Volatile organic compounds in soil	Determination of volatile organic compounds in soil by headspace GC-MS	In-house method based on USEPA 8260	L073B	W	MCERTS
Total petroleum hydrocarbons by GC-FID/GC-MS HS in soil	Determination of total petroleum hydrocarbons in soil by GC-FID/GC-MS HS	In-house method	L076B/L088-PL	D/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

Analytical Report Number : 24-057546

Project / Site name: Crayford

Water matrix abbreviations:

Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters Heating/Cooling (PrW) DI Process Water (DI PrW)

Final Sewage Effluent (FSE) Landfill Leachate (LL)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Chloride 10:1 WAC	Determination of Chloride colorimetrically by discrete analyser	In-house based on MEWAM Method ISBN 0117516260	L082B	W	ISO 17025

For method numbers ending in 'UK' or 'A' analysis have been carried out in our laboratory in the United Kingdom (Watford).

For method numbers ending in 'F' analysis have been carried out in our laboratory in the United Kingdom (East Kilbride).

For method numbers ending in 'PL' or 'B' 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.

Unless otherwise indicated, site information, order number, project number, sampling date, time, sample reference and depth are provided by the client. The instructed on date indicates the date on which this information was provided to the laboratory.

Quality control parameter failure associated with individual result applies to calculated sum of individuals.

The result for sum should be interpreted with caution

Sample Deviation Report



Analytical Report Number : 24-057546

Project / Site name: Crayford

This deviation report indicates the sample and test deviations that apply to the samples submitted for analysis. Please note that the associated result(s) may be unreliable and should be interpreted with care.

Key: a - No sampling date b - Incorrect container c - Holding time d - Headspace e - Temperature

Sample ID	Other ID	Sample Type	Lab Sample Number	Sample Deviation	Test Name	Test Ref	Test Deviation
WS3	5	S	398555	c	BTEX and/or Volatile organic compounds in soil	L073B	c
WS3	5	S	398555	c	Speciated PAHs and/or Semi-volatile organic compounds in soil	L064B	c
WS3	5	S	398555	c	Total petroleum hydrocarbons by GC-FID/GC-MS HS in soil	L076B/L088-PL	c



Van Elle
Kirkby Lane
Pinxton
Nottinghamshire
NG16 6JA

i2 Analytical Ltd.
7 Woodshots Meadow,
Croxley Green
Business Park,
Watford,
Herts,
WD18 8YS

t: 01773 580 580

t: 01923 225404

e: labs@stratageo.co.uk
labs@stratageo.co.uk

f: 01923 237404

e: reception@i2analytical.com

Analytical Report Number : 24-056191

Project / Site name:	Crayford	Samples received on:	22/11/2024
Your job number:	G242600	Samples instructed on/ Analysis started on:	22/11/2024
Your order number:	VE325506	Analysis completed by:	03/12/2024
Report Issue Number:	1	Report issued on:	03/12/2024
Samples Analysed:	3 soil samples		

Signed: 

Joanna Wawrzeczko
Senior Reporting 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: 24-056191

Project / Site name: Crayford

Your Order No: VE325506

Lab Sample Number	392233	392234	392235
Sample Reference	BH01	WS1	WS4
Sample Number	None Supplied	None Supplied	None Supplied
Water Matrix	N/A	N/A	N/A
Depth (m)	0.50	0.50	1.00
Date Sampled	19/11/2024	21/11/2024	20/11/2024
Time Taken	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Test Limit of detection	Test Accreditation Status

Stone Content	%	0.1	NONE	45.5	52	87.7
Moisture Content	%	0.01	NONE	15	9.1	11
Total mass of sample received	kg	0.1	NONE	0.2	0.2	0.2

Asbestos

Asbestos in Soil Detected/Not Detected	Type	N/A	ISO 17025	Not-detected	Not-detected	Not-detected
Asbestos Analyst ID	N/A	N/A	N/A	MUA	MUA	MUA

General Inorganics

pH (L099)	pH Units	N/A	MCERTS	10.5	8.6	9
Total Cyanide	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0
Water Soluble Sulphate as SO ₄ 16hr extraction (2:1)	mg/kg	2.5	MCERTS	1200	190	160
Water Soluble SO ₄ 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	604	92.7	80.9
Organic Matter (automated)	%	0.1	MCERTS	0.9	1.2	0.6

Total Phenols

Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0
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Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	< 0.05	0.13	< 0.05
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	0.16	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	0.07	0.49	< 0.05
Fluorene	mg/kg	0.05	MCERTS	0.06	0.31	< 0.05
Phenanthrene	mg/kg	0.05	MCERTS	0.34	4.1	0.15
Anthracene	mg/kg	0.05	MCERTS	0.13	0.76	< 0.05
Fluoranthene	mg/kg	0.05	MCERTS	0.94	7.1	0.24
Pyrene	mg/kg	0.05	MCERTS	0.87	6.4	0.21
Benzo(a)anthracene	mg/kg	0.05	MCERTS	0.57	2.9	0.1
Chrysene	mg/kg	0.05	MCERTS	0.5	2.9	0.12
Benzo(b)fluoranthene	mg/kg	0.05	ISO 17025	0.84	3.9	0.18
Benzo(k)fluoranthene	mg/kg	0.05	ISO 17025	0.27	1.6	< 0.05
Benzo(a)pyrene	mg/kg	0.05	MCERTS	0.77	3.6	0.1
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	0.4	2	0.06
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	0.08	0.3	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	0.54	2.4	0.07

Total PAH

Speciated Total EPA-16 PAHs	mg/kg	0.8	ISO 17025	6.38	39.2	1.23
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Heavy Metals / Metalloids

Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	6.6	7.6	8.3
Boron (water soluble)	mg/kg	0.2	MCERTS	0.9	1.2	1.2
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2	0.2	0.2
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	19	16	17
Copper (aqua regia extractable)	mg/kg	1	MCERTS	22	19	11
Lead (aqua regia extractable)	mg/kg	1	MCERTS	47	41	18
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	9.6	14	21
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	190	75	51

