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GEOENVIRONMENTAL APPRAISAL

of land at

HAVERHILL, EAST ANGLIA, CB9 0LL

Prepared on behalf of LNT Care Developments (3) Limited

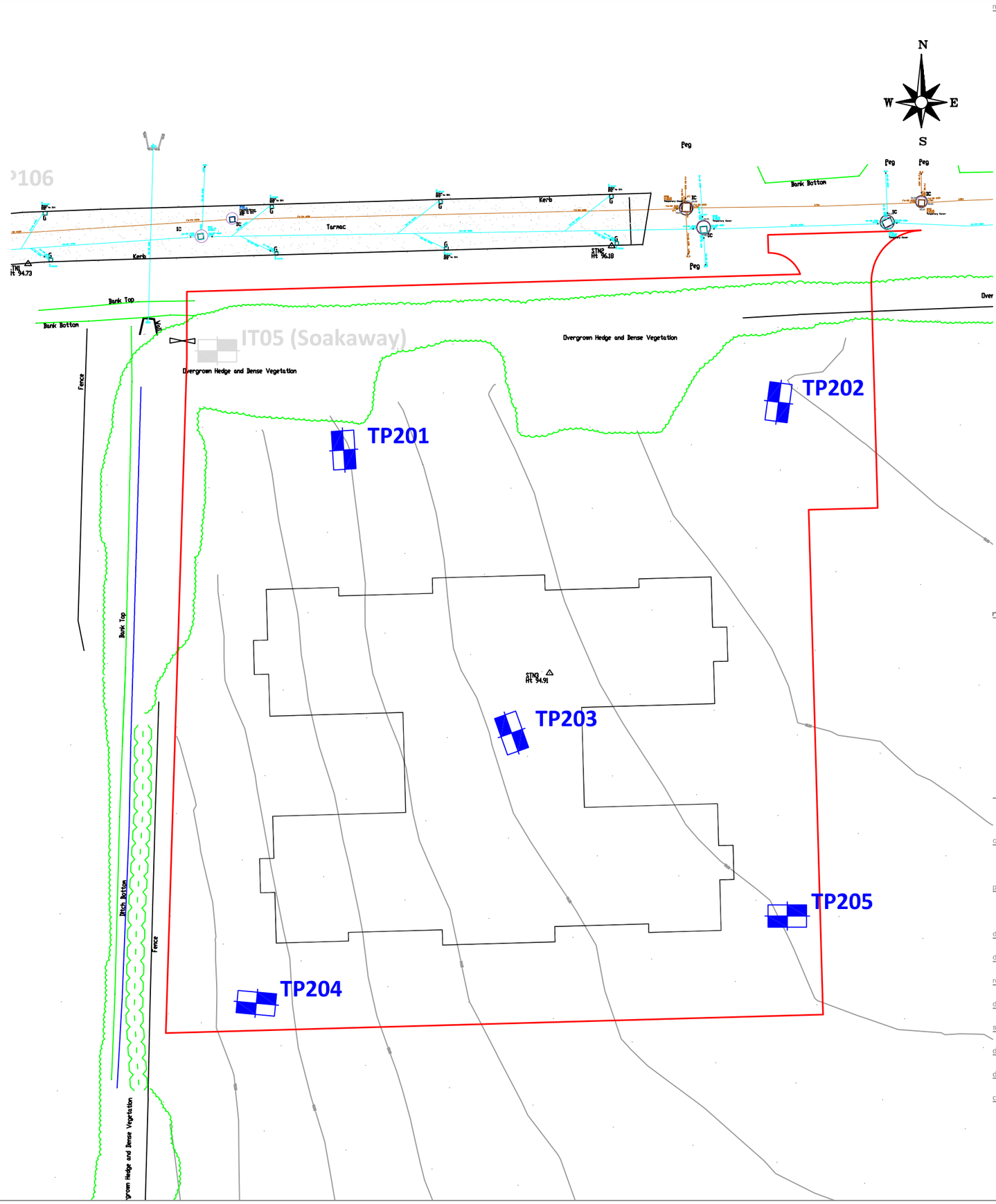
Report 7322/1

November 2024

GEOENVIRONMENTAL SUMMARY

Site Description	The site comprises an open area of rough grassland that slopes down by around 3.5m from north-east towards the south-west. The sites northern boundary if formed by a deep mixed species hedgerow with a wire fence at its centre and an open dry ditch immediately beyond. The western boundary is predominantly a three strand barbed wire fence with an open ditch/watercourse immediately beyond. There are no physical boundaries to the south and east.
History	The site and surrounding land has remained undeveloped and likely in agricultural use throughout its recent history.
Made Ground	Made ground was not encountered at the site.
Natural Ground	Natural ground was encountered for the full depth of each exploratory hole, and typically comprised around 300mm of topsoil overlying stiff gravelly clay.
Contamination & Remediation	The site has essentially not been previously developed and there was no evidence of any made ground, burning or burials encountered during the ground investigation. Analysis has determined that all soils at the site is 'clean' and suitable for reuse either on or off-site and remediation is not required.
Hazardous Gas	There are no known areas of landfilling within 250m; furthermore, the site is not in area considered susceptible to mines gas, or other sources of hazardous gas generation. The site is in an area where less than 1% of homes are estimated to be above the radon action level. As such, no special precautions against hazardous gas are required.
Mining & Quarrying	The site is located outside of any potential mining areas. There are no quarries within 250m of the site.
Foundations	Conventional strip foundations will be suitable for the two-storey care home founding in the clay deposits at around 1.0m depth.
Groundwater & Excavations	No significant inflows of groundwater were encountered during the investigation. The stability of excavations within natural ground was generally good.
Flooding & Drainage	The EA indicate that the site is not located within an indicative floodplain. *Insitu* soakaway testing found very low infiltrations rates. This coupled with shallow groundwater mean that soakaways will not provide a suitable means of surface water discharge at the site.

This brief summary should not be assumed to represent a complete account of all the potential geoenvironmental issues that may exist at the site. As such it is strongly recommended that the report be read in its entirety.



notes

Proposed layout reproduced from LNT Construction Drawing referenced CB9 0LL-F-04B, dated 10/11/2023.

CALABRIAN 2024 INVESTIGATION

TRIAL PIT LOCATION

APPROXIMATE SITE BOUNDARY

PROPOSED CARE HOME FOOTPRINT

rev. description

LNT Care Developments

client

HAVERHILL, EAST ANGLIA, CB9 0LL

project

GEOENVIRONMENTAL SUMMARY

drawing title

drawing number 7322/7

revision –

drawing status Final

scale 1:500 @A3

date 13/11/2024

drawn by RJH

checked by –

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FOREWORD (Geoenvironmental Investigation Report)

This report has been prepared for the sole internal use and reliance of the LNT Care Developments (3) Limited. This report shall not be relied upon or transferred to any other parties without the express written authorisation of Calabrian Limited (Calabrian); such authorisation not to be unreasonably withheld. If any unauthorised third party comes into possession of this report, they rely on it at their peril and the authors owe them no duty of care and skill.

The report presents observations and factual data obtained during our site investigation and provides an assessment of geoenvironmental issues with respect to information provided by the Client regarding the proposed development. Further advice should be sought from Calabrian prior to significant revision of the development proposals.

The report should be read in its entirety, including all associated drawings and appendices. Calabrian cannot be held responsible for any misinterpretations arising from the use of extracts that are taken out of context.

The findings and opinions conveyed in this report (including review of any third-party reports) are based on information obtained from a variety of sources as detailed within this report, and which Calabrian believes are reliable. All reasonable care and skill has been applied in examining the information obtained. Nevertheless, Calabrian cannot and does not guarantee the authenticity or reliability of the information it has relied upon.

The report represents the findings and opinions of experienced geoenvironmental consultants. Calabrian does not provide legal advice and the advice of lawyers may also be required.

Intrusive investigation can only investigate shallow ground beneath a small proportion of the total site area. It is possible therefore that the intrusive investigation undertaken by Calabrian, 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. Any opinion expressed as to the possible configuration of strata between or below exploratory holes is for guidance only and no responsibility is accepted as to its accuracy

It should be borne in mind that the timescale over which the investigation was undertaken may not allow the establishment of equilibrium groundwater levels. Particularly relevant in this context is that groundwater levels are susceptible to seasonal and other variations and may be higher during wetter periods than those encountered during this commission.

Where the report refers to the potential presence of invasive weeds such as Japanese Knotweed, or the presence of asbestos containing materials, it should be noted that the observations are for information only and should be verified by a suitably qualified expert.

This report assumes that ground levels will not change significantly from those existing at present and that the care home will be of two-storey construction. If this is not to be the case, then some modification to this report may be required.

Calabrian cannot be responsible for the consequences of changing practices, revisions to waste management legislation etc that may affect the viability of proposed remediation options.

Calabrian reserve the right to amend their conclusions and recommendations in the light of further information that may become available.

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Table B	Summary of Contamination Results (Organics)
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1 INTRODUCTION

1.1 THE COMMISSION AND BRIEF

Calabrian Limited (Calabrian), were commissioned by LNT Care Developments (3) Limited (LNT) to carry out a geoenvironmental appraisal of land at Haverhill, East Anglia, CB9 0LL.

Correspondence regarding Calabrian's appointment, including the brief for this investigation, is included in Appendix A. The agreed scope of works included:

- A review of third-party reports;
- a site walkover and inspection;
- an assessment of the land use history;
- determination of the site's environmental setting;
- an intrusive ground investigation comprising five trial pits;
- assessment of the geotechnical properties of the near surface deposits to enable provision of foundation and highway recommendations;
- a qualitative assessment of contamination risks; and,
- recommendations for the necessary site preparatory and remediation works.

1.2 OBJECTIVES

Primary aims of this investigation were to identify salient geoenvironmental issues affecting the site to enable LNT to obtain budget costs for the necessary foundation, site preparatory and remediation works, and to support the submission of a planning application to the local authority.

1.3 DEVELOPMENT PROPOSALS

It is understood that consideration is being given to development of the site with a two-storey residential care home with associated gardens/landscaping, access road and car park. A proposed site layout has been provided by LNT and is copied as Drawing 7322/2.

1.4 REPORT FORMAT AND LIMITATIONS

General notes and limitations relevant to all Calabrian investigations are described in the Foreword and should be read in conjunction with this report. The text of the report draws specific attention to any modification to these procedures and to any other special techniques employed.

2 SITE DESCRIPTION

2.1 GENERAL

Details of the site are given below:

- Location: 1.25km north-east of town centre
- Nearest Post Code: CB9 7YZ
- National Grid Reference: 56822, 24644 (TL 682 464)
- Area: 0.68 hectares.

2.2 SITE FEATURES

Calabrian completed a walkover survey of the site on 23rd October 2024.

The site comprises an open area of rough grassland that slopes down by around 3.5m from north-east towards the south-west.

The sites northern boundary if formed by a deep mixed species hedgerow with a wire fence at its centre and an open dry ditch immediately beyond. The western boundary is predominantly a three strand barbed wire fence with an open ditch/watercourse immediately beyond. There are no physical boundaries to the south and east.

Surrounding land is open farmland that lies within a wider ongoing residential development.

Existing salient features, at the time of the walkover are presented on Drawing No. 7322/3. A selection of site photographs are included on Drawing 7322/4.

3 SITE HISTORY

In order to investigate the development history and previous land uses at the site and immediate surrounding land, site centred extracts from Ordnance Survey (OS) plans dating back to 1885 have been examined. These plans are presented in Appendix B.

The site and surrounding land have remained undeveloped and likely in agricultural use throughout its recent history.

4 ENVIRONMENTAL SETTING

4.1 GENERAL

The responses received from ZeticaUXO and Landmark are presented in Appendix C.

Issue Data Reviewed	Remark
Geology 1:50,000 BGS map	Superficial – Glacial Till overlying Lowestoft Formation. Solid - Lewes Nodular Chalk Formation and Seaford Chalk Formation (Undifferentiated) - Chalk. Shallowest coal seam - None. Strata Dip – Not recorded. Faults – none beneath the site.
Mining Coal Authority BGS maps	The site is located beyond the CA's defined coalfields.
Quarrying Landmark Report Historical OS Plans	None within 250m.
Radon UKHSA Map Landmark Report	No protective measures required. All parts of this 1km grid square are in the lowest band of radon potential. Less than 1% of homes at or above the Action Level.
Hydrogeology Landmark Report Groundwater Vulnerability map	Source Protection Zone? Yes, Zone III. Aquifers: Secondary (Superficial); Principal (Bedrock). Groundwater abstractions? Nearest >1.4km south-west. Pollution incidents? Nearest >1.3km west.
Hydrology Landmark Report	Nearest watercourse(s) – Adjacent to western boundary. Water quality – Not recorded. Pollution incidents? None relating to the site. Abstractions? Nearest >1.3km west. Discharge consents? None relating to the site.
Landfill Sites Landmark Report	None within 500m.
Flood Risk Landmark Report	The site lies in Flood Zone 1, where the risk of flooding from rivers or the sea is classified as low.

4.2 GROUNDWATER SOURCE PROTECTION ZONES (SPZ) & THE CHALK AQUIFER

The site lies within a groundwater Source Protection Zone (SPZ III) for the Chalk aquifer.

About 35% of public water supply in England and Wales is provided by groundwater resources, this figure being much higher where the Chalk aquifer has been a major source of water supply.

It is possible that the Environment Agency will request more detail, and at an earlier stage, than usual with respect to drainage design and measures to mitigate pollution (interceptors etc). They may require drainage to be kept at shallowest possible depths. They may also require details of mitigation measures to reduce pollution risks during the construction phase.

4.3 Unexploded Ordnance (UXO) Risk Assessment

Military activities including those conducted as part of both the First and Second World Wars have resulted in a legacy of unexploded ordnance (UXO) being present within the shallow soils of the UK.

UXO result from various sources including both allied (military training) and German (bombing raids) with a guide figure of approximately 10% of all munitions failing to function as designed.

The likelihood of UXO being encountered on a development site is influenced by several factors including: the proximity to strategic targets; the nature of the development works being undertaken; and evidence of local damage in the post-war periods amongst others. To determine the likelihood of UXO being present on a site, a stepwise risk assessment process is followed. This process is outlined within CIRIA C681[1].

An initial UXO threat assessment has been undertaken using the ZeticaUXO risk map. The site is located in a low-risk area meaning that there is no greater probability of encountering UXO than anywhere else in the UK; on this basis further assessment is not advocated.

5 PREVIOUS INVESTIGATIONS

5.1 General

LNT have provided Calabrian with a copy of the following report:

1. Land at Haverhill, Suffolk. Geo-Environmental Phase 1 Desk Study. Report prepared by Brookbanks Consulting Limited on behalf of Hallam Land Management and Mrs Pelly. Report referenced 10173/DS/01, dated 2nd February 2016.
2. Phase I Review & Strategic Phase II Geo-Environmental Assessment. Land at Great Wilsey Farm, Haverhill, Suffolk, CB9 0LL. Report prepared by GEG Limited on behalf of Hallam Land Management and Mrs Pelly. Report referenced GEG-14-366/PI_PII, dated 13th November 2017.

5.2 Summary of Previous Findings

- The site appears to have remained undeveloped throughout its history;
- during the 2017 investigation TP08, and TP108 were excavated on the site and found topsoil overlying firm becoming very stiff gravelly clay of the Lowestoft Formation;
- infiltration testing was undertaken at locations IT04, IT04, IT07 on or close to the site. These tests determined that soakaways would not provide a suitable means of surface water disposal due to very low infiltration within clay deposits;
- gas protection measures are not required; and;
- soils on site appear to be 'clean'.

[1] CIRIA C681 Unexploded Ordnance: A Guide for the Construction Industry.

6 GROUND INVESTIGATION DESIGN

6.1 ANTICIPATED GROUND CONDITIONS

Based on the Environmental Setting and previous land use data reviewed anticipated ground conditions are expected to comprise:

- **Made Ground** - not anticipated.
- **Natural Soils** - topsoil over stiff clay.
- **Bedrock –** not anticipated at shallow depth.
- **Mineworkings –** not located within coal mining area.
- **Groundwater –** not anticipated at shallow depth.

6.2 POTENTIAL ISSUES

Based on the data above and that in Sections 2 (Site Description) and 3 (History), potential ground-related issues associated with this site are likely to include:

Potential on-site contamination sources:

1. Former agricultural uses.

Potential off-site contamination sources:

1. None.

Potential geotechnical hazards:

1. None.

Other potential constraints:

1. None.

6.3 PRELIMINARY CONCEPTUAL SITE MODEL

Historical plans show that the site has remained in agricultural use; this use is considered highly unlikely to have caused any significant ground contamination. Nonetheless, activities such as the discharge of chemicals to ground, unregulated burial, and burning of waste have all occurred on farmland.

Potential pollutants associated with farming activity and construction might include any of the following:

- Pesticides and herbicides:
- soil conditioners – heavy metals, sulphates, PAH;
- fuel storage - hydrocarbons, methane, oxygen depletion;
- equipment maintenance - hydrocarbons, metals;
- waste burial, land levelling, backfilling ponds\quarries - heavy metals, PAH etc; and,
- naturally occurring contaminants - Arsenic, heavy metals.

Potential pollutant linkages are shown on a preliminary conceptual site model, presented as Drawing No 7322/5 with a summary of the possible source-pathway-receptor linkages and risk definitions provided in the table on Page 7 below. Clearly the conceptual model will be subject to modification in light of data arising from the proposed intrusive ground investigation.

6.4 Investigation Strategy

The preliminary conceptual site model has used as a basis for design of an appropriate ground investigation, the scope of which is summarised below:

Exploratory Hole Type	Purpose
Trail Pits (Machine Excavated)	To determine the general nature of soils underlying the site, including the: • Nature, distribution, and thickness of shallow soils, including any made ground; • suitability of the ground for founding structures and pavements; and, • to determine whether soakaways could be utilised for storm water drainage.

Proposed exploratory hole locations should be selected to provide a representative view of the strata beneath the. A nominal 40m grid spacing should be appropriate, with additional exploratory locations scheduled as necessary in light of the ground conditions actually encountered.

The number of soil samples taken should be reflective of the geological complexity actually encountered, but in general about three samples should be taken from most exploratory holes.

7 FIELDWORK

7.1 Objectives

The original investigation strategy is outlined in Section 6.4 above.

7.2 Scope of Works

Fieldwork was supervised by Calabrian on 23rd October 2024 and comprised the exploratory holes listed below.

Technique Type	Exploratory Holes	Final depth(s)	Remarks
Trial pitting (machine dug)	TP201 to TP205	2.4m to 2.6m	
Soakaway Tests	Within TP201 and TP202	2.5m	

Exploratory hole logs are presented in Appendix D. These logs include details of the:

- Samples taken;
- descriptions of the solid strata, and any groundwater encountered; and,
- results of the in-situ testing.

Exploratory hole locations are shown on Drawing No. 7322/6.

Preliminary Conceptual Site Model – the table below summarises the possible source-pathway-receptor linkages with risk definitions in accordance with CIRIA C552[2].

Source	Exposure Pathway	Potential Receptor	Probability of Exposure	Consequence of Exposure	Discussion of Pollutant Linkage
Agricultural activities (heavy metals, PAHs, asbestos, and fuel / oil hydrocarbons).	Inhalation, Ingestion and Dermal Contact	Humans – future users of site infrastructure (Residents/site workers)	Likely	Medium (dependent on the types of contaminants someone is exposed to).	Residents and site users could come into contact with any made ground if near surface in garden or landscaped areas.
		Humans - construction & maintenance workers	Low (with appropriate use of PPE / RPE)	Medium (dependent on the types of contaminants someone is exposed to).	Potential for construction and maintenance workers to encounter contaminated soil / asbestos fibres. Exposure times likely to be limited and risks should be reduced by wearing appropriate personnel protective equipment (PPE/RPE).
	Leaching and migration	Groundwater - Underlying Principal aquifer (Bedrock).	Low Likelihood	High	Low permeability glacial deposits will reduce likelihood of impact of mobile contaminants.
	Surface water – Adjacent watercourse	Low Likelihood	Medium	Infiltration and migration is predicted to be limited and the migration potential is assessed as low.	Surface water unlikely to be affected.
	Direct contact	Foundation	Likely	Mild	Potential for contaminants posing risk to new foundations and underground structures to be present.

[2] *Contaminated land risk assessment. A guide to good practice (C552), 2001.*

8 GROUND CONDITIONS

8.1 General

A complete record of strata encountered beneath the proposed development site is given on the various exploratory hole records, presented in Appendix D.

8.2 Made Ground

Made ground was not encountered at the site.

8.3 Natural Ground

Natural ground was encountered for the full depth of each exploratory hole, and typically comprised around 300mm of topsoil overlying stiff gravelly clay.

8.4 Visual & Olfactory Evidence of Organic Contamination

No visual or olfactory evidence of organic contamination such as free fuel/oil product, oily sheens or discernible fuel/oil odours was noted during the investigation.

8.5 Groundwater

No significant inflows of groundwater were encountered during the investigation.

8.6 Stability

The stability of excavations was good.

8.7 Revised Conceptual Ground Model (Ground Conditions)

No amendments to the Preliminary Conceptual Site Model were required in light of data obtained during the ground investigation.

9 CONTAMINATION (ANALYSIS, RISK ASSESSMENT & REMEDIATION)

9.1 General

Historical plans show that the site has remained in agricultural use; this use is considered highly unlikely to have caused any significant ground contamination. Nonetheless, activities such as the discharge of chemicals to ground, unregulated burial, and burning of waste have all occurred on farmland.

In the context of risks to human health associated with residential development, the Tier 1 Soil Screening Values referenced in this report have been derived by Land Quality Management Limited as their LQM/CIEH S4Uls, but amended, where appropriate, to be more specific to redevelopment within the planning process (see Notes in Annex I).

Where available, Category 4 Screening Levels (C4SL) have also been referenced; see Notes in Annex I for more detail.

This site is greenfield and no evidence of significant made ground or significant contamination was noted. Consequently, the Tier 1 Values used in this report have been derived with reference to a CSM that assumes a residential end-use with gardens/landscaped areas but without homegrown produce (Calabrian Scenario B). In the event that determinands exceed these Tier 1 Values, the results will be reassessed.

9.2 Testing Scheduled

Based on the above assessment, Calabrian submitted a test schedule (summarised in the table below) to a UKAS accredited laboratory.

Type of Sample	No. of Samples	Determinands
Topsoil	5	Asbestos ID, TOC, pH, water soluble boron, and total metals (arsenic, cadmium, chromium, copper, lead, mercury, nickel, selenium, and zinc) and speciated Poly Aromatic Hydrocarbons (sPAH), BTEX and speciated Total Petroleum Hydrocarbons (sTPH).
Cohesive Glacial Deposits	3	
Topsoil	2	Insecticide screening.

9.3 Soil Contamination Results

The soil contamination test results are summarised in the Tables in Annex I.

Laboratory test certificates as received from the laboratory are presented in Appendix E.

Inorganic Determinands

Of the five samples of topsoil and three samples of Cohesive Glacial Deposits analysed for inorganic parameters none could be classified as contaminated.

These samples are classified by comparison of concentrations with Calabrian Tier 1 Values for an end use including domestic gardens and any area where plants are to be grown (the most sensitive of the proposed end-uses).

Asbestos

No asbestos fibres were identified in any of the samples screened.

Organic Determinands

Samples have been classified by comparison with Calabrian risk-derived Tier 1 Values. These screening values assume a Soil Organic Matter (SOM) of 6% (equivalent to a TOC of 3.5%). Many organic contaminants are more mobile when the SOM is lower, and consequently lower screening values are then more appropriate for many organic contaminants.

In order to check the validity of Calabrian Tier 1 Values, the average TOC for each common fill type (beyond any areas of obvious hydrocarbon impact) have been determined.

Fill Type	Typical TOC/%	Comparison with revised Screening Value necessary?
Topsoil	<2.4	Yes, but no significant organic contamination was recorded in this soil type. All determinands well below "6%" screening value; all below limit of laboratory detection.
Cohesive Glacial Deposits		

Total Petroleum Hydrocarbons (TPH)

Calabrian have used the CLEA model to derive risk-based screening values for hydrocarbons, in accordance with the methodology detailed by the TPHCWG, and reviewed by a UK workshop of experts with respect to UK adoption of the method.

Assessment of TPH would normally be undertaken in accordance with a 3-step approach. However, given former uses and the absence of visual/olfactory evidence, only a simple banded TPH was scheduled here (compared with full speciation).

None of the fractions exceed their respective Tier 1 criteria, even if it is conservatively assumed all of each fraction is either aliphatic or aromatic.

Poly Aromatic Hydrocarbons (PAH)

Speciated PAH analysis has been undertaken in order to determine concentrations of the key "marker" compounds: benzo(a)pyrene (considered the most toxic of the PAHs); and naphthalene (the most mobile and volatile of the PAHs).

Speciated analysis has confirmed the absence of significant concentrations of naphthalene in the soils beneath this site (no samples above the limit of detection at 0.03mg/kg).

No concentrations of benzo(a)pyrene were recorded above Calabrian' Tier 1 Value of 3.2mg/kg; in fact, no samples exceeded the limit of detection at 0.03mg/kg.

Insecticides

Two samples of topsoil samples scheduled for insecticide analysis (Organochlorine & Organophosphorous Insecticides) yielded results for the various determinands below the laboratory limit of detection (0.01 mg/kg).

9.4 Discussion

The site has essentially not been previously developed and there was no evidence of any made ground, burning or burials encountered during the ground investigation.

Analysis has determined that all soils at the site is 'clean' and suitable for reuse either on or off-site.

9.5 Waste Classification

Soils at the site have been classified using the HazWasteOnline toolkit as non-hazardous.

Exp Hole	Depth (m)	Classification	WAC Results	
			SNRHW*	Hazardous
TP201	0.1	Non-Hazardous		
TP202	0.1	Non-Hazardous		
TP202	0.5	Non-Hazardous	Pass	Pass
TP203	0.1	Non-Hazardous		
TP203	0.6	Non-Hazardous	Pass	Pass
TP204	0.1	Non-Hazardous		
TP204	0.8	Non-Hazardous	Pass	Pass
TP205	0.1	Non-Hazardous		

**Stable non-reactive hazardous waste*.

All soil waste will have a non-hazardous classification.

WAC testing was undertaken on three samples of non-hazardous soil; the results are presented within Appendix G. The results suggest that the soils here would be classified as inert waste. Contractors exporting waste from the site should be asked to review the site investigation data and make their own assessment.

10 HAZARDOUS GAS

10.1 Sources of Hazardous Gas Generation

The site is not believed to be affected by sources of hazardous gas generation as it is:

- Not located within 250m of a known former or current landfill site or backfilled feature (eg quarry, pond, canal etc);
- neither underlain by shallow mineworkings nor located in an area considered susceptible to mines gas emissions;
- not underlain by any thickness of made ground; and,
- not underlain by peat or shallow chalk deposits (chalk CO_2 only).

10.2 Radon

United Kingdon Security Agency (UKHSA) launched the new radon map on in December 2022 this indicates that the site is in an area where less than 1% of homes are estimated to be above the action level, and that radon protection measures are therefore not required radon protection measures are not required for new dwellings at the site. Information from Landmark confirms this.

10.3 Conclusion

As such, no special precautions against hazardous gas are required on this site.

11 GEOTECHNICAL TESTING

11.1 General

A total of five samples of natural soil were delivered to a suitably accredited laboratory with a schedule of geotechnical testing drawn up by Calabrian.

The geotechnical laboratory test results are presented in Appendix F.

11.2 Atterberg Limits

The plasticity indices of five samples of cohesive soil have been determined; results are summarised below.

Soil type	Range of Plasticity Indices* (Average)	Shrinkability
Cohesive Glacial Deposits	36 to 32 (28)	Medium

** Modified where appropriate in accordance with revised Chapter 4.2 of the NHBC Standards (April 2003).*

Note. The term Shrinkability is equivalent to the term Volume Change Potential used in Chapter 4.2.

One sample yielded a non-plastic result (not clay due to its high gravel content).

For the purposes of foundation design, it is recommended that all cohesive soils be regarded as being of medium shrinkability.

11.3 Soluble Sulphate and pH

In accordance with BRE Special Digest 1:2005, this site has been classified as greenfield with a static groundwater regime.

It is envisaged foundations will extend to depths of about 1m into natural strata and samples taken from this depth range have been submitted for pH and water-soluble sulphate (2:1 soil/water extract).

The concentrations of sulphate in the aqueous natural soil extracts of five samples were determined.

The highest water-soluble sulphate concentration and the lowest pH value for each soil type analysed are shown in the Table below.

Soil type	Lowest pH values	Highest Soluble Sulphate Concentration (mg/l)
Cohesive Glacial Deposits	7.9	69

pH values were all above 5.5, therefore concentrations of chloride and nitrate are considered insignificant.

In accordance with Tables C1 and C2 of SD1, sub-surface concrete should be Design Sulphate Class DS-1, with the site allocated an ACEC Classification of AC-1.

11.4 Infiltration Tests

Infiltration tests have been undertaken within TP201 and TP202. Test were carried out in general accordance with BRE365[3] and C156:1996[4]. Where possible in accordance with C753:2015[5] tests would be repeated three times. The locations of the soakaways are shown on Drawing No. 7218/6.

Infiltration Rates

Infiltration rates for each soakaway test have been calculated (where possible) in accordance with BRE 365 . This design takes into account the time for water level in to fall from 75% to 25% of its effective depth. The effective depth is the difference between the starting water level and the soakaway pit base depth.

After around three hours the water levels had not fallen from the initial level. Due to this the test was not considered suitable for calculation of an infiltration rate. Copies of the associated test data are presented in Appendix F.

The guidance within BRE365 and C753:2015 states the following:

- "Fill the pit and allow it to drain three times to near empty….The three fillings should be on the same or consecutive days." *Given that the water level did not fall at all it would be impossible to repeat the test three times over a single or subsequent days*.
- "The soakaway should discharge from full to half-volume within 24 hours in readiness for subsequent storm inflow." *Evidently, the test conducted on site could not achieve half full volume within 24 hours and the soakaway would be ineffective*.

Consequently, soakaways will not provide a suitable drainage solution for the discharge of surface water run-off at the site and therefore there may be a need for surface water balancing. Consideration should be given to alternative sustainable drainage systems (SUDS) such as (see CIRIA C753:2015 for further details):

- Swales – linear grassed features in which surface water can be stored or conveyed. Where suitable, swales can be designed to allow infiltration.
- Pervious Pavements – provide a surface suitable for pedestrian and/or vehicular traffic, while allowing rainwater to infiltrate into subsurface storage, with subsequent infiltration or controlled discharge. Pavement could be porous (water able to infiltrate across entire surface material; e.g. reinforced grass), or permeable (water infiltrates via joints between concrete blocks).
- Ponds – designed to have permanent pool of water, but with capacity to provide temporary storage-controlled discharge.

[3] BRE (1991) Soakaway Design, BRE Digest 365, Building Research Establishment, Bracknell UK.
[4] BETTESS R (1996), Infiltration drainage - manual of good practice, R156D, CIRIA, London.
[5] SuDS Manual. CIRIA C753 2015.

12 GEOTECHNICAL ISSUES

12.1 CONCEPTUAL SITE MODEL

Made ground was not encountered at the site.

Natural ground was encountered for the full depth of each exploratory hole, and typically comprised around 300mm of topsoil overlying stiff gravelly clay.

12.2 MINING & QUARRYING

This site is located beyond the CA's defined coalfields.

There are no known quarries on, or within 500m of the site.

12.3 FOUNDATION RECOMMENDATIONS

Foundation recommendations assume that development will be two-storey construction and that line loads will not exceed 110kN/m run. If this is not the case significant alteration to these recommendations will be required.

We have assumed that final development levels will not differ significantly from ground levels existing at the time of investigation. Any digital terrain modelling undertaken or commissioned by Client should consider implications for the foundation recommendations outlined below.

In accordance with Tables C1 and C2 of SD1, sub-surface concrete should be Design Sulphate Class DS-1, with the site allocated an ACEC Classification of AC-1.

Strip/Trench Fill Footings

It is considered that shallow strip or deepened trench fill footings will be the most suitable foundation solution for the proposed two-storey care home. This solution is viable where stiff clay is the founding material.

Clay/Cohesive Soils

The care home has an assumed maximum foundation line load of 110kN/m run, a foundation geometry of length = 50m, breadth = 0.6m, thickness = 225mm, founding below 1m depth and assuming an undrained shear strength of 100kPa for the stiff clay then theoretical safe bearing capacities as detailed below can be calculated:

- Meyerhof (Factor of Safety) Approach = >150kPa (FoS=2.5)
- Lumped Factor of Safety = >150kPa (FoS=2.5)

A Eurocode 7 approach provides the following ultimate bearing capacities including the use of depth factors. Applying 75mm of eccentricity to the line load has negligible effect in either case:

- DA1 Combination 1 = >150kPa (ultimate)
- DA2 Combination 2 = >150kPa

However, consideration should also be given to the effect of settlement on the above safe bearing capacities in order to assess meaningful allowable bearing capacities. Assuming the foundation geometry detailed above minimal settlements would be anticipated.

Clay classification tests suggest that natural cohesive soils at the site should be regarded as being of medium shrinkability. A minimum founding depth of 900mm is therefore recommended for all soils on the site where strip footings are proposed.

General

Reinforcement, as a precaution against differential settlement, is recommended only where foundation excavations encounter significant lateral and vertical variations in strata. One layer of B385 mesh placed 75mm above the base of the footing is likely to provide suitable reinforcement, but further advice should be sought from the Structural Engineer.

Founding depths are from original or finished ground level, whichever is the lower, to the underside of the footing.

Foundations should be deepened near trees in accordance with NHBC Standards Chapter 4.2. Overdeepened foundations should be stepped in accordance with NHBC Standards, Chapter 4.4.

LNT or their groundworker should seek further advice from Calabrian if unexpected ground conditions are encountered in foundation or sewer excavations.

12.4 Excavations

Groundwater was not encountered during the investigation.

Excavations should remain stable in the short term but if left open for any significant period of time may require shoring.

12.5 Drainage

Based on *insitu* infiltration testing undertaken during the investigation, soakaways will not provide a suitable drainage solution for surface water run-off at the site. Consequently, it will be necessary to consider alternative sustainable drainage systems (SuDS), and there may be a need for surface water balancing.

12.6 Pavements

Based on visual inspection of the natural materials and the recorded plasticity indices at the site, published tables (Interim Advice Note 73/06 Revision 1 (2009), Chapter 5. Characterisation of Materials Design Guidance for Road Pavement Foundations - Draft HD25) PDF p25 indicate that the natural clay will have a CBR value of at least 3%. These values should be verified prior to or during construction.

13 REDEVELOPMENT ISSUES

13.1 General

This report has presented options with respect to foundation solutions and contamination assessment that are considered technically feasible and in line with current good practice. Consequently, we would expect to obtain regulatory approval for whichever option is adopted, although this cannot be guaranteed. Copies of this report should be forwarded to the relevant regulatory authorities (Local Authority) for their comment/approval.

13.2 Preparation Works

Given the absence of any significant contamination, a remediation strategy is not considered necessary. Nonetheless, some preparatory works will be required, most notably general site clearance of unprotected trees, and vegetation

It should be ensured that the groundworker understands the need for good materials management. Most notably the importance of not mixing different materials within a given stockpile; i.e. there should be separate stockpiles of topsoil and natural ground.

No areas of gross contamination were encountered during the site investigation. However, if any buried drums, "oily", odorous, brightly coloured etc. materials are encountered, further advice should be sought from Calabrian. Further advice should also be sought if deep foundations etc associated with the former building (highly unlikely) are encountered during the preparatory works; such obstructions might necessitate revised foundation design.

13.3 Health & Safety Issues - Construction Workers

Access into excavations etc. must be controlled and only undertaken in accordance with the Confined Spaces Regulations 1997. The atmosphere in shored trenches in excess of 1.2m should be monitored for oxygen and hazardous gas (methane & carbon dioxide), prior to personnel entering such excavations. Monitoring should continue whilst personnel are working in deep excavations.

Before site operations are started, the necessary COSHH statements and Health & Safety Plan should be drafted in accordance with the CDM regulations.

13.4 New Utilities

It is strongly recommended that all statutory service bodies are consulted at an early stage with respect to the ground conditions within which they will lay services in order to enable them to assess at an early stage any potential abnormal costs.

This site is essentially greenfield, and no previous or current usage of the site or its immediate surroundings is likely to have resulted in ground contamination. Furthermore, no significant made ground was encountered in any of the exploratory holes during the ground investigation.

Consequently, the use of 'standard' polyethylene water supply pipes should be acceptable, although the Client should consult the local water company at the earliest opportunity to confirm this.

14 CONCLUSIONS & RECOMMENDATIONS

14.1 Development Proposals

Consideration is being given to development of the site with a two-storey residential care home with associated gardens/landscaping, access road and car park.

14.2 History

The site and surrounding land have remained undeveloped and likely in agricultural use throughout its recent history.

14.3 Ground Conditions

Made ground was not encountered at the site.

Natural ground was encountered for the full depth of each exploratory hole, and typically comprised around 300mm of topsoil overlying stiff gravelly clay.

14.4 Hazardous Gas

There are no known or suspected areas of landfilling within 250m, and the site is not in area considered susceptible to mines gas, nor is it underlain by shallow mineworkings.

The site is in an area where less than 1% of homes are estimated to be above the radon action level.

As such, no special precautions against hazardous gas are required.

14.5 Mining & Quarrying

This site is located beyond the CA's defined coalfields.

There are no quarries within 500m of the site.

14.6 Contamination & Remediation

The site has essentially not been previously developed and there was no evidence of any made ground, burning or burials encountered during the ground investigation.

Analysis has determined that all soils at the site is 'clean' and suitable for reuse either on or off-site and remediation is not required.

14.7 Foundations

Conventional strip foundations will be suitable for the two-storey care home founding in the clay at around 1m depth deepened near to any proposed trees. Sub-surface concrete should be Design Sulphate Class DS1/AC1.

14.8 Flooding

The EA indicate that the site is not located within an indicative floodplain.

14.9 Drainage

Due to very slow infiltration rates soakaways are very unlikely to provide a suitable drainage solution for surface water run-off at the site. Consequently, it will be necessary to consider alternative sustainable drainage systems (SUDS), and there may be a need for surface water balancing.

14.10 Pavements

The natural clay will have a CBR value of at least 3%. These values should be verified prior to or during construction.

