Hydrock now Stantec

Thakeham Tiles, Rock Road

Phase 1 Desk Study Report

For *Thakeham Concrete Products Ltd*

Date	*9 October 2025*
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1. Introduction

1.1 Terms of reference

In February 2025, Hydrock Consultants Limited (Hydrock, now Stantec - referred to hereafter as Hydrock) was commissioned by Thakeham Concrete Products Ltd (the Client) to update the Phase 1 Desk Study for the site located along Rock Road, Storrington, RH20 3AD, known as Thakeham Tiles. This report has been updated following revision of the red line boundary to include two new parcels of land in the north of the site, which has added to the number of residential units, and included areas to be enhanced for biodiversity.

The initial desk study for the site was undertaken and prepared in February 2018 by Hydrock (reference: TRS-HYD-XX-GI-RP-GE-1001), and the site since has subsequently undergone numerous ground investigations and reporting listed and summarised in Section 3. The updated desk study is being prepared within a new report to show the additional areas that have been added and to allow for a summary of the site's investigation history.

The works have been undertaken in accordance with Hydrock's proposal 08347-HYD-XX-XX-FP-GE-0007 and the Client's instructions to proceed via email dated 28th February 2025.

1.2 Project background and Objectives

The site is currently a concrete product manufacturing plant, covering 6.12 hectares (ha).

Hydrock understands that outline planning application is for the demolition of all existing buildings, the erection of 108 dwellings with associated landscaping and open space; and the formation of a new access onto Rock Road. All matters to be reserved, except for means of access. A proposed development layout (Thrive Architects drawing: THAK230417 IMP-04A) is presented in Appendix A.

The works have been commissioned to support the planning application and to assist with the design of the development.

This report will identify potential contaminant linkages and establish where there are potentially unacceptable risks in the context of the report objectives. It will also provide preliminary assessment of geotechnical risks within the new areas of the site.

1.3 Available information

The following documents have been provided to Hydrock by the Client for use in the preparation of this report:

- Thrive Architects. 07 February 2025. Sketch Layout. Land at Thakeham Tiles, Storrington. Job No: THAK230417. Drawing No: SKL-04; and
- Thrive Architects. 10 September 2025. Constraints Plan. Thakeham Tiles. Job No: THAK230417. Drawing No: CP-01 A.

1.4 Regulatory context and guidance

This report has been prepared in accordance with relevant parts of BS 5930:2015+A1:2020 'Code of practice for ground investigations'.

The geo-environmental aspects of this report are written with reference to:

- Environment Agency (EA) guidance 'Land Contamination Risk Management' (LCRM), 2023;

- BS 10175:2011+A2:2017 'Investigation of potentially contaminated sites – Code of practice';
- BS EN ISO 21365:2020 'Soil quality – Conceptual site models for potentially contaminated sites;
- AGS (2006) 'AGS Guidelines for Good Practice in Site Investigations'; and
- R&D Publication 66: 2008 'Guidance for the Safe Development of Housing on Land Affected by Contamination' published by NHBC, the Environment Agency and CIEH.

The methods used follow a risk-based approach, with this report constituting the first stage, a Phase 1 Desk Study and Field Reconnaissance (also referred to as 'preliminary investigation'). The potential geo-environmental risks have been assessed qualitatively using the 'source-pathway-receptor (SPR) contaminant linkage' concept as introduced in the Environmental Protection Act 1990 (EPA, 1990).

The geotechnical aspects of this report are prepared in general accordance with:

- relevant parts of BS EN 1997-1:2004+A1:2013 'Eurocode 7: Geotechnical design. General rules' (EC7); and
- associated document NA+A2:2022 'UK National annex to Eurocode 7: Geotechnical design. General rules' and BS 8004:2015+A1:2020 Code of Practice for foundations.

1.5 Uncertainties and limitations

1.5.1 Site-specific comments

The presence, nature and extent of former adits is unknown. These features may have been removed by progression of the open pit, infilled with waste or remain open.

The newly acquired deciduous woodland areas have not been included in previous ground investigations due to it not being part of the development boundary at the time, it is likely some preliminary investigation will be required to confirm ground conditions.

1.5.2 General comments

Hydrock has prepared this report in accordance with the instructions of the Client, under the terms of appointment for Hydrock. It is for the sole and specific use of the Client and parties to whom reliance has been agreed with Hydrock.

Hydrock shall not be responsible for use of the report or its contents for purposes other than that for which it was prepared or for use of the report by parties not defined in Hydrock's appointment. Third parties who use the information contained herein do so at their own risk.

The report has been prepared by Hydrock on the basis of available information obtained during the study period. Although every reasonable effort has been made to gather all relevant information, not all potential environmental constraints or liabilities associated with the site may have been revealed.

Hydrock has used reasonable skill, care and diligence in its interpretation of the information obtained. The inherent variation of ground conditions however, means that significant extrapolation and inference may be made between data points. This could result in actual ground conditions not correlating with the assessment or conclusions of this report.

Information provided by third parties has been used in good faith and is taken at face value; however, Hydrock do not guarantee its accuracy or completeness.

The work has been carried out in general accordance with recognised best practice. Unless otherwise stated, no assessment has been made for the presence of radioactive substances or unexploded ordnance. Where the phrase 'suitable for use' is used in this report, it is in keeping with the terminology used in planning control and does not imply specific warranty or guarantee offered by Hydrock.

Please note that notwithstanding site observations concerning the presence or otherwise of archaeological sites, asbestos-containing materials or invasive weeds, this report does not constitute a formal survey of these potential constraints. Specialist advice should be sought.

Site boundary lines depicted on plans do not imply legal ownership of land.

2. Desk study and field reconnaissance

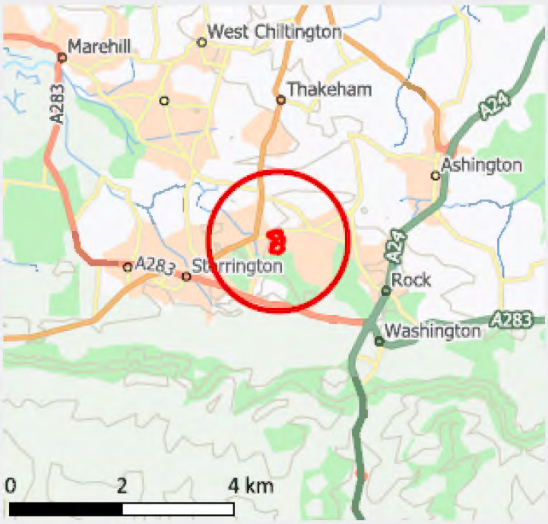
An updated environmental database report has been obtained for the site to account for the new site boundary and this is presented in Appendix D.

2.1 Site referencing

Table 2.1: Site referencing information

Item	Description
Site name	Thakeham Tiles, Rock Road
Site address	Land at Thakeham Tiles, Rock Road, Storrington, RH20 3AD
Site location	Centred on National Grid Reference: 510385E, 114913N
Site dimensions	Approximately 230m wide (south-east) by 380m in length (north-south) and 6.12ha.

Figure 2.1: Site location



OS licence AC0000817865

Figure 2.2: Aerial imagery with updated site boundary

Figure 2.3: Aerial imagery with previous site boundary

2.2 Site Description and field reconnaissance survey

The following information is based on online aerial imagery and maps and observations from the field reconnaissance survey undertaken on 20th February 2018. Photographs are presented in Appendix B.

A site location plan (Hydrock drawing 37212-HYD-XX-XX-DR-GE-1000) and a site constraints plan (Thrive Architects drawing THAK203417 CP-01 A) are presented in Appendix A.

Table 2.2: Site description

Item	Description
Site access	Along Rock Road where the northern site boundary is situated.
Elevation and topography	The site slopes from the north (48m above ordnance datum (AOD)) towards the south of the site (64m AOD). The two deciduous woodland areas adjacently south of Rock Road are split by the site entrance/access road and lies approximately at 56m AOD in the east sloping down to 46m AOD in the west towards the houses associated with Hillside Walk. Within the former sandpit area in the south end of site there is undulating and steep ground which is covered with dense vegetation and mature trees.
Site boundaries and surrounding land use	Rock Road bounds the site to the north with open fields beyond. To the east and west are residential properties. To the south of site lies woodland and residential properties, and beyond there is a quarry, currently operated by CEMEX.
Present land use	The site is currently an active concrete manufacturing plant operated by Thakeham Concrete Products Ltd (the client). The site can be split into two key areas, the northern half of site and the southern half of site. The northern half of site closest to Rock Road, comprises the main factory production facilities with warehouses and industrial units. The southern half is used for aggregate storage. This area to the south has formerly been a quarry, extracting sand and subsequently later used as a landfill. The woodland areas are not in use and not accessible due to the dense vegetation and mature trees currently present within them.
Surface cover and vegetation	Dense vegetation and mature trees border the whole site boundary with an area of woodland to the south of the site adjacent to the aggregate storage area. Two additional areas of deciduous woodland are situated off Rock Road, to the east and west of the site's existing access.
Evidence of contamination	A number of site features and operations were noted during the 2018 site walkover survey. These included silo features, fuel storage tanks, workshops, kerosene, paraffin and iron oxide and pigment stores, oil spray treatment areas, potential asbestos containing materials (ACMs) within the building fabric and an infilled former sandpit. These areas of potential concern are presented on drawing ref: 37212-HYD-XX-XX-DR-GE-1002 (Appendix A).
General site sensitivity	The site lies in a suburban area on the eastern outskirts of Storrington. There are no Designated Environmentally Sensitive Sites in the vicinity of the site.

Selected photographs from the field reconnaissance are presented in Appendix B.

2.3 Data sources

The following sources of information have been reviewed as part of the Desk Study:

- Historical Ordnance Survey mapping (Appendix C).
- Third-party environmental report (Groundsure report, reference HYD-QKX-TF5-HSL-2U2) (Appendix D).
- British Geological Survey (BGS) GeoIndex Onshore (mapapps2.bgs.ac.uk/geoindex/home.html).
- BGS 1:50,000 geological map of Brighton and Worthing (Sheet 318).
- BGS Memoir for Sheet 318.
- BGS Lexicon (webapps.bgs.ac.uk/lexicon/).
- DEFRA's MAGiC Map (magic.defra.gov.uk/MagicMap.aspx).
- BGS/Environment Agency's aquifer designation dataset (bgs.ac.uk/datasets/aquifer-designation-data/).
- Allen et al (1997) and Jones et al (2000).
- Environment Agency Catchment Data Explorer (environment.data.gov.uk/catchment-planning/).
- Environment Agency's Hydrology Data Explorer (environment.data.gov.uk/hydrology/explore).
- UK Health Security Agency's Interactive Radon Map (ukradon.org/information/ukmaps).
- BGS Radon Report (Reference: BGS_336701_51534) (Appendix D).
- Unexploded bomb (UXB) Risk Maps (zeticauxo.com/downloads-and-resources/risk-maps/).

2.4 Site history

A study of historical maps (Appendix C) and aerial imagery has been undertaken to identify former land uses at the site and in the surrounding areas, which may have affected, or be affected by, the site.

2.4.1 On-site

Table 2.3: Site history

Reference	Key Features on-site
1875 – 1897 (1:2,500) & 1876 – 1897 (1:10,560)	Site is covered by coniferous woodland labelled Heath Common or The Plantation and is crossed by a footpath running east to west through the centre of site. The northern extent is shown as an open field with the 'main' road or track running along the northern boundary.
1911 (1:2,500) & 1914 (1:10,560)	Mixed woodland has encroached the northeastern corner of the site and the southern half remains as coniferous woodland.
1937 (1:2,500)	A tile works occupies the northern central slither of site, cutting through the woodland. The access has also been created along the 'main' road

Reference	Key Features on-site
	to the north. Three large buildings are located in the central area and northern area, and numerous small buildings in the north of the site. The greenhouses located along the western central boundary of site noted to be on site are associated with Elizabeth cottage and are not part of the tile works. In the south there is a large sandpit with half of the woodland remaining in the east. An additional area of woodland is now marked on which covers the northwest corner of site. A narrow-gauge railway runs along the west side of the sandpit area to the buildings in the north of the site.
1966, 1971 – 1990 (1:2,500)	Minor development of the tile works is evident, with five large buildings and numerous smaller ones. A weighbridge is present in the north and a hopper is noted in the centre. The narrow-gauge railway now runs between buildings in the south and the central areas of the site. The sandpit is noted as disused and covered in mixed woodland.
2002-2010 (1:10,000)	The site is shown in its present-day configuration and is labelled as a works.

2.4.2 Off-site

The key off-site feature within 250m of the site are summarised in Table 2.4. All distances quoted are approximate to the nearest site boundary.

Table 2.4: Key off-site historical features

Feature	Location	Dates	Comment
Heath Common or The Plantation	On and off-site	1875-1971	Site is surrounded to the east, south and west by woodland and a marshland area is also shown to the southeast.
Thakeham Union Workhouse School	122m west	1875-1937 1971	One of the few buildings situated from the vicinity of site at the time, then re-built into Thakeham intermediate school. Is noted to still be used as a school at present (now named Steyning Grammar School).
Snape's Farm Orchardway Farm	5m-500m north	1875-1966 1966-2025	Area of farmland renamed to Orchardway Farm around 1966 with a new access track built from Rock Road leading to an area of cottages. Water wells noted to be present.

2.4.3 Site history summary

The site remained as coniferous and mixed woodland until the late 1920s, when the tile works opened and comprised of eight small to large buildings, a narrow-gauge railway with associated hoppers to the north and a sandpit to the south. Throughout the 1970s to 2000s there have been minor changes to the site layout and ancillary buildings, but predominantly the site use has not changed since its opening in 1929. The pit was noted to receive inert waste from the tile works, including surplus aggregate and concrete products. A copy of Town and Country News article titled 'A roofing tile of outstanding merit', dated 14th November 1930 was provided by the client (Appendix D). The article includes photographs of

the site which appear to show a potential adit leading to underground workings, however it is unclear whether this feature was simply a part of the opencast sand excavation.

2.5 Published Geology

The general geology of the site is shown on the BGS GeoIndex and 1:50,000 geological map of Brighton and Worthing (Sheet 318), with further information provided in the BGS Memoir for Sheet 318. The 1:50,000 and 1:10,000 BGS map extracts are reproduced as part of the Groundsure Report in Appendix D. A summary of the published geology is presented in Table 2.5.

