DRAFT Rev01

Clock House Developments Ltd.

Geo-environmental and Geotechnical Investigation Report

LAND AT MANOR FARM,
BLACKWELL CLOSE,
EARLS BARTON,
NN6 0NU

Report No: 23-05-05

February 2024

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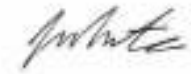
		SIGNATURE 	SIGNATURE 

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EXECUTIVE SUMMARY

Site Location	Land at Manor Farm, Blackwell Close, Earls Barton, NN6 0NU
OS Grid Reference	SP 85452 63573
Development Proposals	From development plans provided (drawing no. 1365 – PL – 103, revision E, dated 8/2/2024, drawn by HUB Architects) it can be seen that three residential dwellings are to be developed on the site with associated gardens, parking and soft landscaped areas, and one of the existing barns (Plot 4 on the aforementioned drawing) is to be converted to an additional residential dwelling with a garden.
Published Geology	Reference to the British Geological Survey website and sheet 186, Wellingborough 2007, indicates that the site is underlain by bedrock strata of Whitby Mudstone Formation of Jurassic Age. Northampton Sand Formation identified approximately 30m east.
Topography	The site is generally flat-lying. The southwest of the site is approximate 1.00m below the rest of the site.
Site History	Historical information records the southeast of the site to have been used as a smithy between 1901 and 1950; this is supported by historical maps.
Ground Conditions Encountered	• Made Ground was encountered in all exploratory holes in various forms from ground level to depths between 0.20m bgl and 1.15m bgl. • The Northampton Sand Formation was encountered across the site beneath the Made Ground to depths between 1.50m bgl and 2.00m bgl, and was generally encountered as firm to stiff orange-brown and blue-grey clay, with occasional gravel of ironstone, flint and organic material. • The Whitby Mudstone Formation was encountered in all continuous tube boreholes, to a maximum depth of 5.00m bgl where the deepest exploratory hole terminated, and was generally encountered as a stiff to very stiff dark blue-grey and occasional yellow-brown clay, becoming a stiff to very stiff blue-grey silty clay with occasional yellow silt partings, mudstone lithorelics, selenite crystals and shell fragments.
Groundwater Encountered	Groundwater was encountered in CT 1 to CT 3 at a depth of 3.00m bgl.
Chemical Analysis	Six samples were tested from the soils across the whole site. Of all soil samples screened against the relevant GAC for a “Residential with the consumption of home-grown produce” land use scenario as described above, it can be seen that levels of Arsenic exceed the relevant levels in CT 2, HA 101 and SA A. Levels of Benzo(b)fluoranthene, Benzo(a)pyrene and Dibenz(a,h)anthracene exceeded the relevant levels in HA101, and levels of Dibenz(a,h)anthracene exceeded the relevant levels in SA B. Using the C4SLs for Benzo(a)Pyrene as a surrogate marker for the PAH mixture encountered on site, the risk to end users of the site was below the C4SL level which is defined as “there is no risk that land poses a significant possibility of significant harm”. Due to the Northampton Sand Formation being present beneath the site, and in contact with the Made Ground soils across the site, it is considered that the elevated levels of Arsenic encountered have a low bioavailability and do not pose a risk to end users of the site
Gas Protection	No gas protection measures are considered necessary in regards to methane and carbon dioxide. A site specific report can be obtained from the BGS which will confirm the level of radon protection measures required for the site. The majority of the site is within an area where less than 1% of homes exceed the action level of 200Bq/m^3 for radon gas. The easternmost point of the site is recorded to be within an area where between 10% and 30% of homes exceed the action level.
Geotechnical Comments	• A CBR value range for pavement design between 5% and 40% was identified. • An allowable bearing pressure of 100kPa can be assumed for the natural soils of the Northampton Sand Formation for conventional shallow foundations placed at a

	minimum of 1.25m bgl or 0.20m into the natural soils, not exceeding 1.0m in width. • A Design Sulphate Class of DS-1 and a site Aggressive Chemical Environment Classification (ACEC) Class of AC-1s can be used for the natural soils. • The soils are classed as medium volume change potential in accordance with the NHBC Standards. • Two soakaway tests failed to complete a single test over the course of the day, and therefore soakaway drainage is not viable at this site.
Waste Soil Classification	From the results of the HazWasteOnline spread sheets and the WAC testing, the tested Made Ground soils can be classed as Non-Hazardous, and the Natural Soils may be classed as Inert without testing.
Recommendations	We recommend a watching brief should be undertaken during the construction phase, and if during development any previously undiscovered contamination (including visual or olfactory evidence) is found then site management should be immediately informed and inspection by a suitably qualified person should be undertaken.

This executive summary must be read in conjunction with this report.

GROUND INVESTIGATION REPORT

1 INTRODUCTION

Geo-Integrity Ltd were commissioned by William Chambers, on behalf of the Client Clock House Developments Ltd, via email on the 5th of May 2023 to undertake a site investigation at Land at Manor Farm, Blackwell Close, Earls Barton, NN6 0NU. This Phase I desk study and Phase II intrusive investigation has been completed to gather geo-environmental and geotechnical data.

This report describes desk based searches of geological, environmental and historical information, the fieldwork and laboratory testing undertaken and provides an interpretative section of the geo-environmental and geotechnical data from this investigation.

The site is located at OS Reference SP 85452 63573.

This report will be reviewed by the Local Authority with reference to the NPPF. Once the development is completed, and as a minimum, the land must not be capable of being determined as 'contaminated land' under the terms of Part IIA of the Environmental Protection Act 1990. However, it also states that "Where a site is affected by contamination or land stability issues, responsibility for securing a safe development rests with the developer and/or landowner." As such the desk study in this report is the first stage in investigating whether the site is likely to be considered "contaminated", in accordance with clause 184 of the NPPF.

The objectives of this phase I and phase II interpretative report are:-

- To undertake a site walkover to identify any potential pollution sources on the site.
- To gather historical, geological and environmental information.
- To complete a preliminary site conceptual model so that potential pollutant linkages can be established and investigated further.
- Briefly summarise the site development proposals and site setting.
- To describe and report the fieldwork undertaken at the site.
- To describe and report the chemical and geotechnical laboratory work undertaken on selected samples.
- To provide an interpretation of the results of this investigation with regards to the geo-environmental and geotechnical implications for the site.

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The investigation was performed in accordance with the general requirements of BS 5930:2015, BS EN ISO 22475-1 (2006) and other relevant related standards. The fieldwork took place on the 23rd of May 2023.

1.1 SOURCES OF INFORMATION

The following sources of information have been used to compile this report:-

- Extracts of available historical Ordnance Survey (OS) maps covering the period from 1883 to 2023, which are presented in the Appendices.
- Groundsure Report Ref GS-IVX-KC7-9LJ-P2Q included in the Appendices.
- The British Geological Survey (BGS) and Environment Agency (EA) websites.
- A site reconnaissance visit undertaken on the 23rd of May 2023.
- Information from various internet sites on site history and environmental setting.

It should be noted that the information provided in the desk study is obtained from independent third party sources. It is provided in good faith, but no guarantee can be provided as to its accuracy. The desk study information is not necessarily exhaustive and further information relevant to the site may be available from other sources.

1.2 DEVELOPMENT PROPOSALS

From development plans provided (drawing no. 1365 – PL – 103, revision E, dated 8/2/2024, drawn by HUB Architects) it can be seen that three residential dwellings are to be developed on the site with associated gardens, parking and soft landscaped areas, and one of the existing barns (Plot 4 on the aforementioned drawing) is to be converted to an additional residential dwelling with a garden.

2 PHASE I DESK STUDY

2.1 WALKOVER SURVEY

A site walkover survey was undertaken on the 23rd of May 2023. Site location plans, site photographs and layout plans are included in the Appendices.

The site is situated in the village of Earls Barton, approximately 10km northeast of the centre of Northampton, in a largely residential area. Residential dwellings are present around the site in every direction.

The site is accessed via a small tarmacked entrance road off the B573 to the north of the site. The road widens towards the south of the site to create a large area of hardstanding with several large cracks, and partially covered by overgrown grass and vegetation. On the north of the site, to the west of the access road, is a stone-built barn, in average condition, with an adjoining open barn to the west, and an adjoining open garage/lean-to on the south; all are currently used for storage. To the south of this garage is an above-ground oil tank in average condition; overgrown vegetation and small trees/shrubs were present around the tank, but no visible spills/leaks were seen, and there was no olfactory evidence of any fuel spills/leaks. A derelict brick-built barn is located on the southeastern corner on the site, which has been divided into several smaller barns. The southwestern corner of the site is a largely undeveloped area; there are stone steps leading down to this area, and it is lower than the rest of the site by approximately 1.0m. The area is covered by heavily overgrown vegetation with mature trees on the northern and southern boundaries, as well as on the east of this area which divides it from the rest of the site. No development was seen in this area apart from a greenhouse and evidence of several small wooden planters, all of which appear to be disused.

There were no significant pollution sources identified on the walkover.

2.2 PUBLISHED GEOLOGY

Reference to the British Geological Survey website and sheet 186, Wellingborough 2007, indicates that the site is underlain by bedrock strata of Whitby Mudstone Formation of Jurassic Age. Northampton Sand Formation has been recorded approximately 30m east of the site.

The BGS memoir describes the Whitby Mudstone Formation as: “Medium and dark grey fossiliferous mudstone and siltstone, laminated and bituminous in part, with thin siltstone or silty mudstone beds and rare fine-grained calcareous sandstone beds; dense, smooth argillaceous

limestone nodules very common at some horizons; phosphatic nodules at some levels. Nodular and fossiliferous limestones occur at the base in some areas."

2.2.1 Naturally Occurring Arsenic

Jurassic Age soils (particularly the Northampton Sand Formation) are known to have high naturally occurring arsenic values when tested using "Total" chemical extraction methods. However, this arsenic is known to have a low bioavailability and therefore this is not considered to be a risk to Human Health receptors.

2.2.2 Historical Boreholes

The British Geological Survey holds records of exploratory holes, historically put down across the United Kingdom during historical investigation. There are no records of boreholes undertaken within 250m of the site, and within the same geology.

2.3 PREVIOUS WORK

To our knowledge there has not been any previous works undertaken on the site.

2.4 HISTORY OF THE SITE

The history of the site has been established by the review of old Ordnance Survey maps going back to 1883. The maps and any other relevant information are included in the Appendices and indicated the following.

2.4.1 Ordnance Survey

It can be seen from the earliest maps, from 1883, that two buildings are already developed on the north of the site in the same footprint as the stone-built barn and adjoining open barn seen during the walkover; the rest of the site is free from development and appears to be open fields. The village of Earls Barton is already well-developed at this time, and a small circular cutting/excavation can be seen approximately 400m northwest of the site, possibly associated with the Church and its graveyard.

By 1900 the open garage/lean-to seen during the walkover, adjacent to the south of the existing stone barn, appears to be developed. A small building is also seen to be developed to the south of the site, in the same footprint as one of the brick-built barns which was present during the walkover. A smithy is also recorded on the site at this time; this is last seen to be recorded in 1950.

Also by 1900, a gasometer can be seen approximately 550m northeast of the site. This is extended by 1950, and also at this time a large quarry can be seen to the north of this, spanning approximately 500m; a small cutting/excavation can also be seen approximately 400m southeast of the site.

By 1969 it can be seen that several buildings are developed in the southeast of the site, in the footprint of the existing brick-built barns. A small building is developed almost centrally on the site, in the approximate footprint of the existing above-ground oil tank.

Development of Earls Barton increases at this time. Shoe factories can be seen approximately 90m northwest of the site and approximately 230m northeast.

An engineering works is recorded approximately 220m northeast of the site by 1972, and roughly half of the quarry appears to be infilled and is recorded as disused. The remainder of the quarry is recorded as disused by 1988.

Development of another building/extension to the north of the site can be seen by 1993, and the small building located centrally (possibly the above-ground oil tank) is no longer seen.

The shoe factory to the northeast is re-developed into residential housing by 1995, and the shoe factory to the northwest is no longer seen by 2003.

There is little change to the site and its immediate environs seen from this date.

2.5 UNEXPLODED ORDNANCE AND BOMB SITES

Reference to the site specific unexploded bomb risk map (UXO) produced by Zetica indicates that the site is located in an area where there is a low risk of unexploded ordnance. Low risk regions are those with a bombing density of up to 15 bombs per 1000 acres or less.

2.6 HYDROLOGY

There are no surface water features within 250m of the site.

There are is one surface water abstraction licence within 2000m of the site, located approximately 1564m south of the site at Earls Barton Spinney Quarry, used for mineral washing.

2.7 HYDROGEOLOGY

Reference to the Environment Agency website indicates that the site is located on an Unproductive Bedrock Aquifer, associated with the Whitby Mudstone Formation.

The aquifer designation data is based on geological mapping provided by the British Geological Survey. The maps are divided into two different types of aquifer designation:

Superficial (Drift) - permeable unconsolidated (loose) deposits. For example, sands and gravels.

Bedrock - solid permeable formations e.g. sandstone, chalk and limestone.

For each type there are four designations: Principal, Secondary A, Secondary B and Unproductive Strata, ranked by importance.

The site is not recorded to be within a Source Protection Zone.

A Source Protection Zone (SPZ) is a designated area around a well or abstraction borehole defining the sensitivity to contamination. An SPZ is generally divided into three zones (but there can be a fourth).

There are twelve active groundwater abstraction licenses within 2000m of the site; none of which are recorded to be potable supplies.

2.8 WASTE TREATMENT AND LANDFILL SITES

2.8.1 Landfills

There are no records of active, recent or historical landfill sites within 500m of the site.

2.8.2 Other Waste Treatment Sites

Three waste exemptions have been recorded within 500m of the site; all are described as sorting and de-naturing of controlled drugs for disposal.

2.9 LOCAL INDUSTRY AND ENVIRONMENTAL PERMITTING

2.9.1 Local Industry

There are eight records of recent industrial land uses within 250m of the site; examples include electrical sub-stations, unspecified works, motoring processes and machinery processes.

There is one record of an obsolete petrol station, recorded at 331m west of the site.

2.9.2 Environmental Permitting and Incidents

There are no historic IPC authorisations within 500m of the site, and no records of Part A(1) licensed industrial activities within 500m.

There is one record of Part A(2)/B pollutant release within 500m of the site; this is a historical permit located approximately 365m west, with coating processes.

There have been no pollution incidents recorded within 500m of the site, and no licensed discharges to controlled waters within 500m of the site.

2.9.3 Historical Site Usage

Historical information records the southeast of the site to have been used as a smithy between 1901 and 1950; this is supported by historical maps.

2.10 WORKED OUT GROUND/MADE GROUND

The desk study information has identified areas of infilled ground approximately 251m northeast, associated with the historic quarry, and 394m north of the site. An area of landscaped ground has been identified approximately 347m northwest of the site, possibly associated with a graveyard.

A BritPit has been identified approximately 359m northeast of the site, associated with Earls Barton Quarry. This was used for ironstone but is recorded as ceased.

2.11 GROUND GASES

2.11.1 Radon

Information obtained from the BGS and the National Geoscience Information Service indicates that the site lies within an area where less than 1% of homes exceed the action level of 200Bq/m^3 for radon gas. The easternmost point of the site is recorded to be within an area where between 10% and 30% of homes exceed the action level. The level of 1% confirms that no radon protection measures are required for the site, and the level of 10%-30% confirms that full radon protection measures are required for the easternmost point.

A site specific report can be obtained from the BGS which will confirm the level of radon protection measures required for the site.

This conclusion should be agreed with Building Control prior to development to avoid any potential delays.

2.11.2 Landfill Gases

In accordance with BS8576:2013 the site has been provisionally assessed for the risk of ground gases. This has been done with reference to “A pragmatic approach to ground gas risk assessment for the 21st Century” Card and Wilson, 2011.

- No credible source or pathway for landfill gas migration from an off-site landfill has been identified. An area of infilled ground has been identified approximately 251m northeast of the site, but it is considered that there is no pathway for any ground gas generated in this area to migrate to the site, as the recorded Whitby Mudstone Formation beneath the site is impermeable.
- The site has not been a registered landfill.
- The Made Ground is not expected to be 5m deep or an average of 3m in thickness.
- The site is recorded to be directly located on a carbonate rich rock that can produce low levels of carbon dioxide. These levels are not thought to be significant.
- Radon protection measures are not recommended for this site; the easternmost point of the site may require full radon protection measures. This should be confirmed by a site specific report from the BGS, and agreed with Building Control.
- The site does not significantly lie on a potential naturally organic soil or humic or degradable Made Ground soil.

As such, it is considered that there is a low risk of ground gas at this site and therefore ground gas will not be monitored as part of this investigation.

2.12 POTENTIAL GEOTECHNICAL HAZARDS

The risk of naturally occurring geotechnical hazards (as identified by the British Geological Survey) at the site is recorded in the Groundsure report to be as follows:

Ground Stability Hazard	Maximum Hazard Potential Rating
Shrinking and Swelling Clays	Low
Running Sands	Negligible
Compressible Deposits	Negligible
Collapsible Deposits	Very Low
Landslides	Very Low
Ground Dissolution of Soluble Rocks	Negligible

From the geotechnical data available in the desk study it can be seen that the site is identified as having a negligible to very low risk for all of the naturally occurring geotechnical hazards, except shrinking and swelling clays, but even this is only a low risk.

2.13 POTENTIALLY SENSITIVE LAND USES

The site is located within a Nitrate Vulnerable Zone.

3 INITIAL CONCEPTUAL SITE MODEL

In accord with the Environment Agency LCRM “Land Contamination Risk Management” 2020, this desk study and site reconnaissance report constitutes a preliminary risk assessment in order to establish the potential presence of pollutant linkages. The chart below illustrates the potential linkages.

Reference to the desk study and walkover survey indicates that the southeast of the site has been formerly used as a smithy, and therefore there may be heavy metals and hydrocarbons present within the ground from its processes. These heavy metals and hydrocarbons can pose a risk to end users of the site, and to construction workers during development of the site. There has been historical development and redevelopment of the site, which could lead to Made Ground being present beneath the site. This Made Ground, if present, has the potential to contain heavy metals, hydrocarbons and asbestos, which can pose a risk to end users and construction workers. An above ground oil tank was seen during the site walkover and, although there was no evidence of any oil spills/leaks, there is the potential for historic oil spills/leaks in this area, which could lead to hydrocarbons within the ground which could again pose a risk to end users and construction workers. There have been no significantly contaminative land uses identified within close proximity to the site. Therefore it is considered that Human Health receptors could be at an elevated risk from the proposed development.

Therefore currently it is considered that the following potential source/pathway/receptors may be present at and around the site:

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Potential Source	Potential Pathway	Potential Receptor	Considered Risk
Historic heavy metals, hydrocarbons and asbestos within the ground from long human history and development/redevelopment of the site	Ingestion, inhalation or absorption from direct contact with soil	End Users	Low
	Volatile vapours possible	End Users	Low
	Leaching through the ground	Controlled Waters	Low
	Possible contact during work phase	Construction Workers	Low
	Possible contact during work phase	Underground Services	Low
Heavy metals and hydrocarbons within ground from historic smithy in southeast of site	Ingestion, inhalation or absorption from direct contact with soil	End Users	Low to Moderate
	Leaching through the ground	Controlled Waters	Low
	Volatile vapours possible	End Users	Low to Moderate
	Possible contact during work phase	Construction Workers	Low to Moderate
	Possible contact during work phase	Underground Services	Low to Moderate
Hydrocarbons within ground from above ground oil tank	Ingestion, inhalation or absorption from direct contact with soil	End Users	Low to Moderate
	Volatile vapours possible	End Users	Low to Moderate
	Leaching through the ground	Controlled Waters	Low
	Possible contact during work phase	Construction Workers	Low to Moderate
	Possible contact during work phase	Underground Services	Low to Moderate

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4 PHASE II INTRUSIVE INVESTIGATION

4.1 SITE WORK AND SAMPLING STRATEGY

The fieldwork was undertaken in accordance with BS 5930:2015, BS EN 1997-2 (2007) and BS EN ISO 22475-1 (2006), with the exploratory locations being selected by Geo-Integrity. The exploratory hole locations can be seen in the Appendices.

The fieldwork was undertaken on the 23rd of May 2023 and consisted of four continuous tube boreholes targeting the proposed development areas; two machine-dug trial pits were undertaken with soakaway testing to BRE365; four hand-dug pits were undertaken in proposed gardens/soft landscaping; and three CBR tests for pavement design were undertaken using the TRL DCP in/close to areas where there will be roads/paths/driveways.

Disturbed samples were taken at selected depths down to the base of the exploratory holes for subsequent laboratory testing and inspection.

Exploratory Hole	Location Reasoning
CT 1 – CT 4	For expansive cover of the site, to understand the deeper ground properties to inform foundation design, and to identify any contamination.
SA A & SA B	To undertake BRE365 tests to understand the infiltration potential of the site.
HA 101 – HA 104	To take shallow soil samples in future gardens/soft landscaping areas to identify any contamination. HA 101 adjacent to above-ground fuel tank. HA 102 in area of historic smithy.

4.2 GROUND CONDITIONS

4.2.1 Summary

The site and laboratory test work revealed that the general succession of strata can be represented by Made Ground overlying Northampton Sand Formation, overlying Whitby Mudstone Formation. Descriptions of the strata encountered are given on the exploratory hole records, and

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are summarised below. Further information is provided on the exploratory hole logs within the appendices.

4.2.2 Made Ground

Made Ground was encountered in various forms in all exploratory holes from ground level to depths between 0.20m bgl and 1.15m bgl. Made Ground was only encountered to 1.15m bgl in CT 2, elsewhere on site the Made Ground was present to a maximum depth of 0.55m bgl.

HA 101 was terminated before reaching natural strata, as only shallow soil samples were required. HA 102 and HA 103 were terminated in the Made Ground before reaching the desired depth, due to obstructions and no further digging being possible.

Generally, the Made Ground was encountered as loose orange-brown gravelly sand, and firm orange-brown gravelly clay, with gravel of limestone, brick, ash and flint.

SA B was located within a tarmacked area; the tarmac was present to a depth of 0.15m bgl and a sample was taken for chemical testing for waste classification.

HA 101, CT 4 and HA 104 were located within areas of soft landscaping, and Made Ground as topsoil was encountered in these locations.

4.2.3 Northampton Sand Formation

The Northampton Sand Formation was encountered across the site beneath the Made Ground to depths between 1.50m bgl and 2.00m bgl in all exploratory holes excluding in HA 101 to HA 103 which terminated in the Made Ground.

This was generally encountered as firm to stiff orange-brown and blue-grey clay, with occasional gravel of ironstone, flint and organic material.

SPT tests were undertaken within the Northampton Sand Formation within the CT boreholes and gave N values between 9 and 14.

Atterberg testing within the Northampton Sand Formation, on samples taken between 0.50m bgl and 1.50m bgl, showed moisture contents between 23% and 29% and plasticity indexes between 12% and 33%. In accordance with the NHBC Standards this soil would be considered low to medium volume change potential; medium volume change potential should be adopted for these soils.

4.2.4 Whitby Mudstone Formation

The Whitby Mudstone Formation was encountered in all continuous tube boreholes, to a maximum depth of 5.00m bgl where the deepest exploratory hole terminated.

This was generally encountered as a stiff to very stiff dark blue-grey and occasional yellow-brown clay, becoming a stiff to very stiff blue-grey silty clay with occasional yellow silt partings, mudstone lithorelics, selenite crystals and shell fragments.

SPT tests undertaken within the Whitby Mudstone Formation in the CT boreholes gave a range of N values between 13 and 37.

Atterberg testing within the Whitby Mudstone Formation, on samples taken between 2.00m bgl and 4.50m bgl, showed moisture contents between 23% and 33% and plasticity indexes between 29% and 33%. In accordance with the NHBC Standards this soil would be considered medium volume change potential.

4.2.5 Groundwater

Groundwater was struck at 3.00m bgl in CT 1 to CT 3, and was not encountered in any of the other exploratory holes.

4.2.6 Evidence of Contamination

There was no obvious contamination identified within the Made Ground or Natural Soils during the field work.

4.2.7 Sulphate and pH Tests

Soluble sulphate and pH tests were carried out on two samples from the Natural Soils of the Northampton Sand Formation from across the site at depths between 0.50m bgl to 1.00m bgl. Water soluble sulphate was measured at between 0.013g/l and 0.12g/l, and pH was measured at between 8.4 and 8.5.

4.2.8 California Bearing Ratio (CBR) Tests

TRL DCP CBR testing was undertaken at three locations along/close to the proposed driveway and parking areas. Testing was undertaken at ground level and revealed equivalent CBR values between 3% and 40%.

4.2.9 BRE365 Soakaway Testing

Two trial pits were tested for their infiltration potential using the methods set out in BRE 365. The full results are attached in the Appendix. The soakaway testing was conducted within the Northampton Sand Formation in all exploratory holes. The results were recorded as follows:

Location	Test 1	Test 2	Test 3
SA A (1.05m bgl)	Test Not Complete	-	-
SA B (0.75m bgl)	Test Not Complete	-	-

4.3 GEO-ENVIRONMENTAL TESTING

Geo-environmental laboratory testing was scheduled by Geo-Integrity on six soil samples recovered during the fieldwork. The testing was carried out at a MCERTS and UKAS accredited laboratory. The results are presented in the Appendices.

Six soil samples were tested for a varied suite containing the following:

- Metals and Inorganic Substances
- Speciated Polyaromatic Hydrocarbons (PAH)
- Benzene, Toluene, Ethylbenzene and Xylene (BTEX)
- Total Petroleum Hydrocarbons (TPH), with eight band split
- Asbestos Identification and Quantification
- In addition, a WAC test was also carried out on a representative Made Ground Sample taken from CT 2 at 0.50m bgl

Two additional samples (from CT 2 at 0.50m bgl and SA A at 1.00m bgl) were tested for a suite of chemicals in accord with the UKWIR publication “Contaminated Land Assessment Guidance” – January 2014. These include:-

- Total Petroleum Hydrocarbons (TPH), with eight band split

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- Semi-volatile Organic Compounds (SVOC's)
- Volatile Organic Compounds (VOC's)

One additional sample (from SA B at ground level) was tested for a suite of chemicals to assess whether the tarmac on site is derived from coal tar. These include:-

- Polycyclic Aromatic Hydrocarbons (PAH's)
- Phenols

One additional sample (from HA 101 at 0.50m bgl to 0.90m bgl) was tested for Total Petroleum Hydrocarbons (TPH) with eight band split, due to its location adjacent to the above ground fuel tank.

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5 GEOTECHNICAL INTERPRETATIVE SECTION

5.1 GENERAL GROUND CONDITIONS INTERPRETATION

The site and laboratory test work revealed that the general succession of strata can be represented by Made Ground, overlying Northampton Sand Formation, overlying Whitby Mudstone Formation. Descriptions of the strata encountered are given on the exploratory hole records, and are summarised below. Further information is provided on the exploratory hole logs within the appendices.

Made Ground was encountered in all exploratory holes in various forms from ground level to depths between 0.20m bgl and 1.15m bgl.

The Northampton Sand Formation was encountered across the site beneath the Made Ground to depths between 1.50m bgl and 2.00m bgl in all exploratory holes excluding in HA 101 to HA 103 which terminated in the Made Ground.

This was generally encountered as firm to stiff orange-brown and blue-grey clay, with occasional gravel of ironstone, flint and organic material.

SPT tests gave N values between 9 and 14.

The Whitby Mudstone Formation was encountered in all continuous tube boreholes, to a maximum depth of 5.00m bgl where the deepest exploratory hole terminated.

This was generally encountered as a stiff to very stiff dark blue-grey and occasional yellow-brown clay, becoming a stiff to very stiff blue-grey silty clay with occasional yellow silt partings, mudstone lithorelics, selenite crystals and shell fragments.

SPT tests gave N values between 13 and 37.

The soils of the Northampton Sand Formation and the Whitby Mudstone Formation would both be considered medium volume change potential in accordance with the NHBC Standards.

Groundwater was encountered in CT 1 to CT 3 at a depth of 3.00m bgl.

5.2 EXCAVATIONS

Conventional plant should be sufficient for the excavation of the underlying soils at the site.

5.3 POTENTIAL DESICCATION

There are several ways to establish if clay soil is desiccated. As part of this report we have used three methods involving the comparison of moisture contents against soil index properties. CT 3 was located close to existing small trees/shrubs on the site, and CT 4 was not located near mature trees, but was in an area of overgrown vegetation.

Firstly, all the samples have been weighed before and after oven drying to measure the gravimetric moisture content. Equivalent moistures, factored to take account of the "% passing" value, have been used throughout. The line of the equivalent Mc has been superimposed against depth. The graphs are attached. Moisture content in a uniform soil should display a generally linear relationship, decreasing gradually with depth as natural in-situ earth pressures increase. If there is a negative bulge, this indicates a zone of desiccation. As can be seen, on this site the EMC profiles are linear except for CT 3 at 1.00m bgl where such a characteristic negative bulge can be seen. This is possibly due to the sample at 0.50m bgl having a much higher EMC and therefore the lower value appears to be more prominent, this could also be attributed to the soil sample being slightly gravelly and having a comparatively lower "% passing" value and therefore a lower EMC.

The second method was proposed by Richard Driscoll (Driscoll R. (1983) "Influence of Vegetation on Clay Soils" Geotechnique. Vol. 33). The method seeks to establish a relationship between the moisture content and index properties of the soil. Driscoll suggested that a soil might be desiccated if the moisture content is less than (a) 0.4 x LL or (b) 2% + PL. Driscoll preferred the LL test as the more reliable of the two and recommends this assessment is always used in conjunction with other forms of testing. In addition, if the soil is highly desiccated the tests perform better and become less clear and more confusing as the level of desiccation diminishes, as stated by Plante, S., Rollit, E. and Nazareth, C. (2007) "Site Investigation and Soil Testing" The Clay Research Group, Pg. 18.

The Driscoll Criteria employed were based on the Atterberg Limit parameters from samples taken at a range of depths down the boreholes.

At 4.00m bgl in CT 3 and CT 3 the equivalent moisture content was slightly lower than (b) 2% + PL, but not significantly.

The equivalent moisture content values were not less than (a) 0.4 x LL or (b) 2% + PL in any of the other samples tested.

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The final method is the comparison of the Liquidity Indices of the soil with depth. The Liquidity (or Consistency) Index is the normalised value of the moisture content on a scale between PL = 0 and LL = 1. Such that:-

$$\mathbf{LI=(Mc-PL)/(LL-PL)} \quad - \quad \text{normalisation formula}$$

When using this method of interpretation a value of below '0' suggests a desiccated soil and '1' a saturated soil a result of 0.5 may be considered as a nominal soil value. There are two negative LI values out of all the samples tested; these are in CT 4 at 1.00m bgl and 4.00m bgl. The suspected reason for this is explained below.

The Whitby Mudstone Formation is a known overconsolidated soil. Overconsolidation is a relative term which compares the stress acting on soil in its current state, to the highest stress experienced by the soil from an eroded overburden pressure. If the current stress is less than that applied in the past, the soil is overconsolidated and will inherently have a lower Mc than a normally consolidated soil.

It is therefore considered that although there are a few results from the testing which could suggest there is a possibility of desiccation, overall there is no strong evidence of desiccation in the soils present on the site, and the lower Mc values can be attributed to the natural overconsolidated behaviour of the soils, and the higher granular content of the shallow samples taken from the Northampton Sand Formation. Therefore, foundations in these soils are not likely to be affected by desiccation currently.

5.4 FOUNDATIONS

5.4.1 Shallow Foundations

Shallow foundations may be considered at the site providing the following criterion is followed:

The Made Ground (including reworked deposits, hardstanding and topsoil) is considered unsuitable as a bearing stratum due to its variability, and potential for unacceptable total and differential settlement under applied foundation loadings.

The natural soils of the Northampton Sand Formation, present across the site, are considered suitable bearing strata for conventional spread footings, either pads or strips, not exceeding 1.0m in width.

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At a minimum of 1.25m bgl or 0.20m into the Northampton Sand Formation, whichever is the deeper, a net allowable bearing pressure of 100kPa can be adopted. This allows for a factor of safety of three against shear failure, and for settlements generally not to exceed 25mm taking place over several years.

As the cohesive soils are considered medium volume change potential, where foundations are built within the influence of trees (or where new trees or vegetation are planned) the recommendations given in Chapter 4.2 of the NHBC Standards should be followed.

5.5 FLOOR SLAB DESIGN

Assuming all the Topsoil and Made Ground is stripped off; ground bearing floor slabs could be constructed and placed on a layer of good quality, free draining, well-compacted granular fill placed prior to the construction of the floor slab in order to make up the level. However, the advice of the NHBC Standards should be followed.

Floor slabs would need to be suspended on the site in the area of CT 2, due to the Made Ground being present to a depth over 0.60m bgl. The advice of the NHBC Standards should be followed.

5.6 CONCRETE SULPHATE ATTACK

Two soil samples from this investigation were scheduled for the measurement of water soluble sulphate and pH to give an indication of the aggressivity of the ground in relation to buried concrete, as set out in the Building Research Establishment (BRE) Special Digest 1 (2005) Concrete in Aggressive Ground, Part 1: Assessing the aggressive chemical environment. The samples were recovered from depths ranging from 0.50m bgl to 1.00m bgl, and were sourced from the Natural Soils of the Northampton Sand Formation.

The results indicate a Design Sulphate Class of DS-1 and a site Aggressive Chemical Environment Classification (ACEC) Class AC-1s for the Natural Soils of the Northampton Sand Formation.

The recommendations given in the above digest, with respect to suitable concrete design and other associated precautions against sulphate attack, should be followed for all below ground level concrete.

5.7 ACCESS ROADS AND PARKING

Three TRL DCP tests were undertaken from ground level. The results of the in-situ testing identified a CBR value range between 5% and 40%.

Made Ground has been proven across the site, and given the unknown origin of the soil, its variability and the likelihood and proven possibility for soft-spots, we recommend that any areas of soft or deleterious material should be excavated, replaced with a properly compacted coarse-grained fill and proof rolled prior to construction.

In addition, to avoid uneven and excessive settlement in hard-standing areas it is recommended that the following precautions are taken:-

- Heavy proof-rolling of the exposed sub-grade strata
- Excavation of soft spots encountered and replacement with well compacted granular material
- The usage of a geo-textile separator layer above the sub-grade.

If the above methods are followed, it is considered a design CBR value of 2.5% for these soils could be possible.

5.8 GAS PROTECTION

The risk of ground gases impacting the site was assessed by reference to the paper “A pragmatic approach to ground gas risk assessment for the 21st Century” Card and Wilson, 2011 and determined that the site is at low risk from ground gases.

In addition, the site lies within an area where less than 1% of homes exceed the action level of 200Bq/m^3 for radon gas. The easternmost point of the site is recorded to be within an area where between 10% and 30% of homes exceed the action level.

The level of 1% confirms that no radon protection measures are required for the site, and the level of 10%-30% confirms that full radon protection measures are required for the easternmost point.

A site specific report can be obtained from the BGS which will confirm the level of radon protection measures required for the site.

This conclusion should be agreed with Building Control prior to development to avoid any potential delays.

6 GEO-ENVIRONMENTAL INTERPRETATION

6.1 RISKS TO HUMAN HEALTH

6.1.1 Introduction

Environment Agency guidance LCRM, Land Contamination Risk Management, (EA, 2020), states that human health risk assessment should be undertaken by a tiered approach using the source-pathway-receptor principle. A desk study constitutes the first tier and this has been undertaken as part of this investigation. The conclusions of this phase were that:-

"Reference to the desk study and walkover survey indicates that the southeast of the site has been formerly used as a smithy, and therefore there may be heavy metals and hydrocarbons present within the ground from its processes. These heavy metals and hydrocarbons can pose a risk to end users of the site, and to construction workers during development of the site. There has been historical development and redevelopment of the site, which could lead to Made Ground being present beneath the site. This Made Ground, if present, has the potential to contain heavy metals, hydrocarbons and asbestos, which can pose a risk to end users and construction workers. An above ground oil tank was seen during the site walkover and, although there was no evidence of any oil spills/leaks, there is the potential for historic oil spills/leaks in this area, which could lead to hydrocarbons within the ground which could again pose a risk to end users and construction workers. There have been no significantly contaminative land uses identified within close proximity to the site. Therefore it is considered that Human Health receptors could be at an elevated risk *from the proposed development."*

Therefore, six soil samples were tested for chemical suites that were also analysed under the second tier, known as a Generic Quantitative Risk Assessment (GQRA), which uses generic guideline values to compare site chemical data against. The next and final tier would be a Detailed Quantitative Risk Assessment (DQRA), which uses data derived from the ground investigation to assess risks to identified receptors.

The assessment included in this report comprises a GQRA, which is undertaken by comparing soil contaminant concentrations from this investigation with conservative Generic Assessment Criteria (GAC). GAC for various land use and exposure scenarios have been selected from the following sources:

- CL:AIRE Category 4 Screening Levels (C4SL);

- LQM Suitable for Use Levels (S4UL);
- CL:AIRE/EIC/AGS GAC;
- Surrogate Marker Approach for PAHs

The GAC have been derived using the Environment Agency Contaminated Land Exposure Assessment (CLEA) model, for a range of land uses and exposure scenarios, including:

- Residential with the consumption of home-grown produce
- Residential without the consumption of home-grown produce
- Commercial
- Allotments
- Public Open Space near residential housing (POS_{resi})
- Public Open Space public park scenario (POS_{park})

Given the proposed development is to develop the land into residential dwellings with associated gardens and soft landscaping, we have used the most conservative option of “Residential with the consumption of home-grown produce” for this assessment.

6.1.2 Results of Chemical Testing

Six samples were tested from the soils across the whole site. Of all soil samples screened against the relevant GAC for a “Residential with the consumption of home-grown produce” land use scenario as described above, it can be seen that levels of Arsenic exceed the relevant levels in CT 2 at 0.20m bgl and 0.50m bgl, HA 101 at 0.20m bgl and SA A at 0.30m bgl. Levels of Benzo(b)fluoranthene, Benzo(a)pyrene and Dibenz(a,h)anthracene exceeded the relevant levels in HA101 at 0.20m bgl, and levels of Dibenz(a,h)anthracene exceeded the relevant levels in SA B at 0.30m bgl. The samples were taken from the Made Ground soils. No other levels exceeded the relevant GACs.

None of the samples tested identified Asbestos Containing Material (ACM).

6.1.3 Polyaromatic Hydrocarbons (PAHs)

Levels of Benzo(b)fluoranthene, Benzo(a)pyrene and Dibenz(a,h)anthracene exceeded the relevant levels in HA101 at 0.20m bgl, and levels of Dibenz(a,h)anthracene exceeded the relevant levels in SA B at 0.30m bgl.

Due to the conservative approach to calculating the S4UL's we have decided to use the C4SL for BaP as a surrogate marker for the PAH mixture encountered on site. In order to do this the three criteria below need to be met:-

- The SM (BaP) must be present in all soil samples.
- The profile of the different PAH relative to BaP should be similar in all samples.
- The PAH profile in the soil samples should be similar to that used in the pivotal toxicity study on which HBGV was based i.e. the Culp study.

This was the case within all samples where PAHs were encountered and the soil concentration of BaP in all cases was less than the relevant C4SL of 5mg/kg. Therefore, it is considered that the risk to end users of the site was below the C4SL level which is defined as "there is no risk that land poses a significant possibility of significant harm", therefore in line with DEFRA authorised guidance we consider that the PAHs do not cause a risk to end users across the site. The BaP Surrogate Marker calculation sheets are included in the Appendices.

6.1.4 Arsenic

Elevated levels of Arsenic were encountered in CT 2 at 0.20m bgl and 0.50m bgl, HA 101 at 0.20m bgl and SA A at 0.30m bgl.

The samples were taken from the Made Ground soils, overlying the Northampton Sand Formation. Elevated levels of arsenic are typical for the area, due to Jurassic Age soils being present. Jurassic Age soils (such as the Northampton Sand Formation which has been identified beneath the site) are high in naturally occurring arsenic when tested using "Total" chemical extraction methods due to a mineral called arsenopyrite. However, this arsenic is known to have a low bioavailability and therefore this is not considered to be a risk to Human Health receptors.

Therefore, due to the Northampton Sand Formation being present beneath the site, and in contact with the Made Ground soils across the site, it is considered that the elevated levels of Arsenic encountered have a low bioavailability and do not pose a risk to end users of the site. This could be confirmed by PBET testing.

This conclusion should be agreed with the Local Authority at the earliest stage to reduce any potential delays to the development.

6.2 RISK TO END USERS

Given the results of the desk study, intrusive investigation and laboratory testing, no source-pathway-receptor linkage has been identified at the site and consequently no additional human health risk assessment is considered necessary.

This conclusion should be confirmed by the relevant Regulatory Authority as soon as possible prior to development.

6.3 RISK TO CONTROLLED WATERS

None of the metals and inorganic contaminants tested for within the total soil chemical tests recorded significantly elevated values, and no free-phase hydrocarbon contamination was encountered. It is considered that there is no risk of Controlled Waters pollution from this site.

The Environment Agency is the regulatory body charged with protection of controlled waters and may be a consultee in the planning process. We recommend that the conclusions of this report are agreed with the relevant Local Authority at the earliest stage, to reduce any potential delays.

6.4 RISKS TO UNDERGROUND WATER SUPPLY PIPES

Based upon the guidance document from the UK Water Industry Research (UK WIR), 'Contaminated Land Assessment Guidance' February 2014, and the results of the samples tested from the site, specifically the UKWIR suite undertaken on samples from SA A at 1.00m bgl and CT 2 at 0.50m bgl, it is considered that conventional PE water pipes can be used across the site as no significantly elevated hydrocarbons or BTEX were encountered across the site. This should be confirmed with the local water company as not all authorities use this guidance.

6.5 GEO-ENVIRONMENTAL CONCLUSION

Given the findings of the desk study, fieldwork and laboratory testing it is considered that no elevated risk to Human Health or Controlled Waters exists on this site. Given the results of the investigation it is considered that there will be no need for specific remediation.

7 WASTE DISPOSAL CLASSIFICATION

7.1 INTRODUCTION

Excavation for foundations or services will produce waste soil and possibly other waste streams. As a waste producer you have a duty of care under section 34 of the Environmental Protection Act 1990 to ensure, amongst other things that these wastes are:-

- Correctly stored
- Correctly classify
- Handed only to an authorised person
- Disposed of properly.

To aid with these obligations we have used HazWasteOnline to undertake the Hazard Assessment Screen as part of this investigation, to establish whether the sampled soils should be considered as either hazardous or non-hazardous waste. This classification process is in line with the Environment Agency's guidance WM3 "Guidance on the classification and assessment of waste", Version 1.2, October 2021.

7.2 RESULTS OF HAZARD ASSESSMENT

The full results of the HazWasteOnline Stage-One analyses can be seen in the Appendices.

The HazWasteOnline classification summary sheet from this investigation provides a waste classification of Non-Hazardous waste for all samples tested.

No visible pieces of asbestos were detected (by the naked eye) in any of the exploratory holes, or identified in the chemical testing. Therefore, asbestos was not considered further from a waste perspective.

7.2.1 Blacktop

Of the determinants tested for (PAHs and Phenols) within a representative blacktop sample taken at ground level from SA B no elevated levels were recorded. It is therefore considered that the blacktop hardstanding at the site is not coal-tar derived. Therefore the results of this test confirmed that this material would be classified as Non-Hazardous (i.e. not containing coal tar).

7.3 WASTE ACCEPTANCE CRITERIA (WAC) TESTING RESULTS

To further classify the waste soil for landfill disposal, Waste Acceptance Criteria (WAC) testing has been carried out on one representative Made Ground sample from the site at CT 2 at 0.50m bgl.

The results show that this material does not pass the Inert Waste criteria due to elevated levels of Total Organic Carbon, and is therefore classed as Non-Hazardous. The laboratory testing results are presented in the Appendices.

The soils of CT 2 appeared to have a higher ash content compared to the other Made Ground soils on the site, and therefore it may be possible to lower the classification of the other Made Ground soils on the site if further WAC testing is carried out, as the above classification has been concluded from a single worst-case WAC test.

Should further WAC testing be carried out and the classification for the Made Ground soils become Inert, the soils in the area of CT 2 should remain Non-Hazardous. This is shown on the Waste Plan included the Appendices, which should be referred to.

It is considered that the underlying natural soils beneath the site qualify in accordance with EU Council Decision 2003/33/EC para. 2.1.1. “uncontaminated soil can be classified as Inert without testing”.

As such, given the testing results, currently the underlying soils from the site are considered to be classified as follows:-

Strata	Classification	Description of Material	EWC Code	Recommended Landfill Tax Rate
Made Ground Soils – Blacktop	Non-Hazardous	“Bituminous mixtures other than those mentioned in 17 03 01”	17 03 02	Standard Rate
Made Ground – Topsoil	Non-Hazardous (Possibly Inert with further WAC testing)	“Generally topsoil including Group 2 and 5 Materials: brick and ash”	17 05 04	Standard Rate
Made Ground Soils around CT 2 – Sand and Gravel (with gravel of ash) (refer to Waste	Non-Hazardous	“Naturally occurring soils and stones (sand/gravel) including Group 5 Materials: ash.”	17 09 04	Lower Rate

Plan in Appendices)				
Made Ground Soils – Sand/Clay (with gravels of brick, concrete and ash)	Non-Hazardous (Possibly Inert with further WAC testing)	"Naturally occurring soils and stones (clay/sand/gravel) including Group 2 and 5 Materials: brick, concrete and ash."	17 09 04	Lower Rate
Natural Soils	Inert	"Naturally occurring soils and stones (sand, gravel and clay)"	17 05 04	Lower Rate

Under section 63(2) of the Finance Act 1996 it states where a disposal to landfill consists mainly of qualifying material(s), but includes a small amount of standard-rated material, the whole load is taxable at the lower rate. As such, the surrounding Made Ground soils (excluding any Topsoil and blacktop) are considered to be taxable at the lower rate.

We recommend that analytical results relevant to the materials being disposed of should be provided to the landfill operators or waste management contractors to confirm whether it meets their licence agreements and to confirm tipping costs.

All wastes removed from site should be consigned, transported and disposed of in full accordance with all relevant UK legislation.

7.4 RE-USE OF MATERIAL ON SITE

Currently, if surplus arisings are 'fit for re-use' on the site and have not been treated, its re-use is allowed within the planning law. If it needs treating prior to re-use, exemptions can be sought from the Environment Agency to allow this activity.

Based upon the human health and groundwater risk assessments, the underlying soils are suitable for re-use on site. This analysis is, however, dependent on the agreement of the Local Authority.

8 RECOMMENDATIONS

We recommend a watching brief should be undertaken during the construction phase, and if during development any previously undiscovered contamination (including visual or olfactory evidence) is found then site management should be immediately informed and inspection by a suitably qualified person should be undertaken.