DRAWINGS	
7322/1	Site Location Plan
7322/2	Proposed Site Layout
7322/3	Existing Site Features
7322/4	Site Photographs
7322/5	Preliminary Conceptual Site Model
7322/6	Exploratory Hole Location Plan
7322/7	Geoenvironmental Summary



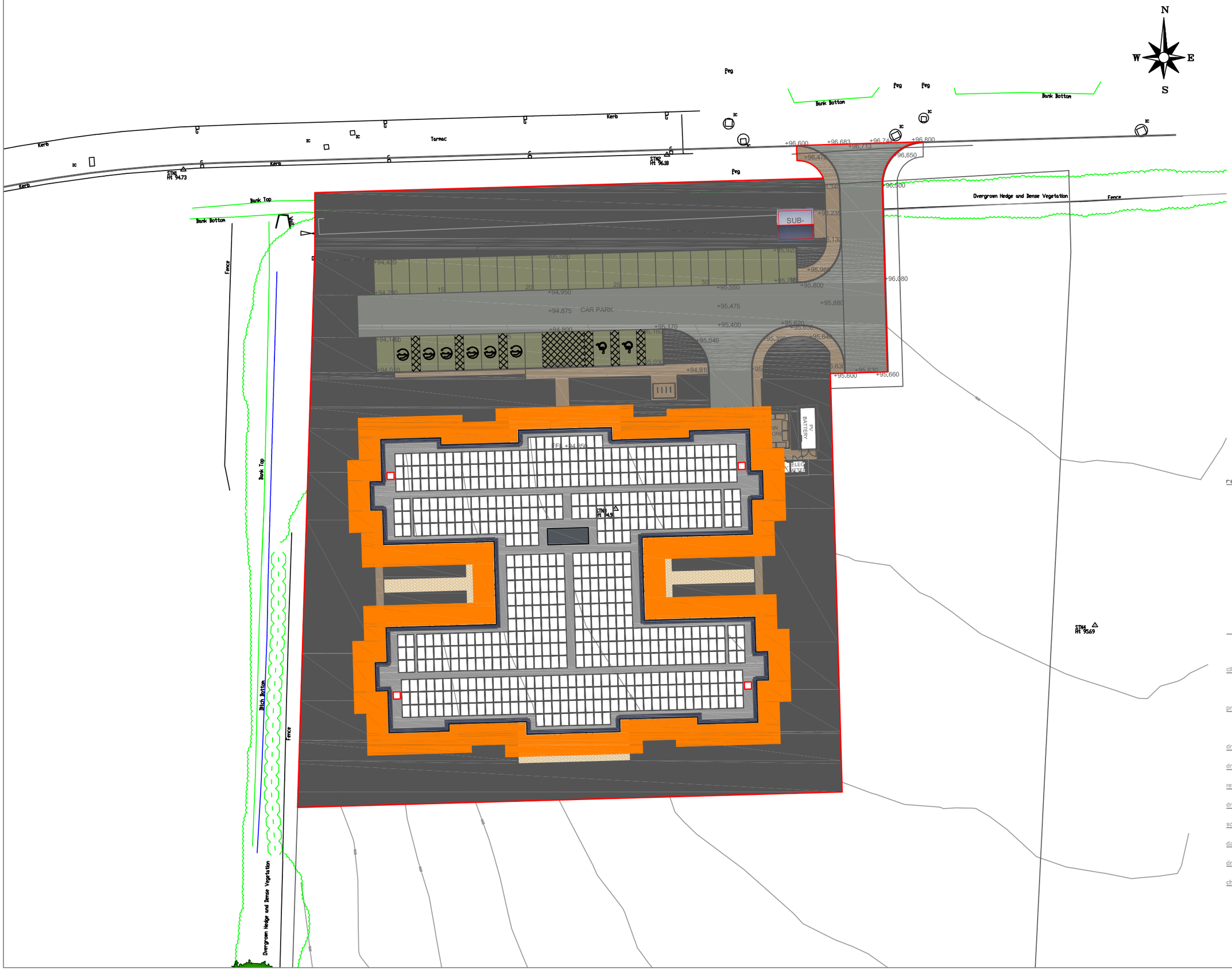


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LNT Care Developments

client	
project	HAVERHILL, EAST ANGLIA, CB9 0LL
drawing title	SITE LOCATION
drawing number	7322/1
revision	–
drawing status	Final
scale	1:25,000 @ A4
date	09/10/2024
drawn by	RJH
checked by	–

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notes

Proposed layout reproduced from LNT Construction Drawing referenced CB9 0LL-F-04B, dated 10/11/2023.

rev. description

LNT Care Developments

client

HAVERHILL, EAST ANGLIA, CB9 0LL

project

PROPOSED LAYOUT

drawing title

drawing number 7322/2

revision –

drawing status Final

scale 1:500 @A3

date 09/10/2024

drawn by RJH

checked by –

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notes

GRASS & OVERGROWN AREAS

TARMAC HARDSTAND

APPROXIMATE SITE BOUNDARY

N

W E

S

Ditch

Open Watercourse

Ditch Bottom

Bank Top

Bank Bottom

Kerb

Tarmac

Peg

Fence

Overgrown Hedge and Dense Vegetation

STN3 Ht 94.73

STN4 Ht 96.18

STN2 Ht 94.91

STN1 Ht 95.69

rev. description

LNT Care Developments

client

HAVERHILL, EAST ANGLIA, CB9 0LL

project

SITE FEATURES

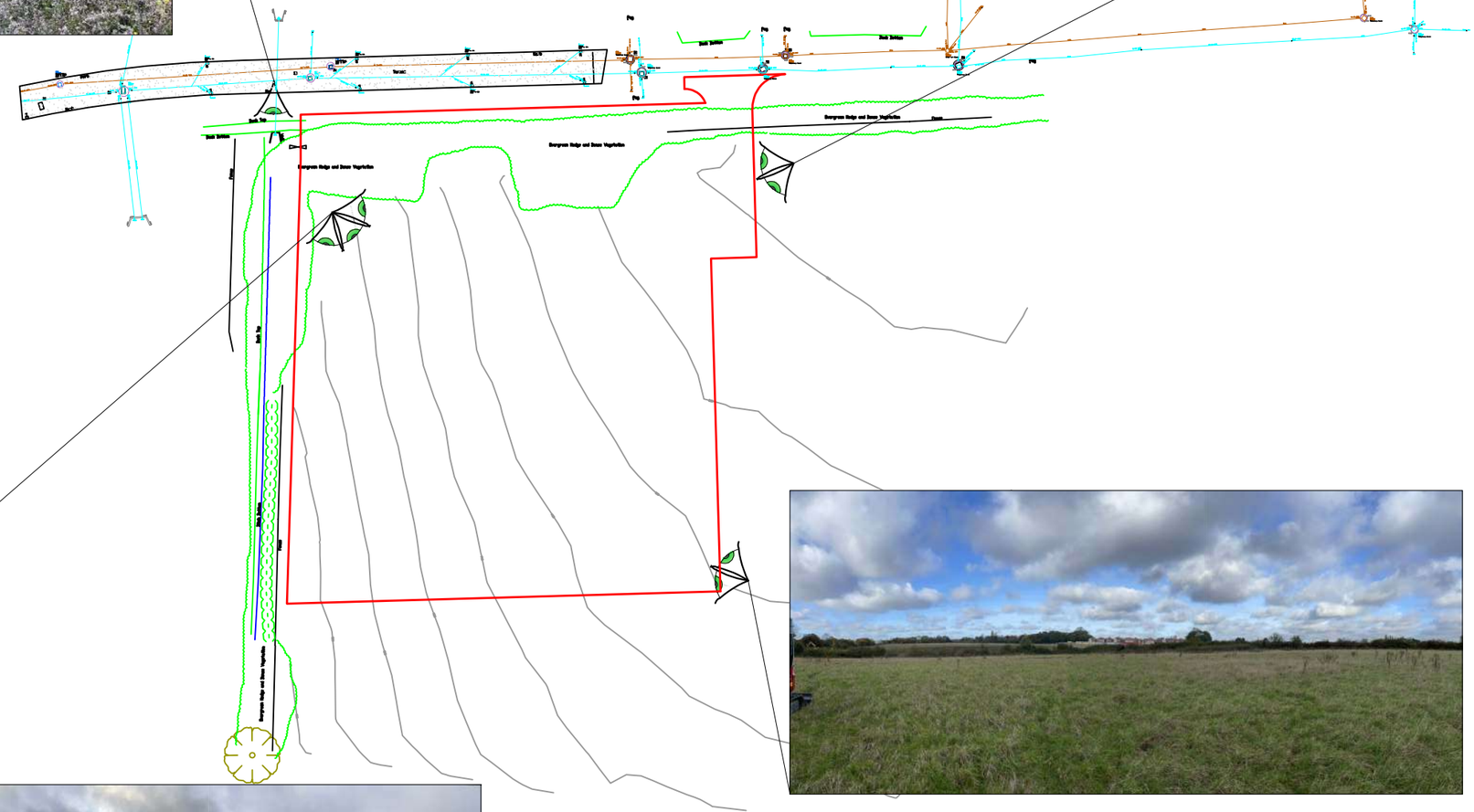
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revision	–
drawing status	Final
scale	1:500 @A3
date	23/10/2024
drawn by	RJH
checked by	–

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N

W E

S

APPROXIMATE SITE BOUNDARY

LOCATION & ORIENTATION OF PHOTOGRAPH

notes

rev. description

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client

HAVERHILL, EAST ANGLIA, CB9 0LL

project

PHOTOGRAPHS

drawing title

drawing number 7322/4

revision –

drawing status Final

scale 1:1000 @A3

date 23/10/2024

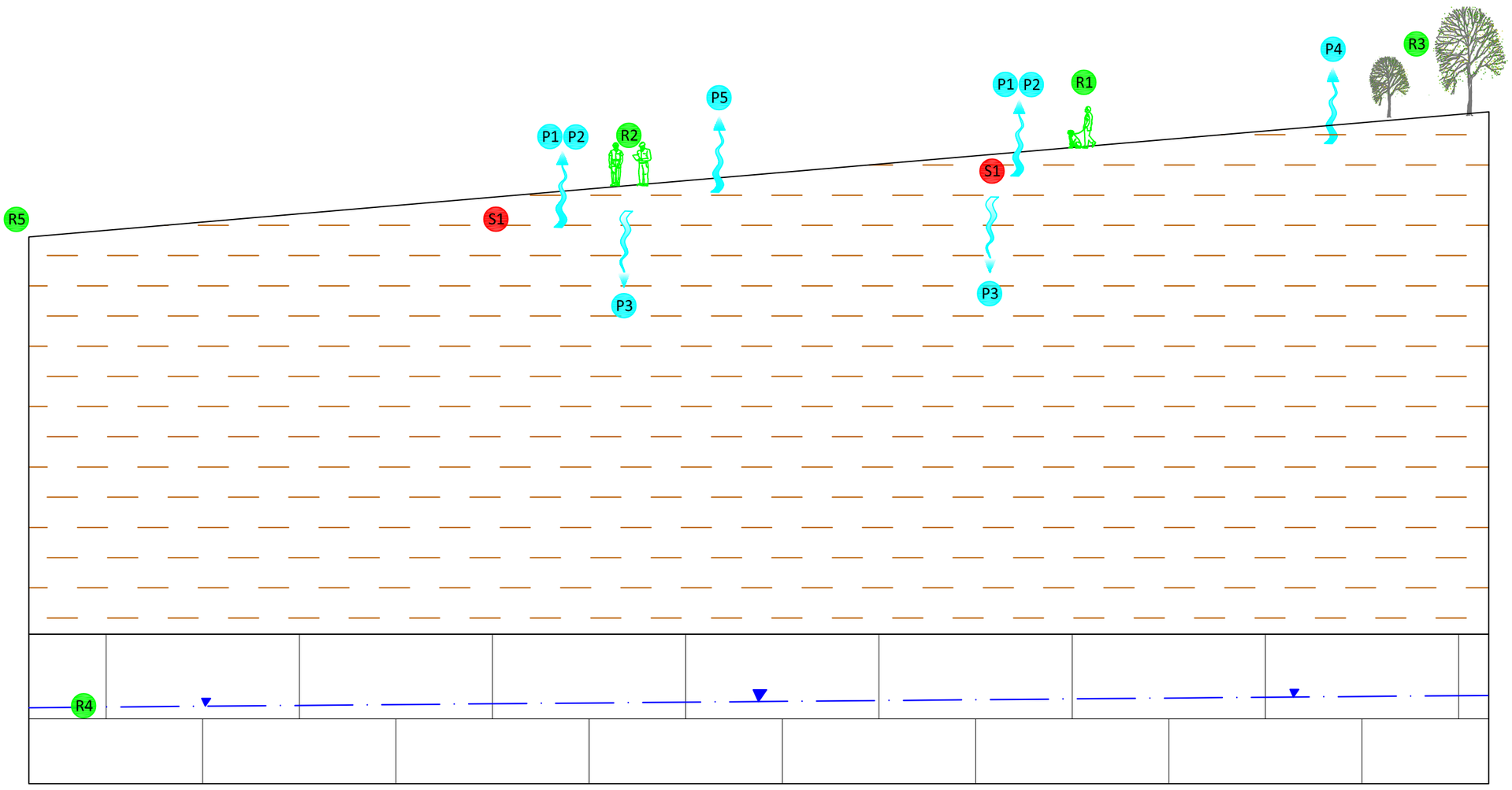
drawn by RJH

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GEOLOGY

- GLACIAL TILL (gravelly clay)
- LEWES NODULAR CHALK FORMATION and SEAFORD CHALK FORMATION

SOURCES

- S1 **FORMER AGRICULTURAL USES** (inorganics, organics, asbestos)

POTENTIAL PATHWAYS

- P1 **DERMAL CONTACT**
- P2 **INGESTION\INHALATION**
- P3 **LEACHING OF CONTAMINANTS**
- P4 **UPTAKE BY PLANTS**
- P5 **VOLATILISATION**

SIGNIFICANT RECEPTORS

- R1 **END USERS** (residents & staff)
- R2 **SITE WORKERS**
- R3 **VEGETATION**
- R4 **PRINCIPLE AQUIFER** (Bedrock)
- R5 **SURFACE WATERS**

notes

rev. description

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client

HAVERHILL, EAST ANGLIA, CB9 0LL

project

PRELIMINARY CONCEPTUAL SITE MODEL

drawing title

drawing number 7322/5

revision –

drawing status Final

scale Not to Scale

date 09/10/2024

drawn by RJH

checked by –

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notes

GEG 2017 INVESTIGATION

TRIAL PIT LOCATION

CALABRIAN 2024 INVESTIGATION

TRIAL PIT LOCATION

APPROXIMATE SITE BOUNDARY

PROPOSED CARE HOME FOOTPRINT

N

W E

S

TP106

IT05 (Soakaway)

TP201

TP202

TP203

TP204

TP205

Kerb

Tarmac

Kerb

Kerb

STN3 Ht 94.73

STN2 Ht 96.18

Peg

Peg

Peg

Bank Bottom

Bank Bottom

Overgrown Hedge and Dense Vegetation

Fence

Bank Top

Bank Top

Overgrown Hedge and Dense Vegetation

Fence

STN1 Ht 94.91

STN4 Ht 95.69

Ditch Bottom

Fence

Overgrown Hedge and Dense Vegetation

rev. description

LNT Care Developments

client

HAVERHILL, EAST ANGLIA, CB9 0LL

project

EXPLORATORY HOLE LOCATION PLAN

drawing title

drawing number	7322/6
revision	–
drawing status	FINAL
scale	1:500 @A3
date	23/10/2024
drawn by	RJH
checked by	–

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ANNEX I	SUMMARY CONTAMINATION DATA (SOILS)
Table A	Summary of Contamination Results (Inorganics)
Table B	Summary of Contamination Results (Organics)
Table C	Cumulative Effects



Summary of Degree of Ground Contamination (Inorganics)

Expl Hole	Depth (m)	Material	Concentrations in mg/kg unless otherwise stated. Results are quoted to 1 decimal place if <10, and whole numbers if >10. Trigger Level Concentrations are shown in **BLACK** and assume a **residential without homegrown produce end-use (Calabrian scenario B).**											
			pH	As	B	Cd	Cr (III)	Cu	Pb	Hg (inorganic)	Ni	Se	Zn	Asbestos
				40	290	85	910	7100	310	56	180	430	40000	Indentification	Quantity (% mass)
TP201	0.1	Topsoil	9.1	13	0.5	0.3	25	19	25	< 0.05	26	< 0.5	72	Not Identified	
TP202	0.1	Topsoil	7.9	12	0.7	0.3	23	18	27	< 0.05	23	< 0.5	71	Not Identified	
TP202	0.5	Cohesive Glacial Deposits	7.8	9.9	0.5	0.2	19	17	9	< 0.05	26	< 0.5	45	Not Identified	
TP203	0.1	Topsoil	7.7	12	0.7	0.2	20	15	20	< 0.05	22	< 0.5	67	Not Identified	
TP203	0.6	Cohesive Glacial Deposits	7.6	8.3	0.3	0.2	17	15	7.5	< 0.05	23	< 0.5	43	Not Identified	
TP204	0.1	Topsoil	6	10	0.6	0.3	21	15	19	< 0.05	22	< 0.5	60	Not Identified	
TP204	0.8	Cohesive Glacial Deposits	8	6.4	< 0.2	0.2	13	13	5.5	< 0.05	18	< 0.5	43	Not Identified	
TP205	0.1	Topsoil	8.1	11	0.5	0.2	21	14	17	< 0.05	23	< 0.5	55	Not Identified	

KEY

36	Parameter tested for and found to be in excess of Tier 1 concentration
179	Parameter tested for and found to be > 5 x Tier 1 concentration
12	Parameter tested for but not found to be in excess of Tier 1 concentration

Summary of Degree of Ground Contamination (Organics)

Expl Hole	Depth (m)	Material	Concentrations in mg/kg. Results are quoted to 1 decimal place if <10, and whole numbers if >10. Trigger Level Concentrations are shown in **BLUE** and assume a **residential without homegrown produce** (Calabrian Scenario B)									
								PAH		TPH - C6 to C40		
			% TOC	Benzene	Toluene	Ethyl Benzene	Xylenes	B(a)P	Naphthalene	GRO~ C_6 to C_{10}	DRO◊ C_{10} to C_{20}	LRO C_{20} to C_{40}
				1.4	3900	440	430	3.2	13	42	130	1000
TP201	0.1	Topsoil	3	< 0.01	< 0.01	< 0.01	< 0.01	< 0.03	< 0.03	< 0.01	< 1.5	< 3.4
TP202	0.1	Topsoil	2.4	< 0.01	< 0.01	< 0.01	< 0.01	< 0.03	< 0.03	< 0.01	< 1.5	< 3.4
TP202	0.5	Cohesive Glacial Deposits	1.1	< 0.01	< 0.01	< 0.01	< 0.01	< 0.03	< 0.03	< 0.01	< 1.5	< 3.4
TP203	0.1	Topsoil	1.8	< 0.01	< 0.01	< 0.01	< 0.01	< 0.03	< 0.03	< 0.01	< 1.5	< 3.4
TP203	0.6	Cohesive Glacial Deposits	< 0.5	< 0.01	< 0.01	< 0.01	< 0.01	< 0.03	< 0.03	< 0.01	< 1.5	< 3.4
TP204	0.1	Topsoil	2.4	< 0.01	< 0.01	< 0.01	< 0.01	< 0.03	< 0.03	< 0.01	< 1.5	< 3.4
TP204	0.8	Cohesive Glacial Deposits	1.5	< 0.01	< 0.01	< 0.01	< 0.01	< 0.03	< 0.03	< 0.01	< 1.5	< 3.4
TP205	0.1	Topsoil	2.2	< 0.01	< 0.01	< 0.01	< 0.01	< 0.03	< 0.03	< 0.01	< 1.5	< 3.4

KEY

36	Parameter tested for and found to be in excess of Tier 1 concentration
179	Parameter tested for and found to be > 5 x Tier 1 concentration
12	Parameter tested for but not found to be in excess of Tier 1 concentration

TPH Assessment (Step 3 - Consideration of cumulative effects).

Expl Hole	Depth (m)	Material	Concentrations in mg/kg. Results are quoted to 1 decimal place if <10, and whole numbers if >10. Trigger Level Concentrations are shown in **BLUE** and assume a **residential with gardens with home grown produce and 1% SOM**.													Hazard Index
			Aliphatic							Aromatic							
			C5-C6	C6-C8	C8-C10	C10-C12	C12-C16	C16-C21	C21-C35	C5-C7	C7-C8	C8-C10	C10-C12	C12-C16	C16-C21	C21-C35	
			42	100	27	130	1100	65000	65000	70	130	34	74	140	260	1100	
TP201	0.1	Topsoil	< 0.01	< 0.01	< 0.01	< 1.5	< 1.2	< 1.5	< 3.4	< 0.01	< 0.01	< 0.01	< 0.9	< 0.5	< 0.6	< 1.4	0
TP202	0.1	Topsoil	< 0.01	< 0.01	< 0.01	< 1.5	< 1.2	< 1.5	< 3.4	< 0.01	< 0.01	< 0.01	< 0.9	< 0.5	< 0.6	< 1.4	0
TP202	0.5	Cohesive Glacial Deposits	< 0.01	< 0.01	< 0.01	< 1.5	< 1.2	< 1.5	< 3.4	< 0.01	< 0.01	< 0.01	< 0.9	< 0.5	< 0.6	< 1.4	0
TP203	0.1	Topsoil	< 0.01	< 0.01	< 0.01	< 1.5	< 1.2	< 1.5	< 3.4	< 0.01	< 0.01	< 0.01	< 0.9	< 0.5	< 0.6	< 1.4	0
TP203	0.6	Cohesive Glacial Deposits	< 0.01	< 0.01	< 0.01	< 1.5	< 1.2	< 1.5	< 3.4	< 0.01	< 0.01	< 0.01	< 0.9	< 0.5	< 0.6	< 1.4	0
TP204	0.1	Topsoil	< 0.01	< 0.01	< 0.01	< 1.5	< 1.2	< 1.5	< 3.4	< 0.01	< 0.01	< 0.01	< 0.9	< 0.5	< 0.6	< 1.4	0
TP204	0.8	Cohesive Glacial Deposits	< 0.01	< 0.01	< 0.01	< 1.5	< 1.2	< 1.5	< 3.4	< 0.01	< 0.01	< 0.01	< 0.9	< 0.5	< 0.6	< 1.4	0
TP205	0.1	Topsoil	< 0.01	< 0.01	< 0.01	< 1.5	< 1.2	< 1.5	< 3.4	< 0.01	< 0.01	< 0.01	< 0.9	< 0.5	< 0.6	< 1.4	0

Key

123	Actual CLEA derived value(mg/kg)

Soil Screening Values used by Calabrian

In March 2002 DEFRA and the Environment Agency published a series of technical papers (R&D Publications CLR 7, 8, 9 and 10) outlining the UK approach to the assessment of risk to human health from land contamination. In 2008 CLR 7, 9 and 10 and all corresponding SGV and Tox reports were withdrawn and superseded by new guidance including:

- Professional Guidance: Comparing Soil Contamination Data with a Critical Concentration- CL:AIRE, 2020
- Evaluation of models for predicting plant uptake of chemicals from soil - Science Report – SC050021/SR
- Human health toxicological assessment of contaminants in soil - Science Report: SC050021/SR2
- Updated technical background to the CLEA model - Science Report: SC050021/SR3
- CLEA Software (Version 1.05) Handbook Science report: SC050021/SR4
- Compilation of data for priority organic pollutants for derivation of Soil Guideline Values - Science Report: SC050021/SR7

The approach set out in these documents represents current scientific knowledge and thinking; and includes the Contaminated Land Exposure Model (CLEAv1.06). The Environment Agency are in the process of using this updated approach to regenerate a selection of Soil Guideline Values (SGVs).

CLEA SGVs were derived for standard land use scenarios predominantly in the context of Part IIA, using a conceptual site model (CSM) defined in SR3. Calabrian have incorporated amendments to the CSM used to derive SGVs that more accurately reflect redevelopment within the planning regime; consequently, Calabrian have not necessarily adopted any published SGV as a screening value.

The CLEA conceptual site model assumes a source located in a sandy loam, with 6% soil organic matter (SOM) - equivalent to 3.5% total organic carbon (TOC). Calabrian consider it reasonable to adopt the CLEA default TOC for made ground. However, where the average TOC value for a particular soil type is significantly lower than the 3.5%, Calabrian adopt refined Screening Values.

In March 2014 DEFRA published Category 4 Screening Levels (C4SLs) for six substances (arsenic, cadmium, chromium IV, lead, benzene & benzo(a)pyrene) for four generic land-uses comprising residential, commercial, allotments and public open space.

The methodology for deriving both the previous Soil Guideline Values and the new Category 4 Screening Levels is based on the Environment Agency's Contaminated Land Exposure Assessment (CLEA) methodology. Development of Category 4 Screening Levels has been achieved by modifying the toxicological and\or exposure parameters used within CLEA (while maintaining current exposure parameters).

The Part 2A Statutory Guidance was developed on the basis that Category 4 Screening Levels could be used under the planning regime. However, policy responsibility for the National Planning Policy Framework falls to the Department for Communities and Local Government. Defra anticipate that, where they exist, C4SLs will be used as generic screening criteria, and Calabrian consider C4SLs to be suitable for use as Tier 1 Screening Values. Calabrian have discussed this matter with both NHBC and YAHPAC (collection of Yorkshire & Humberside local authorities) and received confirmation that they are satisfied with this approach.

In general Calabrian have adopted the use of the LQM/CIEH Suitable 4 Use Levels (S4ULs) as Tier 1 Screening Criteria. Copyright Land Quality Management Limited reproduced with permission; Publication Number S4UL3373. All rights reversed.

Calabrian have adopted Tier 1 Screening Criteria for five different CSMs (Scenarios); these are:

- A - Residential with homegrown produce.
- B - Residential without homegrown produce.
- C – Residential apartments with landscaping/public open space (POS).
- D - Commercial/industrial with landscaping.
- E - Dedicated sports grounds or parkland/ public open space (POS).

The **exposure** pathways considered for each scenario are detailed in the Table below.

Scenario	Land use	Pathways	Justification
A	Residential with homegrown produce, but no cover (or only up to 300mm)	• Direct ingestion of soil • Dermal contact • Consumption of vegetables and soil attached to vegetables • Inhalation of indoor vapours and dust • Inhalation of outdoor vapours and dust	Minimal cover – insufficient to break any pathways therefore all exposure pathways are relevant
B	Residential apartments with landscaped areas and minimum 300mm cover	• Direct ingestion of soil • Dermal contact • Inhalation of indoor vapours and dust • Inhalation of outdoor vapours and dust	All pathways applicable due to possible exposure from landscaped areas. However consumption of home grown produce not included as unlikely to be grown in landscaped areas. Where vegetables are to be grown site specific QRA may be required.
C	Grassed area or play park in close proximity to housing. Assumes minimum 300mm cover (growing medium).	• Direct ingestion of soil • Dermal contact • Inhalation of outdoor vapours and dust	All pathways applicable due to possible exposure from landscaped areas. Assumes an area where some children play regularly and others less.
D	Commercial/ industrial with landscaped areas no cover	• Direct ingestion of soil • Dermal contact • Inhalation of indoor vapours and dust • Inhalation of outdoor vapours and dust	All pathways applicable due to possible exposure from landscaped areas. Assumed the commercial development consists of offices to provide a conservative assessment.
E	Dedicated sports grounds. Assumes minimum 300mm cover (growing medium).	• Direct ingestion of soil • Dermal contact • Inhalation of outdoor vapours and dust	All pathways applicable due to possible exposure from landscaped areas. Assumes an where exposure only occurs to players and grounds staff

The Soil Screening Values referred to in this document are **not** intended to be used when considering potential risks associated with:

- Existing land uses in the context of Part IIA of the Environment Protection Act 1990;
- end uses such as allotments, sports fields, children's playgrounds, care homes, hospitals etc; and
- controlled waters.

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With respect to **inorganic** determinands, Calabrian derived Tier 1 values for the four Scenarios A to E are presented below:

Inorganic Contaminant	Source	C4SL*	LQM/ CIEH S4UL	Tier 1 Assessment Criteria (mg/kg) for Scenarios A to E					Comments/Notes
				A	B	C	D	E	
As	CLEA	37	37	37	40	79	640	170	LQM/CIEH S4UL adopted.
Cd	CLEA	26	11	11	85	120	190	532	LQM/CIEH S4UL adopted.
Cr	CLEA		910	910	910	1,500	8,600	33,000	LQM/CIEH S4UL adopted. Assumes Cr is CrIII.
Pb	CLEA	200		200	310	630	2,330	1,300	C4SLs adopted.
Ni	CLEA		130	130	180	230	980	3,400	LQM/CIEH S4UL. Assessment of health risk only.
				60 (pH<6), 75 (pH6-7), 110 (pH>7)					*Phytotoxicity.*
Se	CLEA		250	250	430	1,100	12,000	1,800	LQM/CIEH S4UL adopted.
Hg	CLEA		40	40	56	120	11,000	240	LQM/CIEH S4UL. Assumes in an inorganic compound.
B	Drinking		290	290	11,000	21,000	240,000	46,000	LQM/CIEH S4UL adopted.
Cu	EPA		2,400	2,400	7100	12,000	68,000	44,000	LQM/CIEH S4UL adopted. Assessment of health risk only.
				100 (pH<6), 135 (pH6-7), 200 (pH>7)					*Phytotoxicity.*
Zn	DoE		3,700	3,700	40,000	81,000	73,000	170,000	LQM/CIEH S4UL adopted. Assessment of health risk only.
				200 (300 if pH >7.0)					Phytotoxicity.
Cyanide	CLEA			527	530		14,000		SSV

* *For a residential end use*

With respect to **organic** determinands, Calabrian derived Tier 1 values (assuming 6% SOM) for the four Scenarios A to E are presented below:

Organic Contaminant (all sourced via CLEA)	Tier 1 Assessment Criteria (mg/kg) for Scenarios A to E					Comments/Notes
	A	B	C	D	E	
Benzene	0.37	1.4	73	90	110	LQM/CIEH S4UL adopted.
Toluene	660	3900	56,000	180,000^{VAP} (4,360)	100,000^{vap} (4,360)	LQM/CIEH S4UL adopted.
Ethyl Benzene	260	440	25,000	27,000^{VAP} (2,840)	27,000^{VAP} (2,840)	LQM/CIEH S4UL adopted.
Xylenes	310	430	43,000	30,000^{sol} (3,170)	31,000^{sol} (3,170)	LQM/CIEH S4UL adopted (assumes worst-case p-xylene).
Phenol	412	557	557	38,700		
PCBs	1.7	1.8	1.8	1.8		Based on toxicity of EC7.
Benzo(a)pyrene	3.0	3.2	5.7	36	13	LQM/CIEH S4UL adopted.
Naphthalene	13	13	4,900	1,100	3,000	LQM/CIEH S4UL adopted.
Gasoline Range Organics#	42	42	1,000	1,000	1,000	See **3-step** assessment of TPH below.
Diesel Range Organics#	130	130	5,000	5,000	1,000	
Lubricating Range Org#	1,000	1,000	5,000	5,000	1,000	

* *For a residential end use*

LQM/CIEH S4UL adopted, 6% SOM

Note: **PAH** cannot be assessed as a single "total" value, as each individual PAH compound has different toxicity and mobility in the environment. Speciated analysis is required to determine the concentrations of the various compounds, most notably the key PAHs: Benzo(a)Pyrene (considered the most toxic of the PAHs); and Naphthalene (the most mobile and volatile of the PAHs).

Similarly, **TPH** cannot be assessed as a single "total" value, and reference has been made to the Environment Agency's document P5-080/TR3, "*The UK approach for evaluating human health risks from petroleum hydrocarbons in soils*". This document supports the assumptions and recommendations made by the US Total Petroleum Hydrocarbons Criteria Working Group (TPHCWG). The TPHCWG have broken down "TPH" into thirteen representative constituent fractions or "EC Bandings". The TPHCWG have derived a series of physiochemical and toxicological parameters for each of the thirteen bandings. The significance of speciated TPH results can be assessed by following the 3 steps outlined in the below.

Step	Result	Action
1. Consider indicator compounds: Are BTEX, Naphthalene, Benzo(a)pyrene above their respective Tier 1 values?	Yes	Remediation or DQRA required
	No	Proceed to Step 2
2. Consider individual TPH fractions: are they above respective screening values?	Yes	Remediation or DQRA required
	No	Proceed to Step 3
3. Assess Cumulative effects: Is the calculated Hazard Index for each source >1	Yes	Remediation or DQRA required
	No	TPH compounds pose no significant risk

Step 1 *- Assessing indicator compounds*

TPH fraction Indicator compound	End use specific screening value (mg/kg)			
	A: Residential with produce	B: Residential without produce	C: Residential with POS	D: Commercial\ Industrial
Benzene	0.37	1.4	1.4	90
Toluene	660	3900	3900	180,000^{VAP} (4,360)
Ethyl Benzene	260	440	440	27,000^{VAP} (2,840)
Xylenes	310	430	430	30,000^{sol} (3,170)
Naphthalene	13	13	13	1,100

Step 2 *- Assessing individual TPH fractions*

TPH fraction		End use specific screening value S4UL (mg/kg) assuming 1% SOM				
		A	B	C	D	E
Aliphatic 5-6	GRO	42	42	5,000^	5,000^	5,000^
Aliphatic 6-8	GRO	100	100			
Aliphatic 8-10	GRO	27	27			
Aliphatic 10-12	DRO	130	130			
Aliphatic 12-16	DRO	1,100	1,100			
Aliphatic 16-21	DRO	5,000^	5,000^			
Aliphatic 21-35	LRO					
Aromatic 5-7	GRO	70	370			
Aromatic 7-8	GRO	130	860	1,000^	1,000^	1,000^
Aromatic 8-10	GRO	34	47	5,000^	5,000^	5,000^
Aromatic 10-12	DRO	74	250			
Aromatic 12-16	DRO	140	1,800			
Aromatic 16-21	DRO	260	1,900	3,800		
Aromatic 21-35	LRO	1,100	1,900			

^ Calculated Screening Value close to soil saturation limit, screening value selected by Calabrian considering visual and olfactory impacts.

S4UL LQM/CIEH S4UL adopted, 1% SOM

Step 3 *- Assessing Cumulative Effects*

$$HI = \sum_{F_i=1}^{16} HQ\ F_i = \frac{Measured\ concentration\ F_i\ (mg\,kg^{-1})}{SGV\ F_i\ (mg\,kg^{-1})}$$

where HI = Hazard Index
HQ = Hazard Quotient
F_i = Fraction $_i$
SGV = Soil Guideline Value

With respect to the interpretation of the **calorific values**, at present there are no accepted methods to assess whether a sample is combustible and under what circumstances it might smoulder. Some guidance is given in ICRCL Note 61/84 "Notes on the fire hazards of contaminated land" which states that:

"In general … it seems likely that materials whose CV's exceed 10MJ/kg are almost certainly combustible, while those with values below 2MJ/kg are unlikely to burn".

Tier 1 **groundwater** risk assessments are undertaken by comparing leachate or groundwater concentrations with the appropriate water quality standard. Tier 1 Screening Values have been discussed with the Environment Agency, and typically those in **bold** below are adopted.

Analyte	Source of Tier 1 Screening Value (µg/l)			
	Surface Water (Abstraction for Drinking) 1996	Water Supply Regulations. 2000	Water Framework Directive	Environment Agency Advice
Arsenic	50	10	**50**	
Selenium	10	**10**		
Cadmium	5	5	**1.5**	
Chromium	50	50	**32**	
Copper	50	2,000	**28**	
Lead	50	10	**7.2**	
Nickel		20	**20**	
Zinc	3,000		**125**	
Boron		**1,000**		
Mercury	1	1	**0.05**	
Polyromantic Hydrocarbons		0.01~	**0.002#**	
Petroleum Hydrocarbons				10
1,1,1-Trichloroethane			100	
1,1 Dichloroethane				100
1,2-Dichloroethane		3	10	
1,1-Dichloroethene				100
Benzene		1	10	
Ethylbenzene				10
Tetrachloroethene		10	10	
Toluene			50	
Trichloroethene		10	10	
Vinyl Chloride		0.5		
Trichloromethane			2.5	
Xylenes			30	
Chloroethane				**100**

~ sum of benzo(g,h,i)perylene + indeno(1,2,3-cd)pyrene

sum of Benzo(b)fluoranthene + Benzo(k)fluoranthene + Benzo(g,h,i)perylene + Indeno(1,2,3-cd)pyrene

Possible Action in event of Tier 1 exceedance

Should any of the Tier 1 criteria detailed above be exceeded, then three potential courses of action are available. (The first is only applicable in terms of human health, but the second and third could also be applied to groundwater or landfill gas).

1. Undertake further statistical analysis following the approach set out in "*Professional Guidance: Comparing Soil Contamination Data with a Critical Concentration- CL:AIRE, 2020*" in order to determine whether contaminant concentrations of inorganic contaminants within soil\fill actually present a risk (only applicable to assessing the risk to human health).
2. Carry out a more detailed quantitative risk assessment in order to determine whether contamination risks actually exist.
3. Based on a qualitative risk assessment, advocate an appropriate level of remediation to "break" the pollutant linkage - for example the removal of the contaminated materials or the provision of a clean cover.

Prior to undertaking any statistical analysis the issue of the **averaging area** requires further consideration. The CL:AIRE\CIEH document still refers to CLR 7, which suggests averaging area should reflect receptor behaviour and therefore might be a single garden, or an open area used by the local community as a play area. This approach to averaging areas is considered applicable within the context of Part IIA of the Environmental Protection Act (EPA) 1990, in terms of an existing residential development.

However, Calabrian consider the concept of a single garden as an averaging area to be inappropriate with respect to brownfield redevelopment, which is regulated by the planning regime. In this context, contamination across the entire site needs to be characterised by reference to the Conceptual Site Model. Consequently, Calabrian gather and analyse sample results by fill type, and\or by former use in a given sub-area of the site, before undertaking statistical analysis; ie the averaging area is associated with the extent of a particular fill type, or an area affected by spillage\leakage.

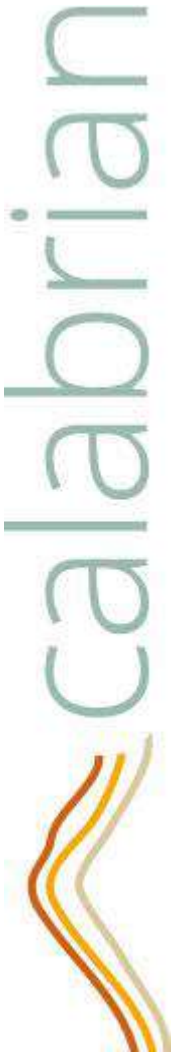
In terms of brownfield redevelopment, this is considered a more appropriate methodology which provides a more representative sample population for statistical analysis. As such the entire site is considered in terms of the proposed end use, be this residential with, or without gardens.

Analysis by soil\fill type is appropriate for essentially immobile contaminants associated with a particular fill type, for example arsenic in colliery spoil, metals in ash & clinker, sulphate in plaster-rich demolition rubble etc.

Analysis by former use is appropriate where more mobile contaminants have entered the ground, for example diesel associated with leakage from a former fuel tank, downward migration of leachable metals through granular materials, various soluble contaminants present in a wastewater leaking into the ground via a fractured sewer etc. In these circumstances, it may be appropriate to undertake statistical analysis of sample results from a variety of different soil\fill types. However, consideration would have to be given to factors such as porosity which might influence impregnation of a mobile contaminant into the soil mass; ie contamination would normally be more pervasive and significant in granular soils than cohesive soils.

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APPENDIX A COMMISSION



7322/002/RJH/rjh

3rd October 2024

Mrs S Rose
LNT Care Developments
Helios 47
Leeds
West Yorkshire
LS25 2DY

Dear Sam

Haverhill, East Anglia, CB9 0LL – Fee proposal

Please find enclosed our fee proposal for undertaking a site investigation on the above land in general accordance with your standard brief.

Your drawing suggests that the site consists of a single parcel of land with a plan area of approximately 0.63 hectares. The site currently comprises open roughly vegetated land within an ongoing wider residential development.

Your proposed layout referenced CB9 0LL-F-04 and dated 10th November 2023 indicates a two-storey residential care home development with associated gardens/landscaping, access road and car park.

We have been provided with copies of the following report that we have briefly reviewed:

1. Land at Haverhill, Suffolk. Geo-Environmental Phase 1 Desk Study. Report prepared by Brookbanks Consulting Limited on behalf of Hallam Land Management and Mrs Pelly. Report referenced 10173/DS/01, dated 2nd February 2016.
2. Phase I Review & Strategic Phase II Geo-Environmental Assessment. Land at Great Wilsey Farm, Haverhill, Suffolk, CB9 0LL. Report prepared by GEG Limited on behalf of Hallam Land Management and Mrs Pelly. Report referenced GEG-14-366/PI_PII, dated 13th November 2017.