Table 2.5: Published Geological Sequence

Reference	Location	Stratigraphic Name	Description
Artificial Ground (Figure 2.4)			
A	On Site	Made Ground	Man-made superficial deposits of variable composition including waste bricks/tiles.
B	On Site	Worked Ground	Void – coincident to the location of the former sandpit in the southern half of site.
Solid Geology (Figure 2.5)			
1	On Site (outcrop to the south)	Folkestone Formation	Medium and coarse grained, well sorted cross-bedded sands and weakly cemented sandstones.
2	On Site	Fittleworth Member	Glauconitic sandy clays and clayey sands. Orange brown where weathered; bright green where unweathered.
	On site (at depth)	Hythe Formation	Underlying the Fittleworth Member. Fine to medium grained, sparsely glauconitic sands, sandstones and silts, locally pebbly with calcareous or siliceous cement.
Figures			

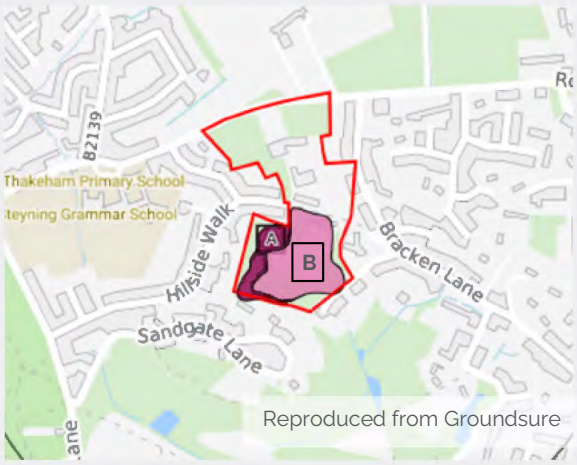


Figure 2.4: Superficial deposits

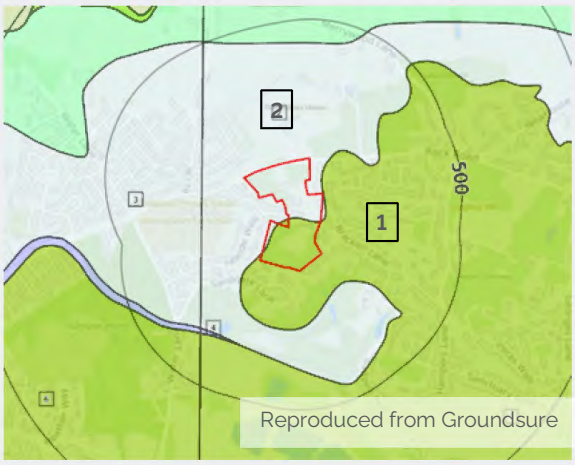


Figure 2.5: Solid geology

Some Made Ground is anticipated across the site area from previous development, with potentially deep Made Ground infilling the former sandpit. Superficial deposits are shown to be absent from the site. There are no faults beneath, or within influencing distance of the site.

2.5.1 *Regional Geology*

Storrington is situated within the South Downs of West Sussex and is part of the Wealden District that covers parts of Kent, Surrey and Hampshire. The Wealden District is characterised by various anticlines and synclines which form ridges and valleys across the landscape. The most prominent and central feature is known as the Weald Anticline, where the axis of this anticline is situated north of the site striking east to west with site being on the southern limb and the geological units dipping to the south at approximately 5˚.

The Wealden District is also divided into two main belts, the Northern and Southern belts, distinguished by their geological compositions. The Northern belt comprise the Chalk Group, Gault Clay and Upper Greensand with the Southern bely comprising the Chalk Group and Lower Greensand Group. The chalk has largely been eroded away within the Storrington area and exposes the older rock formations of the Lower Greensand Group which are split into the Atherfield Clay, the Hythe Formation, the Sandgate Beds (which includes the Fittleworth Member) and the Folkestone Formation.

2.6 BGS Borehole records

A number of borehole logs from the BGS archive (through GeoIndex) have been reviewed. Selected relevant records are summarised in Table 2.6. Boreholes that have been drilled on site have been reviewed and summarised in Section 3.2.

Table 2.6: BGS archive borehole logs

Reference	Location	Strata and Groundwater Observations
TQ11SW108	280m southeast	» Folkestone beds (soft sand with occasional bands of sandstone) – 0m to 31m bgl); and » Sandgate beds (stiff blue clay) - 31 to 32m bgl. » Water level at 8m below datum (mbd).
TQ11NW2	420m northeast	» Old well (strata not logged) – 0 to 9.1m bgl; » Hythe beds (hard blue rock) - 9.1m bgl to 27.4m bgl; and » Hythe beds (green sand to rock) – 27.4m to 27.6m bgl. » Water level at 16.7m

2.7 Hydrogeology

Information relating to the hydrogeological setting of the site is summarised in Table 2.7 through to Table 2.9.

Table 2.7: Aquifer system

Stratum	Aquifer Designation	Comments
Artificial Ground		
Made Ground	N/A	Moderate to high porosity because of unconsolidated nature, but permeability likely to be constrained to

Stratum	Aquifer Designation	Comments
		low or low to moderate where poor sorting and high clay content are present.
Solid Geology		
Folkestone Member	Principal aquifer	Geology of high intergranular and/or fracture permeability, usually providing a high level of water storage and may support water supply/river base flow on a strategic scale.
Fittleworth Formation	Secondary A aquifer	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.
Hythe Formation	Principal aquifer	Dual porosity aquifer, groundwater flows via intergranular flow (primary porosity) and along fractures (secondary porosity). The secondary porosity can contribute significantly to the permeability and flow.

The site is situated within the Hardham basin and is formed of the Folkestone Formation and Hythe Formation Principal aquifers, which are separated by the Sandgate Formation (also known as the Fittleworth Member) Secondary A aquifer. Due to its clay content, the Fittleworth Member in this region acts as an aquitard separating the two principal aquifers. The Hythe Formation aquifer is confined by the overlying Fittleworth Member and is hydraulically separated from the overlying Folkstone Formation. The Lower Greensand Group aquifers are known to be highly productive with yields up to 51l/s. Sandgate beds (which includes the Fittleworth Member) yield little groundwater.[1]

According to the Groundsure report, there are no active licensed groundwater abstraction or discharges within 250m of the site. However, in September 2024 a deep rotary borehole (58m depth) was drilled and tested in the north of the site with future intention to use as a groundwater abstraction point for the new development. Further details of the investigation and drilling of this borehole can be found in Hydrock report (reference: 08347-HYD-XX-XX-RP-GE-1005).

Table 2.8: Groundwater Vulnerability and Source Protection Zones

Item	Details
Groundwater Vulnerability	Principal Bedrock aquifer – High vulnerability Secondary bedrock aquifer – High vulnerability
Source Protection Zone	Not located within a source protection zone

[1] BGS. (1978). Hydrogeological map of the South Downs and the adjacent part of the Weald including parts of hydrometric areas 39, 40, 41 and 42. Scale 1:100,000.

Table 2.9: Other groundwater information

Item	Details
Operational Catchment	South East GW Management Catchment
Groundwater body	Lower Greensand Arun and Western Streams
Groundwater levels	The BGS borehole (TQ11SW108) recorded groundwater level within the Folkestone at 8mbd and (TQ11NW2) at 16m bgl within the Hythe Formation.
Groundwater quality	Poor classification rating (2019); » Chemical rating body – poor; » Quantitative – good. Objectives; Overall water body – good by 2027 (low confidence due to being disproportionately expensive
Groundwater flooding	Negligible

2.8 Hydrology

Information relating to the hydrological setting of the site is summarised in Table 2.10 and Table 2.11.

Table 2.10: Surface water features

Feature	Location	Flow direction and comments
Inland river (ditch/stream)	46m to 67m northwest	Inland river not influenced by normal tidal action. On ground surface. Watercourse contains water all year round.
Inland river (ditch/stream)	72m to 108m southeast	Inland river not influenced by normal tidal action. On ground surface (running underground 196m southeast). Watercourse contains water all year round.
Lake, loch or reservoir (pond)	119m to 207m southeast	On ground surface and contains water all year round.
Inland river (ditch/stream)	188m to 209 north east and 240m north	Inland river not influenced by normal tidal action. On ground surface. Watercourse contains water all year round.

There are no active licensed surface water abstractions or discharges within 250m of the site.

Table 2.11: Other surface water information

Item	Details
Operational Catchment	Arun and Western Streams
Water body	River Stor
Surface water quality	Moderate classification rating (2019-2022): » Ecological rating – moderate;

Item	Details
	» Chemical rating – fail.
Surface water drainage	Site level drainage is apparent at a number of points on the site. It was noted that a drainage feature is located alongside the fuel storage tank area in the form of a drainage channel which discharges off-site to the northwest.
Surface water flooding	Highest risk on site: 1 in 30 year, 0.1m – 0.3m. No further consideration of flood risk is undertaken in this report. Specialist flood risk advice should be sought with regard to drainage and flooding.

2.9 Mining and mineral extraction

Table 2.12: Mining and mineral extraction

Item	Details
Sand extraction	The site is recorded to have been subject to sand extraction. This relates to the disused sandpit within the southern half of the site. In addition, it appears some adits may have been progressed beneath the site.

2.10 Waste management

The southern area of the site, formerly a sand pit, has since been partially infilled by inert materials related to the waste product from the tile works. This is summarised in Table 2.13 and shown in Figure 2.6.

Table 2.13: Waste management sites

Site Name	Location	Details
Thakeham Tiles	On site - Storrington, Sussex	Status: Closed Operational dates: 1970-1994 Waste accepted: inert, (waste products from tile manufacturing)

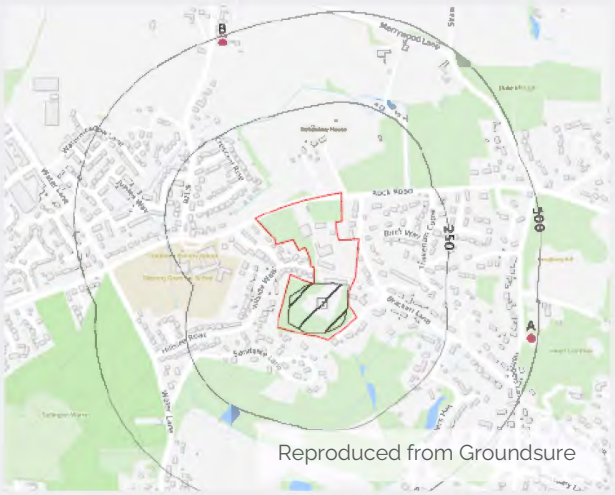


Figure 2.6: Waste management sites within 250m

2.11 Regulatory information

Information in the Groundsure Report, relating to various regulatory controls has been reviewed, with a summary of key aspects not included in the above sections presented in Table 2.14. Refer to Appendix D for further information. All distances quoted are approximate.

Table 2.14: Regulatory information within 250m of the site

Regulatory Data	Location	Details	Potential Risk	Comment
Licensed pollutant release	On site	Use of bulk cement	Yes	Potential contaminative processes from tile works.
	On site	Factory	Yes	Potential contaminative processes from tile works.
Recent industrial land uses	34m northwest & 67m northeast & 191m southwest	Electricity substation	No	Contaminants associated with substations (Polychlorinated Biphenyls - PCBs) are not considered mobile in soil or water.
	167m west	Petrol station (now obsolete)	No	Due to distance from site and being down gradient.
	168m west	Vehicle hire and rental	No	No contaminative processes identified and due to distance from site.
	174m west & 221m northwest	Vehicle repair, testing and servicing	No	Due to distance from site and being down gradient.
	239m west	Gas Meter House	No	Due to distance from site and being down gradient.

There are no records relating to the storage of radioactive materials within 500m of the site.

There is no Local Authority Pollution Prevention and Controls, COMAH sites, NIHHS sites, or Planning Hazardous Substance consents or enforcements within 500m of the site.

There are no contaminative industrial processes operating in the surrounding area at present, with historic records relating primarily to the site itself including the presence of the sandpit, railway and cement products works. However, as long as these have been operated in accordance with any applicable licence, no impact on the site is envisaged.

2.12 Radon

The radon risk is reported in a Radon Report obtained from the British Geological Survey. The site is in a radon affected area where 0-1% (southern half) and 1-3% (northern half) of homes are estimated to be at or above the action level.

At these levels no radon protective measures are necessary for incorporation into new properties or extensions to existing ones as described in publication BR211 by the Building Research Establishment.

A copy of the BGS radon report is presented in Appendix D.

2.13 Unexploded ordnance

There is no indication of former military use from the desk study, and screening against the Zetica regional bomb risk map (West Sussex) indicates the site to be in an area where the bomb risk is low. A copy of the map is presented in Appendix D.

The non-specialist UXO screening exercise has indicated no further assessment is required regarding UXO in relation to ground investigation. Further assessment may be considered prudent for construction activities.

3. Summary of previous reports

The previous reports that have been reviewed as part of this Desk Study are listed in Section 3.1.

3.1 List of previous reports

- Hydrock Consultants Ltd (Hydrock). July 2018. Rock Road, Storrington. Desk Study and Ground Investigation. Reference: TRS-HYD-XX-GI-RP-GE-1001;
- Hydrock Consultants Ltd. (Hydrock). May 2021. Supplementary Ground Investigation Report. Reference: 08347-HYD-XX-XX-RP-GE-1002;
- Hydrock Consultants Ltd. (Hydrock). January 2022. Supplementary Ground Investigation Factual Report. Reference: 08347-HYD-XX-XX-RP-GE-1003;
- Hydrock Consultants Ltd. (Hydrock). April 2022. Supplementary Ground Investigation. Reference: 08347-HYD-XX-XX-RP-GE-1004;
- Hydrock Consultants Ltd. (Hydrock). April 2022. Remediation Strategy and Verification Plan. Reference: 08347-HYD-XX-XX-RP-GE-3001;
- Hydrock Consultants Ltd. (Hydrock). February 2024. Water Features Survey. Reference: 08347-HYD-XX-XX-TN-GE-1001;
- Hydrock Consultants Ltd. (Hydrock). March 2024. Contaminated Land Risk Assessment Summary. Reference: 08347-HYD-XX-XX-TN-GE-1000;
- Hydrock Consultants Ltd. (Hydrock). June 2024. Ground Investigation Specification. Reference: 08347-HYD-XX-XX-SP-GE-1000;
- Hydrock Consultants Ltd. (Hydrock). September 2024. Abstraction well soil sampling assessment. Reference: 08347-HYD-XX-XX-TN-GE-1001; and,
- Hydrock Consultants Ltd. (Hydrock). December 2024. Water Supply Borehole Investigation. Reference: 08347-HYD-XX-XX-RP-GE-1005.