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9 REFERENCES

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APPENDIX A

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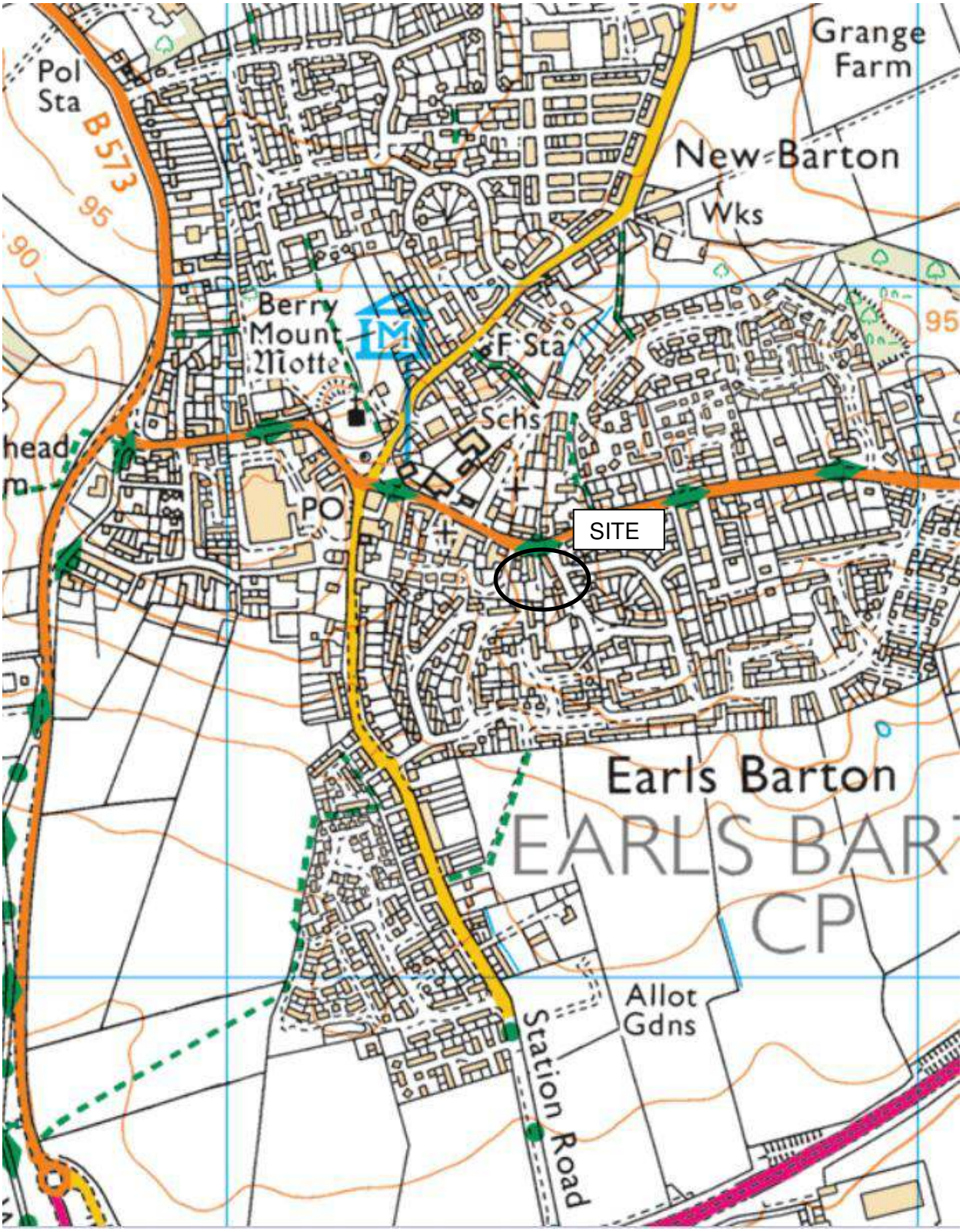
Site Plan



May 2023 **SITE LOCATION PLAN** Report No:- 23-05-05

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Barn (Plot 4) to be converted - 23rd May 2023

Above-ground oil tank to south of Plot 4 – 23rd May 2023

Geo-Integrity, - 07858 367 125 Email:- murraybateman@geo-integrity.co.uk

Barns to southeast of site (area of old Smithy) - 23rd May 2023

Looking towards south of site - 23rd May 2023

Geo-Integrity, - 07858 367 125 Email:- murraybateman@geo-integrity.co.uk

Looking towards Plot 4 from south of site - 23rd May 2023

Barn adjoining Plot 4 - 23rd May 2023

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Overgrown area in west of site - 23rd May 2023

West of site looking east to centre of site - 23rd May 2023

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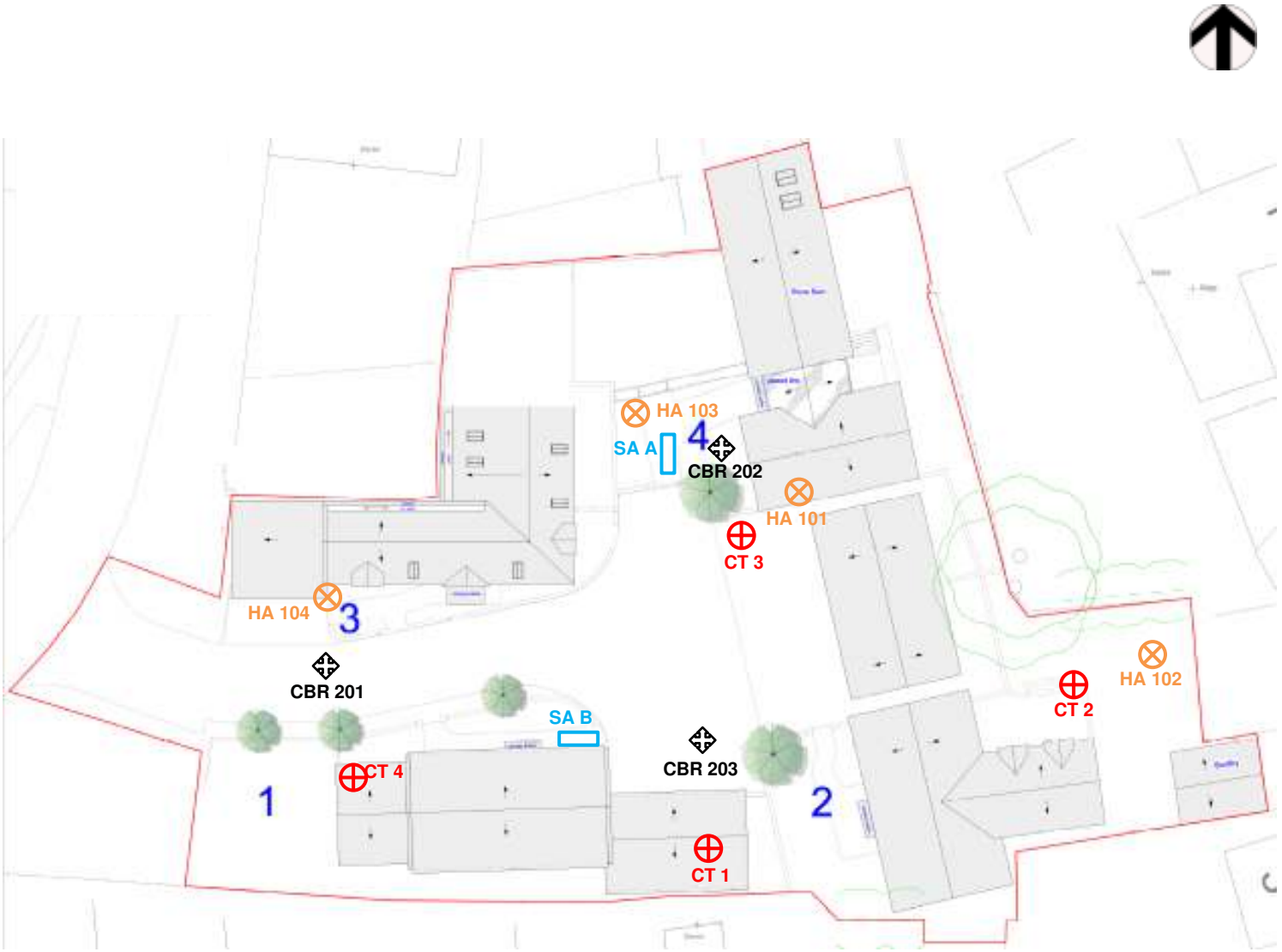

Key

- Continuous Tube Borehole Locations
- BRE365 Test Locations
- TRL DCP CBR Locations
- Hand Auger Locations

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Exploratory Hole Location Plan

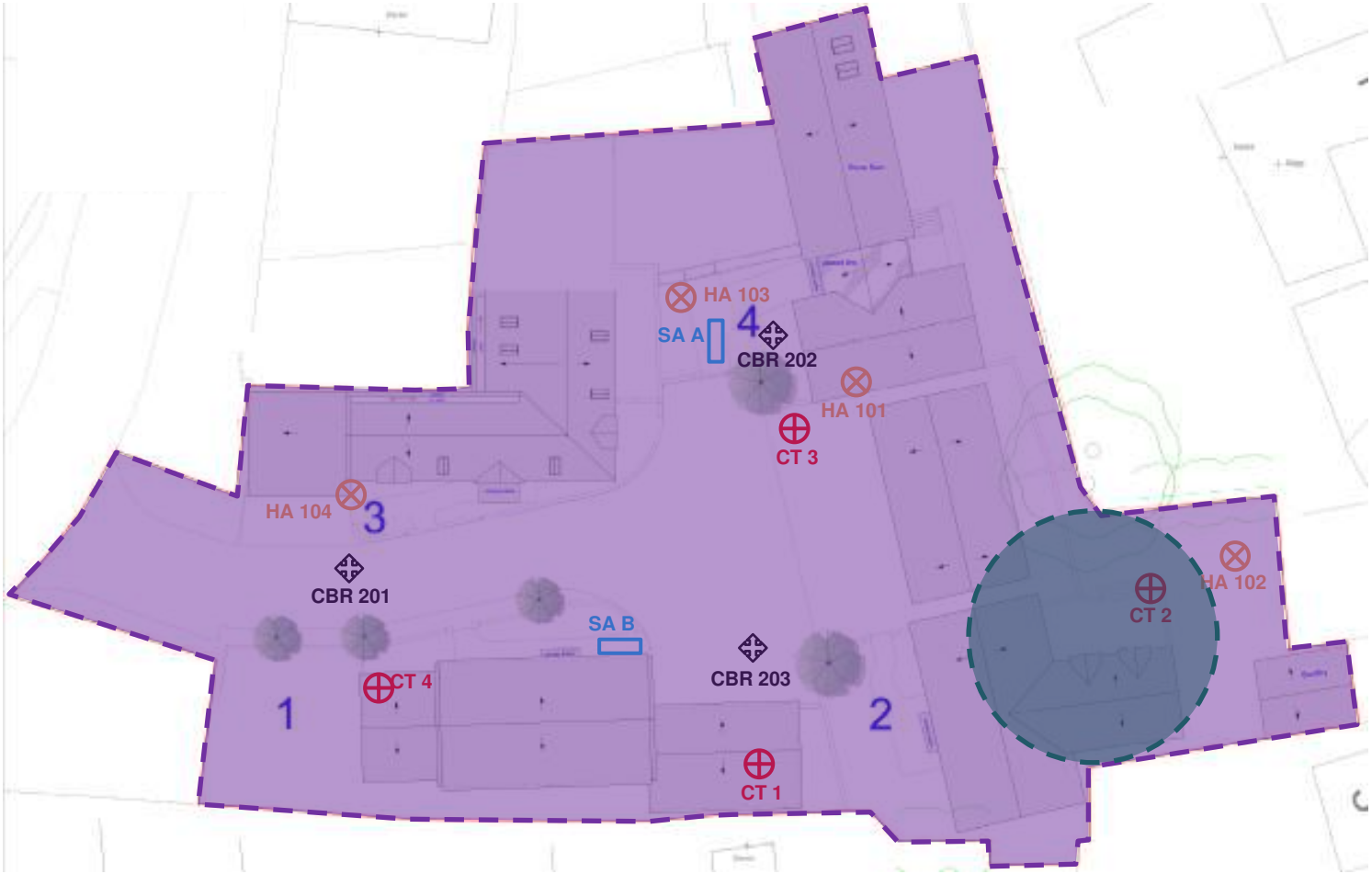
SITE:- Land at Manor Farm, Blackwell Close, Earls Barton, NN6 0NU

JOB NO.:- 23-05-05

CLIENT:- Clock House Developments Ltd.

Drawn	Checked
FW	MB

Scale: Not To Scale, for indicative purposes only



Key

Non-hazardous Made Ground soils from WAC testing (area of CT 2)

Non-hazardous Made Ground soils. Possibly Inert with further WAC testing. Natural soils below are Inert

GEO INTEGRITY

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Waste Plan

SITE:- Land at Manor Farm, Blackwell Close, Earls Barton, NN6 0NU

JOB NO.:- 23-05-05

CLIENT:- Clock House Developments Ltd.

Drawn	Checked
FW	MB

Scale: Not To Scale, for indicative purposes only

APPENDIX B

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Site
Manor Farm, Blackwell Close, Earls Barton, NN6 0NU

Number
CT 1

Machine : Window Sample Rig
Method : Drive-in Windowless Sampler

Dimensions
102mm to 2.0m 67mm to 5.0m
87mm to 3.0m
77mm to 4.0m

Ground Level (mOD)

Client
Clock House Developments Ltd.

Job Number
23-05-05

Location (Handheld GPS)
485450 E 263557 N

Dates
23/05/2023

Project Contractor
Geo-Integrity

Sheet
1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
0.20	D				(0.40)	MADE GROUND Firm orange brown slightly gravelly slightly sandy CLAY. Gravel is medium brick and limestone		
0.50-0.90	D				0.40	NORTHAMPTON SAND FORMATION Stiff blue-grey and orange-brown CLAY with occasional organic material		
1.00-1.45	SPT N=10		2,2/2,2,3,3		(1.35)			
1.00-1.50	D							
1.75-2.00	D				1.75	WHITBY MUDSTONE FORMATION Stiff to very stiff dark blue-grey and occasional yellow-brown CLAY with occasional rootlets		
2.00-2.45	SPT N=14		1,2/3,3,4,4		(0.75)			
2.00-2.50	D							
2.50-3.00	D				2.50	WHITBY MUDSTONE FORMATION Stiff to very stiff dark blue-grey silty CLAY with occasional selenite crystals, mudstone lithorelics and yellow silt bands		
					(0.50)			
3.00-3.50	D		Slight seepage(1) at 3.00m.		3.00	WHITBY MUDSTONE FORMATION Stiff to very stiff dark blue-grey silty CLAY with occasional selenite crystals		▽1
3.00-3.45	SPT N=18		2,3/4,4,5,5					
3.50-4.00	D							
4.00-4.45	SPT N=37		5,6/8,10,9,10		(2.00)			
4.50-5.00	D		Poor sample recovery betwwen 4.0m to 4.50m					
5.00-5.45	SPT N=35		7,7/9,8,9,9		5.00	Complete at 5.00m		

Remarks

Scale (approx)
1:40

Logged By
FW

Figure No.
23-05-05.CT 1

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Site
Manor Farm, Blackwell Close, Earls Barton, NN6 0NU

Number
CT 2

Machine : Window Sample Rig

Method : Drive-in Windowless Sampler

Dimensions
87mm to 2.0m
77mm to 3.0m

Ground Level (mOD)

Client
Clock House Developments Ltd.

Job Number
23-05-05

Location (Handheld GPS)
485465 E 263567 N

Dates
23/05/2023

Project Contractor
Geo-Integrity

Sheet
1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
					(0.30)	MADE GROUND Loose to medium dense grey and brown very gravelly SAND. Gravel is medium to coarse brick and concrete		
0.20	D				0.30			
0.50	D				(0.50)	MADE GROUND Loose to medium dense orange-brown gravelly SAND. Gravel is medium to coarse flint, limestone and occasional ash		
					0.80			
					(0.35)	MADE GROUND Firm orange-brown very gravelly very sandy CLAY. Gravel is medium of ash, brick and flint		
1.00-1.45	SPT N=9		1,1/2,2,3,2		1.15			
1.00-1.15	D				(0.15)	NORTHAMPTON SAND FORMATION Stiff orange very sandy gravelly CLAY. Gravel is medium to coarse ironstone		
1.15-1.30	D				1.30			
1.30-1.50	D				(0.20)			
1.50-1.80	D				1.50	NORTHAMPTON SAND FORMATION Stiff blue-grey and orange-brown CLAY with occasional cobbles of flint and limestone		
					(0.30)			
1.80-2.00	D				1.80	WHITBY MUDSTONE FORMATION Stiff to very stiff dark blue-grey and occasional yellow-brown CLAY		
					(0.20)			
2.00-2.45	SPT N=13		3,3/3,4,3,3		2.00			
2.00-2.20	D				(0.20)	WHITBY MUDSTONE FORMATION Stiff to very stiff dark blue-grey silty CLAY with occasional selenite crystals, mudstone lithorelics and yellow silt bands		
2.30-2.60	D				2.20			
2.60-3.00	D				(0.80)	WHITBY MUDSTONE FORMATION Stiff to very stiff dark blue-grey and occasional yellow-brown CLAY		
			Slight seepage(1) at 3.00m.		3.00	WHITBY MUDSTONE FORMATION Stiff to very stiff dark blue-grey silty CLAY with occasional selenite crystals Firm to stiff from approximately 2.30m bgl to 2.60m bgl.		▽1
3.00-3.45	SPT N=15		2,3/3,4,4,4			Complete at 3.00m		

Remarks
Unable to drill past 3.00m due to angle of rig/rods

Scale (approx)
1:40

Logged By
FW

Figure No.
23-05-05.CT 2

AGS

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01280 816409

Site
Manor Farm, Blackwell Close, Earls Barton, NN6 0NU

Number
CT 3

Machine : Window Sample Rig
Method : Drive-in Windowless Sampler

Dimensions
102mm to 2.0m 67mm to 5.0m
87mm to 3.0m
77mm to 4.0m

Ground Level (mOD)

Client
Clock House Developments Ltd.

Job Number
23-05-05

Location (Handheld GPS)
485445 E 263574 N

Dates
23/05/2023

Project Contractor
Geo-Integrity

Sheet
1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
					(0.30)	MADE GROUND Loose brown and black slightly clayey SAND AND GRAVEL. Gravel is medium to coarse of tarmac, brick, concrete and limestone, with limestone cobbles		
0.20	D				0.30			
0.50-0.90	D					NORTHAMPTON SAND FORMATION Firm to stiff orange-brown silty CLAY Soft to 0.90m bgl		
1.00-1.45 1.00-1.50	SPT N=14 D		2,3/4,3,4,3		(1.70)			
1.50-2.00	D							
2.00-2.45 2.00-2.50	SPT N=15 D		3,4/4,4,3,4		2.00	WHITBY MUDSTONE FORMATION Stiff to very stiff dark blue-grey and occasional yellow-brown CLAY with occasional rootlets and selenite crystals		
2.50-3.00	D				(1.10)			
3.10-3.50 3.00-3.45	D SPT N=17		Slight seepage(1) at 3.00m. 3,4/4,5,4,4		3.10	WHITBY MUDSTONE FORMATION Stiff to very stiff dark blue-grey silty CLAY with occasional selenite crystals		▽1
3.50-4.00	D							
4.00-4.45 4.00-4.50	SPT N=19 D		4,4/4,5,5,5		(1.90)			
4.50-5.00	D							
5.00-5.45	SPT N=27		7,8/7,6,7,7		5.00	Complete at 5.00m		

Remarks

Scale (approx)
1:40

Logged By
FW

Figure No.
23-05-05.CT 3

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Site
Manor Farm, Blackwell Close, Earls Barton, NN6 0NU

Number
CT 4

Machine : Window Sample Rig

Method : Drive-in Windowless Sampler

Dimensions
102mm to 2.0m 67mm to 5.0m
87mm to 3.0m
77mm to 4.0m

Ground Level (mOD)

Client
Clock House Developments Ltd.

Job Number
23-05-05

Location (Handheld GPS)
485423 E 263563 N

Dates
23/05/2023

Project Contractor
Geo-Integrity

Sheet
1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
0.20	D				(0.30) 0.30	MADE GROUND Soft brown slightly gravelly TOPSOIL. Gravel is fine to medium brick, ash, quartzite and occasional ironstone		
0.50-0.90	D				(1.30)	NORTHAMPTON SAND FORMATION Firm to stiff orange-brown silty CLAY with occasional rootlets		
1.00-1.45 1.00-1.50	SPT N=17 D		3,4/5,4,4,4					
1.60-2.00	D				1.60	WHITBY MUDSTONE FORMATION Stiff to very stiff dark blue-grey and occasional yellow-brown CLAY with occasional rootlets and selenite crystals		
2.00-2.45 2.00-2.50	SPT N=15 D		4,4/3,4,4,4		(1.20)			
2.50-2.80	D							
2.80-3.20	D				2.80	WHITBY MUDSTONE FORMATION Stiff to very stiff dark blue-grey silty CLAY with occasional selenite crystals, mudstone lithorelics and yellow silt bands		
3.00-3.45	SPT N=17		5,4/4,3,5,5		(0.40)			
3.20-3.50	D				3.20	WHITBY MUDSTONE FORMATION Stiff to very stiff dark blue-grey silty CLAY with occasional selenite crystals and shell fragments		
3.50-4.00	D							
4.00-4.45 4.00-4.50	SPT N=30 D		4,5/7,7,8,8		(1.80)			
4.50-5.00	D							
5.00-5.45	SPT N=31		6,7/6,7,9,9		5.00	Complete at 5.00m		

Remarks

Scale (approx)
1:40

Logged By
FW

Figure No.
23-05-05.CT 4

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Site	Trial Pit Number
Manor Farm, Blackwell Close, Earls Barton, NN6 0NU	HA 101

Machine : Hand Dug Method : Trial Pit	Dimensions	Ground Level (mOD)	Client	Job Number
			Clock House Developments Ltd.	23-05-05
	Location (Handheld GPS) 485450 E 263576 N	Dates 23/05/2023	Project Contractor Geo-Integrity	Sheet 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
0.20-0.30	D				(0.20) 0.20	MADE GROUND Soft to firm brown silty sandy slightly gravelly TOPSOIL with roots. Gravel is fine to coarse flint, concrete, tarmac and brick.		
0.50	D				(0.35) 0.55	MADE GROUND Firm light brown and orange sandy GRAVEL. Gravel is cobbles and boulders of brick and sandstone		
						Complete at 0.55m		

Plan

Remarks

AGS

Scale (approx)	Logged By	Figure No.
1:40	SB	23-05-05.HA 101

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Site	Trial Pit Number
Manor Farm, Blackwell Close, Earls Barton, NN6 0NU	HA 102

Machine : Hand Dug Method : Trial Pit	Dimensions	Ground Level (mOD)	Client	Job Number
			Clock House Developments Ltd.	23-05-05
	Location (Handheld GPS) 485471 E 263568 N	Dates 23/05/2023	Project Contractor Geo-Integrity	Sheet 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
0.05	D		Unable to dig further. Possible floor slab		0.10	MADE GROUND Very dense yellow-brown gravelly SAND. Gravel is medium of quartzite. (Possible hardstanding) Complete at 0.10m		

Plan

Remarks

AGS

Scale (approx)	Logged By	Figure No.
1:40	FW	23-05-05.HA 102

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Site Manor Farm, Blackwell Close, Earls Barton, NN6 0NU			**Trial Pit Number** HA 103
Machine : Hand Dug **Method :** Trial Pit	**Dimensions**	**Ground Level (mOD)**	**Client** Clock House Developments Ltd.	**Job Number** 23-05-05
	Location (Handheld GPS) 485438 E 263583 N	**Dates** 23/05/2023	**Project Contractor** Geo-Integrity	**Sheet** 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
					(0.25) 0.25	MADE GROUND CONCRETE		
0.30	D		Unable to dig further- cobble obstruction		(0.15) 0.40	MADE GROUND Dense light brown SAND AND GRAVEL. Gravel is concrete, flint, quartzite with cobbles of flint and quartzite		
						Complete at 0.40m		

Plan

Remarks

AGS

Scale (approx)	Logged By	Figure No.
1:40	FW	23-05-05.HA 103

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Site	Trial Pit Number
Manor Farm, Blackwell Close, Earls Barton, NN6 0NU	HA 104

Machine / Method	Dimensions	Ground Level (mOD)	Client	Job Number
Machine : Hand Dug Method : Trial Pit			Clock House Developments Ltd.	23-05-05
	Location (Handheld GPS) 485424 E 263573 N	**Dates** 23/05/2023	**Project Contractor** Geo-Integrity	**Sheet** 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
0.10	D				(0.20) 0.20	MADE GROUND Soft brown slightly gravelly TOPSOIL. Gravel if fine to medium brick, ash, quartzite and occasional ironstone		
0.40	D				(0.30) 0.50	NORTHAMPTON SAND FORMATION Stiff blue-grey and orange-brown CLAY with occasional organic material		
						Complete at 0.50m		

Plan

Remarks

Scale (approx)	Logged By	Figure No.
1:40	FW	23-05-05.HA 104

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Site	Trial Pit Number
Manor Farm, Blackwell Close, Earls Barton, NN6 0NU	SA A

Machine / Method	Dimensions	Ground Level (mOD)	Client	Job Number
Machine : JCB 3CX Method : Trial Pit	0.30m x 1.20m x 1.20m		Clock House Developments Ltd.	23-05-05
	Location (Handheld GPS) 485439 E 263577 N	**Dates** 23/05/2023	**Project Contractor** Geo-Integrity	**Sheet** 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
0.30	D				(0.45)	MADE GROUND Loose orange brown slightly clayeygravelly SAND. Gravel is fine to coarse of brick, flint, quartzite and ironstone with cobbles of brick and ironstone		
0.50	D				0.45 (0.25)	NORTHAMPTON SAND FORMATION Firm to stiff orange brown silty CLAY		
1.00	D				0.70 (0.50)	NORTHAMPTON SAND FORMATION Stiff blue-grey and occasional orange-brown silty slightly gravelly CLAY. Gravel is medium of ironstone and flint		
					1.20	Complete at 1.20m		

Plan

Remarks

AGS

Scale (approx)	Logged By	Figure No.
1:40	FW	23-05-05.SA A

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Site Manor Farm, Blackwell Close, Earls Barton, NN6 0NU			**Trial Pit Number** SA B
Machine : JCB 3CX **Method :** Trial Pit	**Dimensions** 0.30m x 1.20m x 0.75m	**Ground Level (mOD)**	**Client** Clock House Developments Ltd.	**Job Number** 23-05-05
	Location (Handheld GPS) 485442 E 263566 N	**Dates** 23/05/2023	**Project Contractor** Geo-Integrity	**Sheet** 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
0.00	D				(0.15) 0.15	MADE GROUND TARMAC		
0.30	D				(0.30) 0.45	MADE GROUND Loose medium dense black and brown sandy medium GRAVEL of tarmac and granite		
0.60	D				(0.30) 0.75	NORTHAMPTON SAND FORMATION Firm to stiff orange brown silty CLAY		
						Complete at 0.75m		

Plan

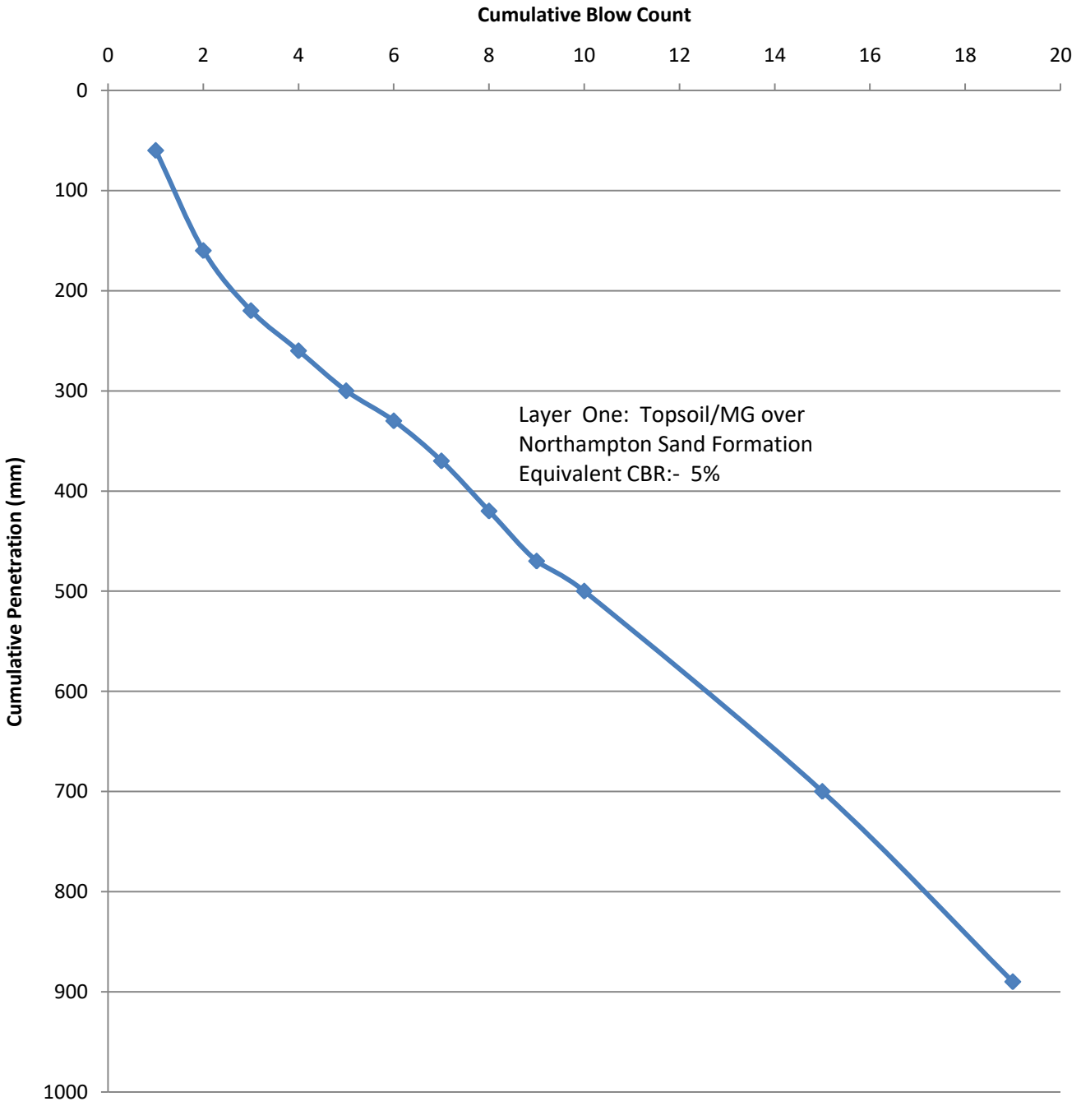
Remarks

Scale (approx)	Logged By	Figure No.
1:40	FW	23-05-05.SA B

TRL DYNAMIC CONE PENETROMETER RECORD

Job No:- 23-05-05
Job Name:- Manor Farm, Earls Barton, NN6 0NU
Equivalent CBR:- 5%
Position:- CBR 201
Depth below ground level at start of test:- GL

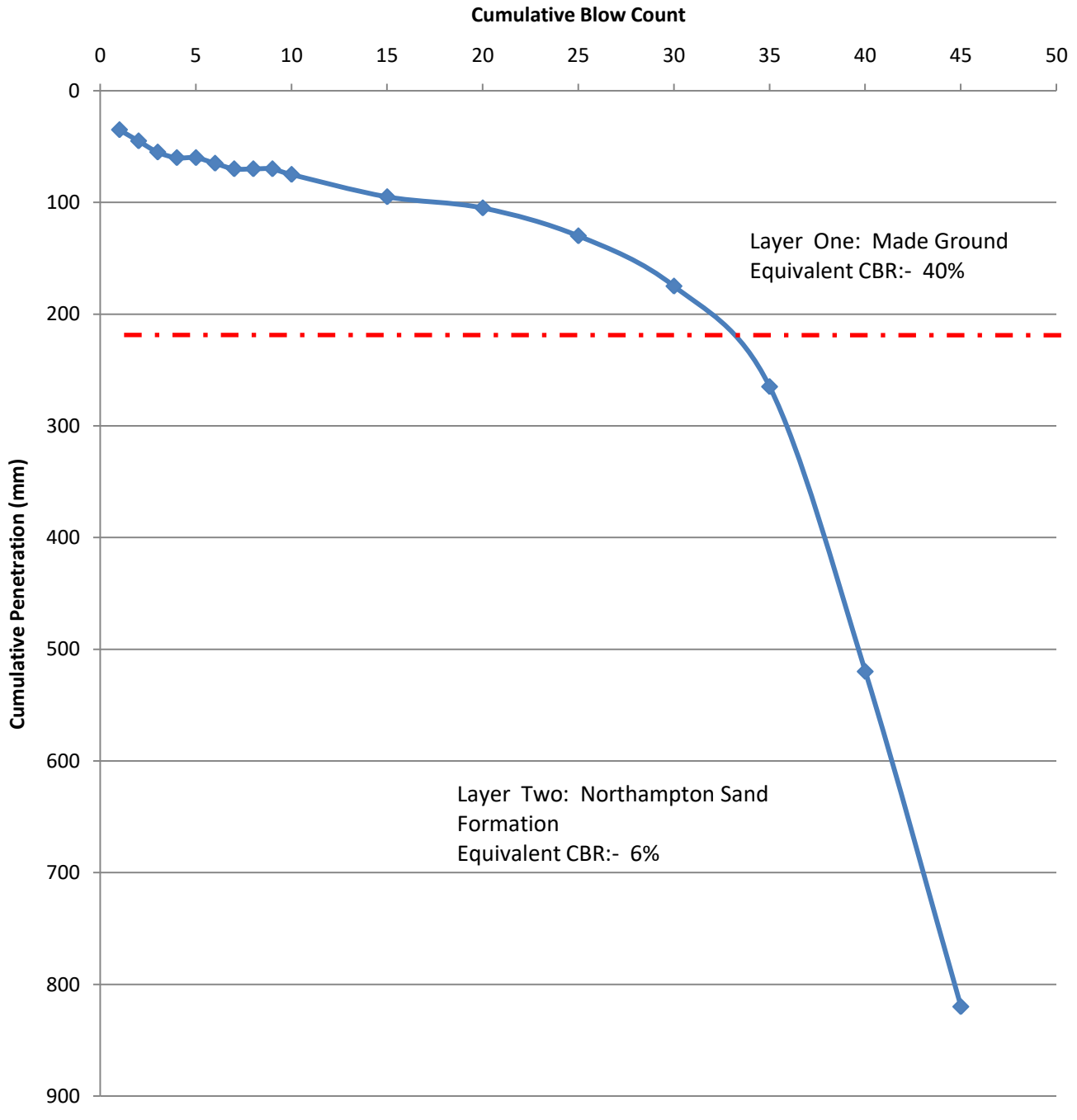
Cumulative Blows Vs Penetration (mm)



TRL DYNAMIC CONE PENETROMETER RECORD

Job No:- 23-05-05
Job Name:- Manor Farm, Earls Barton, NN6 0NU
Equivalent CBR:- 6% to 40%
Position:- CBR 202
Depth below ground level at start of test:- GL

Cumulative Blows Vs Penetration (mm)



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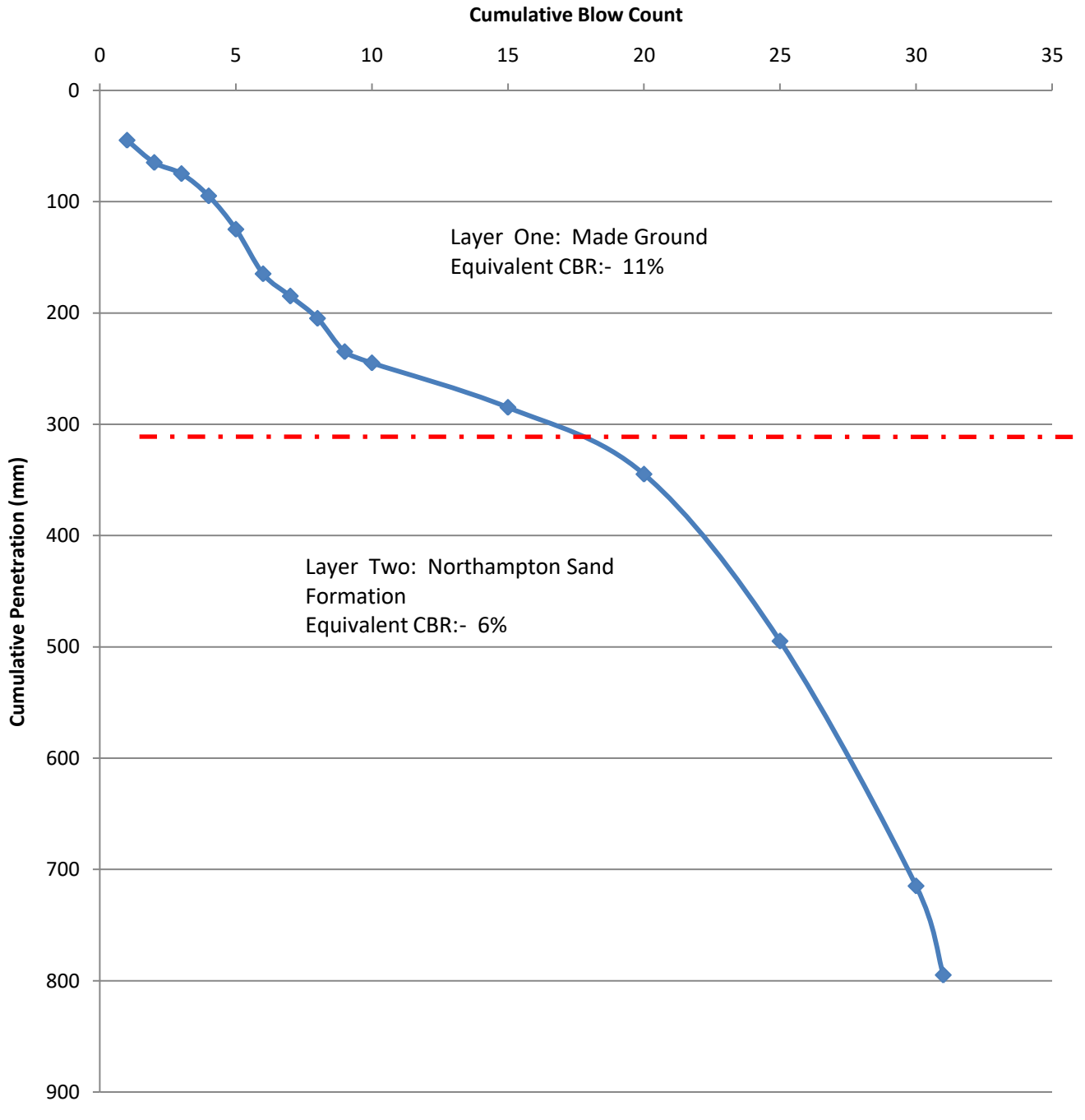
TRL DYNAMIC CONE PENETROMETER RECORD

Job No:- 23-05-05
Job Name:- Manor Farm, Earls Barton, NN6 0NU
Equivalent CBR:- 6% to 11%
Position:- CBR 203
Depth below ground level at start of test:- GL

Cumulative Blows Vs Penetration (mm)



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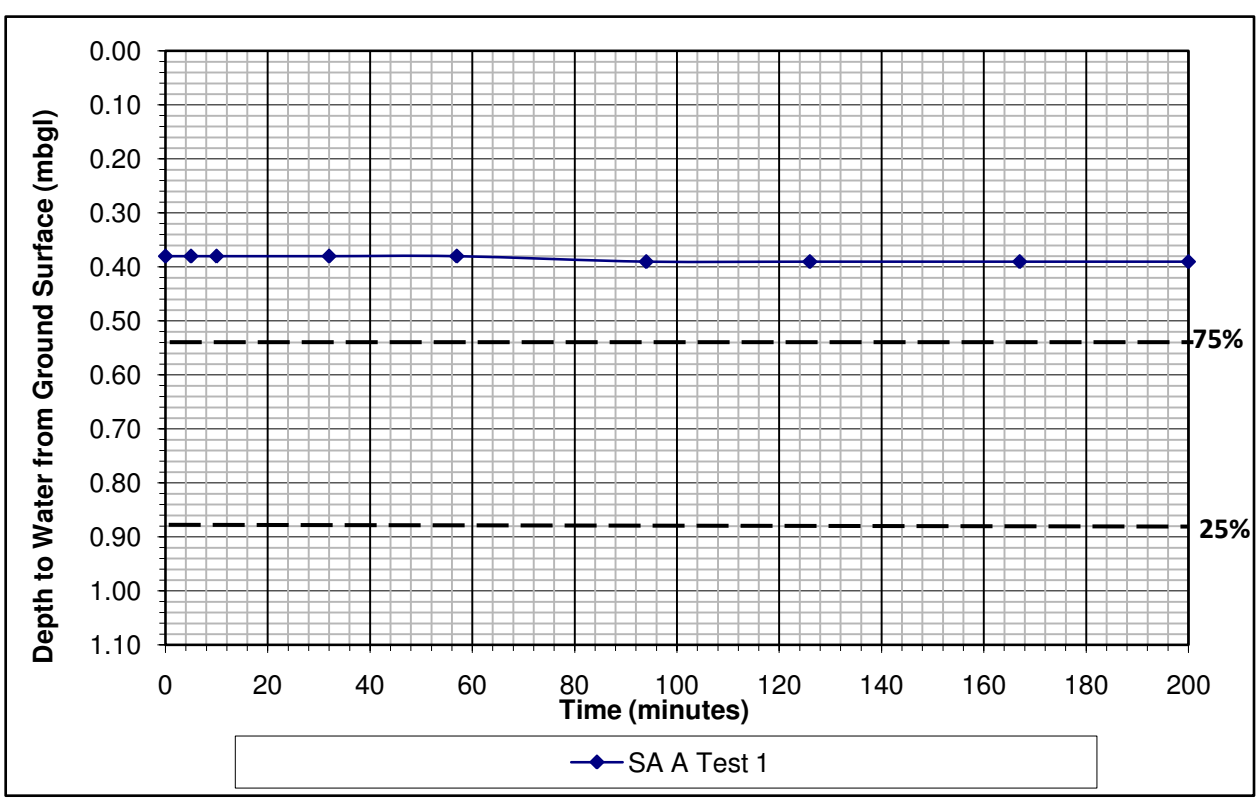
Trial Pit Infiltration Testing to BRE Digest 365

Client: Clock House Developments Ltd.
Report No: 23-05-05
Site: Manor Farm, Blackwell Close, Earls Barton
Date Tested: 23/05/23
Dimensions: 0.30m x 1.20m x 1.05m (width x length x depth)
Test Location: SA A

Test Response Zone Description - : Northampton Sand Formation

Time	Depth BGL	Time	Depth BGL	Time	Depth BGL
0	0.38	167	0.39		
5	0.38	200	0.39		
10	0.38				
32	0.38				
57	0.38				
94	0.39				
126	0.39				

Unable to Calculate Average Soil Infiltration Rate



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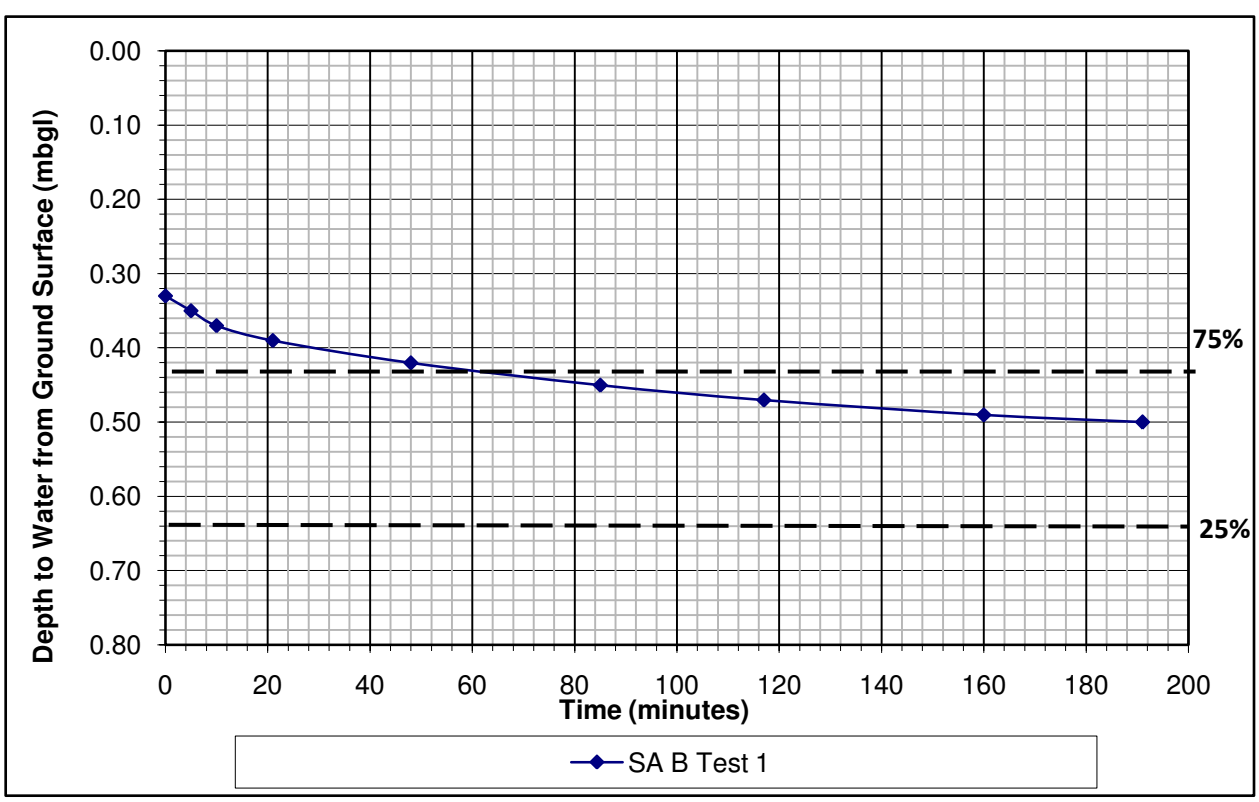
Trial Pit Infiltration Testing to BRE Digest 365

Client: Clock House Developments Ltd.
Report No: 23-05-05
Site: Manor Farm, Blackwell Close, Earls Barton
Date Tested: 23/05/23
Dimensions: 0.30m x 1.20m x 0.75m (width x length x depth)
Test Location: SA B

Test Response Zone Description - : Northampton Sand Formation

Time	Depth BGL	Time	Depth BGL	Time	Depth BGL
0	0.33	160	0.49		
5	0.35	191	0.5		
10	0.37				
21	0.39				
48	0.42				
85	0.45				
117	0.47				

Unable to Calculate Average Soil Infiltration Rate



APPENDIX C

Geo-Integrity, Mob.: - 07858 367 125 Email:- info@geo-integrity.co.uk

eurofins | Chemtest
Eurofins Chemtest Ltd
Depot Road
Newmarket
CB8 0AL
Tel: 01638 606070
Email: info@chemtest.com

Final Report

Report No.:	23-18458-1
Initial Date of Issue:	10-Jun-2023
Re-Issue Details:	
Client	Geo Integrity
Client Address:	Units 7 Burcote Wood Farm Business Park Wood Burcote Towcester NN12 8TA
Contact(s):	Fiona White
Project	23-05-05 Land at Manor Farm, Earls Barton
Quotation No.:	Q22-27618
Order No.:	
No. of Samples:	10
Turnaround (Wkdays):	5
Date Approved:	10-Jun-2023
Approved By:	
Details:	Stuart Henderson, Technical Manager

Date Received:	02-Jun-2023
Date Instructed:	02-Jun-2023
Results Due:	08-Jun-2023

Results - Soil

Project: 23-05-05 Land at Manor Farm, Earls Barton

Client: Geo Integrity			**Chemtest Job No.:**		23-18458	23-18458	23-18458	23-18458	23-18458	23-18458	23-18458	23-18458
Quotation No.: Q22-27618			**Chemtest Sample ID.:**		1649328	1649329	1649330	1649331	1649332	1649333	1649334	1649335
			Sample Location:		CT 2	CT 2	HA 101	SA A	SA B	HA 104	SA B	SA A
			Sample Type:		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
			Top Depth (m):		0.20	0.50	0.20	0.30	0.30	0.10	0.00	1.00
			Bottom Depth (m):				0.30					
			Date Sampled:		23-May-2023	23-May-2023	23-May-2023	23-May-2023	23-May-2023	23-May-2023	23-May-2023	23-May-2023
			Asbestos Lab:		NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB		
Determinand	**Accred.**	**SOP**	**Units**	**LOD**								
ACM Type	U	2192		N/A	-	-	-	-	-	-		
Asbestos Identification	U	2192		N/A	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected		
Moisture	N	2030	%	0.020	9.3	9.4	14	12	9.5	25	4.3	16
pH	M	2010		4.0								8.4
Sulphate (2:1 Water Soluble) as SO4	M	2120	g/l	0.010								0.013
Arsenic	M	2455	mg/kg	0.5	190	56	57	54	21	35		
Cadmium	M	2455	mg/kg	0.10	0.15	< 0.10	0.40	< 0.10	0.16	< 0.10		
Chromium	M	2455	mg/kg	0.5	57	54	62	53	38	52		
Copper	M	2455	mg/kg	0.50	18	16	29	10	13	19		
Mercury	M	2455	mg/kg	0.05	0.31	0.18	0.22	0.09	0.07	0.19		
Nickel	M	2455	mg/kg	0.50	43	39	30	24	12	19		
Lead	M	2455	mg/kg	0.50	50	37	160	44	50	88		
Selenium	M	2455	mg/kg	0.25	2.3	2.0	2.4	1.9	3.7	1.5		
Zinc	M	2455	mg/kg	0.50	150	130	460	110	240	130		
Chromium (Hexavalent)	N	2490	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50		
TPH >C5-C6	N	2670	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0		< 1.0
TPH >C6-C7	N	2670	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0		< 1.0
TPH >C7-C8	N	2670	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0		< 1.0
TPH >C8-C10	N	2670	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0		< 1.0
TPH >C10-C12	N	2670	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0		< 1.0
TPH >C12-C16	N	2670	mg/kg	1.0	6.8	< 1.0	< 1.0	< 1.0	2.4	6.8		< 1.0
TPH >C16-C21	N	2670	mg/kg	1.0	8.6	< 1.0	< 1.0	< 1.0	15	7.9		< 1.0
TPH >C21-C35	N	2670	mg/kg	1.0	34	< 1.0	< 1.0	< 1.0	340	36		< 1.0
Total TPH >C5-C35	N	2670	mg/kg	10	49	< 10	< 10	< 10	360	50		< 10
Naphthalene	M	2700	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	
Acenaphthylene	M	2700	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	
Acenaphthene	M	2700	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	
Fluorene	M	2700	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	
Phenanthrene	M	2700	mg/kg	0.10	< 0.10	< 0.10	1.4	< 0.10	1.5	< 0.10	< 0.10	
Anthracene	M	2700	mg/kg	0.10	< 0.10	< 0.10	0.64	< 0.10	0.78	< 0.10	< 0.10	
Fluoranthene	M	2700	mg/kg	0.10	< 0.10	< 0.10	3.6	< 0.10	2.3	< 0.10	8.8	
Pyrene	M	2700	mg/kg	0.10	< 0.10	< 0.10	3.8	< 0.10	2.4	< 0.10	12	
Benzo[a]anthracene	M	2700	mg/kg	0.10	< 0.10	< 0.10	2.4	< 0.10	1.3	< 0.10	< 0.10	
Chrysene	M	2700	mg/kg	0.10	< 0.10	< 0.10	3.1	< 0.10	1.6	< 0.10	< 0.10	
Benzo[b]fluoranthene	M	2700	mg/kg	0.10	< 0.10	< 0.10	4.4	< 0.10	2.2	< 0.10	< 0.10	
Benzo[k]fluoranthene	M	2700	mg/kg	0.10	< 0.10	< 0.10	2.1	< 0.10	1.6	< 0.10	< 0.10	
Benzo[a]pyrene	M	2700	mg/kg	0.10	< 0.10	< 0.10	3.5	< 0.10	1.6	< 0.10	< 0.10	

Results - Soil

Project: 23-05-05 Land at Manor Farm, Earls Barton

Client: Geo Integrity			**Chemtest Job No.:**		23-18458	23-18458	23-18458	23-18458	23-18458	23-18458	23-18458	23-18458
Quotation No.: Q22-27618			**Chemtest Sample ID.:**		1649328	1649329	1649330	1649331	1649332	1649333	1649334	1649335
			Sample Location:		CT 2	CT 2	HA 101	SA A	SA B	HA 104	SA B	SA A
			Sample Type:		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
			Top Depth (m):		0.20	0.50	0.20	0.30	0.30	0.10	0.00	1.00
			Bottom Depth (m):				0.30					
			Date Sampled:		23-May-2023	23-May-2023	23-May-2023	23-May-2023	23-May-2023	23-May-2023	23-May-2023	23-May-2023
			Asbestos Lab:		NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB		
Determinand	**Accred.**	**SOP**	**Units**	**LOD**								
Indeno(1,2,3-c,d)Pyrene	M	2700	mg/kg	0.10	< 0.10	< 0.10	3.2	< 0.10	1.7	< 0.10	< 0.10	
Dibenz(a,h)Anthracene	M	2700	mg/kg	0.10	< 0.10	< 0.10	0.88	< 0.10	0.98	< 0.10	< 0.10	
Benzo[g,h,i]perylene	M	2700	mg/kg	0.10	< 0.10	< 0.10	4.5	< 0.10	2.4	< 0.10	< 0.10	
Total Of 16 PAH's	M	2700	mg/kg	2.0	< 2.0	< 2.0	34	< 2.0	20	< 2.0	21	
Dichlorodifluoromethane	U	2760	µg/kg	1.0		< 1.0						< 1.0
Chloromethane	M	2760	µg/kg	1.0		< 1.0						< 1.0
Vinyl Chloride	M	2760	µg/kg	1.0		< 1.0						< 1.0
Bromomethane	M	2760	µg/kg	20		< 20						< 20
Chloroethane	U	2760	µg/kg	2.0		< 2.0						< 2.0
Trichlorofluoromethane	M	2760	µg/kg	1.0		< 1.0						< 1.0
1,1-Dichloroethene	M	2760	µg/kg	1.0		< 1.0						< 1.0
Trans 1,2-Dichloroethene	M	2760	µg/kg	1.0		< 1.0						< 1.0
1,1-Dichloroethane	M	2760	µg/kg	1.0		< 1.0						< 1.0
cis 1,2-Dichloroethene	M	2760	µg/kg	1.0		< 1.0						< 1.0
Bromochloromethane	U	2760	µg/kg	5.0		< 5.0						< 5.0
Trichloromethane	M	2760	µg/kg	1.0		< 1.0						< 1.0
1,1,1-Trichloroethane	M	2760	µg/kg	1.0		< 1.0						< 1.0
Tetrachloromethane	M	2760	µg/kg	1.0		< 1.0						< 1.0
1,1-Dichloropropene	U	2760	µg/kg	1.0		< 1.0						< 1.0
Benzene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0		< 1.0
1,2-Dichloroethane	M	2760	µg/kg	2.0		< 2.0						< 2.0
Trichloroethene	N	2760	µg/kg	1.0		< 1.0						< 1.0
1,2-Dichloropropane	M	2760	µg/kg	1.0		< 1.0						< 1.0
Dibromomethane	M	2760	µg/kg	1.0		< 1.0						< 1.0
Bromodichloromethane	M	2760	µg/kg	5.0		< 5.0						< 5.0
cis-1,3-Dichloropropene	N	2760	µg/kg	10		< 10						< 10
Toluene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0		< 1.0
Trans-1,3-Dichloropropene	N	2760	µg/kg	10		< 10						< 10
1,1,2-Trichloroethane	M	2760	µg/kg	10		< 10						< 10
Tetrachloroethene	M	2760	µg/kg	1.0		< 1.0						< 1.0
1,3-Dichloropropane	U	2760	µg/kg	2.0		< 2.0						< 2.0
Dibromochloromethane	U	2760	µg/kg	10		< 10						< 10
1,2-Dibromoethane	M	2760	µg/kg	5.0		< 5.0						< 5.0
Chlorobenzene	M	2760	µg/kg	1.0		< 1.0						< 1.0
1,1,1,2-Tetrachloroethane	M	2760	µg/kg	2.0		< 2.0						< 2.0
Ethylbenzene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0		< 1.0
m & p-Xylene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0		< 1.0
o-Xylene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0		< 1.0