A brief review of our archives and publicly available data suggests the site:

- The site appears to have remained undeveloped throughout its history;
- during the 2017 investigation TP08, and TP108 were excavated on the site and found topsoil overlying firm becoming very stiff gravelly clay of the Lowestoft Formation;
- infiltration testing was undertaken at locations IT04, IT04, IT07 on or close to the site. These tests determined that soakaways would not provide a suitable means of surface water disposal due to very low infiltration within clay deposits;
- gas protection measures are not required; and;
- soils on site appear to be ‘clean’.

Our site investigation proposal allows for the following works:

Phase 1 Desk Study

Environmental search data and historical maps (obtained from Landmark) will be reviewed in order to determine whether any past land uses have had any effect on the proposed development. In addition, published geological plans of the area will be examined. We will also visit site to undertake a walkover survey.

Preliminary and detailed unexploded ordnance (UXO) risk assessments are advocated as good practice by industry guidance such as CIRIA C681 'Unexploded Ordnance (UXO), a guide for the construction industry'. An initial UXO threat assessment has been undertaken using the ZeticaUXO risk map. The site is located in a low-risk area meaning that there is no greater probability of encountering UXO than anywhere else in the UK; on this basis further assessment is not advocated.

Fieldwork

We have allowed for one day's trial pitting (around five trial pits). All trial pits will be supervised and logged by an experienced geoenvironmental engineer.

Based on anticipated ground, soakaway tests are considered highly unlikely to yield satisfactory results, but they would remove any ambiguity with respect to planning queries. We have allowed for soakaway testing within two trial pits but not for the installation of groundwater monitoring wells as this would be an unnecessary cost.

Given the potential for excavation instability, we have allowed for the import of gravel (20mm, single size) to site to fill the pits and prevent collapse during testing. We will leave stone at least 500mm below ground level, so that the pits can be reinstated with topsoil. However, we will have to 'lose' the surplus subsoil arisings somewhere on site; probably close to a boundary.

Representative soil samples of natural and man-made ground, including any contaminated samples, will be taken during the works. In-situ shear strengths of any cohesive soils encountered will be determined by the use of a hand-held shear vane.

We will make every effort to compact arisings and 'sweep' them over each pit. However, you should be aware that on completion of the investigation, "graves" of spoil (each about 3m long by 1m wide) unsuitable for trafficking, will be left up to 400mm proud at each trial pit location. At this stage, no allowance has been made for any further reinstatement such as removal of excess arisings, replacement of turf.

This site is greenfield and therefore highly unlikely to be underlain by made ground. Furthermore, we are not aware of any other sources of hazardous gas (shallow mine workings, landfill sites etc) within influencing distance of the site. Consequently, at this stage, we have not allowed for undertaking a hazardous gas risk assessment, but we will review the need for this in light of desk study data and the ground conditions actually encountered.

This proposal has been put together without a visit to the site and it has been assumed that access is available for a JCB-type or 5-tonne tracked excavator along with a road-going water tanker.

Soils Testing: This will comprise routine geotechnical soils analysis, typical of that normally required for greenfield sites. Although no allowance has been made for in-situ or laboratory CBR testing, CBR values will be estimated from the strata descriptions and classification test results, where appropriate (ie. if no significant regrading or reworking of made ground is proposed).

Appropriate chemical analyses, based on our knowledge of the site's history, have been allowed for; this will comprise eight samples for a suite including asbestos, heavy metals, TPH and PAH. In the event that ground contamination is more significant or different to that anticipated, it might be necessary to carry out additional chemical testing.

Waste Acceptance Criteria (WAC) analysis will be undertaken on three samples of soils that are likely to require removal from site to landfill.

Reporting & Timescales

In order to provide you with sufficient information to enable assessment of abnormal costs at the earliest opportunity we will issue a concise overview report within five days of fieldwork completion.

On completion of the desk study, fieldwork and laboratory testing a comprehensive, factual, and interpretative report will be issued. This will contain detailed engineering records, laboratory test results, copies of all relevant correspondence and drawings of the site. The report will include qualitative risk assessment with respect to both controlled waters and human health.

The report will also provide technically feasible options for redevelopment of the site with a care home, including consideration of foundation types and treatment\removal of contamination.

Fieldwork could be commenced within around four weeks of receipt of your written instruction to proceed. Our comprehensive geoenvironmental appraisal report will be issued within four weeks of fieldwork completion.

A copy of the final report will be issued to the relevant regulatory authorities on receipt of written instruction from yourselves.

Invoicing: The attached proposal provides a breakdown of the costs associated with this project. This breakdown is for information only and the proposal can be regarded as a lump sum price of £**,*** plus VAT. Variation will only occur in the event that a given item is not undertaken or that substantial additional works are recommended, in which case we will inform you immediately, provide costs for the required works, and seek your prior consent.

Our proposal allows for submission of the report to the Local Authority and for submission of a single piece of subsequent correspondence with each regulator to address any queries they may have. Any further meetings, correspondence etc, would be chargeable.

The investigation should be considered to comprise two elements. Each will be invoiced on completion of the relevant report as defined below:

1. Items A to E within five days of fieldwork completion, with exploratory hole logs and an interim letter report outlining our initial findings and Preliminary Recommendations Report; and,
2. Items F to I on issue of the comprehensive geoenvironmental appraisal report.

Health, Safety & Welfare

The works outlined above will be carried out in accordance with Calabrian task- and site- specific Risk Assessments and Method Statements.

Details of welfare will be included within the Method Statements.

A detailed utilities survey including ground penetrating radar is required in order to protect operatives from the hazards associated with striking buried services and avoid potentially substantial disruption\repair costs. We assume that this survey will be available ahead of our proposed fieldwork. We will make every effort not to damage any services (including review of utility plans and use of a CAT detector).

Terms & Conditions

This work will be undertaken in accordance with our Standard Terms and Conditions, a copy of which are enclosed.

Should you require any further information, please contact the undersigned.

Yours sincerely

Richard Hey - Managing Director
for and on behalf of
CALABRIAN LIMITED

enc

Calabrian Limited
9 Millwood | Ingleton | LA6 3HY | Tel: 07957 335307
email: info@calabrian.co.uk

Terms and Conditions for the Appointment of Calabrian Limited

1 DEFINITIONS AND INTERPRETATION

1.1 In this Agreement, unless the context otherwise requires, the following words and expressions have the following meanings:

"Agreement" shall mean these Terms (entitled "Terms and Conditions for the Appointment of Calabrian Limited"), the Proposal, any document recording the Client's unequivocal acceptance of the Proposal and any other documents or parts of other documents expressly referred to in any of the foregoing:

"Client" shall mean the party for whom the Services are being provided by Calabrian;

"Documents" shall mean all documents of any kind and includes plans, drawings, reports, programmes, specifications, Bills of Quantities, calculations, letters, e-mails, faxes, memoranda, films, and photographs (including negatives), or any other form of record prepared or provided or received by, or on behalf of Calabrian, and whether in paper form or stored electronically or on disk, or otherwise;

"Calabrian" shall mean Calabrian Limited whose registered office is at Spring Royd, Clapham Road, Austwick, Lancaster, LA2 8BE.

"Intellectual Property" includes all rights to, and any interests in, any patents, designs, trademarks,

right, know-how, trade secrets and any other proprietary rights or forms of intellectual property (protectable by registration or not) in respect of any technology, concept, idea, data, programme, or other software (including source and object codes), specification, plan, drawing, schedule, minutes, correspondence, scheme, programme, design, system, process logo, mark, style, or other matter or thing, existing or conceived, used, developed, or produced by any person;

"Parties" shall mean the Client and Calabrian

"Project" shall mean the project described in the Proposal and any enquiry from the Client on which Calabrian has based its Proposal;

"Proposal" means the offer document prepared by Calabrian in response to an enquiry or otherwise, in connection with the proposed provision of the Services;

"Services" means the work and services relating to the Project to be provided by Calabrian pursuant to the Agreement and as set out in the Proposal and shall include any additions or amendments thereto made in accordance with these Terms;

"Terms" means these terms entitled "Calabrian Terms of Appointment";

1.2 Words importing the singular only shall also include the plural and vice versa, where the context requires.

1.3 Words importing persons or parties shall include firms, corporations and any organisation having legal capacity and vice versa, where the context requires; and words importing a particular gender include all genders.

1.4 The sub-headings to the clauses of these Terms are for convenience only and shall not affect the construction of the Agreement.

1.5 A reference to legislation includes that legislation as from time to time amended, re-enacted or substituted and any Orders in Council, orders, rules, regulations, schemes, warrants, by-laws, directives or codes of practice issued under any such legislation.

1.6 In the event of conflict between the documents forming part of the Agreement, the Proposal shall prevail, followed by the Terms.

2 APPOINTMENT

2.1 The Client agrees to engage Calabrian and Calabrian agrees to provide the Services in accordance with the provisions of the Agreement.

3 OBLIGATIONS OF CALABRIAN

3.1 Calabrian shall perform the Services using the reasonable standard of skill and care normally exercised by similar professional Environmental firms in performing similar services under similar conditions.

3.2 Calabrian shall perform the Services in accordance with all relevant environmental and safety legislation at the time of undertaking the project.

4 OBLIGATIONS OF THE CLIENT

4.1 Throughout the period of this Agreement the Client shall afford to Calabrian or procure the affording to Calabrian of access to any site where access is required for the performance of the Services.

4.2 The Client accepts responsibility for ensuring that Calabrian is notified in writing of all special site and/or plant conditions, including without prejudice to the generality of the foregoing, the existence and precise location of all underground services, cables, pipes, drains or underground buildings, constructions or any hazards known or suspected by the Client, which the Client shall clearly mark on the ground or identify on accurate location plans supplied to Calabrian prior to the commencement of the Services. The Client shall also inform Calabrian in writing of any relevant operating procedures including any site safe operating procedures and any other regulations relevant to the carrying out of the Services. The Client shall indemnify Calabrian against all costs, claims, demands and expenses arising as a result of any non-disclosure in this respect, including but not limited to indemnification against any action brought by the owner of the land or otherwise.

4.3 If the Client discovers any conflict, defect or other fault in the information or designs provided by Calabrian pursuant to the Agreement, he will advise Calabrian in writing of such defect, conflict or other fault and Calabrian shall have the right to rectify the same or where necessary, to design the solution for rectification of any works carried out by others pursuant the conflicting, defective or in any other way faulty information or designs. Calabrian shall indemnify the client against all costs claims demands and expenses arising as a result of any conflict, defect, or other fault in this respect.

5 INTELLECTUAL PROPERTY

5.1 The copyright in all Intellectual Property prepared by or on behalf of Calabrian in connection with the Project for delivery to the Client shall remain vested in Calabrian.

5.2 The Client shall have a non-exclusive licence to copy and use such Intellectual Property for purposes directly related to the Project. Such licence shall enable the Client to copy and use the Intellectual Property but solely for its own purposes in connection with the Project and such use shall not include any licence to reproduce any conceptual designs or professional opinions contained therein nor shall it include any license to amend any drawing, design or other Intellectual Property produced by Calabrian.

5.3 Should the Client wish to use such Intellectual Property in connection with any other works or for any other purpose not directly related to the Project or wish to pass any Intellectual Property to any third party, it must obtain the prior written consent of Calabrian. The giving of such consent shall be at the discretion of Calabrian and shall be upon such terms as may be required by Calabrian. Calabrian shall not be liable for the use by any person of such Intellectual Property for any purpose other than that for which the same were prepared by or on behalf of Calabrian.

5.4 Ownership of any proposals submitted to the Client that are not subsequently confirmed as part of the Services to be provided for the Client remain with Calabrian and such proposals must not be used as the basis for any future work undertaken by the Client or a third party and no liability can be accepted howsoever arising from such proposals.

5.5 In the event of the Client being in default of payment of any fees or other amounts due, Calabrian may suspend further use of the licence on that Project on giving 2 days' notice of the intention to do so. Use of the licence may be resumed on receipt of the outstanding amounts.

6 TITLE

6.1 Calabrian shall transfer only such title or rights in respect of the Documents as it has, and if any part is purchased from a third-party Calabrian shall transfer only such title or rights as that party had and has transferred to Calabrian.

6.2 Title in the Documents shall remain with and shall not pass to the Client until the amount due under the invoice(s) (including interest and costs) has been paid in full.

6.3 Until title passes, the Client shall hold the Documents as bailee for Calabrian and shall store or mark them so that they can at all times be identified as the property of Calabrian.

6.4 At any time before title passes (save and except where payment is not due), but only after prior consultation with the Client, Calabrian may without any liability to the Client repossess and use or sell all or any of part of the Documents and by doing so terminate the right of the Client to use, sell or otherwise deal in the Documents.

6.5 Calabrian may maintain an action for the price of the Documents notwithstanding that title in them has not passed to the Client.

7 CONFIDENTIALITY

7.1 Calabrian undertakes not to divulge or disclose to any third party without the written consent of the Client information which is designated confidential by the Client or which can reasonably be considered to be confidential and arises during the performance of the Services unless required to do so by law or necessary in the proper performance of its duties in relation to the Project, or in order to make full frank and proper disclosure to its insurers or intended insurers, or to obtain legal or accounting advice.

7.2 Subject to the above and to the advance prior written consent of the Client, Calabrian shall be permitted to use information related to the Services it provides in connection with the Project for the purposes of marketing its services and in proposals for work of a similar type.

8 THIRD PARTIES

8.1 The Agreement or any part thereof or any benefit or interest thereunder may not be assigned by the Client without the prior written consent of Calabrian. The giving of such consent shall be at the discretion of Calabrian and Calabrian will only agree to an assignment on its terms and in return for payment of a fee by the Client to Calabrian to cover Calabrian's legal and other costs associated with any assignment.

8.2 The Agreement shall not confer and shall not purport to confer on any third party any benefit or any right to enforce any term of this Agreement for the purposes of the Contracts (Rights of Third Parties) Act 1999 or otherwise.

8.3 Calabrian will consent to any reasonable request from the Client for Calabrian to enter a collateral warranty or provide a letter of reliance with/to a tenant, funder, or purchaser with regard to the Services provided under the Agreement. Calabrian will only enter a collateral warranty or provide a letter of reliance on its terms and in return for payment of a fee by the Client to Calabrian to cover Calabrian's legal and other costs associated with any collateral warranty or letter of reliance.

9 INSURANCE

9.1 Calabrian warrants to the Client that there is in force a policy of Professional Indemnity insurance covering its liabilities for negligence under this Agreement, with a limit of indemnity of £5,000,000 (FIVE MILLION POUNDS) any one Single Claim, Defence Costs in addition. This policy is annually renewable and whilst renewal is not automatic, Calabrian agrees to use reasonable endeavours to maintain such insurance at all times until six years from the date of the completion (or termination) of the Services under the Agreement, provided such insurance is available at commercially reasonable rates having regard, inter alia, to premiums required and policy terms obtainable.

9.2 If for any period such insurance is not available at commercially reasonable rates, Calabrian shall forthwith inform the Client and shall obtain in respect of such period such reduced level of Professional Indemnity insurance as is available and as would be fair and reasonable in the circumstances for Calabrian to obtain.

10 LIMITATIONS ON LIABILITY

10.1 Calabrian's liability under or in connection with the Agreement whether in contract, tort, negligence, breach of statutory duty or otherwise (other than in respect of personal injury or death) shall not exceed five million pounds any One Single claim.

10.2 No action or proceedings under or in respect of the Agreement whether in contract, tort, negligence, under statute or otherwise shall be commenced against Calabrian after the expiry of a period of six years from the date of the completion (or termination) of the Services under the Agreement.

10.3 Whilst Calabrian will scan all potential exploratory locations with a Cable Avoidance Tool, Calabrian shall not be liable for any damage to underground services, cables, pipes, drains or underground buildings, constructions and the like which were either not marked on site or for which accurate plans were not provided.

10.4 Calabrian shall not be liable for the cost of rectifying any defect, conflict or other fault in the information or designs provided by Calabrian or for the cost of designing a solution for and rectifying any subsequent works carried out by others pursuant to the conflicting, defective or in any other way faulty information or designs, unless Calabrian has been advised in writing of the same by the Client and has been given the opportunity to rectify the same or where necessary, to design the solution for rectification of any subsequent works carried out by others pursuant to the same. Calabrian shall indemnify the client against all costs claims demands and expenses arising as a result of any conflict, defect, or other fault in this respect.

11 PAYMENT

11.1 Invoices for services rendered will be submitted for payment in accordance with the Proposal.

11.2 The due date for payment is the date of the invoice and the final date for payment is 28 days from the date of the invoice.

11.3 If the Client disputes the amount included for payment in an invoice a written notice must be served on Calabrian by the Client not later than 14 days before the final date for payment. If no notice is given the amount due shall be the amount stated in the invoice.

11.4 In the event of failure on the part of the Client to pay any monies in accordance with the foregoing payment provisions, Calabrian will be entitled to charge interest on any monies owed to it by the Client, such interest to be at a rate of 8% above the base rate of a clearing bank from time to time calculated from the final date for payment to the date of actual payment on a compound basis.

12 DELAY

12.1 Calabrian will comply with any timescale agreed for completion of the Services unless delayed or prevented by circumstances beyond its reasonable control and in the event of any such circumstances arising Calabrian undertakes to complete the Services within a reasonable period but will not be liable to the Client for any delay as a result.

13 TERMINATION

13.1 The Agreement may be determined by either party in the event of the other making a composition or arrangement with its creditors, becoming bankrupt, or being a company, making a proposal for a voluntary arrangement for a composition of debts, or has a provisional liquidator appointed, or has a winding-up order made, or passes a resolution for voluntary winding-up (except for the purposes of a bona fide scheme of amalgamation or reconstruction), or has an administrator or an administrative receiver appointed to the whole or any part of its assets. Notice of determination must be given to the party which is insolvent by the other party.

13.2 If for any reason the performance of the Services by Calabrian is suspended for a period in excess of three calendar months then Calabrian shall be entitled to determine its appointment in respect of the Services by seven days written notice to the Client.

13.3 If the Client shall fail to pay in full any sum due under the terms of the Agreement by the final date for payment for that sum and no effective notice of intention to withhold payment has been issued, Calabrian may serve written notice on the Client demanding payment within 14 days of such notice. If the Client shall fail to comply with such notice, Calabrian shall be entitled to terminate its employment under the Agreement forthwith.

13.4 Any determination of the appointment of Calabrian howsoever caused shall be without prejudice to the right of Calabrian to require payment for all services performed up to the date of such determination including but not limited to payment of a fair and reasonable proportion of any figure identified in the Proposal or otherwise for fees in respect of a particular service which Calabrian has started, but not completed.

14 NOTICES

14.1 Any notice provided for in the Agreement shall be in writing and shall be deemed to be properly given if delivered by hand or sent by first class post to the address of the relevant party as may have been notified by each party to the other or, in the absence of notification, to the address of Calabrian set out above or to the registered address of the Client.

14.2 Such notice shall be deemed to have been received on the day of delivery if delivered by hand or on the second working day after the day of posting if sent by first class post.

15 ENTIRE AGREEMENT

15.1 The Agreement constitutes the complete and entire agreement between the Client and Calabrian with respect to the Services and supersedes any prior oral and/or written warranties, terms, conditions, communications, and representations, whether express or implied and any claim against Calabrian in respect of the Services can only be made in contract under the provisions of the Agreement and not otherwise under the law or tort or otherwise.

15.2 No amendments, modifications or variation of the Agreement shall be valid unless made in writing and agreed to by both the Client and Calabrian; such agreement must be recorded in writing by at least one of the Parties.

15.3 Calabrian will not be bound by any standard or printed terms or conditions furnished by the Client in any of its documents unless Calabrian specifically states in writing separately from such documents that it intends such terms and conditions to apply.

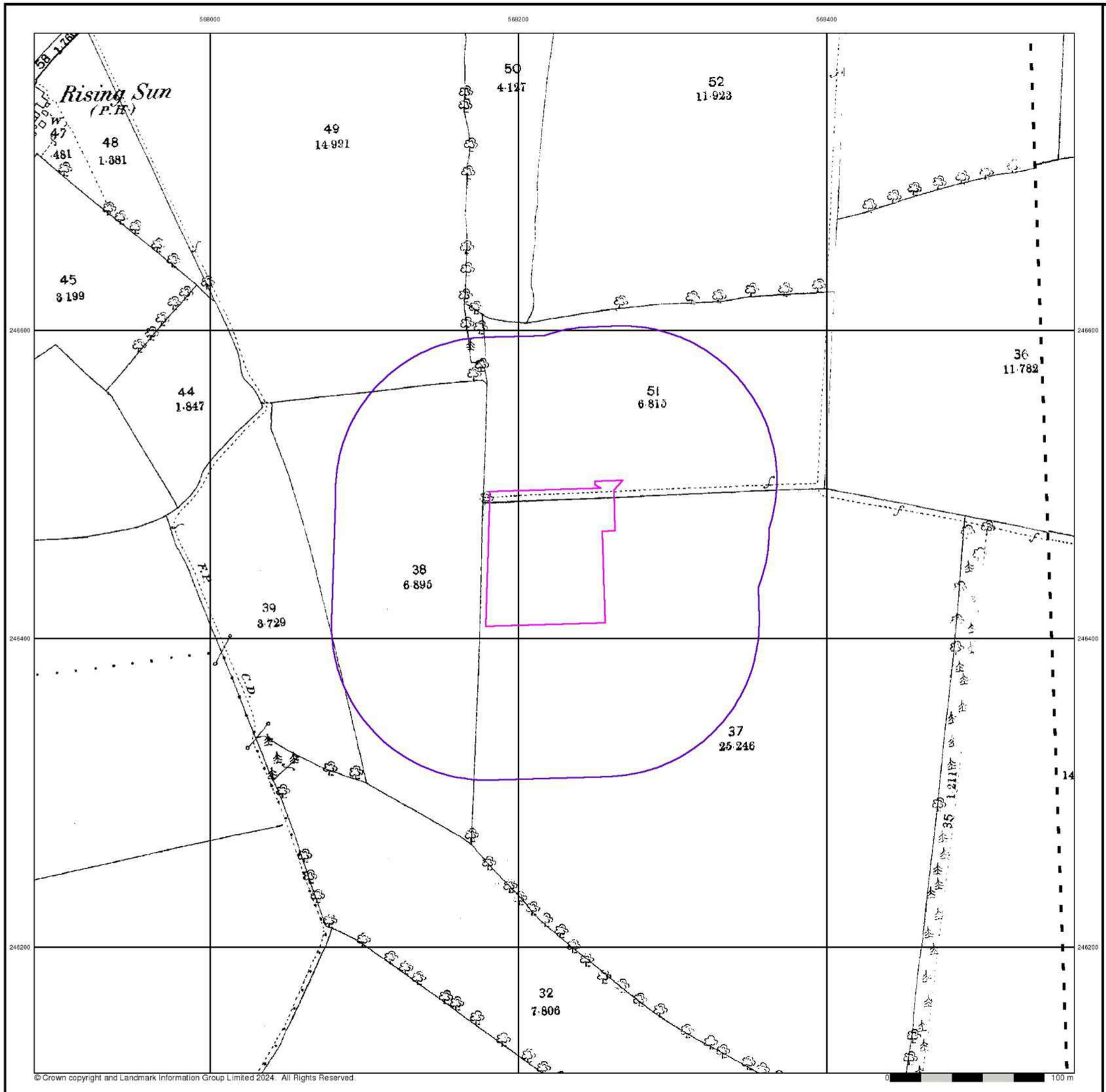
16 DISPUTES AND GOVERNING LAW

16.1 The Agreement shall be governed by and construed in accordance with English law and the Parties irrevocably and unconditionally submit to the jurisdiction of the English Courts.

16.2 Where the Housing Grants, Construction and Regeneration Act 1996 applies, any dispute between the Parties may be referred to adjudication in accordance with The Scheme for Construction Contracts Regulations 1998 or any amendment or modification thereof being in force at the time of the dispute, as applicable to England, Wales, Scotland, and Northern Ireland.

APPENDIX B HISTORICAL OS PLANS





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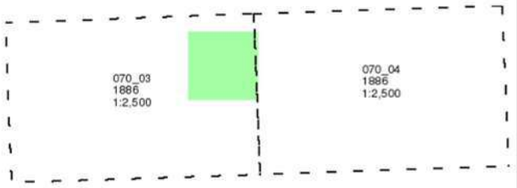
Suffolk

Published 1886

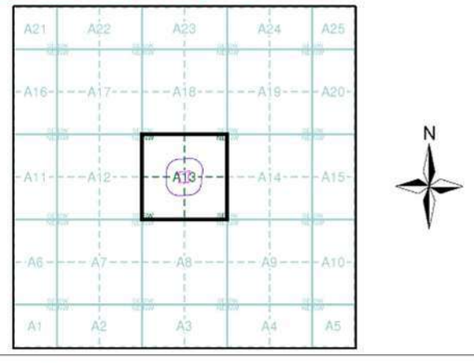
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)



Historical Map - Segment A13



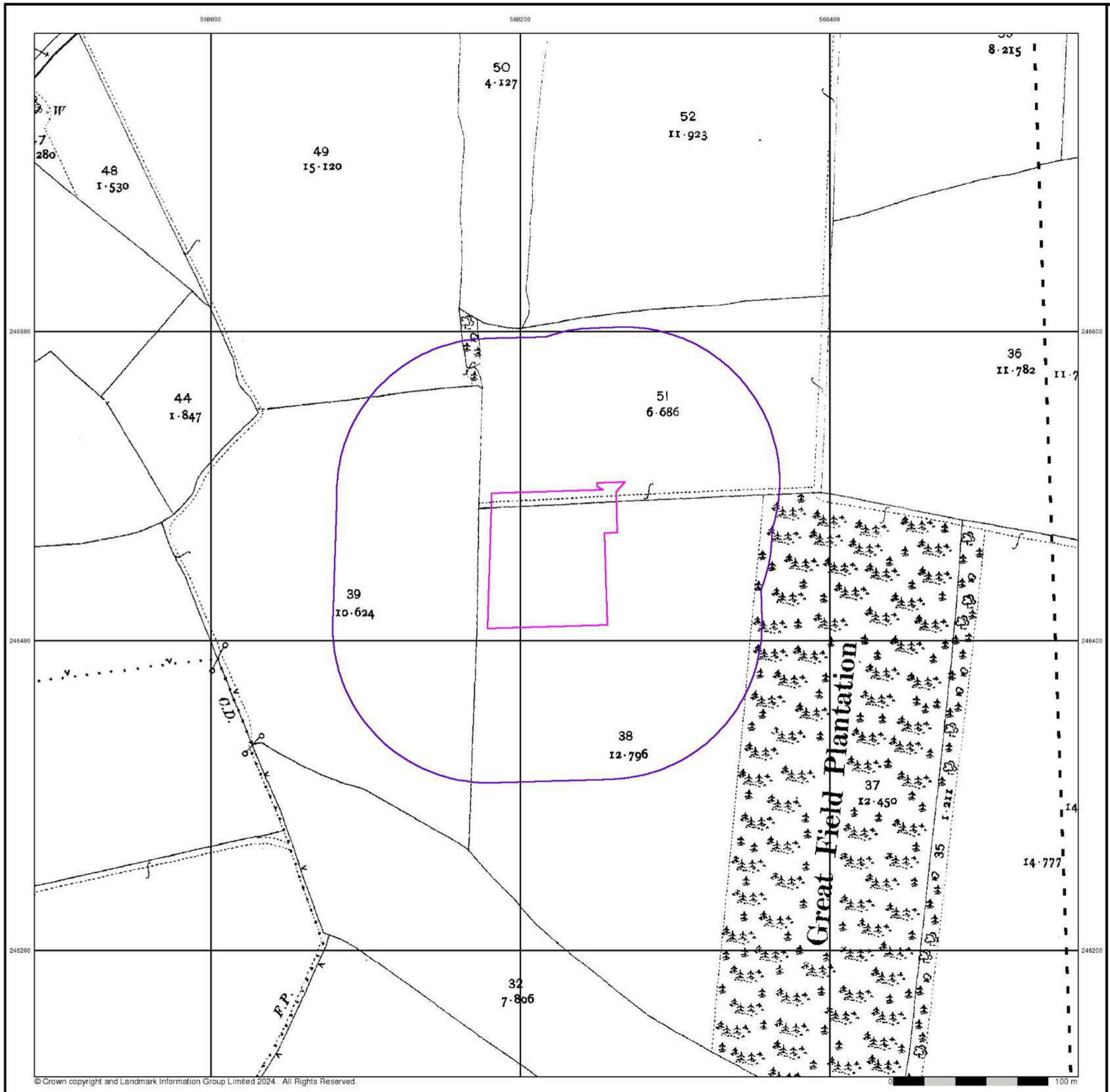
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Customer Ref:	7322
National Grid Reference:	568220, 246460
Slice:	A
Site Area (Ha):	0.69
Search Buffer (m):	100

Site Details

Site at 568223,246456

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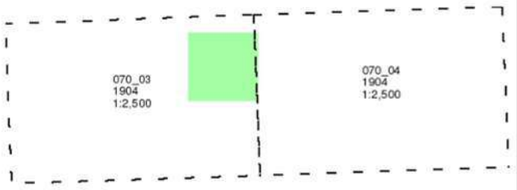
Suffolk

Published 1904

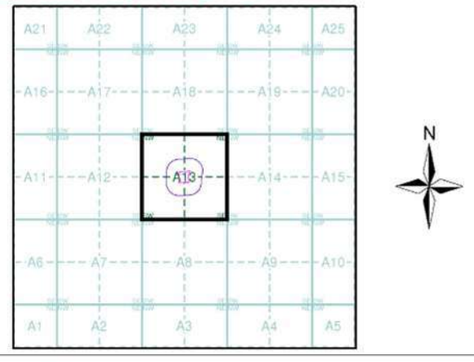
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)



Historical Map - Segment A13



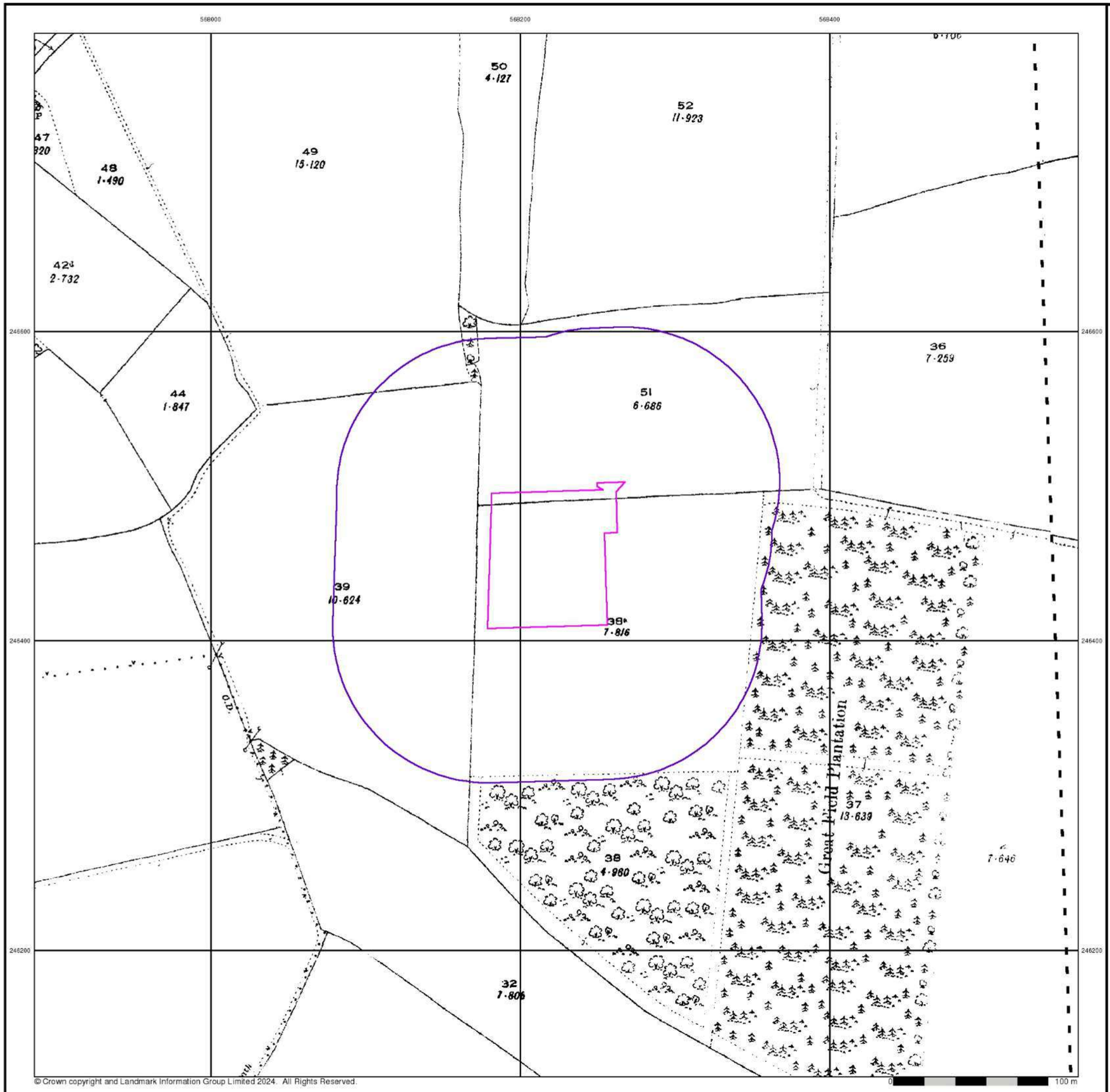
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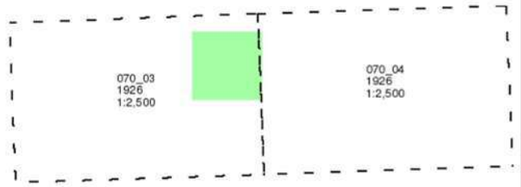
Suffolk

Published 1926

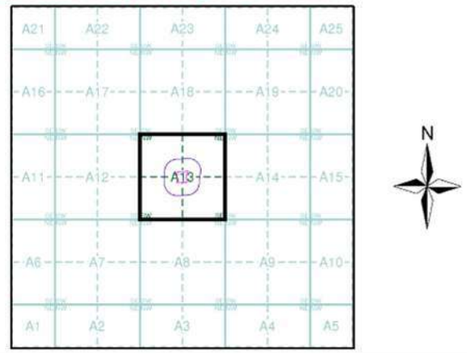
Source map scale - 1:2,500

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Map Name(s) and Date(s)



Historical Map - Segment A13

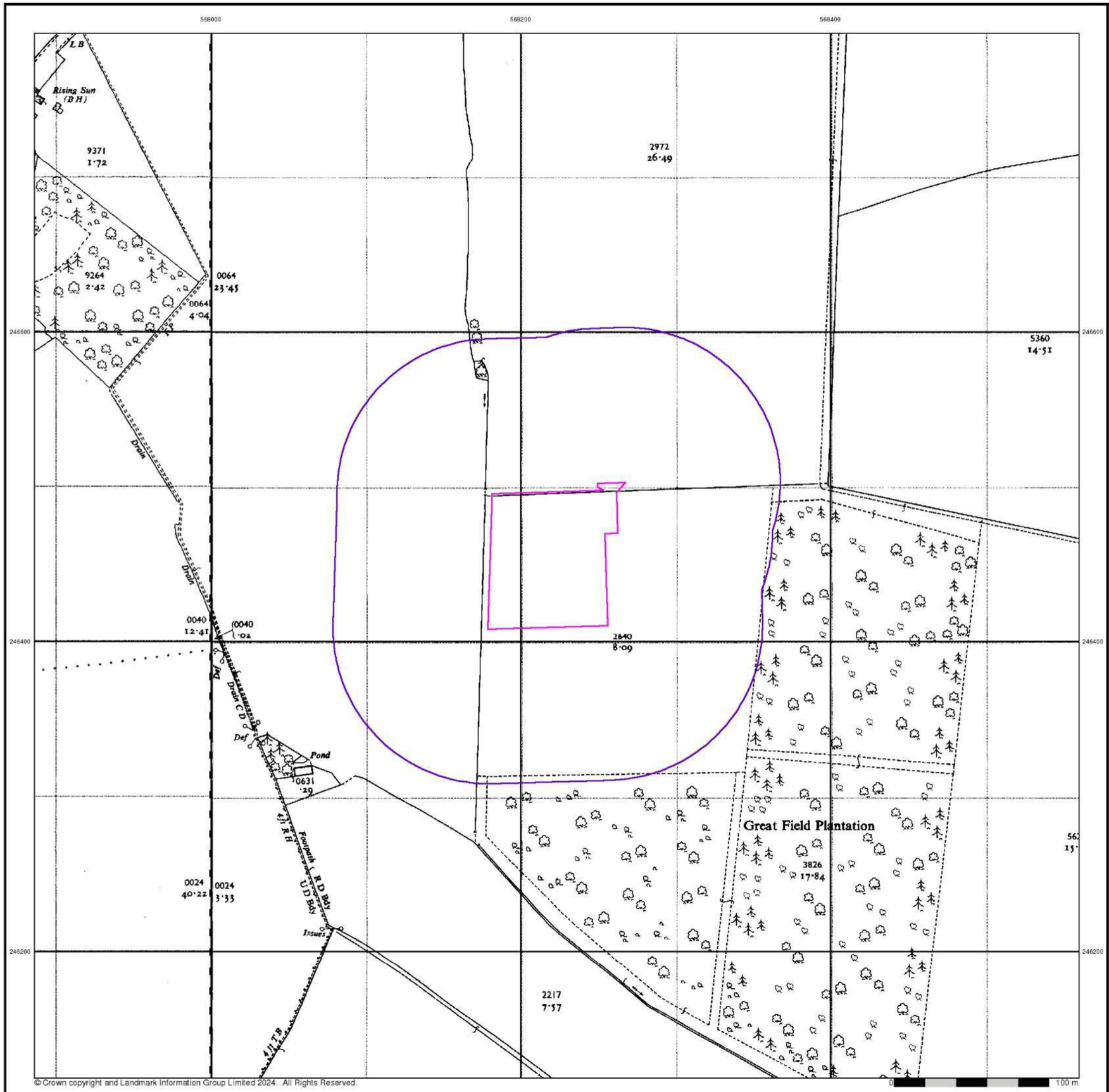


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Site Details

Site at 568223,246456



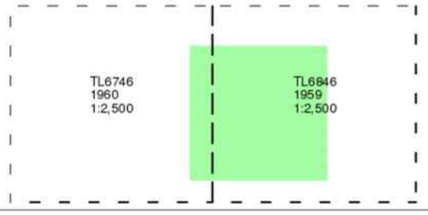
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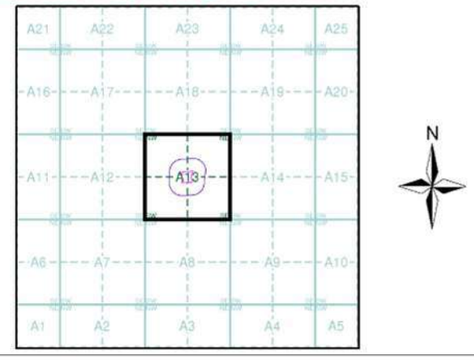
Ordnance Survey Plan
Published 1959 - 1960
Source map scale - 1:2,500