3.2 Ground conditions identified from previous investigations

The site before the development boundary was changed in 2025, has undergone numerous previous ground investigations and assessments between 2018 and 2024. The majority of the findings and works to date (with the exception of the abstraction borehole investigation) have been summarised in the Contaminated Land Risk Assessment review (reference: 08347-HYD-XX-XX-TN-GE-1000) which was produced for the client and the Environment Agency (EA), during the investigation of the groundwater abstraction well.

The ground conditions identified to date within the original boundary of site has been summarised below, in Table 3.1 and in Figure 3.1.

Table 3.1: Summary of ground conditions encountered (2018-2024)

Zone A (Northern main production facilities)		Zone B (Southern former sandpit/quarry area)	
Geology	**Depths (m bgl)**	**Geology**	**Depths (m bgl)**
Topsoil	0 – 0.6	Made Ground	0 – 5.45
Made Ground	0 – 5.55	Folkestone Formation	1 – 5.45
Fittleworth Member	0.25 - 27	Fittleworth Member	3.3 - 20
Hythe Formation	27 - 58		

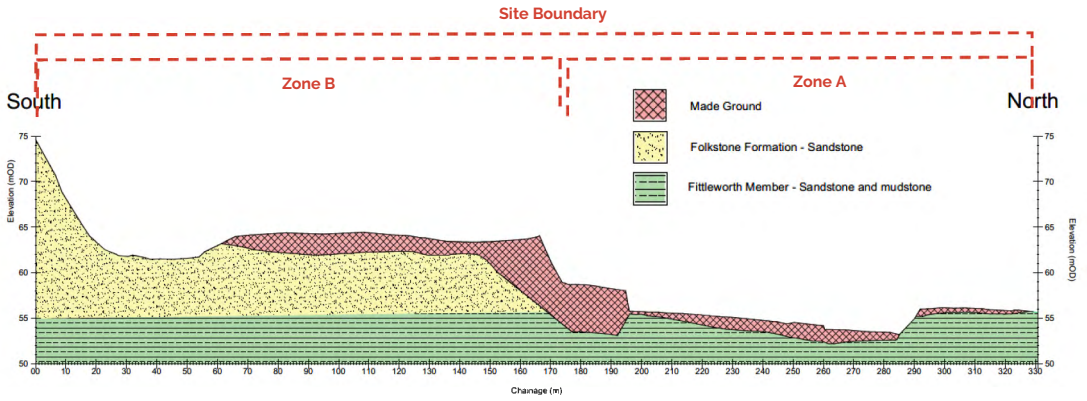


Figure 3.1: Indicative geological cross section of site

The conditions varied across site (Zone A – the northern area and Zone B - the southern area) and three types of Made Ground were identified:

- "**Surface covering**" which included concrete hardstanding/paving slabs within the northern area of site and reinforced concrete within the southern area which was found at a maximum depth of 0.30m bgl;
- '**General**' Made Ground which was found in the northern area to a maximum depth of 5.55m bgl; and,
- '**Quarry backfill/Landfilled**' Made Ground which was found in the southern area to a maximum depth of 5.45m bgl. This Made Ground within the southern area contained occasional visible asbestos and rare asbestos fibres. An investigation into the extent of the asbestos contamination has been undertaken and these findings can be found in report 08347-HYD-XX-XX-RP-GE-1004.

Topsoil was encountered in the northwest of site between 0.10m and 0.60m thick and comprised of dark brown clayey sandy silt with roots and rootlets.

The Folkestone Formation was encountered underlying and surrounding the quarry backfill/landfilled Made Ground only within the southern area of site between the depths of 1.00m to 5.45m bgl. This generally consisted of brownish red/pink of medium to very dense pink sands with rare interbedded sandstones. The Folkestone Formation was not encountered within the northern area of site. The BGS mapping shows the apparent contact between the Folkestone Formation and Fittleworth Member bisecting the site and the ground investigation data largely supports this.

The Fittleworth Member was encountered across the whole site underlying the Made Ground between depths of 0.25m bgl and 27m bgl within the northern area and between depths of 3.30m and 20m bgl within the southern area (bases of which was not proven). The strata comprised of greenish grey sands and clays and becoming weakly cemented sandy siltstone and sandstone at depths around 7.50m and 8.50m bgl.

The Hythe Formation was encountered during the drilling of the groundwater abstraction borehole undertaken in September 2024 within the northern half of the site. The transition from the Fittleworth Member to the Hythe Formation has been inferred as an approximate depth of 27m bgl due, but this is likely not the exact depth due to the difficulties in defining the two units due to the drilling method used, as well as their similarities geologically. This stratum was described and recovered as dark grey sandy fine and medium gravels of glauconitic sandstone and chert. This is not shown above in Figure 3.1, however it is expected to underlie the Fittleworth Member across the site.

In the south of the site is a former quarry area (sandpit) and historic landfill recorded as a licensed inert landfill between 1970 and 1982. Hydrock investigations have identified Made Ground to extend up to 5.45m bgl, with an average thickness of 2.39m. This comprised of cream, light brown sand over reddish brown and grey brown gravelly sand with occasional clay layers. Gravel noted to be of concrete, brick, metal, plastic and wood. Frequent asbestos containing materials and loose fibres were also encountered within the quarry area Made Ground.

3.3 Groundwater conditions

In general, shallow groundwater <1.0m bgl, was encountered during site works in the north of the site within the Made Ground (most likely perched groundwater). Within the Fittleworth Member (also within the north), groundwater was encountered at 49.62m and 50.99m above ordnance datum (OD), no groundwater was encountered within the Folkestone Formation during the site works.

Water levels recorded post-fieldwork in the north ranged from 48.86m and 55.77m OD (1.11m to 2.83m bgl) in the Made Ground and 47.77m to 54.14m OD (0.30m to 2.50m bgl) in the Fittleworth Member and in the south area between 59.72m to 60.30m OD (3.92 to 4.50m bgl) in the Folkestone Member.

Groundwater levels during the drilling of the groundwater abstraction borehole encountered an initial seepage within the hand pit at 1.25m bgl. During drilling, a deeper water strike was encountered at 19.80m bgl rising to 12.25m bgl after 40 minutes. Resting groundwater after the drilling was recorded between 13.65m and 14.43m bgl.

The groundwater generally flows south to north and appears to be topographically controlled.

3.4 Geo-environmental findings

Hydrock drawing 37212-HYD-XX-XX-DR-GE-1005, presented in Appendix A, highlights the main areas of contamination that have been identified throughout the investigations. This drawing also includes all the positions of all exploratory hole locations undertaken from to date.

A summary of identified contamination is outlined in the Remediation Strategy and Verification Plan (08347-HYD-XX-XX-RP-GE-3001) and is presented below:

Human Health

- Elevated Lead in Made Ground – General, in the north of the site (WS204, WS108 and WS110).
- Elevated Total Petroleum Hydrocarbons (TPH) (WS203B, WS102, WS108, WS110, TP107 and SA104).
- Elevated Benzo(a)anthracene, Benzo(b)fluoranthene, Indeno(1,2,3,cd)pyrene, chrysene and dibenz(a,h)anthracene in Made Ground – General in the north of the site and in Made Ground – Quarry backfill.
- Asbestos in Made Ground - General and Quarry backfill/landfilled Made Ground. Rare to frequent incidences of visible asbestos and asbestos loose fibres were encountered in a number of locations in the southern site area (former quarry). Sporadic visible asbestos and loose asbestos fibres were identified within the northern site area.

Plant Growth

- Elevated Zinc in Made Ground – General (WS212, WS103, WS108 and WS110).
- Elevated Boron in Made Ground – General (SA106 and SA103).

Waters

» Petroleum hydrocarbons were detected at WS203B in the vicinity of the fuel storage and old filling pump.

Ground Gas

» Characteristic Situation 1 conditions determined – no additional gas mitigation required.
» No significant risk concluded with respect to potential for VOC vapours.

Construction materials:

» Plastic or bitumastic products may be at risk from high concentrations of petroleum hydrocarbons locally – consideration should be given to the appropriate selection of constriction materials.

Water supply pipes:

» The site is brownfield and organic contamination (Polycyclic Aromatic Hydrocarbons (PAH), Volatile Organic Compounds (VOCs), and petroleum hydrocarbons) has been identified in exceedance of the threshold values in some locations across the site. Barrier pipe should be used for potable water supply. However, confirmation should be sought from the water supply company at the earliest opportunity.

As part of the Environment Agency (EA) requirements during investigation for the abstraction well on site in September 2024, contamination analysis was required to be undertaken within the hand pit of BH1, prior to the commencement of drilling works. The report (reference: 08347-HYD-XX-XX-TN-GE-1001) concluded that all Chemicals of Potential Concern (CoPC) within the soils of the hand pit were below the relevant GAC and therefore all relevant contaminant linkages are incomplete.

3.5 Remedial Recommendations

Investigation and risk assessment have concluded that the site will require remediation to mitigate the risks to the identified receptors from lead, PAH, TPH hotspots and sporadic asbestos in the north area of the site; and to mitigate the risk of PAH and TPH hotspots and frequent asbestos across the south area of the site.

The objectives of the remediation are to sever one or more of the linkages within the source-pathway-receptor model. The Remediation Strategy and Verification Plan (RSVP) (report ref: 08347-HYD-XX-XX-RP-GE-3001) details the recommended remedial measures for the site. A summary of actions is provided below.

» Existing industrial processes will cease and buildings be subject to demolition (with prior removal of asbestos containing materials).
» Fuel storage infrastructure will be removed.
» Hotspots and point sources will be remediated and subject to validation works.
» The selected most appropriate remediation options include a combination of:
    » appropriate materials handling and stockpiling in accordance with a Materials Management Plan (MMP);
    » In-situ remediation of soils (hand picking visible ACM);
    » watching brief during groundworks;

- installation of Protectaline or similar protective pipework for supply of potable water to the properties;
- import of subsoil and topsoil in accordance with a Materials Management Plan (MMP);
- the installation of an engineered cover system in private gardens and POS areas; comprising:
  - A geotextile marker layer; and
  - Imported subsoil / topsoil (600mm in private gardens and 450mm in public open space), comprising a minimum of 150mm topsoil.

A verification report will be produced outlining the extent of remediation undertaken.

4. Consultations and local knowledge

Discussions have been held with Horsham District Council Environmental Health & Licensing Department. Information provided through consultation, relating to the site confirms the findings of the information presented in this study.

The southern part of the site was confirmed as a recorded licensed inert landfill with site references given as WD27/212 and WD13/38. First input is reported as received in 1970 and last input in 1982. Records are held by the Environment Agency.

The site is confirmed to overly a Principal Aquifer with High Groundwater vulnerability.

Historic Petroleum Licensing records provided by West Sussex Country Council show up to 500 gallons of petrol were stored at the site. Storage of diesel fuel was not licensed.

The site is currently permitted for the blending, packing, loading, unloading and use of bulk cement. The Permit reference is EPR19.

No incidents of pollution at the site have been reported to Horsham District Council.

5. Preliminary Ground Model

Much of the ground model on site has been investigated and assessed (Zone A and Zone B). The preliminary ground model is based on the information on the ground conditions presented in Sections 2 and 3 and integrates site-specific data (where available) with regional geological desk-based information.

Table 5.1: Preliminary Ground Model

Strata	Expected Thickness (m)	Description	Comments
Artificial Ground/Topsoil			
Made Ground	0.10 – 5.55	Man-made superficial deposits of variable composition including waste bricks/tiles.	Encountered within Zone A and Zone B.
Topsoil/Made Ground	0 - 0.50	Topsoil expected within Zone C (the woodland areas adjacent to Rock Road). Some localised Made Ground expected (potential fly tipping), but not expected to be a significant thickness due to the nature that these areas have been woodland and not developed on.	
Solid Geology			
Folkestone Formation	1 – 5.45	Medium and coarse grained, well sorted cross-bedded sands and weakly cemented sandstones.	Encountered within Zone B (southern half of site only).
Fittleworth Member	0.50 - ~27	Glauconitic sandy clays and clayey sands. Orange brown where weathered; bright green where unweathered.	Encountered across site, underlying Folkestone in Zone B and underlying topsoil/made ground in Zone A. Expected to underlie topsoil/made ground in Zone C.
Hythe Formation	~27 to 58	Underlying the Fittleworth Member. Fine to medium grained, sparsely glauconitic sands, sandstones and silts, locally pebbly with calcareous or siliceous cement.	Encountered underlying the Fittleworth Member in Zone A during drilling of the groundwater abstraction well. It is expected to underlie the Fittleworth Member across the site (Zone B and Zone C).

Much of the geology encountered on site has comprised mostly of the Lower Greensand Group. The higher ground towards the south of the site is underlain by the sands and weakly cemented sandstones of the Folkestone Formation which overlies the sandy clays and clayey sands of the Fittleworth Member. The lower ground, towards the north of the site, the Folkestone Formation is absent, and the site is underlain by the Fittleworth Member and the Hythe Formation. No natural superficial deposits are recorded across the site overlying the bedrock geology. Generally Made Ground beneath the site is thin

and shallow (with an average thickness of 1.64m in the north of the site and 2.39m in the south of the south), but locally thicker Made Ground was encountered in the northern area and worked ground associated with the southern quarry area up to a maximum thickness of 5.47m.

The absence of the Folkestone Formation within the northern half of site, is consistent with the BGS mapping where the apparent contact between the Folkestone and Fittleworth bisects the site. The deepest borehole on site has been drilled to 58m bgl, identified the Fittleworth Member to approximately 27m bgl and the Hythe Formation below this from 27m to 58m bgl. The base of the Hythe Formation has not proven.

Based on publicly available mapping records, the new woodland areas (Zone C) in the north of the site are anticipated to be very similar geologically to Zone A, with the absence of the Folkestone Formation.