Results - Soil

Project: 23-05-05 Land at Manor Farm, Earls Barton

Client: Geo Integrity			**Chemtest Job No.:**		23-18458	23-18458	23-18458	23-18458	23-18458	23-18458	23-18458	23-18458
Quotation No.: Q22-27618			**Chemtest Sample ID.:**		1649328	1649329	1649330	1649331	1649332	1649333	1649334	1649335
			Sample Location:		CT 2	CT 2	HA 101	SA A	SA B	HA 104	SA B	SA A
			Sample Type:		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
			Top Depth (m):		0.20	0.50	0.20	0.30	0.30	0.10	0.00	1.00
			Bottom Depth (m):				0.30					
			Date Sampled:		23-May-2023	23-May-2023	23-May-2023	23-May-2023	23-May-2023	23-May-2023	23-May-2023	23-May-2023
			Asbestos Lab:		NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB		
Determinand	**Accred.**	**SOP**	**Units**	**LOD**								
Styrene	M	2760	µg/kg	1.0		< 1.0						< 1.0
Tribromomethane	U	2760	µg/kg	1.0		< 1.0						< 1.0
Isopropylbenzene	M	2760	µg/kg	1.0		< 1.0						< 1.0
Bromobenzene	M	2760	µg/kg	1.0		< 1.0						< 1.0
1,2,3-Trichloropropane	N	2760	µg/kg	50		< 50						< 50
N-Propylbenzene	U	2760	µg/kg	1.0		< 1.0						< 1.0
2-Chlorotoluene	M	2760	µg/kg	1.0		< 1.0						< 1.0
1,3,5-Trimethylbenzene	M	2760	µg/kg	1.0		< 1.0						< 1.0
4-Chlorotoluene	U	2760	µg/kg	1.0		< 1.0						< 1.0
Tert-Butylbenzene	U	2760	µg/kg	1.0		< 1.0						< 1.0
1,2,4-Trimethylbenzene	M	2760	µg/kg	1.0		< 1.0						< 1.0
Sec-Butylbenzene	U	2760	µg/kg	1.0		< 1.0						< 1.0
1,3-Dichlorobenzene	M	2760	µg/kg	1.0		< 1.0						< 1.0
4-Isopropyltoluene	U	2760	µg/kg	1.0		< 1.0						< 1.0
1,4-Dichlorobenzene	M	2760	µg/kg	1.0		< 1.0						< 1.0
N-Butylbenzene	U	2760	µg/kg	1.0		< 1.0						< 1.0
1,2-Dichlorobenzene	M	2760	µg/kg	1.0		< 1.0						< 1.0
1,2-Dibromo-3-Chloropropane	U	2760	µg/kg	50		< 50						< 50
1,2,4-Trichlorobenzene	M	2760	µg/kg	1.0		< 1.0						< 1.0
Hexachlorobutadiene	N	2760	µg/kg	1.0		< 1.0						< 1.0
1,2,3-Trichlorobenzene	U	2760	µg/kg	2.0		< 2.0						< 2.0
Methyl Tert-Butyl Ether	M	2760	µg/kg	1.0		< 1.0						< 1.0
N-Nitrosodimethylamine	M	2790	mg/kg	0.50		< 0.50						< 0.50
Phenol	M	2790	mg/kg	0.50		< 0.50						< 0.50
2-Chlorophenol	M	2790	mg/kg	0.50		< 0.50						< 0.50
Bis-(2-Chloroethyl)Ether	M	2790	mg/kg	0.50		< 0.50						< 0.50
1,3-Dichlorobenzene	M	2790	mg/kg	0.50		< 0.50						< 0.50
1,4-Dichlorobenzene	N	2790	mg/kg	0.50		< 0.50						< 0.50
1,2-Dichlorobenzene	M	2790	mg/kg	0.50		< 0.50						< 0.50
2-Methylphenol	M	2790	mg/kg	0.50		< 0.50						< 0.50
Bis(2-Chloroisopropyl)Ether	M	2790	mg/kg	0.50		< 0.50						< 0.50
Hexachloroethane	N	2790	mg/kg	0.50		< 0.50						< 0.50
N-Nitrosodi-n-propylamine	M	2790	mg/kg	0.50		< 0.50						< 0.50
4-Methylphenol	M	2790	mg/kg	0.50		< 0.50						< 0.50
Nitrobenzene	M	2790	mg/kg	0.50		< 0.50						< 0.50
Isophorone	M	2790	mg/kg	0.50		< 0.50						< 0.50
2-Nitrophenol	N	2790	mg/kg	0.50		< 0.50						< 0.50
2,4-Dimethylphenol	N	2790	mg/kg	0.50		< 0.50						< 0.50

Results - Soil

Project: 23-05-05 Land at Manor Farm, Earls Barton

Client: Geo Integrity			**Chemtest Job No.:**		23-18458	23-18458	23-18458	23-18458	23-18458	23-18458	23-18458	23-18458
Quotation No.: Q22-27618			**Chemtest Sample ID.:**		1649328	1649329	1649330	1649331	1649332	1649333	1649334	1649335
			Sample Location:		CT 2	CT 2	HA 101	SA A	SA B	HA 104	SA B	SA A
			Sample Type:		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
			Top Depth (m):		0.20	0.50	0.20	0.30	0.30	0.10	0.00	1.00
			Bottom Depth (m):				0.30					
			Date Sampled:		23-May-2023	23-May-2023	23-May-2023	23-May-2023	23-May-2023	23-May-2023	23-May-2023	23-May-2023
			Asbestos Lab:		NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB		
Determinand	**Accred.**	**SOP**	**Units**	**LOD**								
Bis(2-Chloroethoxy)Methane	M	2790	mg/kg	0.50		< 0.50						< 0.50
2,4-Dichlorophenol	M	2790	mg/kg	0.50		< 0.50						< 0.50
1,2,4-Trichlorobenzene	M	2790	mg/kg	0.50		< 0.50						< 0.50
Naphthalene	M	2790	mg/kg	0.50		< 0.50						< 0.50
4-Chloroaniline	N	2790	mg/kg	0.50		< 0.50						< 0.50
Hexachlorobutadiene	M	2790	mg/kg	0.50		< 0.50						< 0.50
4-Chloro-3-Methylphenol	M	2790	mg/kg	0.50		< 0.50						< 0.50
2-Methylnaphthalene	M	2790	mg/kg	0.50		< 0.50						< 0.50
4-Nitrophenol	N	2790	mg/kg	0.50		< 0.50						< 0.50
Hexachlorocyclopentadiene	N	2790	mg/kg	0.50		< 0.50						< 0.50
2,4,6-Trichlorophenol	M	2790	mg/kg	0.50		< 0.50						< 0.50
2,4,5-Trichlorophenol	M	2790	mg/kg	0.50		< 0.50						< 0.50
2-Chloronaphthalene	M	2790	mg/kg	0.50		< 0.50						< 0.50
2-Nitroaniline	M	2790	mg/kg	0.50		< 0.50						< 0.50
Acenaphthylene	M	2790	mg/kg	0.50		< 0.50						< 0.50
Dimethylphthalate	M	2790	mg/kg	0.50		< 0.50						< 0.50
2,6-Dinitrotoluene	M	2790	mg/kg	0.50		< 0.50						< 0.50
Acenaphthene	M	2790	mg/kg	0.50		< 0.50						< 0.50
3-Nitroaniline	N	2790	mg/kg	0.50		< 0.50						< 0.50
Dibenzofuran	M	2790	mg/kg	0.50		< 0.50						< 0.50
4-Chlorophenylphenylether	M	2790	mg/kg	0.50		< 0.50						< 0.50
2,4-Dinitrotoluene	M	2790	mg/kg	0.50		< 0.50						< 0.50
Fluorene	M	2790	mg/kg	0.50		< 0.50						< 0.50
Diethyl Phthalate	M	2790	mg/kg	0.50		< 0.50						< 0.50
4-Nitroaniline	M	2790	mg/kg	0.50		< 0.50						< 0.50
2-Methyl-4,6-Dinitrophenol	N	2790	mg/kg	0.50		< 0.50						< 0.50
Azobenzene	M	2790	mg/kg	0.50		< 0.50						< 0.50
4-Bromophenylphenyl Ether	M	2790	mg/kg	0.50		< 0.50						< 0.50
Hexachlorobenzene	M	2790	mg/kg	0.50		< 0.50						< 0.50
Pentachlorophenol	N	2790	mg/kg	0.50		< 0.50						< 0.50
Phenanthrene	M	2790	mg/kg	0.50		< 0.50						< 0.50
Anthracene	M	2790	mg/kg	0.50		< 0.50						< 0.50
Carbazole	M	2790	mg/kg	0.50		< 0.50						< 0.50
Di-N-Butyl Phthalate	M	2790	mg/kg	0.50		< 0.50						< 0.50
Fluoranthene	M	2790	mg/kg	0.50		< 0.50						< 0.50
Pyrene	M	2790	mg/kg	0.50		< 0.50						< 0.50
Butylbenzyl Phthalate	M	2790	mg/kg	0.50		< 0.50						< 0.50
Benzo[a]anthracene	M	2790	mg/kg	0.50		< 0.50						< 0.50

Results - Soil

Project: 23-05-05 Land at Manor Farm, Earls Barton

Client: Geo Integrity			**Chemtest Job No.:**		23-18458	23-18458	23-18458	23-18458	23-18458	23-18458	23-18458	23-18458
Quotation No.: Q22-27618			**Chemtest Sample ID.:**		1649328	1649329	1649330	1649331	1649332	1649333	1649334	1649335
			Sample Location:		CT 2	CT 2	HA 101	SA A	SA B	HA 104	SA B	SA A
			Sample Type:		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
			Top Depth (m):		0.20	0.50	0.20	0.30	0.30	0.10	0.00	1.00
			Bottom Depth (m):				0.30					
			Date Sampled:		23-May-2023	23-May-2023	23-May-2023	23-May-2023	23-May-2023	23-May-2023	23-May-2023	23-May-2023
			Asbestos Lab:		NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB		
Determinand	**Accred.**	**SOP**	**Units**	**LOD**								
Chrysene	M	2790	mg/kg	0.50		< 0.50						< 0.50
Bis(2-Ethylhexyl)Phthalate	N	2790	mg/kg	0.50		< 0.50						< 0.50
Di-N-Octyl Phthalate	M	2790	mg/kg	0.50		< 0.50						< 0.50
Benzo[b]fluoranthene	M	2790	mg/kg	0.50		< 0.50						< 0.50
Benzo[k]fluoranthene	M	2790	mg/kg	0.50		< 0.50						< 0.50
Benzo[a]pyrene	M	2790	mg/kg	0.50		< 0.50						< 0.50
Indeno(1,2,3-c,d)Pyrene	M	2790	mg/kg	0.50		< 0.50						< 0.50
Dibenz(a,h)Anthracene	M	2790	mg/kg	0.50		< 0.50						< 0.50
Benzo[g,h,i]perylene	M	2790	mg/kg	0.50		< 0.50						< 0.50
Total Phenols	M	2920	mg/kg	0.10							0.40	

Results - Soil

Project: 23-05-05 Land at Manor Farm, Earls Barton

Client: Geo Integrity		**Chemtest Job No.:**			23-18458	23-18458
Quotation No.: Q22-27618		**Chemtest Sample ID.:**			1649336	1649337
		Sample Location:			CT 1	HA 101
		Sample Type:			SOIL	SOIL
		Top Depth (m):			0.50	0.50
		Bottom Depth (m):				0.90
		Date Sampled:			23-May-2023	23-May-2023
		Asbestos Lab:				
Determinand	**Accred.**	**SOP**	**Units**	**LOD**		
ACM Type	U	2192		N/A		
Asbestos Identification	U	2192		N/A		
Moisture	N	2030	%	0.020	19	12
pH	M	2010		4.0	8.5	
Sulphate (2:1 Water Soluble) as SO4	M	2120	g/l	0.010	0.12	
Arsenic	M	2455	mg/kg	0.5		
Cadmium	M	2455	mg/kg	0.10		
Chromium	M	2455	mg/kg	0.5		
Copper	M	2455	mg/kg	0.50		
Mercury	M	2455	mg/kg	0.05		
Nickel	M	2455	mg/kg	0.50		
Lead	M	2455	mg/kg	0.50		
Selenium	M	2455	mg/kg	0.25		
Zinc	M	2455	mg/kg	0.50		
Chromium (Hexavalent)	N	2490	mg/kg	0.50		
TPH >C5-C6	N	2670	mg/kg	1.0		< 1.0
TPH >C6-C7	N	2670	mg/kg	1.0		< 1.0
TPH >C7-C8	N	2670	mg/kg	1.0		< 1.0
TPH >C8-C10	N	2670	mg/kg	1.0		< 1.0
TPH >C10-C12	N	2670	mg/kg	1.0		< 1.0
TPH >C12-C16	N	2670	mg/kg	1.0		6.7
TPH >C16-C21	N	2670	mg/kg	1.0		8.8
TPH >C21-C35	N	2670	mg/kg	1.0		25
Total TPH >C5-C35	N	2670	mg/kg	10		41
Naphthalene	M	2700	mg/kg	0.10		
Acenaphthylene	M	2700	mg/kg	0.10		
Acenaphthene	M	2700	mg/kg	0.10		
Fluorene	M	2700	mg/kg	0.10		
Phenanthrene	M	2700	mg/kg	0.10		
Anthracene	M	2700	mg/kg	0.10		
Fluoranthene	M	2700	mg/kg	0.10		
Pyrene	M	2700	mg/kg	0.10		
Benzo[a]anthracene	M	2700	mg/kg	0.10		
Chrysene	M	2700	mg/kg	0.10		
Benzo[b]fluoranthene	M	2700	mg/kg	0.10		
Benzo[k]fluoranthene	M	2700	mg/kg	0.10		
Benzo[a]pyrene	M	2700	mg/kg	0.10		

Results - Soil

Project: 23-05-05 Land at Manor Farm, Earls Barton

Client: Geo Integrity			**Chemtest Job No.:**		23-18458	23-18458
Quotation No.: Q22-27618			**Chemtest Sample ID.:**		1649336	1649337
			Sample Location:		CT 1	HA 101
			Sample Type:		SOIL	SOIL
			Top Depth (m):		0.50	0.50
			Bottom Depth (m):			0.90
			Date Sampled:		23-May-2023	23-May-2023
			Asbestos Lab:			
Determinand	**Accred.**	**SOP**	**Units**	**LOD**		
Indeno(1,2,3-c,d)Pyrene	M	2700	mg/kg	0.10		
Dibenz(a,h)Anthracene	M	2700	mg/kg	0.10		
Benzo[g,h,i]perylene	M	2700	mg/kg	0.10		
Total Of 16 PAH's	M	2700	mg/kg	2.0		
Dichlorodifluoromethane	U	2760	µg/kg	1.0		
Chloromethane	M	2760	µg/kg	1.0		
Vinyl Chloride	M	2760	µg/kg	1.0		
Bromomethane	M	2760	µg/kg	20		
Chloroethane	U	2760	µg/kg	2.0		
Trichlorofluoromethane	M	2760	µg/kg	1.0		
1,1-Dichloroethene	M	2760	µg/kg	1.0		
Trans 1,2-Dichloroethene	M	2760	µg/kg	1.0		
1,1-Dichloroethane	M	2760	µg/kg	1.0		
cis 1,2-Dichloroethene	M	2760	µg/kg	1.0		
Bromochloromethane	U	2760	µg/kg	5.0		
Trichloromethane	M	2760	µg/kg	1.0		
1,1,1-Trichloroethane	M	2760	µg/kg	1.0		
Tetrachloromethane	M	2760	µg/kg	1.0		
1,1-Dichloropropene	U	2760	µg/kg	1.0		
Benzene	M	2760	µg/kg	1.0		
1,2-Dichloroethane	M	2760	µg/kg	2.0		
Trichloroethene	N	2760	µg/kg	1.0		
1,2-Dichloropropane	M	2760	µg/kg	1.0		
Dibromomethane	M	2760	µg/kg	1.0		
Bromodichloromethane	M	2760	µg/kg	5.0		
cis-1,3-Dichloropropene	N	2760	µg/kg	10		
Toluene	M	2760	µg/kg	1.0		
Trans-1,3-Dichloropropene	N	2760	µg/kg	10		
1,1,2-Trichloroethane	M	2760	µg/kg	10		
Tetrachloroethene	M	2760	µg/kg	1.0		
1,3-Dichloropropane	U	2760	µg/kg	2.0		
Dibromochloromethane	U	2760	µg/kg	10		
1,2-Dibromoethane	M	2760	µg/kg	5.0		
Chlorobenzene	M	2760	µg/kg	1.0		
1,1,1,2-Tetrachloroethane	M	2760	µg/kg	2.0		
Ethylbenzene	M	2760	µg/kg	1.0		
m & p-Xylene	M	2760	µg/kg	1.0		
o-Xylene	M	2760	µg/kg	1.0		

Results - Soil

Project: 23-05-05 Land at Manor Farm, Earls Barton

Client: Geo Integrity			**Chemtest Job No.:**		23-18458	23-18458
Quotation No.: Q22-27618			**Chemtest Sample ID.:**		1649336	1649337
			Sample Location:		CT 1	HA 101
			Sample Type:		SOIL	SOIL
			Top Depth (m):		0.50	0.50
			Bottom Depth (m):			0.90
			Date Sampled:		23-May-2023	23-May-2023
			Asbestos Lab:			
Determinand	**Accred.**	**SOP**	**Units**	**LOD**		
Styrene	M	2760	µg/kg	1.0		
Tribromomethane	U	2760	µg/kg	1.0		
Isopropylbenzene	M	2760	µg/kg	1.0		
Bromobenzene	M	2760	µg/kg	1.0		
1,2,3-Trichloropropane	N	2760	µg/kg	50		
N-Propylbenzene	U	2760	µg/kg	1.0		
2-Chlorotoluene	M	2760	µg/kg	1.0		
1,3,5-Trimethylbenzene	M	2760	µg/kg	1.0		
4-Chlorotoluene	U	2760	µg/kg	1.0		
Tert-Butylbenzene	U	2760	µg/kg	1.0		
1,2,4-Trimethylbenzene	M	2760	µg/kg	1.0		
Sec-Butylbenzene	U	2760	µg/kg	1.0		
1,3-Dichlorobenzene	M	2760	µg/kg	1.0		
4-Isopropyltoluene	U	2760	µg/kg	1.0		
1,4-Dichlorobenzene	M	2760	µg/kg	1.0		
N-Butylbenzene	U	2760	µg/kg	1.0		
1,2-Dichlorobenzene	M	2760	µg/kg	1.0		
1,2-Dibromo-3-Chloropropane	U	2760	µg/kg	50		
1,2,4-Trichlorobenzene	M	2760	µg/kg	1.0		
Hexachlorobutadiene	N	2760	µg/kg	1.0		
1,2,3-Trichlorobenzene	U	2760	µg/kg	2.0		
Methyl Tert-Butyl Ether	M	2760	µg/kg	1.0		
N-Nitrosodimethylamine	M	2790	mg/kg	0.50		
Phenol	M	2790	mg/kg	0.50		
2-Chlorophenol	M	2790	mg/kg	0.50		
Bis-(2-Chloroethyl)Ether	M	2790	mg/kg	0.50		
1,3-Dichlorobenzene	M	2790	mg/kg	0.50		
1,4-Dichlorobenzene	N	2790	mg/kg	0.50		
1,2-Dichlorobenzene	M	2790	mg/kg	0.50		
2-Methylphenol	M	2790	mg/kg	0.50		
Bis(2-Chloroisopropyl)Ether	M	2790	mg/kg	0.50		
Hexachloroethane	N	2790	mg/kg	0.50		
N-Nitrosodi-n-propylamine	M	2790	mg/kg	0.50		
4-Methylphenol	M	2790	mg/kg	0.50		
Nitrobenzene	M	2790	mg/kg	0.50		
Isophorone	M	2790	mg/kg	0.50		
2-Nitrophenol	N	2790	mg/kg	0.50		
2,4-Dimethylphenol	N	2790	mg/kg	0.50		

Results - Soil

Project: 23-05-05 Land at Manor Farm, Earls Barton

Client: Geo Integrity			**Chemtest Job No.:**		23-18458	23-18458
Quotation No.: Q22-27618			**Chemtest Sample ID.:**		1649336	1649337
			Sample Location:		CT 1	HA 101
			Sample Type:		SOIL	SOIL
			Top Depth (m):		0.50	0.50
			Bottom Depth (m):			0.90
			Date Sampled:		23-May-2023	23-May-2023
			Asbestos Lab:			
Determinand	**Accred.**	**SOP**	**Units**	**LOD**		
Bis(2-Chloroethoxy)Methane	M	2790	mg/kg	0.50		
2,4-Dichlorophenol	M	2790	mg/kg	0.50		
1,2,4-Trichlorobenzene	M	2790	mg/kg	0.50		
Naphthalene	M	2790	mg/kg	0.50		
4-Chloroaniline	N	2790	mg/kg	0.50		
Hexachlorobutadiene	M	2790	mg/kg	0.50		
4-Chloro-3-Methylphenol	M	2790	mg/kg	0.50		
2-Methylnaphthalene	M	2790	mg/kg	0.50		
4-Nitrophenol	N	2790	mg/kg	0.50		
Hexachlorocyclopentadiene	N	2790	mg/kg	0.50		
2,4,6-Trichlorophenol	M	2790	mg/kg	0.50		
2,4,5-Trichlorophenol	M	2790	mg/kg	0.50		
2-Chloronaphthalene	M	2790	mg/kg	0.50		
2-Nitroaniline	M	2790	mg/kg	0.50		
Acenaphthylene	M	2790	mg/kg	0.50		
Dimethylphthalate	M	2790	mg/kg	0.50		
2,6-Dinitrotoluene	M	2790	mg/kg	0.50		
Acenaphthene	M	2790	mg/kg	0.50		
3-Nitroaniline	N	2790	mg/kg	0.50		
Dibenzofuran	M	2790	mg/kg	0.50		
4-Chlorophenylphenylether	M	2790	mg/kg	0.50		
2,4-Dinitrotoluene	M	2790	mg/kg	0.50		
Fluorene	M	2790	mg/kg	0.50		
Diethyl Phthalate	M	2790	mg/kg	0.50		
4-Nitroaniline	M	2790	mg/kg	0.50		
2-Methyl-4,6-Dinitrophenol	N	2790	mg/kg	0.50		
Azobenzene	M	2790	mg/kg	0.50		
4-Bromophenylphenyl Ether	M	2790	mg/kg	0.50		
Hexachlorobenzene	M	2790	mg/kg	0.50		
Pentachlorophenol	N	2790	mg/kg	0.50		
Phenanthrene	M	2790	mg/kg	0.50		
Anthracene	M	2790	mg/kg	0.50		
Carbazole	M	2790	mg/kg	0.50		
Di-N-Butyl Phthalate	M	2790	mg/kg	0.50		
Fluoranthene	M	2790	mg/kg	0.50		
Pyrene	M	2790	mg/kg	0.50		
Butylbenzyl Phthalate	M	2790	mg/kg	0.50		
Benzo[a]anthracene	M	2790	mg/kg	0.50		

Results - Soil

Project: 23-05-05 Land at Manor Farm, Earls Barton

Client: Geo Integrity			**Chemtest Job No.:**		23-18458	23-18458
Quotation No.: Q22-27618			**Chemtest Sample ID.:**		1649336	1649337
			Sample Location:		CT 1	HA 101
			Sample Type:		SOIL	SOIL
			Top Depth (m):		0.50	0.50
			Bottom Depth (m):			0.90
			Date Sampled:		23-May-2023	23-May-2023
			Asbestos Lab:			
Determinand	**Accred.**	**SOP**	**Units**	**LOD**		
Chrysene	M	2790	mg/kg	0.50		
Bis(2-Ethylhexyl)Phthalate	N	2790	mg/kg	0.50		
Di-N-Octyl Phthalate	M	2790	mg/kg	0.50		
Benzo[b]fluoranthene	M	2790	mg/kg	0.50		
Benzo[k]fluoranthene	M	2790	mg/kg	0.50		
Benzo[a]pyrene	M	2790	mg/kg	0.50		
Indeno(1,2,3-c,d)Pyrene	M	2790	mg/kg	0.50		
Dibenz(a,h)Anthracene	M	2790	mg/kg	0.50		
Benzo[g,h,i]perylene	M	2790	mg/kg	0.50		
Total Phenols	M	2920	mg/kg	0.10		

Results - Single Stage WAC

Project: 23-05-05 Land at Manor Farm, Earls Barton

					Landfill Waste Acceptance Criteria Limits		
Chemtest Job No:	23-18458						
Chemtest Sample ID:	1649329						
Sample Ref:							
Sample ID:							
Sample Location:	CT 2						
Top Depth(m):	0.50						
Bottom Depth(m):							
Sampling Date:	23-May-2023						
Determinand	**SOP**	**Accred.**	**Units**		**Inert Waste Landfill**	**Stable, Non-reactive hazardous waste in non-hazardous Landfill**	**Hazardous Waste Landfill**
Total Organic Carbon	2625	M	%	3.3	3	5	6
Loss On Ignition	2610	M	%	0.58	--	--	10
Total BTEX	2760	M	mg/kg	< 0.010	6	--	--
Total PCBs (7 Congeners)	2815	M	mg/kg	< 0.10	1	--	--
TPH Total WAC	2670	M	mg/kg	< 10	500	--	--
Total (Of 17) PAH's	2700	N	mg/kg	< 2.0	100	--	--
pH	2010	M		8.1	--	>6	--
Acid Neutralisation Capacity	2015	N	mol/kg	0.015	--	To evaluate	To evaluate
Eluate Analysis			**10:1 Eluate mg/l**	**10:1 Eluate mg/kg**	**Limit values for compliance leaching test using BS EN 12457 at L/S 10 l/kg**		
Arsenic	1455	U	0.0067	0.067	0.5	2	25
Barium	1455	U	0.005	0.053	20	100	300
Cadmium	1455	U	< 0.00011	< 0.0011	0.04	1	5
Chromium	1455	U	0.0030	0.030	0.5	10	70
Copper	1455	U	0.0017	0.017	2	50	100
Mercury	1455	U	< 0.00005	< 0.00050	0.01	0.2	2
Molybdenum	1455	U	0.0060	0.060	0.5	10	30
Nickel	1455	U	0.0008	0.0079	0.4	10	40
Lead	1455	U	< 0.0005	< 0.0050	0.5	10	50
Antimony	1455	U	< 0.0005	< 0.0050	0.06	0.7	5
Selenium	1455	U	< 0.0005	< 0.0050	0.1	0.5	7
Zinc	1455	U	0.019	0.19	4	50	200
Chloride	1220	U	3.8	38	800	15000	25000
Fluoride	1220	U	0.39	3.9	10	150	500
Sulphate	1220	U	18	180	1000	20000	50000
Total Dissolved Solids	1020	N	89	890	4000	60000	100000
Phenol Index	1920	U	< 0.030	< 0.30	1	-	-
Dissolved Organic Carbon	1610	U	5.0	50	500	800	1000

Solid Information	
Dry mass of test portion/kg	0.090
Moisture (%)	9.4

Waste Acceptance Criteria

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

Test Methods

SOP	Title	Parameters included	Method summary
1020	Electrical Conductivity and Total Dissolved Solids (TDS) in Waters	Electrical Conductivity and Total Dissolved Solids (TDS) in Waters	Conductivity Meter
1220	Anions, Alkalinity & Ammonium in Waters	Fluoride; Chloride; Nitrite; Nitrate; Total; Oxidisable Nitrogen (TON); Sulfate; Phosphate; Alkalinity; Ammonium	Automated colorimetric analysis using 'Aquakem 600' Discrete Analyser.
1455	Metals in Waters by ICP-MS	Metals, including: Antimony; Arsenic; Barium; Beryllium; Boron; Cadmium; Chromium; Cobalt; Copper; Lead; Manganese; Mercury; Molybdenum; Nickel; Selenium; Tin; Vanadium; Zinc	Filtration of samples followed by direct determination by inductively coupled plasma mass spectrometry (ICP-MS).
1610	Total/Dissolved Organic Carbon in Waters	Organic Carbon	TOC Analyser using Catalytic Oxidation
1920	Phenols in Waters by HPLC	Phenolic compounds including: Phenol, Cresols, Xylenols, Trimethylphenols Note: Chlorophenols are excluded.	Determination by High Performance Liquid Chromatography (HPLC) using electrochemical detection.
2010	pH Value of Soils	pH	pH Meter
2015	Acid Neutralisation Capacity	Acid Reserve	Titration
2030	Moisture and Stone Content of Soils(Requirement of MCERTS)	Moisture content	Determination of moisture content of soil as a percentage of its as received mass obtained at <37°C.
2040	Soil Description(Requirement of MCERTS)	Soil description	As received soil is described based upon BS5930
2120	Water Soluble Boron, Sulphate, Magnesium & Chromium	Boron; Sulphate; Magnesium; Chromium	Aqueous extraction / ICP-OES
2192	Asbestos	Asbestos	Polarised light microscopy / Gravimetry
2455	Acid Soluble Metals in Soils	Metals, including: Arsenic; Barium; Beryllium; Cadmium; Chromium; Cobalt; Copper; Lead; Manganese; Mercury; Molybdenum; Nickel; Selenium; Vanadium; Zinc	Acid digestion followed by determination of metals in extract by ICP-MS.
2490	Hexavalent Chromium in Soils	Chromium [VI]	Soil extracts are prepared by extracting dried and ground soil samples into boiling water. Chromium [VI] is determined by 'Aquakem 600' Discrete Analyser using 1,5-diphenylcarbazide.
2610	Loss on Ignition	loss on ignition (LOI)	Determination of the proportion by mass that is lost from a soil by ignition at 550°C.
2625	Total Organic Carbon in Soils	Total organic Carbon (TOC)	Determined by high temperature combustion under oxygen, using an Eltra elemental analyser.
2670	Total Petroleum Hydrocarbons (TPH) in Soils by GC-FID	TPH (C6–C40); optional carbon banding, e.g. 3-band – GRO, DRO & LRO*TPH C8–C40	Dichloromethane extraction / GC-FID
2700	Speciated Polynuclear Aromatic Hydrocarbons (PAH) in Soil by GC-FID	Acenaphthene; Acenaphthylene; Anthracene; Benzo[a]Anthracene; Benzo[a]Pyrene; Benzo[b]Fluoranthene; Benzo[ghi]Perylene; Benzo[k]Fluoranthene; Chrysene; Dibenz[ah]Anthracene; Fluoranthene; Fluorene; Indeno[123cd]Pyrene; Naphthalene; Phenanthrene; Pyrene	Dichloromethane extraction / GC-FID (GC-FID detection is non-selective and can be subject to interference from co-eluting compounds)
2760	Volatile Organic Compounds (VOCs) in Soils by Headspace GC-MS	Volatile organic compounds, including BTEX and halogenated Aliphatic/Aromatics.(cf. USEPA Method 8260)*please refer to UKAS schedule	Automated headspace gas chromatographic (GC) analysis of a soil sample, as received, with mass spectrometric (MS) detection of volatile organic compounds.
2790	Semi-Volatile Organic Compounds (SVOCs) in Soils by GC-MS	Semi-volatile organic compounds(cf. USEPA Method 8270)	Acetone/Hexane extraction / GC-MS

Test Methods

SOP	Title	Parameters included	Method summary
2815	Polychlorinated Biphenyls (PCB) ICES7Congeners in Soils by GC-MS	ICES7 PCB congeners	Acetone/Hexane extraction / GC-MS
2920	Phenols in Soils by HPLC	Phenolic compounds including Resorcinol, Phenol, Methylphenols, Dimethylphenols, 1-Naphthol and TrimethylphenolsNote: chlorophenols are excluded.	60:40 methanol/water mixture extraction, followed by HPLC determination using electrochemical detection.
640	Characterisation of Waste (Leaching C10)	Waste material including soil, sludges and granular waste	ComplianceTest for Leaching of Granular Waste Material and Sludge

Report Information

Key

U	UKAS accredited
M	MCERTS and UKAS accredited
N	Unaccredited
S	This analysis has been subcontracted to a UKAS accredited laboratory that is accredited for this analysis
SN	This analysis has been subcontracted to a UKAS accredited laboratory that is not accredited for this analysis
T	This analysis has been subcontracted to an unaccredited laboratory
I/S	Insufficient Sample
U/S	Unsuitable Sample
N/E	not evaluated
<	"less than"
>	"greater than"
SOP	Standard operating procedure
LOD	Limit of detection

Comments or interpretations are beyond the scope of UKAS accreditation
The results relate only to the items tested
Uncertainty of measurement for the determinands tested are available upon request
None of the results in this report have been recovery corrected
All results are expressed on a dry weight basis

The following tests were analysed on samples as received and the results subsequently corrected to a dry weight basis TPH, BTEX, VOCs, SVOCs, PCBs, Phenols

For all other tests the samples were dried at < 37°C prior to analysis
All Asbestos testing is performed at the indicated laboratory
Issue numbers are sequential starting with 1 all subsequent reports are incremented by 1

Sample Deviation Codes

A - Date of sampling not supplied
B - Sample age exceeds stability time (sampling to extraction)
C - Sample not received in appropriate containers
D - Broken Container
E - Insufficient Sample (Applies to LOI in Trommel Fines Only)

Sample Retention and Disposal

All soil samples will be retained for a period of 30 days from the date of receipt
All water samples will be retained for 14 days from the date of receipt
Charges may apply to extended sample storage

If you require extended retention of samples, please email your requirements to:
customerservices@chemtest.com

	HA 101	SA B
	0.20	0.30
Benzo[a]anthracene	2.4	1.3
Chrysene	3.1	1.6
Benzo[b]fluoranthene	4.4	2.2
Benzo[k]fluoranthene	2.1	1.6
Indeno(1,2,3-c,d)Pyrene	3.2	1.7
Dibenz(a,h)Anthracene	0.88	0.98
Benzo[g,h,i]perylene	4.5	2.4
Benzo[a]pyrene	3.5	1.6

	PAH/BaP ratio	Mean
0.685714	0.8125	0.75
0.885714	1	0.94
1.257143	1.375	1.32
0.6	1	0.80
0.914286	1.0625	0.99
0.251429	0.6125	0.43
1.285714	1.5	1.39

Table 2.5: Profile of the genotoxic PAHs relative to BaP in the Culp study with order of magnitude upper and lower limits.

PAH	Mean ratio to BaP	Lower limit	Upper limit
Benz[a]anthracene	1.24	0.12	12.43
Chrysene	1.16	0.12	11.61
Benzo[b]fluoranthene	1.08	0.11	10.85
Benzo[k]fluoranthene	0.37	0.04	3.72
Dibenz[ah]anthracene	0.14	0.01	1.38
Indeno[123-cd]pyrene	0.73	0.07	7.27
Benzo[ghi]perylene	0.82	0.08	8.22

GroundTech Laboratories

Geotechnical Testing Facility

Slapton Hill Barn, Blakesley Road, Slapton, Towcester, Northants. NN12 8QD

Telephone:- 01327 860947/860060 Email: lab@listersgeotechnics.co.uk

PROJECT INFORMATION		SAMPLE INFORMATION		
Site Location:-	Land at Manor Farm Earls Barton	**Laboratory Tests Undertaken:-**		
		TEST TYPE	**TEST METHOD**	**TESTED**
		Natural Moisture Contents (MC%)	(BS 1377:Part 2:1990 Clause 3.2)	✓
		Liquid Limits (%)	(BS 1377:Part 2:1990 Clause 4.3)	✓
		Plastic Limits (%)	(BS 1377:Part 2:1990 Clause 5.3)	✓
		Plasticity Index (%)	(BS 1377:Part 2:1990 Clause 5.4)	✓
		Linear Shrinkage (%)	(BS 1377:Part 2:1990 Clause 6.5)	
		PSD - Wet Sieving	(BS 1377:Part 2:1990 Clause 9.2)	
Client Reference:-	23-05-05	Engineering Sample Descriptions	(BS 5930 : Section 6)	
		Passing 425/63 (μm)	-	✓
		Hydrometer	(BS 1377:Part 2:1990 Clause 9.5)	
Date Samples Received:-	07 June 2023	Loss on Ignition (%)	-	
Date Testing Completed:-	20 June 2023	Soil Suctions (kPa)	BRE Digest IP 4/93, 1993	
		Bulk Density (Mg/m^3)	(BS 1377:Part 2:1990 Clause 7.2)	
		Strength Tests	(BS 1377:Part 7:1990 Clause 8 & 9)	
		Soluble Sulphate Content (SO_4g/l)	(BS 1377:Part 3:1990 Clause 5.3)	
		pH value	(BS 1377:Part 3:1990 Clause 9.4)	
		California Bearing Ratios (CBR)	(BS 1377:Part 4:1990 Clause 7)	
		Compaction Tests	(BS 1377:Part 4:1990 Clauses 3.0-3.6)	

The results relate only to the samples tested

Laboratory testing in accord with BS EN ISO/IEC 17025-2000 and Quality Management in accord with ISO 9001

Signed on behalf of GroundTech Laboratories:-_____ Technical Signatory

Quality Assured to ISO 9001

GEOTECHNICAL LABORATORY TEST RESULTS

Report No: 23.06.011

GroundTech Laboratories

Geotechnical Testing Facility

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Telephone: 01327 860947/860060 Fax: 01327 860430 Email: groundtech@listersgeotechnics.co.uk

Quality Assured to ISO 9001

SAMPLES				CLASSIFICATION TESTS							CLASSIFICATION TESTS							STRENGTH TESTS					CHEMICAL TESTS	
Test Location	Sample Type	Sample Depth -m	Test Type	WC %	LL %	PL %	PI %	Passing 425 µm %	Modified PI %	Class	Passing 63 µm %	WC/ LL	PL+ 2%	Liquidity Index	Loss on Ignition %	Soil Suction kPa	Bulk Density Mg/m³	Test Type	Cell Pressure kN/m²	Deviator Stress kN/m²	Apparent Cohesion kN/m²	ϕ	pH Value	Soluble Sulphate Content SO4 g/l
CT 03	D	0.50	PI/63	29	40	23	17	69	12	CI	39	0.73	25	0.35										
	D	1.00	PI/63	23	51	22	29	96	28	CH	91	0.45	24	0.03										
	D	2.00	PI/63	32	57	26	31	99	31	CH	96	0.56	28	0.19										
	D	3.10	PI/63	28	55	26	29	100	29	CH	99	0.51	28	0.07										
	D	4.00	PI/63	24	54	24	30	100	30	CH	99	0.44	26	0.00										
CT 04	D	1.00	PI/63	26	60	27	33	99	33	CH	98	0.43	29	-0.03										
	D	2.00	PI/63	33	60	27	33	99	33	CH	97	0.55	29	0.18										
	D	2.80	PI/63	29	58	26	32	98	31	CH	96	0.50	28	0.09										
	D	4.00	PI/63	23	55	25	30	100	30	CH	99	0.42	27	-0.07										

Symbols:

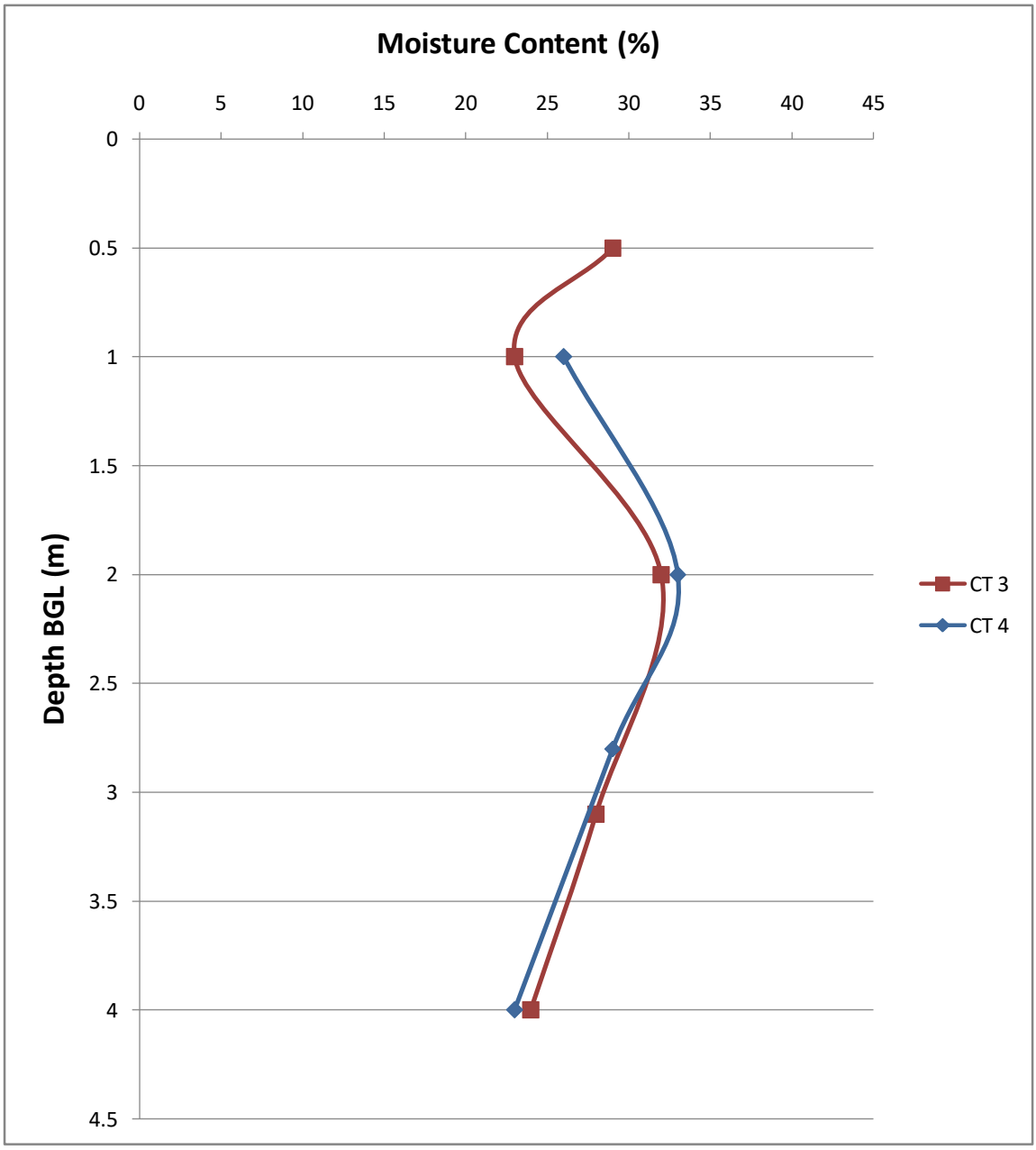
U	Undisturbed Sample	R	Remoulded	PI	Plasticity Index	T	Triaxial Undrained	L	100mm specimen
D	Disturbed Sample	63	Passing 63µm	F	Filter Paper Suction Tests	M	Multistage Triaxial	S	38mm specimen
B	Bulk Sample	H	Hydrometer	CC	Continuous Core	HP	Hand Penetrometer		
W	Water Sample	PSD	Wet Sieving			V	Vane Test		

LABORATORY TEST RESULTS

Project Reference
23.06.011

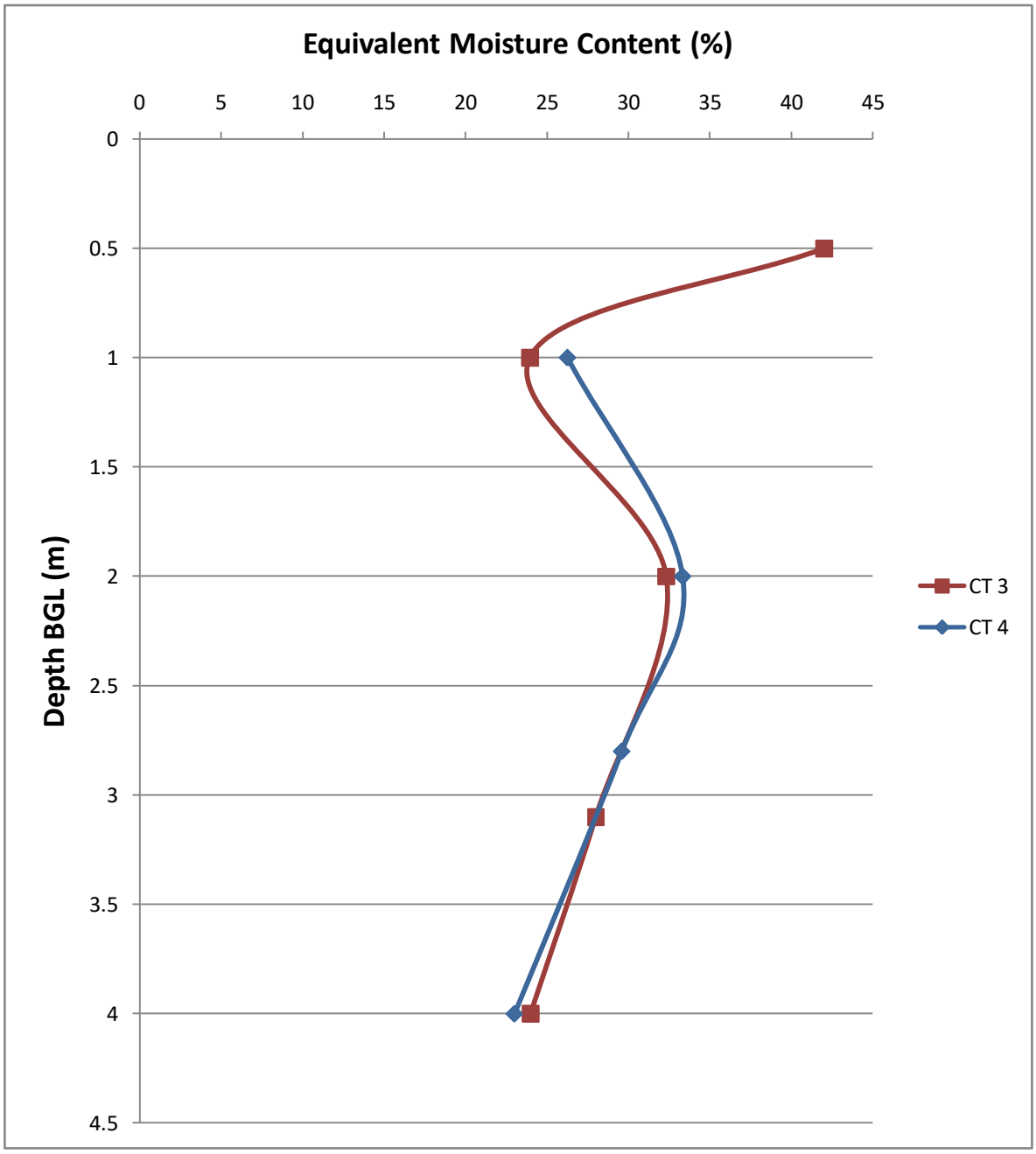
PROJECT NUMBER	23-05-05
PROJECT NAME	Land at Manor Farm, Earls Barton
CLIENT	Clock House Developments Ltd.
REPORT DATE	July 2023

MOISTURE CONTENT VS. DEPTH



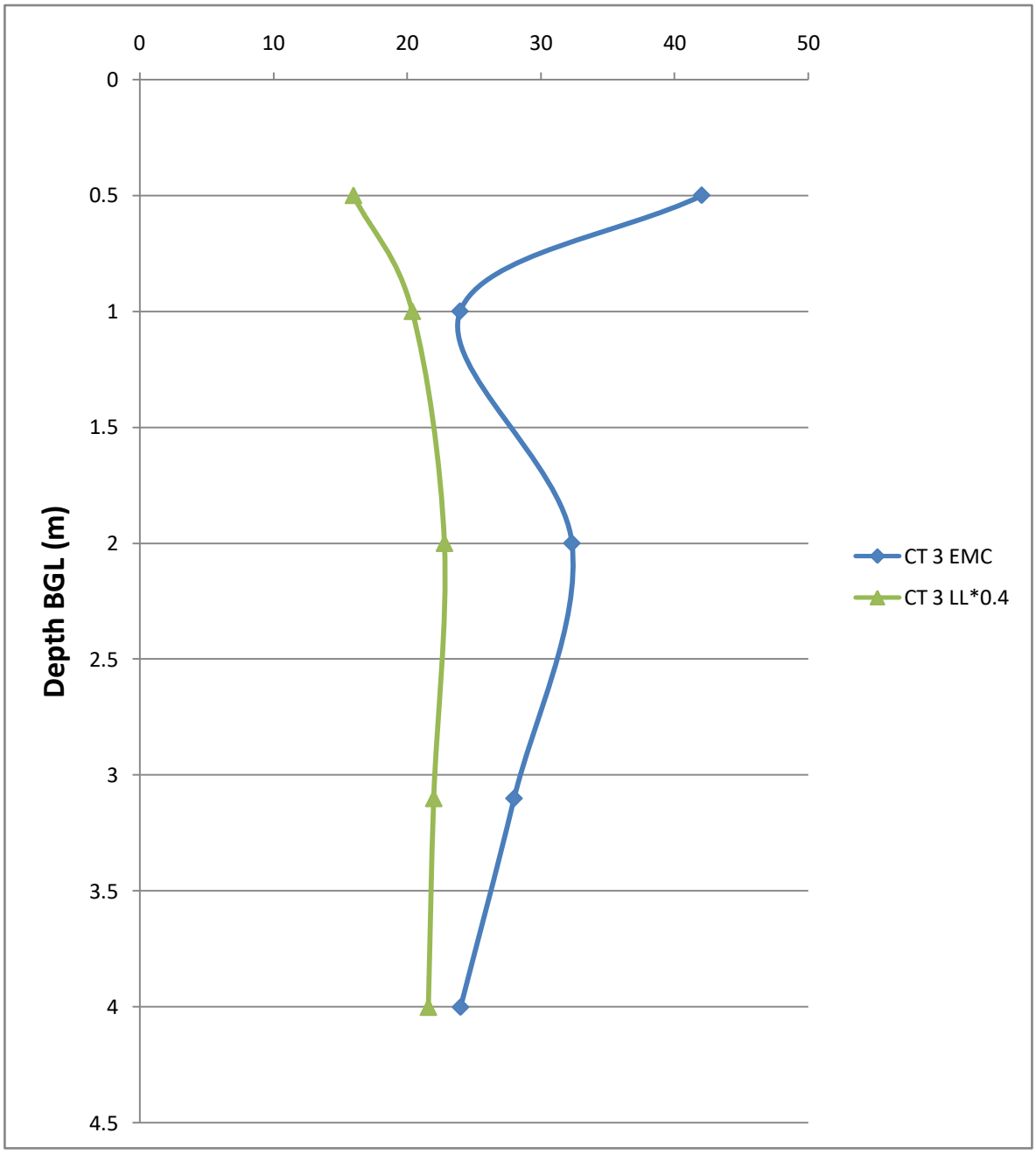
PROJECT NUMBER	23-05-05
PROJECT NAME	Land at Manor Farm, Earls Barton
CLIENT	Clock House Developments Ltd.
REPORT DATE	01/07/2023