Analytical Report Number: 24-056191

Project / Site name: Crayford

Your Order No: VE325506

Lab Sample Number	392233	392234	392235
Sample Reference	BH01	WS1	WS4
Sample Number	None Supplied	None Supplied	None Supplied
Water Matrix	N/A	N/A	N/A
Depth (m)	0.50	0.50	1.00
Date Sampled	19/11/2024	21/11/2024	20/11/2024
Time Taken	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Test Limit of detection	Test Accreditation Status

Petroleum Hydrocarbons

TPHCWG - Aliphatic >EC5 - EC6 _{HS_1D_AL}	mg/kg	0.01	MCERTS	< 0.010	< 0.010	< 0.010
TPHCWG - Aliphatic >EC6 - EC8 _{HS_1D_AL}	mg/kg	0.01	MCERTS	0.038	< 0.010	< 0.010
TPHCWG - Aliphatic >EC8 - EC10 _{HS_1D_AL}	mg/kg	0.01	MCERTS	< 0.010	< 0.010	< 0.010
TPHCWG - Aliphatic >EC10 - EC12 _{EH_CU_1D_AL}	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0
TPHCWG - Aliphatic >EC12 - EC16 _{EH_CU_1D_AL}	mg/kg	2	MCERTS	< 2.0	< 2.0	< 2.0
TPHCWG - Aliphatic >EC16 - EC21 _{EH_CU_1D_AL}	mg/kg	8	MCERTS	< 8.0	< 8.0	< 8.0
TPHCWG - Aliphatic >EC21 - EC35 _{EH_CU_1D_AL}	mg/kg	8	MCERTS	61	12	34
TPHCWG - Aliphatic >EC5 - EC35 _{EH_CU+HS_1D_AL}	mg/kg	10	NONE	61	12	34

TPHCWG - Aromatic >EC5 - EC7 _{HS_1D_AR}	mg/kg	0.01	MCERTS	< 0.010	< 0.010	< 0.010
TPHCWG - Aromatic >EC7 - EC8 _{HS_1D_AR}	mg/kg	0.01	MCERTS	< 0.010	< 0.010	< 0.010
TPHCWG - Aromatic >EC8 - EC10 _{HS_1D_AR}	mg/kg	0.02	MCERTS	< 0.020	< 0.020	< 0.020
TPHCWG - Aromatic >EC10 - EC12 _{EH_CU_1D_AR}	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0
TPHCWG - Aromatic >EC12 - EC16 _{EH_CU_1D_AR}	mg/kg	2	MCERTS	< 2.0	2.8	< 2.0
TPHCWG - Aromatic >EC16 - EC21 _{EH_CU_1D_AR}	mg/kg	10	MCERTS	< 10	12	< 10
TPHCWG - Aromatic >EC21 - EC35 _{EH_CU_1D_AR}	mg/kg	10	MCERTS	19	16	< 10
TPHCWG - Aromatic >EC5 - EC35 _{EH_CU+HS_1D_AR}	mg/kg	10	NONE	19	31	< 10

VOCs

MTBE (Methyl Tertiary Butyl Ether)	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0
Benzene	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0
Toluene	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0
Ethylbenzene	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0
p & m-Xylene	µg/kg	8	MCERTS	< 8.0	< 8.0	< 8.0
o-Xylene	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0

U/S = Unsuitable Sample I/S = Insufficient Sample ND = Not detected



Analytical Report Number : 24-056191

Project / Site name: Crayford

* 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 *
392233	BH01	None Supplied	0.5	Brown sand with stones
392234	WS1	None Supplied	0.5	Brown clay and sand with stones
392235	WS4	None Supplied	1	Brown clay and sand with stones

Analytical Report Number : 24-056191

Project / Site name: Crayford

Water matrix abbreviations:

Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters Heating/Cooling (PrW) DI Process Water (DI PrW)

Final Sewage Effluent (FSE) Landfill Leachate (LL)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Asbestos identification in Soil	Asbestos Identification with the use of polarised light microscopy in conjunction with dispersion staining techniques	In-house method based on HSG 248, 2021	A001B	D	ISO 17025
Organic matter (Automated) in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate (Walkley Black Method)	In-house method	L009B	D	MCERTS
Moisture Content	Moisture content, determined gravimetrically (up to 30°C)	In-house method	L019B	W	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.	L019B	D	NONE
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	L038B	D	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	L038B	D	MCERTS
Sulphate, water soluble, in soil (16hr extraction)	Sulphate, water soluble, in soil (16hr extraction)	In-house method	L038B	D	MCERTS
Speciated PAHs and/or Semi-volatile organic compounds in soil	Determination of semi-volatile organic compounds (including PAH) in soil by extraction in dichloromethane and hexane followed by GC-MS	In-house method based on USEPA 8270	L064B	D	MCERTS
BTEX and/or Volatile organic compounds in soil	Determination of volatile organic compounds in soil by headspace GC-MS	In-house method based on USEPA 8260	L073B	W	MCERTS
Total petroleum hydrocarbons with carbon banding by GC-FID/GC-MS HS in soil	Determination of total petroleum hydrocarbons in soil by GC-FID/GC-MS HS with carbon banding aliphatic and aromatic	In-house method	L076B/L088-PL	D/W	MCERTS
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	L080-PL	W	MCERTS
Total cyanide in soil	Determination of total cyanide by distillation followed by colorimetry	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	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

For method numbers ending in 'UK' or 'A' analysis have been carried out in our laboratory in the United Kingdom (Watford).

For method numbers ending in 'F' analysis have been carried out in our laboratory in the United Kingdom (East Kilbride).

For method numbers ending in 'PL' or 'B' 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 30°C.