6. Ground hazards

6.1 Natural ground instability

The site is considered to have a very low to low risk of running sands, although it must be considered that there may be possibility of running sand problems after major changes in ground conditions. Collapsible deposits are considered a very low risk for site. However, it appears that adits may have been progressed on the site in the 1930s, the nature and extent of these is unclear.

The risk of ground dissolution from soluble rocks or from shrinking or swelling of clays is rated as negligible on the site. Landslides are considered to be at a low risk of occurring on site, although the steep cut face at the extent of the former sand pit may be at an angle unconducive to stability.

6.2 Preliminary geotechnical hazard identification

Potential geotechnical hazards have been assessed in accordance with the general requirements of ICE/DETR Document 'Managing Geotechnical Risk' and the HE documents CS 641 and CD 622. Table 6.1 sets out the identified geotechnical risks and hazards which are associated with the site.

Table 6.1: Preliminary geotechnical hazard identification

Hazard	Hazard Plausible	Comment
Uncontrolled Made Ground (variable strength and compressibility).	Yes	There is Made Ground due to historical construction activity as well as infilling of the former sand pit in the southern half of site.
Soft / loose compressible ground (low strength and high settlement potential).	Yes	Uncontrolled Made Ground and Worked Ground and unknown strength of soils.
Shrinkage / swelling of the clay fraction of soils under the influence of vegetation.	Yes	The shallow bedrock comprises of clayey sands. Strength unknown.
Variable lateral and vertical changes in ground conditions	Yes	The site is on a slope and the extent, composition and thickness of Made Ground also varies across the site
Attack of buried concrete by aggressive ground conditions.	Yes	The ground investigation has proven that there is the potential for expansive sulphate bearing soils to be present at depth within the Fittleworth Formation
Adverse chemical ground conditions, (e.g. expansive slag).	No	Expansive slag has not been identified on site.
Obstructions.	Yes	Obstructions have been proven by the investigation and there is a potential for additional obstructions to be present due to historical construction activity, or unknown fill in Made Ground.

Hazard	Hazard Plausible	Comment
Existing below ground structures to remain (on or off-site tunnels, foundations, basements, and adjacent sub-structures).	Yes	Existing building and structures (including adit) are likely to be present and will require removal prior to redevelopment.
Shallow groundwater.	Yes	Perched water encountered in the Made Ground. Boreholes drilled on site have recorded groundwater between <1m bgl and 19.80m bgl.
Changing groundwater conditions.	Yes	Groundwater may be seasonally affected.
Risk from erosion or flooding.	No	No erosion or flooding is anticipated.
Running sands and / or loose Made Ground, leading to difficulty with excavation and collapse of side walls.	Yes	The ground investigation has indicated that there is a potential for loose soils and Made Ground to be present at the site.
Slope stability issues – general slopes.	Yes	The site is on a significant slope.
Slope stability issues – retaining walls.	Yes	The proposed development will likely require retaining walls to be constructed and/or existing ones to remain.
Earthworks – poor bearing capacity of new fill.	No	Any imported fill should be as required in regards to its suitability of engineering properties relating to the proposed use and subgrade it will be placed upon.
Earthworks – unsuitability of site won material to be reused as fill.	Yes	There is a requirement for cut to fill to create the development platform and filling of remediation excavations. This will require reuse of soils excavated from the site.
Solution features in Chalk.	No	Chalk bedrock not present underlying the site.
Cavities in the superficial deposits, due to solution features.	No	No superficial deposits present.
Dissolution (associated with 'wet rock head').	No	N/A
Brine extraction.	No	N/A
Mining/mineral extraction	Yes	Historical sand extraction in the south of site, potential for adits.
Possible cambered ground with gulls possibly present.	No	N/A
Relict slip surfaces.	No	N/A

Hazard	Hazard Plausible	Comment
Problematic soils.	Yes	Made Ground/Worked Ground has been encountered across site.
Unforeseen ground conditions - risk associated with limited data.	Yes	Ground investigation has been undertaken. However, additional information will be obtained during construction. Ground conditions are only defined at exploratory hole locations.

6.3 Potential development elements affected

Development elements potentially affected by geotechnical hazards are:

- Building foundations.
- Building floor slabs.
- Roads and pavements.
- Services.
- General slopes.
- Retaining walls.
- Gardens.
- Construction staff, vehicles and plant operators.
- Concrete below ground.
- Earthworks control, inability to place and compact fill.
- Insufficient fill to complete earthworks.

Health and safety risks to site Contractors and maintenance workers have not been assessed and will need to be considered separately during design.

7. Initial Conceptual Site Model and Preliminary Risk Assessment

7.1 Introduction

The initial Conceptual Site Model (CSM) and Preliminary Risk Assessment incorporates evidence from the site walkover, the Desk Study, and previous investigations carried out at the site. The formulation of an initial CSM is a key component of the LCRM methodology for assessing geoenvironmental risk, and incorporates the Preliminary Ground Model of the site physical conditions (Section 5) and the identification of potential contaminant linkages.

The available information has used to identify geo-environmental hazards and to establish potential contaminant linkages based on the source-pathway-receptor (S-P-R) approach. A viable contaminant linkage requires all the components of an S-P-R to be present. If only one or two are present, there is no linkage and no further assessment is required.

Health and safety risks to site development contractors and maintenance workers have not been assessed as part of this study and will need to be considered separately.

7.2 Potential contaminants

For the purpose of this assessment the potential contaminants have been separated according to whether they are likely to have originated from an on-site or off-site source.

7.2.1 Potential on-site sources of contamination

- Made Ground below the site from development of the tile works (metals, metalloids and PAH) - S1;
- Made Ground below the site from development of the tile works (asbestos) - S2;
- Asbestos within existing buildings – S3;
- Landfill, inert waste products from the infilling of former sand pit and known records of historical landfill usage (cementitious products and concrete) – S4;
- Petroleum hydrocarbon fuels, lubricants and chlorinated solvents associated with the workshops and on-site storage – S5; and,
- Ground gases (carbon dioxide and methane) from the organic materials in the infilled sand pit area and the general Made Ground below the site – S6.

7.2.2 Potential off-site sources of contamination

No potential off-site sources of contamination have been identified.

7.3 Potential receptors

The following potential receptors in relation to the proposed land use have been identified.

- Humans (neighbours, future site users) – R1;
- Development end use (buildings, utilities and landscaping) – R2;
- Groundwater: Principal aquifer status of the Folkestone Formation and Secondary A aquifer status of the Fittleworth Member – R3;
- Surface water: on-site drainage ditch and streams in the vicinity of the site – R4; and

- Ecology: the wooded areas surrounding the former sand pit area is known to support a number of badger setts – R5.

7.4 Potential pathways

The following potential pathways have been identified.

- Humans: ingestion, skin contact, inhalation of dust and indoor air – P1;
- Buildings: direct contact with substances deleterious to building materials – P2;
- Buildings: methane ingress via permeable soils and/or construction gap – P3;
- Plant life: root uptake – P4;
- Underlying groundwater: migration of contaminant via leachate dispersion through the unsaturated and saturated zone within the Folkestone and Fittleworth Formations – P5;
- Surface water: overland flow – P6;
- Surface water: drainage discharge – P7;
- Surface water: base flow from groundwater – P8;
- Wildlife: ingestion, skin contact, inhalation of dust and outdoor air – P9.

7.5 Potential implications of climate change

Climate change has the potential to change the risk profile for conceptual site models and associated contaminant linkages. The impact of climate change on the CSM is site-specific, and a qualitative assessment of the potential impact of climate change on the CSM for this site is summarised below. The assessment has primarily utilised the guidance in Environment Agency (2010) and SoBRA (2022) which set out the UK context to climate change and land contamination. Both guidance documents advocate a "what if" scenario approach in the context of changes in ambient temperatures, an increase in the frequency of extreme rainfall/storm events and heatwaves/droughts, and long-term changes in groundwater and sea levels.

Those "what if" scenarios that are relevant to this CSM are:

- Increased long-term rainfall leading to increased infiltration and seasonally higher groundwater and water levels in surface waters.
- Increased frequency and/or magnitude of extreme rainfall events leading to short-term surface flooding, surface water run-off, groundwater flooding, and/or land-based erosion.
- Increased frequency and/or magnitude of storm events leading to short-term drops in barometric pressure and/or high winds.
- Occurrence of extreme cold and hot weather events leading to changes in ground conditions such as soil temperature, evapo(trans)piration, and soil moisture (for example freeze-thaw effects and desiccation), decreased infiltration and fall in groundwater and surface water levels.
- Long-term decrease in rainfall leading to lower infiltration and fall in groundwater and surface water levels.

In considering the potential impact of climate change, the following factors have been considered:

- The design life of the proposed development is 50-100 years.

- The location and elevation of the site in relation to the sea is 13km in distance (English Channel), 51m (northern half of site) to 65m (southern half of site) above ordnance datum.
- The location and elevation of the site in relation to projected increased flooding extents is currently situated within a Flood Zone 1, which means it is at very low risk of flooding (>1% chance per year) and a very low chance of flooding between 2036 and 2069.
- The underlying geology at the site are unlikely to be physically adversely affected by desiccation, subsidence or erosion.
- The UK Climate Predictions published by the Met Office indicate that over the lifetime of the proposed development average:
  - Precipitation is forecast to decrease annually by 9.9% by 2085;
  - Temperature is forecast to increase by 4.9˚C by 2085;
  - Sea level is forecast to increase by 70 to 115cm by 2100; and
  - Groundwater recharge is forecast to increase in the winter and spring months and decrease in the summer and autumn months by 2050 to 2079. Table 7.1 summarises the projected average seasonal groundwater recharge within the Lower Greensand Arun and Western Streams using the Enhanced Future Flows and Groundwater (eFLaG) dataset[2]. The recharge changes are viewed as three slices of time throughout each season of the year: Baseline represents the years 1989-2018; Near future represents the years 2020-2049 and far future represents the years 2050-2079. Additional detailed investigation on the aquifer recharge for the site is provided in Hydrock report 08347-HYD-XX-XX-RP-GE-1005).

Table 7.1: Seasonal average projections of groundwater recharge within the Lower Greensand Arun and Western Streams

Seasons	Average Baseline (BL) mm/day	Average Near Future (NF) mm/day	Average Far Future (FF) mm/day	Comment
Spring (M, A, M)	0.44	0.44	0.45	An increase in average groundwater recharge from BL to FF by 0.01mm/day.
Summer (J, J, A)	0.08	0.04	0.02	A decrease in average groundwater recharge from BL to FF by 0.06mm/day.
Autumn (S,O,N)	0.98	0.86	0.73	A decrease in average groundwater recharge from BL to FF by 0.25mm/day.
Winter (D,J,F)	1.63	1.68	1.91	An increase in average groundwater recharge from BL to FF by 0.28mm/day.

[2] UK Centre for Ecology and Hydrology, 2024. Enhanced Future Flows and Groundwater Portal

» Potential changes in soil moisture levels and soil temperature are not likely to have a significant impact on contaminant fate and transport (mobility and degradation) noting that a rise in soil temperature will likely increase the volatility and solubility of contaminants and increase the microbial degradation of contaminants. A reduction in soil moisture may decrease microbial degradation and increase vapour and gas diffusion.

For further details on the considerations made, refer to Table E.1 in Appendix E.

7.6 Summary of potential contaminant linkages

The above sources, pathways and receptors have been identified as part of a Preliminary Risk Assessment in accordance with Stage 1 of LCRM (2023). These are considered to be plausible in the context of this site and the available information and have been carried forward for investigation and assessment.

The previous desk study written in 2018, did not provide an initial risk level to the potential contaminant linkages identified at desk study stage. This has been included in Table 7.3.

Table 7.3 lists the plausible contaminant linkages which have been identified. These are considered as potentially unacceptable risks in line with guidelines published in LCRM (2023) and additional risk assessment is required.

S-P-R linkages have been assessed in general accordance with guidance in CIRIA Report C552 (Rudland et al 2001) as modified to reflect changes made in Table A4.5 of NHBC/EA R&D66 (2008), to remove the ambiguous term "low/moderate risk", and to adopt "Extremely low risk" for the lowest risk category (see Table 7.2).

Table 7.2: Consequences versus probability assessment

		Consequence			
		Severe	Medium	Mild	Minor
Probability	High likelihood	Very high risk	High risk	Moderate risk	Low risk
	Likely	High risk	Moderate risk	Low risk	Very low risk
	Low likelihood	Moderate risk	Low risk	Low risk	Very low risk
	Unlikely	Low risk	Very low risk	Very low risk	Extremely low risk

Table 7.3: CSM

Source	Pathway	Receptor	Risk Level	Comment
Made Ground below the site from development of the tile works (metals, metalloids and PAH) - S1	Soil ingestion, direct dermal contact, soil derived dust inhalation	Site users	Moderate	There is Made Ground and Worked Ground across the site due to the historical development and infilling of former sandpit. Elevated metals, PAHs and TPHs have been identified across site. Contact with these materials is likely in soft landscaping areas.

Source	Pathway	Receptor	Risk Level	Comment
				Mitigation measures will be required to break the SPR linkage.
	Inhalation of fugitive dusts	Neighbours	Low	The risk of significant dust generation is likely only during site development process and can therefore be controlled with good site practices.
	Leaching from unsaturated soils	Groundwater (Folkestone Formation and Hythe Formation - Principal aquifers. Fittleworth Member – Secondary A aquifer)	Low	No significant risk considered to controlled waters.
	Surface water run-off	Aquatic ecosystem in adjacent surface water	Low	Surface water run-off will drain into onsite drainage and drainage situated on Rock Road and will unlikely flow to any surface water features situated nearby.
	Base flow from contaminated groundwater		Moderate	Flow of groundwater may occur through soils to the aquifer at depth.
	Plant root uptake	Landscape planting	Low	Elevated levels of zinc and boron identified within the ground investigation, growing medium will have to be imported in areas of proposed soft landscaping.
Made Ground below the site from development of the tile works (asbestos) - S2	Inhalation of fugitive dust	Future site users Neighbours	High	There is Made Ground and Worked Ground across the site due to the historical development and infilling of former sand pit. and asbestos fibres/ACM has been encountered. Contact with these materials is likely in soft landscaping areas. Mitigation measures may be required to break the SPR linkage.