EQUIVALENT MOISTURE CONTENT VS. DEPTH



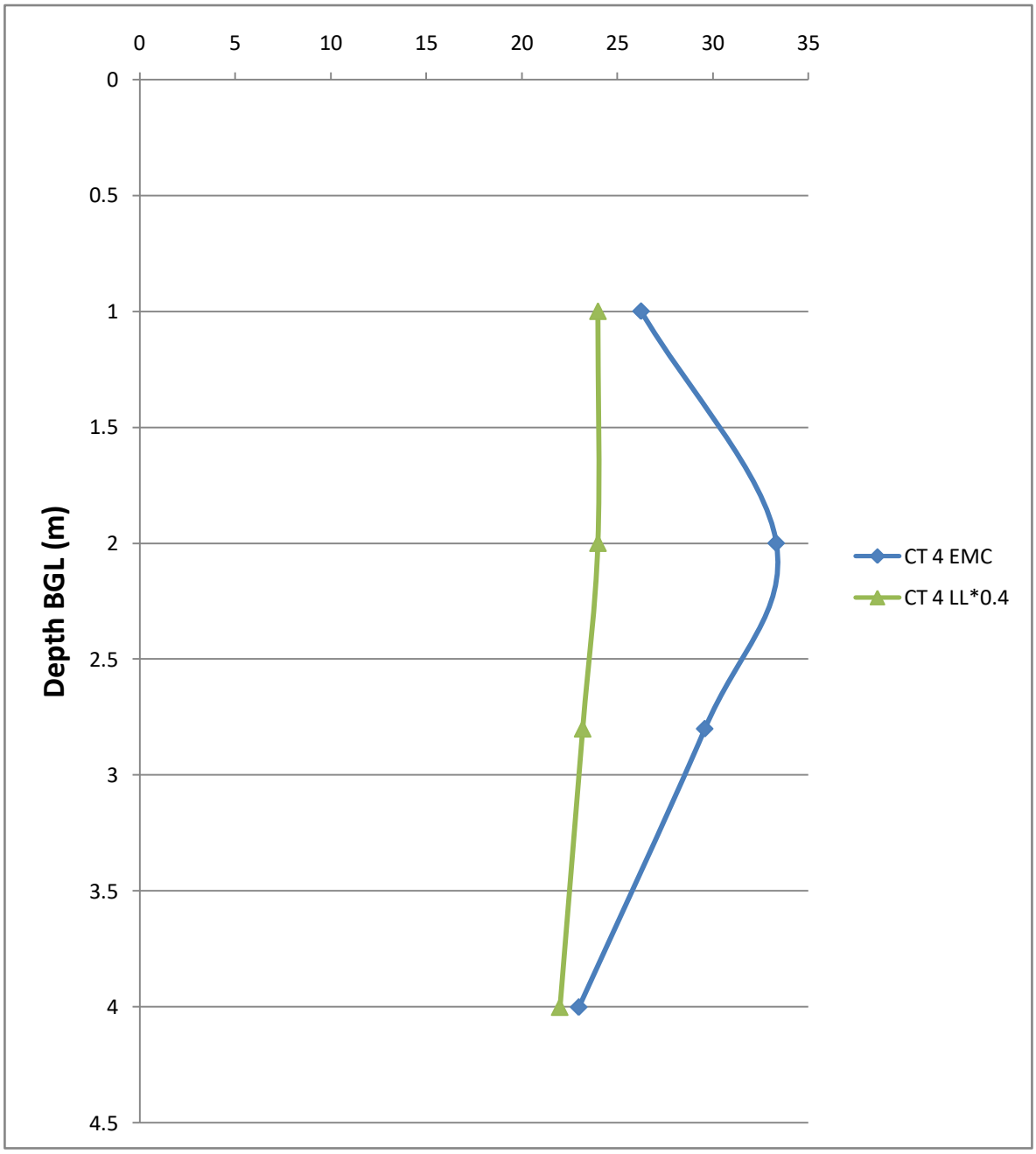
PROJECT NUMBER	23-05-05
PROJECT NAME	Land at Manor Farm, Earls Barton
CLIENT	Clock House Developments Ltd.
REPORT DATE	01/07/2023

EMC > LIQUID LIMIT*0.4 VS. DEPTH



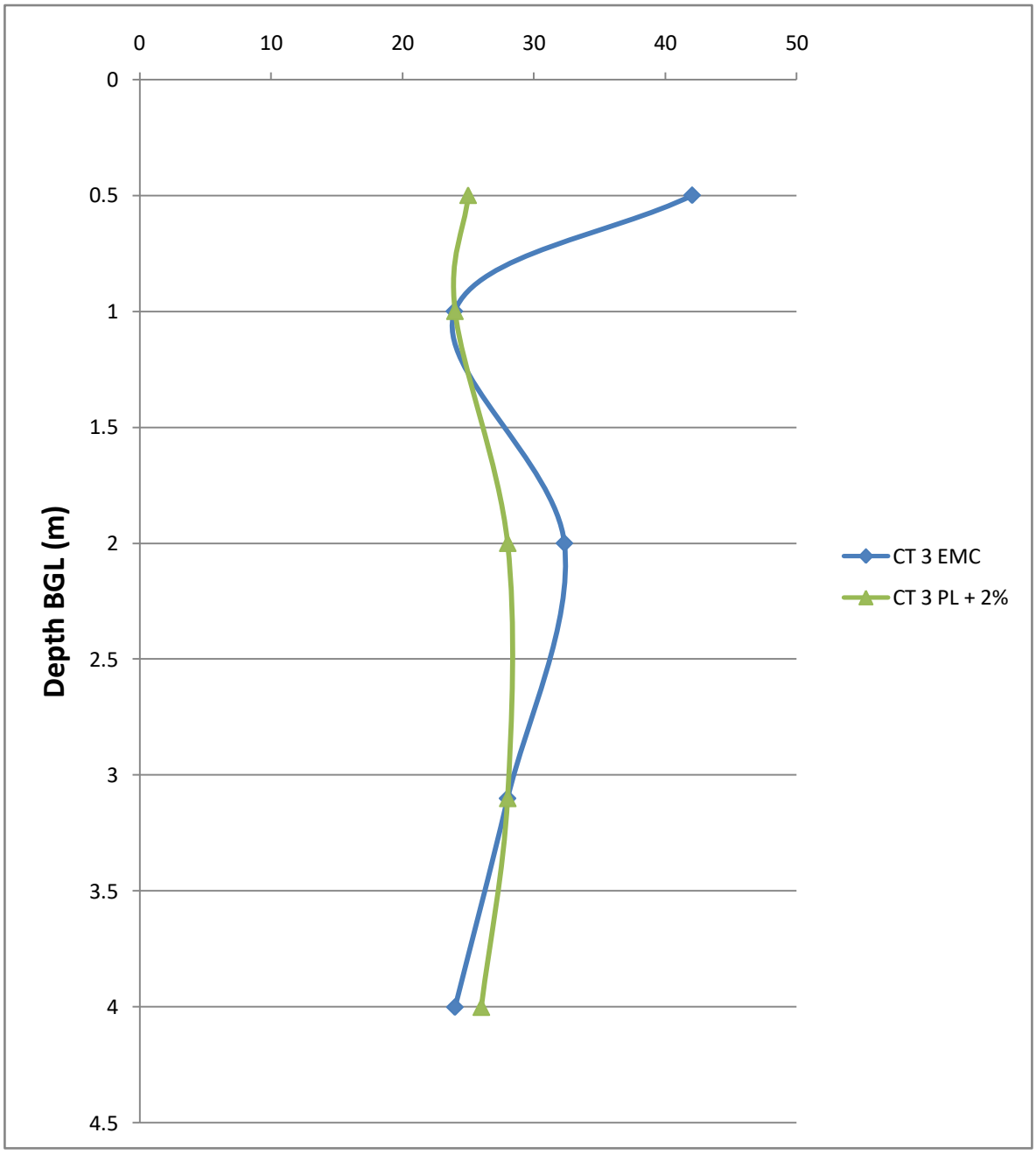
PROJECT NUMBER	23-05-05
PROJECT NAME	Land at Manor Farm, Earls Barton
CLIENT	Clock House Developments Ltd.
REPORT DATE	01/07/2023

EMC > LIQUID LIMIT*0.4 VS. DEPTH



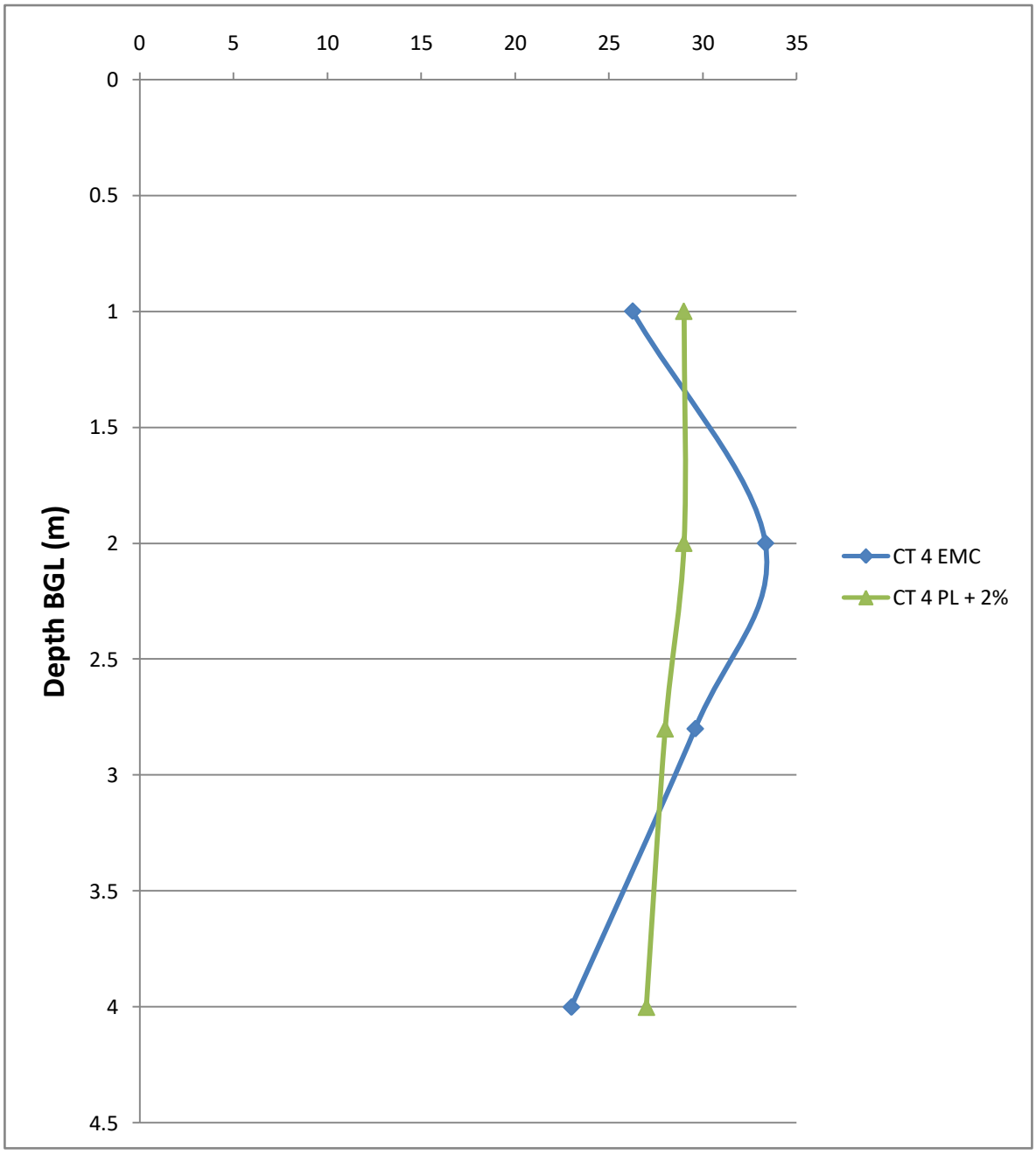
PROJECT NUMBER	23-05-05
PROJECT NAME	Land at Manor Farm, Earls Barton
CLIENT	Clock House Developments Ltd.
REPORT DATE	01/07/2023

EMC > PLASTIC LIMIT + 2 VS. DEPTH



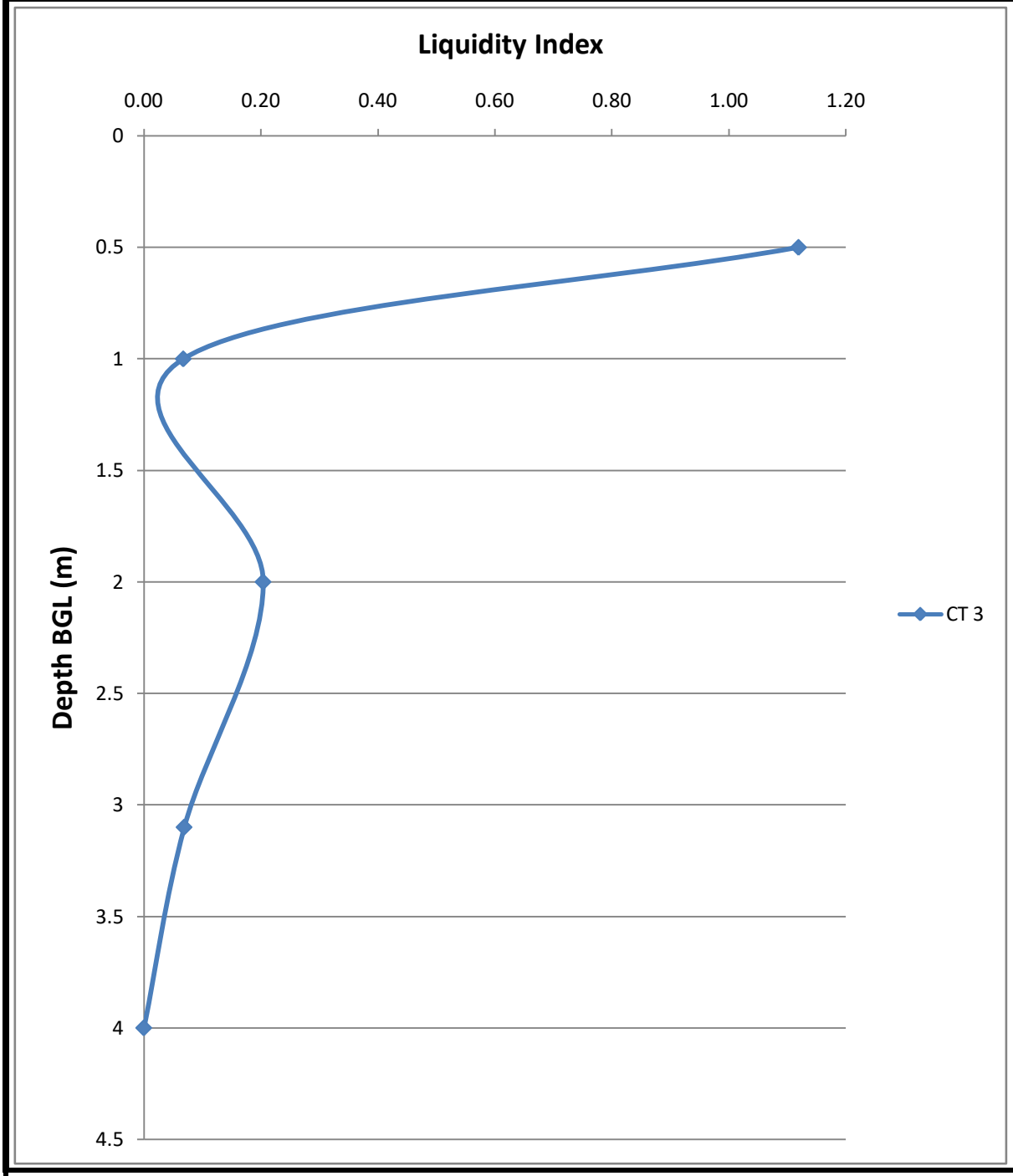
PROJECT NUMBER	23-05-05
PROJECT NAME	Land at Manor Farm, Earls Barton
CLIENT	Clock House Developments Ltd.
REPORT DATE	01/07/2023

EMC > PLASTIC LIMIT + 2 VS. DEPTH



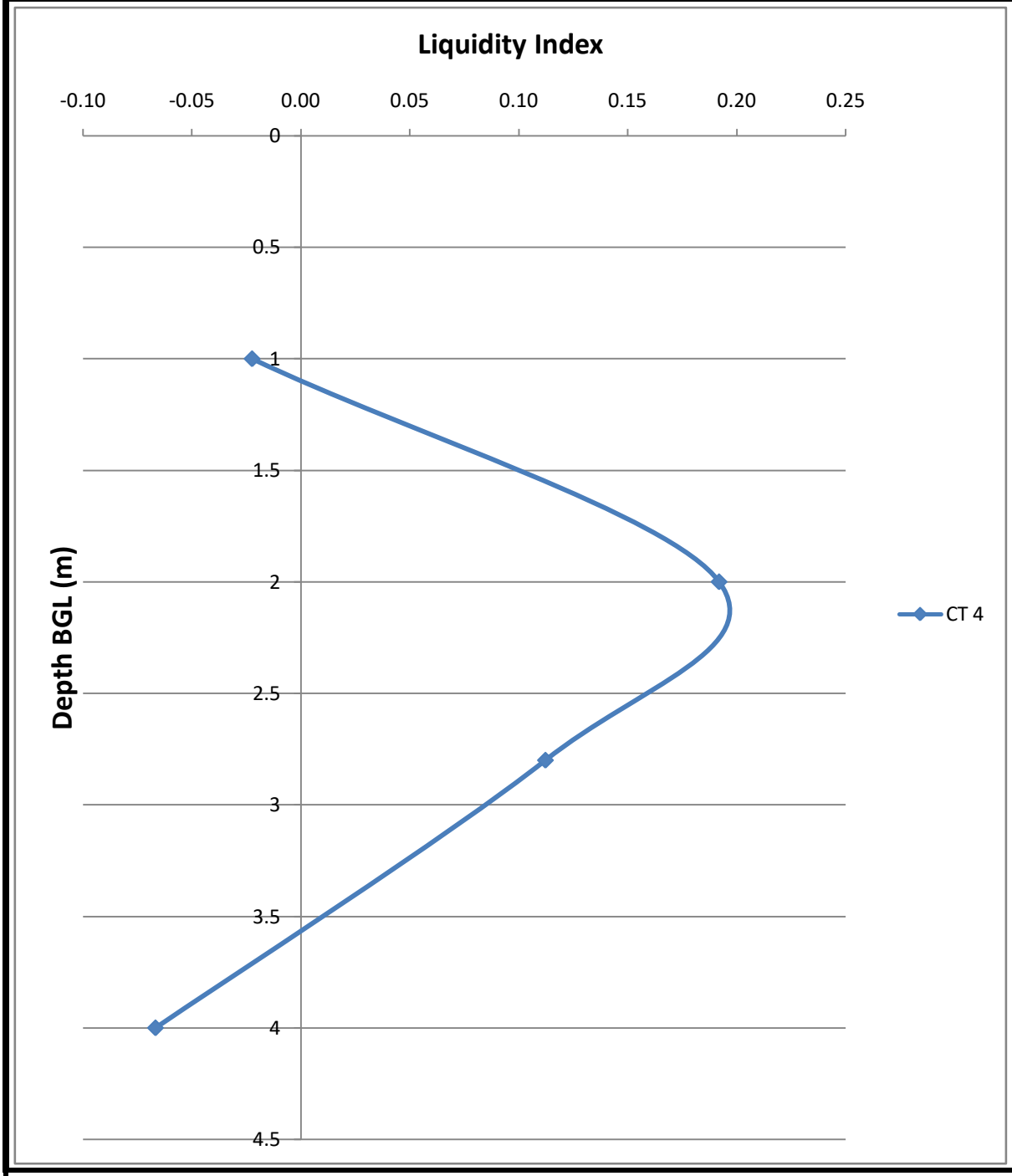
PROJECT NUMBER	23-05-05
PROJECT NAME	Land at Manor Farm, Earls Barton
CLIENT	Clock House Developments Ltd.
REPORT DATE	01/07/2023

LIQUIDITY INDEX VS. DEPTH



PROJECT NUMBER	23-05-05
PROJECT NAME	Land at Manor Farm, Earls Barton
CLIENT	Clock House Developments Ltd.
REPORT DATE	01/07/2023

LIQUIDITY INDEX VS. DEPTH



HazWasteOnline™

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.

Q5GA6-GY7DS-F68RN

Job name

Earl Barton

Description/Comments

Project

23-05-05

Site

Land at Manor Farm, Earls Barton

Classified by

Name:
Fiona White
Date:
26 Jun 2023 12:07 GMT
Telephone:
01280 816409

Company:
Geo-Integrity Limited
Geo-Integrity
Unit 7
Towcester
NN12 8TA

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	05 Oct 2023 *

* training course booked

Purpose of classification

2 - Material Characterisation

Address of the waste

Land at Manor Farm, Blackwell Close, Earls Barton **Post Code** NN6 0NU

SIC for the process giving rise to the waste

Description of industry/producer giving rise to the waste

Redevelopment of site

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

Waste created during excavation of foundations

Description of the waste

Made Ground

Job summary

#	Sample name	Depth [m]	Classification Result	Hazard properties	Page
1	CT 2	0.20	Non Hazardous		3
2	CT 2[2]	0.50	Non Hazardous		5
3	HA 101	0.20	Non Hazardous		7
4	SA A	0.30	Non Hazardous		9
5	SA B	0.30	Non Hazardous		11
6	HA 104	0.10	Non Hazardous		13

Related documents

#	Name	Description
1	WM3 v1.2 2021 compliant	waste stream template used to create this Job

Report

Created by: Fiona White

Created date: 26 Jun 2023 12:07 GMT

Classification of sample: CT 2

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

Sample details

Sample name:
CT 2
Sample Depth:
0.20 m
Moisture content:
9.3%
(wet weight correction)

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: 9.3% Wet Weight 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		190 mg/kg	1.32	227.532 mg/kg	0.0228 %	✓	
2	cadmium { cadmium sulfate }	048-009-00-9	233-331-6	10124-36-4		0.15 mg/kg	1.855	0.252 mg/kg	0.0000252 %	✓	
3	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		57 mg/kg	1.462	75.561 mg/kg	0.00756 %	✓	
4	copper { copper sulphate pentahydrate }	029-023-00-4	231-847-6	7758-99-8		18 mg/kg	3.929	64.146 mg/kg	0.00641 %	✓	
5	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		0.31 mg/kg	1.353	0.381 mg/kg	0.0000381 %	✓	
6	nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7		43 mg/kg	2.976	116.077 mg/kg	0.0116 %	✓	
7	lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	50 mg/kg	1.56	70.738 mg/kg	0.00454 %	✓	
8	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }	034-002-00-8				2.3 mg/kg	1.405	2.931 mg/kg	0.000293 %	✓	
9	zinc { zinc sulphate }	030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]		150 mg/kg	2.469	335.948 mg/kg	0.0336 %	✓	
10	chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0		<0.5 mg/kg	1.923	<0.962 mg/kg	<0.0000962 %		<LOD
11	TPH (C6 to C40) petroleum group			TPH		49 mg/kg		44.443 mg/kg	0.00444 %	✓	
12	naphthalene	601-052-00-2	202-049-5	91-20-3		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
13	acenaphthylene		205-917-1	208-96-8		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
14	acenaphthene		201-469-6	83-32-9		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
15	fluorene		201-695-5	86-73-7		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD

#		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									
16		phenanthrene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			201-581-5	85-01-8									
17		anthracene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			204-371-1	120-12-7									
18		fluoranthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			205-912-4	206-44-0									
19		pyrene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			204-927-3	129-00-0									
20		benzo[a]anthracene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-033-00-9	200-280-6	56-55-3									
21		chrysene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-048-00-0	205-923-4	218-01-9									
22		benzo[b]fluoranthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-034-00-4	205-911-9	205-99-2									
23		benzo[k]fluoranthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-036-00-5	205-916-6	207-08-9									
24		benzo[a]pyrene; benzo[def]chrysene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-032-00-3	200-028-5	50-32-8									
25		indeno[123-cd]pyrene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			205-893-2	193-39-5									
26		dibenz[a,h]anthracene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-041-00-2	200-181-8	53-70-3									
27		benzo[ghi]perylene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			205-883-8	191-24-2									
28		PAHs (total)				<2	mg/kg		<2	mg/kg	<0.0002 %		<LOD
29		benzene				<1	mg/kg		<1	mg/kg	<0.0001 %		<LOD
		601-020-00-8	200-753-7	71-43-2									
30		toluene				<1	mg/kg		<1	mg/kg	<0.0001 %		<LOD
		601-021-00-3	203-625-9	108-88-3									
31		ethylbenzene				<1	mg/kg		<1	mg/kg	<0.0001 %		<LOD
		601-023-00-4	202-849-4	100-41-4									
32		xylene				<1	mg/kg		<1	mg/kg	<0.0001 %		<LOD
		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]									
										Total:	0.0921 %		

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

Supplementary Hazardous Property Information

HP 3(i): Flammable "flammable liquid waste: liquid waste having a flash point below 60°C or waste gas oil, diesel and light heating oils having a flash point > 55°C and <= 75°C"

Force this Hazardous property to non hazardous because No free-phase product encountered. Long chain hydrocarbons, not flammable

Hazard Statements hit:

Flam. Liq. 3; H226 "Flammable liquid and vapour."

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.00444%)

Classification of sample: CT 2[2]

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

Sample details

Sample name:
CT 2[2]
Sample Depth:
0.50 m
Moisture content:
9.4%
(wet weight correction)

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: 9.4% Wet Weight 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		56	mg/kg	1.32	66.988	mg/kg	0.0067 %	✓	
2	cadmium { cadmium sulfate }	048-009-00-9	233-331-6	10124-36-4		<0.1	mg/kg	1.855	<0.185	mg/kg	<0.0000185 %		<**LOD**
3	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		54	mg/kg	1.462	71.505	mg/kg	0.00715 %	✓	
4	copper { copper sulphate pentahydrate }	029-023-00-4	231-847-6	7758-99-8		16	mg/kg	3.929	56.956	mg/kg	0.0057 %	✓	
5	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		0.18	mg/kg	1.353	0.221	mg/kg	0.0000221 %	✓	
6	nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7		39	mg/kg	2.976	105.163	mg/kg	0.0105 %	✓	
7	lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	37	mg/kg	1.56	52.288	mg/kg	0.00335 %	✓	
8	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }	034-002-00-8				2	mg/kg	1.405	2.546	mg/kg	0.000255 %	✓	
9	zinc { zinc sulphate }	030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]		130	mg/kg	2.469	290.834	mg/kg	0.0291 %	✓	
10	chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0		<0.5	mg/kg	1.923	<0.962	mg/kg	<0.0000962 %		<**LOD**
11	TPH (C6 to C40) petroleum group			TPH		<10	mg/kg		<10	mg/kg	<0.001 %		<**LOD**
12	naphthalene	601-052-00-2	202-049-5	91-20-3		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
13	acenaphthylene		205-917-1	208-96-8		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
14	acenaphthene		201-469-6	83-32-9		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
15	fluorene		201-695-5	86-73-7		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**

#		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									
16		phenanthrene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			201-581-5	85-01-8									
17		anthracene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			204-371-1	120-12-7									
18		fluoranthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			205-912-4	206-44-0									
19		pyrene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			204-927-3	129-00-0									
20		benzo[a]anthracene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-033-00-9	200-280-6	56-55-3									
21		chrysene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-048-00-0	205-923-4	218-01-9									
22		benzo[b]fluoranthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-034-00-4	205-911-9	205-99-2									
23		benzo[k]fluoranthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-036-00-5	205-916-6	207-08-9									
24		benzo[a]pyrene; benzo[def]chrysene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-032-00-3	200-028-5	50-32-8									
25		indeno[123-cd]pyrene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			205-893-2	193-39-5									
26		dibenz[a,h]anthracene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-041-00-2	200-181-8	53-70-3									
27		benzo[ghi]perylene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			205-883-8	191-24-2									
28		PAHs (total)				<2	mg/kg		<2	mg/kg	<0.0002 %		<LOD
29		benzene				<1	mg/kg		<1	mg/kg	<0.0001 %		<LOD
		601-020-00-8	200-753-7	71-43-2									
30		toluene				<1	mg/kg		<1	mg/kg	<0.0001 %		<LOD
		601-021-00-3	203-625-9	108-88-3									
31		ethylbenzene				<1	mg/kg		<1	mg/kg	<0.0001 %		<LOD
		601-023-00-4	202-849-4	100-41-4									
32		xylene				<1	mg/kg		<1	mg/kg	<0.0001 %		<LOD
		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]									
										Total:	0.0646 %		

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

Classification of sample: HA 101

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

Sample details

Sample name:
HA 101
Sample Depth:
0.20 m
Moisture content:
14%
(wet weight correction)

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: 14% Wet Weight 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		57	mg/kg	1.32	64.722	mg/kg	0.00647 %	✓	
2	cadmium { cadmium sulfate }	048-009-00-9	233-331-6	10124-36-4		0.4	mg/kg	1.855	0.638	mg/kg	0.0000638 %	✓	
3	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		62	mg/kg	1.462	77.93	mg/kg	0.00779 %	✓	
4	copper { copper sulphate pentahydrate }	029-023-00-4	231-847-6	7758-99-8		29	mg/kg	3.929	97.991	mg/kg	0.0098 %	✓	
5	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		0.22	mg/kg	1.353	0.256	mg/kg	0.0000256 %	✓	
6	nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7		30	mg/kg	2.976	76.788	mg/kg	0.00768 %	✓	
7	lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	160	mg/kg	1.56	214.631	mg/kg	0.0138 %	✓	
8	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }	034-002-00-8				2.4	mg/kg	1.405	2.9	mg/kg	0.00029 %	✓	
9	zinc { zinc sulphate }	030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]		460	mg/kg	2.469	976.854	mg/kg	0.0977 %	✓	
10	chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0		<0.5	mg/kg	1.923	<0.962	mg/kg	<0.0000962 %		<LOD
11	TPH (C6 to C40) petroleum group			TPH		<10	mg/kg		<10	mg/kg	<0.001 %		<LOD
12	naphthalene	601-052-00-2	202-049-5	91-20-3		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
13	acenaphthylene		205-917-1	208-96-8		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
14	acenaphthene		201-469-6	83-32-9		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
15	fluorene		201-695-5	86-73-7		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD

#		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									
16	●	phenanthrene				1.4	mg/kg		1.204	mg/kg	0.00012 %	✓	
			201-581-5	85-01-8									
17	●	anthracene				0.64	mg/kg		0.55	mg/kg	0.000055 %	✓	
			204-371-1	120-12-7									
18	●	fluoranthene				3.6	mg/kg		3.096	mg/kg	0.00031 %	✓	
			205-912-4	206-44-0									
19	●	pyrene				3.8	mg/kg		3.268	mg/kg	0.000327 %	✓	
			204-927-3	129-00-0									
20		benzo[a]anthracene				2.4	mg/kg		2.064	mg/kg	0.000206 %	✓	
		601-033-00-9	200-280-6	56-55-3									
21		chrysene				3.1	mg/kg		2.666	mg/kg	0.000267 %	✓	
		601-048-00-0	205-923-4	218-01-9									
22		benzo[b]fluoranthene				4.4	mg/kg		3.784	mg/kg	0.000378 %	✓	
		601-034-00-4	205-911-9	205-99-2									
23		benzo[k]fluoranthene				2.1	mg/kg		1.806	mg/kg	0.000181 %	✓	
		601-036-00-5	205-916-6	207-08-9									
24		benzo[a]pyrene; benzo[def]chrysene				3.5	mg/kg		3.01	mg/kg	0.000301 %	✓	
		601-032-00-3	200-028-5	50-32-8									
25	●	indeno[123-cd]pyrene				3.2	mg/kg		2.752	mg/kg	0.000275 %	✓	
			205-893-2	193-39-5									
26		dibenz[a,h]anthracene				0.88	mg/kg		0.757	mg/kg	0.0000757 %	✓	
		601-041-00-2	200-181-8	53-70-3									
27	●	benzo[ghi]perylene				4.5	mg/kg		3.87	mg/kg	0.000387 %	✓	
			205-883-8	191-24-2									
28	●	PAHs (total)				34	mg/kg		29.24	mg/kg	0.00292 %	✓	
29		benzene				<1	mg/kg		<1	mg/kg	<0.0001 %		<**LOD**
		601-020-00-8	200-753-7	71-43-2									
30		toluene				<1	mg/kg		<1	mg/kg	<0.0001 %		<**LOD**
		601-021-00-3	203-625-9	108-88-3									
31	●	ethylbenzene				<1	mg/kg		<1	mg/kg	<0.0001 %		<**LOD**
		601-023-00-4	202-849-4	100-41-4									
32		xylene				<1	mg/kg		<1	mg/kg	<0.0001 %		<**LOD**
		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]									
										Total:	0.151 %		

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

Classification of sample: SA A

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

Sample details

Sample name:
SA A
Sample Depth:
0.30 m
Moisture content:
12%
(wet weight correction)

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: 12% Wet Weight 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		54 mg/kg	1.32	62.742 mg/kg	0.00627 %	✓	
2	cadmium { cadmium sulfate }	048-009-00-9	233-331-6	10124-36-4		<0.1 mg/kg	1.855	<0.185 mg/kg	<0.0000185 %		<**LOD**
3	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		53 mg/kg	1.462	68.167 mg/kg	0.00682 %	✓	
4	copper { copper sulphate pentahydrate }	029-023-00-4	231-847-6	7758-99-8		10 mg/kg	3.929	34.576 mg/kg	0.00346 %	✓	
5	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		0.09 mg/kg	1.353	0.107 mg/kg	0.0000107 %	✓	
6	nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7		24 mg/kg	2.976	62.859 mg/kg	0.00629 %	✓	
7	lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	44 mg/kg	1.56	60.396 mg/kg	0.00387 %	✓	
8	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }	034-002-00-8				1.9 mg/kg	1.405	2.349 mg/kg	0.000235 %	✓	
9	zinc { zinc sulphate }	030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]		110 mg/kg	2.469	239.028 mg/kg	0.0239 %	✓	
10	chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0		<0.5 mg/kg	1.923	<0.962 mg/kg	<0.0000962 %		<**LOD**
11	TPH (C6 to C40) petroleum group			TPH		<10 mg/kg		<10 mg/kg	<0.001 %		<**LOD**
12	naphthalene	601-052-00-2	202-049-5	91-20-3		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<**LOD**
13	acenaphthylene		205-917-1	208-96-8		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<**LOD**
14	acenaphthene		201-469-6	83-32-9		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<**LOD**
15	fluorene		201-695-5	86-73-7		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<**LOD**

#		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									
16		phenanthrene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			201-581-5	85-01-8									
17		anthracene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			204-371-1	120-12-7									
18		fluoranthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			205-912-4	206-44-0									
19		pyrene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			204-927-3	129-00-0									
20		benzo[a]anthracene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-033-00-9	200-280-6	56-55-3									
21		chrysene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-048-00-0	205-923-4	218-01-9									
22		benzo[b]fluoranthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-034-00-4	205-911-9	205-99-2									
23		benzo[k]fluoranthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-036-00-5	205-916-6	207-08-9									
24		benzo[a]pyrene; benzo[def]chrysene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-032-00-3	200-028-5	50-32-8									
25		indeno[123-cd]pyrene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			205-893-2	193-39-5									
26		dibenz[a,h]anthracene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-041-00-2	200-181-8	53-70-3									
27		benzo[ghi]perylene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			205-883-8	191-24-2									
28		PAHs (total)				<2	mg/kg		<2	mg/kg	<0.0002 %		<LOD
29		benzene				<1	mg/kg		<1	mg/kg	<0.0001 %		<LOD
		601-020-00-8	200-753-7	71-43-2									
30		toluene				<1	mg/kg		<1	mg/kg	<0.0001 %		<LOD
		601-021-00-3	203-625-9	108-88-3									
31		ethylbenzene				<1	mg/kg		<1	mg/kg	<0.0001 %		<LOD
		601-023-00-4	202-849-4	100-41-4									
32		xylene				<1	mg/kg		<1	mg/kg	<0.0001 %		<LOD
		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]									
										Total:	0.0527 %		

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

Classification of sample: SA B

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

Sample details

Sample name:
SA B
Sample Depth:
0.30 m
Moisture content:
9.5%
(wet weight correction)

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: 9.5% Wet Weight 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		21	mg/kg	1.32	25.093	mg/kg	0.00251 %	✓	
2	cadmium { cadmium sulfate }	048-009-00-9	233-331-6	10124-36-4		0.16	mg/kg	1.855	0.269	mg/kg	0.0000269 %	✓	
3	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		38	mg/kg	1.462	50.263	mg/kg	0.00503 %	✓	
4	copper { copper sulphate pentahydrate }	029-023-00-4	231-847-6	7758-99-8		13	mg/kg	3.929	46.225	mg/kg	0.00462 %	✓	
5	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		0.07	mg/kg	1.353	0.0857	mg/kg	0.00000857 %	✓	
6	nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7		12	mg/kg	2.976	32.322	mg/kg	0.00323 %	✓	
7	lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	50	mg/kg	1.56	70.582	mg/kg	0.00453 %	✓	
8	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }	034-002-00-8				3.7	mg/kg	1.405	4.705	mg/kg	0.00047 %	✓	
9	zinc { zinc sulphate }	030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]		240	mg/kg	2.469	536.331	mg/kg	0.0536 %	✓	
10	chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0		<0.5	mg/kg	1.923	<0.962	mg/kg	<0.0000962 %		<**LOD**
11	TPH (C6 to C40) petroleum group			TPH		360	mg/kg		325.8	mg/kg	0.0326 %	✓	
12	naphthalene	601-052-00-2	202-049-5	91-20-3		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
13	acenaphthylene		205-917-1	208-96-8		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
14	acenaphthene		201-469-6	83-32-9		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
15	fluorene		201-695-5	86-73-7		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**

#		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									
16		phenanthrene				1.5	mg/kg		1.358	mg/kg	0.000136 %	✓	
			201-581-5	85-01-8									
17		anthracene				0.78	mg/kg		0.706	mg/kg	0.0000706 %	✓	
			204-371-1	120-12-7									
18		fluoranthene				2.3	mg/kg		2.081	mg/kg	0.000208 %	✓	
			205-912-4	206-44-0									
19		pyrene				2.4	mg/kg		2.172	mg/kg	0.000217 %	✓	
			204-927-3	129-00-0									
20		benzo[a]anthracene				1.3	mg/kg		1.177	mg/kg	0.000118 %	✓	
		601-033-00-9	200-280-6	56-55-3									
21		chrysene				1.6	mg/kg		1.448	mg/kg	0.000145 %	✓	
		601-048-00-0	205-923-4	218-01-9									
22		benzo[b]fluoranthene				2.2	mg/kg		1.991	mg/kg	0.000199 %	✓	
		601-034-00-4	205-911-9	205-99-2									
23		benzo[k]fluoranthene				1.6	mg/kg		1.448	mg/kg	0.000145 %	✓	
		601-036-00-5	205-916-6	207-08-9									
24		benzo[a]pyrene; benzo[def]chrysene				1.6	mg/kg		1.448	mg/kg	0.000145 %	✓	
		601-032-00-3	200-028-5	50-32-8									
25		indeno[123-cd]pyrene				1.7	mg/kg		1.539	mg/kg	0.000154 %	✓	
			205-893-2	193-39-5									
26		dibenz[a,h]anthracene				0.98	mg/kg		0.887	mg/kg	0.0000887 %	✓	
		601-041-00-2	200-181-8	53-70-3									
27		benzo[ghi]perylene				2.4	mg/kg		2.172	mg/kg	0.000217 %	✓	
			205-883-8	191-24-2									
28		PAHs (total)				20	mg/kg		18.1	mg/kg	0.00181 %	✓	
29		benzene				<1	mg/kg		<1	mg/kg	<0.0001 %		<**LOD**
		601-020-00-8	200-753-7	71-43-2									
30		toluene				<1	mg/kg		<1	mg/kg	<0.0001 %		<**LOD**
		601-021-00-3	203-625-9	108-88-3									
31		ethylbenzene				<1	mg/kg		<1	mg/kg	<0.0001 %		<**LOD**
		601-023-00-4	202-849-4	100-41-4									
32		xylene				<1	mg/kg		<1	mg/kg	<0.0001 %		<**LOD**
		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]									
										Total:	0.111 %		

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

Supplementary Hazardous Property Information

HP 3(i): Flammable "flammable liquid waste: liquid waste having a flash point below 60°C or waste gas oil, diesel and light heating oils having a flash point > 55°C and <= 75°C"

Force this Hazardous property to non hazardous because No free-phase product encountered. Long chain hydrocarbons, not flammable

Hazard Statements hit:

Flam. Liq. 3; H226 "Flammable liquid and vapour."

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.0326%)

Classification of sample: HA 104

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

Sample details

Sample name:
HA 104
Sample Depth:
0.10 m
Moisture content:
25%
(wet weight correction)

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: 25% Wet Weight 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		35 mg/kg	1.32	34.659 mg/kg	0.00347 %	✓	
2	cadmium { cadmium sulfate }	048-009-00-9	233-331-6	10124-36-4		<0.1 mg/kg	1.855	<0.185 mg/kg	<0.0000185 %		<LOD
3	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		52 mg/kg	1.462	57.001 mg/kg	0.0057 %	✓	
4	copper { copper sulphate pentahydrate }	029-023-00-4	231-847-6	7758-99-8		19 mg/kg	3.929	55.989 mg/kg	0.0056 %	✓	
5	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		0.19 mg/kg	1.353	0.193 mg/kg	0.0000193 %	✓	
6	nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7		19 mg/kg	2.976	42.412 mg/kg	0.00424 %	✓	
7	lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	88 mg/kg	1.56	102.948 mg/kg	0.0066 %	✓	
8	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }	034-002-00-8				1.5 mg/kg	1.405	1.581 mg/kg	0.000158 %	✓	
9	zinc { zinc sulphate }	030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]		130 mg/kg	2.469	240.756 mg/kg	0.0241 %	✓	
10	chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0		<0.5 mg/kg	1.923	<0.962 mg/kg	<0.0000962 %		<LOD
11	TPH (C6 to C40) petroleum group			TPH		50 mg/kg		37.5 mg/kg	0.00375 %	✓	
12	naphthalene	601-052-00-2	202-049-5	91-20-3		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
13	acenaphthylene		205-917-1	208-96-8		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
14	acenaphthene		201-469-6	83-32-9		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
15	fluorene		201-695-5	86-73-7		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD

#		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									
16		phenanthrene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			201-581-5	85-01-8									
17		anthracene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			204-371-1	120-12-7									
18		fluoranthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			205-912-4	206-44-0									
19		pyrene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			204-927-3	129-00-0									
20		benzo[a]anthracene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-033-00-9	200-280-6	56-55-3									
21		chrysene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-048-00-0	205-923-4	218-01-9									
22		benzo[b]fluoranthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-034-00-4	205-911-9	205-99-2									
23		benzo[k]fluoranthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-036-00-5	205-916-6	207-08-9									
24		benzo[a]pyrene; benzo[def]chrysene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-032-00-3	200-028-5	50-32-8									
25		indeno[123-cd]pyrene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			205-893-2	193-39-5									
26		dibenz[a,h]anthracene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-041-00-2	200-181-8	53-70-3									
27		benzo[ghi]perylene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			205-883-8	191-24-2									
28		PAHs (total)				<2	mg/kg		<2	mg/kg	<0.0002 %		<LOD
29		benzene				<1	mg/kg		<1	mg/kg	<0.0001 %		<LOD
		601-020-00-8	200-753-7	71-43-2									
30		toluene				<1	mg/kg		<1	mg/kg	<0.0001 %		<LOD
		601-021-00-3	203-625-9	108-88-3									
31		ethylbenzene				<1	mg/kg		<1	mg/kg	<0.0001 %		<LOD
		601-023-00-4	202-849-4	100-41-4									
32		xylene				<1	mg/kg		<1	mg/kg	<0.0001 %		<LOD
		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]									
										Total:	0.0545 %		

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

Supplementary Hazardous Property Information

HP 3(i): Flammable "flammable liquid waste: liquid waste having a flash point below 60°C or waste gas oil, diesel and light heating oils having a flash point > 55°C and <= 75°C"

Force this Hazardous property to non hazardous because No free-phase product encountered. Long chain hydrocarbons, not flammable

Hazard Statements hit:

Flam. Liq. 3; H226 "Flammable liquid and vapour."

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.00375%)

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

- **TPH (C6 to C40) petroleum group** (CAS Number: TPH)

Description/Comments: Hazard statements taken from WM3 1st Edition 2015; Risk phrases: WM2 3rd Edition 2013
Data source: WM3 1st Edition 2015
Data source date: 25 May 2015
Hazard Statements: Flam. Liq. 3; H226 , Asp. Tox. 1; H304 , STOT RE 2; H373 , Muta. 1B; H340 , Carc. 1B; H350 , Repr. 2; H361d , Aquatic Chronic 2; H411

- **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

- **PAHs (total)**

Description/Comments: Worst case scenario combining risk phrases and substance specific thresholds from benzo[a]pyrene (CLP# 601-032-00-3) and benzo[a]anthracene (CLP# 601-033-00-9)
Data source: 2008/1272/EC – Table 3.2 of Annex VI of regulation 1272/2008/EC - Classification, labelling and packaging of substances and mixtures and 2009/790/EC Annex IV – Annex IV of regulation 2009/790/EC - 1st Adaptation to Technical Progress for European Regulation 1272/2008
Data source date: 16 Dec 2008
Hazard Statements: Skin Sens. 1; H317 , Carc. 1B; H350 , Carc. 1B; H350 >= 0.01 % , Muta. 1B; H340 , Aquatic Acute 1; H400 (M=100) , Aquatic Chronic 1; H410 (M=100) , Repr. 1B; H360FD

- **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

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

cadmium {cadmium sulfate}

Worst Case Species Selected

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

(enter justification for selecting this species)

copper {copper sulphate pentahydrate}

Worst Case Species Selected

mercury {mercury dichloride}

Worst case CLP species based on hazard statements/molecular weigh

nickel {nickel chromate}

Worst case CLP species based on hazard statements/molecular weight

lead {lead chromate}

Worst Case Species Selected

selenium {selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex}

(enter justification for selecting this species)

zinc {zinc sulphate}

Not enough Chromium. Previous use on farm, possible fertiliser

chromium in chromium(VI) compounds {chromium(VI) oxide}

(enter justification for selecting this species)

Appendix C: Version

HazWasteOnline Classification Engine: WM3 1st Edition v1.2.GB - Oct 2021
HazWasteOnline Classification Engine Version: 2023.174.5645.10410 (23 Jun 2023)
HazWasteOnline Database: 2023.174.5645.10410 (23 Jun 2023)

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

APPENDIX D

Geo-Integrity, Mob.: - 07858 367 125 Email:- info@geo-integrity.co.uk

Groundsure LOCATION INTELLIGENCE

Enviro+Geo Insight

LAND AT MANOR FARM, BLACKWELL CLOSE, EARLS BARTON, NN6 0NU

Order Details

Date: 09/05/2023

Your ref: 23-05-05

Our Ref: GS-IVX-KC7-9LJ-P2Q

Site Details

Location: 485445 263575

Area: 0.19 ha

Authority: North Northamptonshire Council (Wellingborough Area) ↗

Contact us with any questions at:
info@groundsure.com ↗
01273 257 755

Summary of findings

Page	Section	Past land use >	On site	0-50m	50-250m	250-500m	500-2000m
14 >	1.1 >	Historical industrial land uses >	2	1	3	14	-
15 >	1.2 >	Historical tanks >	0	0	0	5	-
16 >	1.3 >	Historical energy features >	0	0	6	9	-
17 >	1.4 >	Historical petrol stations >	0	0	0	0	-
17 >	1.5 >	Historical garages >	0	0	0	0	-
17 >	1.6 >	Historical military land >	0	0	0	0	-
Page	Section	Past land use - un-grouped >	On site	0-50m	50-250m	250-500m	500-2000m
18 >	2.1 >	Historical industrial land uses >	3	1	3	15	-
19 >	2.2 >	Historical tanks >	0	0	0	15	-
20 >	2.3 >	Historical energy features >	0	0	16	31	-
22 >	2.4 >	Historical petrol stations >	0	0	0	0	-
22 >	2.5 >	Historical garages >	0	0	0	0	-
Page	Section	Waste and landfill >	On site	0-50m	50-250m	250-500m	500-2000m
23 >	3.1 >	Active or recent landfill >	0	0	0	0	-
23 >	3.2 >	Historical landfill (BGS records) >	0	0	0	0	-
24 >	3.3 >	Historical landfill (LA/mapping records) >	0	0	0	0	-
24 >	3.4 >	Historical landfill (EA/NRW records) >	0	0	0	0	-
24 >	3.5 >	Historical waste sites >	0	0	0	0	-
24 >	3.6 >	Licensed waste sites >	0	0	0	0	-
24 >	3.7 >	Waste exemptions >	0	0	2	1	-
Page	Section	Current industrial land use >	On site	0-50m	50-250m	250-500m	500-2000m
26 >	4.1 >	Recent industrial land uses >	0	0	8	-	-
27 >	4.2 >	Current or recent petrol stations >	0	0	0	1	-
27 >	4.3 >	Electricity cables >	0	0	0	0	-
27 >	4.4 >	Gas pipelines >	0	0	0	0	-
28 >	4.5 >	Sites determined as Contaminated Land >	0	0	0	0	-

28 >	4.6 >	Control of Major Accident Hazards (COMAH) >	0	0	0	0	-
28 >	4.7 >	Regulated explosive sites >	0	0	0	0	-
28 >	4.8 >	Hazardous substance storage/usage >	0	0	0	0	-
28 >	4.9 >	Historical licensed industrial activities (IPC) >	0	0	0	0	-
29 >	4.10 >	Licensed industrial activities (Part A(1)) >	0	0	0	0	-
29 >	4.11 >	Licensed pollutant release (Part A(2)/B) >	0	0	0	1	-
29 >	4.12 >	Radioactive Substance Authorisations >	0	0	0	0	-
29 >	4.13 >	Licensed Discharges to controlled waters >	0	0	0	0	-
30 >	4.14 >	Pollutant release to surface waters (Red List) >	0	0	0	0	-
30 >	4.15 >	Pollutant release to public sewer >	0	0	0	0	-
30 >	4.16 >	List 1 Dangerous Substances >	0	0	0	0	-
30 >	4.17 >	List 2 Dangerous Substances >	0	0	0	0	-
30 >	4.18 >	Pollution Incidents (EA/NRW) >	0	0	0	0	-
31 >	4.19 >	Pollution inventory substances >	0	0	0	0	-
31 >	4.20 >	Pollution inventory waste transfers >	0	0	0	0	-
31 >	4.21 >	Pollution inventory radioactive waste >	0	0	0	0	-

Page	Section	Hydrogeology >	On site	0-50m	50-250m	250-500m	500-2000m
32 >	5.1 >	Superficial aquifer >	Identified (within 500m)				
33 >	5.2 >	Bedrock aquifer >	Identified (within 500m)				
35 >	5.3 >	Groundwater vulnerability >	Identified (within 50m)				
36 >	5.4 >	Groundwater vulnerability- soluble rock risk >	None (within 0m)				
36 >	5.5 >	Groundwater vulnerability- local information >	None (within 0m)				
37 >	5.6 >	Groundwater abstractions >	0	0	0	0	18
41 >	5.7 >	Surface water abstractions >	0	0	0	0	1
42 >	5.8 >	Potable abstractions >	0	0	0	0	0
42 >	5.9 >	Source Protection Zones >	0	0	0	0	-
42 >	5.10 >	Source Protection Zones (confined aquifer) >	0	0	0	0	-

Page	Section	Hydrology >	On site	0-50m	50-250m	250-500m	500-2000m
43 >	6.1 >	Water Network (OS MasterMap) >	0	0	0	-	-