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Map Name(s) and Date(s)



Historical Map - Segment A13



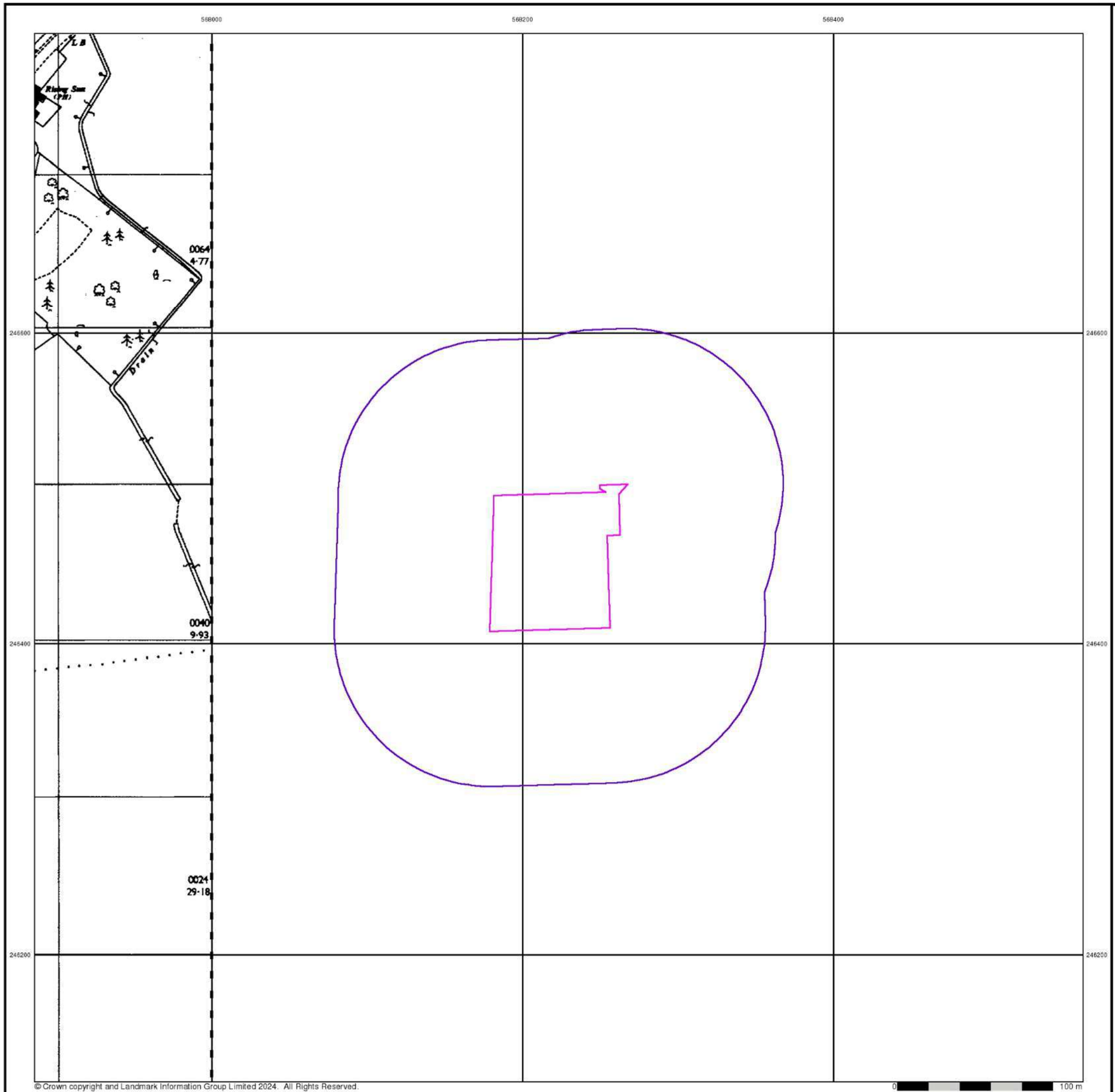
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Site Details

Site at 568223,246456

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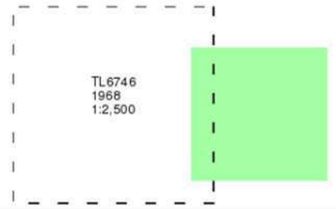
Ordnance Survey Plan

Published 1968

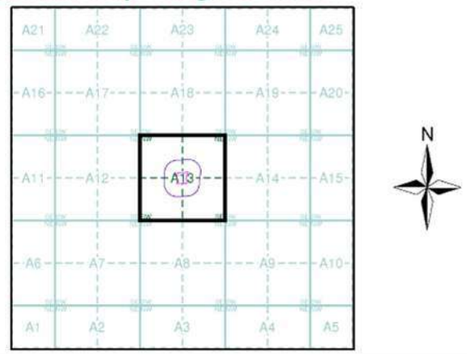
Source map scale - 1:2,500

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Map Name(s) and Date(s)



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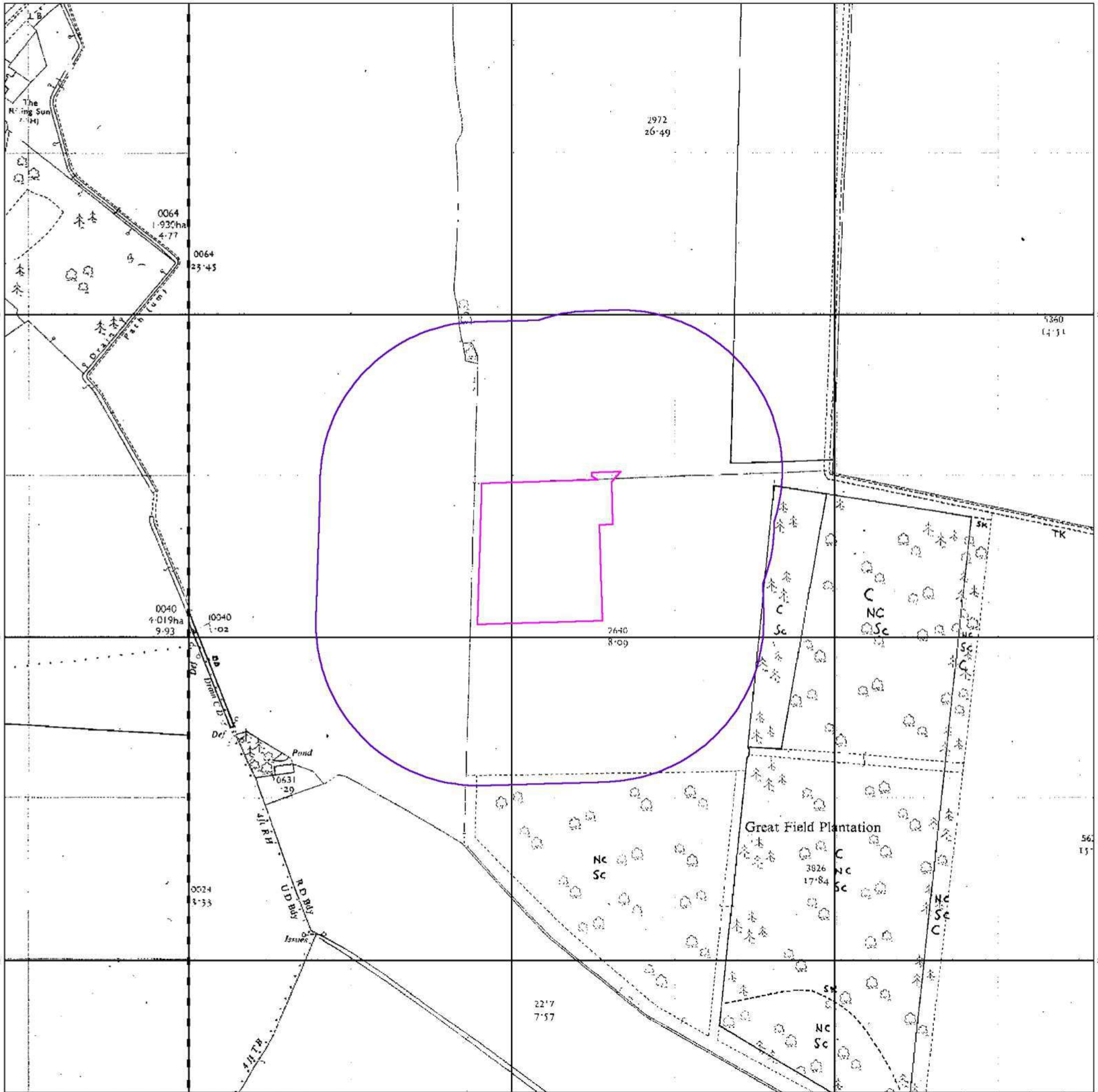


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Site Details

Site at 568223,246456



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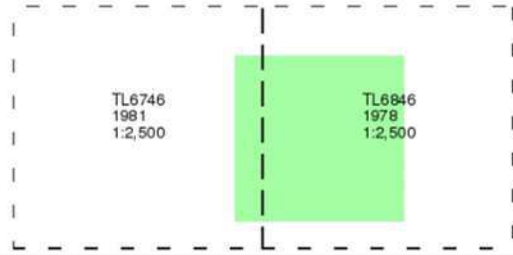
Additional SIMs

Published 1978 - 1981

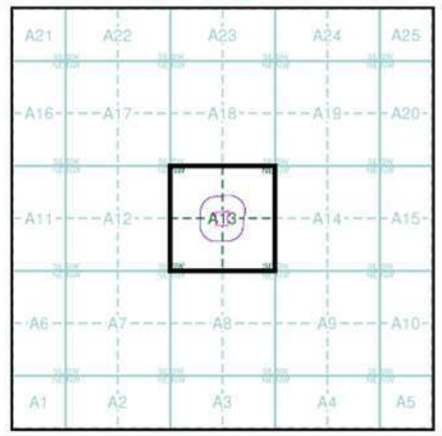
Source map scale - 1:2,500

The SIM cards (Ordnance Survey's `Survey of Information on Microfilm') are further, minor editions of mapping which were produced and published in between the main editions as an area was updated. They date from 1947 to 1994, and contain detailed information on buildings, roads and land-use. These maps were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)



Historical Map - Segment A13



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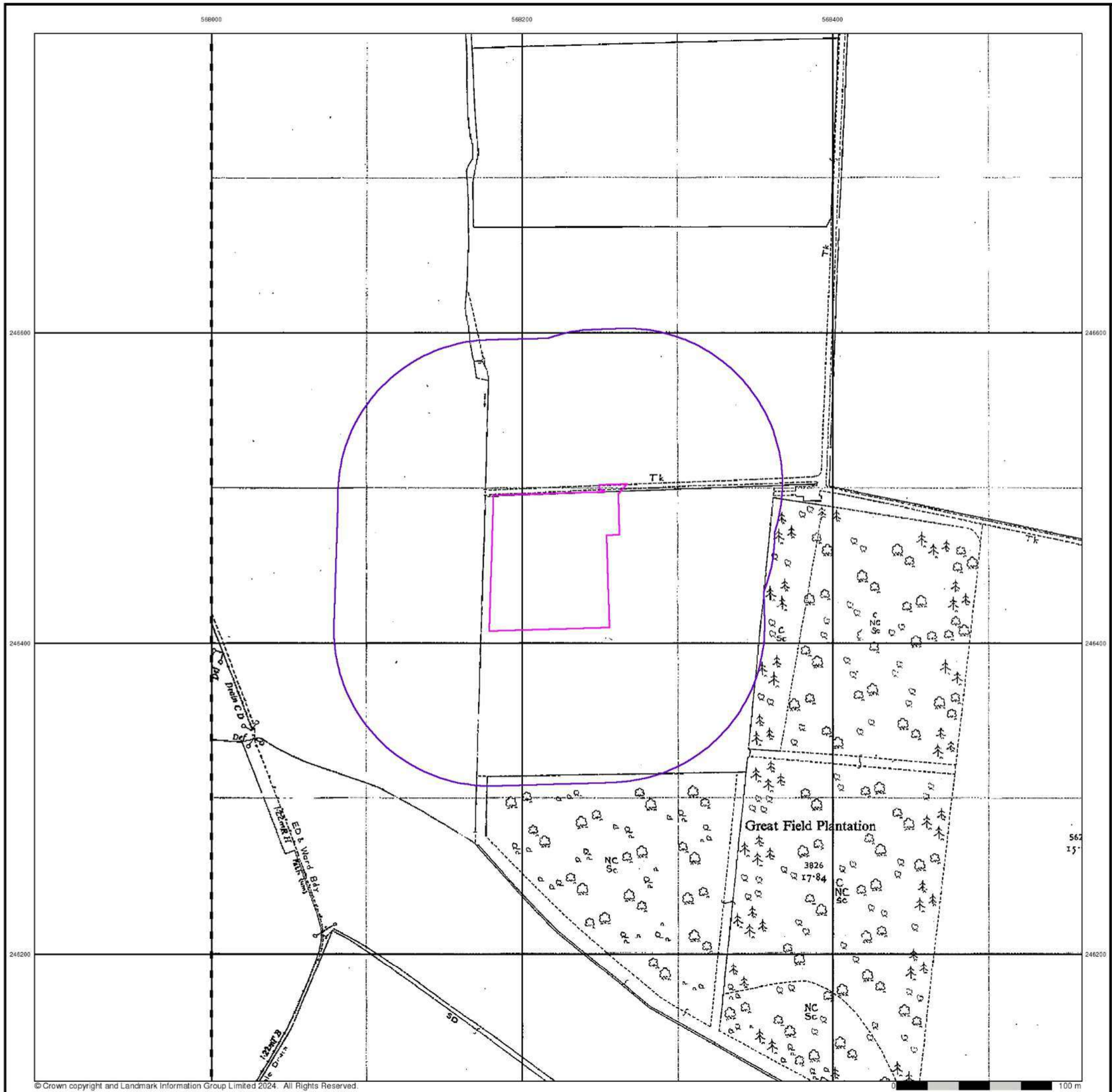
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Customer Ref: 7322
National Grid Reference: 568220, 246460
Slice: A
Site Area (Ha): 0.69
Search Buffer (m): 100

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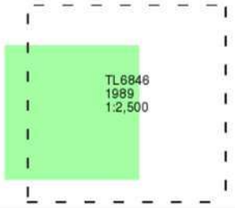
Additional SIMs

Published 1989

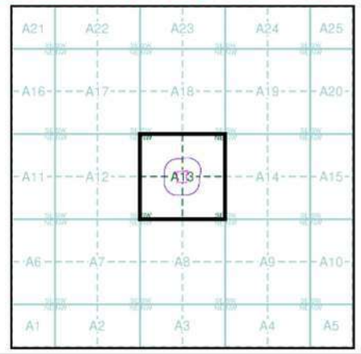
Source map scale - 1:2,500

The SIM cards (Ordnance Survey's `Survey of Information on Microfilm') are further, minor editions of mapping which were produced and published in between the main editions as an area was updated. They date from 1947 to 1994, and contain detailed information on buildings, roads and land-use. These maps were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)



Historical Map - Segment A13



Order Details

Order Number:	361491623_1_1
Customer Ref:	7322
National Grid Reference:	568220, 246460
Slice:	A
Site Area (Ha):	0.69
Search Buffer (m):	100

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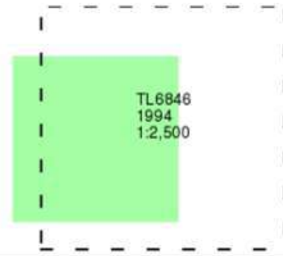
Large-Scale National Grid Data

Published 1994

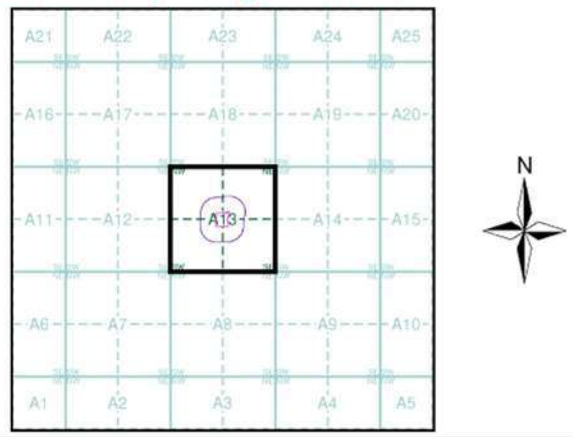
Source map scale - 1:2,500

'Large Scale National Grid Data' superseded SIM cards (Ordnance Survey's 'Survey of Information on Microfilm') in 1992, and continued to be produced until 1999. These maps were the fore-runners of digital mapping and so provide detailed information on houses and roads, but tend to show less topographic features such as vegetation. These maps were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)



Historical Map - Segment A13



Order Details

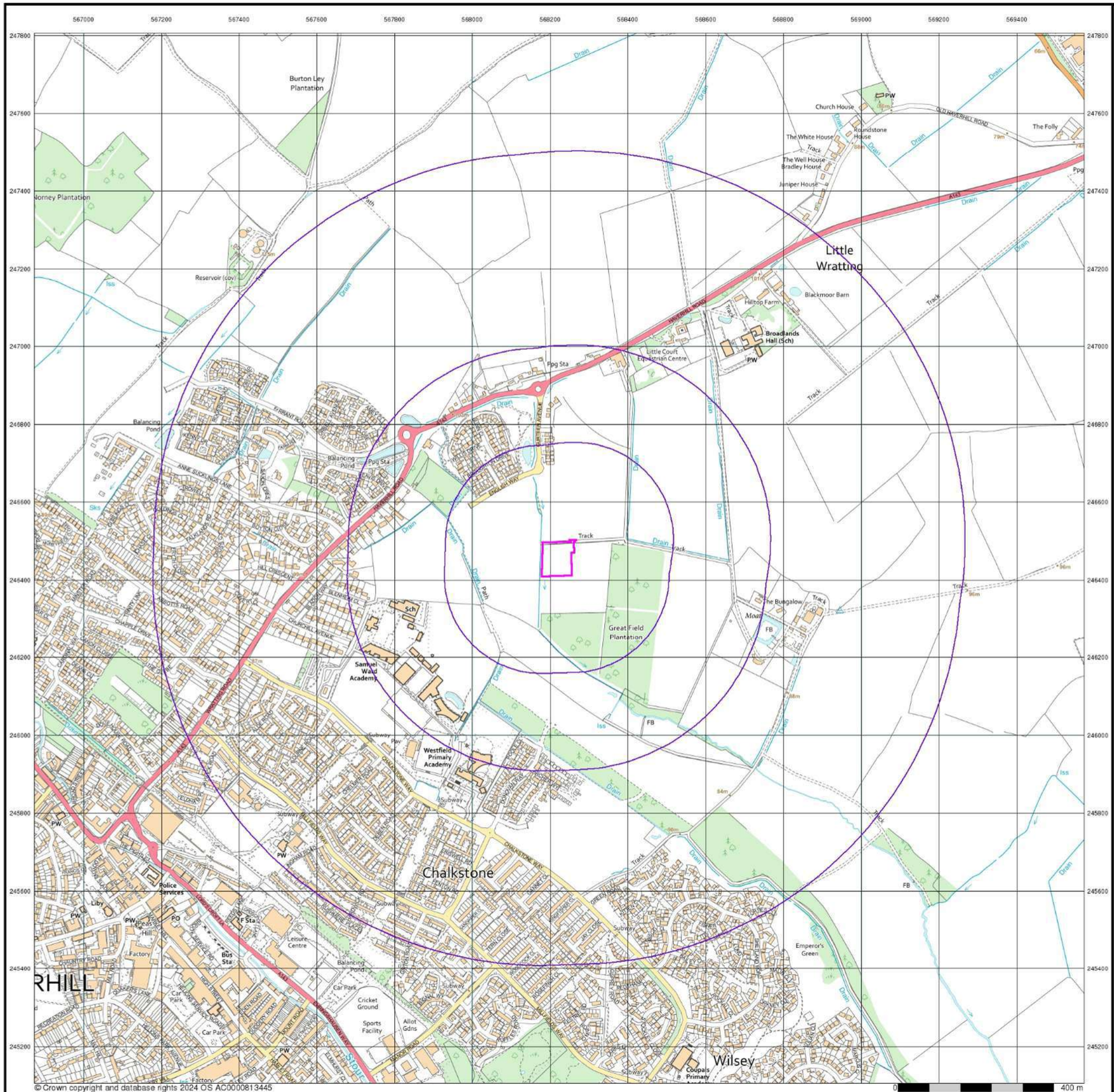
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Customer Ref:	7322
National Grid Reference:	568220, 246460
Slice:	A
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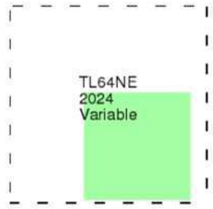
VectorMap Local

Published 2024

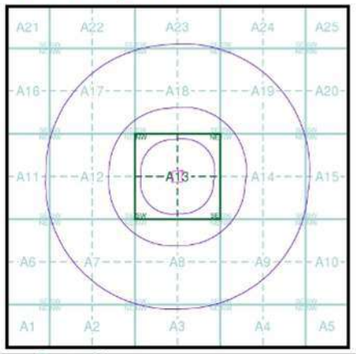
Source map scale - 1:10,000

VectorMap Local (Raster) is Ordnance Survey's highest detailed 'backdrop' mapping product. These maps are produced from OS's VectorMap Local, a simple vector dataset at a nominal scale of 1:10,000, covering the whole of Great Britain, that has been designed for creating graphical mapping. OS VectorMap Local is derived from large-scale information surveyed at 1:1250 scale (covering major towns and cities),1:2500 scale (smaller towns, villages and developed rural areas), and 1:10 000 scale (mountain, moorland and river estuary areas).

Map Name(s) and Date(s)



Historical Map - Slice A



Order Details

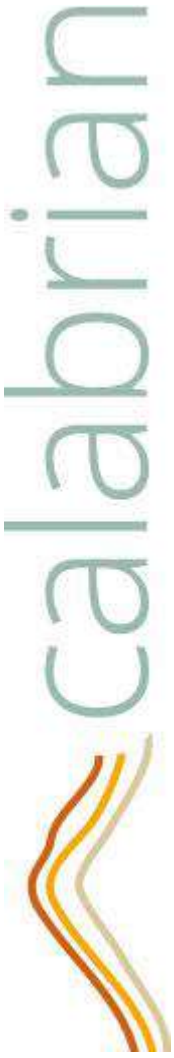
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Slice:	A
Site Area (Ha):	0.69
Search Buffer (m):	1000

Site Details

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APPENDIX C	SEARCHES
Landmark	Envirocheck Report
ZeticaUXO	UXO Risk Map



Envirocheck® Report:

Datasheet

Order Details:

Order Number:
361491623_1_1

Customer Reference:
7322

National Grid Reference:
568220, 246460

Slice:
A

Site Area (Ha):
0.69

Search Buffer (m):
1000

Site Details:

Site at 568223,246456

Client Details:

Mr R Hey
Calabrian Limited
9 Millwood
Ingleton
LA6 3HY

Prepared For:

LNT Care Developments

Summary

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Agency & Hydrological					
BGS Groundwater Flooding Susceptibility	pg 1	Yes			n/a
Contaminated Land Register Entries and Notices					
Discharge Consents	pg 1			4	2
Prosecutions					
Enforcement and Prohibition Notices					
Integrated Pollution Controls					
Integrated Pollution Prevention And Control					
Local Authority Integrated Pollution Prevention And Control					
Local Authority Pollution Prevention and Controls					
Local Authority Pollution Prevention and Control Enforcements					
Nearest Surface Water Feature	pg 2		Yes		
Pollution Incidents to Controlled Waters	pg 2				1
Historical Prosecutions					
Registered Radioactive Substances					
Substantiated Pollution Incident Register					
Water Abstractions	pg 2				(*30)
Water Industry Act Referrals					
Groundwater Vulnerability Map	pg 10	Yes	n/a	n/a	n/a
Groundwater Vulnerability - Soluble Rock Risk	pg 10	1	n/a	n/a	n/a
Groundwater Vulnerability - Local Information			n/a	n/a	n/a
Bedrock Aquifer Designations	pg 10	Yes	n/a	n/a	n/a
Superficial Aquifer Designations	pg 10	Yes	n/a	n/a	n/a
Source Protection Zones	pg 10	1			1
Extreme Flooding from Rivers or Sea without Defences				n/a	n/a
Flooding from Rivers or Sea without Defences				n/a	n/a
Areas Benefiting from Flood Defences				n/a	n/a
Flood Water Storage Areas				n/a	n/a
Flood Defences				n/a	n/a
OS Water Network Lines	pg 10		15	27	50
Water Framework Directive - Catchment	pg 21	Yes			Yes
Water Framework Directive - Groundwater	pg 21	Yes			
Water Framework Directive - Surface Waters					

Summary

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Waste					
BGS Recorded Landfill Sites					
Historical Landfill Sites					
Integrated Pollution Control Registered Waste Sites					
Licensed Waste Management Facilities (Landfill Boundaries)					
Licensed Waste Management Facilities (Locations)					
Local Authority Landfill Coverage	pg 22	2	n/a	n/a	n/a
Local Authority Recorded Landfill Sites					
Potentially Infilled Land (Non-Water)					
Potentially Infilled Land (Water)					
Registered Landfill Sites					
Registered Waste Transfer Sites					
Registered Waste Treatment or Disposal Sites					
Hazardous Substances					
Control of Major Accident Hazards Sites (COMAH)					
Explosive Sites					
Notification of Installations Handling Hazardous Substances (NIHHS)					
Planning Hazardous Substance Consents					
Planning Hazardous Substance Enforcements					

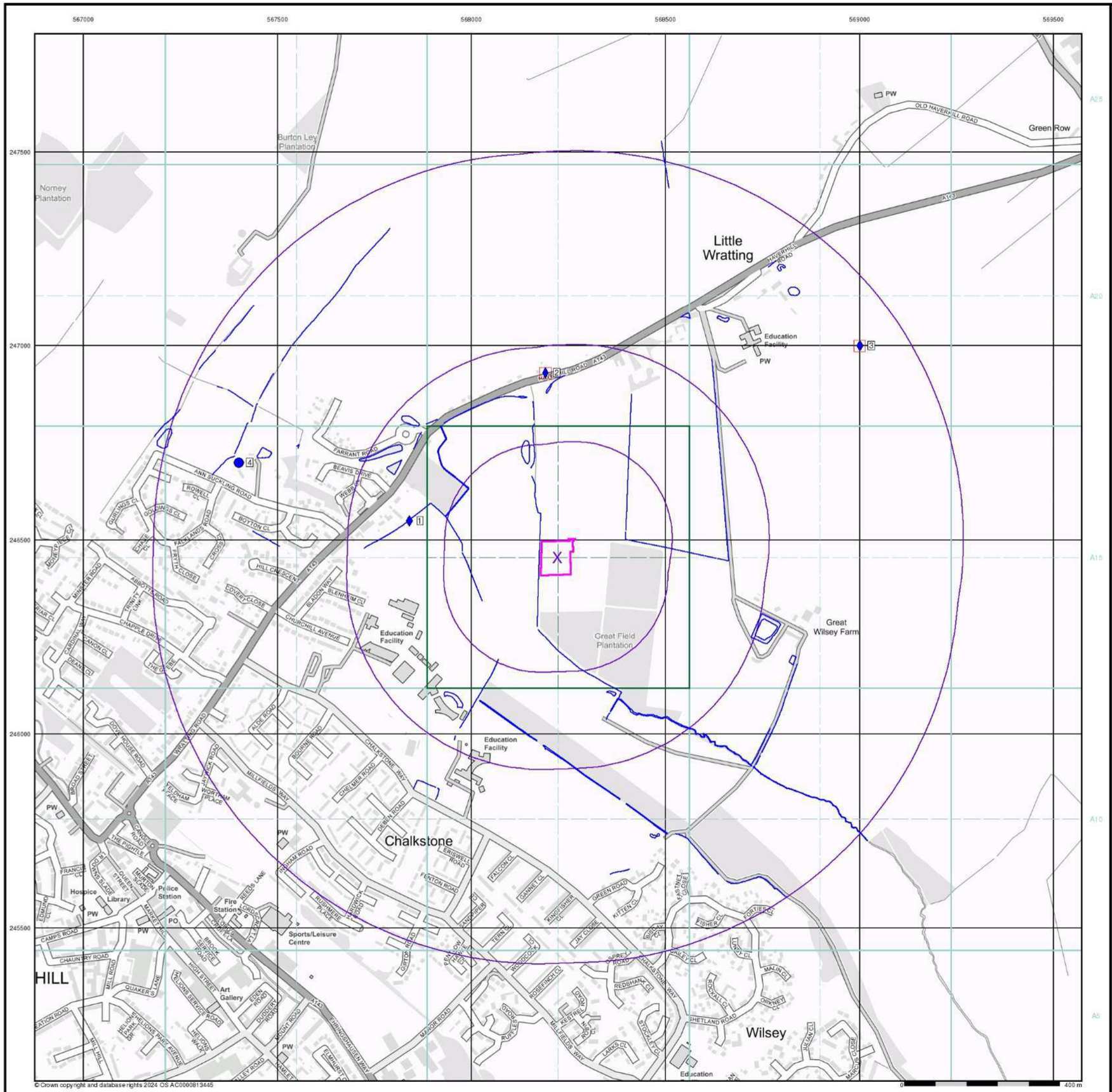
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Summary

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Geological					
BGS 1:625,000 Solid Geology	pg 23	Yes	n/a	n/a	n/a
BGS Estimated Soil Chemistry	pg 23	Yes			Yes
BGS Recorded Mineral Sites					
BGS Urban Soil Chemistry					
BGS Urban Soil Chemistry Averages					
CBSCB Compensation District			n/a	n/a	n/a
Coal Mining Affected Areas			n/a	n/a	n/a
Mining Instability			n/a	n/a	n/a
Man-Made Mining Cavities					
Natural Cavities					
Non Coal Mining Areas of Great Britain	pg 23	Yes		n/a	n/a
Potential for Collapsible Ground Stability Hazards	pg 23	Yes		n/a	n/a
Potential for Compressible Ground Stability Hazards				n/a	n/a
Potential for Ground Dissolution Stability Hazards	pg 23		Yes	n/a	n/a
Potential for Landslide Ground Stability Hazards	pg 24	Yes	Yes	n/a	n/a
Potential for Running Sand Ground Stability Hazards	pg 24	Yes		n/a	n/a
Potential for Shrinking or Swelling Clay Ground Stability Hazards	pg 24	Yes		n/a	n/a
Radon Potential - Radon Affected Areas			n/a	n/a	n/a
Radon Potential - Radon Protection Measures			n/a	n/a	n/a
Industrial Land Use					
Contemporary Trade Directory Entries	pg 25				7
Fuel Station Entries					
Points of Interest - Commercial Services	pg 25				1
Points of Interest - Education and Health					
Points of Interest - Manufacturing and Production	pg 25				1
Points of Interest - Public Infrastructure					
Points of Interest - Recreational and Environmental	pg 25				7
Underground Electrical Cables					

Summary

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Sensitive Land Use					
Ancient Woodland					
Areas of Adopted Green Belt					
Areas of Unadopted Green Belt					
Areas of Outstanding Natural Beauty					
Environmentally Sensitive Areas					
Forest Parks					
Local Nature Reserves					
Marine Nature Reserves					
National Nature Reserves					
National Parks					
Nitrate Sensitive Areas					
Nitrate Vulnerable Zones	pg 27	2			
Ramsar Sites					
Sites of Special Scientific Interest					
Special Areas of Conservation					
Special Protection Areas					
World Heritage Sites					



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General

Specified Site
Specified Buffer(s)
Bearing Reference Point
Map ID
Several of Type at Location

Agency and Hydrological

- Contaminated Land Register Entry or Notice (Location)
- Contaminated Land Register Entry or Notice
- Discharge Consent
- Enforcement or Prohibition Notice
- Integrated Pollution Control
- Integrated Pollution Prevention Control
- Local Authority Integrated Pollution Prevention and Control
- Local Authority Pollution Prevention and Control
- Local Authority Pollution Prevention and Control Enforcement
- Pollution Incident to Controlled Waters
- Historical Prosecutions
- Prosecutions
- Registered Radioactive Substance
- River Network or Water Feature
- Substantiated Pollution Incident Register
- Water Abstraction
- Water Industry Act Referral

Waste

- BGS Recorded Landfill Site (Location)
- BGS Recorded Landfill Site
- EA Historic Landfill (Buffered Point)
- EA Historic Landfill (Polygon)
- Integrated Pollution Control Registered Waste Site
- Licensed Waste Management Facility (Landfill Boundary)
- Licensed Waste Management Facility (Location)
- Local Authority Recorded Landfill Site (Location)
- Local Authority Recorded Landfill Site
- Potentially Infilled Land (Non-water)
- Potentially Infilled Land (Non-water)
- Potentially Infilled Land (Non-water)
- Potentially Infilled Land (Water)
- Potentially Infilled Land (Water)
- Potentially Infilled Land (Water)
- Registered Landfill Site
- Registered Landfill Site (Location)
- Registered Landfill Site (Point Buffered to 100m)
- Registered Landfill Site (Point Buffered to 250m)
- Registered Waste Transfer Site (Location)
- Registered Waste Transfer Site
- Registered Waste Treatment or Disposal Site (Location)
- Registered Waste Treatment or Disposal Site

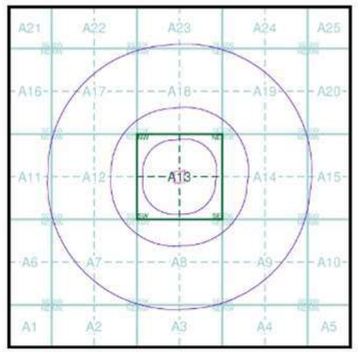
Hazardous Substances

- COMAH Site
- Explosive Site
- NIHHS Site
- Planning Hazardous Substance Consent
- Planning Hazardous Substance Enforcement

Geological

- BGS Recorded Mineral Site

Site Sensitivity Map - Slice A



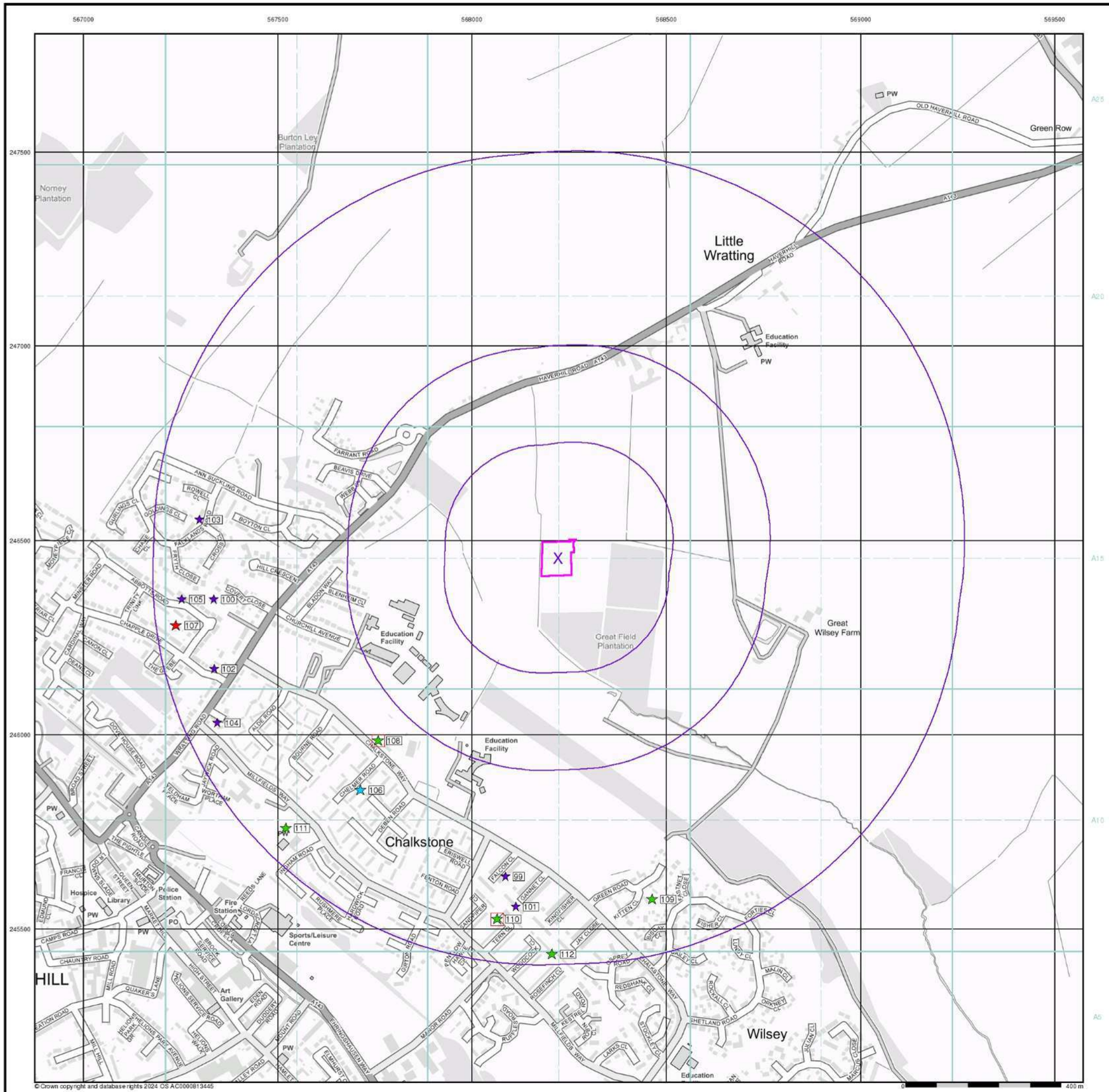
Order Details

Order Number:	361491623_1_1
Customer Ref:	7322
National Grid Reference:	568220, 246460
Slice:	A
Site Area (Ha):	0.69
Search Buffer (m):	1000

Site Details

Site at 568223,246456

Landmark INFORMATION GROUP
Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www.envirocheck.co.uk



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Industrial Land Use Map

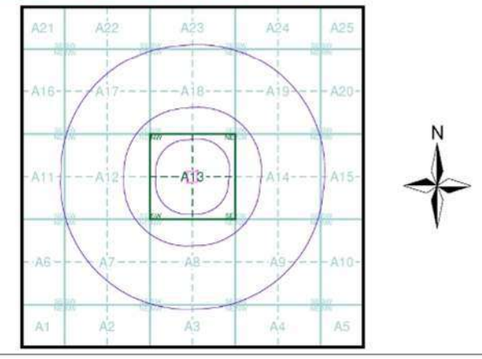
General

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

Industrial Land Use

- Contemporary Trade Directory Entry
- Fuel Station Entry
- Points of Interest - Commercial Services
- Points of Interest - Education and Health
- Points of Interest - Manufacturing and Production
- Points of Interest - Public Infrastructure
- Points of Interest - Recreational and Environmental
- Underground Electrical Cables