Source	Pathway	Receptor	Risk Level	Comment
				Good site practices during construction will be required to mitigate risks to off-site neighbours.
Asbestos in existing buildings – S3	Inhalation of fugitive dust	Site users	High	Asbestos may be present in existing buildings due to pre-2000 construction. Careful removal will be required from buildings during demolition
		Neighbours	Low	Removal under controlled conditions should limit release of fibres to the air and the ground.
Landfill, inert waste products from the infilling of former sand pit and known records of historical landfill usage (cementitious products and concrete) – S4	Soil ingestion, direct dermal contact, soil derived dust inhalation	Site users	Low	A historical landfill is present within the former sandpit area to the south. Contact with these materials is likely in soft landscaping areas. Mitigation measures will be required to break the SPR linkage.
	Inhalation of fugitive dust	Neighbours	Low	The risk of significant dust generation is likely only during site development process and can therefore be controlled with good site practices.
	Leaching from unsaturated soils	Groundwater	Low	No significant risk to controlled waters identified.
	Surface water run-off	Aquatic ecosystem in adjacent surface water	Low	Surface water run-off will drain into onsite drainage and drainage situated on Rock Road and will unlikely flow to any surface water features situated nearby.
	Plant root uptake	Landscape planting	Low	Growing medium will have to be imported in areas of proposed soft landscaping.
Petroleum hydrocarbon fuels, lubricants and chlorinated	Soil ingestion, direct dermal contact, soil derived dust inhalation	Future site users	Moderate	Petroleum hydrocarbons recorded in soils during previous ground investigations. Contact with these materials is likely in soft landscaping areas.

Source	Pathway	Receptor	Risk Level	Comment
solvents associated with the workshops and on-site storage – S5				Mitigation measures will be required to break the SPR linkage.
	Leaching through unsaturated zone.	Groundwater	Low	No significant risk to controlled waters identified.
	Surface run-off.	Aquatic ecosystem in adjacent surface water	Low	Surface water run-off will drain into onsite drainage and drainage situated on Rock Road and will unlikely flow to any surface water features situated nearby.
Ground gases (carbon dioxide and methane) from organic materials in the infilled sand pit area and the general Made Ground below the site – S6	Vertical migration and ingress into buildings	Future site users	Low	There is Made Ground and Worked Ground across the site due to the historical development and infilling of former sand pit. However, based on the monitoring to date, CS1 conditions have been determined for the site where gas protections measures are not required.
		On site buildings	Low	

The possible contaminant linkages (for risk levels of moderate or greater) on an unremediated redeveloped site, as determined by the desk study and walk-over and previous investigations, are summarised in the table below:

Table 9.4: Possible Contaminant Linkages (for Risk Levels of Moderate or Greater)

Source(s)	Pathway(s)	Receptor(s)
Metals, metalloids, PAH, petroleum hydrocarbons and asbestos in Made Ground below the site.	Soil ingestion, direct dermal contact, soil derived dust inhalation	Site users
Made Ground below the site from development of the tile works (asbestos)	Inhalation of fugitive dust	Future site users Neighbours
Asbestos in existing buildings	Inhalation of fugitive dust	Future site users Neighbours
Petroleum hydrocarbon fuels, lubricants and chlorinated solvents associated with the workshops and on-site storage	Soil ingestion, direct dermal contact, soil derived dust inhalation	Future site users

8. Conclusions and recommendations

8.1 Geotechnical conclusions

The following plausible geotechnical risks are identified:

- Variable Made Ground - settlement or differential settlement of foundations, floor slabs, roads and infrastructure elements.
- Low strength, compressible ground – risk of shear failure and excessive settlement of foundations, roads and infrastructure elements.
- Attack of buried concrete by aggressive ground conditions – the development contains Made Ground and potentially sulfate bearing soils.
- Shrinkage/swelling of clay – settlement/heave of foundations, especially where located within the influence of trees and vegetation.
- Running sands, loose Made Ground and shallow groundwater, leading to difficulty with excavation due to trench instability.
- Instability of slopes and impact on foundations, floor slabs, roads and infrastructure and construction plant.
- Potential for obstructions and the risk of instability of excavations with the impact on construction staff, vehicles and plant operators.
- Earthworks – Low bearing capacity or settlement of new fill and impact on foundations, floor slabs, roads and infrastructure and construction plant.
- Potential for unforeseen ground conditions and the risks associated with limited data in the woodland areas adjacent to Rock Road which have not been investigated.

These plausible risks require further investigation and assessment (see recommendations).

8.2 Geoenvironmental conclusions

Based on historical and current land uses:

- It is considered that it is unlikely that the site would be classified as Contaminated Land under Part 2A of the EPA 1990.
- The overall risk from land contamination at the site is considered to be low for the current development, as it is covered by hard standing or buildings limiting the possibility of contact with the soils, as well as the risk of significant rainwater infiltration leading to leaching.
- The overall risk for a redeveloped site is assessed to be low to moderate.
- The woodland areas not investigated to date, will need preliminary investigation testing and assessment to confirm these areas are suitable.

8.3 Recommendations

Following the update to the site boundary in 2025, the following additional works are recommended:

- Preliminary ground investigation within the deciduous woodland area to the west along Rock Road, following vegetation clearance to include trial pitting and drilling of boreholes to confirm ground conditions, identify contamination if any within the underlying soils/geology are present along with the undertaking of insitu (SPT) to determine soil density to aid foundation design;

- Preliminary ground investigation within the deciduous woodland to the east, along Rock Road, to include hand pitting to confirm ground conditions and identify contamination if any within the underlying soils/geology are present;
- Update the ground model;
- Provide geotechnical design recommendations;
- Update the CSM, including identification of plausible pollution linkages;
- Undertake generic quantitative risk assessment of potential chemical contaminants to establish 'suitability for use' under the current planning regime;
- Discuss potential environmental liabilities associated with land contamination (soil, water and gas); and
- Provide updates if required to the mitigation and remediation recommendations to ensure the site is 'suitable for use'.

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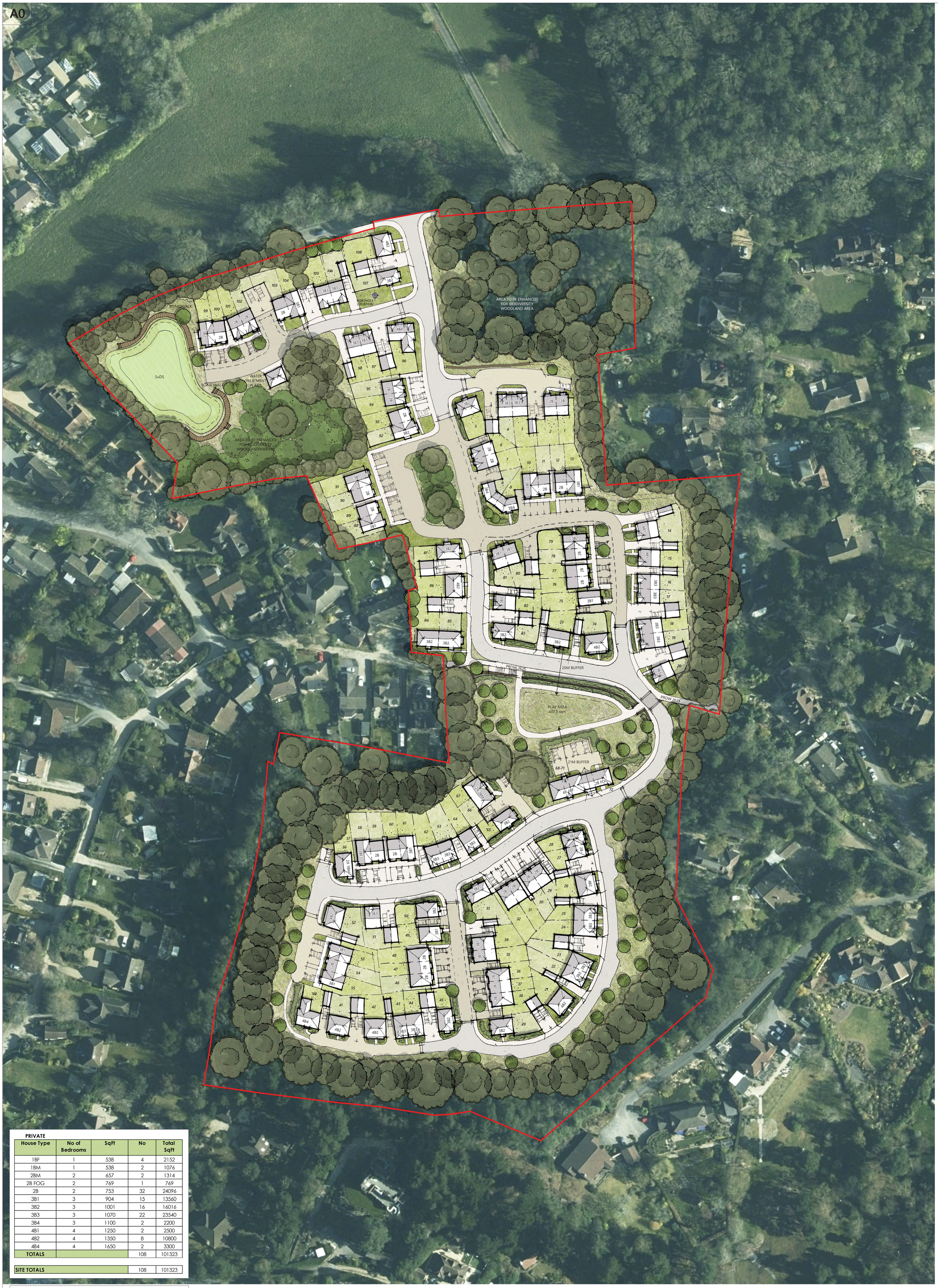
Appendix A Drawings

A0



PRIVATE

House Type	No of Bedrooms	SqFt	No	Total SqFt
1BF	1	538	4	2152
1BM	1	538	2	1076
2BM	2	657	2	1314
2B FOG	2	769	1	769
2B	2	753	32	24096
3B1	3	904	15	13560
3B2	3	1001	16	16016
3B3	3	1070	22	23540
3B4	3	1100	2	2200
4B1	4	1250	2	2500
4B2	4	1350	8	10800
4B4	4	1650	2	3300
TOTALS			108	101323

SITE TOTALS	108	101323

— Site Boundary
26 Plot Number
3B2 House Type

0 5 10 15 20 25 30 35 40 45 50m
1:500

N

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Portishead T: 01275 407000
London T: 01794 367703

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Rev	Description	Date	Au	Ch
A	Issued for Planning	10.09.25	CI/HP	--/--

Project	Land at Thakeham Tiles, Storrington				
Drawing	Illustrative Masterplan - 04				
	-				
Client	Thakeham Tiles Ltd				
Job no.	THAK230417			Date	10.09.25
Dwg no.	IMP-04			Rev.	A
Author	CI/HP	Checked	-/-	Scale	1:500@A0
Status	PLANNING			Office	Romsey
Client ref.	-				

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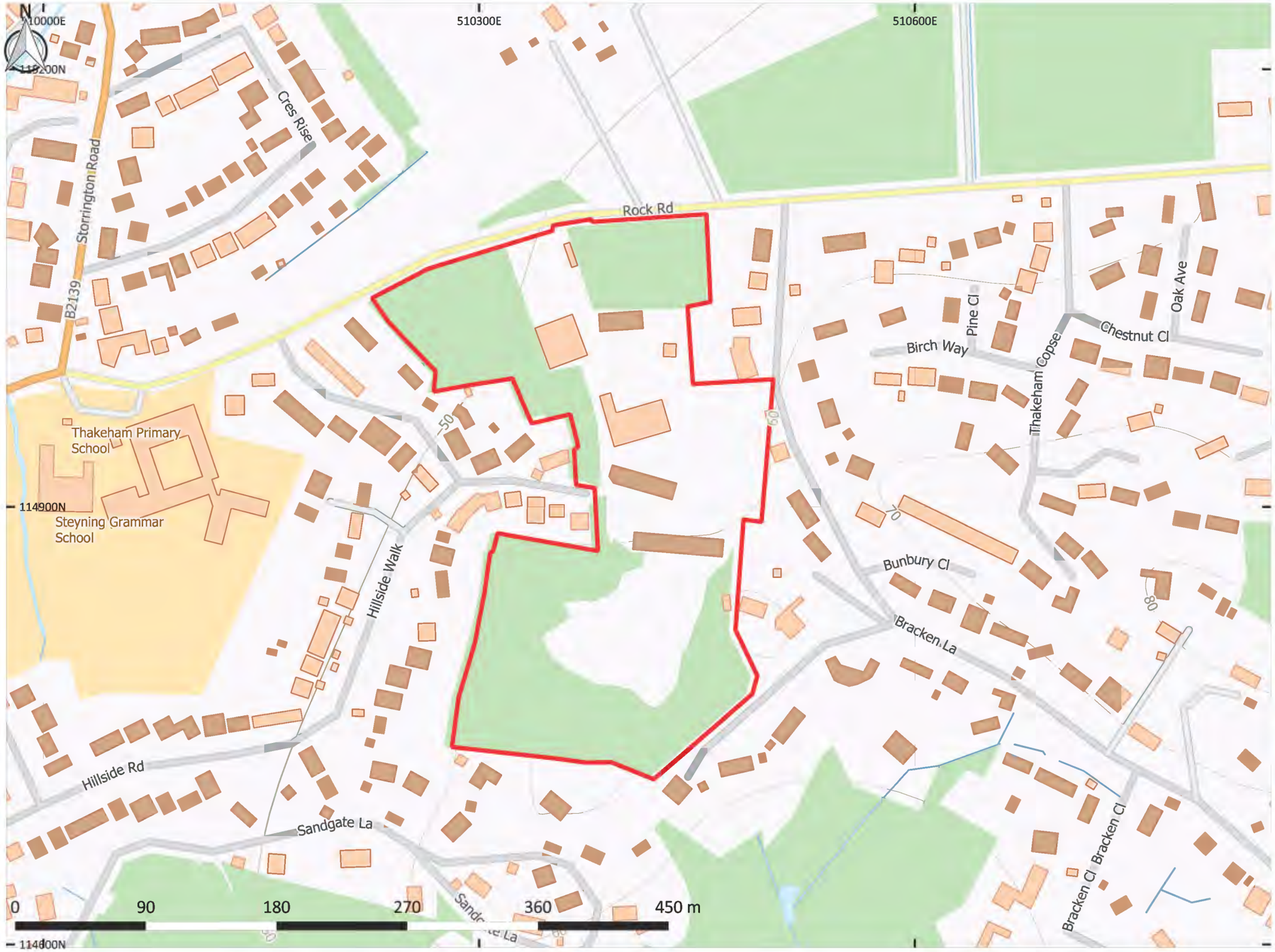