Unless otherwise indicated, site information, order number, project number, sampling date, time, sample reference and depth are provided by the client. The instructed on date indicates the date on which this information was provided to the laboratory.

Quality control parameter failure associated with individual result applies to calculated sum of individuals.

The result for sum should be interpreted with caution

GEOLABS Limited
 Bucknalls Lane
 Garston
 Watford
 Hertfordshire
 WD25 9XX
 Tel: +44(0) 1923 892 190
 Fax: +44(0) 1923 892 191
 email: admin@geolabs.co.uk
 web: www.geolabs.co.uk

STRATA Geotechnics
 Summit Close
 Kirby in Ashfield
 Nottinghamshire
 NG17 8GJ

23 December 2024

Report No : GEO/41683/01

Page 1 of 1

For the attention of Mr L Donovan

Our ref	GEO / 41683	Date samples received	10/12/2024
Your ref	G242600/GEO 01	Date written instructions received	10/12/2024
Order ref	G242600	Date testing commenced	11/12/2024
Project	CRAYFORD	Date of sample disposal	20/01/2025

Further to your instructions we have pleasure in enclosing the results of the tests you requested in the attached figures.

LABORATORY TEST REPORT

Item No	Test Quantity	Description
1	7	Unconfined Compressive Strength

Any opinions or interpretations expressed herein are outside the scope of UKAS accreditation. All results contained in this report are provisional and may be subject to change unless signed by an approved signatory. The results contained in this report relate only to samples received in the laboratory and are tested 'as received' unless otherwise stated. This report should not be reproduced, except in full, without the written approval of the laboratory. The results reported are applicable only to the test items received by the laboratory.

All the necessary data required by the documented test procedures has been recorded and will be stored for a period of not less than 6 years. This data will be issued to yourselves at your request. All samples will be disposed of after the date shown above. Written confirmation will be required to retain the samples beyond this period and a storage charge may be applied.

We trust that the above meets your requirements and should you require any further information or assistance, please do not hesitate to contact us.

Yours faithfully
on behalf of **GEOLABS Limited**










I Tabios
Laboratory Manager






ISRM Suggested Methods - Rock Characterization Testing and Monitoring 1974 - 2006

UNIAXIAL COMPRESSIVE STRENGTH OF ROCK MATERIALS

Sample details				Density				Uniaxial Compression Test (LF0879C (1000kN) compression frame used)							
Borehole Ref.	Sample Ref.	Depth (m)	Description	MC (%)	Degree of Saturation (%)	Bulk (Mg/m ³)	Dry (Mg/m ³)	Mean after prep.		H/D Ratio	Load at Failure (kN)	UCS (MPa) <small>3 sig. fig.</small>	Failure Sketch	D. Tested	Remarks
								Diameter (mm)	Height (mm)						
WS1		0.00-0.30	CONCRETE	6.8	57.0	2.30	2.16	54.70	156.70	2.9	151.2	64.3		20/12/24	
WS2		0.00-0.15	CONCRETE	7.8	57.2	2.24	2.08	54.60	134.90	2.5	99.5	42.5		20/12/24	
WS3		0.00-0.15	CONCRETE	8.6	61.0	2.23	2.05	54.60	160.80	2.9	118.0	50.4		20/12/24	
WS4		0.00-0.15	CONCRETE	6.4	55.1	2.31	2.17	54.70	149.40	2.7	129.6	55.1		20/12/24	
WS5		0.00-0.15	CONCRETE	8.7	63.9	2.26	2.08	41.10	111.60	2.7	71.2	53.7		20/12/24	
BH01		0.00-0.30	CONCRETE	5.7	57.7	2.38	2.25	54.70	156.30	2.9	81.5	34.7		20/12/24	
BH02		0.00-0.30	CONCRETE	7.3	58.1	2.28	2.12	54.70	156.10	2.9	114.0	48.5		20/12/24	

Note: The dimensional requirements of flatness (<0.02 mm), perpendicularity (<0.05 / 50 mm) and straightness (0.3 mm deviation) are all met. Specific Gravity used for Degree of Saturation is assumed unless specified by the client.

Checked and Approved by  I Tabios (Head of Department) Date: 23/12/2024	Project Number: GEO / 41683 Project Name: CRAYFORD G242600/GEO 01	 
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UNIAXIAL COMPRESSIVE STRENGTH OF ROCK MATERIALS

Borehole Ref.: WS1	Description: CONCRETE
Sample Ref.: -	
Depth (m): 0.00-0.30	

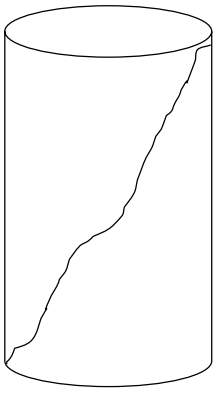
Diameter	54.70 mm
Height	156.70 mm
Bulk Density	2.30 Mg/m ³
Dry Density	2.16 Mg/m ³
Water Content	6.8 %

Degree of Saturation: 57.0 % Specific Gravity: 2.9 Mg/m³ (Assumed)

Test results




Unconfined Compressive Strength Maximum load (kN): 151.20	64.3 MPa
Young's Modulus (tangential at 50% failure load)	n/a
Poisson's Ratio (tangential at 50% failure load)	n/a
Young's Modulus (secant at 10% failure load)	n/a
Poisson's Ratio (secant at 10% failure load)	n/a

LF0879C (1000kN) compression frame used

Failure Sketch	
Mode of failure: Diagonal shearing	
	
Solid lines for material failures. Dashed lines for apparent weakness failure.	
Angle of foliation/Axis of loading: n/a Angle of shear plane/Axis of loading: n/a	
Sample type	C

Date tested: 20/12/2024

Note: The dimensional requirements of Flatness (<0.02 mm), Perpendicularity (<0.05 / 50 mm) and Straightness (0.3 mm deviation) are all met.