43 >	6.2 >	Surface water features >	0	0	0	-	-
44 >	6.3 >	WFD Surface water body catchments >	1	-	-	-	-
44 >	6.4 >	WFD Surface water bodies >	0	0	0	-	-
44 >	6.5 >	WFD Groundwater bodies >	1	-	-	-	-
Page	Section	**River and coastal flooding >**	On site	0-50m	50-250m	250-500m	500-2000m
46 >	7.1 >	Risk of flooding from rivers and the sea >	None (within 50m)				
46 >	7.2 >	Historical Flood Events >	0	0	0	-	-
46 >	7.3 >	Flood Defences >	0	0	0	-	-
47 >	7.4 >	Areas Benefiting from Flood Defences >	0	0	0	-	-
47 >	7.5 >	Flood Storage Areas >	0	0	0	-	-
48 >	7.6 >	Flood Zone 2 >	None (within 50m)				
48 >	7.7 >	Flood Zone 3 >	None (within 50m)				
Page	Section	**Surface water flooding >**					
49 >	8.1 >	Surface water flooding >	Negligible (within 50m)				
Page	Section	**Groundwater flooding >**					
50 >	9.1 >	Groundwater flooding >	Negligible (within 50m)				
Page	Section	**Environmental designations >**	On site	0-50m	50-250m	250-500m	500-2000m
51 >	10.1 >	Sites of Special Scientific Interest (SSSI) >	0	0	0	0	3
52 >	10.2 >	Conserved wetland sites (Ramsar sites) >	0	0	0	0	2
53 >	10.3 >	Special Areas of Conservation (SAC) >	0	0	0	0	0
53 >	10.4 >	Special Protection Areas (SPA) >	0	0	0	0	2
54 >	10.5 >	National Nature Reserves (NNR) >	0	0	0	0	0
54 >	10.6 >	Local Nature Reserves (LNR) >	0	0	0	0	0
54 >	10.7 >	Designated Ancient Woodland >	0	0	0	0	0
55 >	10.8 >	Biosphere Reserves >	0	0	0	0	0
55 >	10.9 >	Forest Parks >	0	0	0	0	0
55 >	10.10 >	Marine Conservation Zones >	0	0	0	0	0
55 >	10.11 >	Green Belt >	0	0	0	0	0
55 >	10.12 >	Proposed Ramsar sites >	0	0	0	0	0

56 >	10.13 >	Possible Special Areas of Conservation (pSAC) >	0	0	0	0	0
56 >	10.14 >	Potential Special Protection Areas (pSPA) >	0	0	0	0	0
56 >	10.15 >	Nitrate Sensitive Areas >	0	0	0	0	0
56 >	10.16 >	Nitrate Vulnerable Zones >	3	0	0	0	3
58 >	10.17 >	SSSI Impact Risk Zones >	1	-	-	-	-
59 >	10.18 >	SSSI Units >	0	0	0	0	3
Page	Section	**Visual and cultural designations >**	On site	0-50m	50-250m	250-500m	500-2000m
62 >	11.1 >	World Heritage Sites >	0	0	0	-	-
63 >	11.2 >	Area of Outstanding Natural Beauty >	0	0	0	-	-
63 >	11.3 >	National Parks >	0	0	0	-	-
63 >	11.4 >	Listed Buildings >	0	0	5	-	-
64 >	11.5 >	Conservation Areas >	0	1	0	-	-
64 >	11.6 >	Scheduled Ancient Monuments >	0	0	0	-	-
65 >	11.7 >	Registered Parks and Gardens >	0	0	0	-	-
Page	Section	**Agricultural designations >**	On site	0-50m	50-250m	250-500m	500-2000m
66 >	12.1 >	Agricultural Land Classification >	Grade 3 (within 250m)				
67 >	12.2 >	Open Access Land >	0	0	0	-	-
67 >	12.3 >	Tree Felling Licences >	0	0	0	-	-
67 >	12.4 >	Environmental Stewardship Schemes >	0	0	0	-	-
67 >	12.5 >	Countryside Stewardship Schemes >	0	0	0	-	-
Page	Section	**Habitat designations >**	On site	0-50m	50-250m	250-500m	500-2000m
68 >	13.1 >	Priority Habitat Inventory >	0	0	0	-	-
68 >	13.2 >	Habitat Networks >	0	0	0	-	-
68 >	13.3 >	Open Mosaic Habitat >	0	0	0	-	-
68 >	13.4 >	Limestone Pavement Orders >	0	0	0	-	-
Page	Section	**Geology 1:10,000 scale >**	On site	0-50m	50-250m	250-500m	500-2000m
69 >	14.1 >	10k Availability >	Identified (within 500m)				
70 >	14.2 >	Artificial and made ground (10k) >	0	0	0	3	-
71 >	14.3 >	Superficial geology (10k) >	0	0	0	1	-

72 >	14.4 >	Landslip (10k) >	0	0	0	0	-
73 >	14.5 >	Bedrock geology (10k) >	1	1	1	3	-
74 >	14.6 >	Bedrock faults and other linear features (10k) >	0	0	0	0	-
Page	Section	**Geology 1:50,000 scale >**	On site	0-50m	50-250m	250-500m	500-2000m
75 >	15.1 >	50k Availability >	Identified (within 500m)				
76 >	15.2 >	Artificial and made ground (50k) >	0	0	0	1	-
77 >	15.3 >	Artificial ground permeability (50k) >	0	0	-	-	-
78 >	15.4 >	Superficial geology (50k) >	0	0	0	1	-
79 >	15.5 >	Superficial permeability (50k) >	None (within 50m)				
79 >	15.6 >	Landslip (50k) >	0	0	0	0	-
79 >	15.7 >	Landslip permeability (50k) >	None (within 50m)				
80 >	15.8 >	Bedrock geology (50k) >	1	1	0	1	-
81 >	15.9 >	Bedrock permeability (50k) >	Identified (within 50m)				
81 >	15.10 >	Bedrock faults and other linear features (50k) >	0	0	0	0	-
Page	Section	**Boreholes >**	On site	0-50m	50-250m	250-500m	500-2000m
82 >	16.1 >	BGS Boreholes >	0	0	3	-	-
Page	Section	**Natural ground subsidence >**					
84 >	17.1 >	Shrink swell clays >	Low (within 50m)				
85 >	17.2 >	Running sands >	Negligible (within 50m)				
86 >	17.3 >	Compressible deposits >	Negligible (within 50m)				
87 >	17.4 >	Collapsible deposits >	Very low (within 50m)				
88 >	17.5 >	Landslides >	Very low (within 50m)				
90 >	17.6 >	Ground dissolution of soluble rocks >	Negligible (within 50m)				
Page	Section	**Mining, ground workings and natural cavities >**	On site	0-50m	50-250m	250-500m	500-2000m
92 >	18.1 >	Natural cavities >	0	0	0	0	-
93 >	18.2 >	BritPits >	0	0	0	1	-
93 >	18.3 >	Surface ground workings >	0	0	0	-	-
93 >	18.4 >	Underground workings >	0	0	0	0	0
93 >	18.5 >	Historical Mineral Planning Areas >	0	0	1	0	-

94 >	18.6 >	Non-coal mining >	0	0	0	0	0
94 >	18.7 >	Mining cavities >	0	0	0	0	0
94 >	18.8 >	JPB mining areas >	None (within 0m)				
94 >	18.9 >	Coal mining >	None (within 0m)				
95 >	18.10 >	Brine areas >	None (within 0m)				
95 >	18.11 >	Gypsum areas >	None (within 0m)				
95 >	18.12 >	Tin mining >	None (within 0m)				
95 >	18.13 >	Clay mining >	None (within 0m)				
Page	Section	**Radon** >					
96 >	19.1 >	Radon >	Between 10% and 30% (within 0m)				
Page	Section	**Soil chemistry** >	On site	0-50m	50-250m	250-500m	500-2000m
98 >	20.1 >	BGS Estimated Background Soil Chemistry >	1	4	-	-	-
98 >	20.2 >	BGS Estimated Urban Soil Chemistry >	0	0	-	-	-
99 >	20.3 >	BGS Measured Urban Soil Chemistry >	0	0	-	-	-
Page	Section	**Railway infrastructure and projects** >	On site	0-50m	50-250m	250-500m	500-2000m
100 >	21.1 >	Underground railways (London) >	0	0	0	-	-
100 >	21.2 >	Underground railways (Non-London) >	0	0	0	-	-
100 >	21.3 >	Railway tunnels >	0	0	0	-	-
100 >	21.4 >	Historical railway and tunnel features >	0	0	0	-	-
100 >	21.5 >	Royal Mail tunnels >	0	0	0	-	-
101 >	21.6 >	Historical railways >	0	0	0	-	-
101 >	21.7 >	Railways >	0	0	0	-	-
101 >	21.8 >	Crossrail 1 >	0	0	0	0	-
101 >	21.9 >	Crossrail 2 >	0	0	0	0	-
101 >	21.10 >	HS2 >	0	0	0	0	-

Recent aerial photograph

Capture Date: 17/04/2021

Site Area: 0.19ha

Recent site history - 2018 aerial photograph

Capture Date: 02/09/2018

Site Area: 0.19ha

Recent site history - 2011 aerial photograph

Capture Date: 29/09/2011

Site Area: 0.19ha

Recent site history - 2000 aerial photograph

Capture Date: 17/06/2000

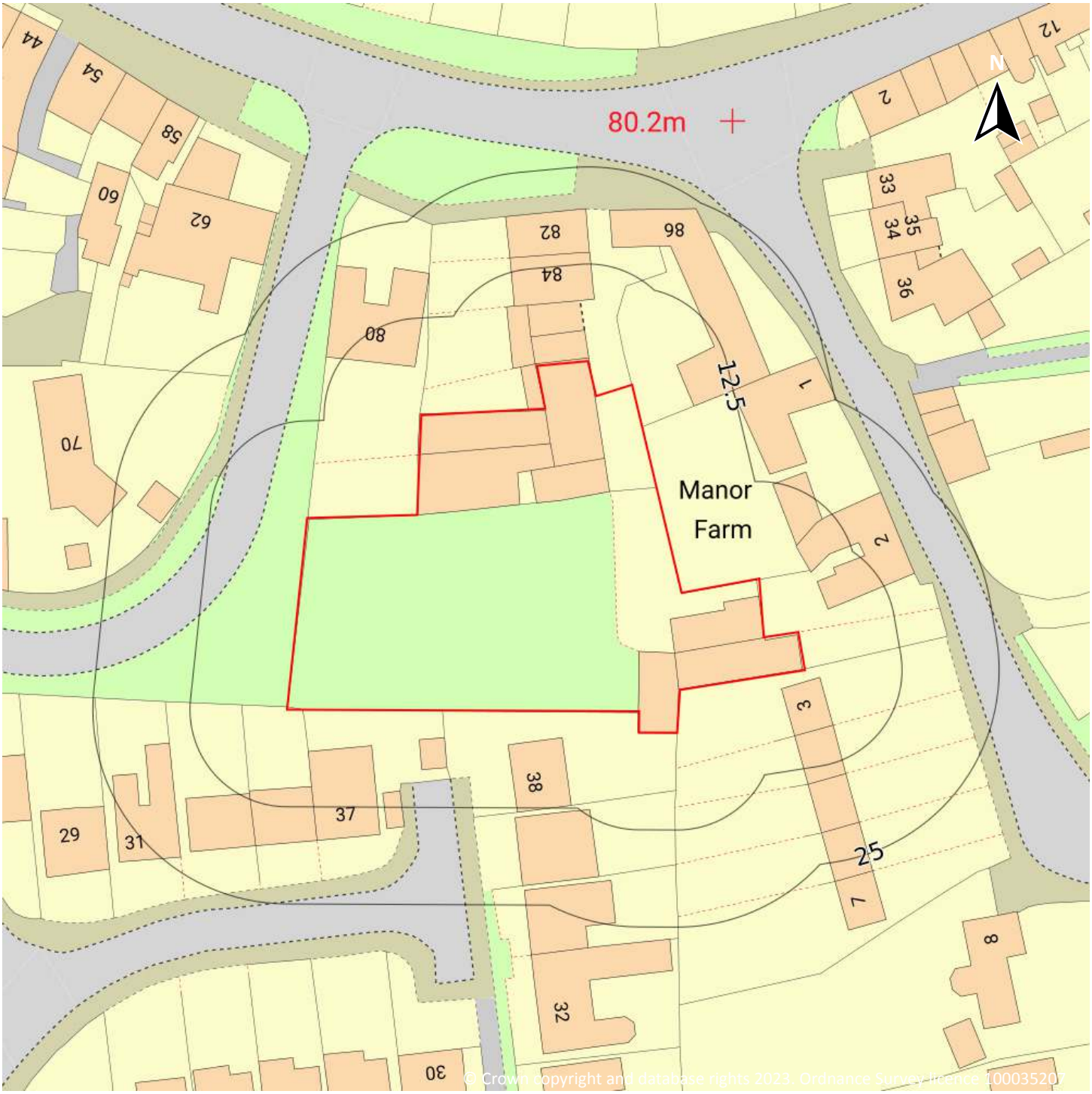
Site Area: 0.19ha

Recent site history - 1999 aerial photograph

Capture Date: 28/08/1999

Site Area: 0.19ha

OS MasterMap site plan



Site Area: 0.19ha

1 Past land use

Site Outline

Search buffers in metres (m)

Historical industrial land uses

Historical tanks

Historical energy features

1.1 Historical industrial land uses

Records within 500m	20

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

Features are displayed on the Past land use map on **page 14 >**

ID	Location	Land use	Dates present	Group ID
A	**On site**	**Smithy**	**1901 - 1950**	**1806202**

ID	Location	Land use	Dates present	Group ID
A	**On site**	**Smithy**	**1950**	**1837200**
1	40m W	Nursery	1988	1772230
2	115m SE	Nursery	1971	1772231
3	239m W	Unspecified Factory	1988	1765659
4	244m NE	Nursery	1971	1772232
D	298m N	Fire Station	1971	1827966
D	298m N	Fire Station	1988	1839554
5	322m E	Unspecified Works	1971	1771410
F	339m NW	Unspecified Heap	1950	1756679
F	340m NW	Unspecified Pit	1950	1800295
F	344m NW	Unspecified Pit	1883	1823732
I	353m E	Unspecified Ground Workings	1971	1755110
F	360m NW	Unspecified Ground Workings	1950	1755109
I	371m E	Unspecified Heap	1950	1781395
K	482m NE	Unspecified Commercial/Industrial	1971	1753063
K	482m NE	Railway Sidings	1971	1786817
7	495m NE	Unspecified Quarry	1950	1826000
L	495m NE	Railway Sidings	1950	1814989
L	495m NE	Railway Sidings	1950	1788393

This data is sourced from Ordnance Survey / Groundsure.

1.2 Historical tanks

Records within 500m	**5**

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

Features are displayed on the Past land use map on **page 14 >**

ID	Location	Land use	Dates present	Group ID
G	340m W	Unspecified Tank	1993 - 1996	289749
G	341m W	Unspecified Tank	1974 - 1990	289534
J	387m W	Unspecified Tank	1968 - 1974	298471
J	407m W	Unspecified Tank	1993 - 1995	296610
J	408m W	Unspecified Tank	1990	290251

This data is sourced from Ordnance Survey / Groundsure.

1.3 Historical energy features

Records within 500m **15**

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

Features are displayed on the Past land use map on **page 14 >**

ID	Location	Land use	Dates present	Group ID
B	95m SW	Electricity Substation	1974 - 1990	177723
B	95m SW	Electricity Substation	1993 - 1996	180121
B	98m SW	Electricity Substation	1986	172129
B	98m SW	Electricity Substation	1989	173332
C	183m E	Electricity Substation	1989	170114
C	193m E	Electricity Substation	1990 - 1996	187234
E	324m NW	Electricity Substation	1986 - 1996	177425
E	341m NW	Electricity Substation	1974	170117
H	344m SW	Electricity Substation	1993 - 1996	174814
H	346m SW	Electricity Substation	1990	179684
6	376m NE	Electricity Substation	1990 - 1996	179644
I	411m E	Electricity Substation	1986 - 1989	184544
I	429m E	Electricity Substation	1993 - 1996	176219

ID	Location	Land use	Dates present	Group ID
I	430m E	Electricity Substation	1974 - 1990	178108
8	498m W	Electricity Substation	1996	170118

This data is sourced from Ordnance Survey / Groundsure.

1.4 Historical petrol stations

Records within 500m	0

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

This data is sourced from Ordnance Survey / Groundsure.

1.5 Historical garages

Records within 500m	0

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

This data is sourced from Ordnance Survey / Groundsure.

1.6 Historical military land

Records within 500m	0

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

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

2 Past land use - un-grouped

Site Outline

Search buffers in metres (m)

Historical industrial land uses

Historical tanks

Historical energy features

2.1 Historical industrial land uses

Records within 500m	22

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

Features are displayed on the Past land use - un-grouped map on **page 18 >**

ID	Location	Land Use	Date	Group ID
A	**On site**	**Smithy**	**1950**	**1837200**
A	**On site**	**Smithy**	**1950**	**1806202**
A	**On site**	**Smithy**	**1901**	**1806202**

ID	Location	Land Use	Date	Group ID
1	40m W	Nursery	1988	1772230
2	115m SE	Nursery	1971	1772231
3	239m W	Unspecified Factory	1988	1765659
4	244m NE	Nursery	1971	1772232
D	298m N	Fire Station	1971	1827966
D	298m N	Fire Station	1988	1839554
5	322m E	Unspecified Works	1971	1771410
F	339m NW	Unspecified Heap	1950	1756679
F	340m NW	Unspecified Pit	1950	1800295
F	344m NW	Unspecified Pit	1883	1823732
I	353m E	Unspecified Ground Workings	1971	1755110
F	360m NW	Unspecified Ground Workings	1950	1755109
I	371m E	Unspecified Heap	1950	1781395
I	373m E	Unspecified Heap	1950	1781395
L	482m NE	Railway Sidings	1971	1786817
L	482m NE	Unspecified Commercial/Industrial	1971	1753063
6	495m NE	Unspecified Quarry	1950	1826000
M	495m NE	Railway Sidings	1950	1814989
M	495m NE	Railway Sidings	1950	1788393

This data is sourced from Ordnance Survey / Groundsure.

2.2 Historical tanks

Records within 500m	**15**

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

Features are displayed on the Past land use - un-grouped map on **page 18 >**

ID	Location	Land Use	Date	Group ID
G	340m W	Unspecified Tank	1994	289749

ID	Location	Land Use	Date	Group ID
G	340m W	Unspecified Tank	1993	289749
G	340m W	Unspecified Tank	1995	289749
G	340m W	Unspecified Tank	1996	289749
G	340m W	Unspecified Tank	1996	289749
G	341m W	Unspecified Tank	1974	289534
G	341m W	Unspecified Tank	1990	289534
G	342m W	Unspecified Tank	1986	289534
G	342m W	Unspecified Tank	1989	289534
K	387m W	Unspecified Tank	1974	298471
K	387m W	Unspecified Tank	1968	298471
K	407m W	Unspecified Tank	1994	296610
K	407m W	Unspecified Tank	1993	296610
K	407m W	Unspecified Tank	1995	296610
K	408m W	Unspecified Tank	1990	290251

This data is sourced from Ordnance Survey / Groundsure.

2.3 Historical energy features

Records within 500m	**47**

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

Features are displayed on the Past land use - un-grouped map on **page 18 >**

ID	Location	Land Use	Date	Group ID
B	95m SW	Electricity Substation	1974	177723
B	95m SW	Electricity Substation	1990	177723
B	95m SW	Electricity Substation	1994	180121
B	95m SW	Electricity Substation	1993	180121
B	95m SW	Electricity Substation	1995	180121
B	95m SW	Electricity Substation	1996	180121

ID	Location	Land Use	Date	Group ID
B	95m SW	Electricity Substation	1996	180121
B	98m SW	Electricity Substation	1986	172129
B	98m SW	Electricity Substation	1989	173332
C	183m E	Electricity Substation	1989	170114
C	193m E	Electricity Substation	1994	187234
C	193m E	Electricity Substation	1993	187234
C	193m E	Electricity Substation	1995	187234
C	193m E	Electricity Substation	1996	187234
C	193m E	Electricity Substation	1996	187234
C	193m E	Electricity Substation	1990	187234
E	324m NW	Electricity Substation	1986	177425
E	324m NW	Electricity Substation	1989	177425
E	324m NW	Electricity Substation	1990	177425
E	325m NW	Electricity Substation	1994	177425
E	325m NW	Electricity Substation	1993	177425
E	325m NW	Electricity Substation	1995	177425
E	325m NW	Electricity Substation	1996	177425
E	325m NW	Electricity Substation	1996	177425
E	341m NW	Electricity Substation	1974	170117
H	344m SW	Electricity Substation	1994	174814
H	344m SW	Electricity Substation	1993	174814
H	344m SW	Electricity Substation	1995	174814
H	344m SW	Electricity Substation	1996	174814
H	344m SW	Electricity Substation	1996	174814
H	346m SW	Electricity Substation	1990	179684
J	376m NE	Electricity Substation	1994	179644
J	376m NE	Electricity Substation	1993	179644
J	376m NE	Electricity Substation	1995	179644

ID	Location	Land Use	Date	Group ID
J	376m NE	Electricity Substation	1996	179644
J	376m NE	Electricity Substation	1996	179644
J	376m NE	Electricity Substation	1990	179644
I	411m E	Electricity Substation	1986	184544
I	411m E	Electricity Substation	1989	184544
I	429m E	Electricity Substation	1994	176219
I	429m E	Electricity Substation	1993	176219
I	429m E	Electricity Substation	1995	176219
I	429m E	Electricity Substation	1996	176219
I	429m E	Electricity Substation	1996	176219
I	430m E	Electricity Substation	1974	178108
I	430m E	Electricity Substation	1990	178108
7	498m W	Electricity Substation	1996	170118

This data is sourced from Ordnance Survey / Groundsure.

2.4 Historical petrol stations

Records within 500m	**0**

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

This data is sourced from Ordnance Survey / Groundsure.

2.5 Historical garages

Records within 500m	**0**

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

This data is sourced from Ordnance Survey / Groundsure.

3 Waste and landfill

Site Outline

Search buffers in metres (m)

Waste exemptions

3.1 Active or recent landfill

Records within 500m	0

Active or recently closed landfill sites under Environment Agency/Natural Resources Wales regulation.

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

3.2 Historical landfill (BGS records)

Records within 500m	0

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

This data is sourced from the British Geological Survey.

3.3 Historical landfill (LA/mapping records)

Records within 500m	0

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

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

3.4 Historical landfill (EA/NRW records)

Records within 500m	0

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

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

3.5 Historical waste sites

Records within 500m	0

Waste site records derived from Local Authority planning records and high detail historical mapping.

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

3.6 Licensed waste sites

Records within 500m	0

Active or recently closed waste sites under Environment Agency/Natural Resources Wales regulation.

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

3.7 Waste exemptions

Records within 500m	3

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

Features are displayed on the Waste and landfill map on **page 23 >**

ID	Location	Site	Reference	Category	Sub-Category	Description
A	228m NW	26-28 The Square Northampton Northamptonshire NN6 0NA	EPR/CE5449VN/A001	Treating waste exemption	Non-Agricultural Waste Only	Sorting and de-naturing of controlled drugs for disposal
A	228m NW	26-28, THE SQUARE, EARLS BARTON, NORTHAMPTON, NN6 0NA	WEX002315	Treating waste exemption	Not on a farm	Sorting and de-naturing of controlled drugs for disposal
1	330m NW	Dental Practice Opposite All Saints church	WEX268555	Treating waste exemption	Not on a farm	Sorting and de-naturing of controlled drugs for disposal

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

4 Current industrial land use

Site Outline

Search buffers in metres (m)

Recent industrial land uses

Current or recent petrol stations

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

4.1 Recent industrial land uses

Records within 250m	8

Current potentially contaminative industrial sites.

Features are displayed on the Current industrial land use map on **page 26 >**

ID	Location	Company	Address	Activity	Category
1	53m N	Desirable Diesels	1, Doddington Road, Earls Barton, Northamptonshire, NN6 0NF	Secondhand Vehicles	Motoring
2	109m SW	Electricity Sub Station	Northamptonshire, NN6	Electrical Features	Infrastructure and Facilities
3	162m W	Perry Bros	34a, The Square, Earls Barton, Northamptonshire, NN6 0NA	Vehicle Parts and Accessories	Motoring

ID	Location	Company	Address	Activity	Category
A	169m E	Works	Northamptonshire, NN6	Unspecified Works Or Factories	Industrial Features
A	185m E	Machinery Plant Services Ltd	38a, Doddington Road, Earls Barton, Northamptonshire, NN6 0NF	General Purpose Machinery	Industrial Products
4	196m E	Electricity Sub Station	Northamptonshire, NN6	Electrical Features	Infrastructure and Facilities
B	222m NW	Works	Northamptonshire, NN6	Unspecified Works Or Factories	Industrial Features
B	239m NW	Barker Shoes Ltd	3, Station Road, Earls Barton, Northamptonshire, NN6 0NT	Footwear	Consumer Products

This data is sourced from Ordnance Survey.

4.2 Current or recent petrol stations

Records within 500m	**1**

Open, closed, under development and obsolete petrol stations.

Features are displayed on the Current industrial land use map on **page 26 >**

ID	Location	Company	Address	LPG	Status
5	331m W	OBSOLETE	Earls Barton Service Station, Earls Barton, Northampton, Northamptonshire, NN6 0LA	Not Applicable	Obsolete

This data is sourced from Experian.

4.3 Electricity cables

Records within 500m	**0**

High voltage underground electricity transmission cables.

This data is sourced from National Grid.

4.4 Gas pipelines

Records within 500m	**0**

High pressure underground gas transmission pipelines.

This data is sourced from National Grid.

4.5 Sites determined as Contaminated Land

Records within 500m	0

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

This data is sourced from Local Authority records.

4.6 Control of Major Accident Hazards (COMAH)

Records within 500m	0

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

This data is sourced from the Health and Safety Executive.

4.7 Regulated explosive sites

Records within 500m	0

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

This data is sourced from the Health and Safety Executive.

4.8 Hazardous substance storage/usage

Records within 500m	0

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

This data is sourced from Local Authority records.

4.9 Historical licensed industrial activities (IPC)

Records within 500m	0

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

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

4.10 Licensed industrial activities (Part A(1))

Records within 500m	0

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

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

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

Records within 500m	1

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

Features are displayed on the Current industrial land use map on **page 26 >**

ID	Location	Address	Details	
6	365m W	A. Barker & Sons Limited, Station Road, Earls Barton, Northampton NN6 0NT	Process: Coating Processes Status: Historical Permit Permit Type: Part B	Enforcement: No Enforcement Notified Date of enforcement: No Enforcement Notified Comment: No Enforcement Notified

This data is sourced from Local Authority records.

4.12 Radioactive Substance Authorisations

Records within 500m	0

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

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

4.13 Licensed Discharges to controlled waters

Records within 500m	0

Discharges of treated or untreated effluent to controlled waters under the Water Resources Act 1991.

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

4.14 Pollutant release to surface waters (Red List)

Records within 500m	0

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

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

4.15 Pollutant release to public sewer

Records within 500m	0

Discharges of Special Category Effluents to the public sewer.

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

4.16 List 1 Dangerous Substances

Records within 500m	0

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

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

4.17 List 2 Dangerous Substances

Records within 500m	0

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

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

4.18 Pollution Incidents (EA/NRW)

Records within 500m	0

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

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

4.19 Pollution inventory substances

Records within 500m	0

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

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

4.20 Pollution inventory waste transfers

Records within 500m	0

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

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

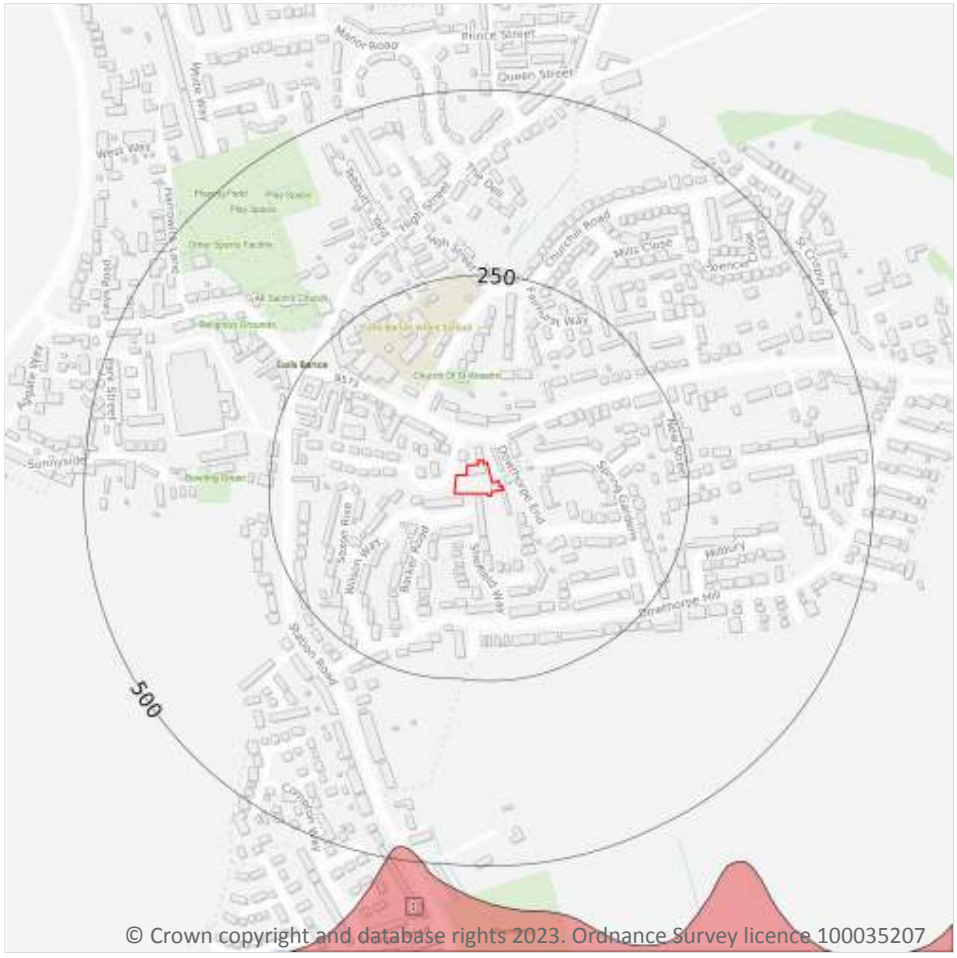
4.21 Pollution inventory radioactive waste

Records within 500m	0

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

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

5 Hydrogeology - Superficial aquifer



Site Outline

Search buffers in metres (m)

- Principal
- Secondary A
- Secondary B
- Secondary Undifferentiated
- Unproductive
- Unknown

5.1 Superficial aquifer

Records within 500m	1

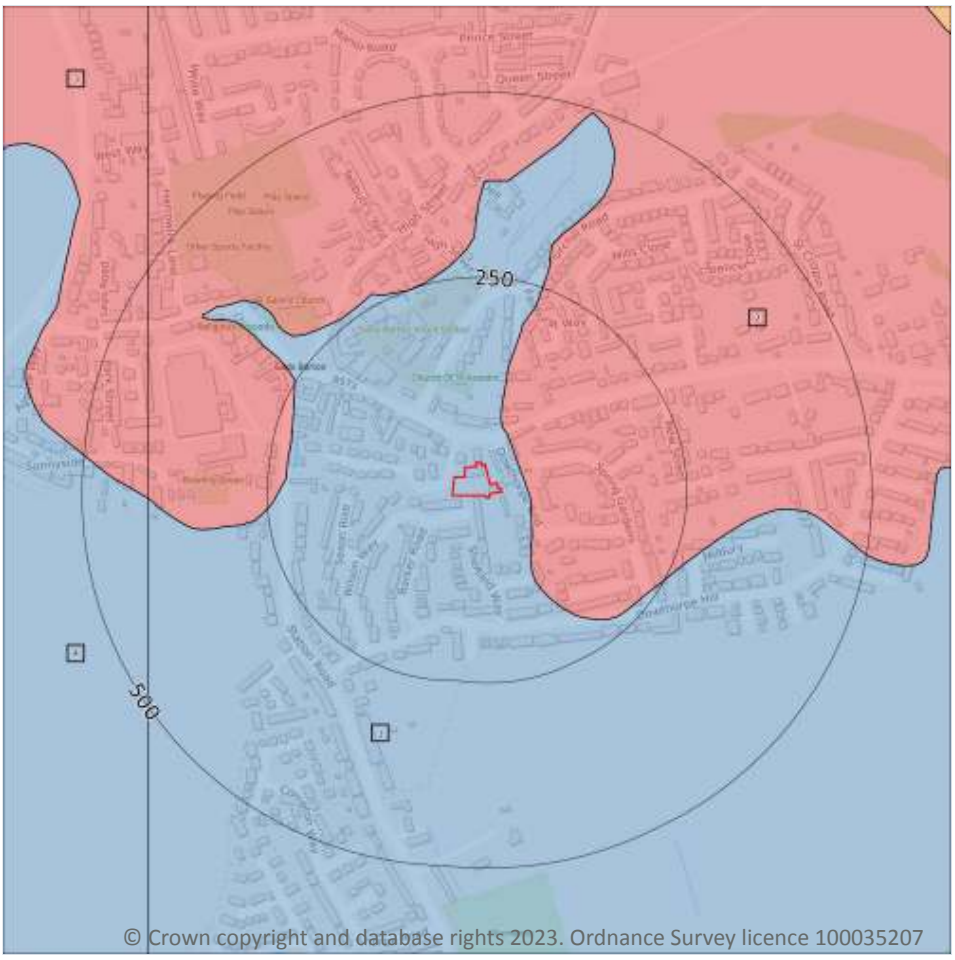
Aquifer status of groundwater held within superficial geology.

Features are displayed on the Hydrogeology map on **page 32 >**

ID	Location	Designation	Description
1	482m S	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers

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

Bedrock aquifer



Site Outline

Search buffers in metres (m)

- Principal
- Secondary A
- Secondary B
- Secondary Undifferentiated
- Unproductive

5.2 Bedrock aquifer

Records within 500m	4

Aquifer status of groundwater held within bedrock geology.

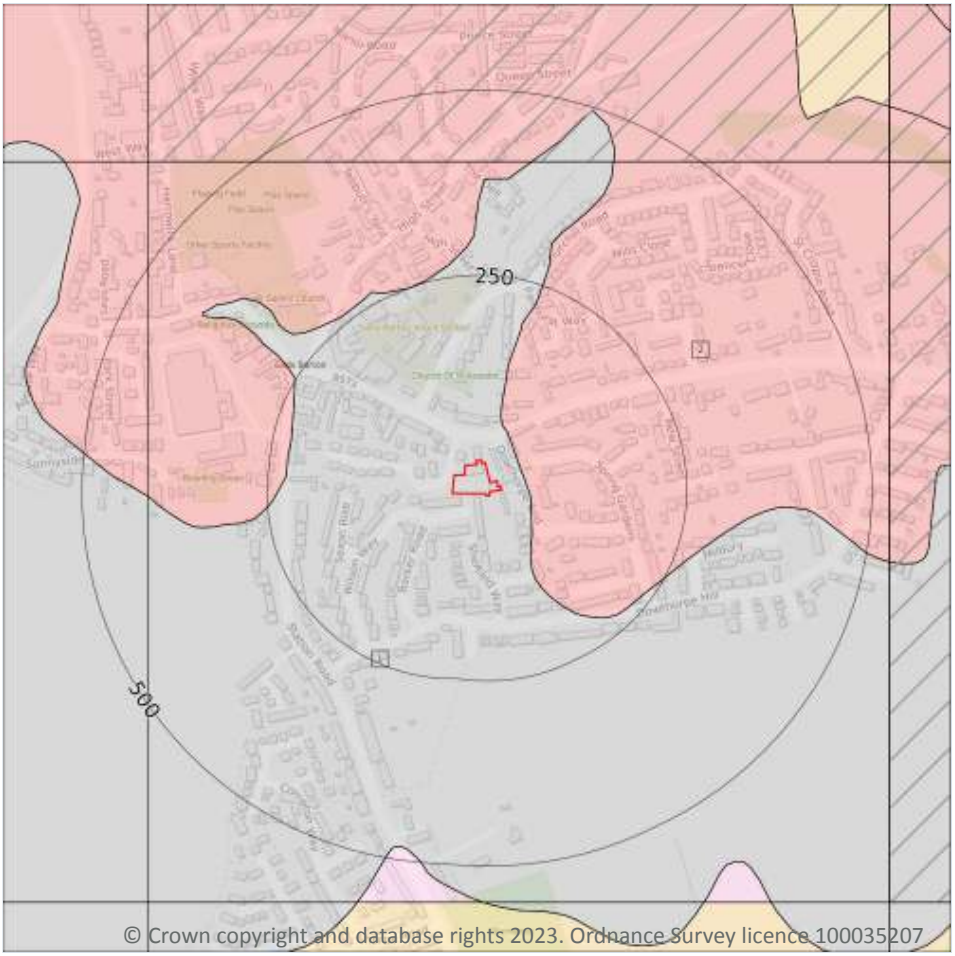
Features are displayed on the Bedrock aquifer map on **page 33 >**

ID	Location	Designation	Description
1	**On site**	**Unproductive**	**These are rock layers or drift deposits with low permeability that have negligible significance for water supply or river base flow**
2	33m E	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers

ID	Location	Designation	Description
3	410m W	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers
4	410m W	Unproductive	These are rock layers or drift deposits with low permeability that have negligible significance for water supply or river base flow

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

Groundwater vulnerability



Site Outline

Search buffers in metres (m)

Superficial vulnerability

- Principal superficial aquifer, high vulnerability
- Secondary superficial aquifer, high vulnerability
- Principal superficial aquifer, medium vulnerability
- Secondary superficial aquifer, medium vulnerability
- Principal superficial aquifer, low vulnerability
- Secondary superficial aquifer, low vulnerability

Bedrock vulnerability

- Principal bedrock aquifer, high vulnerability
- Secondary bedrock aquifer, high vulnerability
- Principal bedrock aquifer, medium vulnerability
- Secondary bedrock aquifer, medium vulnerability
- Principal bedrock aquifer, low vulnerability
- Secondary bedrock aquifer, low vulnerability

Other information

- Unproductive aquifer
- Soluble rock risk
- Local information

5.3 Groundwater vulnerability

Records within 50m	2

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

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

Features are displayed on the Groundwater vulnerability map on **page 35 >**

ID	Location	Summary	Soil / surface	Superficial geology	Bedrock geology
1	**On site**	**Summary Classification: Unproductive aquifer (may have productive aquifer beneath) Combined classification: Unproductive Bedrock Aquifer, No Superficial Aquifer**	**Leaching class: Low Infiltration value: 40-70% Dilution value: <300mm/year**	**Vulnerability: - Aquifer type: - Thickness: <3m Patchiness value: <90% Recharge potential: No Data**	**Vulnerability: Unproductive Aquifer type: Unproductive Flow mechanism: Well connected fractures**
2	32m E	Summary Classification: Secondary bedrock aquifer - High Vulnerability Combined classification: Productive Bedrock Aquifer, No Superficial Aquifer	Leaching class: Low Infiltration value: 40-70% Dilution value: <300mm/year	Vulnerability: - Aquifer type: - Thickness: <3m Patchiness value: <90% Recharge potential: No Data	Vulnerability: High Aquifer type: Secondary Flow mechanism: Well connected fractures

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

5.4 Groundwater vulnerability- soluble rock risk

Records on site	**0**

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

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

5.5 Groundwater vulnerability- local information

Records on site	**0**

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

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

Abstractions and Source Protection Zones

Site Outline

Search buffers in metres (m)

- Source Protection Zone 1 — Inner catchment
- Source Protection Zone 2 — Outer catchment
- Source Protection Zone 3 — Total catchment
- Source Protection Zone 4 — Zone of Special Interest
- Source Protection Zone 1c — Inner catchment - confined aquifer
- Source Protection Zone 2c — Outer catchment - confined aquifer
- Source Protection Zone 3c — Total catchment - confined aquifer
- Drinking water abstraction licences
- Drinking water abstraction licences — Polygon features
- Drinking water abstraction licences — Linear features
- Groundwater abstraction licence (point)
- Groundwater abstraction licence (area)
- Groundwater abstraction licence (linear)
- Surface Water Abstractions (point)
- Surface Water Abstractions (area)
- Surface Water Abstractions (linear)

5.6 Groundwater abstractions

Records within 2000m	18

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

Features are displayed on the Abstractions and Source Protection Zones map on **page 37 >**

ID	Location	Details	
-	836m SW	Status: Historical Licence No: 5/32/05/*G/0030 Details: General Farming & Domestic Direct Source: GROUND WATER SOURCE OF SUPPLY Point: WELL 1, LOWER END FARM Data Type: Point Name: E WARD & SON Easting: 484720 Northing: 263080	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 01/03/1966 Expiry Date: - Issue No: 100 Version Start Date: 01/03/1966 Version End Date: -
-	938m S	Status: Active Licence No: AN/032/0005/015 Details: Dewatering Direct Source: GROUND WATER SOURCE OF SUPPLY Point: EARLS BARTON SPINNEY QUARRY Data Type: Poly4 Name: Breedon Trading Limited Easting: 482863 Northing: 262628	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: NPS/WR/036821 Original Start Date: 30/11/2020 Expiry Date: 31/03/2029 Issue No: 2 Version Start Date: 29/09/2021 Version End Date: -
-	938m S	Status: Active Licence No: AN/032/0005/017 Details: Mineral Washing Direct Source: GROUND WATER SOURCE OF SUPPLY Point: EARLS BARTON SPINNEY QUARRY Data Type: Poly4 Name: Breedon Trading Limited Easting: 482863 Northing: 262628	Annual Volume (m^3): 805064 Max Daily Volume (m^3): 2792 Original Application No: NPS/WR/036821 Original Start Date: 30/11/2020 Expiry Date: 31/03/2029 Issue No: 2 Version Start Date: 29/09/2021 Version End Date: -
-	938m S	Status: Active Licence No: AN/032/0005/015 Details: Make-Up Or Top Up Water Direct Source: GROUND WATER SOURCE OF SUPPLY Point: EARLS BARTON SPINNEY QUARRY Data Type: Poly4 Name: Breedon Trading Limited Easting: 482863 Northing: 262628	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: NPS/WR/036821 Original Start Date: 30/11/2020 Expiry Date: 31/03/2029 Issue No: 2 Version Start Date: 29/09/2021 Version End Date: -
-	938m S	Status: Active Licence No: AN/032/0005/017 Details: Dust Suppression Direct Source: GROUND WATER SOURCE OF SUPPLY Point: EARLS BARTON SPINNEY QUARRY Data Type: Poly4 Name: Breedon Trading Limited Easting: 482863 Northing: 262628	Annual Volume (m^3): 805064 Max Daily Volume (m^3): 2792 Original Application No: NPS/WR/036821 Original Start Date: 30/11/2020 Expiry Date: 31/03/2029 Issue No: 2 Version Start Date: 29/09/2021 Version End Date: -

ID	Location	Details	
-	1242m SW	Status: Historical Licence No: 5/32/05/*G/0030 Details: General Farming & Domestic Direct Source: GROUND WATER SOURCE OF SUPPLY Point: WELL 2, LOWER END FARM Data Type: Point Name: E WARD & SON Easting: 484800 Northing: 262470	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 01/03/1966 Expiry Date: - Issue No: 100 Version Start Date: 01/03/1966 Version End Date: -
-	1386m SW	Status: Active Licence No: AN/032/0005/017 Details: Dust Suppression Direct Source: GROUND WATER SOURCE OF SUPPLY Point: LAGOON C AT EARLS BARTON SPINNEY QUARRY Data Type: Point Name: Breedon Trading Limited Easting: 484849 Northing: 262284	Annual Volume (m^3): 805064 Max Daily Volume (m^3): 2792 Original Application No: NPS/WR/036821 Original Start Date: 30/11/2020 Expiry Date: 31/03/2029 Issue No: 2 Version Start Date: 29/09/2021 Version End Date: -
-	1386m SW	Status: Active Licence No: AN/032/0005/017 Details: Mineral Washing Direct Source: GROUND WATER SOURCE OF SUPPLY Point: LAGOON C AT EARLS BARTON SPINNEY QUARRY Data Type: Point Name: Breedon Trading Limited Easting: 484849 Northing: 262284	Annual Volume (m^3): 805064 Max Daily Volume (m^3): 2792 Original Application No: NPS/WR/036821 Original Start Date: 30/11/2020 Expiry Date: 31/03/2029 Issue No: 2 Version Start Date: 29/09/2021 Version End Date: -
-	1587m SE	Status: Historical Licence No: 5/32/05/*G/0010 Details: Mineral Washing Direct Source: GROUND WATER SOURCE OF SUPPLY Point: GRAVEL PIT EARLS BARTON Data Type: Point Name: PIONEER AGGREGATES (UK) LTD Easting: 486300 Northing: 262200	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 01/04/1985 Expiry Date: - Issue No: 100 Version Start Date: 01/12/1993 Version End Date: -
-	1650m SE	Status: Active Licence No: 5/32/05/*G/0010 Details: Mineral Washing Direct Source: GROUND WATER SOURCE OF SUPPLY Point: GRAVEL PIT - EARLS BARTON Data Type: Point Name: Hanson Quarry Products Europe Ltd Easting: 486340 Northing: 262150	Annual Volume (m^3): 3500000 Max Daily Volume (m^3): 14064 Original Application No: NPS/WR/011609 Original Start Date: 01/04/1985 Expiry Date: - Issue No: 103 Version Start Date: 13/08/2012 Version End Date: -

ID	Location	Details	
-	1650m SE	Status: Active Licence No: 5/32/05/*G/0010 Details: Dust Suppression Direct Source: GROUND WATER SOURCE OF SUPPLY Point: GRAVEL PIT - EARLS BARTON Data Type: Point Name: Hanson Quarry Products Europe Ltd Easting: 486340 Northing: 262150	Annual Volume (m^3): 3500000 Max Daily Volume (m^3): 14064 Original Application No: NPS/WR/011609 Original Start Date: 01/04/1985 Expiry Date: - Issue No: 103 Version Start Date: 13/08/2012 Version End Date: -
-	1650m SE	Status: Active Licence No: 5/32/05/*G/0010 Details: General Washing/Process Washing Direct Source: GROUND WATER SOURCE OF SUPPLY Point: GRAVEL PIT - EARLS BARTON Data Type: Point Name: Hanson Quarry Products Europe Ltd Easting: 486340 Northing: 262150	Annual Volume (m^3): 3500000 Max Daily Volume (m^3): 14064 Original Application No: NPS/WR/011609 Original Start Date: 01/04/1985 Expiry Date: - Issue No: 103 Version Start Date: 13/08/2012 Version End Date: -
-	1661m E	Status: Historical Licence No: 5/32/05/*G/0015 Details: General Farming & Domestic Direct Source: GROUND WATER SOURCE OF SUPPLY Point: TWO WELLS AT EARLS BARTON Data Type: Point Name: ELDERTON Easting: 487100 Northing: 263200	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 01/06/1977 Expiry Date: - Issue No: 100 Version Start Date: 01/06/1977 Version End Date: -
-	1661m E	Status: Historical Licence No: 5/32/05/*G/0015 Details: Spray Irrigation - Direct Direct Source: GROUND WATER SOURCE OF SUPPLY Point: TWO WELLS AT EARLS BARTON Data Type: Point Name: ELDERTON Easting: 487100 Northing: 263200	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 01/06/1977 Expiry Date: - Issue No: 100 Version Start Date: 01/06/1977 Version End Date: -
-	1664m E	Status: Active Licence No: 5/32/05/*G/0015 Details: Spray Irrigation - Direct Direct Source: GROUND WATER SOURCE OF SUPPLY Point: UNDERGROUND STRATA (SAND & GRAVEL)-EARLS BARTON Data Type: Point Name: ELDERTON Easting: 487100 Northing: 263190	Annual Volume (m^3): 9550 Max Daily Volume (m^3): 274 Original Application No: NS 784 Original Start Date: 01/06/1977 Expiry Date: - Issue No: 101 Version Start Date: 01/04/2004 Version End Date: -

ID	Location	Details	
-	1664m E	Status: Active Licence No: 5/32/05/*G/0015 Details: General Farming & Domestic Direct Source: GROUND WATER SOURCE OF SUPPLY Point: UNDERGROUND STRATA (SAND & GRAVEL) - EARLS BARTON Data Type: Point Name: ELDERTON Easting: 487100 Northing: 263190	Annual Volume (m^3): 9550 Max Daily Volume (m^3): 274 Original Application No: NS 784 Original Start Date: 01/06/1977 Expiry Date: - Issue No: 101 Version Start Date: 01/04/2004 Version End Date: -
-	1704m S	Status: Active Licence No: AN/032/0005/016 Details: Dewatering Direct Source: GROUND WATER SOURCE OF SUPPLY Point: EARLS BARTON QUARRY - RIVER TERRACE GRAVELS - AREA Data Type: Poly4 Name: Hanson Quarry Products Europe Ltd Easting: 483202 Northing: 261838	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: NPS/WR/031529 Original Start Date: 30/10/2019 Expiry Date: 31/03/2029 Issue No: 1 Version Start Date: 30/10/2019 Version End Date: -
-	1941m N	Status: Historical Licence No: 5/32/09/*G/0059 Details: General Farming & Domestic Direct Source: GROUND WATER SOURCE OF SUPPLY Point: WELL AT MEARS ASHBY Data Type: Point Name: W CALLIS & SONS Easting: 485180 Northing: 265520	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 01/03/1966 Expiry Date: - Issue No: 100 Version Start Date: 01/03/1966 Version End Date: -

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

5.7 Surface water abstractions

Records within 2000m	**1**

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

Features are displayed on the Abstractions and Source Protection Zones map on **page 37 >**

ID	Location	Details	
-	1564m S	Status: Active Licence No: AN/032/0005/011 Details: Mineral Washing Direct Source: SURFACE WATER SOURCE OF SUPPLY Point: RIVER NENE AT EARLS BARTON SPINNEY QUARRY Data Type: Point Name: Breedon Trading Limited Easting: 485105 Northing: 262018	Annual Volume (m^3): 600000 Max Daily Volume (m^3): 2000 Original Application No: NPS/WR/036821 Original Start Date: 23/01/2018 Expiry Date: 31/03/2029 Issue No: 3 Version Start Date: 29/09/2021 Version End Date: -

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

5.8 Potable abstractions

Records within 2000m	**0**

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

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

5.9 Source Protection Zones

Records within 500m	**0**

Source Protection Zones define the sensitivity of an area around a potable abstraction site to contamination.

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

5.10 Source Protection Zones (confined aquifer)

Records within 500m	**0**

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

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

6 Hydrology

Site Outline

Search buffers in metres (m)

Water Network (OS MasterMap)

Surface water features (wider than 5m)

Surface water features (narrower than 5m)

WFD River, canal and surface water transfer water bodies

WFD Lake water bodies

WFD Transitional and coastal water bodies

WFD Surface water body catchments boundaries

WFD Groundwater body boundaries

6.1 Water Network (OS MasterMap)

Records within 250m	0

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

This data is sourced from the Ordnance Survey.

6.2 Surface water features

Records within 250m	0

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

This data is sourced from the Ordnance Survey.