KEY PLAN

Site Boundary

NOTES

1. Contains OS data © Crown copyright and database right (2022)

REVISIONS

REV.	DRAWN BY INITIALS	CHECKED BY INITIALS	DATE	REVISION NOTES/COMMENTS
P01	PL	LC	270325	First issue

Hydrock now Stantec

TITLE
SITE LOCATION PLAN

HYDROCK PROJECT NO.
37212

SCALE @ A3
1:3,000

CLIENT
Thakeham Tiles Ltd

PURPOSE OF ISSUE
SUITABLE FOR INFORMATION

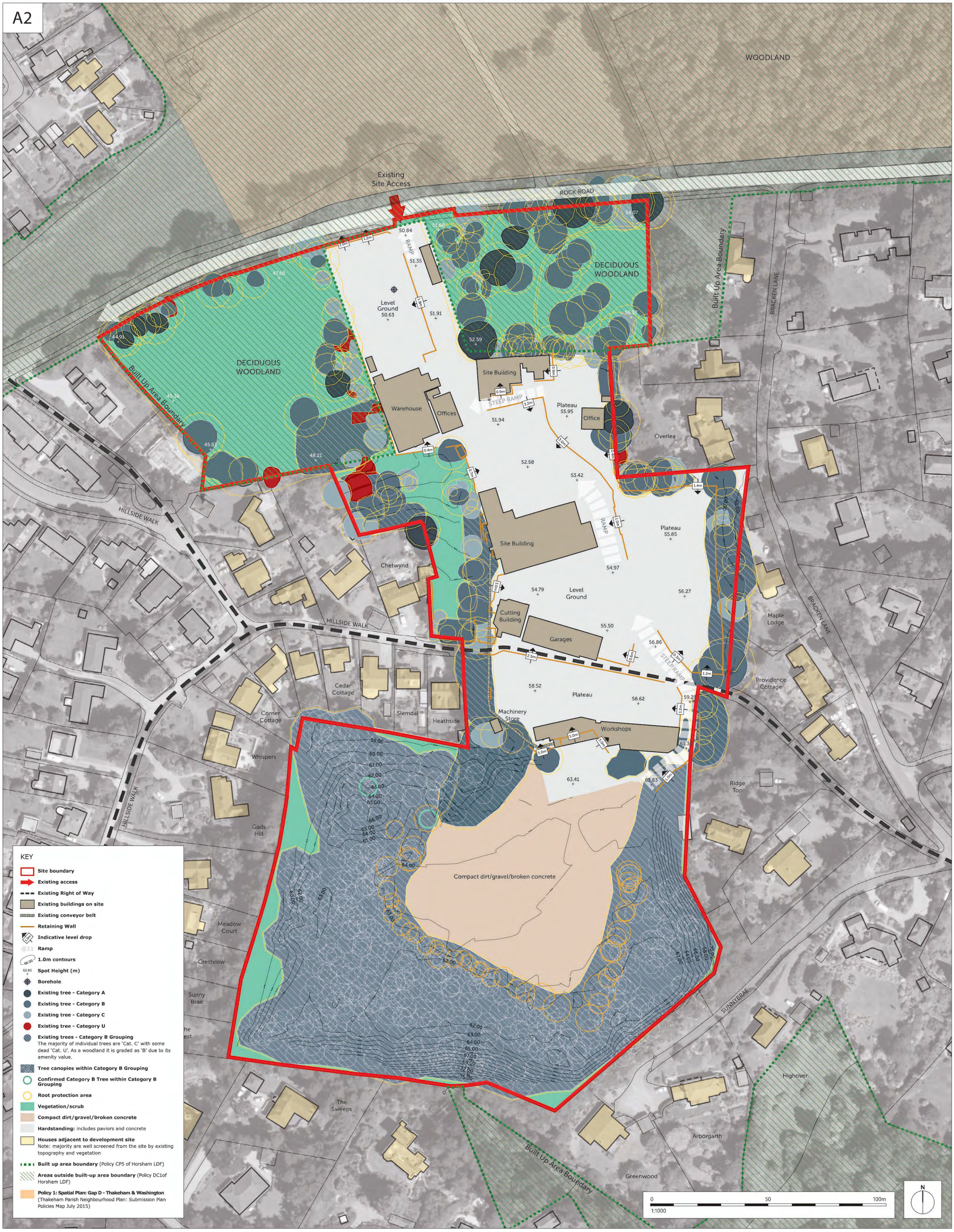
STATUS
S2

PROJECT
Thakeham Tiles, Rock Road

DRAWING NO.
37212-HYD-XX-XX-DR-GE-1000

REVISION
P01

A2



KEY

- Site boundary
- Existing access
- Existing Right of Way
- Existing buildings on site
- Existing conveyor belt
- Retaining Wall
- Indicative level drop
- Ramp
- 1.0m contours
- Spot Height (m)
- Borehole
- Existing tree - Category A
- Existing tree - Category B
- Existing tree - Category C
- Existing tree - Category U
- **Existing trees - Category B Grouping**
  The majority of individual trees are 'Cat. C' with some dead 'Cat. U'. As a woodland it is graded as 'B' due to its amenity value.
- Tree canopies within Category B Grouping
- Confirmed Category B Tree within Category B Grouping
- Root protection area
- Vegetation/scrub
- Compact dirt/gravel/broken concrete
- **Hardstanding:** includes paviors and concrete
- **Houses adjacent to development site**
  Note: majority are well screened from the site by existing topography and vegetation
- **Built up area boundary** (Policy CP5 of Horsham LDF)
- **Areas outside built-up area boundary** (Policy DC1of Horsham LDF)
- **Policy 1: Spatial Plan: Gap D - Thakeham & Washington** (Thakeham Parish Neighbourhood Plan: Submission Plan Policies Map July 2015)

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Rev	Description	Date	Au	Ch
A	Issued for Planning	10.09.25	CI/HP	--/--

Project	Thakeham Tiles
Drawing	Constraints Plan - 01
	-
Client	Thakeham Tiles Ltd
Job no.	THAK230417
Dwg no.	CP-01
Date	10.09.25
Rev.	A
Author	CI/HP
Checked	-/-
Scale	1:1000@A2
Status	PLANNING
Office	Romsey
Client ref.	-

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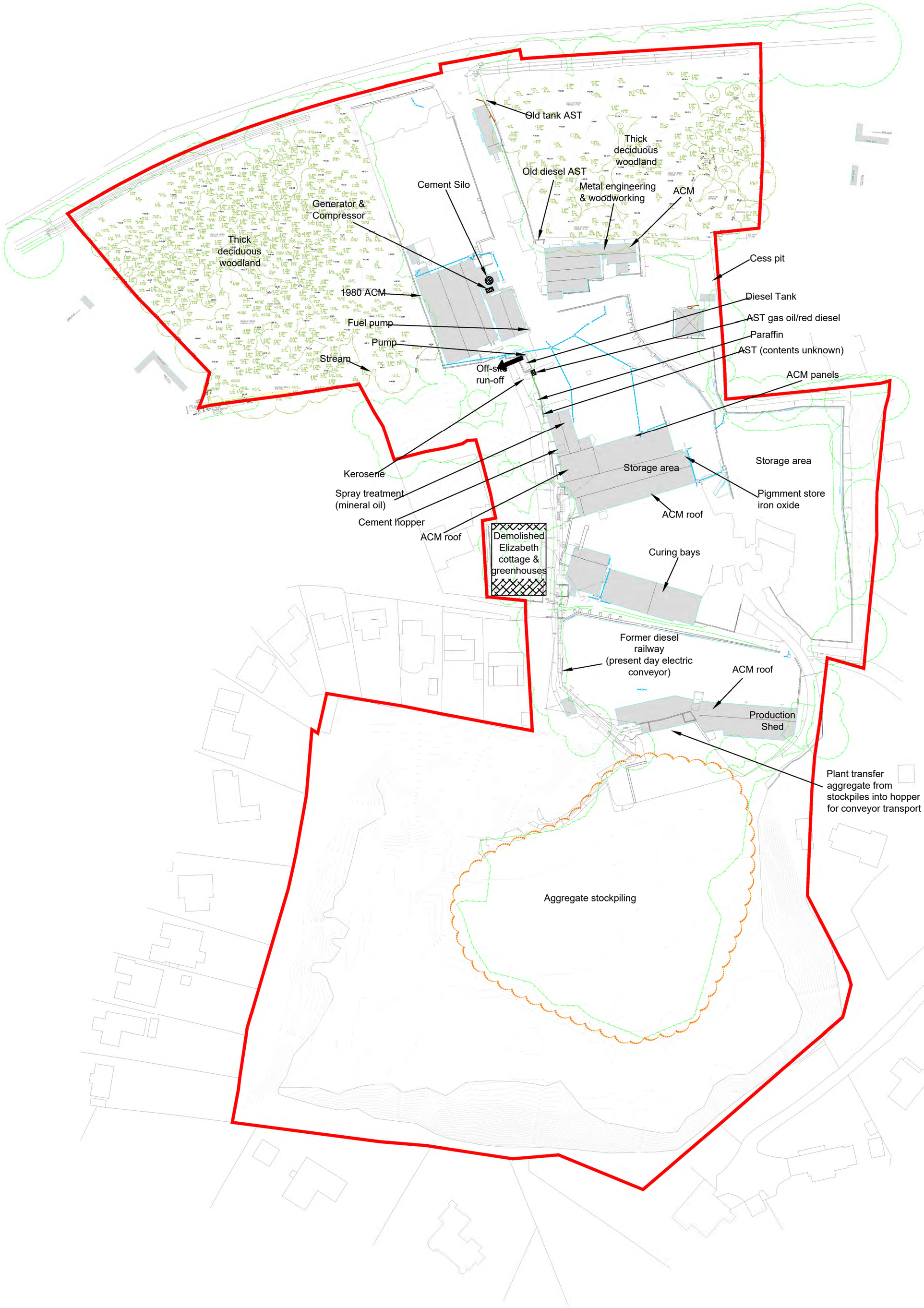
OS NORTH



KEY

Site Boundary

AST : Above ground Storage Tank

ACM : Likely Asbestos Containing Material

Likely area of sand pit backfill

NOTES

1. All dimensions are to be checked on site before the commencement of works. Any discrepancies are to be reported to the Architect & Engineer for verification. Figured dimensions only are to be taken from this drawing.

2. This drawing is to be read in conjunction with all relevant Engineers' and Service Engineers' drawings and specifications.

3. This drawing has been based on the following drawings and information: Topographical Survey number: 32301 by: MK Surveys dated: February 2023.

REV.						
P01	FIRST ISSUE					
	SD	02/04/25	LC	02/04/25	AE	02/04/25
REV.	REVISION NOTES/COMMENTS					
	DRAWN BY	DATE	CHECKED BY	DATE	APPROVED BY	DATE

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CLIENT

Thakeham Tiles Ltd

PROJECT

Thakeham Tiles, Rock Road

TITLE

Areas of Potential Concern

HYDROCK PROJECT NO. 37212

SCALE @ A2 1:1000

PURPOSE OF ISSUE SUITABLE FOR INFORMATION

STATUS S2

DRAWING NO. (PROJECT CODE-ORGINATOR-ZONE-LEVEL-TYPE-ROLE-NUMBER) 37212-HYD-XX-XX-DR-GE-1002

REVISION P01

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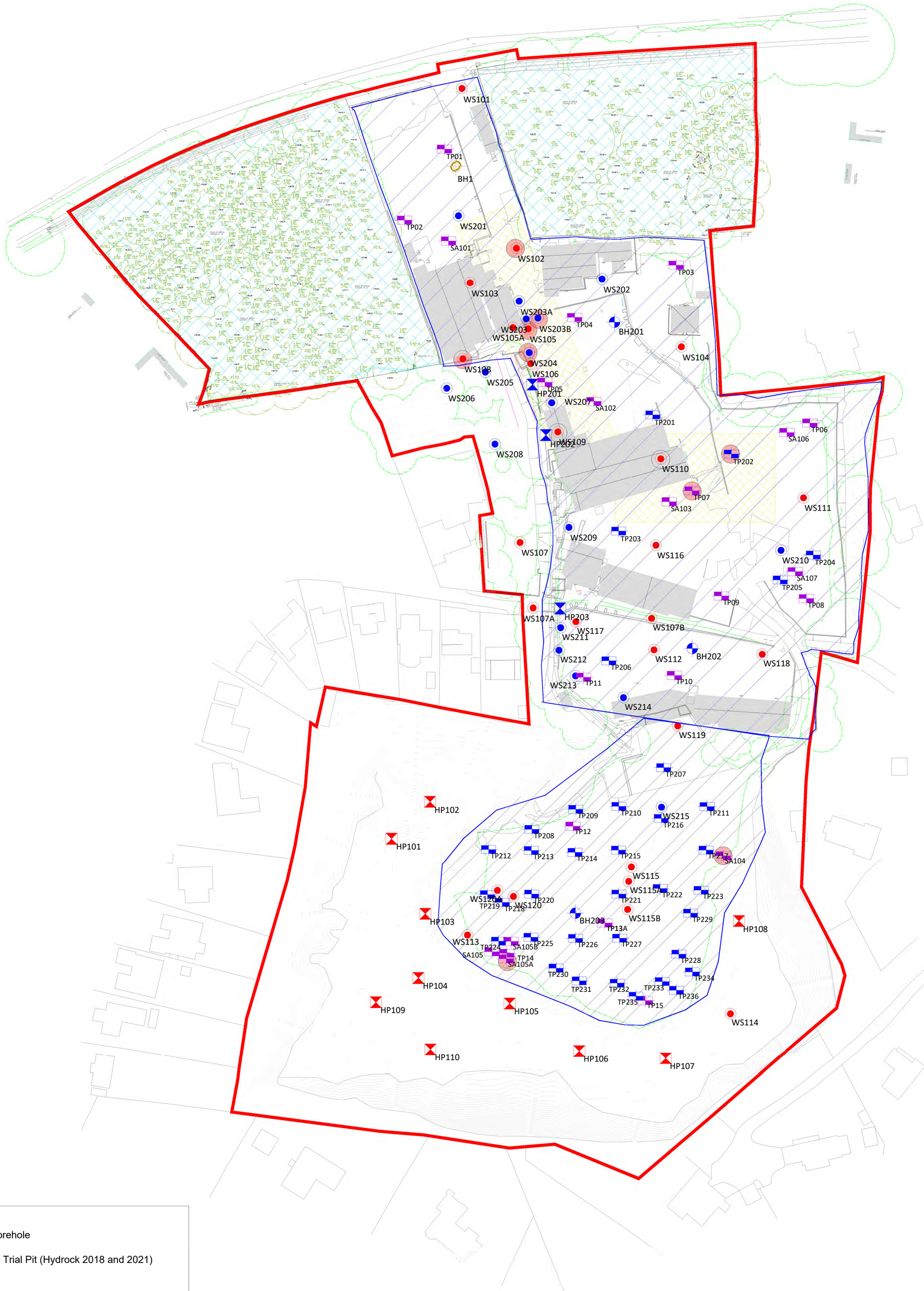

Legend

- BHXX — Rotary borehole
- TPXX — Historical Trial Pit (Hydrock 2018 and 2021)
- TPXX — Trial Pit
- WSXX — Historical windowless sampler borehole (2021)
- WSXX — Windowless sampler borehole
- HPXX — Historical Hand Dug Trial Pit (2021)
- HPXX — Hand Dug Trial Pit
- BH## — Rotary Borehole (2024 Groundwater Extraction)

KEY

- Site Boundary
- Contamination Hotspots
- Areas where barrier pipe is required
- Area where asbestos mitigation is required
- Areas not investigated - thick deciduous woodland

NOTES

1. All dimensions are to be checked on site before the commencement of works. Any discrepancies are to be reported to the Architect & Engineer for verification. Figured dimensions only are to be taken from this drawing.