Checked and Approved by  I Tabios (Head of Department) Date: 23/12/2024	Project Number: GEO / 41683 Project Name: CRAYFORD G242600/GEO 01	 
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UNIAXIAL COMPRESSIVE STRENGTH OF ROCK MATERIALS

Borehole Ref.: WS2	Description: CONCRETE
Sample Ref.: -	
Depth (m): 0.00-0.15	

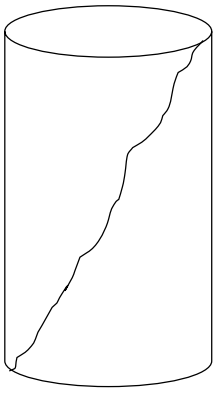
Diameter	54.60 mm
Height	134.90 mm
Bulk Density	2.24 Mg/m ³
Dry Density	2.08 Mg/m ³
Water Content	7.8 %

Degree of Saturation: 57.2 % Specific Gravity: 2.9 Mg/m³ (Assumed)

Test results




Unconfined Compressive Strength Maximum load (kN): 99.50	42.5 MPa
Young's Modulus (tangential at 50% failure load)	n/a
Poisson's Ratio (tangential at 50% failure load)	n/a
Young's Modulus (secant at 10% failure load)	n/a
Poisson's Ratio (secant at 10% failure load)	n/a

LF0879C (1000kN) compression frame used

Failure Sketch	
Mode of failure: Diagonal shearing	
	
Solid lines for material failures. Dashed lines for apparent weakness failure.	
Angle of foliation/Axis of loading: n/a Angle of shear plane/Axis of loading: n/a	
Sample type	C

Date tested: 20/12/2024

Note: The dimensional requirements of Flatness (<0.02 mm), Perpendicularity (<0.05 / 50 mm) and Straightness (0.3 mm deviation) are all met.

Checked and Approved by  I Tabios (Head of Department) Date: 23/12/2024	Project Number: GEO / 41683 Project Name: CRAYFORD G242600/GEO 01	 
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UNIAXIAL COMPRESSIVE STRENGTH OF ROCK MATERIALS

Borehole Ref.: WS3	Description: CONCRETE
Sample Ref.: -	
Depth (m): 0.00-0.15	

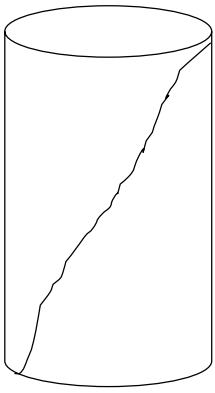
Diameter	54.60 mm
Height	160.80 mm
Bulk Density	2.23 Mg/m ³
Dry Density	2.05 Mg/m ³
Water Content	8.6 %

Degree of Saturation: 61.0 % Specific Gravity: 2.9 Mg/m³ (Assumed)

Test results




Unconfined Compressive Strength Maximum load (kN): 118.00	50.4 MPa
Young's Modulus (tangential at 50% failure load)	n/a
Poisson's Ratio (tangential at 50% failure load)	n/a
Young's Modulus (secant at 10% failure load)	n/a
Poisson's Ratio (secant at 10% failure load)	n/a

LF0879C (1000kN) compression frame used

Failure Sketch	
Mode of failure: Diagonal shearing	
	
Solid lines for material failures. Dashed lines for apparent weakness failure.	
Angle of foliation/Axis of loading: n/a Angle of shear plane/Axis of loading: n/a	
Sample type	C

Date tested: 20/12/2024

Note: The dimensional requirements of Flatness (<0.02 mm), Perpendicularity (<0.05 / 50 mm) and Straightness (0.3 mm deviation) are all met.

Checked and Approved by  I Tabios (Head of Department) Date: 23/12/2024	Project Number: GEO / 41683 Project Name: CRAYFORD G242600/GEO 01	 
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UNIAXIAL COMPRESSIVE STRENGTH OF ROCK MATERIALS

Borehole Ref.: WS4	Description: CONCRETE
Sample Ref.: -	
Depth (m): 0.00-0.15	

Diameter
Height
Bulk Density
Dry Density
Water Content

54.70 mm
149.40 mm
2.31 Mg/m ³
2.17 Mg/m ³
6.4 %

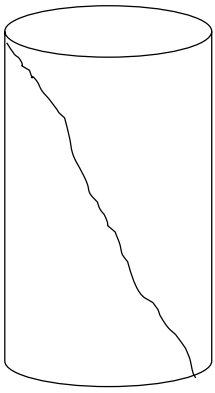
Degree of Saturation: 55.1 % Specific Gravity: 2.9 Mg/m³ (Assumed)

Test results

Unconfined Compressive Strength Maximum load (kN): 129.60
Young's Modulus (tangential at 50% failure load)
Poisson's Ratio (tangential at 50% failure load)
Young's Modulus (secant at 10% failure load)
Poisson's Ratio (secant at 10% failure load)




55.1 MPa
n/a
n/a
n/a
n/a

LF0879C (1000kN) compression frame used

Failure Sketch	
Mode of failure: Diagonal shearing	
	
Solid lines for material failures. Dashed lines for apparent weakness failure.	
Angle of foliation/Axis of loading: n/a Angle of shear plane/Axis of loading: n/a	
Sample type	C

Date tested: 20/12/2024

Note: The dimensional requirements of Flatness (<0.02 mm), Perpendicularity (<0.05 / 50 mm) and Straightness (0.3 mm deviation) are all met.