6.3 WFD Surface water body catchments

Records on site	1

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

Features are displayed on the Hydrology map on **page 43 >**

ID	Location	Type	Water body catchment	Water body ID	Operational catchment	Management catchment
1	**On site**	**River**	**Sywell Brook**	**GB105032045430**	**Nene Middle**	**Nene**

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

6.4 WFD Surface water bodies

Records identified	1

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

Features are displayed on the Hydrology map on **page 43 >**

ID	Location	Type	Name	Water body ID	Overall rating	Chemical rating	Ecological rating	Year
-	939m W	River	Sywell Brook	GB105032045430 ↗	Poor	Fail	Poor	2019

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

6.5 WFD Groundwater bodies

Records on site	1

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

Features are displayed on the Hydrology map on **page 43 >**

ID	Location	Name	Water body ID	Overall rating	Chemical rating	Quantitative	Year
2	**On site**	**Nene Mid Lower Jurassic Unit**	**GB40502G402400** ↗	**Good**	**Good**	**Good**	**2019**

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

7 River and coastal flooding

7.1 Risk of flooding from rivers and the sea

Records within 50m	0

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

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

7.2 Historical Flood Events

Records within 250m	0

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

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

7.3 Flood Defences

Records within 250m	0

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

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

7.4 Areas Benefiting from Flood Defences

Records within 250m	0

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

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

7.5 Flood Storage Areas

Records within 250m	0

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

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

River and coastal flooding - Flood Zones

7.6 Flood Zone 2

Records within 50m	0

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

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

7.7 Flood Zone 3

Records within 50m	0

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

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

8 Surface water flooding

8.1 Surface water flooding

Highest risk on site	**Negligible**
Highest risk within 50m	**Negligible**

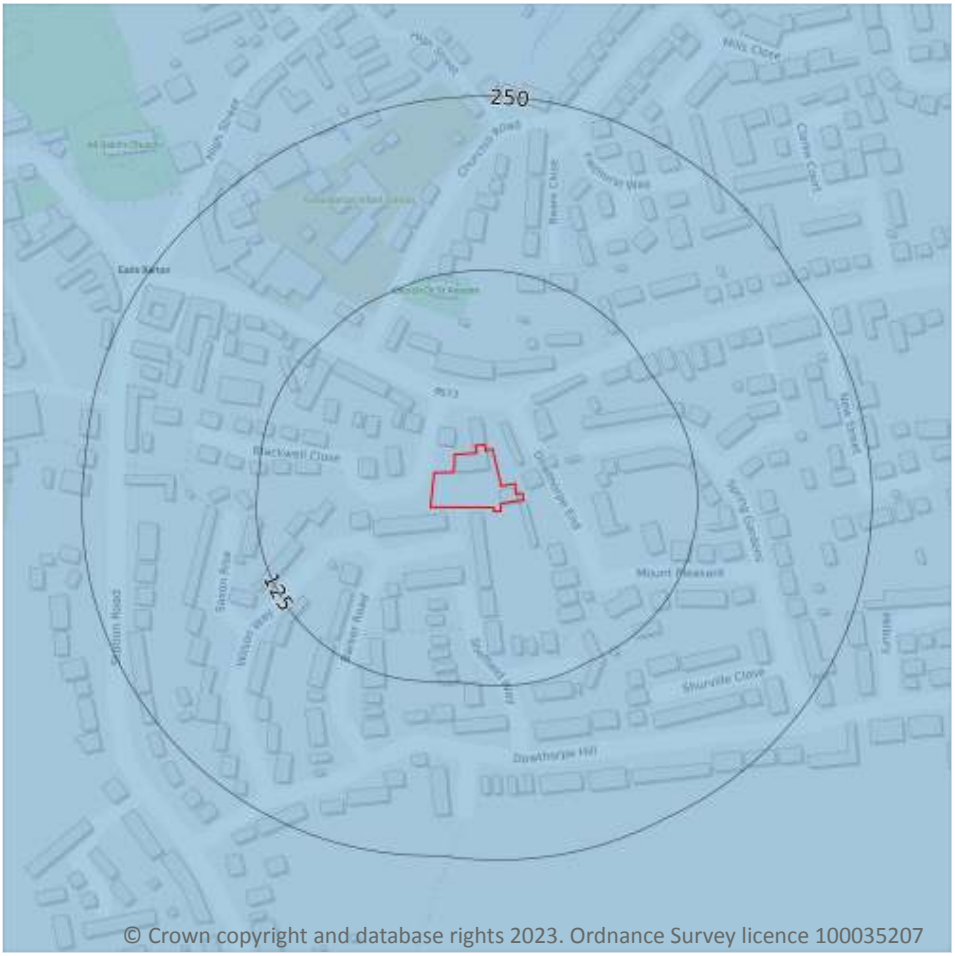
Ambiental Risk Analytics surface water (pluvial) FloodMap identifies areas likely to flood as a result of extreme rainfall events, i.e. land naturally vulnerable to surface water ponding or flooding. This data set was produced by simulating 1 in 30 year, 1 in 100 year, 1 in 250 year and 1 in 1,000 year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

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

Return period	Maximum modelled depth
1 in 1000 year	Negligible
1 in 250 year	Negligible
1 in 100 year	Negligible
1 in 30 year	Negligible

This data is sourced from Ambiental Risk Analytics.

9 Groundwater flooding



Site Outline

Search buffers in metres (m)

- High
- Moderate - High
- Moderate
- Low
- Negligible

9.1 Groundwater flooding

Highest risk on site	**Negligible**
Highest risk within 50m	**Negligible**

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

Features are displayed on the Groundwater flooding map on **page 50 >**

This data is sourced from Ambiental Risk Analytics.

10 Environmental designations

Site Outline

Search buffers in metres (m)

Sites of Special Scientific Interest (SSSI)

Conserved wetland sites (Ramsar sites)

Special Protection Areas (SPA)

10.1 Sites of Special Scientific Interest (SSSI)

Records within 2000m	3

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

Features are displayed on the Environmental designations map on **page 51 >**

ID	Location	Name	Data source
1	1259m SE	Upper Nene Valley Gravel Pits	Natural England

ID	Location	Name	Data source
A	1436m SE	Upper Nene Valley Gravel Pits	Natural England
-	1762m SE	Upper Nene Valley Gravel Pits	Natural England

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

10.2 Conserved wetland sites (Ramsar sites)

Records within 2000m	**2**

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

Features are displayed on the Environmental designations map on **page 51 >**

ID	Location	Site	Details
A	1436m SE	Name: Upper Nene Valley Gravel Pits Site status: Listed Data source: Natural England	Overview: This chain of both active and disused sand and gravel pits form an extensive series of shallow and deep open waters which occur in association with a wide range of marginal features, such as sparsely-vegetated islands, gravel bars and shorelines and habitats including reedswamp, marsh, wet ditches, rush pasture, rough grassland and scattered scrub. This range of habitats and the varied topography of the lagoons provide valuable resting and feeding conditions for concentrations of wintering waterbirds, especially ducks and waders. Species such as golden plover Pluvialis apricaria and lapwing Vanellus vanellus also spend time feeding and roosting on surrounding agricultural land outside the Ramsar site. Ramsar criteria: -

ID	Location	Site	Details
-	1761m SE	Name: Upper Nene Valley Gravel Pits Site status: Listed Data source: Natural England	Overview: This chain of both active and disused sand and gravel pits form an extensive series of shallow and deep open waters which occur in association with a wide range of marginal features, such as sparsely-vegetated islands, gravel bars and shorelines and habitats including reedswamp, marsh, wet ditches, rush pasture, rough grassland and scattered scrub. This range of habitats and the varied topography of the lagoons provide valuable resting and feeding conditions for concentrations of wintering waterbirds, especially ducks and waders. Species such as golden plover Pluvialis apricaria and lapwing Vanellus vanellus also spend time feeding and roosting on surrounding agricultural land outside the Ramsar site. Ramsar criteria: -

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

10.3 Special Areas of Conservation (SAC)

Records within 2000m	**0**

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

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

10.4 Special Protection Areas (SPA)

Records within 2000m	**2**

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

Features are displayed on the Environmental designations map on **page 51 >**

ID	Location	Name	Species of interest	Habitat description	Data source
A	1436m SE	Upper Nene Valley Gravel Pits	Great crested grebe; Great cormorant; Great bittern; Eurasian wigeon; Gadwall; Mallard; Northern shoveler; Common pochard; Tufted duck; Common coot; European golden plover; Northern lapwing	Inland water bodies (Standing water, Running water); Bogs, Marshes, Water fringed vegetation, Fens; Broad-leaved deciduous woodland; Improved grassland	Natural England

ID	Location	Name	Species of interest	Habitat description	Data source
-	1762m SE	Upper Nene Valley Gravel Pits	Great crested grebe; Great cormorant; Great bittern; Eurasian wigeon; Gadwall; Mallard; Northern shoveler; Common pochard; Tufted duck; Common coot; European golden plover; Northern lapwing	Inland water bodies (Standing water, Running water); Bogs, Marshes, Water fringed vegetation, Fens; Broad-leaved deciduous woodland; Improved grassland	Natural England

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

10.5 National Nature Reserves (NNR)

Records within 2000m	0

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

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

10.6 Local Nature Reserves (LNR)

Records within 2000m	0

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

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

10.7 Designated Ancient Woodland

Records within 2000m	0

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

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

10.8 Biosphere Reserves

Records within 2000m	0

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

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

10.9 Forest Parks

Records within 2000m	0

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

This data is sourced from the Forestry Commission.

10.10 Marine Conservation Zones

Records within 2000m	0

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

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

10.11 Green Belt

Records within 2000m	0

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

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

10.12 Proposed Ramsar sites

Records within 2000m	0

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

This data is sourced from Natural England.

10.13 Possible Special Areas of Conservation (pSAC)

Records within 2000m	0

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

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

10.14 Potential Special Protection Areas (pSPA)

Records within 2000m	0

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

This data is sourced from Natural England.

10.15 Nitrate Sensitive Areas

Records within 2000m	0

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

This data is sourced from Natural England.

10.16 Nitrate Vulnerable Zones

Records within 2000m	6

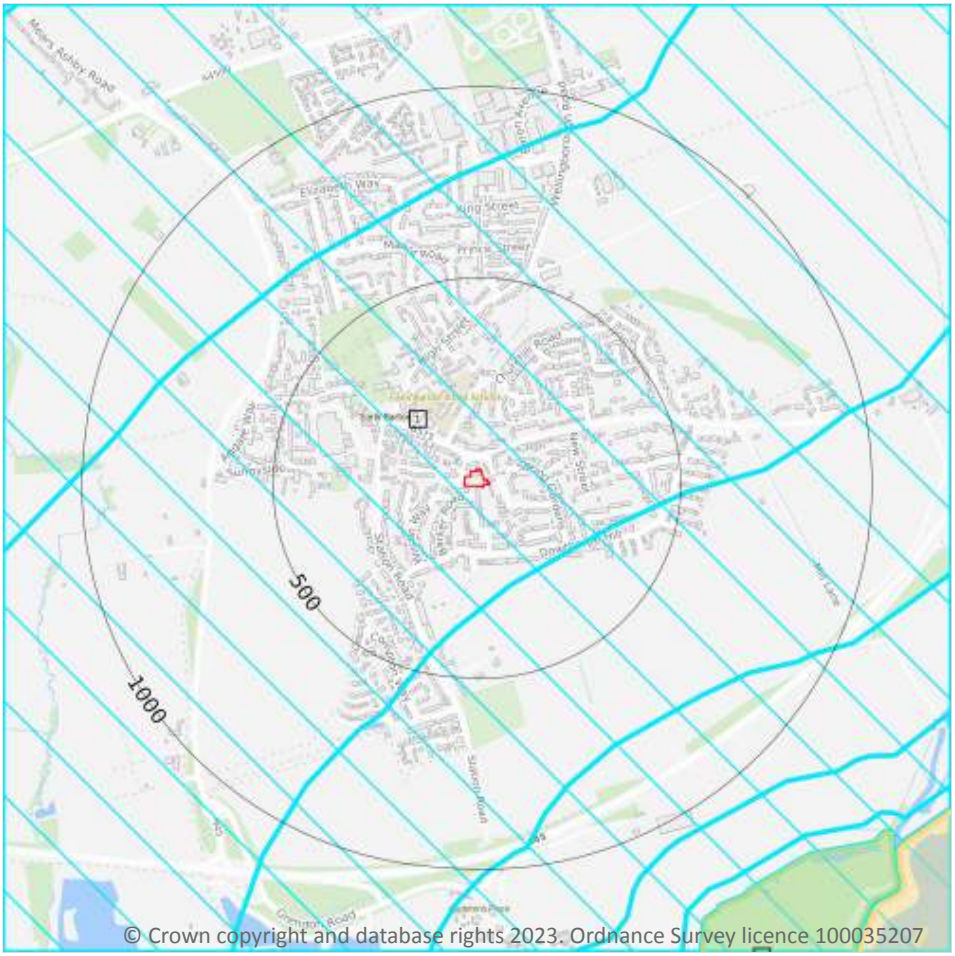
Areas at risk from agricultural nitrate pollution designated under the EC Nitrate Directive (91/676/EEC). These are areas of land that drain into waters polluted by nitrates. Farmers operating within these areas have to follow mandatory rules to tackle nitrate loss from agriculture.

Location	Name	Type	NVZ ID	Status
On site	**River Nene NVZ**	**Surface Water**	**382**	**Existing**

Location	Name	Type	NVZ ID	Status
On site	**Northampton Sands**	**Groundwater**	**165**	**Existing**
On site	**Thrapstone lake Eutrophic lake NVZ**	**Eutrophic Water**	**148**	**Existing**
1318m W	River Nene NVZ	Surface Water	382	Existing
1318m W	Northampton Sands	Groundwater	165	Existing
1318m W	Thrapstone lake Eutrophic lake NVZ	Eutrophic Water	148	Existing

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

SSSI Impact Zones and Units



Site Outline

Search buffers in metres (m)

SSSI Impact Risk Zones

SSSI Units

Not recorded

Favourable

Unfavourable - Recovering

Unfavourable - No change

Unfavourable - Declining

Partially destroyed

Destroyed

10.17 SSSI Impact Risk Zones

Records on site	1

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

Features are displayed on the SSSI Impact Zones and Units map on **page 58 >**

ID	Location	Type of developments requiring consultation
1	On site	**Infrastructure - Pipelines, pylons and overhead cables. any transport proposal including road, rail and by water (excluding routine maintenance). airports, helipads and other aviation proposals. Wind and Solar - Solar schemes with footprint > 0.5ha, all wind turbines. Minerals, Oil and Gas - Planning applications for quarries, including: new proposals, review of minerals permissions (romp), extensions, variations to conditions etc. oil & gas exploration/extraction. Rural non-residential - Large non residential developments outside existing settlements/urban areas where net additional gross internal floorspace is > 1,000m² or footprint exceeds 0.2ha. Residential - Any residential developments with a total net gain in residential units. Rural residential - Any residential developments outside of existing settlements/urban areas with a total net gain in residential units. Air pollution - Any industrial/agricultural development that could cause air pollution (incl: industrial processes, livestock & poultry units with floorspace > 500m², slurry lagoons & digestate stores > 200m², manure stores > 250t). Combustion - General combustion processes >20mw energy input. incl: energy from waste incineration, other incineration, landfill gas generation plant, pyrolysis/gasification, anaerobic digestion, sewage treatment works, other incineration/ combustion. Waste - Landfill. incl: inert landfill, non-hazardous landfill, hazardous landfill. Composting - Any composting proposal with more than 75000 tonnes maximum annual operational throughput. incl: open windrow composting, in-vessel composting, anaerobic digestion, other waste management. Discharges - Any discharge of water or liquid waste of more than 5m³/day to ground (ie to seep away) or to surface water, such as a beck or stream. Water supply - Large infrastructure such as warehousing / industry where total net additional gross internal floorspace following development is 1,000m² or more.**

This data is sourced from Natural England.

10.18 SSSI Units

Records within 2000m	3

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

Features are displayed on the SSSI Impact Zones and Units map on **page 58 >**

ID:	8
Location:	1259m SE
SSSI name:	Upper Nene Valley Gravel Pits
Unit name:	Earls Barton Carr
Broad habitat:	Broadleaved, Mixed And Yew Woodland - Lowland
Condition:	Favourable
Reportable features:	

Feature name	Feature condition	Date of assessment
Wet woodland	Favourable	26/06/2013

ID: 10
Location: 1436m SE
SSSI name: Upper Nene Valley Gravel Pits
Unit name: Earls Barton Gravel Pits (West)
Broad habitat: Standing Open Water And Canals
Condition: Unfavourable - No change
Reportable features:

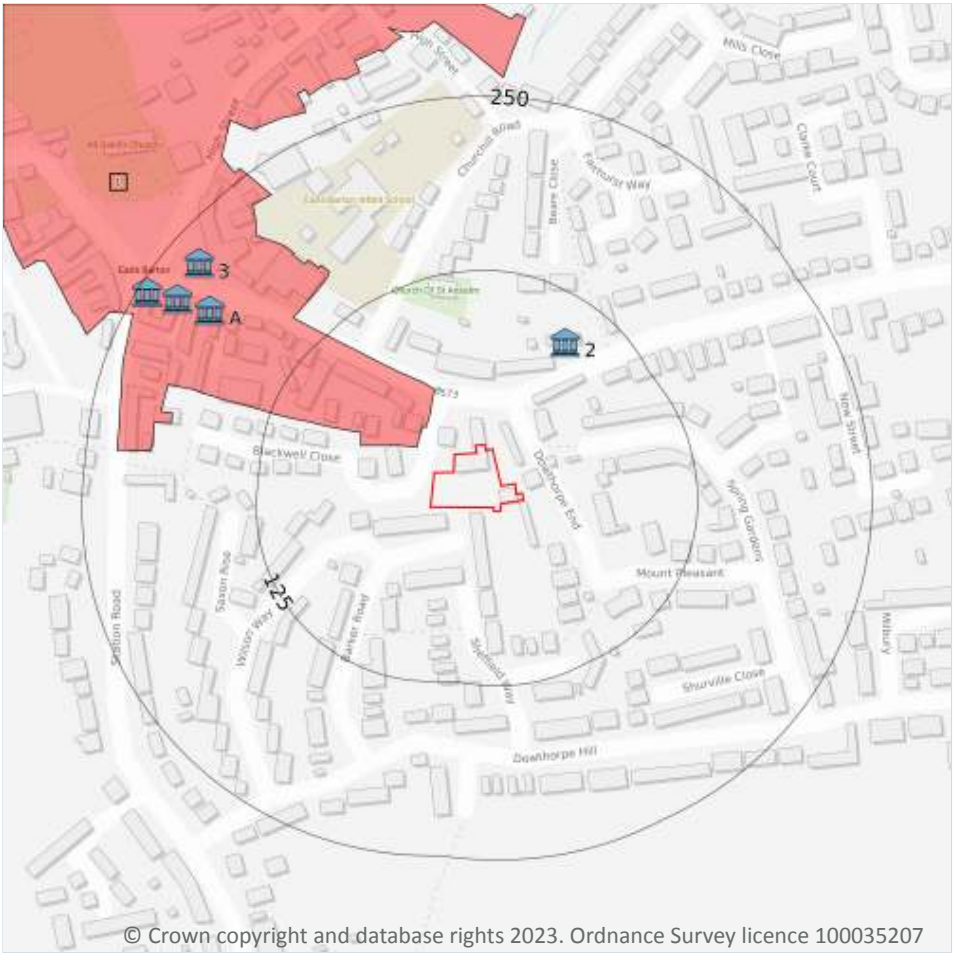
Feature name	Feature condition	Date of assessment
>20,000 Non-breeding waterbirds	Favourable	05/08/2020
Aggregations of breeding birds - Grey heron, Ardea cinerea	Favourable	26/11/2009
Aggregations of non-breeding birds - Bittern, Botaurus stellaris	Favourable	05/08/2020
Aggregations of non-breeding birds - Coot, Fulica atra	Favourable	05/08/2020
Aggregations of non-breeding birds - Cormorant, Phalacrocorax carbo carbo	Favourable	05/08/2020
Aggregations of non-breeding birds - Gadwall, Anas strepera	Favourable	05/08/2020
Aggregations of non-breeding birds - Golden plover, Pluvialis apricaria	Unfavourable - No change	05/08/2020
Aggregations of non-breeding birds - Great crested grebe, Podiceps cristatus	Favourable	05/08/2020
Aggregations of non-breeding birds - Mute swan, Cygnus olor	Favourable	05/08/2020
Aggregations of non-breeding birds - Pochard, Aythya ferina	Favourable	05/08/2020
Aggregations of non-breeding birds - Shoveler, Anas clypeata	Favourable	05/08/2020
Aggregations of non-breeding birds - Tufted duck, Aythya fuligula	Favourable	05/08/2020
Aggregations of non-breeding birds - Wigeon, Anas penelope	Unfavourable - No change	05/08/2020
Assemblages of breeding birds - Lowland open waters and their margins	Favourable	26/11/2009

ID: -
Location: 1762m SE
SSSI name: Upper Nene Valley Gravel Pits
Unit name: Earls Barton Gravel Pits (West)
Broad habitat: Standing Open Water And Canals
Condition: Unfavourable - No change
Reportable features:

Feature name	Feature condition	Date of assessment
>20,000 Non-breeding waterbirds	Favourable	05/08/2020
Aggregations of breeding birds - Grey heron, Ardea cinerea	Favourable	26/11/2009
Aggregations of non-breeding birds - Bittern, Botaurus stellaris	Favourable	05/08/2020
Aggregations of non-breeding birds - Coot, Fulica atra	Favourable	05/08/2020
Aggregations of non-breeding birds - Cormorant, Phalacrocorax carbo carbo	Favourable	05/08/2020
Aggregations of non-breeding birds - Gadwall, Anas strepera	Favourable	05/08/2020
Aggregations of non-breeding birds - Golden plover, Pluvialis apricaria	Unfavourable - No change	05/08/2020
Aggregations of non-breeding birds - Great crested grebe, Podiceps cristatus	Favourable	05/08/2020
Aggregations of non-breeding birds - Mute swan, Cygnus olor	Favourable	05/08/2020
Aggregations of non-breeding birds - Pochard, Aythya ferina	Favourable	05/08/2020
Aggregations of non-breeding birds - Shoveler, Anas clypeata	Favourable	05/08/2020
Aggregations of non-breeding birds - Tufted duck, Aythya fuligula	Favourable	05/08/2020
Aggregations of non-breeding birds - Wigeon, Anas penelope	Unfavourable - No change	05/08/2020
Assemblages of breeding birds - Lowland open waters and their margins	Favourable	26/11/2009

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

11 Visual and cultural designations



Site Outline

Search buffers in metres (m)

Listed buildings

Conservation areas

Conservation areas - no data

National Parks

Areas of Outstanding Natural Beauty

Registered parks and gardens

Scheduled Monuments

World Heritage Sites

11.1 World Heritage Sites

Records within 250m	0

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

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

11.2 Area of Outstanding Natural Beauty

Records within 250m	0

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

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

11.3 National Parks

Records within 250m	0

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

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

11.4 Listed Buildings

Records within 250m	5

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

Features are displayed on the Visual and cultural designations map on **page 62 >**

ID	Location	Name	Grade	Reference Number	Listed date
2	93m NE	No 17 and Attached Outbuildings, Earls Barton, North Northamptonshire, Northamptonshire, NN6	II	1371690	02/08/1972
A	199m NW	36, The Square, Earls Barton, North Northamptonshire, Northamptonshire, NN6	II	1040773	13/05/1986
A	222m NW	Rif-Rafs Cauldron Restaurant, Earls Barton, North Northamptonshire, Northamptonshire, NN6	II	1371676	13/05/1986

ID	Location	Name	Grade	Reference Number	Listed date
3	226m NW	K6 Telephone Kiosk, Earls Barton, North Northamptonshire, Northamptonshire, NN6	II	1040656	28/10/1987
A	243m NW	Number 40 and M and J Greatorex Shop, Earls Barton, North Northamptonshire, Northamptonshire, NN6	II	1040774	13/05/1986

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

11.5 Conservation Areas

Records within 250m	**1**

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

Features are displayed on the Visual and cultural designations map on **page 62 >**

ID	Location	Name	District	Date of designation
1	22m NW	Earls Barton	Wellingborough	unknown

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

11.6 Scheduled Ancient Monuments

Records within 250m	**0**

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

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

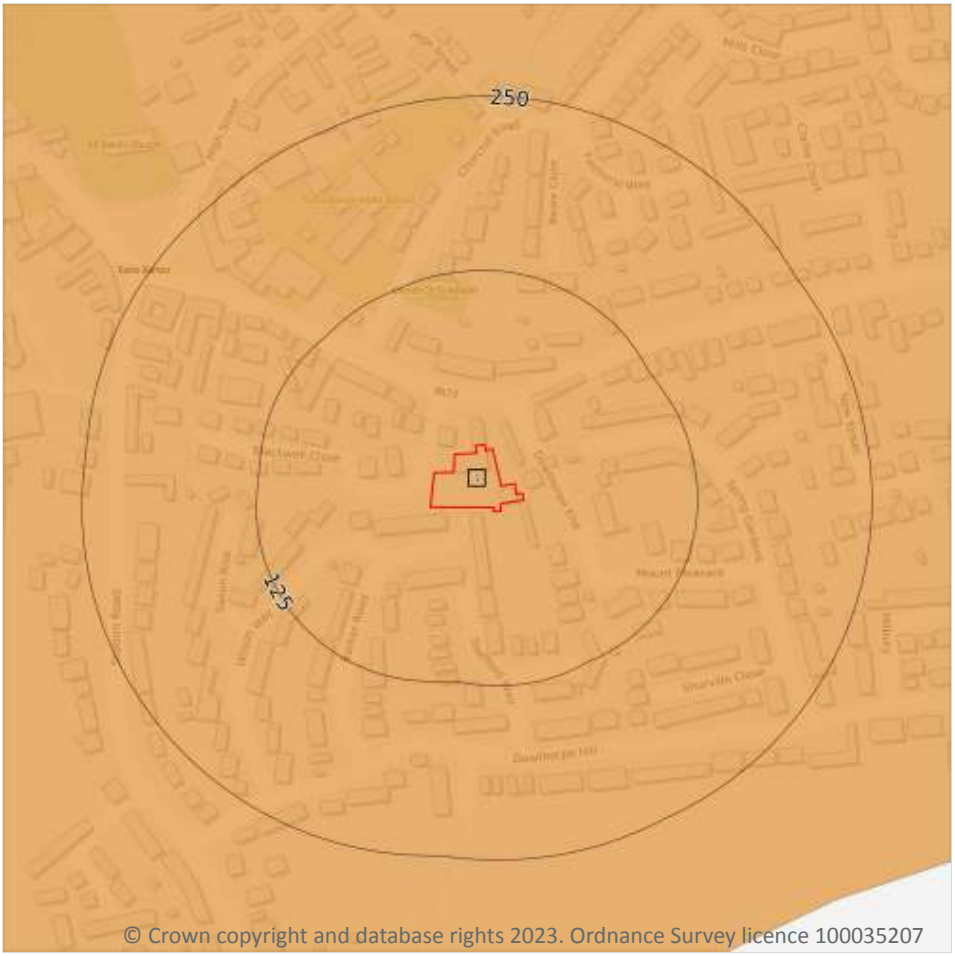
11.7 Registered Parks and Gardens

Records within 250m	0

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

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

12 Agricultural designations



12.1 Agricultural Land Classification

Records within 250m	1

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

Features are displayed on the Agricultural designations map on **page 66 >**

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

This data is sourced from Natural England.

12.2 Open Access Land

Records within 250m	0

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

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

12.3 Tree Felling Licences

Records within 250m	0

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

This data is sourced from the Forestry Commission.

12.4 Environmental Stewardship Schemes

Records within 250m	0

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

This data is sourced from Natural England.

12.5 Countryside Stewardship Schemes

Records within 250m	0

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

This data is sourced from Natural England.

13 Habitat designations

13.1 Priority Habitat Inventory

Records within 250m	0

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

This data is sourced from Natural England.

13.2 Habitat Networks

Records within 250m	0

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

This data is sourced from Natural England.

13.3 Open Mosaic Habitat

Records within 250m	0

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

This data is sourced from Natural England.

13.4 Limestone Pavement Orders

Records within 250m	0

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

This data is sourced from Natural England.

14 Geology 1:10,000 scale - Availability

Site Outline

Search buffers in metres (m)

Full coverage

Partial coverage

No coverage

14.1 10k Availability

Records within 500m	2

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

Features are displayed on the Geology 1:10,000 scale - Availability map on **page 69 >**

ID	Location	Artificial	Superficial	Bedrock	Mass movement	Sheet No.
1	**On site**	**Full**	**Full**	**Full**	**No coverage**	**SP86SE**
2	410m W	Full	Full	Full	No coverage	SP86SW

This data is sourced from the British Geological Survey.

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

Site Outline

Search buffers in metres (m)

- Reclaimed ground
- Made ground
- Worked ground
- Infilled ground
- Disturbed ground
- Landscaped ground

14.2 Artificial and made ground (10k)

Records within 500m	3

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

Features are displayed on the Geology 1:10,000 scale - Artificial and made ground map on **page 70 >**

ID	Location	LEX Code	Description	Rock description
1	251m NE	WMGR-ARTDP	Infilled Ground	Artificial Deposit
2	347m NW	LSGR-UKNOWN	Landscaped Ground (Undivided)	Unknown/unclassified Entry
3	394m N	WMGR-ARTDP	Infilled Ground	Artificial Deposit

This data is sourced from the British Geological Survey.

Geology 1:10,000 scale - Superficial

Site Outline

Search buffers in metres (m)

Landslip (10k)

Superficial geology (10k)
Please see table for more details.

14.3 Superficial geology (10k)

Records within 500m	1

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

Features are displayed on the Geology 1:10,000 scale - Superficial map on **page 71 >**

ID	Location	LEX Code	Description	Rock description
1	482m S	GREC-XSV	Grendon Member And Ecton Member (undifferentiated) - Sand And Gravel	Sand And Gravel

This data is sourced from the British Geological Survey.

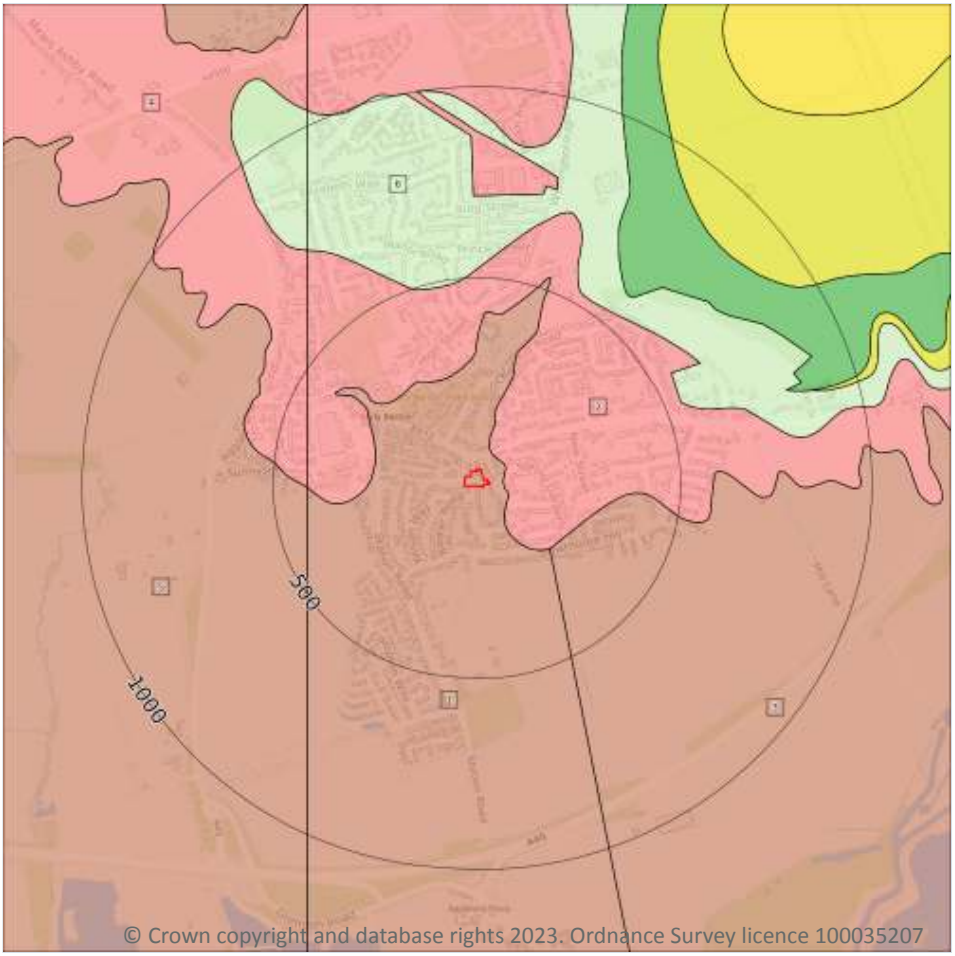
14.4 Landslip (10k)

Records within 500m	0

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

This data is sourced from the British Geological Survey.

Geology 1:10,000 scale - Bedrock



Site Outline

Search buffers in metres (m)

Bedrock faults and other linear features (10k)

Bedrock geology (10k)
Please see table for more details.

14.5 Bedrock geology (10k)

Records within 500m **6**

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

Features are displayed on the Geology 1:10,000 scale - Bedrock map on **page 73 >**

ID	Location	LEX Code	Description	Rock age
1	**On site**	**WHM-MDST**	**Whitby Mudstone Formation - Mudstone**	**Toarcian Age**
2	36m E	NS-FEOOL	Northampton Sand Formation - Ooidal Ironstone	Aalenian Age
3	230m SE	WHM-MDST	Whitby Mudstone Formation - Mudstone	Toarcian Age

ID	Location	LEX Code	Description	Rock age
4	410m W	NS-FEOOL	Northampton Sand Formation - Ooidal Ironstone	Aalenian Age
5	410m W	WHM-MDST	Whitby Mudstone Formation - Mudstone	Toarcian Age
6	486m N	STAM-SDSL	Stamford Member - Sandstone And Siltstone, Interbedded	Bathonian Age - Bajocian Age

This data is sourced from the British Geological Survey.

14.6 Bedrock faults and other linear features (10k)

Records within 500m	**0**

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

This data is sourced from the British Geological Survey.

15 Geology 1:50,000 scale - Availability

Site Outline

Search buffers in metres (m)

Geological map tile

15.1 50k Availability

Records within 500m	1

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

Features are displayed on the Geology 1:50,000 scale - Availability map on **page 75 >**

ID	Location	Artificial	Superficial	Bedrock	Mass movement	Sheet No.
1	**On site**	**Full**	**Full**	**Full**	**Full**	**EW186_wellingborough_v4**

This data is sourced from the British Geological Survey.

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

Site Outline

Search buffers in metres (m)

- Made ground
- Worked ground
- Infilled ground
- Disturbed ground
- Landscaped ground

15.2 Artificial and made ground (50k)

Records within 500m	1

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

Features are displayed on the Geology 1:50,000 scale - Artificial and made ground map on **page 76 >**

ID	Location	LEX Code	Description	Rock description
1	252m NE	WMGR-ARTDP	INFILLED GROUND	ARTIFICIAL DEPOSIT

This data is sourced from the British Geological Survey.

15.3 Artificial ground permeability (50k)

Records within 50m	0

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

This data is sourced from the British Geological Survey.

Geology 1:50,000 scale - Superficial

Site Outline

Search buffers in metres (m)

Landslip (50k)

Superficial geology (50k)
Please see table for more details.

15.4 Superficial geology (50k)

Records within 500m	1

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

Features are displayed on the Geology 1:50,000 scale - Superficial map on **page 78 >**

ID	Location	LEX Code	Description	Rock description
1	482m S	RTDU-XSV	RIVER TERRACE DEPOSITS (UNDIFFERENTIATED)	SAND AND GRAVEL

This data is sourced from the British Geological Survey.

15.5 Superficial permeability (50k)

Records within 50m	0

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

This data is sourced from the British Geological Survey.

15.6 Landslip (50k)

Records within 500m	0

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

This data is sourced from the British Geological Survey.

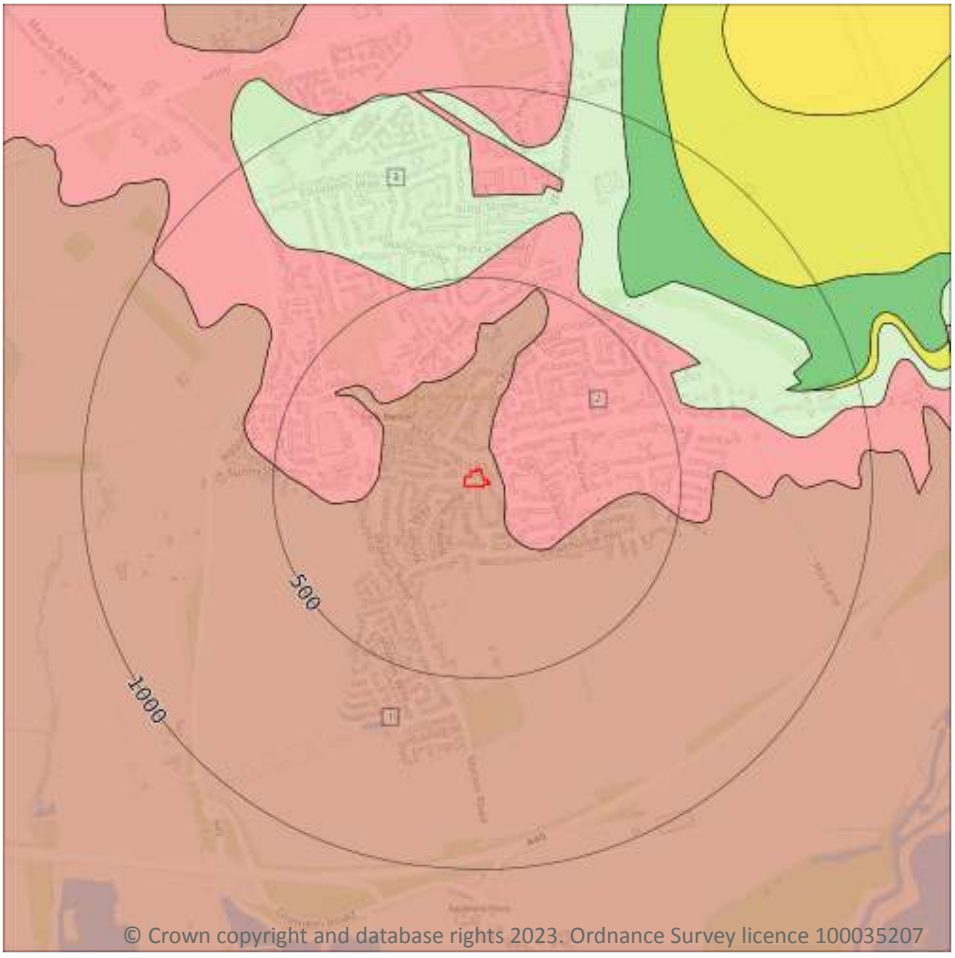
15.7 Landslip permeability (50k)

Records within 50m	0

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

This data is sourced from the British Geological Survey.

Geology 1:50,000 scale - Bedrock



Site Outline

Search buffers in metres (m)

Bedrock faults and other linear features (50k)

Bedrock geology (50k)
Please see table for more details.

15.8 Bedrock geology (50k)

Records within 500m **3**

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

Features are displayed on the Geology 1:50,000 scale - Bedrock map on **page 80 >**

ID	Location	LEX Code	Description	Rock age
1	**On site**	**WHM-MDST**	**WHITBY MUDSTONE FORMATION - MUDSTONE**	**TOARCIAN**
2	33m E	NS-FEOOL	NORTHAMPTON SAND FORMATION - IRONSTONE, OOIDAL	AALENIAN
3	486m N	STAM-SDSL	STAMFORD MEMBER - SANDSTONE AND SILTSTONE, INTERBEDDED	BAJOCIAN

This data is sourced from the British Geological Survey.

15.9 Bedrock permeability (50k)

Records within 50m	**2**

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

Location	Flow type	Maximum permeability	Minimum permeability
On site	**Fracture**	**Low**	**Low**
33m E	Mixed	Moderate	Moderate

This data is sourced from the British Geological Survey.

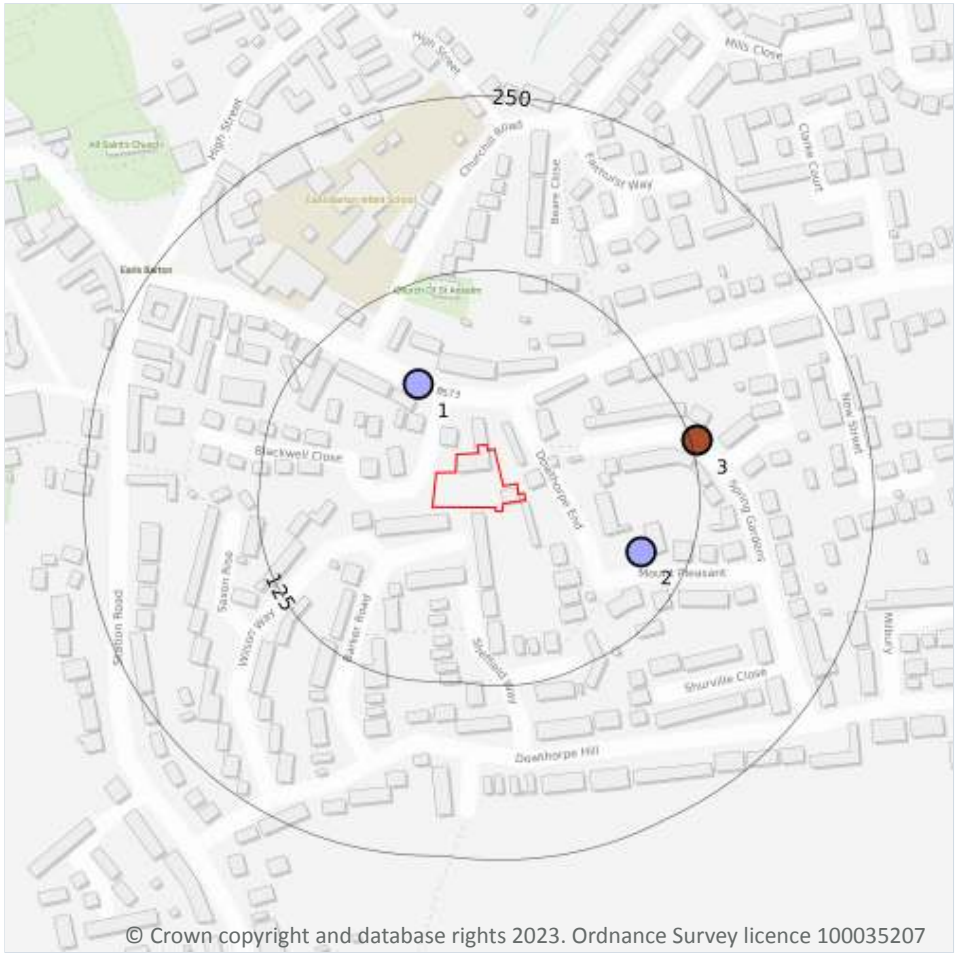
15.10 Bedrock faults and other linear features (50k)

Records within 500m	**0**

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

This data is sourced from the British Geological Survey.

16 Boreholes



16.1 BGS Boreholes

Records within 250m **3**

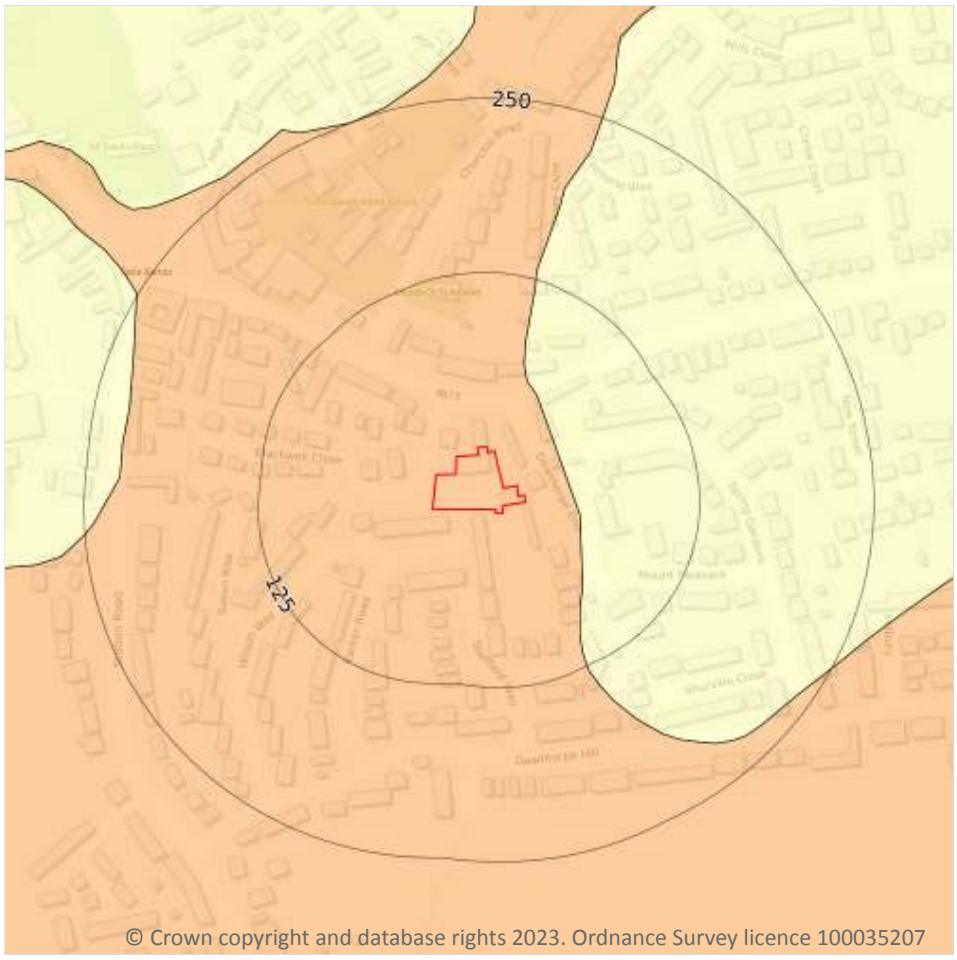
The Single Onshore Boreholes Index (SOBI); an index of over one million records of boreholes, shafts and wells from all forms of drilling and site investigation work held by the British Geological Survey. Covering onshore and nearshore boreholes dating back to at least 1790 and ranging from one to several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

Features are displayed on the Boreholes map on **page 82 >**

ID	Location	Grid reference	Name	Length	Confidential	Web link
1	57m NW	485400 263640	BROAD STREET EARLS BARTON	3.05	N	354765 ↗
2	91m E	485560 263520	MOUNT PLEASANT EARLS BARTON	4.57	N	354766 ↗
3	130m E	485600 263600	DOWTHORPE END EARLS BARTON	-1.0	N	354750 ↗

This data is sourced from the British Geological Survey.

17 Natural ground subsidence - Shrink swell clays



Site Outline

Search buffers in metres (m)

- No data
- Negligible
- Very low
- Low
- Moderate
- High

17.1 Shrink swell clays

Records within 50m	2

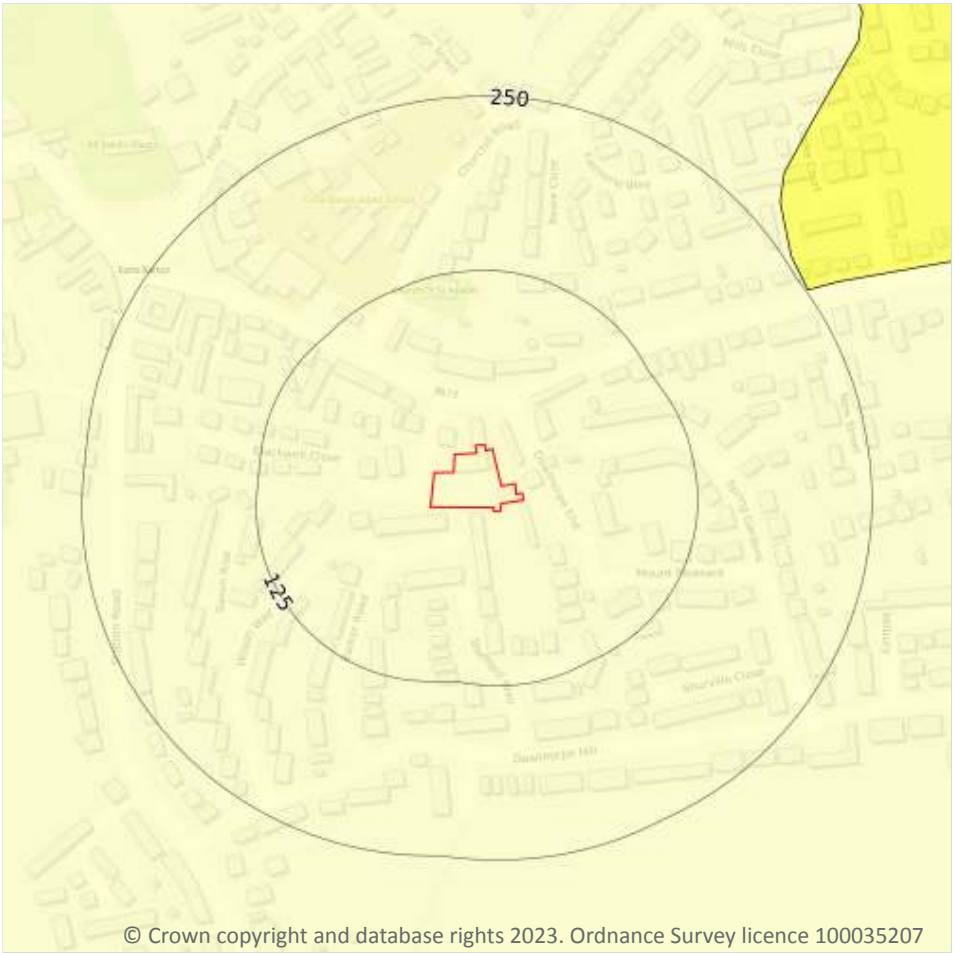
The potential hazard presented by soils that absorb water when wet (making them swell), and lose water as they dry (making them shrink). This shrink-swell behaviour is controlled by the type and amount of clay in the soil, and by seasonal changes in the soil moisture content (related to rainfall and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

Features are displayed on the Natural ground subsidence - Shrink swell clays map on **page 84 >**

Location	Hazard rating	Details
On site	**Low**	**Ground conditions predominantly medium plasticity.**
33m E	Negligible	Ground conditions predominantly non-plastic.

This data is sourced from the British Geological Survey.

Natural ground subsidence - Running sands



Site Outline

Search buffers in metres (m)

- No data
- Negligible
- Very low
- Low
- Moderate
- High

17.2 Running sands

Records within 50m	1

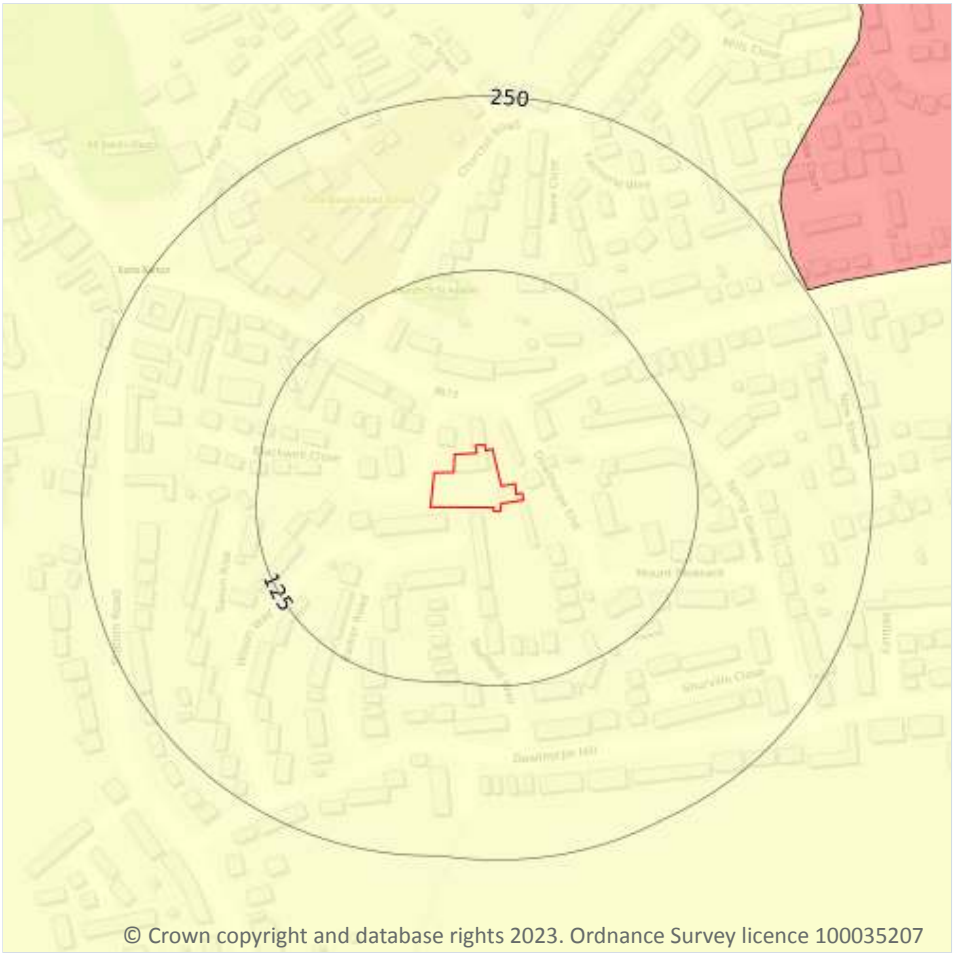
The potential hazard presented by rocks that can contain loosely-packed sandy layers that can become fluidised by water flowing through them. Such sands can 'run', removing support from overlying buildings and causing potential damage.