2. This drawing is to be read in conjunction with all relevant Engineers' and Service Engineers' drawings and specifications.

3. This drawing has been based on the following drawings and information: Topographical Survey number: 32301 by: MK Surveys dated: February 2023.

REV.						
P01	FIRST ISSUE					
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REV.	REVISION NOTES/COMMENTS					
	DRAWN BY	DATE	CHECKED BY	DATE	APPROVED BY	DATE

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CLIENT: Thakeham Tiles Ltd

PROJECT: Thakeham Tiles, Rock Road

TITLE: Site Remediation Plan

HYDROCK PROJECT NO.: 37212

SCALE @ A2: 1:1000

PURPOSE OF ISSUE: SUITABLE FOR INFORMATION

STATUS: S2

DRAWING NO. (PROJECT CODE-ORGINATOR-ZONE-LEVEL-TYPE-ROLE-NUMBER): 37212-HYD-XX-XX-DR-GE-1005

REVISION: P01

Appendix B Field reconnaissance photographs

Photograph 1	
Date: 20/02/2018	
Direction Photograph Taken: West	
Easting: 510365	
Northing: 115095	
Description: Entrance to site via Rock Road.	

Photograph 2	
Date: 20/02/2018	
Direction Photograph Taken: South	
Easting: 510350	
Northing: 115090	
Description: Looking south towards the main reception building and main entrance area.	

Photograph 3	
Date: 20/02/2018	
Direction Photograph Taken: North	
Easting: 510379	
Northing: 115027	
Description: Looking north towards the entrance of site.	

Photograph 4	
Date: 20/02/2018	
Direction Photograph Taken: North	
Easting: 510386	
Northing: 115011	
Description: Metal engineering and woodworking workshop.	

Photograph 5	
Date: 20/02/2018	
Direction Photograph Taken: Northwest	
Easting: 510409	
Northing: 115018	
Description Metal engineering and woodworking workshop (background) and staff canteen building (foreground) which slopes up.	

Photograph 6	
Date: 20/02/2018	
Direction Photograph Taken: West	
Easting: 510413	
Northing: 115016	
Description: Fuel tanks in the background, machinery and palettes of stone products which are sold.	

Photograph 7 Date: 20/02/2018 Direction Photograph Taken: South Easting: 510419 Northing: 115015 Description: The main site office building and car parking area, situated within the centre of site up a ramp towards the eastern boundary.	

Photograph 8 Date: 20/02/2018 Direction Photograph Taken: Southwest Easting: 510413 Northing: 115016 Description: View from the main site office car park area, which is built up from the main yard/works area with a retaining wall.	

Photograph 9	
Date: 20/02/2018	
Direction Photograph Taken: East	
Easting: 510389	
Northing: 115003	
Description: View from the yard/works area up the main site office building, which sits at a higher level.	

Photograph 10	
Date: 20/02/2018	
Direction Photograph Taken: Southeast	
Easting: 510389	
Northing: 115003	
Description: The yard/works area.	

Photograph 11 Date: 20/02/2018 Direction Photograph Taken: N/A Easting: Northing: Description: Inside a workshop area.	

Photograph 12 Date: 20/02/2018 Direction Photograph Taken: N/A Easting: Northing: Description: Inside a workshop area.	

Photograph 13 Date: 20/02/2018 Direction Photograph Taken: North Easting: 510437 Northing: 114970 Description: Looking north back towards the main site office and along the yard/works area.	

Photograph 14 Date: 20/02/2018 Direction Photograph Taken: Southwest Easting: 510467 Northing: 114951 Description: The yard/works area continuing further south.	

Photograph 15 Date: 20/02/2018 Direction Photograph Taken: West Easting: 510460 Northing: 114918 Description: The yard/works area continuing further south, comprising the curing bays	

Photograph 16 Date: 20/02/2018 Direction Photograph Taken:. West Easting: 510464 Northing: 114898 Description: The public footpath that runs through the centre of site from east to west. Retained as the site reaches a higher level to the south.	

Photograph 17 Date: 20/02/2018 Direction Photograph Taken: West Easting: 510463 Northing: 114884 Description: The yard/works area continuing further south, comprising the production shed.	

Photograph 18 Date: 20/02/2018 Direction Photograph Taken:. West Easting: 510409 Northing: 114888 Description: Storage area and former diesel railway now a present day electrical conveyor.	

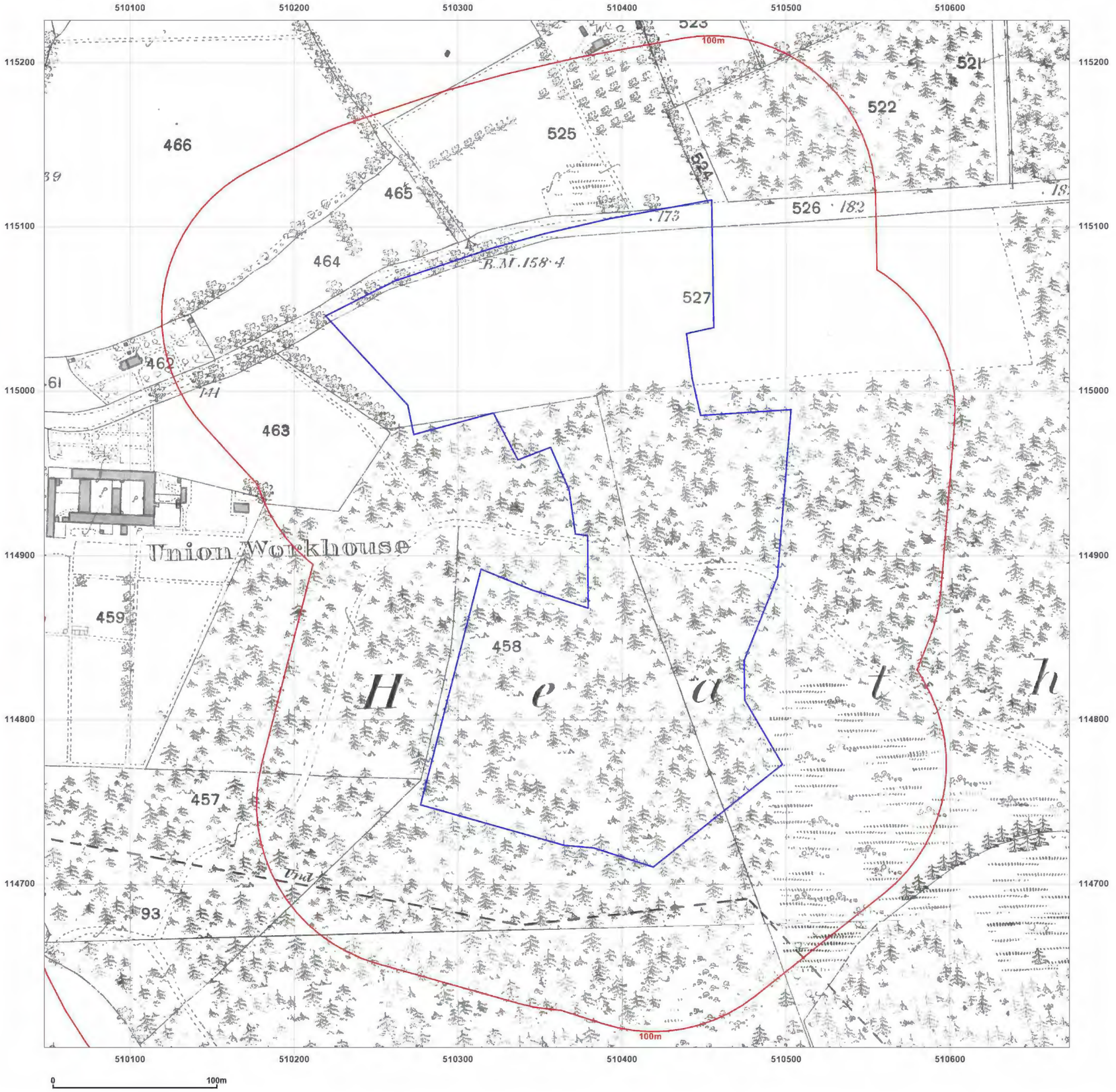
Photograph 19 Date: 20/02/2018 Direction Photograph Taken: Southwest Easting: 510441 Northing: 114843 Description: Aggregate storage area (former sandpit/quarry) to the very south of site.	

Photograph 20 Date: 20/02/2018 Direction Photograph Taken:. South Easting: 510450 Northing: 114836 Description: Waste materials also stored here in the very southern aggregate storage area.	

Photograph 21	
Date: 20/02/2018	
Direction Photograph Taken: South	
Easting: 510443	
Northing: 114815	
Description: Woodland area situated along the boundary of site to the south.	

Photograph 22	
Date: 20/02/2018	
Direction Photograph Taken: North	
Easting: 510432	
Northing: 114871	
Description: View from the aggregate storage area to the north.	

Appendix C Historical mapping



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Grid Ref: 510360, 114913

Map Name: County Series

Map date: **1875**

Scale: 1:2,500

Printed at: 1:2,500

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Surveyed 1875
Revised 1875
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1875
Revised 1875
Edition N/A
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Production date: 07 March 2025

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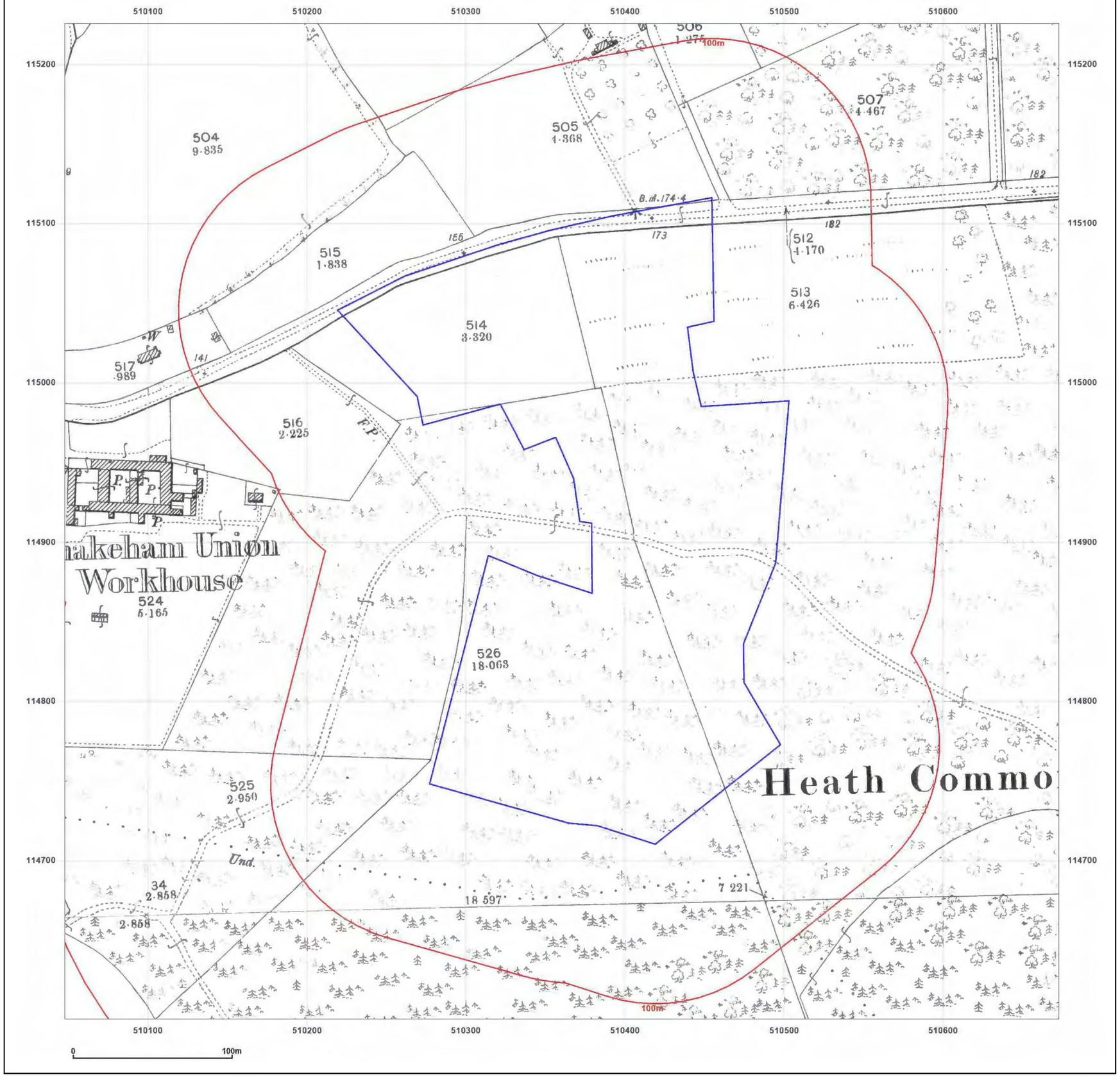