Industrial Land Use Map - Slice A



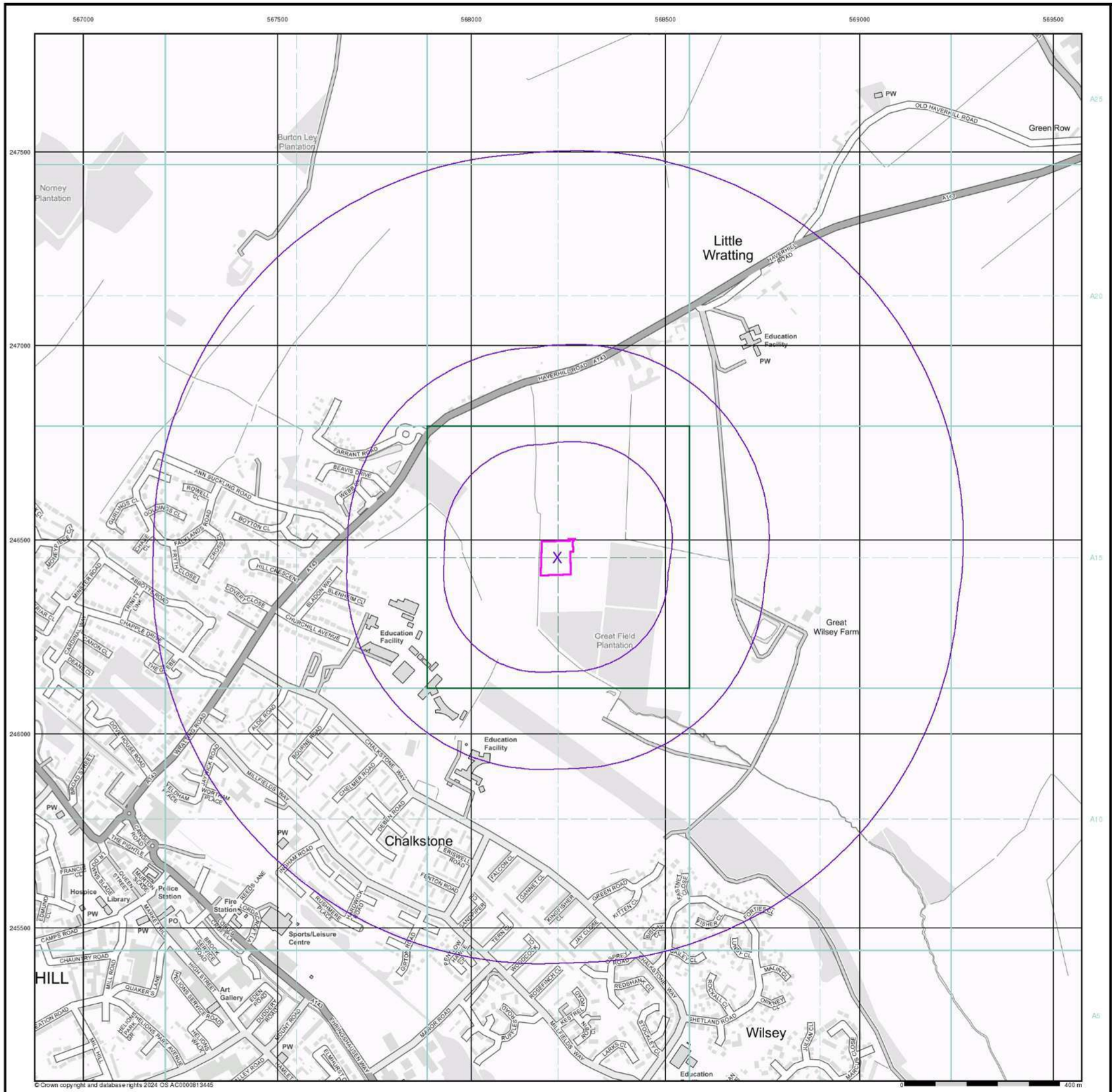
Order Details

Order Number:	361491623_1_1
Customer Ref:	7322
National Grid Reference:	568220, 246460
Slice:	A
Site Area (Ha):	0.69
Search Buffer (m):	1000

Site Details

Site at 568223,246456

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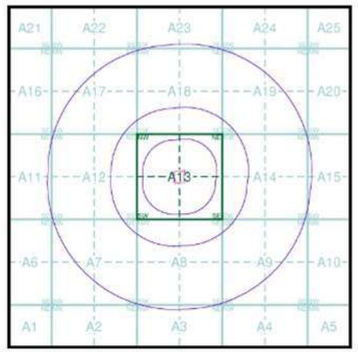
General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point

Agency and Hydrological (Flood)

- Extreme Flooding from Rivers or Sea without Defences (Zone 2)
- Flooding from Rivers or Sea without Defences (Zone 3)
- Area Benefiting from Flood Defence
- Flood Water Storage Areas
- Flood Defence

Flood Map - Slice A



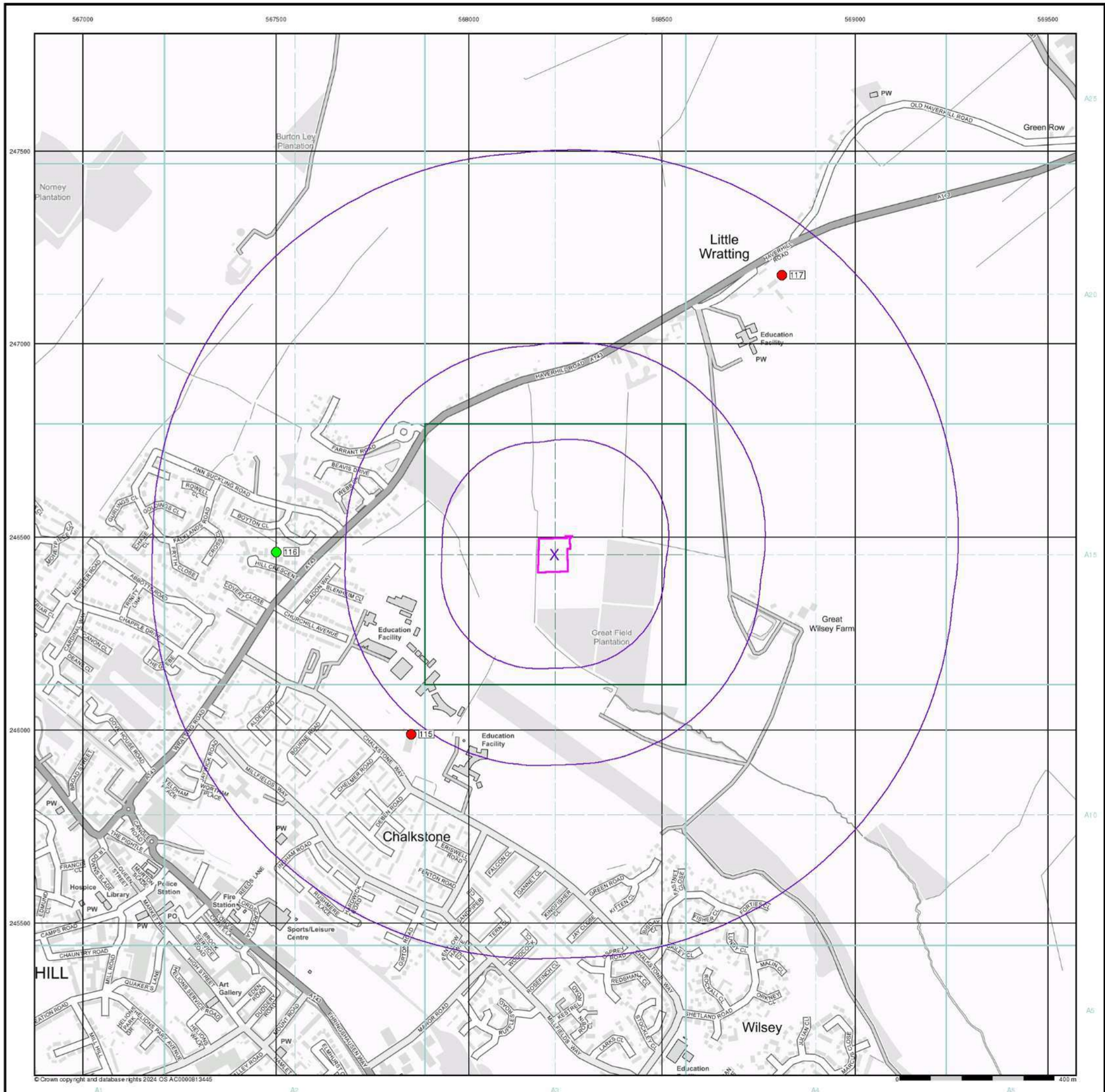
Order Details

Order Number:	361491623_1_1
Customer Ref:	7322
National Grid Reference:	568220, 246460
Slice:	A
Site Area (Ha):	0.69
Search Buffer (m):	1000

Site Details

Site at 568223,246456

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General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Map ID
- Several of Type at Location

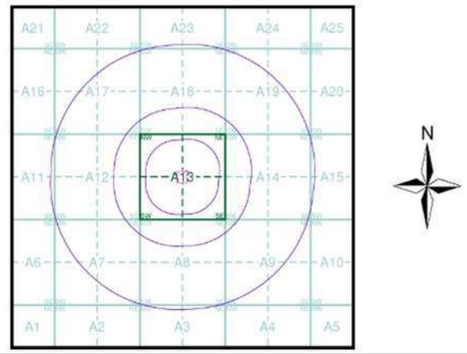
Agency and Hydrological (Boreholes)

- BGS Borehole Depth 0 - 10m
- BGS Borehole Depth 10 - 30m
- BGS Borehole Depth 30m +
- Confidential
- Other

For Borehole information please refer to the Borehole .csv file which accompanied this slice.

A copy of the BGS Borehole Ordering Form is available to download from the Support section of www.envirocheck.co.uk.

Borehole Map - Slice A



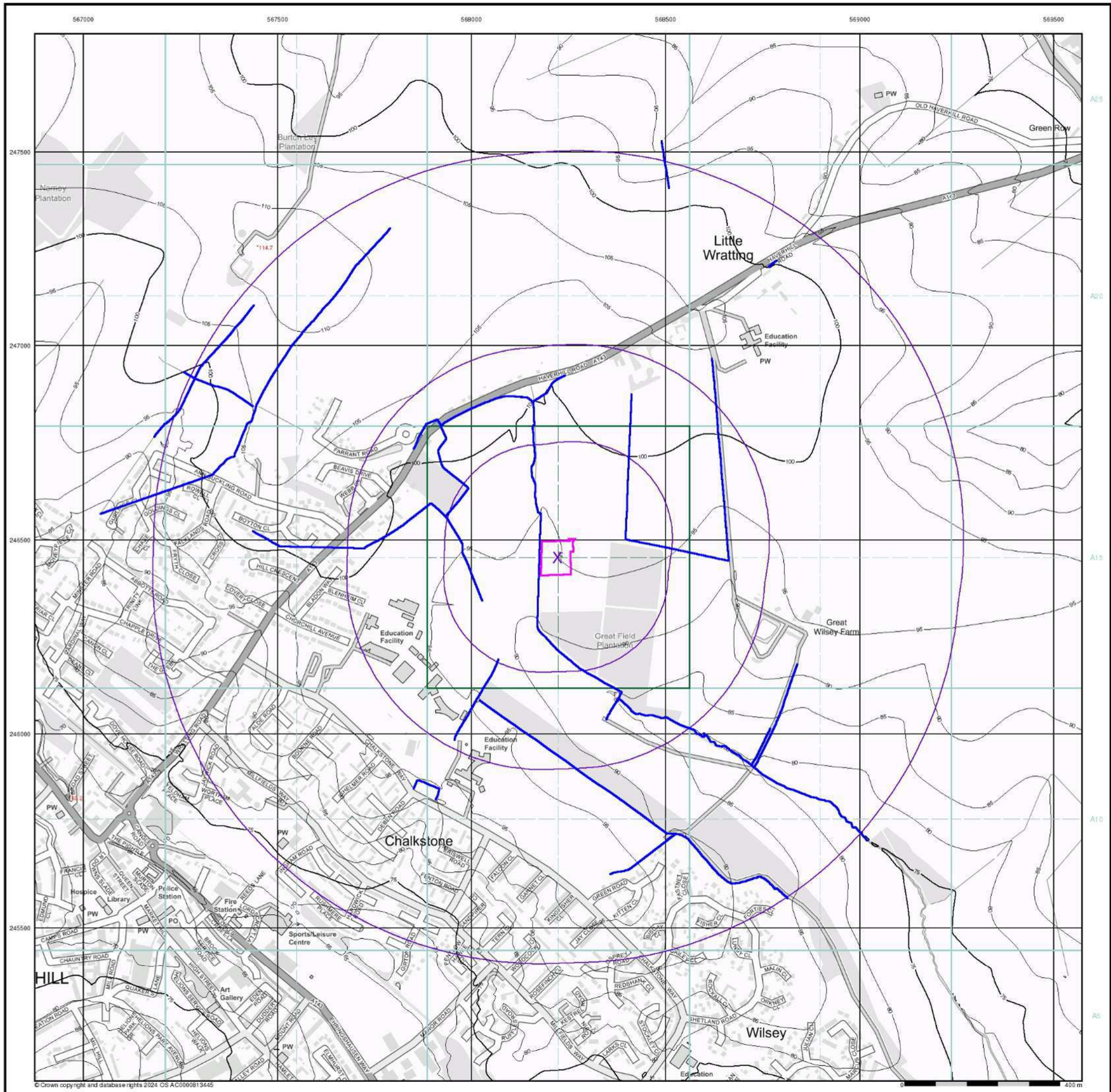
Order Details

Order Number:	361491623_1_1
Customer Ref:	7322
National Grid Reference:	568220, 246460
Slice:	A
Site Area (Ha):	0.69
Search Buffer (m):	1000

Site Details

Site at 568223,246456

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General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point

OS Water Network Data

- Canal
- Reservoir
- Foreshore
- Marsh
- Tidal River
- Inland River
- Drain
- Other
- Lake
- Transfer
- Lock Or Flight Of Locks
- Sea

Contours (height in meters)

Standard Contour 105 100 95

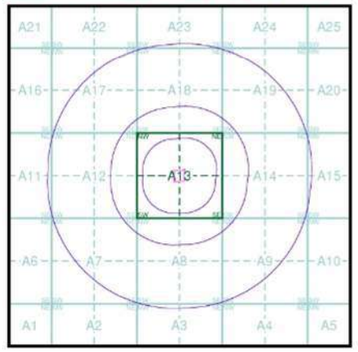
Master Contour

Spot Height 167.3

MLW Mean Low Water

MHW Mean High Water

OS Water Network Map - Slice A



Order Details

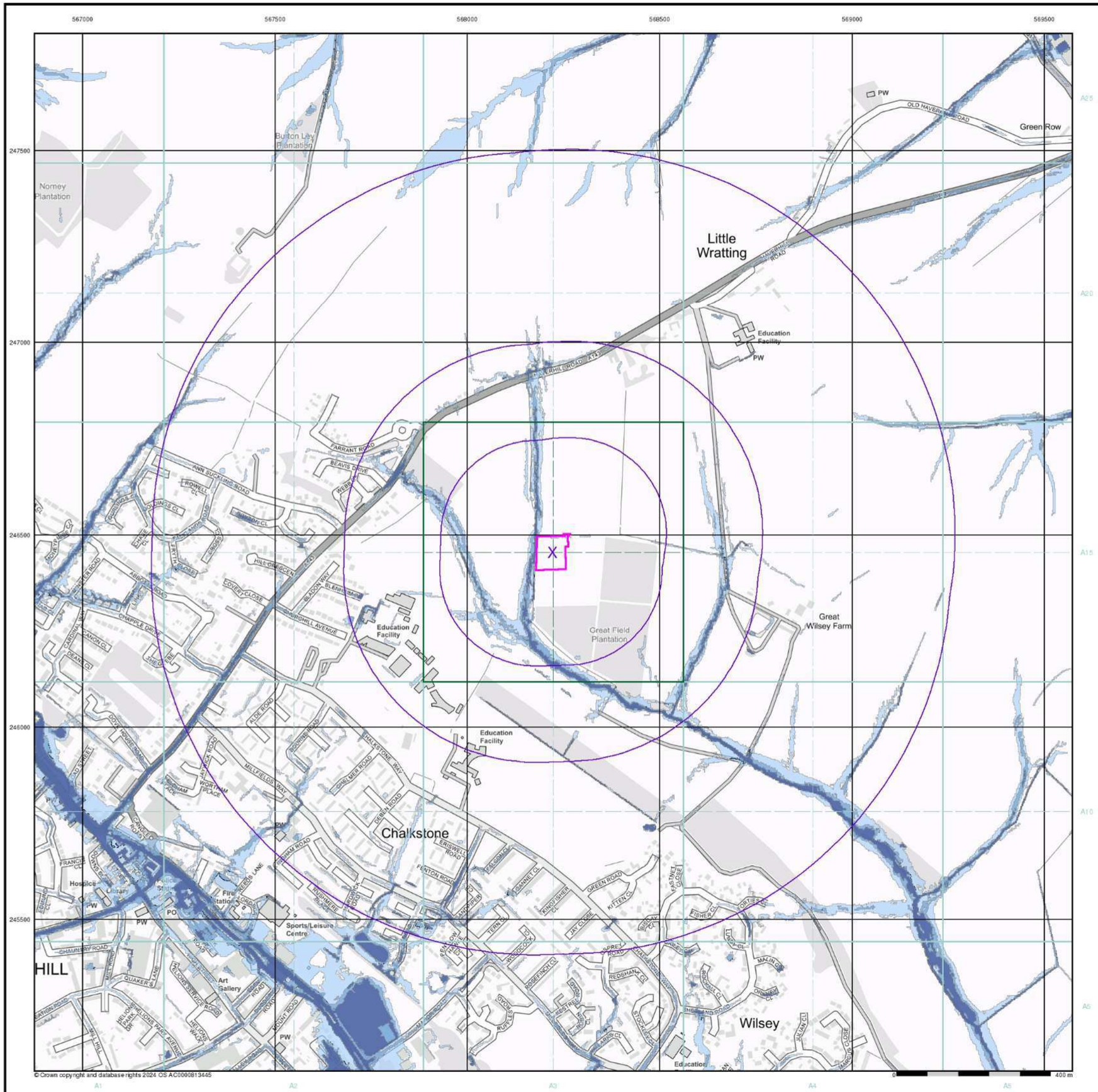
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Customer Ref:	7322
National Grid Reference:	568220, 246460
Slice:	A
Site Area (Ha):	0.69
Search Buffer (m):	1000

Site Details

Site at 568223,246456

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General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point

Risk of Flooding from Surface Water

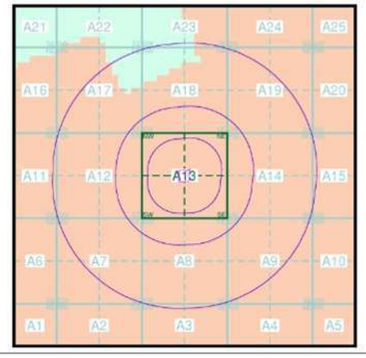
- High - 30 Year Return
- Medium - 100 Year Return
- Low - 1000 Year Return

Suitability

See the suitability map below

- National to county
- County to town
- Town to street
- Street to parcels of land
- Property

EA/NRW Suitability Map - Slice A



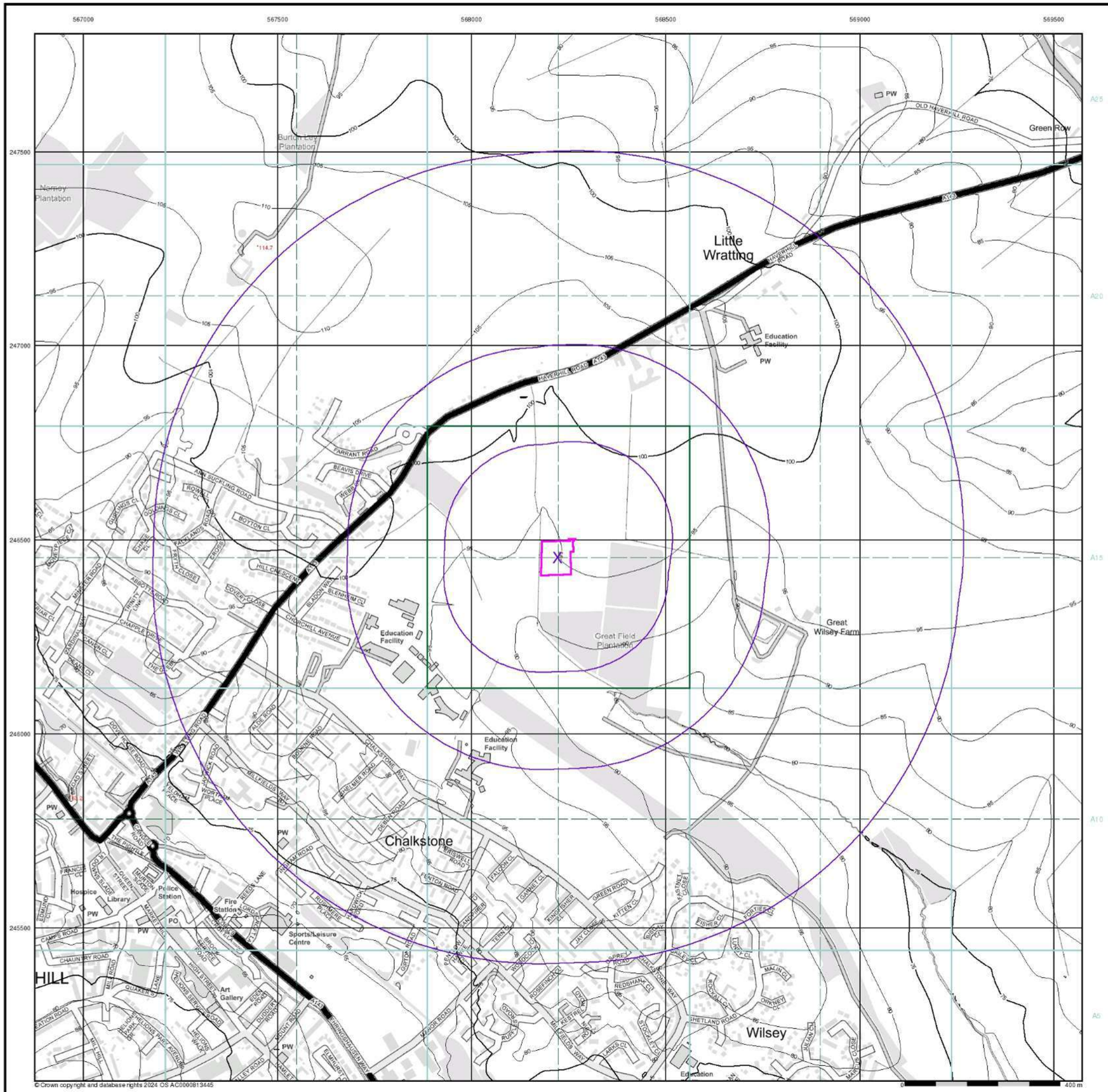
Order Details

Order Number:	361491623_1_1
Customer Ref:	7322
National Grid Reference:	568220, 246460
Slice:	A
Site Area (Ha):	0.69
Search Buffer (m):	1000

Site Details

Site at 568223,246456

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WFD Surface Waters Map

General

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

Water Framework Directive - Surface Water Quality

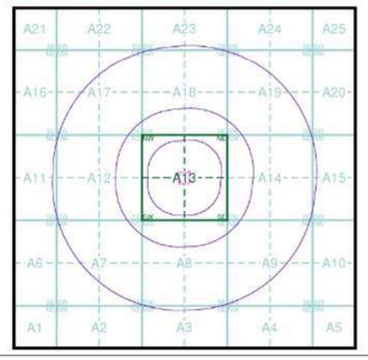
- High
- Good
- Moderate
- Poor
- Bad

Contours (height in meters)

Standard Contour 105
Master Contour 100 95
Spot Height 167.3

MLW Mean Low Water
MHW Mean High Water

WFD Surface Waters Map - Slice A



Order Details

Order Number:	361491623_1_1
Customer Ref:	7322
National Grid Reference:	568220, 246460
Slice:	A
Site Area (Ha):	0.69
Search Buffer (m):	1000

Site Details

Site at 568223,246456

Landmark INFORMATION GROUP
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Web: www.envirocheck.co.uk

UNEXPLODED BOMB RISK MAP

SITE LOCATION

Map Centre: 568263,246375



This map principally indicates a hazard from Unexploded Bombs (UXB) due to WWII bombardment. Other sources of Unexploded Ordnance (UXO) may be present. It should be noted that this map does not represent UXO risk and should not be reported as such when reproduced.

LEGEND

- **High:** Areas indicated as having a bombing density of 50 bombs per 1000acre or higher.
- **Moderate:** Areas indicated as having a bombing density of 15 to 49 bombs per 1000acre.
- **Low:** Areas indicated as having 15 bombs per 1000acre or less.

Miltary | **Industry** | **UXO find** | **Other**
Transport | **Docks** | **Luftwaffe targets**
Utilities | **Bombing decoy** | **Airfields**

How to use your Unexploded Bomb (UXB) risk map?

This map indicates the potential for UXBs to be present because of World War Two (WWII) bombing. It can be incorporated into a technical report, such as a Phase 1 Desk Study, or similar document as an indication of the potential for UXO encounter on a Site. Other sources of UXO may also be indicated, although note that these are not comprehensive and more detailed research is required to confirm their presence.

What if my Site is in a moderate or high density area?

We typically recommend that a detailed UXO desk study and risk assessment is undertaken for sites in an area with a moderate or high bombing density.
Additionally, if your site is in close proximity to a strategic target, military establishment, airfield or bombing decoy, then additional detailed research is recommended.

If my site is in a low risk area, do I need to do anything?

If both the map and other research confirm that there is a low potential for UXO to be present on your site, then, subject to your own comfort and risk tolerance, works can proceed with no special precautions.

If you are unsure whether other sources of UXO may be present, you can request one of our pre-desk study assessments (PDSA) by emailing a site boundary and location to pdsa@zetica.com.

You should never plan site work or undertake a risk assessment using these maps alone. More detail is required, to include an assessment of the likelihood of a source of UXO hazard from other military activity not reflected on these maps.

If I have any questions, who do I contact?

tel: +44 (0) 1993 886682 **email:** uxo@zetica.com **web:** www.zeticauxo.com

The information in this UXB risk map is derived from a range of sources and should be used with the accompanying notes on our website.

Zetica cannot guarantee the accuracy or completeness of the information or data used and cannot accept any liability for any use of the maps. These maps can be used as part of a technical report or similar publication, subject to acknowledgement. The copyright remains with Zetica Ltd.

APPENDIX D	EXPLORATORY HOLE RECORDS
Trial Pits	TP201 to TP205



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Trial Pit Log

Trialpit No
TP201
Sheet 1 of 1

Project Name: Haverhill	Project No. 7322	Co-ords: 568199.58 - 246476.99 Level: 93.95	Date 23/10/2024
Location: East Anglia, CB9 0LL		Dimensions (m): Depth 2.50	Scale 1:25
Client: LNT Care Developments (3) Limited			Logged RJH

Water Strike	Samples and In Situ Testing: Depth	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description
	0.10	J,K&T		0.30	93.65		TOPSOIL: Soft to firm brown slightly organic clay with a little subrounded predominately fine flint gravel. Occasional fine rootlets. TOPSOIL
	1.00	D					Stiff brown CLAY with a little subrounded and rounded fine to coarse predominately chalk with flint gravel. Rare subrounded chalk cobbles. COHESIVE GLACIAL DEPOSITS
							Below 0.8m, light grey locally brown.
				2.50	91.45		End of pit at 2.50 m

1
2
3
4
5

Remarks: 1. Prior to excavation a Cable Avoidance Tool (CAT) survey was carried out. 2. Groundwater was not apparent during excavation. 3. The sides of the trial pit remained stable during excavation. 4. Backfilled with materials arising upon completion.

Stability:

AGS

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Trial Pit Log

Trialpit No
TP202
Sheet 1 of 1

Project Name: Haverhill	Project No. 7322	Co-ords: 568250.78 - 246482.61 Level: 95.95	Date 23/10/2024
Location: East Anglia, CB9 0LL		Dimensions (m): Depth 2.50	Scale 1:25
Client: LNT Care Developments (3) Limited			Logged RJH

Water Strike	Samples and In Situ Testing: Depth	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description
	0.10	J,K&T		0.25	95.70		TOPSOIL: Soft to firm brown slightly organic clay with a little subrounded predominately fine flint gravel. Occasional fine rootlets. TOPSOIL
	0.50	J,K&T					Stiff brown CLAY with a little subrounded and rounded fine to coarse predominately chalk with flint gravel. Rare subrounded chalk cobbles and boulders <350mm. COHESIVE GLACIAL DEPOSITS
	1.00	D					*Below 0.8m, light grey locally brown.*
				2.50	93.45		End of pit at 2.50 m

Remarks: 1. Prior to excavation a Cable Avoidance Tool (CAT) survey was carried out. 2. Groundwater was not apparent during excavation. 3. The sides of the trial pit remained stable during excavation. 4. Backfilled with materials arising upon completion.

Stability:

AGS

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Trial Pit Log

Trialpit No
TP203
Sheet 1 of 1

Project Name: Haverhill	Project No. 7322	Co-ords: 568219.35 - 246443.67 Level: 94.65	Date 23/10/2024
Location: East Anglia, CB9 0LL		Dimensions (m): Depth 2.40	Scale 1:25
Client: LNT Care Developments (3) Limited			Logged RJH

Water Strike	Samples and In Situ Testing: Depth	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description
	0.10	J,K&T		0.30	94.35		TOPSOIL: Soft to firm brown slightly organic clay with a little subrounded predominately fine flint gravel. Occasional fine rootlets. TOPSOIL
	0.60	J,K&T					Stiff brown CLAY with a little subrounded and rounded fine to coarse predominately chalk with flint gravel. Rare subrounded chalk cobbles and boulders <350mm. COHESIVE GLACIAL DEPOSITS
							Below 0.7m, light grey locally brown.
	1.20	D					
				2.40	92.25		End of pit at 2.40 m

1
2
3
4
5

Remarks: 1. Prior to excavation a Cable Avoidance Tool (CAT) survey was carried out. 2. Groundwater was not apparent during excavation. 3. The sides of the trial pit remained stable during excavation. 4. Backfilled with materials arising upon completion.

Stability:

AGS

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Trial Pit Log

Trialpit No
TP204
Sheet 1 of 1

Project Name: Haverhill	Project No. 7322	Co-ords: 568189.29 - 246411.85 Level: 92.90	Date 23/10/2024
Location: East Anglia, CB9 0LL		Dimensions (m): Depth 2.50	Scale 1:25
Client: LNT Care Developments (3) Limited			Logged RJH

Water Strike	Samples and In Situ Testing: Depth	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description
	0.10	J,K&T		0.30	92.60		TOPSOIL: Soft to firm brown slightly organic clay with a little subrounded predominately fine flint gravel. Occasional fine rootlets. TOPSOIL
	0.80 0.90	J,K&T D					Stiff brown CLAY with a little subrounded and rounded fine to coarse predominately chalk with flint gravel. Rare subrounded chalk cobbles and boulders <350mm. COHESIVE GLACIAL DEPOSITS *Below 0.9m, light grey locally brown.*
				2.50	90.40		End of pit at 2.50 m

1
2
3
4
5

Remarks: 1. Prior to excavation a Cable Avoidance Tool (CAT) survey was carried out. 2. Groundwater was not apparent during excavation. 3. The sides of the trial pit remained stable during excavation. 4. Backfilled with materials arising upon completion.

Stability:

AGS

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Trial Pit Log

Trialpit No
TP205
Sheet 1 of 1

Project Name: Haverhill	Project No. 7322	Co-ords: 568251.80 - 246422.12 Level: 95.00	Date 23/10/2024
Location: East Anglia, CB9 0LL		Dimensions (m): Depth 2.60	Scale 1:25
Client: LNT Care Developments (3) Limited			Logged RJH

Water Strike	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
	Depth	Type	Results				
	0.10	J,K&T		0.25	94.75		TOPSOIL: Soft to firm brown slightly organic clay with a little subrounded predominately fine flint gravel. Occasional fine rootlets. TOPSOIL
	1.00	D					Stiff brown CLAY with a little subrounded and rounded fine to coarse predominately chalk with flint gravel. Rare subrounded chalk cobbles. COHESIVE GLACIAL DEPOSITS *Below 0.7m, light grey locally brown.*
				2.60	92.40		End of pit at 2.60 m

1
2
3
4
5

Remarks: 1. Prior to excavation a Cable Avoidance Tool (CAT) survey was carried out. 2. Groundwater was not apparent during excavation. 3. The sides of the trial pit remained stable during excavation. 4. Backfilled with materials arising upon completion.

Stability:

AGS

APPENDIX E CHEMICAL TEST RESULTS

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Certificate of Analysis

Certificate Number 24-23094 *Issued:* 04-Nov-24

Client Calabrian Ltd
8 I'Anson Close
Leyburn
DL8 5LF

Our Reference 24-23094

Client Reference ~ 7322

Order No ~ PO-3705

Contract Title ~ Havenhill,East Anglia, CB9 0LL

Description 8 Soil samples, 3 Leachate prepared by DETS samples.

Date Received 28-Oct-24

Date Started 28-Oct-24

Date Completed 04-Nov-24

Test Procedures Identified by prefix DETSn (details on request).

Notes Opinions and interpretations are outside the laboratory's scope of ISO 17025 accreditation. 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 except in full, without the prior written approval of the laboratory.

Approved By

Kirk Bridgewood
General Manager

2139

Summary of Chemical Analysis
Soil Samples

Our Ref 24-23094
Client Ref ~ 7322
Contract Title ~ Havenhill,East Anglia, CB9 0LL

				Lab No	2415257	2415258	2415259	2415260	2415261	2415262
				Sample ID ~	TP201	TP202	TP202	TP203	TP203	TP204
				Depth ~	0.10	0.10	0.50	0.10	0.60	0.10
				Other ID ~						
				Sample Type ~	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
				Sampling Date ~	23/10/2024	23/10/2024	23/10/2024	23/10/2024	23/10/2024	23/10/2024
				Sampling Time ~	n/s	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**							
Metals										
Arsenic	DETSC 2301#	0.2	mg/kg	13	12	9.9	12	8.3	10
Boron, Water Soluble (2.5:1)	DETSC 2311#	0.2	mg/kg	0.5	0.7	0.5	0.7	0.3	0.6
Cadmium	DETSC 2301#	0.1	mg/kg	0.3	0.3	0.2	0.2	0.2	0.3
Chromium	DETSC 2301#	0.15	mg/kg	25	23	19	20	17	21
Chromium III	DETSC 2301*	0.15	mg/kg	25	23	19	20	17	21
Chromium, Hexavalent	DETSC 2204*	1	mg/kg	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Copper	DETSC 2301#	0.2	mg/kg	19	18	17	15	15	15
Lead	DETSC 2301#	0.3	mg/kg	25	27	9.0	20	7.5	19
Mercury	DETSC 2325#	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Nickel	DETSC 2301#	1	mg/kg	26	23	26	22	23	22
Selenium	DETSC 2301#	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Zinc	DETSC 2301#	1	mg/kg	72	71	45	67	43	60
Inorganics										
pH	DETSC 2008#		pH	9.1	7.9	7.8	7.7	7.6	6.0
Total Organic Carbon	DETSC 2084#	0.5	%	3.0	2.4	1.1	1.8	< 0.5	2.4
Petroleum Hydrocarbons										
Aliphatic C5-C6: HS_1D_AL	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aliphatic C6-C8: HS_1D_AL	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aliphatic C8-C10: HS_1D_AL	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aliphatic C10-C12: EH_CU_1D_AL	DETSC 3072#	1.5	mg/kg	< 1.5	< 1.5	< 1.5	< 1.5	< 1.5	< 1.5
Aliphatic C12-C16: EH_CU_1D_AL	DETSC 3072#	1.2	mg/kg	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2
Aliphatic C16-C21: EH_CU_1D_AL	DETSC 3072#	1.5	mg/kg	< 1.5	< 1.5	< 1.5	< 1.5	< 1.5	< 1.5
Aliphatic C21-C35: EH_CU_1D_AL	DETSC 3072#	3.4	mg/kg	< 3.4	< 3.4	< 3.4	< 3.4	< 3.4	< 3.4
Aliphatic C5-C35: EH_CU+HS_1D_AL	DETSC 3072*	10	mg/kg	< 10	< 10	< 10	< 10	< 10	< 10
Aromatic C5-C7: HS_1D_AR	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aromatic C7-C8: HS_1D_AR	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aromatic C8-C10: HS_1D_AR	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aromatic C10-C12: EH_CU_1D_AR	DETSC 3072#	0.9	mg/kg	< 0.9	< 0.9	< 0.9	< 0.9	< 0.9	< 0.9
Aromatic C12-C16: EH_CU_1D_AR	DETSC 3072#	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Aromatic C16-C21: EH_CU_1D_AR	DETSC 3072#	0.6	mg/kg	< 0.6	< 0.6	< 0.6	< 0.6	< 0.6	< 0.6
Aromatic C21-C35: EH_CU_1D_AR	DETSC 3072#	1.4	mg/kg	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4
Aromatic C5-C35: EH_CU+HS_1D_AR	DETSC 3072*	10	mg/kg	< 10	< 10	< 10	< 10	< 10	< 10
TPH Ali/Aro Total C5-C35: EH_CU+HS_1D_Total	DETSC 3072*	10	mg/kg	< 10	< 10	< 10	< 10	< 10	< 10
Benzene	DETSC 3321#	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Ethylbenzene	DETSC 3321#	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Toluene	DETSC 3321#	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Xylene	DETSC 3321#	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
MTBE	DETSC 3321	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
PAHs										
Naphthalene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03

Summary of Chemical Analysis
Soil Samples

Our Ref 24-23094
Client Ref ~ 7322
Contract Title ~ Havenhill,East Anglia, CB9 0LL

			Lab No	2415257	2415258	2415259	2415260	2415261	2415262
			Sample ID ~	TP201	TP202	TP202	TP203	TP203	TP204
			Depth ~	0.10	0.10	0.50	0.10	0.60	0.10
			Other ID ~						
			Sample Type ~	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
			Sampling Date ~	23/10/2024	23/10/2024	23/10/2024	23/10/2024	23/10/2024	23/10/2024
			Sampling Time ~	n/s	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**						
Acenaphthylene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Acenaphthene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Fluorene	DETSC 3303	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Phenanthrene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Anthracene	DETSC 3303	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Fluoranthene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Pyrene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Benzo(a)anthracene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Chrysene	DETSC 3303	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Benzo(b)fluoranthene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Benzo(k)fluoranthene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Benzo(a)pyrene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Indeno(1,2,3-c,d)pyrene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Dibenzo(a,h)anthracene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Benzo(g,h,i)perylene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
PAH - USEPA 16, Total	DETSC 3303	0.1	mg/kg	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
OCPs									
alpha-BHC	DETSC 3433*	0.1	mg/kg	< 0.1					
gamma-BHC (Lindane)	DETSC 3433*	0.1	mg/kg	< 0.1					
beta-BHC	DETSC 3433*	0.1	mg/kg	< 0.1					
delta-BHC	DETSC 3433*	0.1	mg/kg	< 0.1					
Heptachlor	DETSC 3433*	0.1	mg/kg	< 0.1					
Aldrin	DETSC 3433*	0.1	mg/kg	< 0.1					
Heptachlor epoxide	DETSC 3433*	0.1	mg/kg	< 0.1					
gamma-Chlordane	DETSC 3433*	0.1	mg/kg	< 0.1					
Endosulphan I & Alpha-chlorodane	DETSC 3433*	0.1	mg/kg	< 0.1					
4,4-DDE	DETSC 3433*	0.1	mg/kg	< 0.1					
Dieldrin	DETSC 3433*	0.1	mg/kg	< 0.1					
Endrin	DETSC 3433*	0.1	mg/kg	< 0.1					
Endosulphan II & 4,4-DDD	DETSC 3433*	0.1	mg/kg	< 0.1					
Endrin aldehyde	DETSC 3433*	0.1	mg/kg	< 0.1					
4,4-DDT	DETSC 3433*	0.1	mg/kg	< 0.1					
Endosulphan sulphate	DETSC 3433*	0.1	mg/kg	< 0.1					
Methoxychlor	DETSC 3433*	0.1	mg/kg	< 0.1					
Endrin ketone	DETSC 3433*	0.1	mg/kg	< 0.1					
OPPs									
Dichlorvos	DETSC 3433*	0.1	mg/kg	< 0.1					
Mevinphos	DETSC 3433*	0.1	mg/kg	< 0.1					
Demeton-O	DETSC 3433*	0.1	mg/kg	< 0.1					
Ethoprop	DETSC 3433*	0.1	mg/kg	< 0.1					
Naled	DETSC 3433*	0.1	mg/kg	< 0.1					
Phorate	DETSC 3433*	0.1	mg/kg	< 0.1					