Checked and Approved by  I Tabios (Head of Department) Date: 23/12/2024	Project Number: GEO / 41683	 
	Project Name: CRAYFORD G242600/GEO 01	

UNIAXIAL COMPRESSIVE STRENGTH OF ROCK MATERIALS

Borehole Ref.: WS5	Description: CONCRETE
Sample Ref.: -	
Depth (m): 0.00-0.15	

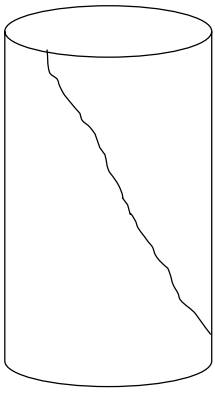
Diameter	41.10 mm
Height	111.60 mm
Bulk Density	2.26 Mg/m ³
Dry Density	2.08 Mg/m ³
Water Content	8.7 %

Degree of Saturation: 63.9 % Specific Gravity: 2.9 Mg/m³ (Assumed)

Test results




Unconfined Compressive Strength Maximum load (kN): 71.20	53.7 MPa
Young's Modulus (tangential at 50% failure load)	n/a
Poisson's Ratio (tangential at 50% failure load)	n/a
Young's Modulus (secant at 10% failure load)	n/a
Poisson's Ratio (secant at 10% failure load)	n/a

LF0879C (1000kN) compression frame used

Failure Sketch	
Mode of failure: Diagonal shearing	
	
Solid lines for material failures. Dashed lines for apparent weakness failure.	
Angle of foliation/Axis of loading: n/a Angle of shear plane/Axis of loading: n/a	
Sample type	C

Date tested: 20/12/2024

Note: The dimensional requirements of Flatness (<0.02 mm), Perpendicularity (<0.05 / 50 mm) and Straightness (0.3 mm deviation) are all met.

Checked and Approved by  I Tabios (Head of Department) Date: 23/12/2024	Project Number: GEO / 41683 Project Name: CRAYFORD G242600/GEO 01	 
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UNIAXIAL COMPRESSIVE STRENGTH OF ROCK MATERIALS

Borehole Ref.: BH01	Description: CONCRETE
Sample Ref.: -	
Depth (m): 0.00-0.30	

Diameter
Height
Bulk Density
Dry Density
Water Content

54.70 mm
156.30 mm
2.38 Mg/m ³
2.25 Mg/m ³
5.7 %

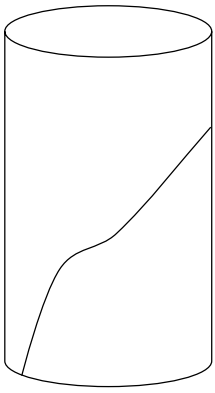
Degree of Saturation: 57.7 % Specific Gravity: 2.9 Mg/m³ (Assumed)

Test results

Unconfined Compressive Strength Maximum load (kN): 81.50
Young's Modulus (tangential at 50% failure load)
Poisson's Ratio (tangential at 50% failure load)
Young's Modulus (secant at 10% failure load)
Poisson's Ratio (secant at 10% failure load)




34.7 MPa
n/a
n/a
n/a
n/a

LF0879C (1000kN) compression frame used

Failure Sketch	
Mode of failure: Diagonal shearing	
	
Solid lines for material failures. Dashed lines for apparent weakness failure.	
Angle of foliation/Axis of loading: n/a Angle of shear plane/Axis of loading: n/a	
Sample type	C

Date tested: 20/12/2024

Note: The dimensional requirements of Flatness (<0.02 mm), Perpendicularity (<0.05 / 50 mm) and Straightness (0.3 mm deviation) are all met.

Checked and Approved by  I Tabios (Head of Department) Date: 23/12/2024	Project Number: GEO / 41683 Project Name: CRAYFORD G242600/GEO 01	 
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UNIAXIAL COMPRESSIVE STRENGTH OF ROCK MATERIALS

Borehole Ref.: BH02	Description: CONCRETE
Sample Ref.: -	
Depth (m): 0.00-0.30	

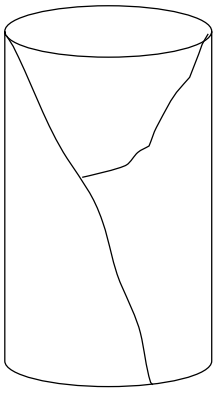
Diameter	54.70 mm
Height	156.10 mm
Bulk Density	2.28 Mg/m ³
Dry Density	2.12 Mg/m ³
Water Content	7.3 %

Degree of Saturation: 58.1 % Specific Gravity: 2.9 Mg/m³ (Assumed)

Test results




Unconfined Compressive Strength Maximum load (kN): 114.00	48.5 MPa
Young's Modulus (tangential at 50% failure load)	n/a
Poisson's Ratio (tangential at 50% failure load)	n/a
Young's Modulus (secant at 10% failure load)	n/a
Poisson's Ratio (secant at 10% failure load)	n/a

LF0879C (1000kN) compression frame used

Failure Sketch	
Mode of failure: Y-Shaped	
	
Solid lines for material failures. Dashed lines for apparent weakness failure.	
Angle of foliation/Axis of loading: n/a Angle of shear plane/Axis of loading: n/a	
Sample type	C

Date tested: 20/12/2024

Note: The dimensional requirements of Flatness (<0.02 mm), Perpendicularity (<0.05 / 50 mm) and Straightness (0.3 mm deviation) are all met.

Checked and Approved by  I Tabios (Head of Department) Date: 23/12/2024	Project Number: GEO / 41683	 
	Project Name: CRAYFORD G242600/GEO 01	



LABORATORY REPORT



Contract Number: PSL25/0142

Report Date: 24 January 2025
Client's Reference: G242600-GEO02
Client Name: Strata Geotechnics
Kirkby Lane
Pinxton
Nottinghamshire
NG16 6JA

For the attention of: Luke Donovan

Contract Title: Crayford
Date Received: 8/1/2025
Date Commenced: 8/1/2025
Date Completed: 24/1/2025

Notes: Opinions and Interpretations are outside the UKAS Accreditation

A copy of the Laboratory Schedule of accredited tests as issued by UKAS is attached to this report. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced other than in full, without the prior written approval of the laboratory.