Features are displayed on the Natural ground subsidence - Running sands map on **page 85 >**

Location	Hazard rating	Details
On site	**Negligible**	**Running sand conditions are not thought to occur whatever the position of the water table. No identified constraints on lands use due to running conditions.**

This data is sourced from the British Geological Survey.

Natural ground subsidence - Compressible deposits



Site Outline

Search buffers in metres (m)

- No data
- Negligible
- Very low
- Low
- Moderate
- High

17.3 Compressible deposits

Records within 50m	1

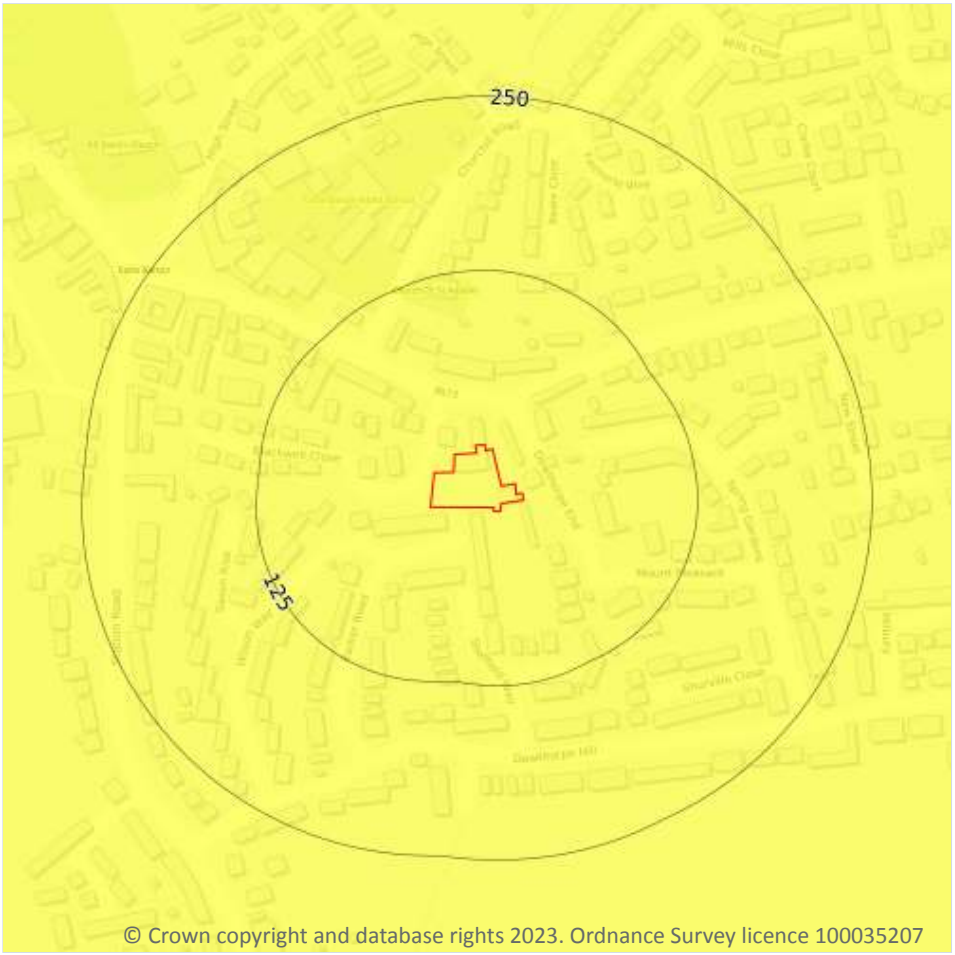
The potential hazard presented by types of ground that may contain layers of very soft materials like clay or peat and may compress if loaded by overlying structures, or if the groundwater level changes, potentially resulting in depression of the ground and disturbance of foundations.

Features are displayed on the Natural ground subsidence - Compressible deposits map on **page 86 >**

Location	Hazard rating	Details
On site	**Negligible**	**Compressible strata are not thought to occur.**

This data is sourced from the British Geological Survey.

Natural ground subsidence - Collapsible deposits



Site Outline

Search buffers in metres (m)

- No data
- Negligible
- Very low
- Low
- Moderate
- High

17.4 Collapsible deposits

Records within 50m	1

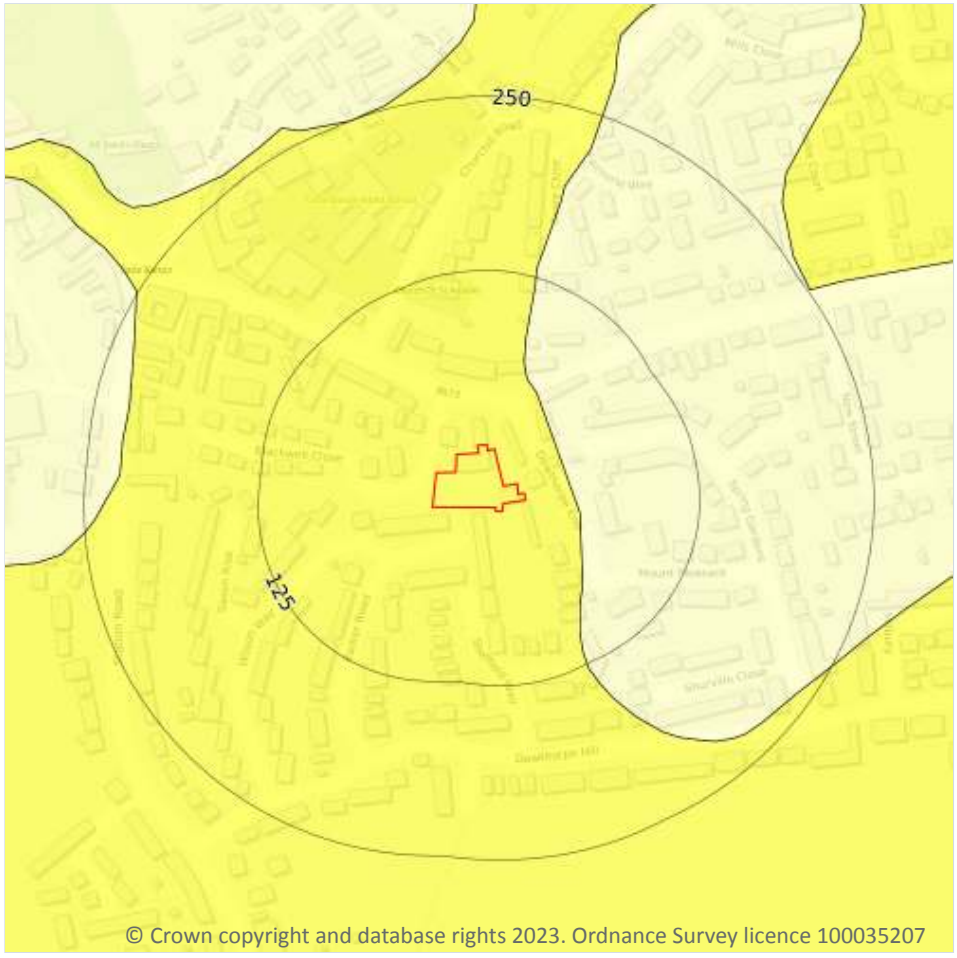
The potential hazard presented by natural deposits that could collapse when a load (such as a building) is placed on them or they become saturated with water.

Features are displayed on the Natural ground subsidence - Collapsible deposits map on **page 87 >**

Location	Hazard rating	Details
On site	**Very low**	**Deposits with potential to collapse when loaded and saturated are unlikely to be present.**

This data is sourced from the British Geological Survey.

Natural ground subsidence - Landslides



Site Outline

Search buffers in metres (m)

- No data
- Negligible
- Very low
- Low
- Moderate
- High

17.5 Landslides

Records within 50m	2

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

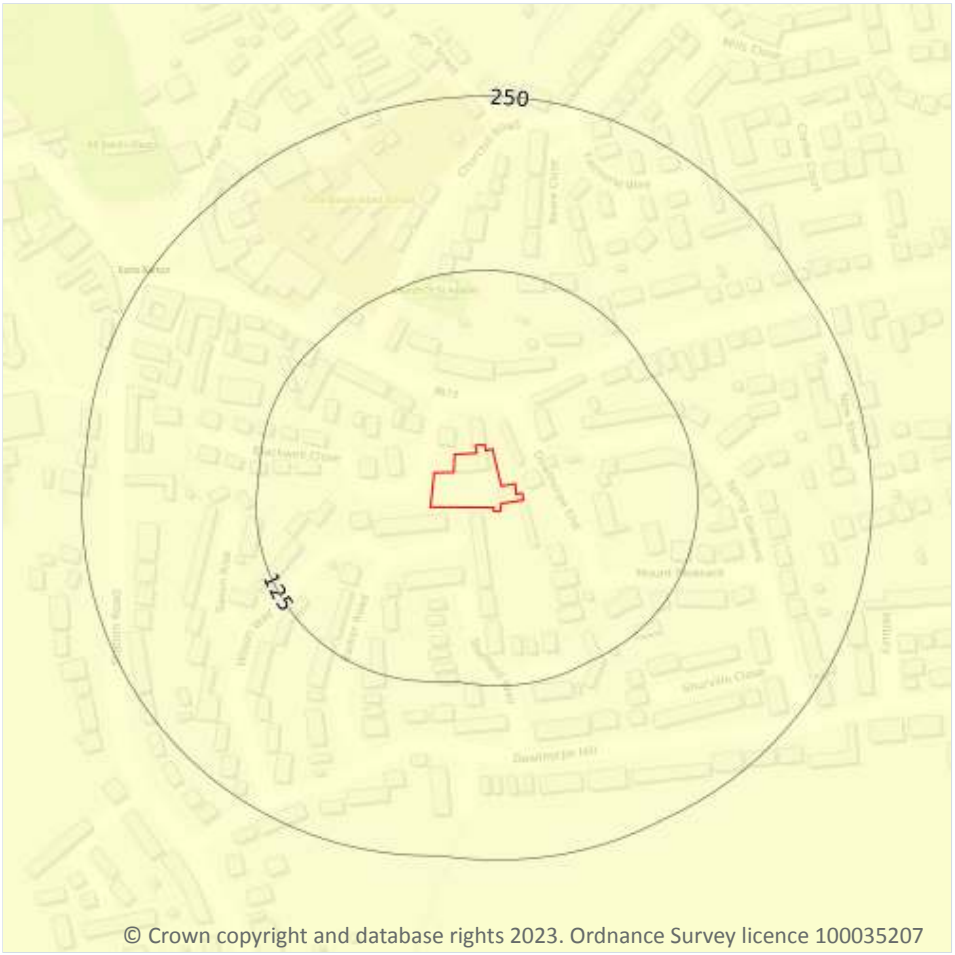
Features are displayed on the Natural ground subsidence - Landslides map on **page 88 >**

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

Location	Hazard rating	Details
33m E	Negligible	Slope instability problems are not thought to occur but consideration to potential problems of adjacent areas impacting on the site should always be considered.

This data is sourced from the British Geological Survey.

Natural ground subsidence - Ground dissolution of soluble rocks



Site Outline

Search buffers in metres (m)

- No data
- Negligible
- Very low
- Low
- Moderate
- High

17.6 Ground dissolution of soluble rocks

Records within 50m	1

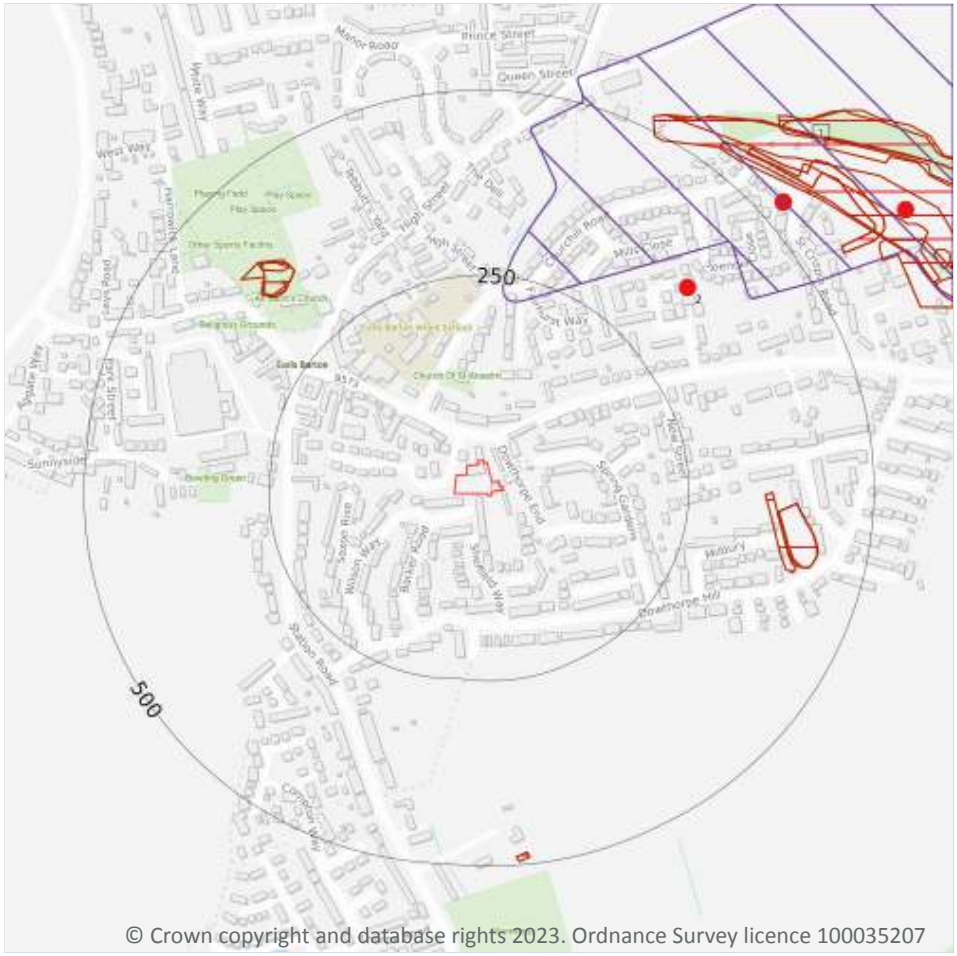
The potential hazard presented by ground dissolution, which occurs when water passing through soluble rocks produces underground cavities and cave systems. These cavities reduce support to the ground above and can cause localised collapse of the overlying rocks and deposits.

Features are displayed on the Natural ground subsidence - Ground dissolution of soluble rocks map on **page 90 >**

Location	Hazard rating	Details
On site	**Negligible**	**Soluble rocks are either not thought to be present within the ground, or not prone to dissolution. Dissolution features are unlikely to be present.**

This data is sourced from the British Geological Survey.

18 Mining, ground workings and natural cavities



Site Outline

Search buffers in metres (m)

Natural cavities (Area)

Natural cavities (Point)

BritPits

Surface ground workings

Underground workings

Historical Mineral Planning Areas

Mining Cavities

Non Coal Mining

Sporadic underground mining of restricted extent possible

Localised small scale underground mining possible

Small scale mining possible

Underground mining known or likely within or in close proximity

Underground mining known within or in very close proximity

18.1 Natural cavities

Records within 500m	0

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

This data is sourced from Stantec UK Ltd.

18.2 BritPits

Records within 500m	1

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

Features are displayed on the Mining, ground workings and natural cavities map on **page 92 >**

ID	Location	Details	Description
2	359m NE	Name: Earls Barton Quarries Address: Earls Barton, NORTHAMPTON, Northamptonshire Commodity: Ironstone Status: Ceased	Type: A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority

This data is sourced from the British Geological Survey.

18.3 Surface ground workings

Records within 250m	0

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

This is data is sourced from Ordnance Survey/Groundsure.

18.4 Underground workings

Records within 1000m	0

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

This is data is sourced from Ordnance Survey/Groundsure.

18.5 Historical Mineral Planning Areas

Records within 500m	1

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

Features are displayed on the Mining, ground workings and natural cavities map on **page 92 >**

ID	Location	Site Name	Mineral	Type	Planning Status	Planning Status Date
1	218m N	Earls Barton	Silica sand, silica clay	Surface mineral working	Valid	21/4/55

This data is sourced from the British Geological Survey.

18.6 Non-coal mining

Records within 1000m	0

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

This data is sourced from the British Geological Survey.

18.7 Mining cavities

Records within 1000m	0

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

This data is sourced from Stantec UK Ltd.

18.8 JPB mining areas

Records on site	0

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

This data is sourced from Johnson Poole and Bloomer.

18.9 Coal mining

Records on site	0

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

This data is sourced from the Coal Authority.

18.10 Brine areas

Records on site	0

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

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

18.11 Gypsum areas

Records on site	0

Generalised areas that may be affected by gypsum extraction.

This data is sourced from British Gypsum.

18.12 Tin mining

Records on site	0

Generalised areas that may be affected by historical tin mining.

This data is sourced from Groundsure.

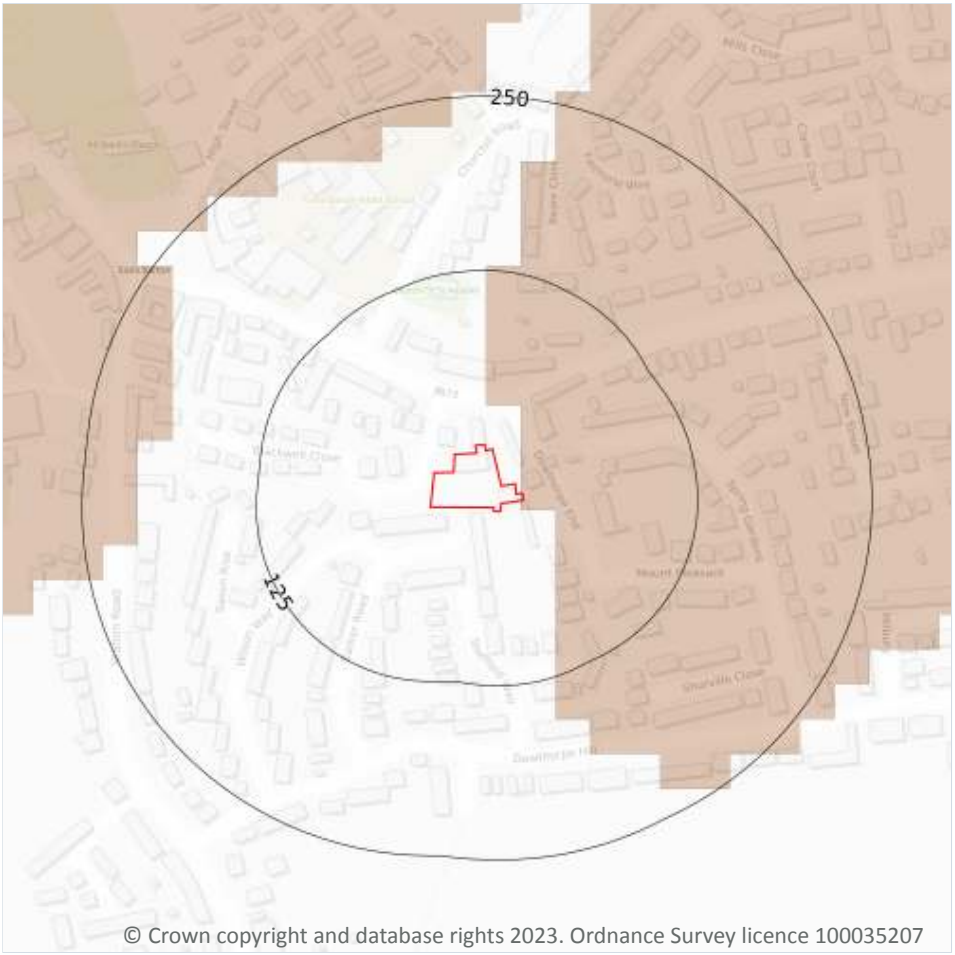
18.13 Clay mining

Records on site	0

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

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

19 Radon



Site Outline

Search buffers in metres (m)

- Greater than 30%
- Between 10% and 30%
- Between 5% and 10%
- Between 3% and 5%
- Between 1% and 3%
- Less than 1%

19.1 Radon

Records on site	2

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

Features are displayed on the Radon map on **page 96 >**

Location	Estimated properties affected	Radon Protection Measures required
On site	**Between 10% and 30%**	**Full**

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

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

20 Soil chemistry

20.1 BGS Estimated Background Soil Chemistry

Records within 50m	5

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

Location	Arsenic	Bioaccessible Arsenic	Lead	Bioaccessible Lead	Cadmium	Chromium	Nickel
On site	**35 - 45 mg/kg**	**2 mg/kg**	**100 mg/kg**	**60 mg/kg**	**1.8 mg/kg**	**90 - 120 mg/kg**	**30 - 45 mg/kg**
23m E	35 - 45 mg/kg	2 mg/kg	100 mg/kg	60 mg/kg	1.8 mg/kg	90 - 120 mg/kg	30 - 45 mg/kg
37m E	35 - 45 mg/kg	2 mg/kg	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
48m NE	35 - 45 mg/kg	2 mg/kg	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
49m S	35 - 45 mg/kg	2 mg/kg	100 mg/kg	60 mg/kg	1.8 mg/kg	90 - 120 mg/kg	30 - 45 mg/kg

This data is sourced from the British Geological Survey.

20.2 BGS Estimated Urban Soil Chemistry

Records within 50m	0

Estimated topsoil chemistry of Arsenic, Cadmium, Chromium, Copper, Nickel, Lead, Tin and Zinc and bioaccessible Arsenic and Lead in 23 urban centres across Great Britain. These estimates are derived from interpolation of the measured urban topsoil data referred to above and provide information across each city between the measured sample locations (4 per km^2).

This data is sourced from the British Geological Survey.

20.3 BGS Measured Urban Soil Chemistry

Records within 50m	0

The locations and measured total concentrations (mg/kg) of Arsenic, Cadmium, Chromium, Copper, Nickel, Lead, Tin and Zinc in urban topsoil samples from 23 urban centres across Great Britain. These are collected at a sample density of 4 per km^2.

This data is sourced from the British Geological Survey.

21 Railway infrastructure and projects

21.1 Underground railways (London)

Records within 250m	0

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

This data is sourced from publicly available information by Groundsure.

21.2 Underground railways (Non-London)

Records within 250m	0

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

This data is sourced from publicly available information by Groundsure.

21.3 Railway tunnels

Records within 250m	0

Railway tunnels taken from contemporary Ordnance Survey mapping.

This data is sourced from the Ordnance Survey.

21.4 Historical railway and tunnel features

Records within 250m	0

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

This data is sourced from Ordnance Survey/Groundsure.

21.5 Royal Mail tunnels

Records within 250m	0

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

This data is sourced from Groundsure/the Postal Museum.

21.6 Historical railways

Records within 250m	0

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

This data is sourced from OpenStreetMap.

21.7 Railways

Records within 250m	0

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

This data is sourced from Ordnance Survey and OpenStreetMap.

21.8 Crossrail 1

Records within 500m	0

The Crossrail railway project links 41 stations over 100 kilometres from Reading and Heathrow in the west, through underground sections in central London, to Shenfield and Abbey Wood in the east.

This data is sourced from publicly available information by Groundsure.

21.9 Crossrail 2

Records within 500m	0

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

This data is sourced from publicly available information by Groundsure.

21.10 HS2

Records within 500m	0

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

This data is sourced from HS2 ltd.

Data providers

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

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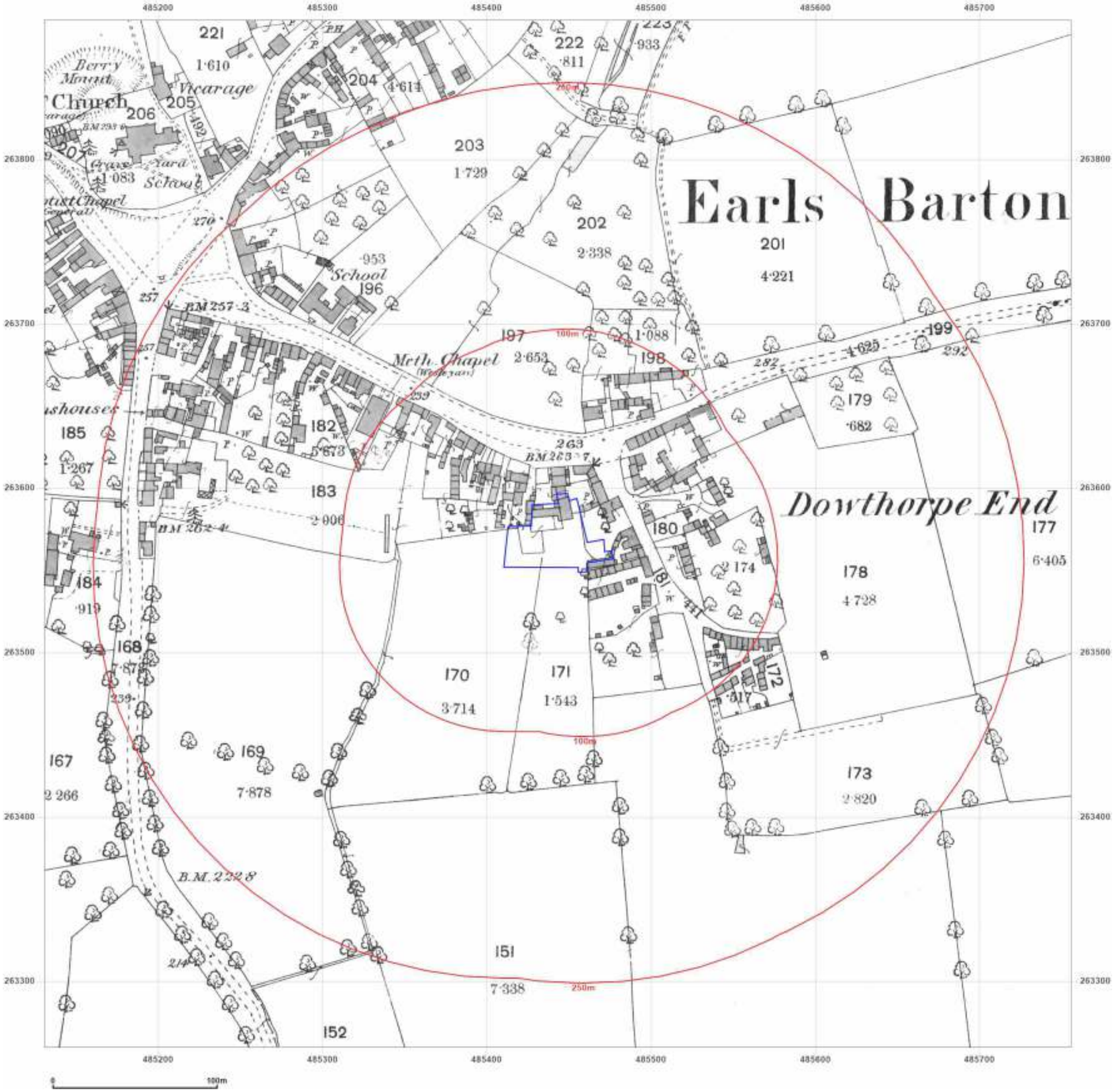

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Site Details:

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Client Ref: 23-05-05
Report Ref: GS-RUR-AUH-EIC-H71
Grid Ref: 485443, 263572

Map Name: County Series
Map date: **1885**
Scale: 1:2,500
Printed at: 1:2,500

N
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Revised 1885
Edition N/A
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Grid Ref: 485443, 263572

Map Name: County Series

Map date: **1900**

Scale: 1:2,500

Printed at: 1:2,500

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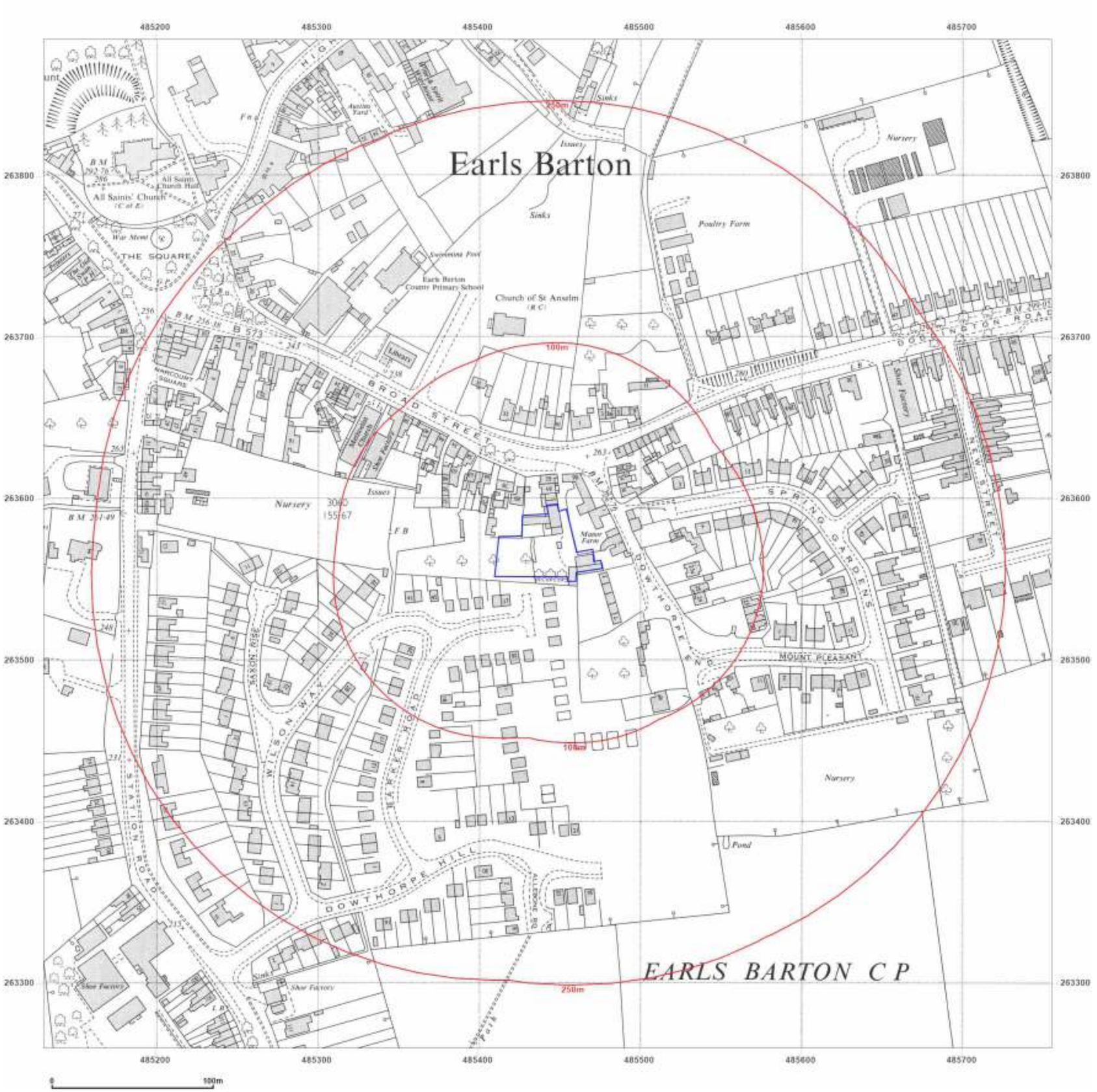

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Client Ref: 23-05-05
Report Ref: GS-RUR-AUH-EIC-H71
Grid Ref: 485443, 263572

Map Name: National Grid

Map date: **1969**

Scale: 1:2,500

Printed at: 1:2,500

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Surveyed 1968
Revised 1968
Edition N/A
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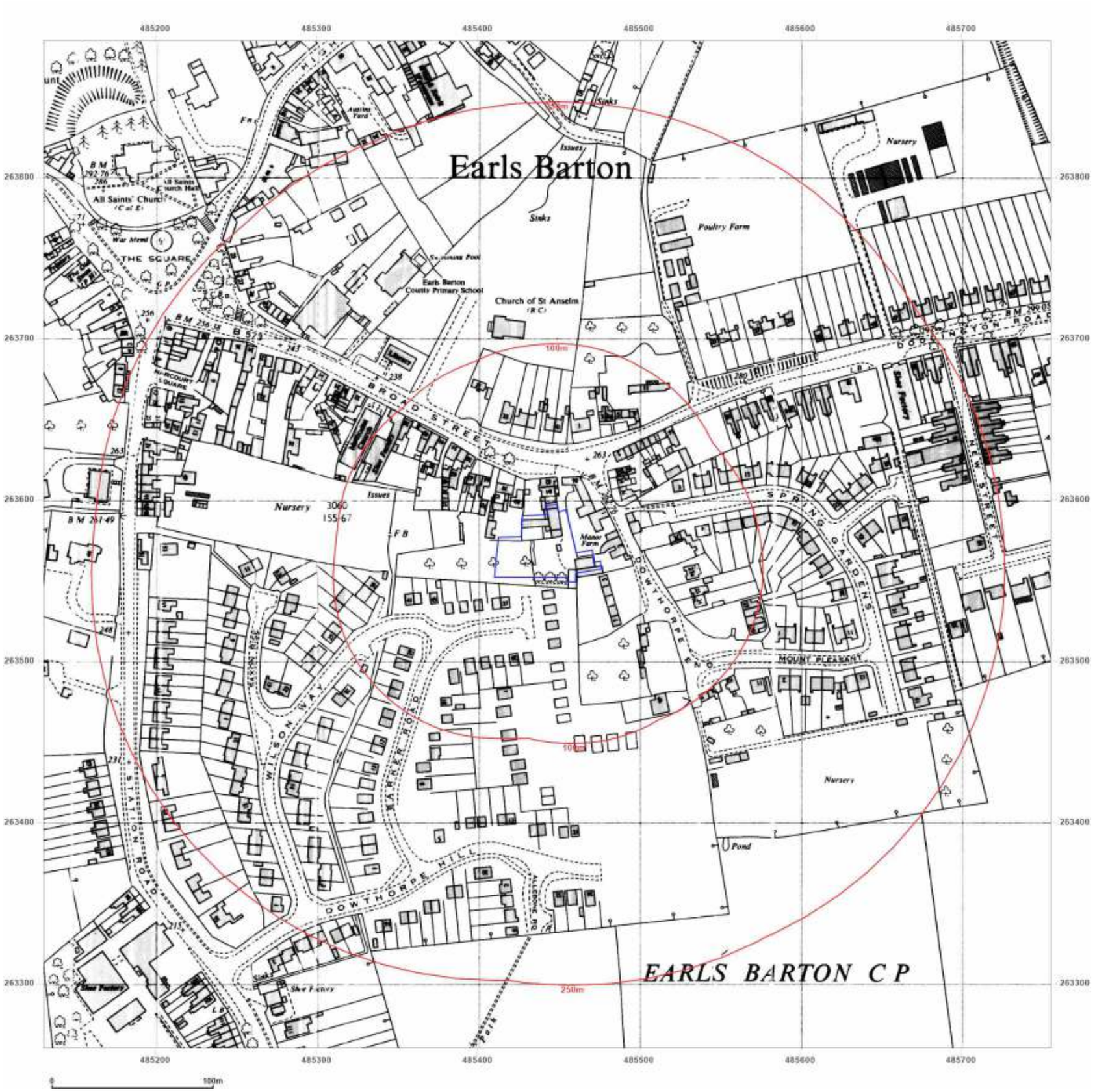

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Grid Ref: 485443, 263572

Map Name: National Grid

Map date: **1969**

Scale: 1:2,500

Printed at: 1:2,500

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Surveyed N/A
Revised N/A
Edition N/A
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Client Ref: 23-05-05
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Grid Ref: 485443, 263572

Map Name: National Grid

Map date: **1974**

Scale: 1:2,500

Printed at: 1:2,500

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Revised 1974
Edition N/A
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Client Ref: 23-05-05
Report Ref: GS-RUR-AUH-EIC-H71
Grid Ref: 485443, 263572

Map Name: National Grid

Map date: **1976**

Scale: 1:2,500

Printed at: 1:2,500

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Surveyed N/A
Revised N/A
Edition N/A
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Client Ref: 23-05-05
Report Ref: GS-RUR-AUH-EIC-H71
Grid Ref: 485443, 263572

Map Name: National Grid

Map date: **1986**

Scale: 1:2,500

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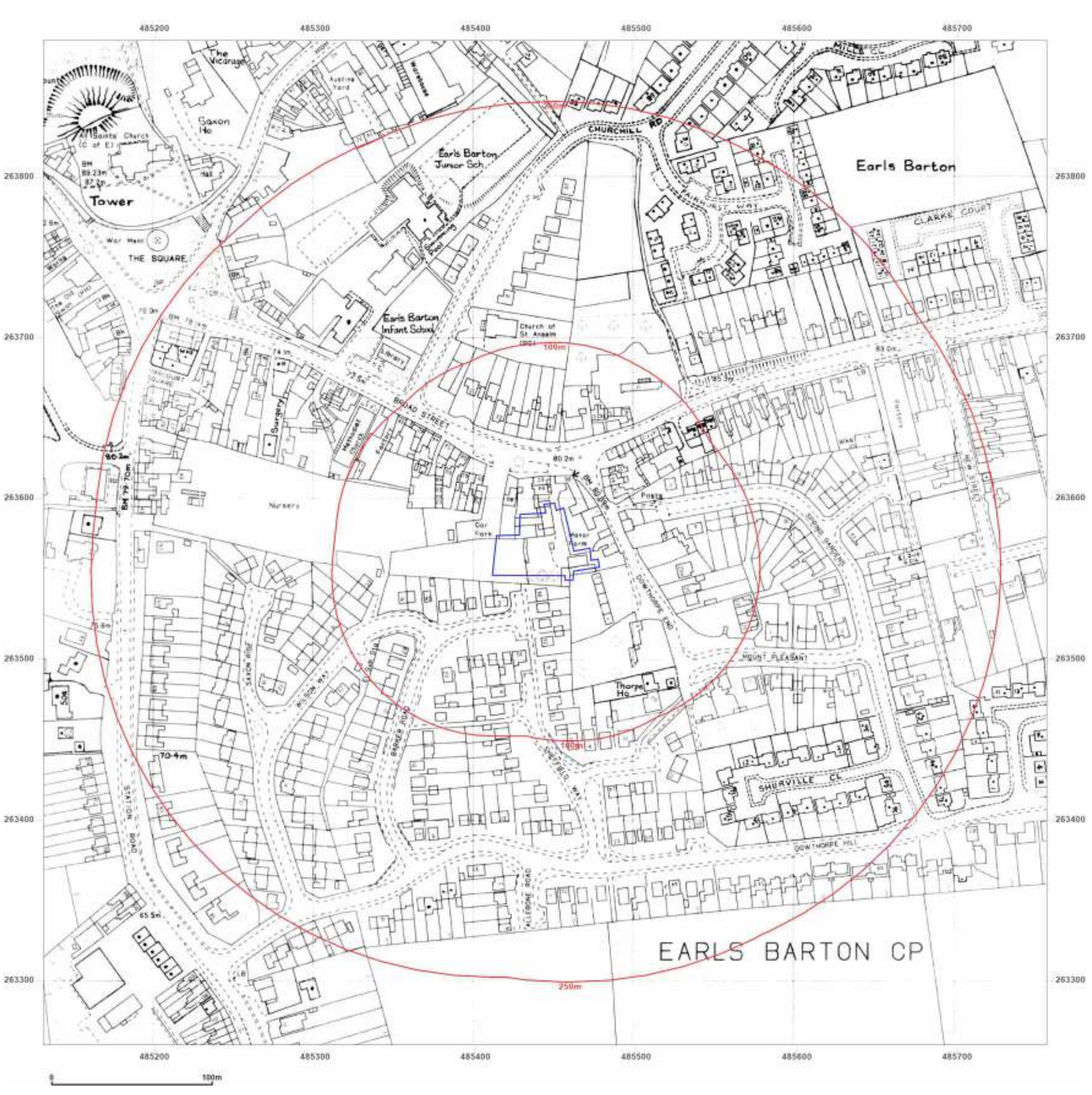

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Client Ref: 23-05-05
Report Ref: GS-RUR-AUH-EIC-H71
Grid Ref: 485443, 263572

Map Name: National Grid

Map date: **1989**

Scale: 1:2,500

Printed at: 1:2,500

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Revised 1989
Edition N/A
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Client Ref: 23-05-05
Report Ref: GS-RUR-AUH-EIC-H71
Grid Ref: 485443, 263572

Map Name: National Grid

Map date: **1993**

Scale: 1:2,500

Printed at: 1:2,500

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Report Ref: GS-RUR-AUH-EIC-H71
Grid Ref: 485443, 263572

Map Name: National Grid

Map date: **1993**

Scale: 1:2,500

Printed at: 1:2,500

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Grid Ref: 485443, 263572

Map Name: National Grid

Map date: **1993**

Scale: 1:2,500

Printed at: 1:2,500

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Site Details:

LAND AT MANOR FARM,
BLACKWELL CLOSE, EARLS
BARTON, NN6 0NU

Client Ref: 23-05-05
Report Ref: GS-RUR-AUH-EIC-H71
Grid Ref: 485443, 263572

Map Name: National Grid

Map date: **1994**

Scale: 1:2,500

Printed at: 1:2,500

N
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Surveyed 1994
Revised 1994
Edition N/A
Copyright 1994
Levelled N/A

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Site Details:

LAND AT MANOR FARM,
BLACKWELL CLOSE, EARLS
BARTON, NN6 0NU

Client Ref: 23-05-05
Report Ref: GS-RUR-AUH-EIC-H71
Grid Ref: 485443, 263572

Map Name: National Grid

Map date: **1994**

Scale: 1:2,500

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N
W E
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Surveyed N/A
Revised N/A
Edition N/A
Copyright 1994
Levelled N/A

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Groundsure INSIGHTS

Site Details:

LAND AT MANOR FARM,
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BARTON, NN6 0NU

Client Ref: 23-05-05
Report Ref: GS-RUR-AUH-EIC-H71
Grid Ref: 485443, 263572

Map Name: National Grid

Map date: **1995**

Scale: 1:2,500

Printed at: 1:2,500

N
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Surveyed 1995
Revised 1995
Edition N/A
Copyright 1995
Levelled N/A

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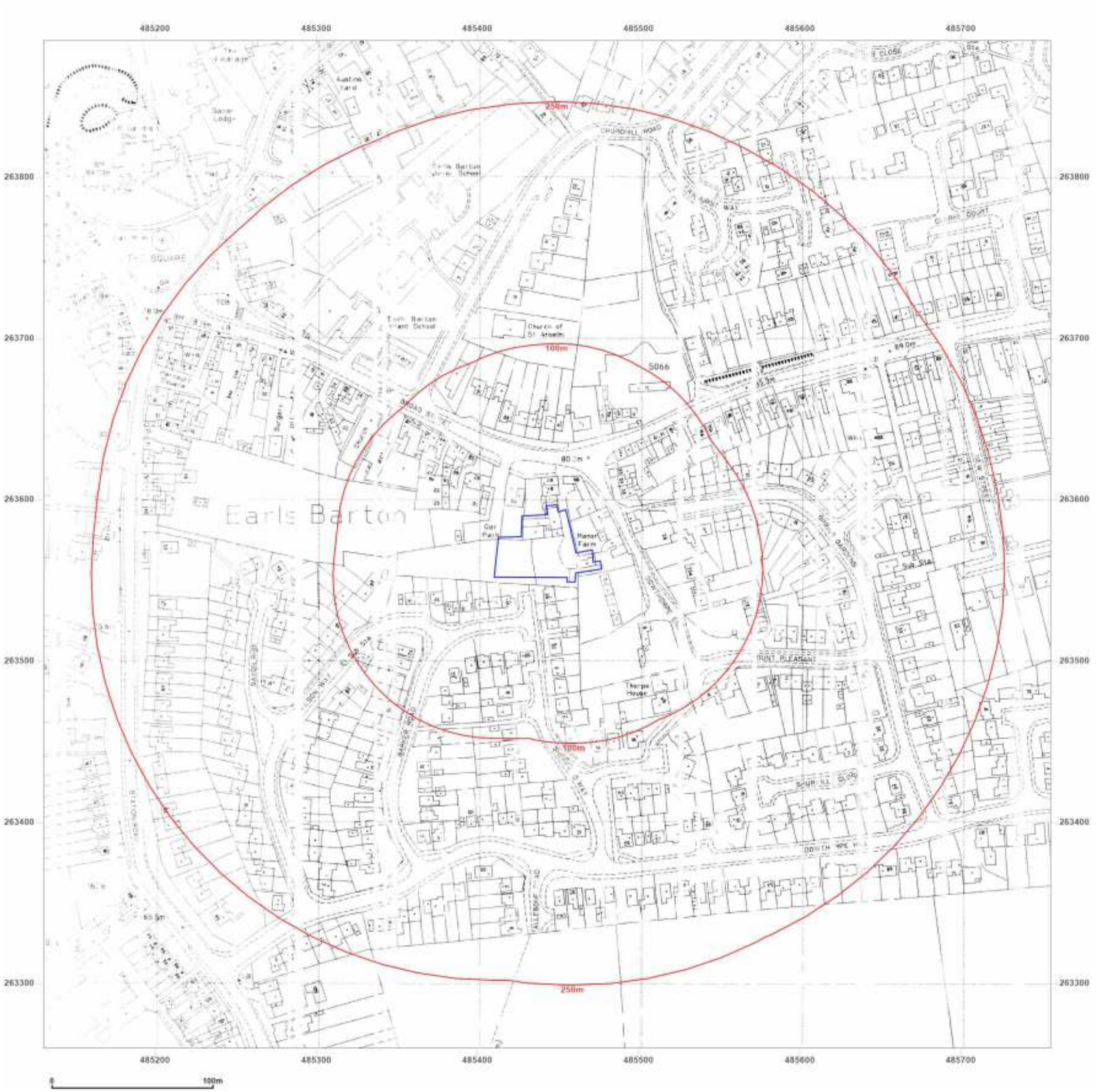

Groundsure INSIGHTS

Site Details:

LAND AT MANOR FARM,
BLACKWELL CLOSE, EARLS
BARTON, NN6 0NU

Client Ref: 23-05-05
Report Ref: GS-RUR-AUH-EIC-H71
Grid Ref: 485443, 263572

Map Name: National Grid

Map date: **1995**

Scale: 1:2,500

Printed at: 1:2,500

N
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Surveyed N/A
Revised N/A
Edition N/A
Copyright 1995
Levelled N/A

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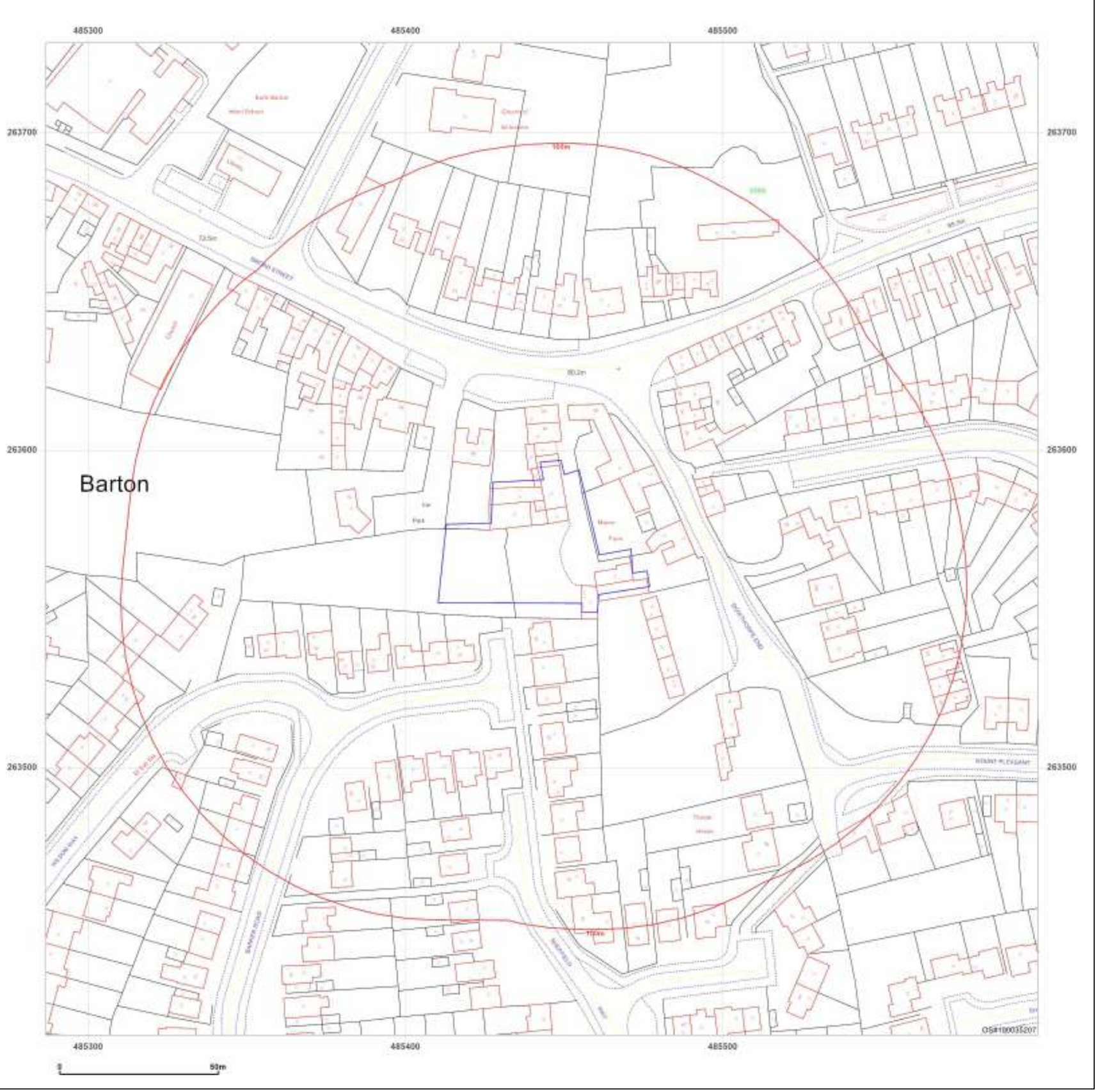

Groundsure INSIGHTS

Site Details:

LAND AT MANOR FARM,
BLACKWELL CLOSE, EARLS
BARTON, NN6 0NU

Client Ref: 23-05-05
Report Ref: GS-RUR-AUH-EIC-H71
Grid Ref: 485443, 263572

Map Name: LandLine
Map date: **2003**
Scale: 1:1,250
Printed at: 1:1,250

N
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2003

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Production date: 09 May 2023

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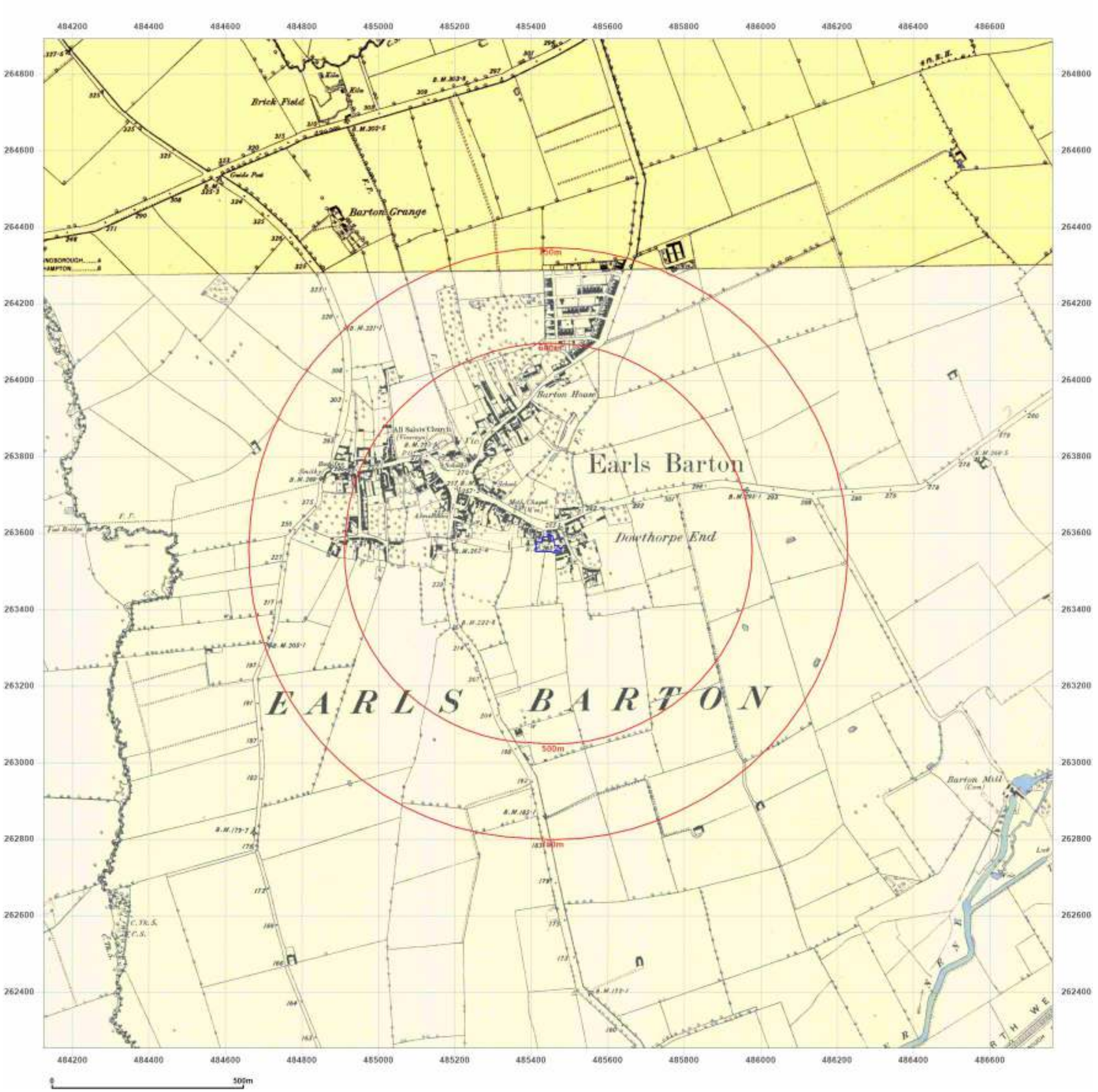

Groundsure INSIGHTS

Site Details:

LAND AT MANOR FARM,
BLACKWELL CLOSE, EARLS
BARTON, NN6 0NU

Client Ref: 23-05-05
Report Ref: GS-RUR-AUH-EIC-H71
Grid Ref: 485443, 263572

Map Name: County Series

Map date: **1883-1885**

Scale: 1:10,560

Printed at: 1:10,560

N
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Surveyed 1885
Revised N/A
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1883
Revised 1883
Edition N/A
Copyright N/A
Levelled N/A

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Production date: 09 May 2023

Map legend available at:
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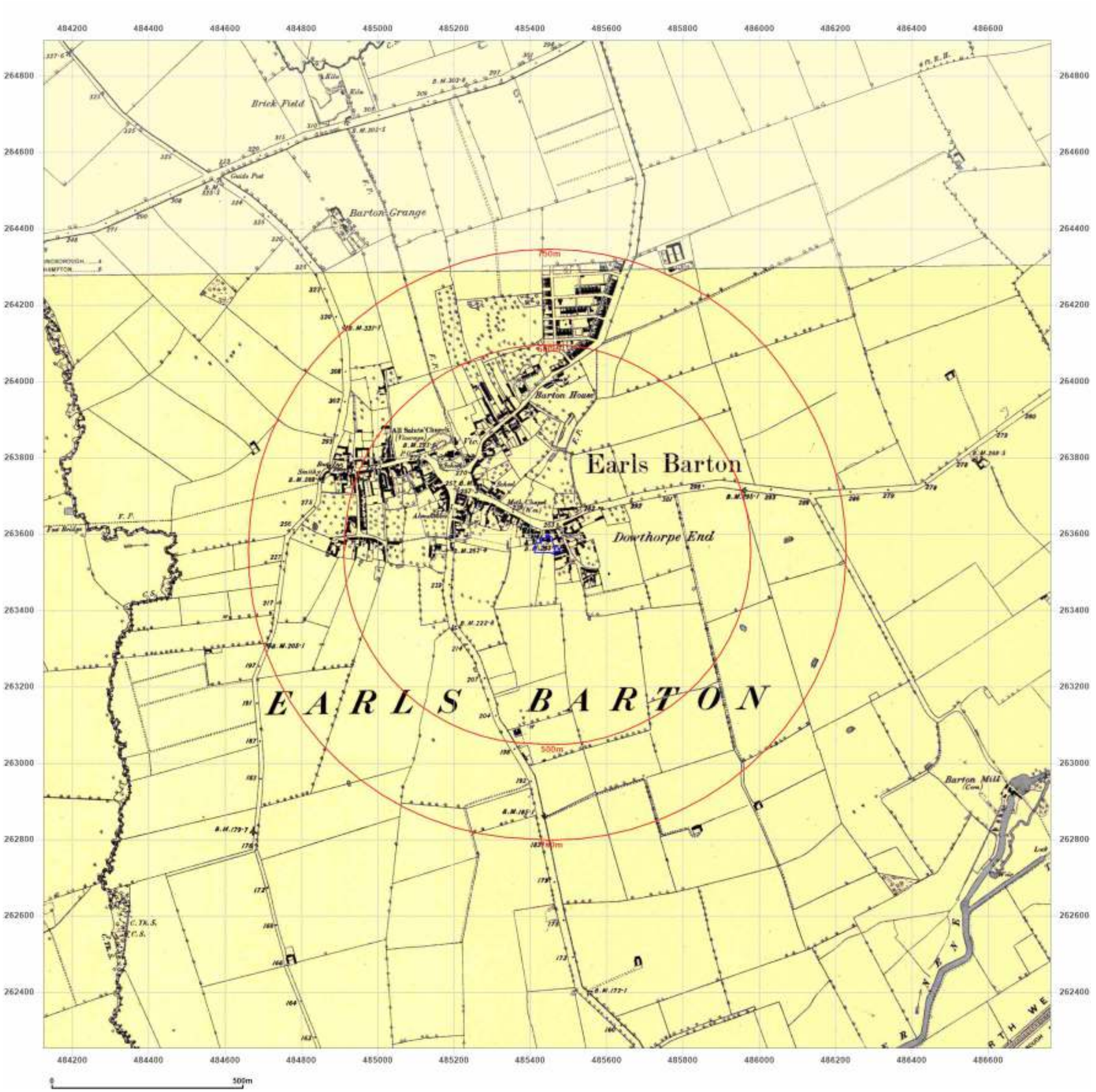

Groundsure INSIGHTS

Site Details:

LAND AT MANOR FARM,
BLACKWELL CLOSE, EARLS
BARTON, NN6 0NU

Client Ref: 23-05-05
Report Ref: GS-RUR-AUH-EIC-H71
Grid Ref: 485443, 263572

Map Name: County Series

Map date: **1884-1885**

Scale: 1:10,560

Printed at: 1:10,560

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Surveyed 1885
Revised 1885
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1883
Revised N/A
Edition N/A
Copyright N/A
Levelled N/A

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Production date: 09 May 2023

Map legend available at:
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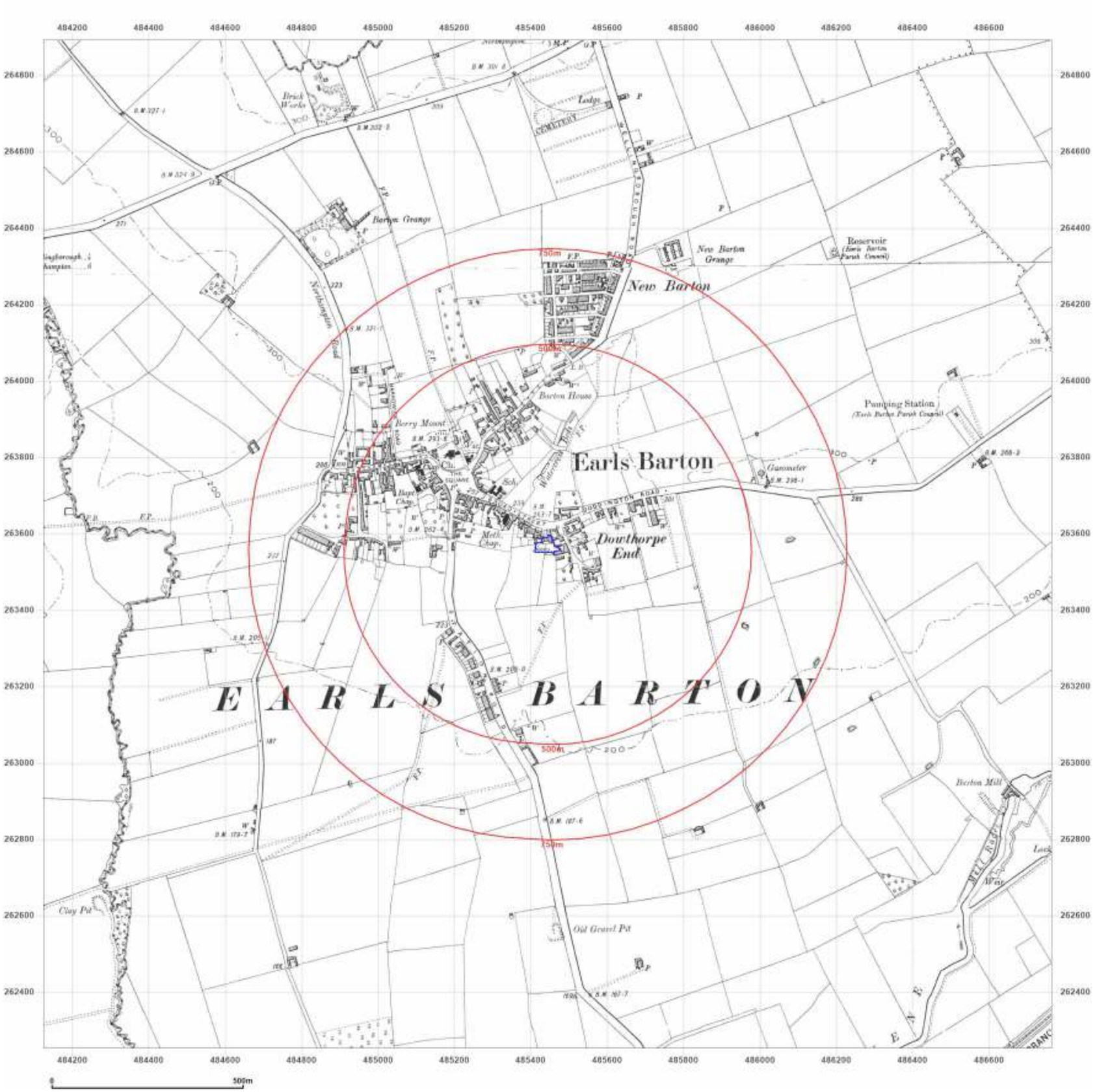

Groundsure INSIGHTS

Site Details:

LAND AT MANOR FARM,
BLACKWELL CLOSE, EARLS
BARTON, NN6 0NU

Client Ref: 23-05-05
Report Ref: GS-RUR-AUH-EIC-H71
Grid Ref: 485443, 263572

Map Name: County Series

Map date: **1899-1901**

Scale: 1:10,560

Printed at: 1:10,560

N
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Surveyed 1884
Revised 1899
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1883
Revised 1901
Edition 1901
Copyright N/A
Levelled N/A

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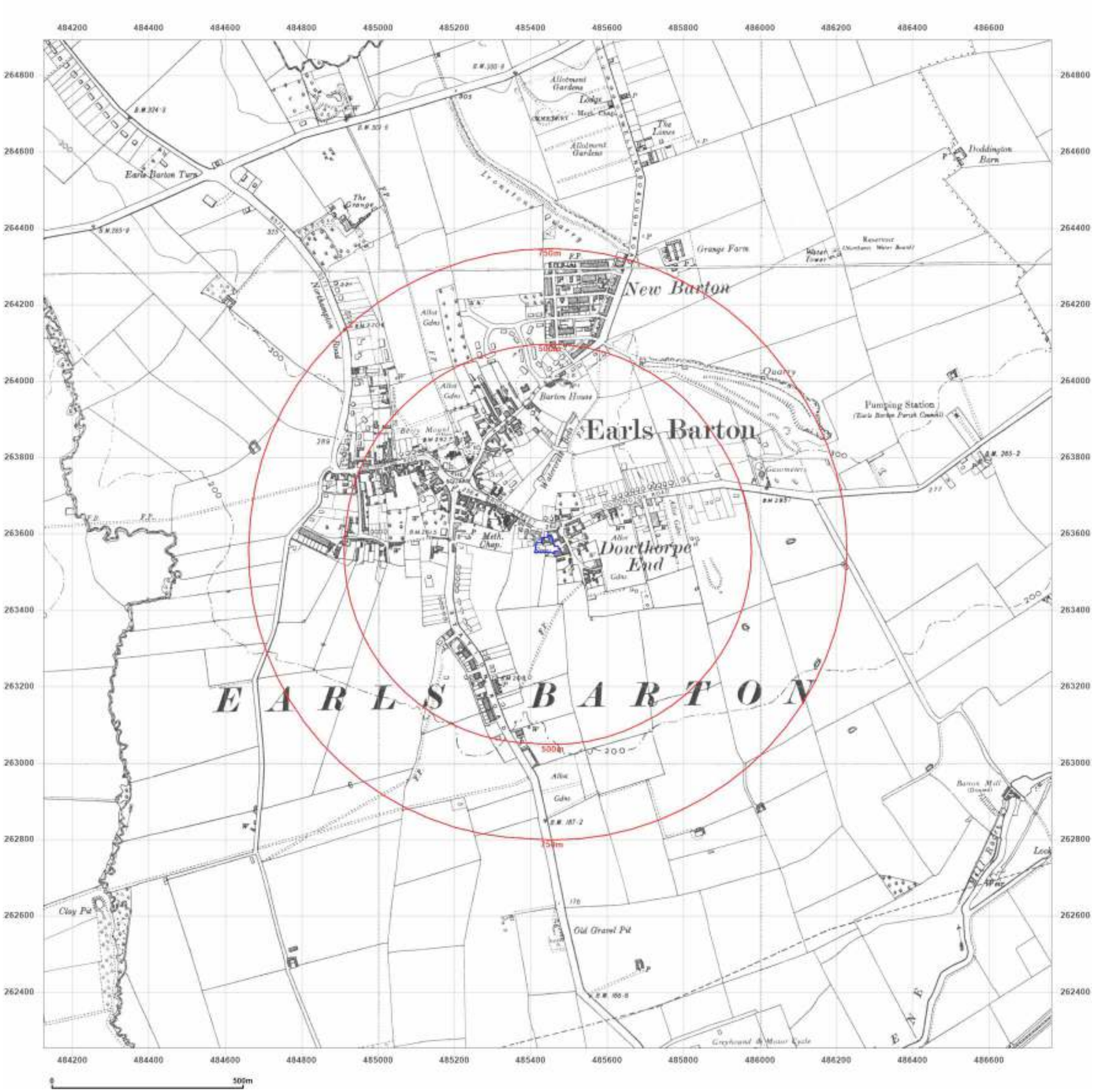

Groundsure INSIGHTS

Site Details:

LAND AT MANOR FARM,
BLACKWELL CLOSE, EARLS
BARTON, NN6 0NU

Client Ref: 23-05-05
Report Ref: GS-RUR-AUH-EIC-H71
Grid Ref: 485443, 263572

Map Name: County Series

Map date: **1950**

Scale: 1:10,560

Printed at: 1:10,560

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Surveyed 1883
Revised 1950
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1883
Revised 1950
Edition N/A
Copyright N/A
Levelled N/A

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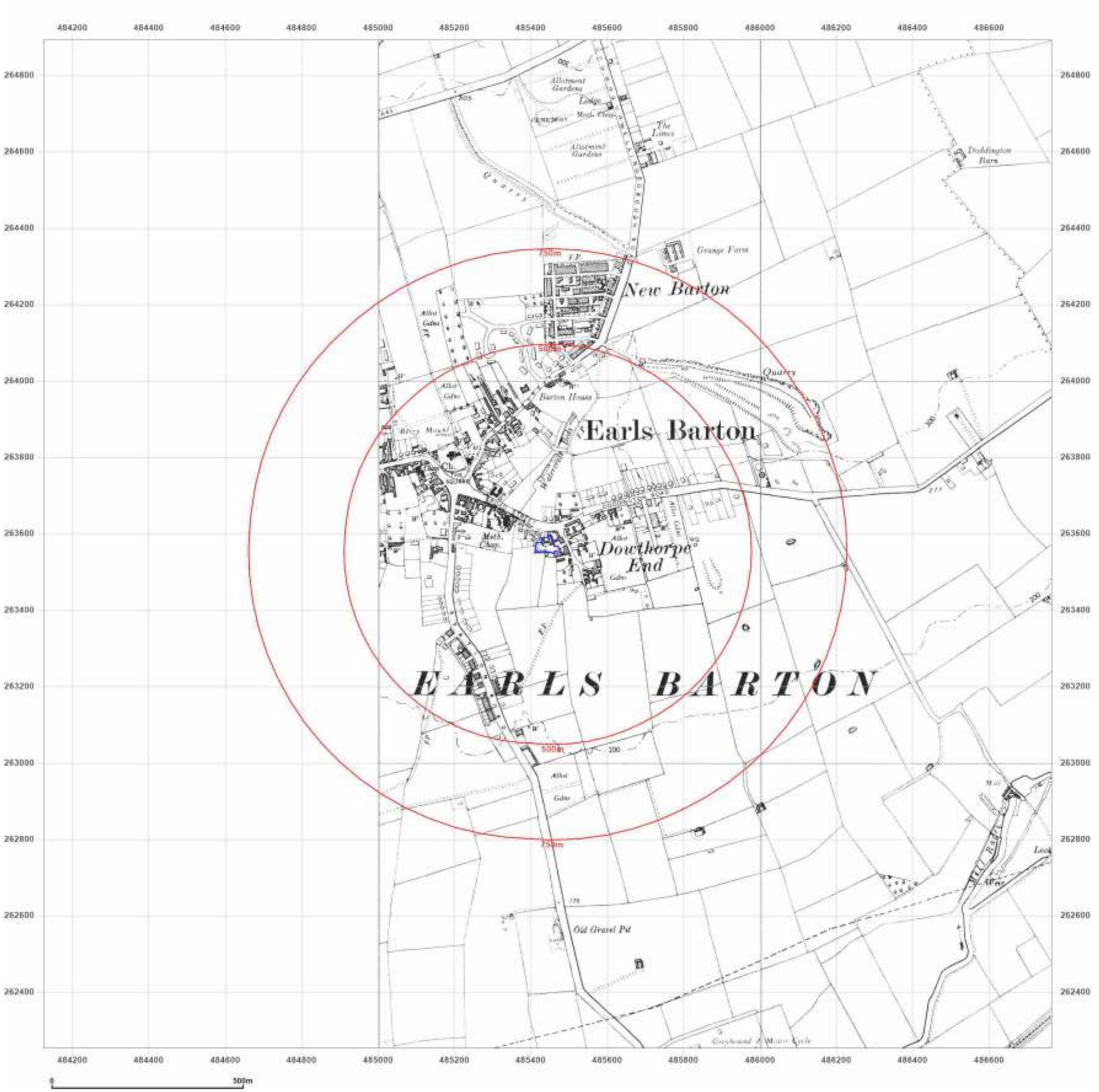

Groundsure INSIGHTS

Site Details:

LAND AT MANOR FARM,
BLACKWELL CLOSE, EARLS
BARTON, NN6 0NU

Client Ref: 23-05-05
Report Ref: GS-RUR-AUH-EIC-H71
Grid Ref: 485443, 263572

Map Name: Provisional
Map date: **1950**
Scale: 1:10,560
Printed at: 1:10,560

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Surveyed 1950
Revised 1950
Edition N/A
Copyright N/A
Levelled N/A

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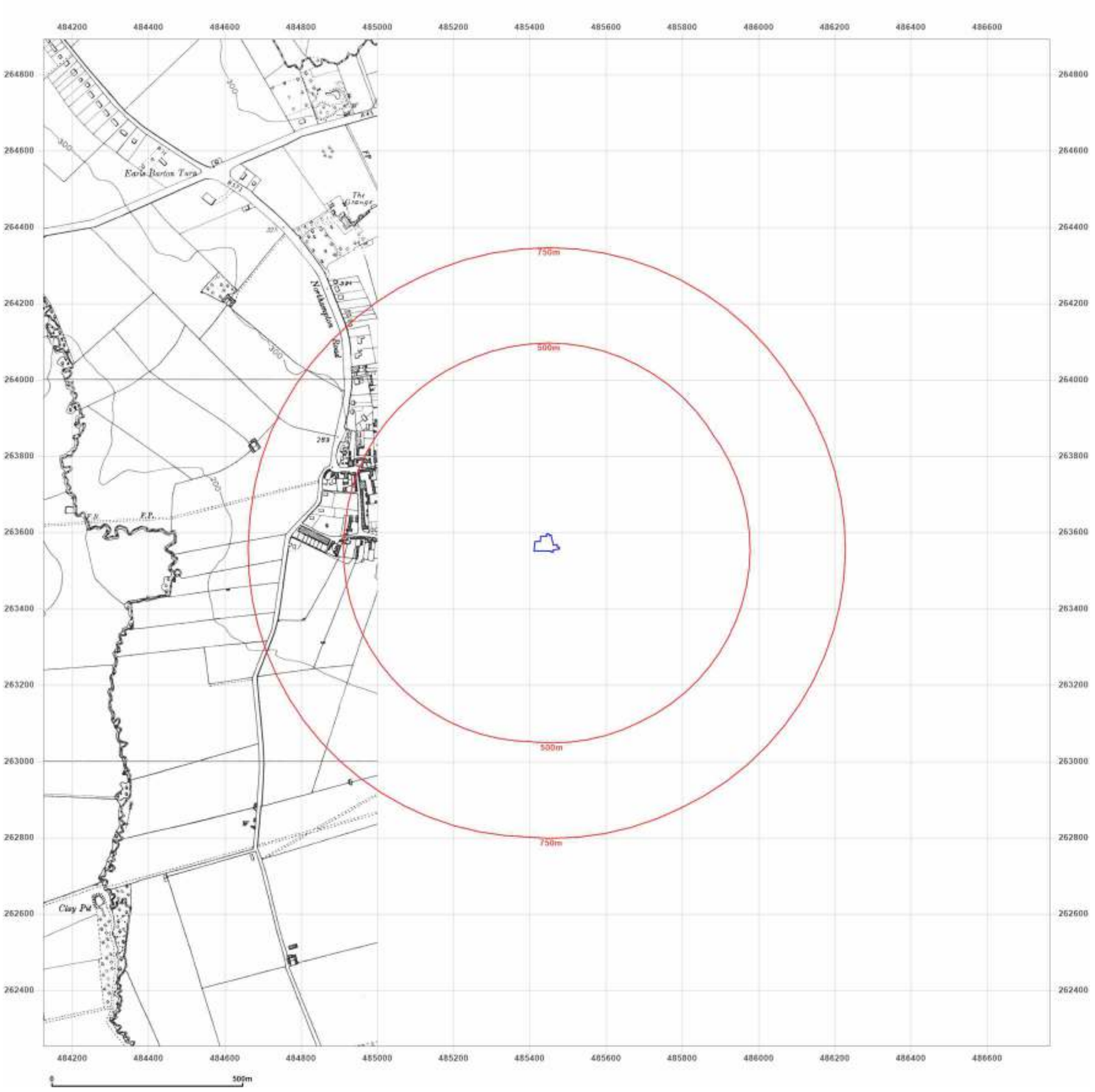

Groundsure INSIGHTS

Site Details:

LAND AT MANOR FARM,
BLACKWELL CLOSE, EARLS
BARTON, NN6 0NU

Client Ref: 23-05-05
Report Ref: GS-RUR-AUH-EIC-H71
Grid Ref: 485443, 263572

Map Name: Provisional
Map date: **1957**
Scale: 1:10,560
Printed at: 1:10,560

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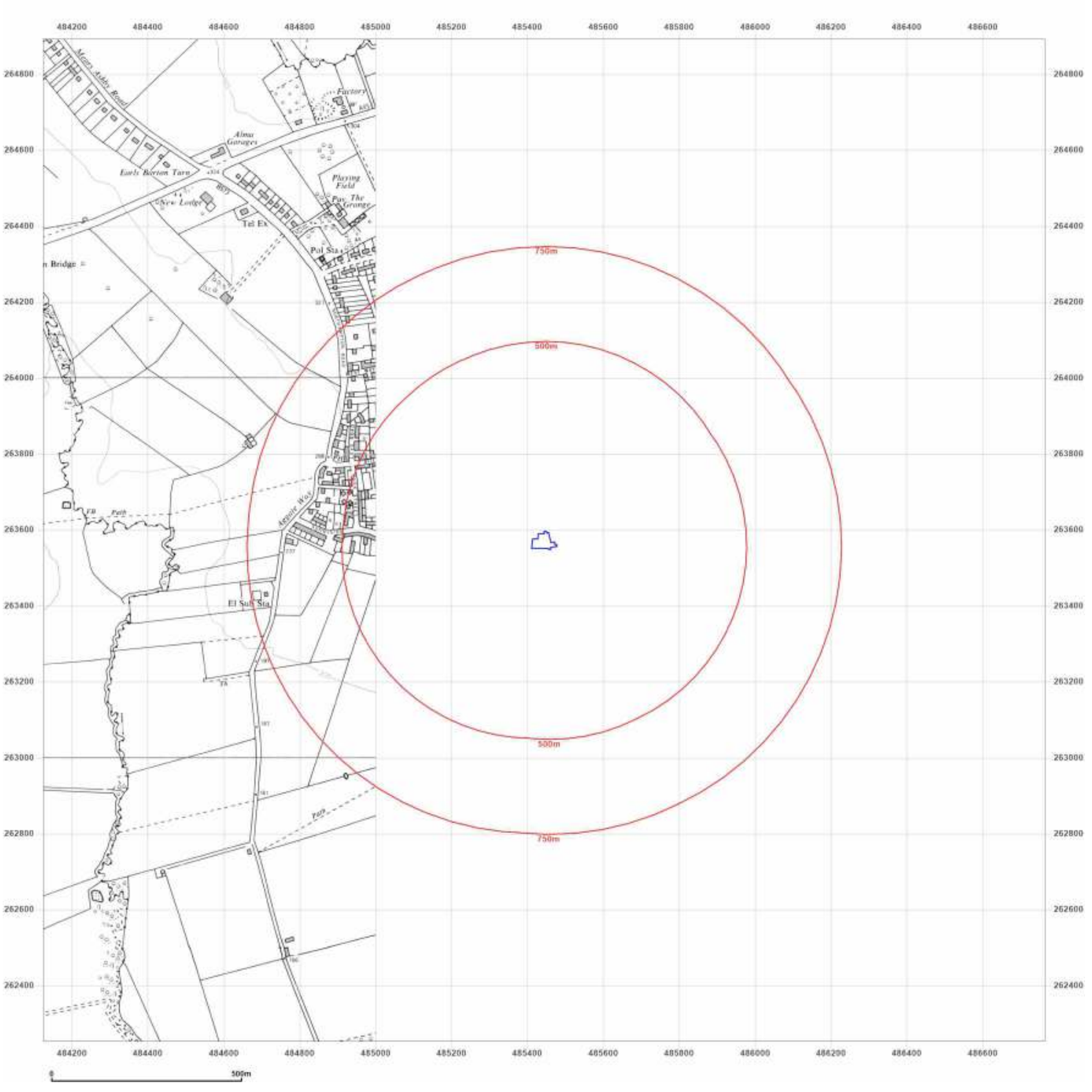

Groundsure INSIGHTS

Site Details:

LAND AT MANOR FARM,
BLACKWELL CLOSE, EARLS
BARTON, NN6 0NU

Client Ref: 23-05-05
Report Ref: GS-RUR-AUH-EIC-H71
Grid Ref: 485443, 263572

Map Name: Provisional

Map date: **1971**

Scale: 1:10,560

Printed at: 1:10,560

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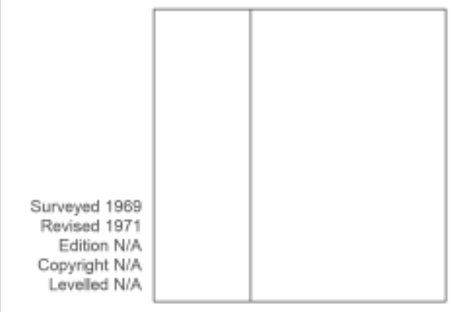

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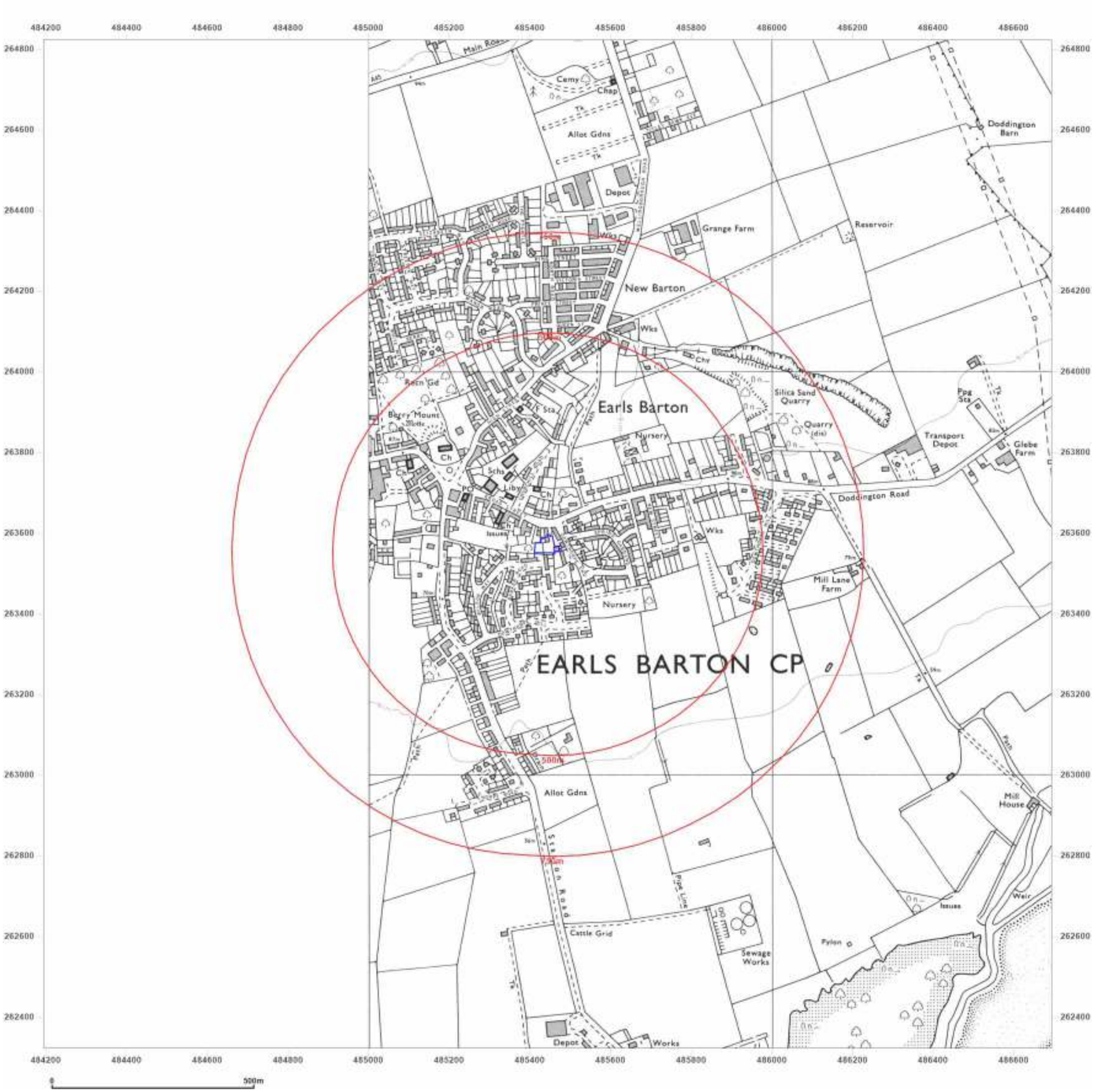

Groundsure INSIGHTS

Site Details:

LAND AT MANOR FARM,
BLACKWELL CLOSE, EARLS
BARTON, NN6 0NU

Client Ref: 23-05-05
Report Ref: GS-RUR-AUH-EIC-H71
Grid Ref: 485443, 263572

Map Name: National Grid

Map date: **1972**

Scale: 1:10,000

Printed at: 1:10,000

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Surveyed 1969
Revised 1972
Edition N/A
Copyright 1972
Levelled N/A

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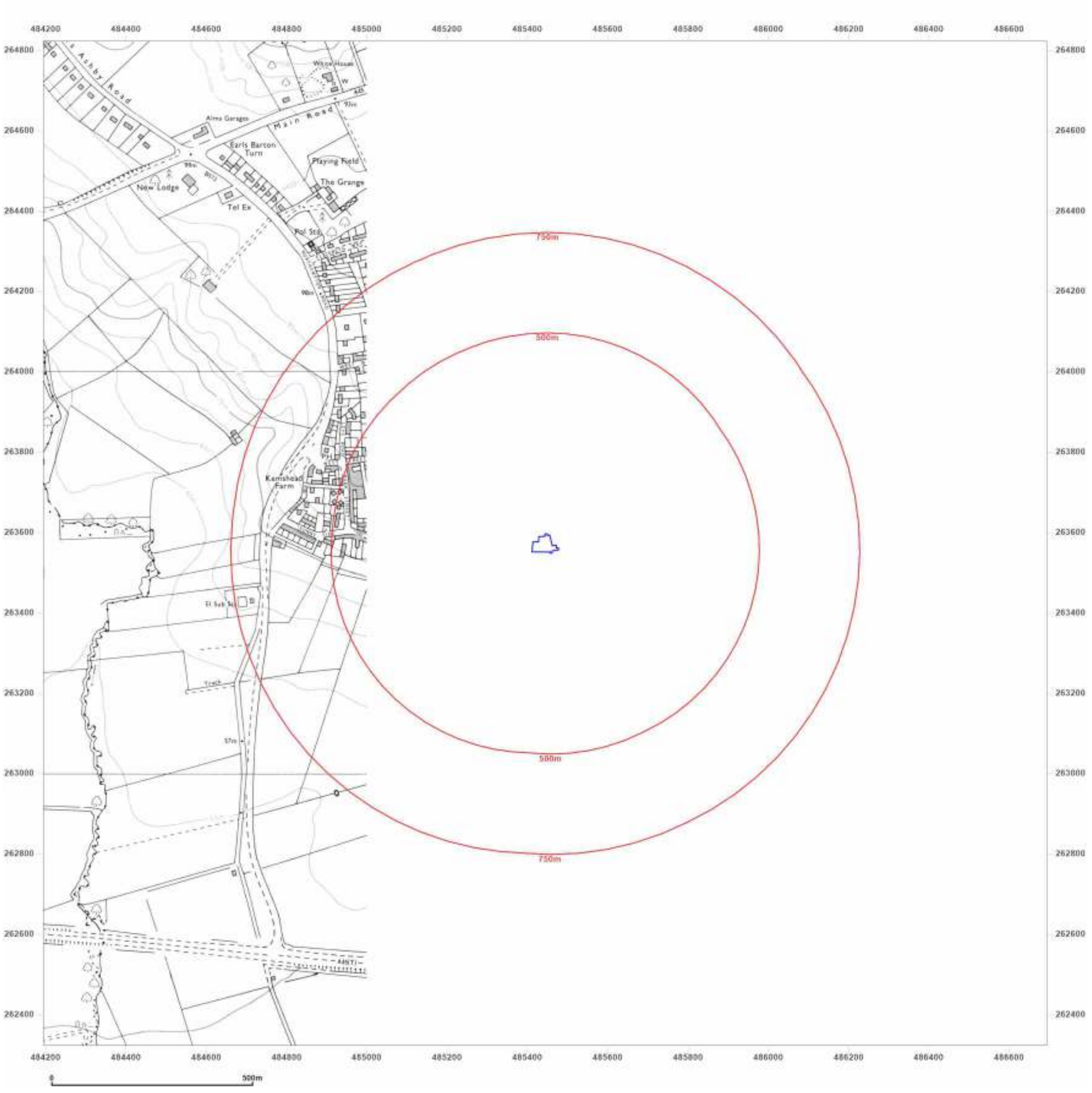

Groundsure INSIGHTS

Site Details:

LAND AT MANOR FARM,
BLACKWELL CLOSE, EARLS
BARTON, NN6 0NU

Client Ref: 23-05-05
Report Ref: GS-RUR-AUH-EIC-H71
Grid Ref: 485443, 263572

Map Name: National Grid
Map date: **1981**
Scale: 1:10,000
Printed at: 1:10,000

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Groundsure INSIGHTS

Site Details:

LAND AT MANOR FARM,
BLACKWELL CLOSE, EARLS
BARTON, NN6 0NU

Client Ref: 23-05-05
Report Ref: GS-RUR-AUH-EIC-H71
Grid Ref: 485443, 263572

Map Name: National Grid

Map date: **1988-1989**

Scale: 1:10,000

Printed at: 1:10,000

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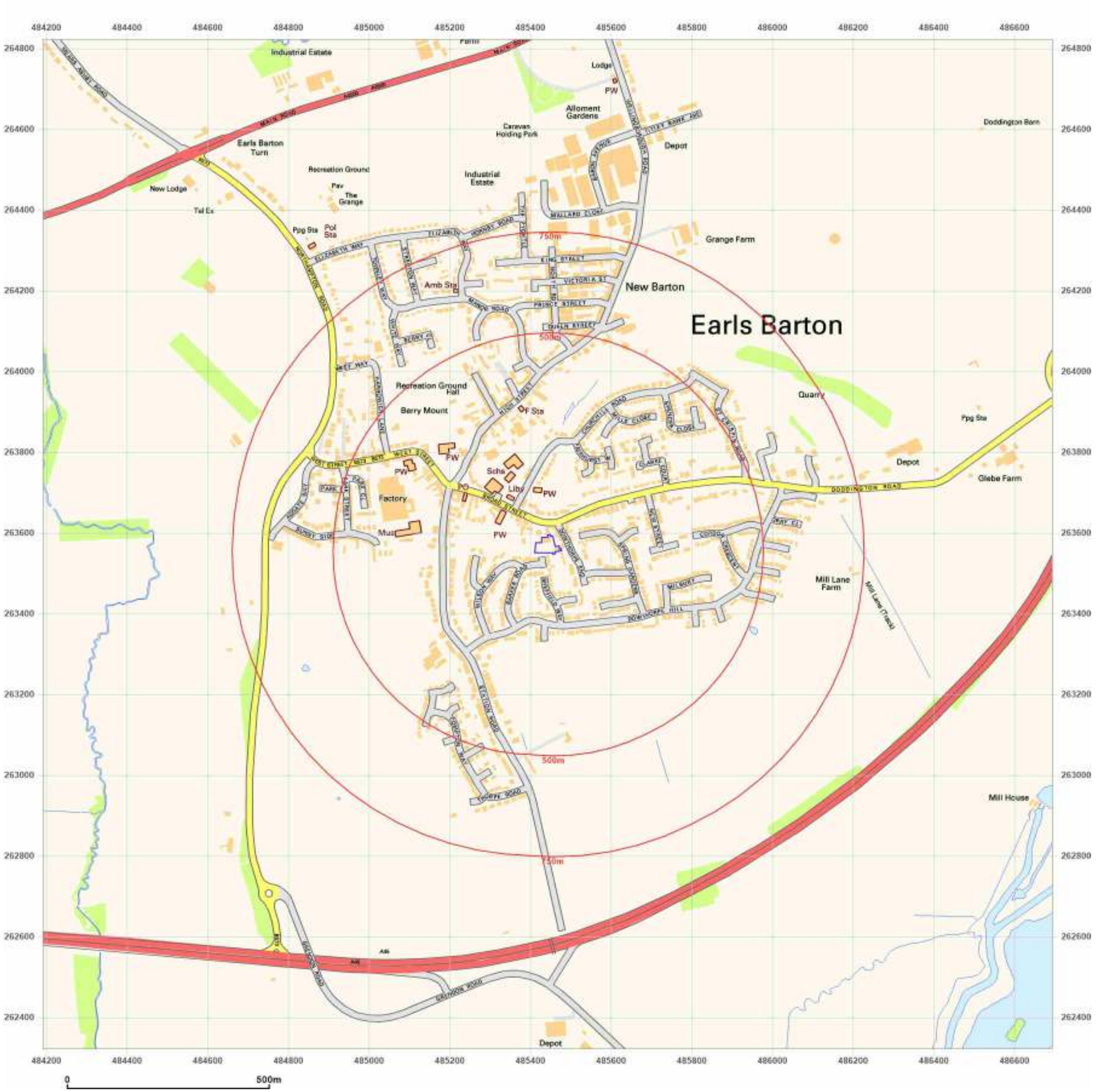

Groundsure INSIGHTS

Site Details:

LAND AT MANOR FARM, BLACKWELL CLOSE, EARLS BARTON, NN6 0NU

Client Ref: 23-05-05
Report Ref: GS-RUR-AUH-EIC-H71
Grid Ref: 485443, 263572

Map Name: National Grid
Map date: **2001**
Scale: 1:10,000
Printed at: 1:10,000

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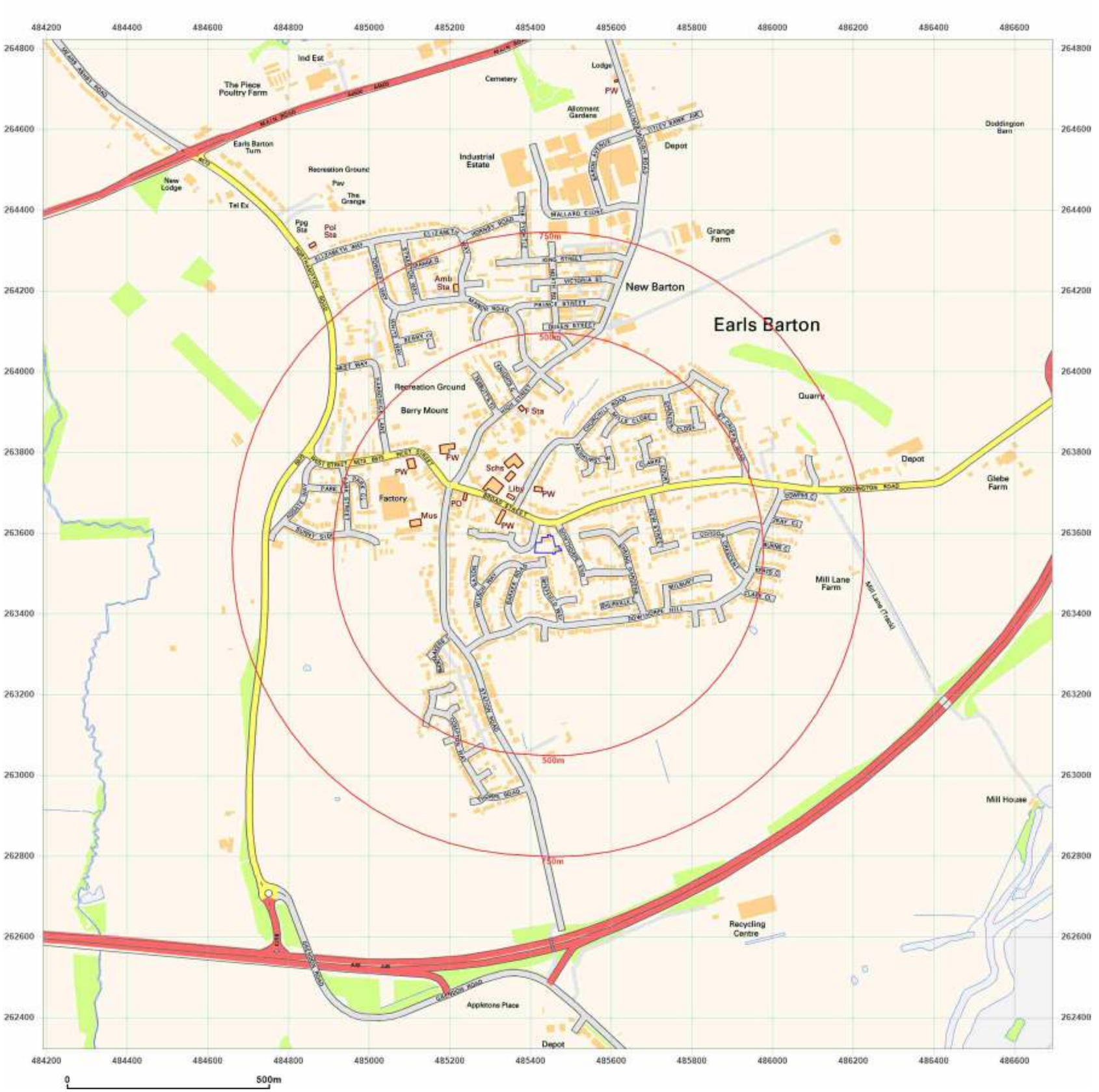

Groundsure INSIGHTS

Site Details:

LAND AT MANOR FARM, BLACKWELL CLOSE, EARLS BARTON, NN6 0NU

Client Ref: 23-05-05
Report Ref: GS-RUR-AUH-EIC-H71
Grid Ref: 485443, 263572

Map Name: National Grid
Map date: **2010**
Scale: 1:10,000
Printed at: 1:10,000

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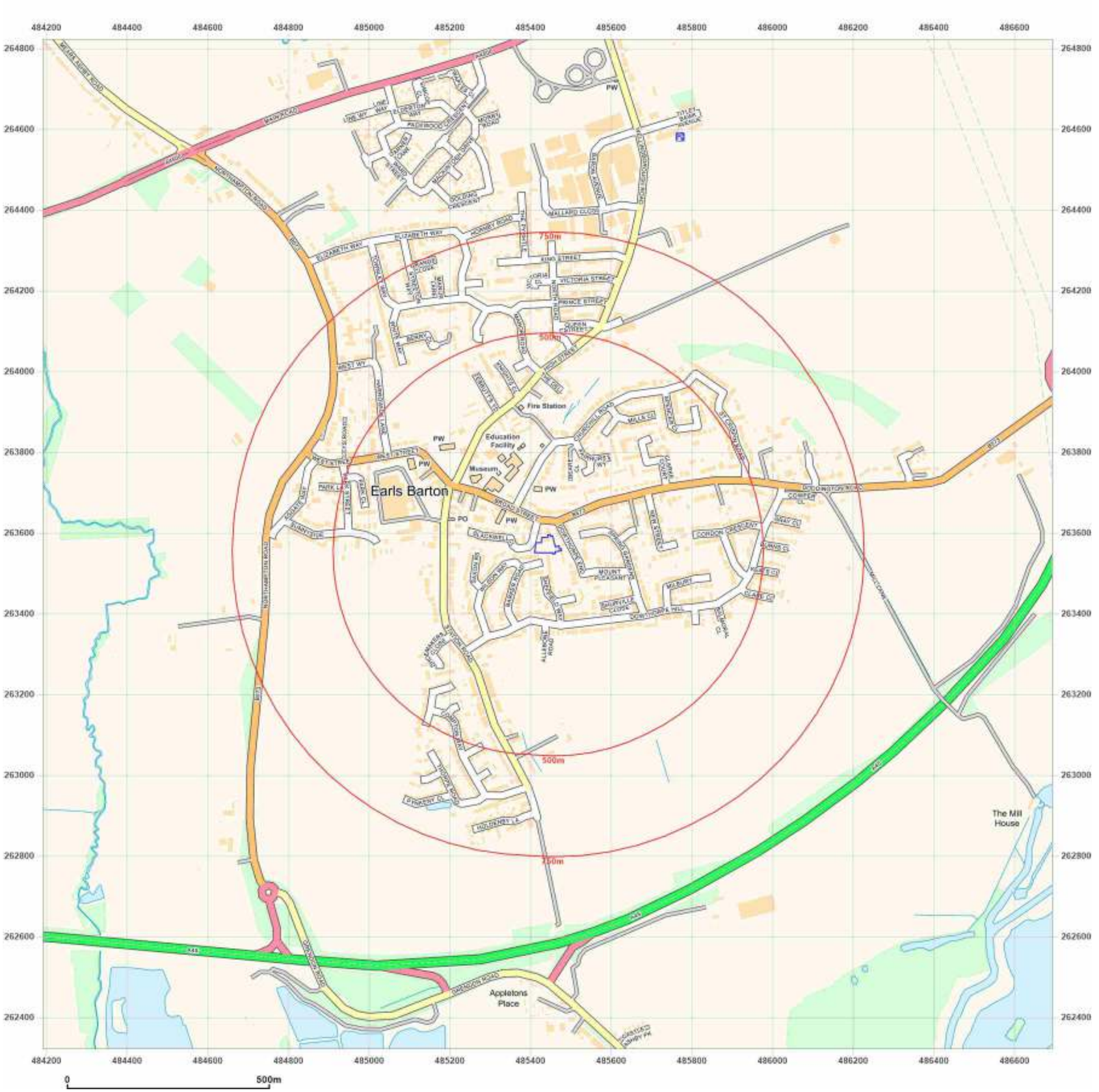

Groundsure INSIGHTS

Site Details:

LAND AT MANOR FARM,
BLACKWELL CLOSE, EARLS
BARTON, NN6 0NU

Client Ref: 23-05-05
Report Ref: GS-RUR-AUH-EIC-H71
Grid Ref: 485443, 263572

Map Name: National Grid
Map date: **2023**
Scale: 1:10,000
Printed at: 1:10,000

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