Summary of Chemical Analysis
Soil Samples

Our Ref 24-23094
Client Ref ~ 7322
Contract Title ~ Havenhill,East Anglia, CB9 0LL

			Lab No	2415257	2415258	2415259	2415260	2415261	2415262
			Sample ID ~	TP201	TP202	TP202	TP203	TP203	TP204
			Depth ~	0.10	0.10	0.50	0.10	0.60	0.10
			Other ID ~						
			Sample Type ~	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
			Sampling Date ~	23/10/2024	23/10/2024	23/10/2024	23/10/2024	23/10/2024	23/10/2024
			Sampling Time ~	n/s	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**						
Demeton-S	DETSC 3433*	0.1	mg/kg	< 0.1					
Diazinon	DETSC 3433*	0.1	mg/kg	< 0.1					
Disulfoton	DETSC 3433*	0.1	mg/kg	< 0.1					
Methylparathion	DETSC 3433*	0.1	mg/kg	< 0.1					
Ronnel	DETSC 3433*	0.1	mg/kg	< 0.1					
Fenthion	DETSC 3433*	0.1	mg/kg	< 0.1					
Chlopyrifos	DETSC 3433*	0.1	mg/kg	< 0.1					
Trichlorinate	DETSC 3433*	0.1	mg/kg	< 0.1					
Merphos	DETSC 3433*	0.1	mg/kg	< 0.1					
Stirofos	DETSC 3433*	0.1	mg/kg	< 0.1					
Tokuthion	DETSC 3433*	0.1	mg/kg	< 0.1					
Fensulfothion	DETSC 3433*	0.1	mg/kg	< 0.1					
Bolstar	DETSC 3433*	0.1	mg/kg	< 0.1					
Azinphos methyl	DETSC 3433*	0.1	mg/kg	< 0.1					
Coumaphos	DETSC 3433*	0.1	mg/kg	< 0.1					
Triazines									
Atraton	DETSC 3433*	0.1	mg/kg	< 0.1					
Prometon	DETSC 3433*	0.1	mg/kg	< 0.1					
Simazine	DETSC 3433*	0.1	mg/kg	< 0.1					
Atrazine	DETSC 3433*	0.1	mg/kg	< 0.1					
Propazine	DETSC 3433*	0.1	mg/kg	< 0.1					
Terbuthylazine	DETSC 3433*	0.1	mg/kg	< 0.1					
Secbumeton	DETSC 3433*	0.1	mg/kg	< 0.1					
Symetryn	DETSC 3433*	0.1	mg/kg	< 0.1					
Ametryn	DETSC 3433*	0.1	mg/kg	< 0.1					
Prometryne	DETSC 3433*	0.1	mg/kg	< 0.1					
Terbutryn	DETSC 3433*	0.1	mg/kg	< 0.1					

Summary of Chemical Analysis
Soil Samples

Our Ref 24-23094
Client Ref ~ 7322
Contract Title ~ Havenhill,East Anglia, CB9 0LL

			Lab No	2415263	2415264
			Sample ID ~	TP204	TP205
			Depth ~	0.80	0.10
			Other ID ~		
			Sample Type ~	SOIL	SOIL
			Sampling Date ~	23/10/2024	23/10/2024
			Sampling Time ~	n/s	n/s
Test	**Method**	**LOD**	**Units**		
Metals					
Arsenic	DETSC 2301#	0.2	mg/kg	6.4	11
Boron, Water Soluble (2.5:1)	DETSC 2311#	0.2	mg/kg	< 0.2	0.5
Cadmium	DETSC 2301#	0.1	mg/kg	0.2	0.2
Chromium	DETSC 2301#	0.15	mg/kg	13	21
Chromium III	DETSC 2301*	0.15	mg/kg	13	21
Chromium, Hexavalent	DETSC 2204*	1	mg/kg	< 1.0	< 1.0
Copper	DETSC 2301#	0.2	mg/kg	13	14
Lead	DETSC 2301#	0.3	mg/kg	5.5	17
Mercury	DETSC 2325#	0.05	mg/kg	< 0.05	< 0.05
Nickel	DETSC 2301#	1	mg/kg	18	23
Selenium	DETSC 2301#	0.5	mg/kg	< 0.5	< 0.5
Zinc	DETSC 2301#	1	mg/kg	43	55
Inorganics					
pH	DETSC 2008#		pH	8.0	8.1
Total Organic Carbon	DETSC 2084#	0.5	%	1.5	2.2
Petroleum Hydrocarbons					
Aliphatic C5-C6: HS_1D_AL	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01
Aliphatic C6-C8: HS_1D_AL	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01
Aliphatic C8-C10: HS_1D_AL	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01
Aliphatic C10-C12: EH_CU_1D_AL	DETSC 3072#	1.5	mg/kg	< 1.5	< 1.5
Aliphatic C12-C16: EH_CU_1D_AL	DETSC 3072#	1.2	mg/kg	< 1.2	< 1.2
Aliphatic C16-C21: EH_CU_1D_AL	DETSC 3072#	1.5	mg/kg	< 1.5	< 1.5
Aliphatic C21-C35: EH_CU_1D_AL	DETSC 3072#	3.4	mg/kg	< 3.4	< 3.4
Aliphatic C5-C35: EH_CU+HS_1D_AL	DETSC 3072*	10	mg/kg	< 10	< 10
Aromatic C5-C7: HS_1D_AR	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01
Aromatic C7-C8: HS_1D_AR	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01
Aromatic C8-C10: HS_1D_AR	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01
Aromatic C10-C12: EH_CU_1D_AR	DETSC 3072#	0.9	mg/kg	< 0.9	< 0.9
Aromatic C12-C16: EH_CU_1D_AR	DETSC 3072#	0.5	mg/kg	< 0.5	< 0.5
Aromatic C16-C21: EH_CU_1D_AR	DETSC 3072#	0.6	mg/kg	< 0.6	< 0.6
Aromatic C21-C35: EH_CU_1D_AR	DETSC 3072#	1.4	mg/kg	< 1.4	< 1.4
Aromatic C5-C35: EH_CU+HS_1D_AR	DETSC 3072*	10	mg/kg	< 10	< 10
TPH Ali/Aro Total C5-C35: EH_CU+HS_1D_Total	DETSC 3072*	10	mg/kg	< 10	< 10
Benzene	DETSC 3321#	0.01	mg/kg	< 0.01	< 0.01
Ethylbenzene	DETSC 3321#	0.01	mg/kg	< 0.01	< 0.01
Toluene	DETSC 3321#	0.01	mg/kg	< 0.01	< 0.01
Xylene	DETSC 3321#	0.01	mg/kg	< 0.01	< 0.01
MTBE	DETSC 3321	0.01	mg/kg	< 0.01	< 0.01
PAHs					
Naphthalene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03

Summary of Chemical Analysis
Soil Samples

Our Ref 24-23094
Client Ref ~ 7322
Contract Title ~ Havenhill,East Anglia, CB9 0LL

			Lab No	2415263	2415264
			Sample ID ~	TP204	TP205
			Depth ~	0.80	0.10
			Other ID ~		
			Sample Type ~	SOIL	SOIL
			Sampling Date ~	23/10/2024	23/10/2024
			Sampling Time ~	n/s	n/s
Test	**Method**	**LOD**	**Units**		
Acenaphthylene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03
Acenaphthene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03
Fluorene	DETSC 3303	0.03	mg/kg	< 0.03	< 0.03
Phenanthrene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03
Anthracene	DETSC 3303	0.03	mg/kg	< 0.03	< 0.03
Fluoranthene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03
Pyrene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03
Benzo(a)anthracene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03
Chrysene	DETSC 3303	0.03	mg/kg	< 0.03	< 0.03
Benzo(b)fluoranthene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03
Benzo(k)fluoranthene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03
Benzo(a)pyrene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03
Indeno(1,2,3-c,d)pyrene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03
Dibenzo(a,h)anthracene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03
Benzo(g,h,i)perylene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03
PAH - USEPA 16, Total	DETSC 3303	0.1	mg/kg	< 0.10	< 0.10
OCPs					
alpha-BHC	DETSC 3433*	0.1	mg/kg		< 0.1
gamma-BHC (Lindane)	DETSC 3433*	0.1	mg/kg		< 0.1
beta-BHC	DETSC 3433*	0.1	mg/kg		< 0.1
delta-BHC	DETSC 3433*	0.1	mg/kg		< 0.1
Heptachlor	DETSC 3433*	0.1	mg/kg		< 0.1
Aldrin	DETSC 3433*	0.1	mg/kg		< 0.1
Heptachlor epoxide	DETSC 3433*	0.1	mg/kg		< 0.1
gamma-Chlordane	DETSC 3433*	0.1	mg/kg		< 0.1
Endosulphan I & Alpha-chlorodane	DETSC 3433*	0.1	mg/kg		< 0.1
4,4-DDE	DETSC 3433*	0.1	mg/kg		< 0.1
Dieldrin	DETSC 3433*	0.1	mg/kg		< 0.1
Endrin	DETSC 3433*	0.1	mg/kg		< 0.1
Endosulphan II & 4,4-DDD	DETSC 3433*	0.1	mg/kg		< 0.1
Endrin aldehyde	DETSC 3433*	0.1	mg/kg		< 0.1
4,4-DDT	DETSC 3433*	0.1	mg/kg		< 0.1
Endosulphan sulphate	DETSC 3433*	0.1	mg/kg		< 0.1
Methoxychlor	DETSC 3433*	0.1	mg/kg		< 0.1
Endrin ketone	DETSC 3433*	0.1	mg/kg		< 0.1
OPPs					
Dichlorvos	DETSC 3433*	0.1	mg/kg		< 0.1
Mevinphos	DETSC 3433*	0.1	mg/kg		< 0.1
Demeton-O	DETSC 3433*	0.1	mg/kg		< 0.1
Ethoprop	DETSC 3433*	0.1	mg/kg		< 0.1
Naled	DETSC 3433*	0.1	mg/kg		< 0.1
Phorate	DETSC 3433*	0.1	mg/kg		< 0.1

Summary of Chemical Analysis
Soil Samples

Our Ref 24-23094
Client Ref ~ 7322
Contract Title ~ Havenhill,East Anglia, CB9 0LL

			Lab No	2415263	2415264
			Sample ID ~	TP204	TP205
			Depth ~	0.80	0.10
			Other ID ~		
			Sample Type ~	SOIL	SOIL
			Sampling Date ~	23/10/2024	23/10/2024
			Sampling Time ~	n/s	n/s
Test	**Method**	**LOD**	**Units**		
Demeton-S	DETSC 3433*	0.1	mg/kg		< 0.1
Diazinon	DETSC 3433*	0.1	mg/kg		< 0.1
Disulfoton	DETSC 3433*	0.1	mg/kg		< 0.1
Methylparathion	DETSC 3433*	0.1	mg/kg		< 0.1
Ronnel	DETSC 3433*	0.1	mg/kg		< 0.1
Fenthion	DETSC 3433*	0.1	mg/kg		< 0.1
Chlopyrifos	DETSC 3433*	0.1	mg/kg		< 0.1
Trichlorinate	DETSC 3433*	0.1	mg/kg		< 0.1
Merphos	DETSC 3433*	0.1	mg/kg		< 0.1
Stirofos	DETSC 3433*	0.1	mg/kg		< 0.1
Tokuthion	DETSC 3433*	0.1	mg/kg		< 0.1
Fensulfothion	DETSC 3433*	0.1	mg/kg		< 0.1
Bolstar	DETSC 3433*	0.1	mg/kg		< 0.1
Azinphos methyl	DETSC 3433*	0.1	mg/kg		< 0.1
Coumaphos	DETSC 3433*	0.1	mg/kg		< 0.1
Triazines					
Atraton	DETSC 3433*	0.1	mg/kg		< 0.1
Prometon	DETSC 3433*	0.1	mg/kg		< 0.1
Simazine	DETSC 3433*	0.1	mg/kg		< 0.1
Atrazine	DETSC 3433*	0.1	mg/kg		< 0.1
Propazine	DETSC 3433*	0.1	mg/kg		< 0.1
Terbuthylazine	DETSC 3433*	0.1	mg/kg		< 0.1
Secbumeton	DETSC 3433*	0.1	mg/kg		< 0.1
Symetryn	DETSC 3433*	0.1	mg/kg		< 0.1
Ametryn	DETSC 3433*	0.1	mg/kg		< 0.1
Prometryne	DETSC 3433*	0.1	mg/kg		< 0.1
Terbutryn	DETSC 3433*	0.1	mg/kg		< 0.1

WASTE ACCEPTANCE CRITERIA TESTING ANALYTICAL REPORT

Our Ref 24-23094
Client Ref 7322
Contract Title Havenhill,East Anglia, CB9 0LL
Sample Id TP202 0.50
Sample Numbers 2415259 2415265
Date Analysed 04/11/2024

Test Results On Waste

Determinand and Method Reference	Units	Result	WAC Limit Values: Inert Waste	SNRHW	Hazardous Waste
DETSC 2084# Total Organic Carbon	%	1.1	3	5	6
DETSC 2003# Loss On Ignition	%	5.7	n/a	n/a	10
DETSC 3321# BTEX	mg/kg	< 0.04	6	n/a	n/a
DETSC 3401# PCBs (7 congeners)	mg/kg	< 0.01	1	n/a	n/a
DETSC 3311* Mineral Oil (C10 - C40)	mg/kg	< 10	500	n/a	n/a
DETSC 3301 PAHs	mg/kg	< 1.6	100	n/a	n/a
DETSC 2008# pH	pH Units	7.8	n/a	>6	n/a
DETSC 2073* Acid Neutralisation Capacity (pH4)	mol/kg	< 1.0	n/a	TBE	TBE
DETSC 2073* Acid Neutralisation Capacity (pH7)	mol/kg	< 1.0	n/a	TBE	TBE

Test Results On Leachate

Determinand and Method Reference	Conc in Eluate ug/l 10:1	Amount Leached* mg/kg LS10	WAC Limit Values (Limit values for LS10 Leachate): Inert Waste	SNRHW	Hazardous Waste
DETSC 2306 Arsenic as As	0.25	< 0.01	0.5	2	25
DETSC 2306 Barium as Ba	4.2	< 0.1	20	100	300
DETSC 2306 Cadmium as Cd	< 0.030	< 0.02	0.04	1	5
DETSC 2306 Chromium as Cr	< 0.25	< 0.1	0.5	10	70
DETSC 2306 Copper as Cu	1	< 0.02	2	50	100
DETSC 2306 Mercury as Hg	< 0.010	< 0.002	0.01	0.2	2
DETSC 2306 Molybdenum as Mo	< 1.1	< 0.1	0.5	10	30
DETSC 2306 Nickel as Ni	< 0.50	< 0.1	0.4	10	40
DETSC 2306 Lead as Pb	0.19	< 0.05	0.5	10	50
DETSC 2306 Antimony as Sb	< 0.17	< 0.05	0.06	0.7	5
DETSC 2306 Selenium as Se	< 0.25	< 0.03	0.1	0.5	7
DETSC 2306 Zinc as Zn	< 1.3	< 0.01	4	50	200
DETSC 2055 Chloride as Cl	1400	< 100	800	15,000	25,000
DETSC 2055* Fluoride as F	260	2.6	10	150	500
DETSC 2055 Sulphate as SO4	2600	< 100	1000	20,000	50,000
DETSC 2009* Total Dissolved Solids	27000	270	4000	60,000	100,000
DETSC 2130 Phenol Index	< 100	< 1	1	n/a	n/a
DETSC 2085 Dissolved Organic Carbon	< 2000	< 50	500	800	1000

TBE - To Be Evaluated
SNRHW - Stable Non-Reactive Hazardous Waste

Additional Information

DETSC 2008 pH	6.7
DETSC 2009 Conductivity uS/cm	38.5
* Temperature*	20.0

Mass of Sample Kg*	0.120
Mass of dry Sample Kg*	0.100

Stage 1

Volume of Leachant L2*	0.985
Volume of Eluate VE1*	0.929

Disclaimer: *The WAC limit values are provided for guidance only. DETS does not accept responsibility for errors or omissions. Values are correct at time of issue.*

V.2.06 ** DETS are accredited for the testing of leachates and not the leachate preparation stage which is unaccredited.*

WASTE ACCEPTANCE CRITERIA TESTING ANALYTICAL REPORT

Our Ref 24-23094
Client Ref 7322
Contract Title Havenhill,East Anglia, CB9 0LL
Sample Id TP203 0.60
Sample Numbers 2415261 2415266
Date Analysed 04/11/2024

Test Results On Waste

Determinand and Method Reference	Units	Result	WAC Limit Values: Inert Waste	SNRHW	Hazardous Waste
DETSC 2084# Total Organic Carbon	%	< 0.5	3	5	6
DETSC 2003# Loss On Ignition	%	4.7	n/a	n/a	10
DETSC 3321# BTEX	mg/kg	< 0.04	6	n/a	n/a
DETSC 3401# PCBs (7 congeners)	mg/kg	< 0.01	1	n/a	n/a
DETSC 3311* Mineral Oil (C10 - C40)	mg/kg	< 10	500	n/a	n/a
DETSC 3301 PAHs	mg/kg	< 1.6	100	n/a	n/a
DETSC 2008# pH	pH Units	7.6	n/a	>6	n/a
DETSC 2073* Acid Neutralisation Capacity (pH4)	mol/kg	< 1.0	n/a	TBE	TBE
DETSC 2073* Acid Neutralisation Capacity (pH7)	mol/kg	< 1.0	n/a	TBE	TBE

Test Results On Leachate

Determinand and Method Reference	Conc in Eluate ug/l 10:1	Amount Leached* mg/kg LS10	WAC Limit Values (Limit values for LS10 Leachate): Inert Waste	SNRHW	Hazardous Waste
DETSC 2306 Arsenic as As	0.54	< 0.01	0.5	2	25
DETSC 2306 Barium as Ba	15	0.2	20	100	300
DETSC 2306 Cadmium as Cd	< 0.030	< 0.02	0.04	1	5
DETSC 2306 Chromium as Cr	2.5	< 0.1	0.5	10	70
DETSC 2306 Copper as Cu	2	0.02	2	50	100
DETSC 2306 Mercury as Hg	< 0.010	< 0.002	0.01	0.2	2
DETSC 2306 Molybdenum as Mo	< 1.1	< 0.1	0.5	10	30
DETSC 2306 Nickel as Ni	1.7	< 0.1	0.4	10	40
DETSC 2306 Lead as Pb	0.65	< 0.05	0.5	10	50
DETSC 2306 Antimony as Sb	< 0.17	< 0.05	0.06	0.7	5
DETSC 2306 Selenium as Se	< 0.25	< 0.03	0.1	0.5	7
DETSC 2306 Zinc as Zn	2.7	0.03	4	50	200
DETSC 2055 Chloride as Cl	1400	< 100	800	15,000	25,000
DETSC 2055* Fluoride as F	260	2.6	10	150	500
DETSC 2055 Sulphate as SO4	3300	< 100	1000	20,000	50,000
DETSC 2009* Total Dissolved Solids	37000	370	4000	60,000	100,000
DETSC 2130 Phenol Index	< 100	< 1	1	n/a	n/a
DETSC 2085 Dissolved Organic Carbon	2100	< 50	500	800	1000

TBE - To Be Evaluated
SNRHW - Stable Non-Reactive Hazardous Waste

Additional Information

DETSC 2008 pH	7.1
DETSC 2009 Conductivity uS/cm	52.7
* Temperature*	19.0

Mass of Sample Kg*	0.120
Mass of dry Sample Kg*	0.101

Stage 1

Volume of Leachant L2*	0.996
Volume of Eluate VE1*	0.925

Disclaimer: *The WAC limit values are provided for guidance only. DETS does not accept responsibility for errors or omissions. Values are correct at time of issue.*

V.2.06 ** DETS are accredited for the testing of leachates and not the leachate preparation stage which is unaccredited.*

WASTE ACCEPTANCE CRITERIA TESTING ANALYTICAL REPORT

Our Ref 24-23094
Client Ref 7322
Contract Title Havenhill,East Anglia, CB9 0LL
Sample Id TP204 0.80
Sample Numbers 2415263 2415267
Date Analysed 04/11/2024

Test Results On Waste

Determinand and Method Reference	Units	Result	WAC Limit Values: Inert Waste	SNRHW	Hazardous Waste
DETSC 2084# Total Organic Carbon	%	1.5	3	5	6
DETSC 2003# Loss On Ignition	%	3.6	n/a	n/a	10
DETSC 3321# BTEX	mg/kg	< 0.04	6	n/a	n/a
DETSC 3401# PCBs (7 congeners)	mg/kg	< 0.01	1	n/a	n/a
DETSC 3311* Mineral Oil (C10 - C40)	mg/kg	< 10	500	n/a	n/a
DETSC 3301 PAHs	mg/kg	< 1.6	100	n/a	n/a
DETSC 2008# pH	pH Units	8.0	n/a	>6	n/a
DETSC 2073* Acid Neutralisation Capacity (pH4)	mol/kg	< 1.0	n/a	TBE	TBE
DETSC 2073* Acid Neutralisation Capacity (pH7)	mol/kg	< 1.0	n/a	TBE	TBE

Test Results On Leachate

Determinand and Method Reference	Conc in Eluate ug/l 10:1	Amount Leached* mg/kg LS10	WAC Limit Values (Limit values for LS10 Leachate): Inert Waste	SNRHW	Hazardous Waste
DETSC 2306 Arsenic as As	0.25	< 0.01	0.5	2	25
DETSC 2306 Barium as Ba	11	0.1	20	100	300
DETSC 2306 Cadmium as Cd	< 0.030	< 0.02	0.04	1	5
DETSC 2306 Chromium as Cr	2	< 0.1	0.5	10	70
DETSC 2306 Copper as Cu	1.7	< 0.02	2	50	100
DETSC 2306 Mercury as Hg	< 0.010	< 0.002	0.01	0.2	2
DETSC 2306 Molybdenum as Mo	< 1.1	< 0.1	0.5	10	30
DETSC 2306 Nickel as Ni	0.64	< 0.1	0.4	10	40
DETSC 2306 Lead as Pb	0.49	< 0.05	0.5	10	50
DETSC 2306 Antimony as Sb	< 0.17	< 0.05	0.06	0.7	5
DETSC 2306 Selenium as Se	< 0.25	< 0.03	0.1	0.5	7
DETSC 2306 Zinc as Zn	< 1.3	< 0.01	4	50	200
DETSC 2055 Chloride as Cl	1200	< 100	800	15,000	25,000
DETSC 2055* Fluoride as F	340	3.4	10	150	500
DETSC 2055 Sulphate as SO4	3700	< 100	1000	20,000	50,000
DETSC 2009* Total Dissolved Solids	30000	300	4000	60,000	100,000
DETSC 2130 Phenol Index	< 100	< 1	1	n/a	n/a
DETSC 2085 Dissolved Organic Carbon	2200	< 50	500	800	1000

TBE - To Be Evaluated
SNRHW - Stable Non-Reactive Hazardous Waste

Additional Information

DETSC 2008 pH	7.4
DETSC 2009 Conductivity uS/cm	43.1
* Temperature*	19.0

Mass of Sample Kg*	0.110
Mass of dry Sample Kg*	0.095

Stage 1

Volume of Leachant L2*	0.934
Volume of Eluate VE1*	0.891

Disclaimer: *The WAC limit values are provided for guidance only. DETS does not accept responsibility for errors or omissions. Values are correct at time of issue.*

V.2.06 ** DETS are accredited for the testing of leachates and not the leachate preparation stage which is unaccredited.*

Summary of Asbestos Analysis
Soil Samples

Our Ref 24-23094
Client Ref ~ 7322
Contract Title ~ Havenhill,East Anglia, CB9 0LL

Lab No	Sample ID	Material Type	Result	Comment*	Analyst
2415257	TP201 0.10	SOIL	NAD	none	Keith Wilson
2415258	TP202 0.10	SOIL	NAD	none	Keith Wilson
2415259	TP202 0.50	SOIL	NAD	none	Keith Wilson
2415260	TP203 0.10	SOIL	NAD	none	Keith Wilson
2415261	TP203 0.60	SOIL	NAD	none	Keith Wilson
2415262	TP204 0.10	SOIL	NAD	none	Keith Wilson
2415263	TP204 0.80	SOIL	NAD	none	Keith Wilson
2415264	TP205 0.10	SOIL	NAD	none	Keith Wilson

Crocidolite = Blue Asbestos, Amosite = Brown Asbestos, Chrysotile = White Asbestos. Anthophyllite, Actinolite and Tremolite are other forms of Asbestos. Samples are analysed by DETSC 1101 using polarised light microscopy in accordance with HSG248 and documented in-house methods. NAD = No Asbestos Detected. Where a sample is NAD, the result is based on analysis of at least 2 sub-samples and should be taken to mean 'no asbestos detected in sample'. Key: * -not included in laboratory scope of accreditation.

Information in Support of the Analytical Results

Our Ref 24-23094
Client Ref ~ 7322
Contract ~ Havenhill,East Anglia, CB9 0LL

Containers Received & Deviating Samples

Lab No	Sample ID ~	Date Sampled ~	Containers Received	Holding time exceeded for tests	Inappropriate container for tests
2415257	TP201 0.10 SOIL	23/10/24	GJ 250ml, GJ 60ml, PT 1L		
2415258	TP202 0.10 SOIL	23/10/24	GJ 250ml, GJ 60ml, PT 1L		
2415259	TP202 0.50 SOIL	23/10/24	GJ 250ml, GJ 60ml, PT 1L		
2415260	TP203 0.10 SOIL	23/10/24	GJ 250ml, GJ 60ml, PT 1L		
2415261	TP203 0.60 SOIL	23/10/24	GJ 250ml, GJ 60ml, PT 1L		
2415262	TP204 0.10 SOIL	23/10/24	GJ 250ml, GJ 60ml, PT 1L		
2415263	TP204 0.80 SOIL	23/10/24	GJ 250ml, GJ 60ml, PT 1L		
2415264	TP205 0.10 SOIL	23/10/24	GJ 250ml, GJ 60ml, PT 1L		
2415265	TP202 0.50 LEACHATE	23/10/24	GJ 250ml, GJ 60ml, PT 1L		
2415266	TP203 0.60 LEACHATE	23/10/24	GJ 250ml, GJ 60ml, PT 1L		
2415267	TP204 0.80 LEACHATE	23/10/24	GJ 250ml, GJ 60ml, PT 1L		

Key: G-Glass P-Plastic J-Jar T-Tub

DETS cannot be held responsible for the integrity of samples received whereby the laboratory did not undertake the sampling. In this instance samples received may be deviating. Deviating Sample criteria are based on British and International standards and laboratory trials in conjunction with the UKAS note 'Guidance on Deviating Samples'. All samples received are listed above. However, those samples that have additional comments in relation to hold time, inappropriate containers etc are deviating due to the reasons stated. This means that the analysis is accredited where applicable, but results may be compromised due to sample deviations. If no sampled date (soils) or date+time (waters) has been supplied then samples are deviating. However, if you are able to supply a sampled date (and time for waters) this will prevent samples being reported as deviating where specific hold times are not exceeded and where the container supplied is suitable.

Soil Analysis Notes

Inorganic soil analysis was carried out on a dried sample, crushed to pass a 425µm sieve, in accordance with BS1377.
Organic soil analysis was carried out on an 'as received' sample. Organics results are corrected for moisture and expressed on a dry weight basis.
The Loss on Drying, used to express organics analysis on an air dried basis, is carried out at a temperature of 28°C +/-2°C.

Disposal

From the issue date of this test certificate, samples will be held for the following times prior to disposal :-
Soils - 1 month, Liquids - 2 weeks, Asbestos (test portion) - 6 months

Information in Support of the Analytical Results

List of HWOL Acronyms and Operators

Acronym	Description
HS	Headspace analysis
EH	Extractable Hydrocarbons - i.e. everything extracted by the solvent
CU	Clean-up - e.g. by florisil, silica gel
1D	GC - Single coil gas chromatography
2D	GC-GC - Double coil gas chromatography
Total	Aliphatics & Aromatics
AL	Aliphatics only
AR	Aromatics only
#1	EH_2D_Total but with humics mathematically subtracted
#2	EH_2D_Total but with fatty acids mathematically subtracted
_	Operator - underscore to separate acronyms (exception for +)
+	Operator to indicate cumulative eg. EH+HS_Total or EH_CU+HS_Total

Det	Acronym
Aliphatic C5-C6	HS_1D_AL
Aliphatic C6-C8	HS_1D_AL
Aliphatic C8-C10	HS_1D_AL
Aliphatic C10-C12	EH_CU_1D_AL
Aliphatic C12-C16	EH_CU_1D_AL
Aliphatic C16-C21	EH_CU_1D_AL
Aliphatic C21-C35	EH_CU_1D_AL
Aliphatic C5-C35	EH_CU+HS_1D_AL
Aromatic C5-C7	HS_1D_AR
Aromatic C7-C8	HS_1D_AR
Aromatic C8-C10	HS_1D_AR
Aromatic C10-C12	EH_CU_1D_AR
Aromatic C12-C16	EH_CU_1D_AR
Aromatic C16-C21	EH_CU_1D_AR
Aromatic C21-C35	EH_CU_1D_AR
Aromatic C5-C35	EH_CU+HS_1D_AR
TPH Ali/Aro Total C5-C35	EH_CU+HS_1D_Total
Mineral Oil (C10-C40) + Clean Up	EH_CU_1D_Total

Key:

~ Sample details are provided by the client and can affect the validity of the results

***** -not accredited.

-MCERTS (accreditation only applies if report carries the MCERTS logo).

$ -subcontracted.

n/s -not supplied.

I/S -insufficient sample.

U/S -unsuitable sample.

t/f -to follow.
nd -not detected.

End of Report

APPENDIX F GEOTECHNICAL TEST RESULTS

calabrian

LABORATORY REPORT

Contract Number: PSL24/7825

Report Date: 05 November 2024

Client's Reference: 7322

Client Name: Calabrian
8 l'Anson Close
Leyburn
Yorkshire
DL8 5LF

For the attention of: Richard Hey

Contract Title: Haverhill, East Anglia, CB9 0LL

Date Received: 24/10/2024
Date Commenced: 24/10/2024
Date Completed: 05/11/2024

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)	D Nicholson (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

SUMMARY OF LABORATORY SOIL DESCRIPTIONS

Hole Number	Sample Number	Sample Type	Top Depth m	Base Depth m	Description of Sample
TP201	1.0	D	2.00		Brown silty SAND.
TP202	1.0	D	3.00		Brown mottled grey slightly gravelly sandy CLAY.
TP203	1.2	D	3.00		Brown mottled grey slightly gravelly sandy CLAY.
TP204	0.9	D	3.00		Brown mottled grey slightly gravelly sandy CLAY.
TP205	1.0	D	2.00		Brown mottled grey slightly gravelly slightly sandy CLAY.

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

Haverhill, East Anglia, CB9 0LL

Contract No:
PSL24/7825
Client Ref:
7322

SUMMARY OF SOIL CLASSIFICATION TESTS

BS 1377 - Part 2 : 2022 in accordance with BS EN ISO 17892 (as below)

Hole Number	Sample Number	Sample Type	Top Depth m	Base Depth m	Water Content %	Linear Shrinkage	Particle Density Mg/m^3	Liquid Limit %	Plastic Limit %	Plasticity Index %	Passing 0.425mm %	Remarks
TP201	1.0	D	2.00		21.2				NP			
TP202	1.0	D	3.00		18.5			49	19	30	90	Medium Plasticity CIM
TP203	1.2	D	3.00		17.5			49	20	29	90	Medium Plasticity CIM
TP204	0.9	D	3.00		19.1			50	19	31	90	High Plasticity CIH
TP205	1.0	D	2.00		30.9			65	29	36	90	High Plasticity CIH

Water Content - BS 1377 - Part 2 : 2022 : Clause 4 in accordance with BS EN ISO 17892 - 1 : 2014 + A1 : 2022
Linear Shrinkage - BS 1377 - Part 2 : 2022 : Clause 7
Particle Density (Gas Jar method) - BS 1377 - Part 2 : 2022 : Clause 9
Liquid, Plastic Limit & Plasticity Index - BS 1377 - Part 2 : 2022 : Clause 5 & 6 in accordance with BS EN ISO 17892 - 12 : 2018 + A2 : 2022

SYMBOLS : NP = Non Plastic

UKAS TESTING 4043

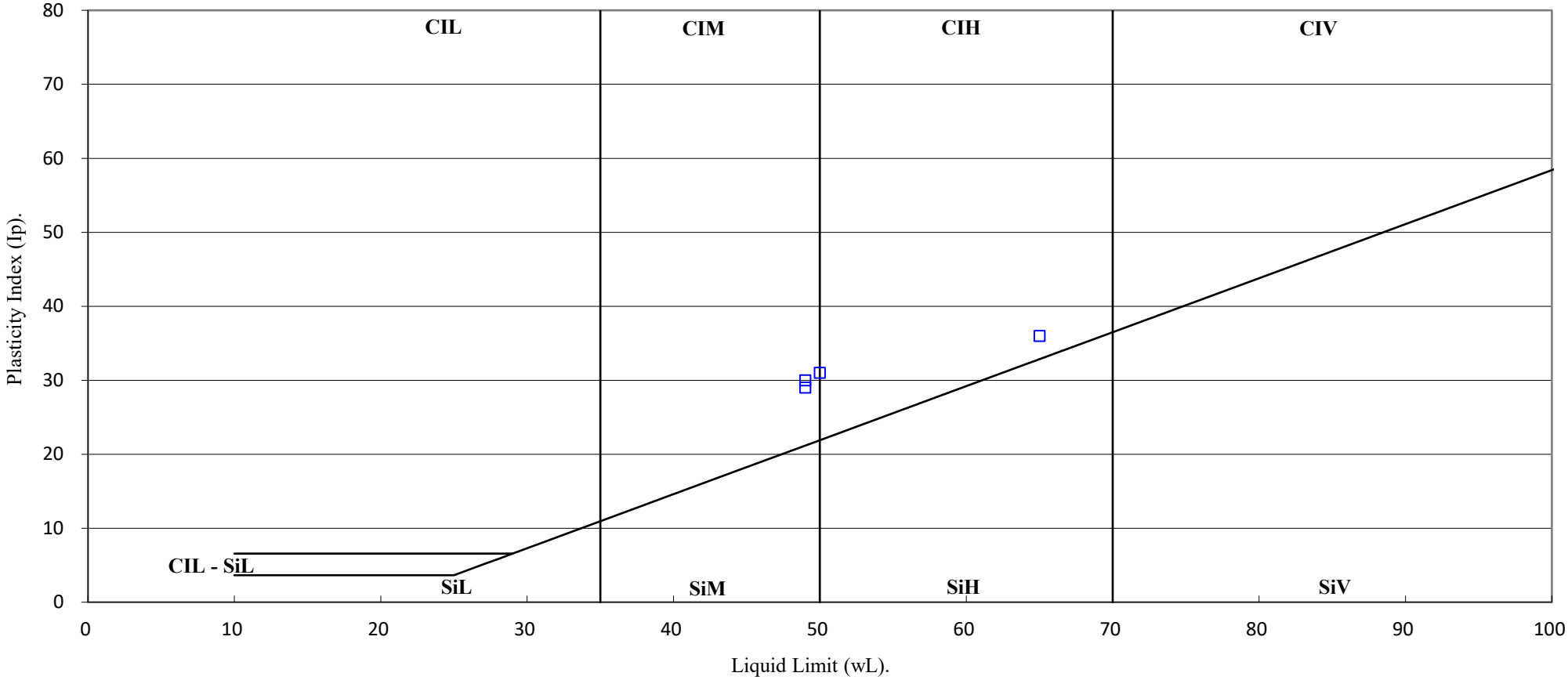
PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

Haverhill, East Anglia, CB9 0LL

Contract No:
PSL24/7825
Client Ref:
7322

PLASTICITY CHART

BS EN ISO 14688-2:2017 Clause 4.4



UKAS TESTING 4043 / PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY	**Haverhill, East Anglia, CB9 0LL**	**Contract No:**
		PSL24/7825
		Client Ref:

7 - 11 Harding Street
Leicester
LE1 4DH

Professional Soils Laboratory
5/7 Hexthorpe Road
Hexthorpe
Doncaster
DN4 0AR

Analytical Test Report: E24/00480/PSL - 24-52106

Your Project Reference:	**PSL24/7825 Haverhill, East Anglia, CB9 0LL**		
Your Order Number:	PSL24/7825	Samples Received / Instructed:	04/11/2024 / 04/11/2024
Report Issue Number:	1	Sample Tested:	04/11 to 12/11/2024
Samples Analysed:	5 sample(s)	Report issued:	12/11/2024

Signed



James Gane
Analytical Services Manager
CTS Group

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

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: 11.11.2024

Issued by: J. Gane

Issue No: 4

Rev No: 18

7 - 11 Harding Street
Leicester
LE1 4DH

E24/00480/PSL - 24-52106

Project Reference - PSL24/7825 Haverhill, East Anglia, CB9 0LL

Analytical Test Results - Chemical Analysis

Lab Reference			415140	415141	415142	415143	415144
Client Sample ID			-	-	-	-	-
Client Sample Location			TP201	TP202	TP203	TP204	TP205
Client Sample Type			D	D	D	D	D
Client Sample Number			1	1	1.2	0.9	1
Depth - Top (m)			2.00	3.00	3.00	3.00	2.00
Depth - Bottom (m)			2.00	3.00	3.00	3.00	2.00
Date of Sampling			-	-	-	-	-
Time of Sampling			-	-	-	-	-
Sample Matrix			Clay	Clay	Clay	Clay	Clay
Determinant	**Units**	**Accreditation**					
Water soluble sulphate (as SO_4)	(mg/l)	u	< 10	25	68	69	< 10
pH Value	pH Units	MCERTS	8.4	8.5	8.5	8.6	7.9

7 - 11 Harding Street
Leicester
LE1 4DH

E24/00480/PSL - 24-52106

Project Reference - PSL24/7825 Haverhill, East Anglia, CB9 0LL

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 (%)
415140	-	TP201	D	1	Brown sandy clay	-	-	100
415141	-	TP202	D	1	Grey slightly gravelly silty clay	-	-	100
415142	-	TP203	D	1.2	Grey slightly gravelly silty clay	-	-	100
415143	-	TP204	D	0.9	Grey slightly gravelly silty clay	-	-	100
415144	-	TP205	D	1	Dark brown sandy clay	-	-	100

7 - 11 Harding Street
Leicester
LE1 4DH

E24/00480/PSL - 24-52106

Project Reference - PSL24/7825 Haverhill, East Anglia, CB9 0LL

Sample Comments

Lab Reference	Client Sample ID	Client Sample Location	Client Sample Type	Client Sample Number	Comments
415140	-	TP201	D	1	
415141	-	TP202	D	1	
415142	-	TP203	D	1.2	
415143	-	TP204	D	0.9	
415144	-	TP205	D	1	

7 - 11 Harding Street
Leicester
LE1 4DH

E24/00480/PSL - 24-52106

Project Reference - PSL24/7825 Haverhill, East Anglia, CB9 0LL

Analysis Methodologies

Test Code	Test Name / Reference	Sample condition for analysis	Sample Preperation	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)
SAMPLEPREP	MS - CL - Sample Preparation	-	-	Preparation of samples (including determination of moisture content) to allow for subsequent analysis

7 - 11 Harding Street
Leicester
LE1 4DH

E24/00480/PSL - 24-52106

Project Reference - PSL24/7825 Haverhill, East Anglia, CB9 0LL

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

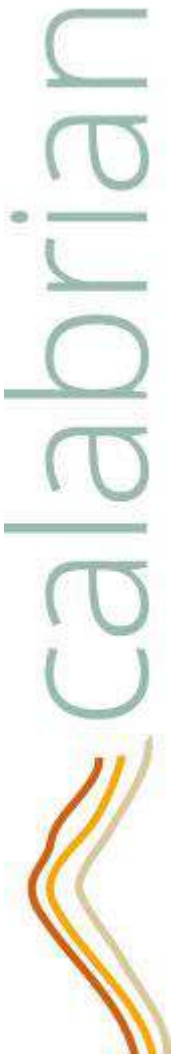
A - No date of sampling provided
W - No time of sampling provided for water sample
C - Received in inappropriate container
H - Contains headspace
T - Temperature on receipt exceeds storage temperature
R - Sample(s) received with less than 96 hours for testing to commence/complete, any result formally 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
415140	-	TP201	D	1		A
415141	-	TP202	D	1		A
415142	-	TP203	D	1		A
415143	-	TP204	D	1		A
415144	-	TP205	D	1		A

APPENDIX G HazWasteOnline™ CLASSIFICATION



Waste Classification Report

HazWasteOnline™ classifies waste as either **hazardous** or **non-hazardous** based on its chemical composition, related legislation and the rules and data defined in the current UK or EU technical guidance (Appendix C) (note that HP 9 Infectious is not assessed). It is the responsibility of the classifier named below to:

a) understand the origin of the waste
b) select the correct List of Waste code(s)
c) confirm that the list of determinands, results and sampling plan are fit for purpose
d) select and justify the chosen metal species (Appendix B)
e) correctly apply moisture correction and other available corrections
f) add the meta data for their user-defined substances (Appendix A)
g) check that the classification engine is suitable with respect to the national destination of the waste (Appendix C)

To aid the reviewer, the laboratory results, assumptions and justifications managed by the classifier are highlighted in pale yellow.