Checked and Approved Signatories:


A Watkins
(Managing Director)

R Berriman
(Associate Director)

S Royle
(Laboratory Manager)

L Knight
(Assistant Laboratory Manager)

S Eyre
(Senior Technician)

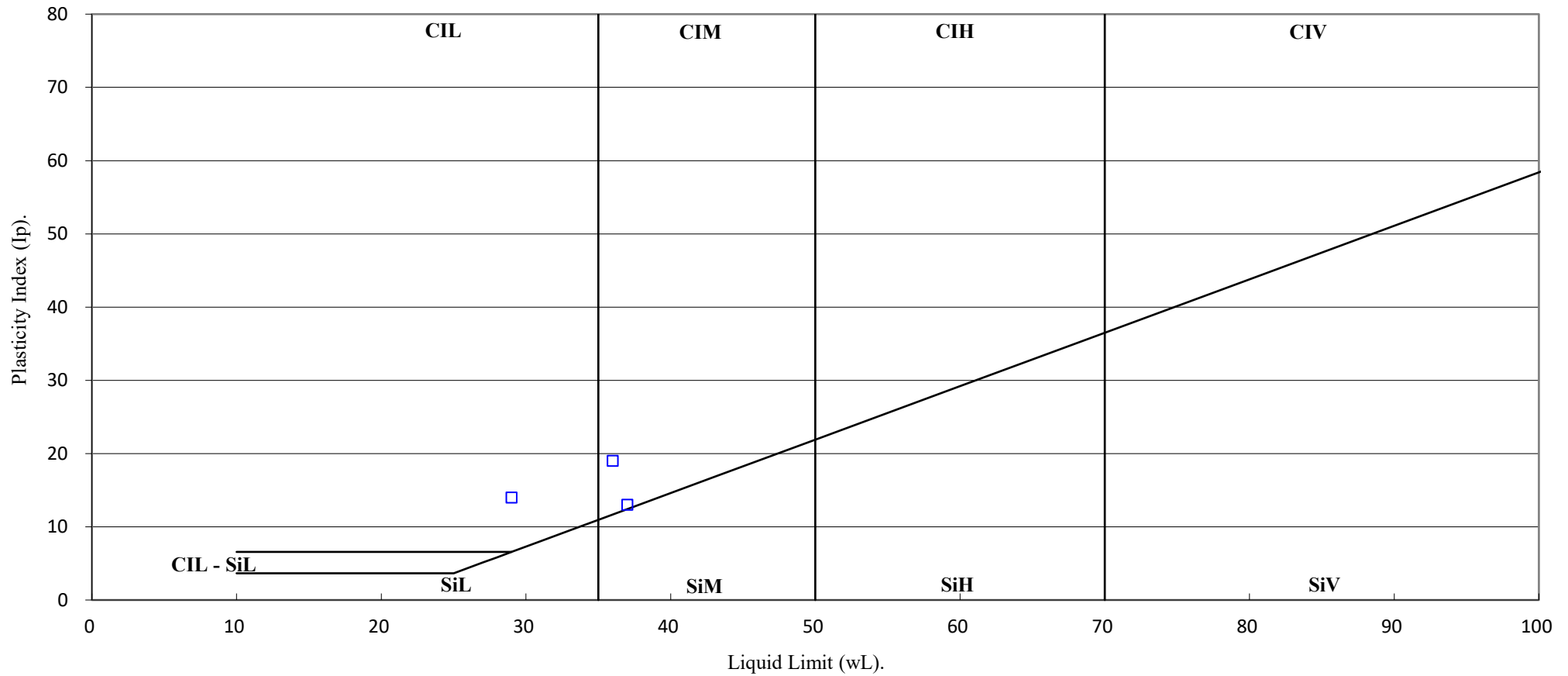

T Watkins
(Senior Technician)

5 – 7 Hexthorpe Road,
Hexthorpe,
Doncaster,
DN4 0AR
Tel: 01302 768098
Email: rberriman@prosoils.co.uk
awatkins@prosoils.co.uk

Page 1 of

PLASTICITY CHART

BS EN ISO 14688-2:2017 Clause 4.4



Crayford

Contract No:

PSL25/0142

Client Ref:

G242600

PSLRF090

Issue No.1.1

Approved By: M.Burton

10/01/2025



7 - 11 Harding Street
Leicester
LE1 4DH

Professional Soils Laboratory
5/7 Hexthorpe Road
Hexthorpe
Doncaster
DN4 0AR

Analytical Test Report: L25/00404/PSL - 25-55372

Your Project Reference:	PSL25/0142 Crayford		
Your Order Number:	PSL25/0142	Samples Received / Instructed:	16/01/2025 / 16/01/2025
Report Issue Number:	1	Sample Tested:	16/01 to 23/01/2025
Samples Analysed:	5 sample(s)	Report issued:	23/01/2025

Signed

James Gane
Analytical Services Manager
CTS

Notes:

General

Please refer to Methodologies page for details pertaining to the analytical methods undertaken.

Samples will be retained for 14 days after issue of this report unless otherwise requested.

Moisture Content was determined in accordance with CTS method statement MS - CL - Sample Prep, oven dried at <30°C.

Moisture Content is reported as a percentage of the dry mass of soil, this calculation is in accordance with BS1377, Part 2, 1990, Clause 3.2

Where specification limits are included these are for guidance only. Where a measured value has been highlighted this is not implying acceptance or failure and certainty of measurement values have not been taken into account.

Uncertainty of measurement values are available on request.

Samples were supplied by customer, results apply to the samples as received.