VRGFL-B7U70-31KEW

Job name

7322 HWOL

Description/Comments

Project

7322

Site

Haverhill, East Anglia, CB9 0LL

Classified by

Name:
Richard Hey
Date:
05 Nov 2024 12:23 GMT
Telephone:
01969 623803

Company:
Calabrian Limited
8 l'Anson Close
Leyburn

HazWasteOnline™ provides a two day, hazardous waste classification course that covers the use of the software and both basic and advanced waste classification techniques. Certification has to be renewed every 3 years.

HazWasteOnline™ Certification: -

Course	Date
Hazardous Waste Classification	-

Purpose of classification

2 - Material Characterisation

Address of the waste

Haverhill, East Anglia **Post Code** CB9 0LL

SIC for the process giving rise to the waste

41202 Construction of domestic buildings

Description of industry/producer giving rise to the waste

Development of greenfield site.

Description of the specific process, sub-process and/or activity that created the waste

Soil from infrastructure and foundations.

Description of the waste

Soil.

Job summary

#	Sample name	Depth [m]	Classification Result	Hazard properties	WAC Results			Page
					Inert	SNRHW	Hazardous	
1	TP201/0.10/2024-10-23		Non Hazardous		-	-	N/A	4
2	TP202/0.10/2024-10-23		Non Hazardous		-	-	N/A	9
3	TP202/0.50/2024-10-23		Non Hazardous		Pass	Pass	N/A	12
4	TP203/0.10/2024-10-23		Non Hazardous		-	-	N/A	15
5	TP203/0.60/2024-10-23		Non Hazardous		Pass	Pass	N/A	18
6	TP204/0.10/2024-10-23		Non Hazardous		-	-	N/A	21
7	TP204/0.80/2024-10-23		Non Hazardous		Pass	Pass	N/A	24
8	TP205/0.10/2024-10-23		Non Hazardous		-	-	N/A	27

Related documents

#	Name	Description
1	7322 HWOL.hwol	DETS North .hwol file used to populate the Job
2	Example waste stream template for contaminated soils	waste stream template used to create this Job

WAC results

WAC Settings: samples in this Job constitute a single population.

WAC limits used to evaluate the samples in this Job: "UK"
The WAC used in this report are the WAC defined for the inert, stable non-reactive hazardous and hazardous classes of landfill in the UK. You should check the actual acceptance criteria when the disposal site is identified as they may differ from the generic WAC used in this report.

Report

Created by: Richard Hey

Created date: 05 Nov 2024 12:23 GMT

Appendices	Page
Appendix A: Classifier defined and non GB MCL determinands	32
Appendix B: Rationale for selection of metal species	33
Appendix C: Version	34

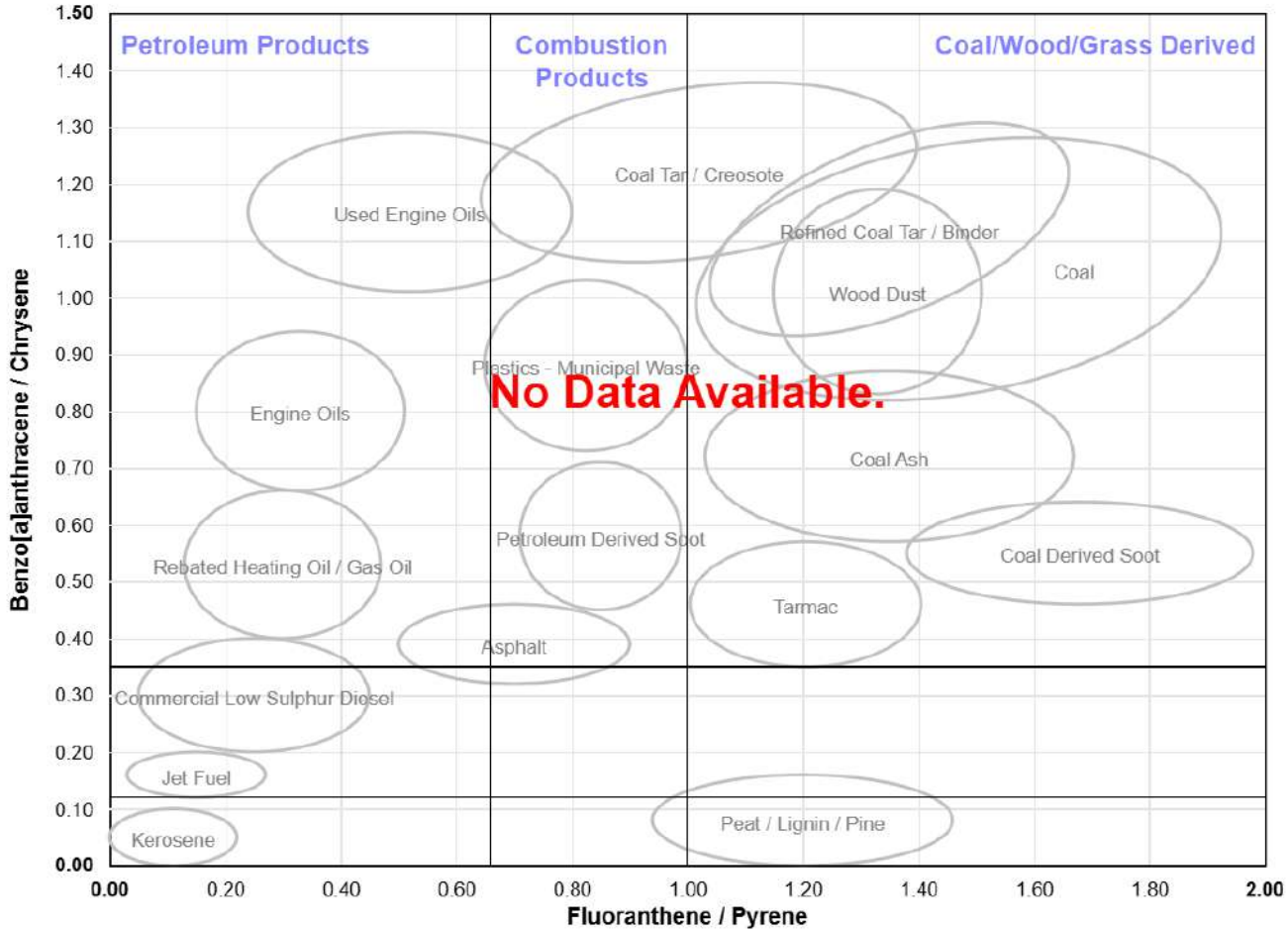
PAH Double Ratio Plot

Disclaimer

The domains, oval areas and the plotted points are **indicators only** and must be combined with other lines of evidence to form conclusions. Samples marked with an empty circle are not plotted as they fall outside of the graph's boundaries.

Credits

The domains and the horizontal and vertical lines are derived from Yunker et al. 2002 (Organic Geochemistry 33, 489-515)



Credits for the oval areas and labels

HazWasteOnline, 2023; Jones Environmental Forensics, 2014

Classification of sample: TP201/0.10/2024-10-23

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:
TP201/0.10/2024-10-23

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 0% No Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		13 mg/kg	1.32	17.164 mg/kg	0.00172 %		
2	boron { diboron trioxide }	005-008-00-8	215-125-8	1303-86-2		0.5 mg/kg	3.22	1.61 mg/kg	0.000161 %		
3	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		0.3 mg/kg	1.142	0.343 mg/kg	0.0000343 %		
4	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		25 mg/kg	1.462	36.539 mg/kg	0.00365 %		
5	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<1 mg/kg	2.27	<2.27 mg/kg	<0.000227 %		<LOD
6	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		19 mg/kg	1.126	21.392 mg/kg	0.00214 %		
7	lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	25 mg/kg	1.56	38.995 mg/kg	0.0025 %		
8	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<0.05 mg/kg	1.353	<0.0677 mg/kg	<0.00000677 %		<LOD
9	nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7		26 mg/kg	2.976	77.383 mg/kg	0.00774 %		
10	selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		<0.5 mg/kg	2.554	<1.277 mg/kg	<0.000128 %		<LOD
11	zinc { zinc chromate }	024-007-00-3	236-878-9	13530-65-9		72 mg/kg	2.774	199.739 mg/kg	0.02 %		
12	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane	603-181-00-X	216-653-1	1634-04-4		<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
13	benzene	601-020-00-8	200-753-7	71-43-2		<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
14	toluene	601-021-00-3	203-625-9	108-88-3		<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
15	ethylbenzene	601-023-00-4	202-849-4	100-41-4		<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
16	xylene	601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]		<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
17	pH			PH		9.1 pH		9.1 pH	9.1 pH		

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number									
18		naphthalene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
		601-052-00-2	202-049-5	91-20-3									
19		acenaphthylene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			205-917-1	208-96-8									
20		acenaphthene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			201-469-6	83-32-9									
21		fluorene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			201-695-5	86-73-7									
22		phenanthrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			201-581-5	85-01-8									
23		anthracene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			204-371-1	120-12-7									
24		fluoranthene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			205-912-4	206-44-0									
25		pyrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			204-927-3	129-00-0									
26		benzo[a]anthracene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
		601-033-00-9	200-280-6	56-55-3									
27		chrysene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
		601-048-00-0	205-923-4	218-01-9									
28		benzo[b]fluoranthene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
		601-034-00-4	205-911-9	205-99-2									
29		benzo[k]fluoranthene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
		601-036-00-5	205-916-6	207-08-9									
30		benzo[a]pyrene; benzo[def]chrysene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
		601-032-00-3	200-028-5	50-32-8									
31		indeno[123-cd]pyrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			205-893-2	193-39-5									
32		dibenz[a,h]anthracene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
		601-041-00-2	200-181-8	53-70-3									
33		benzo[ghi]perylene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			205-883-8	191-24-2									
34		DDT (ISO); clofenotane (INN); dicophane; 1,1,1-trichloro-2,2-bis(4-chlorophenyl)ethane; dichlorodiphenyltrichloroethane				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
		602-045-00-7	200-024-3	50-29-3									
35		chlordane (ISO); 1,2,4,5,6,7,8,8-octachloro-3a,4,7,7a-tetrahydro-4,7-methanoindan				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
		602-047-00-8	200-349-0	57-74-9									
36		hexachlorocyclohexanes, including lindane				<0.2	mg/kg		<0.2	mg/kg	<0.00002 %		<**LOD**
		602-043-00-6	210-168-9, 200-401-2, 206-270-8, 206-271-3	58-89-9, 319-84-6, 319-85-7, 608-73-1									
37		dieldrin (ISO)				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
		602-049-00-9	200-484-5	60-57-1									
38		endrin (ISO); 1,2,3,4,10,10-hexachloro-6,7-epoxy-1,4,4a,5,6,7,8,8a-octahydro-1,4:5,8-dimethanonaphthalene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
		602-051-00-X	200-775-7	72-20-8									
39		heptachlor (ISO); 1,4,5,6,7,8,8-heptachloro-3a,4,7,7a-tetrahydro-4,7-methanoindene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
		602-046-00-2	200-962-3	76-44-8									
40		aldrin (ISO)				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
		602-048-00-3	206-215-8	309-00-2									
41		heptachlor epoxide; 2,3-epoxy-1,4,5,6,7,8,8-heptachloro-3a,4,7,7a-tetrahydro-4,7-methanoindane				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
		602-063-00-5	213-831-0	1024-57-3									
42		p,p'-DDE				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
			200-784-6	72-55-9									
43		p,p'-methoxychlor				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
			200-779-9	72-43-5									

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number									
44		dichlorvos (ISO); 2,2-dichlorovinyl dimethyl phosphate				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
		015-019-00-X	200-547-7	62-73-7									
45		mevinphos (ISO); 2-methoxycarbonyl-1-methylvinyl dimethyl phosphate				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
		015-020-00-5	232-095-1	7786-34-7									
46		demeton-O-methyl (ISO); O-2-ethylthioethyl O,O-dimethyl phosphorothioate				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
		015-030-00-X	212-758-1	867-27-6									
47		ethoprophos (ISO); ethyl-S,S-dipropyl phosphorodithioate				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
		015-107-00-8	236-152-1	13194-48-4									
48		naled (ISO); 1,2-dibromo-2,2-dichloroethyl dimethyl phosphate				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
		015-055-00-6	206-098-3	300-76-5									
49		phorate (ISO); O,O-diethyl ethylthiomethyl phosphorodithioate				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
		015-033-00-6	206-052-2	298-02-2									
50		demeton-S (ISO); diethyl-S-2-ethylthioethyl phosphorothioate				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
		015-029-00-4	204-801-8	126-75-0									
51		diazinon (ISO); O,O-diethyl O-2-isopropyl-6-methylpyrimidin-4-yl phosphorothioate				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
		015-040-00-4	206-373-8	333-41-5									
52		disulfoton (ISO); O,O-diethyl 2-ethylthioethyl phosphorodithioate				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
		015-060-00-3	206-054-3	298-04-4									
53		parathion - methyl (ISO); O,O-dimethyl O-4-nitrophenyl phosphorothioate				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
		015-035-00-7	206-050-1	298-00-0									
54		fenchlorphos (ISO); O,O-dimethyl O-2,4,5-trichlorophenyl phosphorothioate				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
		015-052-00-X	206-082-6	299-84-3									
55		fenthion (ISO); O,O-dimethyl-O-(4-methylthion-m-tolyl) phosphorothioate				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
		015-048-00-8	200-231-9	55-38-9									
56		chlorpyrifos (ISO); O,O-diethyl O-3,5,6-trichloro-2-pyridyl phosphorothioate				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
		015-084-00-4	220-864-4	2921-88-2									
57		trichloronate (ISO); O-ethyl O-2,4,5-trichlorophenyl ethylphosphonothioate				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
		015-098-00-0	206-326-1	327-98-0									
58		fensulfothion (ISO); O,O-diethyl O-4-methylsulfinylphenyl phosphorothioate				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
		015-090-00-7	204-114-3	115-90-2									
59		azinphos-methyl (ISO); O,O-dimethyl-4-oxobenzotriazin-3-ylmethyl phosphorodithioate				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
		015-039-00-9	201-676-1	86-50-0									
60		coumaphos (ISO); O-3-chloro-4-methylcoumarin-7-yl O,O-diethyl phosphorothioate				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
		015-038-00-3	200-285-3	56-72-4									
61		simazine (ISO); 6-chloro-N,N'-diethyl-1,3,5-triazine-2,4-diamine				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
		612-088-00-3	204-535-2	122-34-9									
62		atrazine (ISO); 2-chloro-4-ethylamine-6-isopropylamine-1,3,5-triazine				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
		613-068-00-7	217-617-8	1912-24-9									
63		propazine (ISO); 2-chloro-4,6-bis(isopropylamino)-1,3,5-triazine				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
		613-067-00-1	205-359-9	139-40-2									
64		terbuthylazine (ISO); N-tert-butyl-6-chloro-N¢-ethyl-1,3,5-triazine- 2,4-diamine				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
		613-323-00-2	227-637-9	5915-41-3									
65		secbumeton (ISO); 2-sec-butylamino-4-ethylamino-6-methoxy-1,3,5-triazine				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
		613-063-00-X	247-554-1	26259-45-0									

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number									
66		simetryn (ISO); 2,4-bis(ethylamino)-6-methylthio-1,3,5-triazine				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
		613-065-00-0	213-801-7	1014-70-6									
67		ametryn (ISO); N-ethyl-N'-isopropyl-6-(methylthio)-1,3,5-triazine-2,4-diamine				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
		613-010-00-0	212-634-7	834-12-8									
										Total:	0.0387 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

WAC results for sample: TP201/0.10/2024-10-23

WAC Settings: samples in this Job constitute a single population.

WAC limits used to evaluate this sample: "UK"
The WAC used in this report are the WAC defined for the inert, stable non-reactive hazardous and hazardous classes of landfill in the UK. You should check the actual acceptance criteria when the disposal site is identified as they may differ from the generic WAC used in this report.

The sample cannot be evaluated against the Inert (Inert waste landfill) criteria because of missing determinand values.

The sample cannot be evaluated against the SNRHW (Stable non-reactive hazardous waste in non-hazardous landfill) criteria because of missing determinand values.

WAC Determinands

Solid Waste Analysis				Landfill Waste Acceptance Criteria Limits		
#	Determinand		User entered data	Inert waste landfill	Stable non-reactive hazardous waste in non-hazardous landfill	Hazardous waste landfill
1	TOC (total organic carbon)	%	3	3	5	6
2	LOI (loss on ignition)	%		-	-	10
3	BTEX (benzene, toluene, ethylbenzene and xylenes)	mg/kg	<0.04	6	-	-
4	PCBs (polychlorinated biphenyls, 7 congeners)	mg/kg		1	-	-
5	Mineral oil (C10 to C40)	mg/kg		500	-	-
6	PAHs (polycyclic aromatic hydrocarbons)	mg/kg	<0.1	100	-	-
7	pH	pH		-	>6	-
8	ANC (acid neutralisation capacity)	mol/kg		-	-	-
Eluate Analysis 10:1						
9	arsenic	mg/kg		0.5	2	25
10	barium	mg/kg		20	100	300
11	cadmium	mg/kg		0.04	1	5
12	chromium	mg/kg		0.5	10	70
13	copper	mg/kg		2	50	100
14	mercury	mg/kg		0.01	0.2	2
15	molybdenum	mg/kg		0.5	10	30
16	nickel	mg/kg		0.4	10	40
17	lead	mg/kg		0.5	10	50
18	antimony	mg/kg		0.06	0.7	5
19	selenium	mg/kg		0.1	0.5	7
20	zinc	mg/kg		4	50	200
21	chloride	mg/kg		800	15,000	25,000
22	fluoride	mg/kg		10	150	500
23	sulphate	mg/kg		1,000	20,000	50,000
24	phenol index	mg/kg		1	-	-
25	DOC (dissolved organic carbon)	mg/kg		500	800	1,000
26	TDS (total dissolved solids)	mg/kg		4,000	60,000	100,000

Key

	User supplied data
	Not applicable
	Inert WAC criteria fail
	Missing WAC determinand value

Classification of sample: TP202/0.10/2024-10-23

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:
TP202/0.10/2024-10-23

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 0% No Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
1	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		12	mg/kg	1.32	15.844	mg/kg	0.00158 %		
2	boron { diboron trioxide }	005-008-00-8	215-125-8	1303-86-2		0.7	mg/kg	3.22	2.254	mg/kg	0.000225 %		
3	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		0.3	mg/kg	1.142	0.343	mg/kg	0.0000343 %		
4	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		23	mg/kg	1.462	33.616	mg/kg	0.00336 %		
5	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<1	mg/kg	2.27	<2.27	mg/kg	<0.000227 %		<LOD
6	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		18	mg/kg	1.126	20.266	mg/kg	0.00203 %		
7	lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	27	mg/kg	1.56	42.115	mg/kg	0.0027 %		
8	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<0.05	mg/kg	1.353	<0.0677	mg/kg	<0.00000677 %		<LOD
9	nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7		23	mg/kg	2.976	68.454	mg/kg	0.00685 %		
10	selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		<0.5	mg/kg	2.554	<1.277	mg/kg	<0.000128 %		<LOD
11	zinc { zinc chromate }	024-007-00-3	236-878-9	13530-65-9		71	mg/kg	2.774	196.964	mg/kg	0.0197 %		
12	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane	603-181-00-X	216-653-1	1634-04-4		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
13	benzene	601-020-00-8	200-753-7	71-43-2		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
14	toluene	601-021-00-3	203-625-9	108-88-3		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
15	ethylbenzene	601-023-00-4	202-849-4	100-41-4		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
16	xylene	601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
17	pH			PH		7.9	pH		7.9	pH	7.9 pH		

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number									
18		naphthalene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
		601-052-00-2	202-049-5	91-20-3									
19		acenaphthylene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			205-917-1	208-96-8									
20		acenaphthene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			201-469-6	83-32-9									
21		fluorene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			201-695-5	86-73-7									
22		phenanthrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			201-581-5	85-01-8									
23		anthracene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			204-371-1	120-12-7									
24		fluoranthene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			205-912-4	206-44-0									
25		pyrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			204-927-3	129-00-0									
26		benzo[a]anthracene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
		601-033-00-9	200-280-6	56-55-3									
27		chrysene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
		601-048-00-0	205-923-4	218-01-9									
28		benzo[b]fluoranthene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
		601-034-00-4	205-911-9	205-99-2									
29		benzo[k]fluoranthene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
		601-036-00-5	205-916-6	207-08-9									
30		benzo[a]pyrene; benzo[def]chrysene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
		601-032-00-3	200-028-5	50-32-8									
31		indeno[123-cd]pyrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			205-893-2	193-39-5									
32		dibenz[a,h]anthracene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
		601-041-00-2	200-181-8	53-70-3									
33		benzo[ghi]perylene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			205-883-8	191-24-2									
										Total:	0.0369 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

WAC results for sample: TP202/0.10/2024-10-23

WAC Settings: samples in this Job constitute a single population.

WAC limits used to evaluate this sample: "UK"
The WAC used in this report are the WAC defined for the inert, stable non-reactive hazardous and hazardous classes of landfill in the UK. You should check the actual acceptance criteria when the disposal site is identified as they may differ from the generic WAC used in this report.

The sample cannot be evaluated against the Inert (Inert waste landfill) criteria because of missing determinand values.

The sample cannot be evaluated against the SNRHW (Stable non-reactive hazardous waste in non-hazardous landfill) criteria because of missing determinand values.

WAC Determinands

Solid Waste Analysis				Landfill Waste Acceptance Criteria Limits		
#	Determinand		User entered data	Inert waste landfill	Stable non-reactive hazardous waste in non-hazardous landfill	Hazardous waste landfill
1	TOC (total organic carbon)	%	2.4	3	5	6
2	LOI (loss on ignition)	%		-	-	10
3	BTEX (benzene, toluene, ethylbenzene and xylenes)	mg/kg	<0.04	6	-	-
4	PCBs (polychlorinated biphenyls, 7 congeners)	mg/kg		1	-	-
5	Mineral oil (C10 to C40)	mg/kg		500	-	-
6	PAHs (polycyclic aromatic hydrocarbons)	mg/kg	<0.1	100	-	-
7	pH	pH		-	>6	-
8	ANC (acid neutralisation capacity)	mol/kg		-	-	-
Eluate Analysis 10:1						
9	arsenic	mg/kg		0.5	2	25
10	barium	mg/kg		20	100	300
11	cadmium	mg/kg		0.04	1	5
12	chromium	mg/kg		0.5	10	70
13	copper	mg/kg		2	50	100
14	mercury	mg/kg		0.01	0.2	2
15	molybdenum	mg/kg		0.5	10	30
16	nickel	mg/kg		0.4	10	40
17	lead	mg/kg		0.5	10	50
18	antimony	mg/kg		0.06	0.7	5
19	selenium	mg/kg		0.1	0.5	7
20	zinc	mg/kg		4	50	200
21	chloride	mg/kg		800	15,000	25,000
22	fluoride	mg/kg		10	150	500
23	sulphate	mg/kg		1,000	20,000	50,000
24	phenol index	mg/kg		1	-	-
25	DOC (dissolved organic carbon)	mg/kg		500	800	1,000
26	TDS (total dissolved solids)	mg/kg		4,000	60,000	100,000

Key

	User supplied data
	Not applicable
	Missing WAC determinand value

Classification of sample: TP202/0.50/2024-10-23

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:
TP202/0.50/2024-10-23

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 0% No Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		9.9 mg/kg	1.32	13.071 mg/kg	0.00131 %		
2	boron { diboron trioxide }	005-008-00-8	215-125-8	1303-86-2		0.5 mg/kg	3.22	1.61 mg/kg	0.000161 %		
3	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		0.2 mg/kg	1.142	0.228 mg/kg	0.0000228 %		
4	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		19 mg/kg	1.462	27.77 mg/kg	0.00278 %		
5	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<1 mg/kg	2.27	<2.27 mg/kg	<0.000227 %		<LOD
6	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		17 mg/kg	1.126	19.14 mg/kg	0.00191 %		
7	lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	9 mg/kg	1.56	14.038 mg/kg	0.0009 %		
8	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<0.05 mg/kg	1.353	<0.0677 mg/kg	<0.00000677 %		<LOD
9	nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7		26 mg/kg	2.976	77.383 mg/kg	0.00774 %		
10	selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		<0.5 mg/kg	2.554	<1.277 mg/kg	<0.000128 %		<LOD
11	zinc { zinc chromate }	024-007-00-3	236-878-9	13530-65-9		45 mg/kg	2.774	124.837 mg/kg	0.0125 %		
12	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane	603-181-00-X	216-653-1	1634-04-4		<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
13	benzene	601-020-00-8	200-753-7	71-43-2		<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
14	toluene	601-021-00-3	203-625-9	108-88-3		<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
15	ethylbenzene	601-023-00-4	202-849-4	100-41-4		<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
16	xylene	601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]		<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
17	pH			PH		7.8 pH		7.8 pH	7.8 pH		

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number									
18		naphthalene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
		601-052-00-2	202-049-5	91-20-3									
19		acenaphthylene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			205-917-1	208-96-8									
20		acenaphthene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			201-469-6	83-32-9									
21		fluorene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			201-695-5	86-73-7									
22		phenanthrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			201-581-5	85-01-8									
23		anthracene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			204-371-1	120-12-7									
24		fluoranthene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			205-912-4	206-44-0									
25		pyrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			204-927-3	129-00-0									
26		benzo[a]anthracene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
		601-033-00-9	200-280-6	56-55-3									
27		chrysene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
		601-048-00-0	205-923-4	218-01-9									
28		benzo[b]fluoranthene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
		601-034-00-4	205-911-9	205-99-2									
29		benzo[k]fluoranthene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
		601-036-00-5	205-916-6	207-08-9									
30		benzo[a]pyrene; benzo[def]chrysene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
		601-032-00-3	200-028-5	50-32-8									
31		indeno[123-cd]pyrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			205-893-2	193-39-5									
32		dibenz[a,h]anthracene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
		601-041-00-2	200-181-8	53-70-3									
33		benzo[ghi]perylene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			205-883-8	191-24-2									
34		polychlorobiphenyls; PCB				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<**LOD**
		602-039-00-4	215-648-1	1336-36-3									
										Total:	0.0277 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

WAC results for sample: TP202/0.50/2024-10-23

WAC Settings: samples in this Job constitute a single population.

WAC limits used to evaluate this sample: "UK"
The WAC used in this report are the WAC defined for the inert, stable non-reactive hazardous and hazardous classes of landfill in the UK. You should check the actual acceptance criteria when the disposal site is identified as they may differ from the generic WAC used in this report.

The sample PASSES the Inert (Inert waste landfill) criteria.

The sample PASSES the SNRHW (Stable non-reactive hazardous waste in non-hazardous landfill) criteria.

WAC Determinands

Solid Waste Analysis				Landfill Waste Acceptance Criteria Limits		
#	Determinand		User entered data	Inert waste landfill	Stable non-reactive hazardous waste in non-hazardous landfill	Hazardous waste landfill
1	TOC (total organic carbon)	%	1.1	3	5	6
2	LOI (loss on ignition)	%	5.7	-	-	10
3	BTEX (benzene, toluene, ethylbenzene and xylenes)	mg/kg	<0.04	6	-	-
4	PCBs (polychlorinated biphenyls, 7 congeners)	mg/kg	<0.01	1	-	-
5	Mineral oil (C10 to C40)	mg/kg	<10	500	-	-
6	PAHs (polycyclic aromatic hydrocarbons)	mg/kg	<0.1	100	-	-
7	pH	pH	7.8	-	>6	-
8	ANC (acid neutralisation capacity)	mol/kg	<1	-	-	-
Eluate Analysis 10:1						
9	arsenic	mg/kg	<0.01	0.5	2	25
10	barium	mg/kg	<0.1	20	100	300
11	cadmium	mg/kg	<0.02	0.04	1	5
12	chromium	mg/kg	<0.1	0.5	10	70
13	copper	mg/kg	<0.02	2	50	100
14	mercury	mg/kg	<0.002	0.01	0.2	2
15	molybdenum	mg/kg	<0.1	0.5	10	30
16	nickel	mg/kg	<0.1	0.4	10	40
17	lead	mg/kg	<0.05	0.5	10	50
18	antimony	mg/kg	<0.05	0.06	0.7	5
19	selenium	mg/kg	<0.03	0.1	0.5	7
20	zinc	mg/kg	<0.01	4	50	200
21	chloride	mg/kg	<100	800	15,000	25,000
22	fluoride	mg/kg	2.6	10	150	500
23	sulphate	mg/kg	<100	1,000	20,000	50,000
24	phenol index	mg/kg	<1	1	-	-
25	DOC (dissolved organic carbon)	mg/kg	<50	500	800	1,000
26	TDS (total dissolved solids)	mg/kg	270	4,000	60,000	100,000

Key

	User supplied data
	Not applicable

Classification of sample: TP203/0.10/2024-10-23

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:
TP203/0.10/2024-10-23

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 0% No Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
1	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		12	mg/kg	1.32	15.844	mg/kg	0.00158 %		
2	boron { diboron trioxide }	005-008-00-8	215-125-8	1303-86-2		0.7	mg/kg	3.22	2.254	mg/kg	0.000225 %		
3	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		0.2	mg/kg	1.142	0.228	mg/kg	0.0000228 %		
4	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		20	mg/kg	1.462	29.231	mg/kg	0.00292 %		
5	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<1	mg/kg	2.27	<2.27	mg/kg	<0.000227 %		<LOD
6	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		15	mg/kg	1.126	16.888	mg/kg	0.00169 %		
7	lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	20	mg/kg	1.56	31.196	mg/kg	0.002 %		
8	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<0.05	mg/kg	1.353	<0.0677	mg/kg	<0.00000677 %		<LOD
9	nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7		22	mg/kg	2.976	65.478	mg/kg	0.00655 %		
10	selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		<0.5	mg/kg	2.554	<1.277	mg/kg	<0.000128 %		<LOD
11	zinc { zinc chromate }	024-007-00-3	236-878-9	13530-65-9		67	mg/kg	2.774	185.868	mg/kg	0.0186 %		
12	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane	603-181-00-X	216-653-1	1634-04-4		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
13	benzene	601-020-00-8	200-753-7	71-43-2		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
14	toluene	601-021-00-3	203-625-9	108-88-3		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
15	ethylbenzene	601-023-00-4	202-849-4	100-41-4		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
16	xylene	601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
17	pH			PH		7.7	pH		7.7	pH	7.7 pH		

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number									
18		naphthalene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
		601-052-00-2	202-049-5	91-20-3									
19		acenaphthylene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			205-917-1	208-96-8									
20		acenaphthene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			201-469-6	83-32-9									
21		fluorene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			201-695-5	86-73-7									
22		phenanthrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			201-581-5	85-01-8									
23		anthracene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			204-371-1	120-12-7									
24		fluoranthene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			205-912-4	206-44-0									
25		pyrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			204-927-3	129-00-0									
26		benzo[a]anthracene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
		601-033-00-9	200-280-6	56-55-3									
27		chrysene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
		601-048-00-0	205-923-4	218-01-9									
28		benzo[b]fluoranthene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
		601-034-00-4	205-911-9	205-99-2									
29		benzo[k]fluoranthene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
		601-036-00-5	205-916-6	207-08-9									
30		benzo[a]pyrene; benzo[def]chrysene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
		601-032-00-3	200-028-5	50-32-8									
31		indeno[123-cd]pyrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			205-893-2	193-39-5									
32		dibenz[a,h]anthracene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
		601-041-00-2	200-181-8	53-70-3									
33		benzo[ghi]perylene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			205-883-8	191-24-2									
										Total:	0.034 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

WAC results for sample: TP203/0.10/2024-10-23

WAC Settings: samples in this Job constitute a single population.

WAC limits used to evaluate this sample: "UK"
The WAC used in this report are the WAC defined for the inert, stable non-reactive hazardous and hazardous classes of landfill in the UK. You should check the actual acceptance criteria when the disposal site is identified as they may differ from the generic WAC used in this report.

The sample cannot be evaluated against the Inert (Inert waste landfill) criteria because of missing determinand values.

The sample cannot be evaluated against the SNRHW (Stable non-reactive hazardous waste in non-hazardous landfill) criteria because of missing determinand values.

WAC Determinands

Solid Waste Analysis				Landfill Waste Acceptance Criteria Limits		
#	Determinand		User entered data	Inert waste landfill	Stable non-reactive hazardous waste in non-hazardous landfill	Hazardous waste landfill
1	TOC (total organic carbon)	%	1.8	3	5	6
2	LOI (loss on ignition)	%		-	-	10
3	BTEX (benzene, toluene, ethylbenzene and xylenes)	mg/kg	<0.04	6	-	-
4	PCBs (polychlorinated biphenyls, 7 congeners)	mg/kg		1	-	-
5	Mineral oil (C10 to C40)	mg/kg		500	-	-
6	PAHs (polycyclic aromatic hydrocarbons)	mg/kg	<0.1	100	-	-
7	pH	pH		-	>6	-
8	ANC (acid neutralisation capacity)	mol/kg		-	-	-
Eluate Analysis 10:1						
9	arsenic	mg/kg		0.5	2	25
10	barium	mg/kg		20	100	300
11	cadmium	mg/kg		0.04	1	5
12	chromium	mg/kg		0.5	10	70
13	copper	mg/kg		2	50	100
14	mercury	mg/kg		0.01	0.2	2
15	molybdenum	mg/kg		0.5	10	30
16	nickel	mg/kg		0.4	10	40
17	lead	mg/kg		0.5	10	50
18	antimony	mg/kg		0.06	0.7	5
19	selenium	mg/kg		0.1	0.5	7
20	zinc	mg/kg		4	50	200
21	chloride	mg/kg		800	15,000	25,000
22	fluoride	mg/kg		10	150	500
23	sulphate	mg/kg		1,000	20,000	50,000
24	phenol index	mg/kg		1	-	-
25	DOC (dissolved organic carbon)	mg/kg		500	800	1,000
26	TDS (total dissolved solids)	mg/kg		4,000	60,000	100,000

Key

	User supplied data
	Not applicable
	Missing WAC determinand value

Classification of sample: TP203/0.60/2024-10-23

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:
TP203/0.60/2024-10-23

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 0% No Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		8.3 mg/kg	1.32	10.959 mg/kg	0.0011 %		
2	boron { diboron trioxide }	005-008-00-8	215-125-8	1303-86-2		0.3 mg/kg	3.22	0.966 mg/kg	0.0000966 %		
3	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		0.2 mg/kg	1.142	0.228 mg/kg	0.0000228 %		
4	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		17 mg/kg	1.462	24.846 mg/kg	0.00248 %		
5	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<1 mg/kg	2.27	<2.27 mg/kg	<0.000227 %		<LOD
6	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		15 mg/kg	1.126	16.888 mg/kg	0.00169 %		
7	lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	7.5 mg/kg	1.56	11.699 mg/kg	0.00075 %		
8	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<0.05 mg/kg	1.353	<0.0677 mg/kg	<0.00000677 %		<LOD
9	nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7		23 mg/kg	2.976	68.454 mg/kg	0.00685 %		
10	selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		<0.5 mg/kg	2.554	<1.277 mg/kg	<0.000128 %		<LOD
11	zinc { zinc chromate }	024-007-00-3	236-878-9	13530-65-9		43 mg/kg	2.774	119.288 mg/kg	0.0119 %		
12	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane	603-181-00-X	216-653-1	1634-04-4		<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
13	benzene	601-020-00-8	200-753-7	71-43-2		<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
14	toluene	601-021-00-3	203-625-9	108-88-3		<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
15	ethylbenzene	601-023-00-4	202-849-4	100-41-4		<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
16	xylene	601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]		<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
17	pH			PH		7.6 pH		7.6 pH	7.6 pH		

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number									
18		naphthalene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
		601-052-00-2	202-049-5	91-20-3									
19		acenaphthylene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			205-917-1	208-96-8									
20		acenaphthene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			201-469-6	83-32-9									
21		fluorene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			201-695-5	86-73-7									
22		phenanthrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			201-581-5	85-01-8									
23		anthracene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			204-371-1	120-12-7									
24		fluoranthene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			205-912-4	206-44-0									
25		pyrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			204-927-3	129-00-0									
26		benzo[a]anthracene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
		601-033-00-9	200-280-6	56-55-3									
27		chrysene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
		601-048-00-0	205-923-4	218-01-9									
28		benzo[b]fluoranthene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
		601-034-00-4	205-911-9	205-99-2									
29		benzo[k]fluoranthene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
		601-036-00-5	205-916-6	207-08-9									
30		benzo[a]pyrene; benzo[def]chrysene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
		601-032-00-3	200-028-5	50-32-8									
31		indeno[123-cd]pyrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			205-893-2	193-39-5									
32		dibenz[a,h]anthracene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
		601-041-00-2	200-181-8	53-70-3									
33		benzo[ghi]perylene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			205-883-8	191-24-2									
34		polychlorobiphenyls; PCB				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<**LOD**
		602-039-00-4	215-648-1	1336-36-3									
										Total:	0.0253 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

WAC results for sample: TP203/0.60/2024-10-23

WAC Settings: samples in this Job constitute a single population.

WAC limits used to evaluate this sample: "UK"
The WAC used in this report are the WAC defined for the inert, stable non-reactive hazardous and hazardous classes of landfill in the UK. You should check the actual acceptance criteria when the disposal site is identified as they may differ from the generic WAC used in this report.

The sample PASSES the Inert (Inert waste landfill) criteria.

The sample PASSES the SNRHW (Stable non-reactive hazardous waste in non-hazardous landfill) criteria.

WAC Determinands

Solid Waste Analysis				Landfill Waste Acceptance Criteria Limits		
#	Determinand		User entered data	Inert waste landfill	Stable non-reactive hazardous waste in non-hazardous landfill	Hazardous waste landfill
1	TOC (total organic carbon)	%	<0.5	3	5	6
2	LOI (loss on ignition)	%	4.7	-	-	10
3	BTEX (benzene, toluene, ethylbenzene and xylenes)	mg/kg	<0.04	6	-	-
4	PCBs (polychlorinated biphenyls, 7 congeners)	mg/kg	<0.01	1	-	-
5	Mineral oil (C10 to C40)	mg/kg	<10	500	-	-
6	PAHs (polycyclic aromatic hydrocarbons)	mg/kg	<0.1	100	-	-
7	pH	pH	7.6	-	>6	-
8	ANC (acid neutralisation capacity)	mol/kg	<1	-	-	-
Eluate Analysis 10:1						
9	arsenic	mg/kg	<0.01	0.5	2	25
10	barium	mg/kg	0.15	20	100	300
11	cadmium	mg/kg	<0.02	0.04	1	5
12	chromium	mg/kg	<0.1	0.5	10	70
13	copper	mg/kg	0.02	2	50	100
14	mercury	mg/kg	<0.002	0.01	0.2	2
15	molybdenum	mg/kg	<0.1	0.5	10	30
16	nickel	mg/kg	<0.1	0.4	10	40
17	lead	mg/kg	<0.05	0.5	10	50
18	antimony	mg/kg	<0.05	0.06	0.7	5
19	selenium	mg/kg	<0.03	0.1	0.5	7
20	zinc	mg/kg	0.027	4	50	200
21	chloride	mg/kg	<100	800	15,000	25,000
22	fluoride	mg/kg	2.6	10	150	500
23	sulphate	mg/kg	<100	1,000	20,000	50,000
24	phenol index	mg/kg	<1	1	-	-
25	DOC (dissolved organic carbon)	mg/kg	<50	500	800	1,000
26	TDS (total dissolved solids)	mg/kg	370	4,000	60,000	100,000

Key

	User supplied data
	Not applicable

Classification of sample: TP204/0.10/2024-10-23

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:
TP204/0.10/2024-10-23

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 0% No Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
1	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		10	mg/kg	1.32	13.203	mg/kg	0.00132 %		
2	boron { diboron trioxide }	005-008-00-8	215-125-8	1303-86-2		0.6	mg/kg	3.22	1.932	mg/kg	0.000193 %		
3	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		0.3	mg/kg	1.142	0.343	mg/kg	0.0000343 %		
4	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		21	mg/kg	1.462	30.693	mg/kg	0.00307 %		
5	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<1	mg/kg	2.27	<2.27	mg/kg	<0.000227 %		<LOD
6	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		15	mg/kg	1.126	16.888	mg/kg	0.00169 %		
7	lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	19	mg/kg	1.56	29.636	mg/kg	0.0019 %		
8	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<0.05	mg/kg	1.353	<0.0677	mg/kg	<0.00000677 %		<LOD
9	nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7		22	mg/kg	2.976	65.478	mg/kg	0.00655 %		
10	selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		<0.5	mg/kg	2.554	<1.277	mg/kg	<0.000128 %		<LOD
11	zinc { zinc chromate }	024-007-00-3	236-878-9	13530-65-9		60	mg/kg	2.774	166.449	mg/kg	0.0166 %		
12	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane	603-181-00-X	216-653-1	1634-04-4		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
13	benzene	601-020-00-8	200-753-7	71-43-2		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
14	toluene	601-021-00-3	203-625-9	108-88-3		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
15	ethylbenzene	601-023-00-4	202-849-4	100-41-4		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
16	xylene	601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
17	pH			PH		6	pH		6	pH	6pH		

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number									
18		naphthalene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
		601-052-00-2	202-049-5	91-20-3									
19		acenaphthylene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			205-917-1	208-96-8									
20		acenaphthene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			201-469-6	83-32-9									
21		fluorene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			201-695-5	86-73-7									
22		phenanthrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			201-581-5	85-01-8									
23		anthracene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			204-371-1	120-12-7									
24		fluoranthene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			205-912-4	206-44-0									
25		pyrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			204-927-3	129-00-0									
26		benzo[a]anthracene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
		601-033-00-9	200-280-6	56-55-3									
27		chrysene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
		601-048-00-0	205-923-4	218-01-9									
28		benzo[b]fluoranthene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
		601-034-00-4	205-911-9	205-99-2									
29		benzo[k]fluoranthene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
		601-036-00-5	205-916-6	207-08-9									
30		benzo[a]pyrene; benzo[def]chrysene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
		601-032-00-3	200-028-5	50-32-8									
31		indeno[123-cd]pyrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			205-893-2	193-39-5									
32		dibenz[a,h]anthracene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
		601-041-00-2	200-181-8	53-70-3									
33		benzo[ghi]perylene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			205-883-8	191-24-2									
										Total:	0.0318 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

WAC results for sample: TP204/0.10/2024-10-23

WAC Settings: samples in this Job constitute a single population.

WAC limits used to evaluate this sample: "UK"
The WAC used in this report are the WAC defined for the inert, stable non-reactive hazardous and hazardous classes of landfill in the UK. You should check the actual acceptance criteria when the disposal site is identified as they may differ from the generic WAC used in this report.

The sample cannot be evaluated against the Inert (Inert waste landfill) criteria because of missing determinand values.

The sample cannot be evaluated against the SNRHW (Stable non-reactive hazardous waste in non-hazardous landfill) criteria because of missing determinand values.

WAC Determinands

Solid Waste Analysis				Landfill Waste Acceptance Criteria Limits		
#	Determinand		User entered data	Inert waste landfill	Stable non-reactive hazardous waste in non-hazardous landfill	Hazardous waste landfill
1	TOC (total organic carbon)	%	2.4	3	5	6
2	LOI (loss on ignition)	%		-	-	10
3	BTEX (benzene, toluene, ethylbenzene and xylenes)	mg/kg	<0.04	6	-	-
4	PCBs (polychlorinated biphenyls, 7 congeners)	mg/kg		1	-	-
5	Mineral oil (C10 to C40)	mg/kg		500	-	-
6	PAHs (polycyclic aromatic hydrocarbons)	mg/kg	<0.1	100	-	-
7	pH	pH		-	>6	-
8	ANC (acid neutralisation capacity)	mol/kg		-	-	-
Eluate Analysis 10:1						
9	arsenic	mg/kg		0.5	2	25
10	barium	mg/kg		20	100	300
11	cadmium	mg/kg		0.04	1	5
12	chromium	mg/kg		0.5	10	70
13	copper	mg/kg		2	50	100
14	mercury	mg/kg		0.01	0.2	2
15	molybdenum	mg/kg		0.5	10	30
16	nickel	mg/kg		0.4	10	40
17	lead	mg/kg		0.5	10	50
18	antimony	mg/kg		0.06	0.7	5
19	selenium	mg/kg		0.1	0.5	7
20	zinc	mg/kg		4	50	200
21	chloride	mg/kg		800	15,000	25,000
22	fluoride	mg/kg		10	150	500
23	sulphate	mg/kg		1,000	20,000	50,000
24	phenol index	mg/kg		1	-	-
25	DOC (dissolved organic carbon)	mg/kg		500	800	1,000
26	TDS (total dissolved solids)	mg/kg		4,000	60,000	100,000

Key

	User supplied data
	Not applicable
	Missing WAC determinand value

Classification of sample: TP204/0.80/2024-10-23

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:
TP204/0.80/2024-10-23

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 0% No Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		6.4 mg/kg	1.32	8.45 mg/kg	0.000845 %		
2	boron { diboron trioxide }	005-008-00-8	215-125-8	1303-86-2		<0.2 mg/kg	3.22	<0.644 mg/kg	<0.0000644 %		<LOD
3	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		0.2 mg/kg	1.142	0.228 mg/kg	0.0000228 %		
4	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		13 mg/kg	1.462	19 mg/kg	0.0019 %		
5	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<1 mg/kg	2.27	<2.27 mg/kg	<0.000227 %		<LOD
6	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		13 mg/kg	1.126	14.637 mg/kg	0.00146 %		
7	lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	5.5 mg/kg	1.56	8.579 mg/kg	0.00055 %		
8	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<0.05 mg/kg	1.353	<0.0677 mg/kg	<0.00000677 %		<LOD
9	nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7		18 mg/kg	2.976	53.573 mg/kg	0.00536 %		
10	selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		<0.5 mg/kg	2.554	<1.277 mg/kg	<0.000128 %		<LOD
11	zinc { zinc chromate }	024-007-00-3	236-878-9	13530-65-9		43 mg/kg	2.774	119.288 mg/kg	0.0119 %		
12	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane	603-181-00-X	216-653-1	1634-04-4		<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
13	benzene	601-020-00-8	200-753-7	71-43-2		<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
14	toluene	601-021-00-3	203-625-9	108-88-3		<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
15	ethylbenzene	601-023-00-4	202-849-4	100-41-4		<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
16	xylene	601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]		<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
17	pH			PH		8 pH		8 pH	8pH		

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number									
18		naphthalene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
		601-052-00-2	202-049-5	91-20-3									
19		acenaphthylene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			205-917-1	208-96-8									
20		acenaphthene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			201-469-6	83-32-9									
21		fluorene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			201-695-5	86-73-7									
22		phenanthrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			201-581-5	85-01-8									
23		anthracene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			204-371-1	120-12-7									
24		fluoranthene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			205-912-4	206-44-0									
25		pyrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			204-927-3	129-00-0									
26		benzo[a]anthracene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
		601-033-00-9	200-280-6	56-55-3									
27		chrysene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
		601-048-00-0	205-923-4	218-01-9									
28		benzo[b]fluoranthene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
		601-034-00-4	205-911-9	205-99-2									
29		benzo[k]fluoranthene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
		601-036-00-5	205-916-6	207-08-9									
30		benzo[a]pyrene; benzo[def]chrysene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
		601-032-00-3	200-028-5	50-32-8									
31		indeno[123-cd]pyrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			205-893-2	193-39-5									
32		dibenz[a,h]anthracene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
		601-041-00-2	200-181-8	53-70-3									
33		benzo[ghi]perylene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			205-883-8	191-24-2									
34		polychlorobiphenyls; PCB				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<**LOD**
		602-039-00-4	215-648-1	1336-36-3									
										Total:	0.0225 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

WAC results for sample: TP204/0.80/2024-10-23

WAC Settings: samples in this Job constitute a single population.

WAC limits used to evaluate this sample: "UK"
The WAC used in this report are the WAC defined for the inert, stable non-reactive hazardous and hazardous classes of landfill in the UK. You should check the actual acceptance criteria when the disposal site is identified as they may differ from the generic WAC used in this report.

The sample PASSES the Inert (Inert waste landfill) criteria.

The sample PASSES the SNRHW (Stable non-reactive hazardous waste in non-hazardous landfill) criteria.

WAC Determinands

Solid Waste Analysis				Landfill Waste Acceptance Criteria Limits		
#	Determinand		User entered data	Inert waste landfill	Stable non-reactive hazardous waste in non-hazardous landfill	Hazardous waste landfill
1	TOC (total organic carbon)	%	1.5	3	5	6
2	LOI (loss on ignition)	%	3.6	-	-	10
3	BTEX (benzene, toluene, ethylbenzene and xylenes)	mg/kg	<0.04	6	-	-
4	PCBs (polychlorinated biphenyls, 7 congeners)	mg/kg	<0.01	1	-	-
5	Mineral oil (C10 to C40)	mg/kg	<10	500	-	-
6	PAHs (polycyclic aromatic hydrocarbons)	mg/kg	<0.1	100	-	-
7	pH	pH	8	-	>6	-
8	ANC (acid neutralisation capacity)	mol/kg	<1	-	-	-
Eluate Analysis 10:1						
9	arsenic	mg/kg	<0.01	0.5	2	25
10	barium	mg/kg	0.11	20	100	300
11	cadmium	mg/kg	<0.02	0.04	1	5
12	chromium	mg/kg	<0.1	0.5	10	70
13	copper	mg/kg	<0.02	2	50	100
14	mercury	mg/kg	<0.002	0.01	0.2	2
15	molybdenum	mg/kg	<0.1	0.5	10	30
16	nickel	mg/kg	<0.1	0.4	10	40
17	lead	mg/kg	<0.05	0.5	10	50
18	antimony	mg/kg	<0.05	0.06	0.7	5
19	selenium	mg/kg	<0.03	0.1	0.5	7
20	zinc	mg/kg	<0.01	4	50	200
21	chloride	mg/kg	<100	800	15,000	25,000
22	fluoride	mg/kg	3.4	10	150	500
23	sulphate	mg/kg	<100	1,000	20,000	50,000
24	phenol index	mg/kg	<1	1	-	-
25	DOC (dissolved organic carbon)	mg/kg	<50	500	800	1,000
26	TDS (total dissolved solids)	mg/kg	300	4,000	60,000	100,000

Key

	User supplied data
	Not applicable

Classification of sample: TP205/0.10/2024-10-23

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:
TP205/0.10/2024-10-23

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 0% No Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
1	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		11	mg/kg	1.32	14.524	mg/kg	0.00145 %		
2	boron { diboron trioxide }	005-008-00-8	215-125-8	1303-86-2		0.5	mg/kg	3.22	1.61	mg/kg	0.000161 %		
3	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		0.2	mg/kg	1.142	0.228	mg/kg	0.0000228 %		
4	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		21	mg/kg	1.462	30.693	mg/kg	0.00307 %		
5	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<1	mg/kg	2.27	<2.27	mg/kg	<0.000227 %		<LOD
6	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		14	mg/kg	1.126	15.762	mg/kg	0.00158 %		
7	lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	17	mg/kg	1.56	26.517	mg/kg	0.0017 %		
8	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<0.05	mg/kg	1.353	<0.0677	mg/kg	<0.00000677 %		<LOD
9	nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7		23	mg/kg	2.976	68.454	mg/kg	0.00685 %		
10	selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		<0.5	mg/kg	2.554	<1.277	mg/kg	<0.000128 %		<LOD
11	zinc { zinc chromate }	024-007-00-3	236-878-9	13530-65-9		55	mg/kg	2.774	152.578	mg/kg	0.0153 %		
12	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane	603-181-00-X	216-653-1	1634-04-4		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
13	benzene	601-020-00-8	200-753-7	71-43-2		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
14	toluene	601-021-00-3	203-625-9	108-88-3		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
15	ethylbenzene	601-023-00-4	202-849-4	100-41-4		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
16	xylene	601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
17	pH			PH		8.1	pH		8.1	pH	8.1 pH		

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number									
18		naphthalene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
		601-052-00-2	202-049-5	91-20-3									
19		acenaphthylene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			205-917-1	208-96-8									
20		acenaphthene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			201-469-6	83-32-9									
21		fluorene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			201-695-5	86-73-7									
22		phenanthrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			201-581-5	85-01-8									
23		anthracene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			204-371-1	120-12-7									
24		fluoranthene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			205-912-4	206-44-0									
25		pyrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			204-927-3	129-00-0									
26		benzo[a]anthracene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
		601-033-00-9	200-280-6	56-55-3									
27		chrysene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
		601-048-00-0	205-923-4	218-01-9									
28		benzo[b]fluoranthene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
		601-034-00-4	205-911-9	205-99-2									
29		benzo[k]fluoranthene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
		601-036-00-5	205-916-6	207-08-9									
30		benzo[a]pyrene; benzo[def]chrysene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
		601-032-00-3	200-028-5	50-32-8									
31		indeno[123-cd]pyrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			205-893-2	193-39-5									
32		dibenz[a,h]anthracene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
		601-041-00-2	200-181-8	53-70-3									
33		benzo[ghi]perylene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			205-883-8	191-24-2									
34		DDT (ISO); clofenotane (INN); dicophane; 1,1,1-trichloro-2,2-bis(4-chlorophenyl)ethane; dichlorodiphenyltrichloroethane				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		602-045-00-7	200-024-3	50-29-3									
35		chlordane (ISO); 1,2,4,5,6,7,8,8-octachloro-3a,4,7,7a-tetrahydro-4,7-methanoindan				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		602-047-00-8	200-349-0	57-74-9									
36		hexachlorocyclohexanes, including lindane				<0.2	mg/kg		<0.2	mg/kg	<0.00002 %		<LOD
		602-043-00-6	210-168-9, 200-401-2, 206-270-8, 206-271-3	58-89-9, 319-84-6, 319-85-7, 608-73-1									
37		dieldrin (ISO)				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		602-049-00-9	200-484-5	60-57-1									
38		endrin (ISO); 1,2,3,4,10,10-hexachloro-6,7-epoxy-1,4,4a,5,6,7,8,8a-octahydro-1,4:5,8-dimethanonaphthalene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		602-051-00-X	200-775-7	72-20-8									
39		heptachlor (ISO); 1,4,5,6,7,8,8-heptachloro-3a,4,7,7a-tetrahydro-4,7-methanoindene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		602-046-00-2	200-962-3	76-44-8									
40		aldrin (ISO)				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		602-048-00-3	206-215-8	309-00-2									
41		heptachlor epoxide; 2,3-epoxy-1,4,5,6,7,8,8-heptachloro-3a,4,7,7a-tetrahydro-4,7-methanoindane				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		602-063-00-5	213-831-0	1024-57-3									
42		p,p'-DDE				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			200-784-6	72-55-9									
43		p,p'-methoxychlor				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			200-779-9	72-43-5									

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number									
44		dichlorvos (ISO); 2,2-dichlorovinyl dimethyl phosphate				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
		015-019-00-X	200-547-7	62-73-7									
45		mevinphos (ISO); 2-methoxycarbonyl-1-methylvinyl dimethyl phosphate				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
		015-020-00-5	232-095-1	7786-34-7									
46		demeton-O-methyl (ISO); O-2-ethylthioethyl O,O-dimethyl phosphorothioate				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
		015-030-00-X	212-758-1	867-27-6									
47		ethoprophos (ISO); ethyl-S,S-dipropyl phosphorodithioate				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
		015-107-00-8	236-152-1	13194-48-4									
48		naled (ISO); 1,2-dibromo-2,2-dichloroethyl dimethyl phosphate				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
		015-055-00-6	206-098-3	300-76-5									
49		phorate (ISO); O,O-diethyl ethylthiomethyl phosphorodithioate				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
		015-033-00-6	206-052-2	298-02-2									
50		demeton-S (ISO); diethyl-S-2-ethylthioethyl phosphorothioate				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
		015-029-00-4	204-801-8	126-75-0									
51		diazinon (ISO); O,O-diethyl O-2-isopropyl-6-methylpyrimidin-4-yl phosphorothioate				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
		015-040-00-4	206-373-8	333-41-5									
52		disulfoton (ISO); O,O-diethyl 2-ethylthioethyl phosphorodithioate				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
		015-060-00-3	206-054-3	298-04-4									
53		parathion - methyl (ISO); O,O-dimethyl O-4-nitrophenyl phosphorothioate				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
		015-035-00-7	206-050-1	298-00-0									
54		fenchlorphos (ISO); O,O-dimethyl O-2,4,5-trichlorophenyl phosphorothioate				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
		015-052-00-X	206-082-6	299-84-3									
55		fenthion (ISO); O,O-dimethyl-O-(4-methylthion-m-tolyl) phosphorothioate				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
		015-048-00-8	200-231-9	55-38-9									
56		chlorpyrifos (ISO); O,O-diethyl O-3,5,6-trichloro-2-pyridyl phosphorothioate				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
		015-084-00-4	220-864-4	2921-88-2									
57		trichloronate (ISO); O-ethyl O-2,4,5-trichlorophenyl ethylphosphonothioate				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
		015-098-00-0	206-326-1	327-98-0									
58		fensulfothion (ISO); O,O-diethyl O-4-methylsulfinylphenyl phosphorothioate				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
		015-090-00-7	204-114-3	115-90-2									
59		azinphos-methyl (ISO); O,O-dimethyl-4-oxobenzotriazin-3-ylmethyl phosphorodithioate				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
		015-039-00-9	201-676-1	86-50-0									
60		coumaphos (ISO); O-3-chloro-4-methylcoumarin-7-yl O,O-diethyl phosphorothioate				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
		015-038-00-3	200-285-3	56-72-4									
61		simazine (ISO); 6-chloro-N,N'-diethyl-1,3,5-triazine-2,4-diamine				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
		612-088-00-3	204-535-2	122-34-9									
62		atrazine (ISO); 2-chloro-4-ethylamine-6-isopropylamine-1,3,5-triazine				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
		613-068-00-7	217-617-8	1912-24-9									
63		propazine (ISO); 2-chloro-4,6-bis(isopropylamino)-1,3,5-triazine				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
		613-067-00-1	205-359-9	139-40-2									
64		terbuthylazine (ISO); N-tert-butyl-6-chloro-N¢-ethyl-1,3,5-triazine- 2,4-diamine				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
		613-323-00-2	227-637-9	5915-41-3									
65		secbumeton (ISO); 2-sec-butylamino-4-ethylamino-6-methoxy-1,3,5-triazine				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
		613-063-00-X	247-554-1	26259-45-0									

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number									
66		simetryn (ISO); 2,4-bis(ethylamino)-6-methylthio-1,3,5-triazine				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
		613-065-00-0	213-801-7	1014-70-6									
67		ametryn (ISO); N-ethyl-N'-isopropyl-6-(methylthio)-1,3,5-triazine-2,4-diamine				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
		613-010-00-0	212-634-7	834-12-8									
										Total:	0.0308 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

WAC results for sample: TP205/0.10/2024-10-23

WAC Settings: samples in this Job constitute a single population.

WAC limits used to evaluate this sample: "UK"
The WAC used in this report are the WAC defined for the inert, stable non-reactive hazardous and hazardous classes of landfill in the UK. You should check the actual acceptance criteria when the disposal site is identified as they may differ from the generic WAC used in this report.

The sample cannot be evaluated against the Inert (Inert waste landfill) criteria because of missing determinand values.

The sample cannot be evaluated against the SNRHW (Stable non-reactive hazardous waste in non-hazardous landfill) criteria because of missing determinand values.

WAC Determinands

Solid Waste Analysis				Landfill Waste Acceptance Criteria Limits		
#	Determinand		User entered data	Inert waste landfill	Stable non-reactive hazardous waste in non-hazardous landfill	Hazardous waste landfill
1	TOC (total organic carbon)	%	2.2	3	5	6
2	LOI (loss on ignition)	%		-	-	10
3	BTEX (benzene, toluene, ethylbenzene and xylenes)	mg/kg	<0.04	6	-	-
4	PCBs (polychlorinated biphenyls, 7 congeners)	mg/kg		1	-	-
5	Mineral oil (C10 to C40)	mg/kg		500	-	-
6	PAHs (polycyclic aromatic hydrocarbons)	mg/kg	<0.1	100	-	-
7	pH	pH		-	>6	-
8	ANC (acid neutralisation capacity)	mol/kg		-	-	-
Eluate Analysis 10:1						
9	arsenic	mg/kg		0.5	2	25
10	barium	mg/kg		20	100	300
11	cadmium	mg/kg		0.04	1	5
12	chromium	mg/kg		0.5	10	70
13	copper	mg/kg		2	50	100
14	mercury	mg/kg		0.01	0.2	2
15	molybdenum	mg/kg		0.5	10	30
16	nickel	mg/kg		0.4	10	40
17	lead	mg/kg		0.5	10	50
18	antimony	mg/kg		0.06	0.7	5
19	selenium	mg/kg		0.1	0.5	7
20	zinc	mg/kg		4	50	200
21	chloride	mg/kg		800	15,000	25,000
22	fluoride	mg/kg		10	150	500
23	sulphate	mg/kg		1,000	20,000	50,000
24	phenol index	mg/kg		1	-	-
25	DOC (dissolved organic carbon)	mg/kg		500	800	1,000
26	TDS (total dissolved solids)	mg/kg		4,000	60,000	100,000

Key

	User supplied data
	Not applicable
	Missing WAC determinand value

Appendix A: Classifier defined and non GB MCL determinands

- **chromium(III) oxide (worst case)** (EC Number: 215-160-9, CAS Number: 1308-38-9)

Description/Comments: Data from C&L Inventory Database
Data source: https://echa.europa.eu/information-on-chemicals/cl-inventory-database/-/discli/details/33806
Data source date: 17 Jul 2015
Hazard Statements: Acute Tox. 4; H332 , Acute Tox. 4; H302 , Eye Irrit. 2; H319 , STOT SE 3; H335 , Skin Irrit. 2; H315 , Resp. Sens. 1; H334 , Skin Sens. 1; H317 , Repr. 1B; H360FD , Aquatic Acute 1; H400 , Aquatic Chronic 1; H410

- **ethylbenzene** (EC Number: 202-849-4, CAS Number: 100-41-4)

GB MCL index number: 601-023-00-4
Description/Comments:
Additional Hazard Statement(s): Carc. 2; H351
Reason for additional Hazards Statement(s):
20 Nov 2021 - Carc. 2; H351 hazard statement sourced from: IARC Group 2B (77) 2000

- **pH** (CAS Number: PH)

Description/Comments: Appendix C4
Data source: WM3 1st Edition 2015
Data source date: 25 May 2015
Hazard Statements: None.

- **acenaphthylene** (EC Number: 205-917-1, CAS Number: 208-96-8)

Description/Comments: Data from C&L Inventory Database
Data source: http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database
Data source date: 17 Jul 2015
Hazard Statements: Acute Tox. 4; H302 , Acute Tox. 1; H330 , Acute Tox. 1; H310 , Eye Irrit. 2; H319 , STOT SE 3; H335 , Skin Irrit. 2; H315

- **acenaphthene** (EC Number: 201-469-6, CAS Number: 83-32-9)

Description/Comments: Data from C&L Inventory Database
Data source: http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database
Data source date: 17 Jul 2015
Hazard Statements: Eye Irrit. 2; H319 , STOT SE 3; H335 , Skin Irrit. 2; H315 , Aquatic Acute 1; H400 , Aquatic Chronic 1; H410 , Aquatic Chronic 2; H411

- **fluorene** (EC Number: 201-695-5, CAS Number: 86-73-7)

Description/Comments: Data from C&L Inventory Database
Data source: http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database
Data source date: 06 Aug 2015
Hazard Statements: Aquatic Acute 1; H400 , Aquatic Chronic 1; H410

- **phenanthrene** (EC Number: 201-581-5, CAS Number: 85-01-8)

Description/Comments: Data from C&L Inventory Database
Data source: http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database
Data source date: 06 Aug 2015
Hazard Statements: Acute Tox. 4; H302 , Eye Irrit. 2; H319 , STOT SE 3; H335 , Carc. 2; H351 , Skin Sens. 1; H317 , Aquatic Acute 1; H400 , Aquatic Chronic 1; H410 , Skin Irrit. 2; H315

- **anthracene** (EC Number: 204-371-1, CAS Number: 120-12-7)

Description/Comments: Data from C&L Inventory Database
Data source: http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database
Data source date: 17 Jul 2015
Hazard Statements: Eye Irrit. 2; H319 , STOT SE 3; H335 , Skin Irrit. 2; H315 , Skin Sens. 1; H317 , Aquatic Acute 1; H400 , Aquatic Chronic 1; H410

- **fluoranthene** (EC Number: 205-912-4, CAS Number: 206-44-0)

Description/Comments: Data from C&L Inventory Database
Data source: http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database
Data source date: 21 Aug 2015
Hazard Statements: Acute Tox. 4; H302 , Aquatic Acute 1; H400 , Aquatic Chronic 1; H410

- **pyrene** (EC Number: 204-927-3, CAS Number: 129-00-0)

Description/Comments: Data from C&L Inventory Database; SDS Sigma Aldrich 2014
Data source: http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database
Data source date: 21 Aug 2015
Hazard Statements: Skin Irrit. 2; H315 , Eye Irrit. 2; H319 , STOT SE 3; H335 , Aquatic Acute 1; H400 , Aquatic Chronic 1; H410

- **indeno[123-cd]pyrene** (EC Number: 205-893-2, CAS Number: 193-39-5)

Description/Comments: Data from C&L Inventory Database
Data source: http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database
Data source date: 06 Aug 2015
Hazard Statements: Carc. 2; H351

benzo[ghi]perylene (EC Number: 205-883-8, CAS Number: 191-24-2)

Description/Comments: Data from C&L Inventory Database; SDS Sigma Aldrich 28/02/2015
Data source: http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database
Data source date: 23 Jul 2015
Hazard Statements: Aquatic Acute 1; H400 , Aquatic Chronic 1; H410

p,p'-DDE (EC Number: 200-784-6, CAS Number: 72-55-9)

Description/Comments: other names: 4,4'-DDE; 2,2-bis(p-chlorophenyl)-1,1-dichloroethylene
Data source: ECHA's C&L inventory database

https://www.echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database/-/discli/details/21845
Data source date: 11 Jan 2018
Hazard Statements: Acute Tox. 4; H302 , Acute Tox. 3; H311 , Skin Irrit. 2; H315 , Acute Tox. 3; H331 , Acute Tox. 4; H332 , Carc. 2; H351 , Aquatic Acute 1; H400 , Aquatic Chronic 1; H410

p,p'-methoxychlor (EC Number: 200-779-9, CAS Number: 72-43-5)

Description/Comments: other names: Methoxychlor; DMDT; Dimethoxy-DDT; Methoxy-DDT; Methoxcide; p,p'-Dimethoxydiphenyltrichloroethane; 1,1,1-Trichloro-2,2-bis(4-methoxyphenyl)ethane
Data source: ECHA's C&L inventory database

https://www.echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database/-/discli/details/112624
Data source date: 11 Jan 2018
Hazard Statements: Acute Tox. 4; H302 , Acute Tox. 4; H312 , Acute Tox. 4; H332 , Carc. 2; H351 , Repr. 2; H361 , STOT SE 2; H371 , STOT RE 2; H373 , Aquatic Acute 1; H400 , Aquatic Chronic 1; H410

polychlorobiphenyls; PCB (EC Number: 215-648-1, CAS Number: 1336-36-3)

GB MCL index number: 602-039-00-4
Description/Comments: Worst Case: IARC considers PCB Group 1; Carcinogenic to humans;

POP specific threshold from ATP1 (Regulation 756/2010/EU) to POPs Regulation (Regulation 850/2004/EC). Where applicable, the calculation method laid down in European standards EN 12766-1 and EN 12766-2 shall be applied.
Additional Hazard Statement(s): Carc. 1A; H350
Reason for additional Hazards Statement(s):
20 Nov 2021 - Carc. 1A; H350 hazard statement sourced from: IARC Group 1 (23, Sup 7, 100C) 2012

Appendix B: Rationale for selection of metal species

arsenic {arsenic trioxide}

Reasonable case CLP species based on hazard statements/molecular weight and most common (stable) oxide of arsenic. Industrial sources include: smelting; main precursor to other arsenic compounds (edit as required)

boron {diboron trioxide}

Reasonable case CLP species based on hazard statements/ molecular weight, physical form and low solubility. Industrial sources include: fluxing agent for glass/enamels; additive for fibre optics, borosilicate glass (edit as required)

cadmium {cadmium oxide}

Reasonable case CLP species based on hazard statements/molecular weight, very low solubility in water. Industrial sources include: electroplating baths, electrodes for storage batteries, catalysts, ceramic glazes, phosphors, pigments and nematocides. (edit as required) Worst case compounds in CLP: cadmium sulphate, chloride, fluoride & iodide not expected as either very soluble and/or compound's industrial usage not related to site history (edit as required)

chromium in chromium(III) compounds {chromium(III) oxide (worst case)}

Reasonable case species based on hazard statements/molecular weight. Industrial sources include: tanning, pigment in paint, inks and glass (edit as required)

chromium in chromium(VI) compounds {chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex}

Worst case species based on hazard statements/molecular weight (edit as required)

copper {dicopper oxide; copper (I) oxide}

Reasonable case CLP species based on hazard statements/molecular weight and insolubility in water. Industrial sources include: oxidised copper metal, brake pads, pigments, antifouling paints, fungicide. (edit as required) Worse case copper sulphate is very soluble and likely to have been leached away if ever present and/or not enough soluble sulphate detected. (edit as required)

lead {lead chromate}

Worst case CLP species based on hazard statements/molecular weight (edit as required)

mercury {mercury dichloride}

Worst case CLP species based on hazard statements/molecular weight (edit as required)

nickel {nickel chromate}

Worst case CLP species based on hazard statements/molecular weight (edit as required)

selenium {nickel selenate}

Worst case CLP species based on hazard statements/molecular weight (edit as required)

zinc {zinc chromate}

Worst case CLP species based on hazard statements/molecular weight (edit as required)

Appendix C: Version

HazWasteOnline Classification Engine: WM3 1st Edition v1.2.GB - Oct 2021
HazWasteOnline Classification Engine Version: 2024.304.6320.11573 (30 Oct 2024)
HazWasteOnline Database: 2024.304.6320.11573 (30 Oct 2024)

This classification utilises the following guidance and legislation:
WM3 v1.2.GB - Waste Classification - 1st Edition v1.2.GB - Oct 2021
CLP Regulation - Regulation 1272/2008/EC of 16 December 2008
1st ATP - Regulation 790/2009/EC of 10 August 2009
2nd ATP - Regulation 286/2011/EC of 10 March 2011
3rd ATP - Regulation 618/2012/EU of 10 July 2012
4th ATP - Regulation 487/2013/EU of 8 May 2013
Correction to 1st ATP - Regulation 758/2013/EU of 7 August 2013
5th ATP - Regulation 944/2013/EU of 2 October 2013
6th ATP - Regulation 605/2014/EU of 5 June 2014
WFD Annex III replacement - Regulation 1357/2014/EU of 18 December 2014
Revised List of Waste 2014 - Decision 2014/955/EU of 18 December 2014
7th ATP - Regulation 2015/1221/EU of 24 July 2015
8th ATP - Regulation (EU) 2016/918 of 19 May 2016
9th ATP - Regulation (EU) 2016/1179 of 19 July 2016
10th ATP - Regulation (EU) 2017/776 of 4 May 2017
HP14 amendment - Regulation (EU) 2017/997 of 8 June 2017
13th ATP - Regulation (EU) 2018/1480 of 4 October 2018
14th ATP - Regulation (EU) 2020/217 of 4 October 2019
15th ATP - Regulation (EU) 2020/1182 of 19 May 2020
The Chemicals (Health and Safety) and Genetically Modified Organisms (Contained Use)(Amendment etc.) (EU Exit) Regulations 2020 - UK: 2020 No. 1567 of 16th December 2020
The Waste and Environmental Permitting etc. (Legislative Functions and Amendment etc.) (EU Exit) Regulations 2020 - UK: 2020 No. 1540 of 16th December 2020
GB MCL List - version 1.1 of 09 June 2021
GB MCL List v2.0 - version 2.0 of 20th October 2023
GB MCL List v3.0 - version 3.0 of 11th January 2024
GB MCL List v4.0 - version 4.0 of 2nd March 2024
GB MCL List v5.0 - version 5.0 of 26th June 2024

WASTE CLASSIFICATION

Is Soil Waste?

Any soils intended for disposal off-site at a landfill are waste.

Some excess arisings (topsoil & subsoil) may be generated by excavations for foundations, sewers etc. If these are intended for retention and reuse on the site, they would be classed as clean naturally occurring soils and would not be considered waste, under the Waste Framework Directive.

In accordance with the CL:AIRE Code of Practice[1] any excess natural soil arisings should be suitable for Direct Transfer to another development site, for use either as clean cover material, or bulk fill for use, without the need for waste legislation to be applied.

Basic Waste Characterisation

Government's aim of reducing reliance on landfill as a disposal option and minimising the impacts of landfills on the environment and human health has meant the introduction of more stringent regulatory procedures. In accordance with the Landfill Regulations[2] and Waste Framework Directive (WFD) (2008/98/EC), it is a statutory requirement that a waste is characterised and also meets specific Waste Acceptance Criteria (WAC) prior to disposal at a landfill site. The waste producer has a Duty of Care[3] to ensure that the waste is characterised, and the landfill operator must also be satisfied that a Basic Characterisation, is properly completed before the waste is accepted.

If arisings from construction works are intended for disposal, then there is a requirement to determine prior to disposal whether these would classify as **Hazardous** or **Non-Hazardous** (this is not the same as 'risk' posed to remaining on-site).

The Environment Agency's technical guidance 'Waste Classification (WM3, 1st edition 2015)' which came into force on 1st July 2015, sets out the requirement for the classification. It also provides the basis for the methodology to employ in order to ensure compliance with the regulations.

The classification assesses the composition of the material and determines the concentrations of the hazardous substances in the material. The assessment of contaminated soil (excavated soil) to determine whether it is hazardous waste is dependent on the presence of "hazardous substances" exceeding particular thresholds.

In the case of contaminated soil, the basic characterisation requires testing for potential contaminants, derived from the knowledge of the site history (see sections above).

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[1] *The Definition of Waste: Development Industry Code of Practice. CL:AIRE, 2011.*
[2] *The Landfill (England and Wales) Regulations 2005*
[3] *Duty of Care requirements contained in Section 34 of the Environmental Protection Act 1990 and The Waste (England and Wales) Regulations 2011.*

Waste Acceptance Criteria

Landfills are classified according to whether they can accept hazardous, non-hazardous, or inert wastes. Wastes can only be accepted at a landfill if they meet the waste acceptance criteria (WAC) for that class of landfill.

The WAC laboratory analysis includes solids and leachate testing to assess which class of landfill the waste can be accepted at.

Currently there are only acceptance criteria for inert, stable-non-reactive hazardous and hazardous landfills. This means that WAC testing is only required for wastes destined for Inert, Stable Non-Reactive Hazardous (SNRH) and Hazardous landfills.

If material is classified as non-hazardous, there is a choice of sending the material to a non-hazardous or an inert landfill (subject to meeting inert waste acceptance levels). Where the material is classified as hazardous, WAC analysis will be required to demonstrate that it meets the acceptance levels for hazardous landfill or SNRH landfill.

Asbestos

With respect to asbestos, waste soils will be classed hazardous if the soil mass contains more than 0.1% asbestos fibres that are free and dispersed. However, where the waste contains identifiable pieces of asbestos (i.e., any particle of a size that can be identified as potentially being asbestos by a competent person if examined by the naked eye), then the waste is hazardous if the concentration of asbestos in the pieces alone is 0.1%. If a stockpile of soil contained rare fragments of broken asbestos-cement sheeting, the whole stockpile would be classed as hazardous unless all the fragments could be picked-out (even though the concentration of asbestos in the soil mass might be an orders of magnitude less than 0.1%).

Tarmac/Road Asphalt

Older tarmac typically comprised coal tar which is potentially a hazardous substances. Benzo[a]pyrene (BaP) is typically used as a marker compound for the presence of coal tar. Where the concentration of benzo[a]pyrene is at or above 50mg/kg (within the binding material and excluding the aggregate) then the material would be classed hazardous.