Deviating Samples

On receipt samples are compared against our sample holding and handling protocols, where any deviations have been noted these are reported on our deviating sample page (if present)

Accreditation Key

This report shall not be reproduce except in full

UKAS = UKAS Accreditation, MCERTS = MCERTS Accreditation, u = Unaccredited, subUKAS - Subcontracted to a laboratory UKAS accredited for this test, subMCERTS - Subcontracted to a laboratory MCERTS accredited for this test

MCERTS Accreditation only covers the SAND, CLAY and LOAM matrices

UKAS accreditation on waters only covers the Ground water and Surface water matrices

Date of Issue: 21.01.2025

Issued by: J. Gane

Issue No: 4

Rev No: 23



7 - 11 Harding Street
Leicester
LE1 4DH

L25/00404/PSL - 25-55372

Project Reference - PSL25/0142 Crayford

Analytical Test Results - Chemical Analysis

Lab Reference	437426	437427	437428	437429	437430		
Client Sample ID	-	-	-	-	-		
Client Sample Location	BH01	BH02	BH02	WS1	WS4		
Client Sample Type	D	D	D	D	D		
Client Sample Number	1	5	17	2	2		
Depth - Top (m)	1.20	6.00	23.50	0.50	0.50		
Depth - Bottom (m)	1.65	6.45	23.65	0.50	0.50		
Date of Sampling	19/11/2024	30/11/2024	02/12/2024	21/11/2024	21/11/2024		
Time of Sampling	-	-	-	-	-		
Sample Matrix	Other	Clay	Clay	Clay	Clay		
Determinant	Units	Accreditation					
Water soluble sulphate (as SO ₄)	(mg/l)	u	250	140	120	370	150
Acid Soluble Sulphate	(%)	u	0.82	0.07	0.06	0.22	0.06
Total Sulphur	(%)	UKAS	0.42	0.03	0.05	0.10	0.03
pH Value	pH Units	MCERTS	11.1	9.4	9.2	9.7	9.0
Water Soluble Chloride	(mg/l)	u	760	48	22	160	35
Water Soluble Nitrate (As NO ₃)	(mg/l)	u	1.2	< 1.0	< 1.0	< 1.0	1.7
Water Soluble Magnesium	(mg/l)	u	< 1.5	2.0	3.0	< 1.5	2.3
Water Soluble Ammonium Ion	(mg/l)	u	1.3	1.3	1.3	17	1.3



L25/00404/PSL - 25-55372

Project Reference - PSL25/0142 Crayford

Sample Descriptions

Lab Reference	Client Sample ID	Client Sample Location	Client Sample Type	Client Sample Number	Description	Moisture Content (%)	Stone Content (%)	Passing 2mm test sieve (%)
437426	-	BH01	D	1	Made Ground- brown sandy clayey gravel with occasional brick fragments	-	-	100
437427	-	BH02	D	5	Light white slightly gravelly silty clay	-	-	100
437428	-	BH02	D	17	Light brownish white slightly gravelly silty clay	-	-	100
437429	-	WS1	D	2	Made Ground- dark greyish brown gravelly slightly sandy silty clay with occasional concrete brick fragments fibres	-	-	100
437430	-	WS4	D	2	Made Ground- brown gravelly slightly sandy silty clay with rare brick fragments	-	-	100



7 - 11 Harding Street
Leicester
LE1 4DH

L25/00404/PSL - 25-55372

Project Reference - PSL25/0142 Crayford

Sample Comments

Lab Reference	Client Sample ID	Client Sample Location	Client Sample Type	Client Sample Number	Comments
437426	-	BH01	D	1	
437427	-	BH02	D	5	
437428	-	BH02	D	17	
437429	-	WS1	D	2	
437430	-	WS4	D	2	



L25/00404/PSL - 25-55372

Project Reference - PSL25/0142 Crayford

Analysis Methodologies

Test Code	Test Name / Reference	Sample condition for analysis	Sample Preparation	Test Details
ANIONSS	MS - CL - Anions by Aquakem (2:1Extract)	Oven dried	Passing 2mm test sieve	Determination of Anions (inc Sulphate, chloride etc.) in soils by Aquakem. Analysis is based on a 2:1 water to soil extraction ratio
PHS	MS - CL - pH in Soils	As received	Passing 10mm test sieve	Determination of pH in soils using a pH probe (using a 1:3 soil to water extraction)
ASSO4S	MS - CL - Acid Soluble Sulphate	Oven Dried	Passing 2mm test sieve	Determination of total sulphate in soils by acid extraction followed by ICP analysis
SAMPLEPREP	MS - CL - Sample Preparation	-	-	Preparation of samples (including determination of moisture content) to allow for subsequent analysis
1377TS-ELT	BS1377 Total Sulphur Content by HTC	Oven dried	BS1377 : Part 1 : 2016	Total Sulphur Content testing of Soil in accordance with BS 1377 : Part 3 : 2018 + A1 : 2021 Clause 7.10 (using Eltra CS-800 Analyser)
1377MGICP	BS1377 WS Magnesium (ICP)	Oven dried	Passing 2mm test sieve	Water Soluble Magnesium testing of Soil in accordance with BS 1377 : Part 3 : 2018 + A1 : 2021 Clause 10.



4161



L25/00404/PSL - 25-55372

Project Reference - PSL25/0142 Crayford

Sample Deviations

Deviations are listed below against each sample and associated test method, where deviation(s) are noted it means data may not be representative of the sample at the time of sampling and it is possible that results provided may be compromised.

Observations on receipt

A - No date of sampling provided

W - No time of sampling provided for water sample

C - Received in inappropriate container

H - Contains headspace

T - Temperature on receipt exceeds storage temperature

R - Sample(s) received with less than 96 hours for testing to commence/complete, any result formally classed as deviating will be marked with an X against the applicable test (i.e. RX)

Observations whilst in laboratory

X - Exceeds sampling to extraction or analysis timescales

Lab Reference	Client Sample ID	Client Sample Location	Client Sample Type	Client Sample Number	Test	Deviations
437426	-	BH01	D	1	BS1377 Total Sulphur Content by HTC	RX
437426	-	BH01	D	1	MS - CL - Anions by Aquakem (2:1Extract)	RX
437426	-	BH01	D	1	MS - CL - pH in Soils	RX
437427	-	BH02	D	5	BS1377 Total Sulphur Content by HTC	RX
437427	-	BH02	D	5	MS - CL - Anions by Aquakem (2:1Extract)	RX
437427	-	BH02	D	5	MS - CL - pH in Soils	RX
437428	-	BH02	D	17	BS1377 Total Sulphur Content by HTC	RX
437428	-	BH02	D	17	MS - CL - Anions by Aquakem (2:1Extract)	RX
437428	-	BH02	D	17	MS - CL - pH in Soils	RX
437429	-	WS1	D	2	BS1377 Total Sulphur Content by HTC	RX
437429	-	WS1	D	2	MS - CL - Anions by Aquakem (2:1Extract)	RX
437429	-	WS1	D	2	MS - CL - pH in Soils	RX
437430	-	WS4	D	2	BS1377 Total Sulphur Content by HTC	RX
437430	-	WS4	D	2	MS - CL - Anions by Aquakem (2:1Extract)	RX
437430	-	WS4	D	2	MS - CL - pH in Soils	RX

Appendix D: Core & Dynamic Sample Photographs

STRATA
GEOTECHNICS

Project Name: **CRAYFORD. M.R.F** Project No: **242600**

Date: **-12-24** Box No: Borehole No: **BH1** Depth (M) From: **1.2** To: **2.0**

100mm 200mm 300mm 400mm 500mm 600mm 700mm 800mm 900mm





STRATA
GEOTECHNICS

Project Name: **CRAYFORD. MRF** Project No: **242600**

Date: **06-12-24**

Box No: [blank] Borehole No: **BH1**

Depth (M)
From: **3** To: **4**







Project Name: **CRAYFORD. MRF** Project No: **242600**



Date: **06-12-24**

Box No:

Borehole No: **BH1**

Depth (M)
From: **5** To: **6**







STRATA
GEOTECHNICS

Project Name: **CRAYFORD. MRF** Project No: **242600**

Date: **06-12-24**

Box No:

Borehole ID: **BH1**

Depth (M)

From: **8** To: **9**

100mm 200mm 300mm 400mm 500mm 600mm 700mm 800mm 900mm



STRATA
GEOTECHNICS

Project Name: **CRAYFORD MRF** Project No: **242600**

Date: **06-12-24** Box No: Borehole No: **BH1** Depth (M) From: **9** To: **10**

100mm 200mm 300mm 400mm 500mm 600mm 700mm 800mm 900mm















STRATA
GEOTECHNICS

Project Name: CRAYFORD MRF Project No: 242600

Date: 29/11/24 Box No: Borehole No: 8402

Depth (M)
From: 5.00 To: 6.00



STRATA
GEOTECHNICS

Project Name: CRAYFORD MRF

Project No: 242600

Date: 29/11/24

Box No:

Borehole No: BH02

Depth (M)
From: 6.00 To: 7.00



STRATA
GEOTECHNICS

Project Name: CRAYFORD MRF

Project No: 242600

Date: 29/11/24

Box No:

Borehole No: BH02

Depth (M)
From: 7.00 To: 8.00



STRATA
GEOTECHNICS

Project Name: CRAYFORD MRF

Project No: 242600

Date: 29/11/24

Box No:

Borehole No: BH02

Depth (M)
From: 8.00 To: 9.00











STRATA
GEOTECHNICS

Project Name: **CRAYFORD. M.R.F** Project No:

Date: **5-12-24**

Box No:

Borehole No: **WS1**

Depth (M)
From: **1.8** To: **2.0**

100mm 200mm 300mm 400mm 500mm 600mm 700mm 800mm 900mm





Project Name: **CRAYFORD MRF** Project No:



Date: **5-12-24**

Box No:

Borehole No: **WS2**

Depth (M)
From: **1.0** To: **2.0**





Project Name: **CRAYFORD. M.R.F** Project No:



Date: **5-12-24**

Box No:

Borehole No: **WS2**

Depth (M)
From: **2** To: **3**

100mm 200mm 300mm 400mm 500mm 600mm 700mm 800mm 900mm





Project Name: **CRAYFORD MRF** Project No:



Date: **5-12-24**

Box No:

Borehole No: **WS4**

Depth (M)
From: **1.2** To: **1.5**



STIMA
GEOTECHNICS

Name: **CRAYFORD. M.R.F** Project No:

Date: **5-12-24** Box No:

Borehole No: **WS4** Depth (M) From: **2** To: **3**





Project Name: **CRAYFORD. MRF** Project No:



Date: **5-12-24**

Box No:

Borehole No: **WS3**

Depth (M)
From: **1** To: **2**

100mm 200mm 300mm 400mm 500mm 600mm 700mm 800mm 900mm





Project Name: **CRAYFORD. MRF** Project No:

Date: **5-12-24**

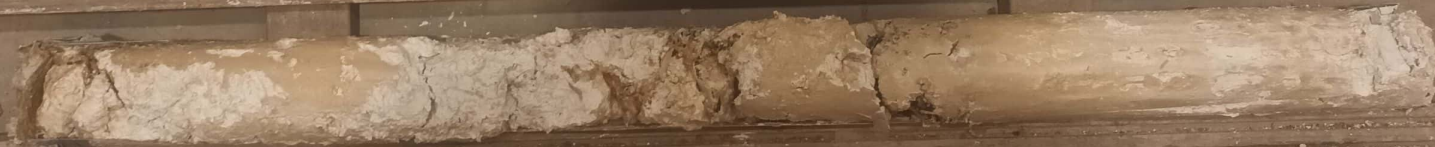
Box No:

Borehole No: **WS3**

Depth (M)
From: **2** To: **3**



100mm 200mm 300mm 400mm 500mm 600mm 700mm 800mm 900mm







Project Name: **CRAYFORD MRF** Project No:



Date: **5-12-24**

Box No:

Borehole No: **WS5**

Depth (M)
From: **2** To: **3**

100mm 200mm 300mm 400mm 500mm 600mm 700mm 800mm 900mm