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Site Details:

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Surveyed 1897
Revised 1897
Edition N/A
Copyright N/A
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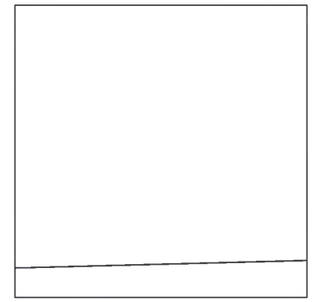

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Revised 1897
Edition N/A
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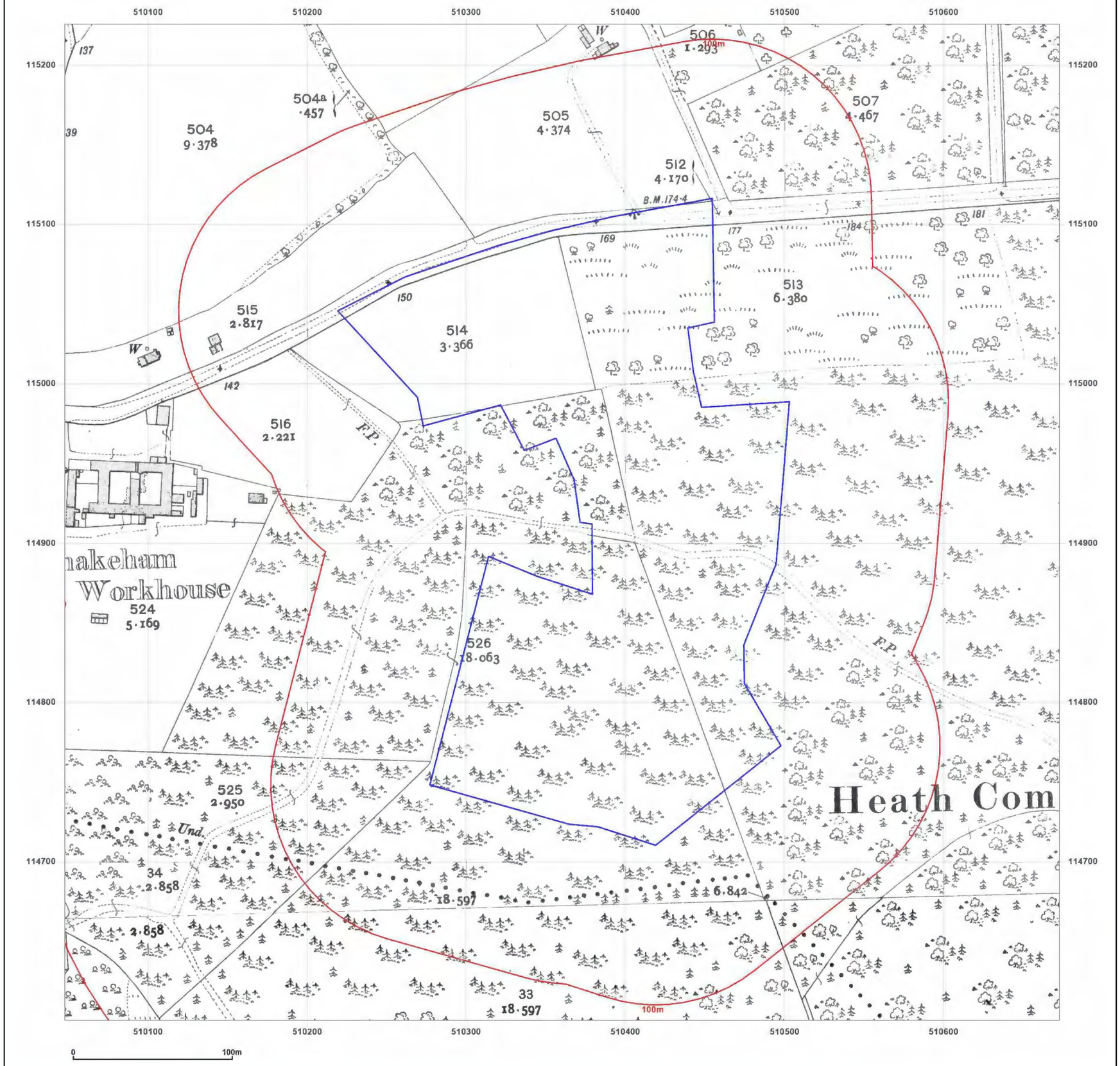

Groundsure INSIGHTS

Site Details:

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Grid Ref: 510360, 114913

Map Name: County Series

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Revised 1911
Edition N/A
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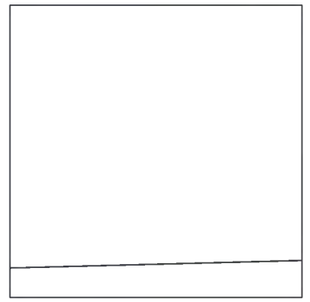

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Production date: 07 March 2025

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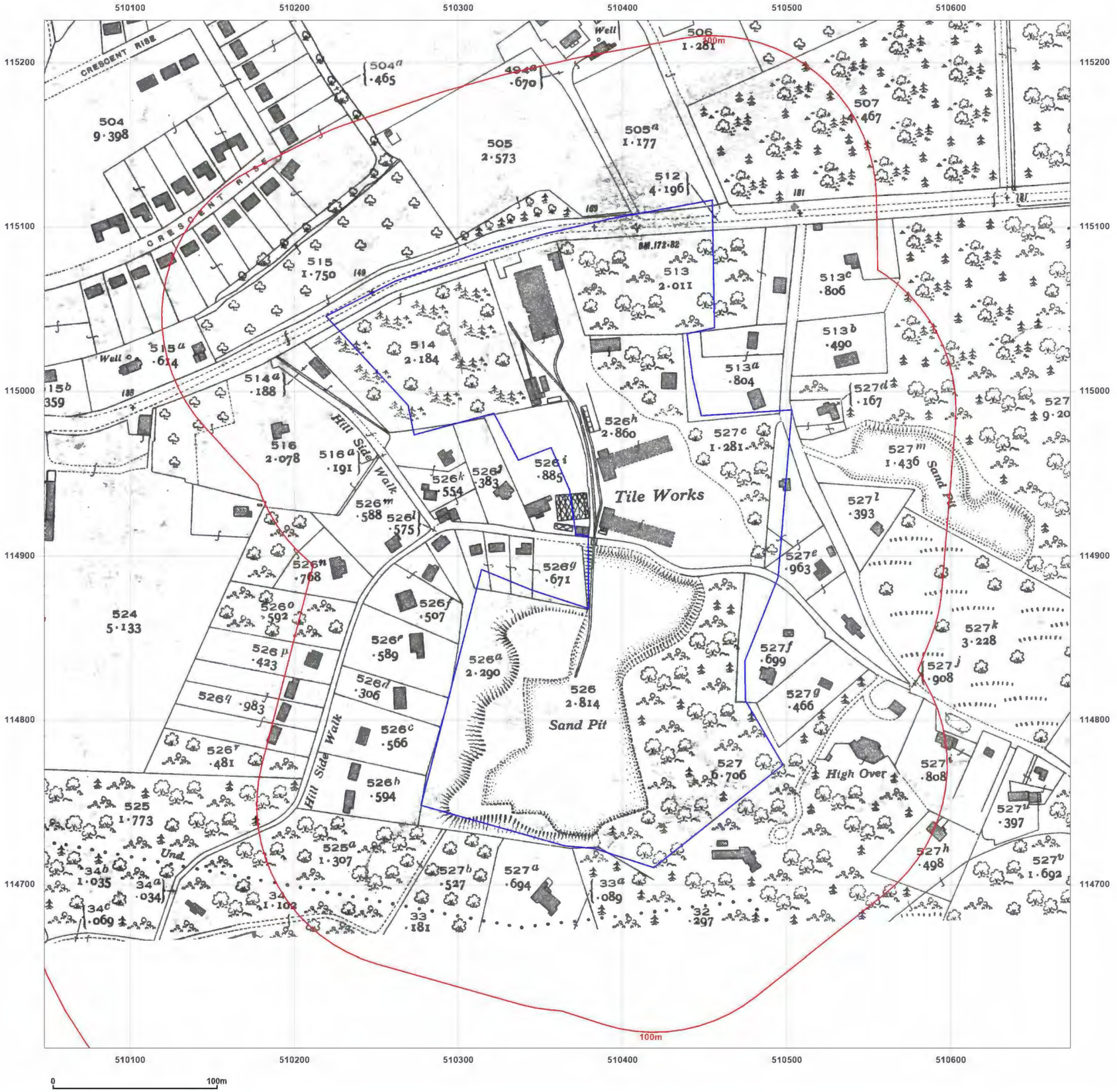

Groundsure INSIGHTS

Site Details:

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Surveyed 1937
Revised 1937
Edition N/A
Copyright N/A
Levelled N/A

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Groundsure INSIGHTS

Site Details:

37212-GELO

Client Ref: PO39879
Report Ref: HYD-VUG-LK4-FNV-QHO_2500
Grid Ref: 510360, 114913

Map Name: National Grid

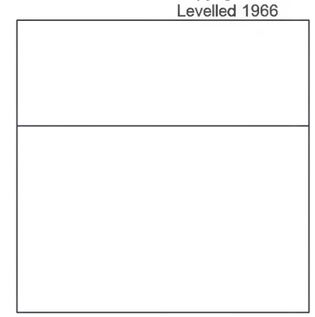
Map date: **1966**

Scale: 1:2,500

Printed at: 1:2,500

N
W E
S

Surveyed N/A
Revised N/A
Edition N/A
Copyright N/A
Levelled 1966



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Map legend available at:
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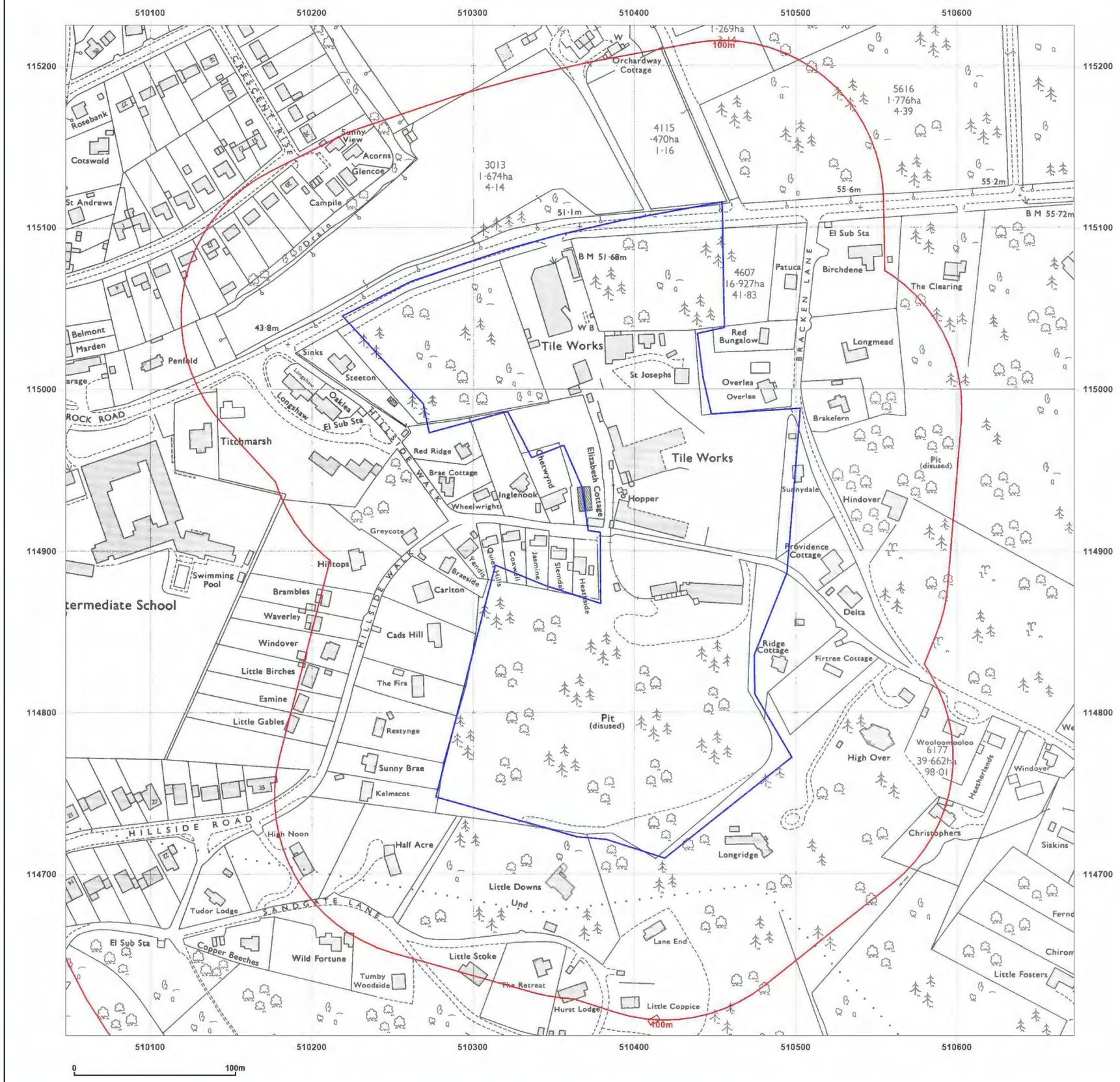

Site Details:

37212-GELO

Client Ref: PO39879
Report Ref: HYD-VUG-LK4-FNV-QHO_2500
Grid Ref: 510360, 114913

Map Name: National Grid

Map date: **1972-1974**

Scale: 1:2,500

Printed at: 1:2,500

N
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Surveyed 1973
Revised 1973
Edition N/A
Copyright 1974
Levelled 1966

Surveyed 1971
Revised 1971
Edition N/A
Copyright 1972
Levelled 1966

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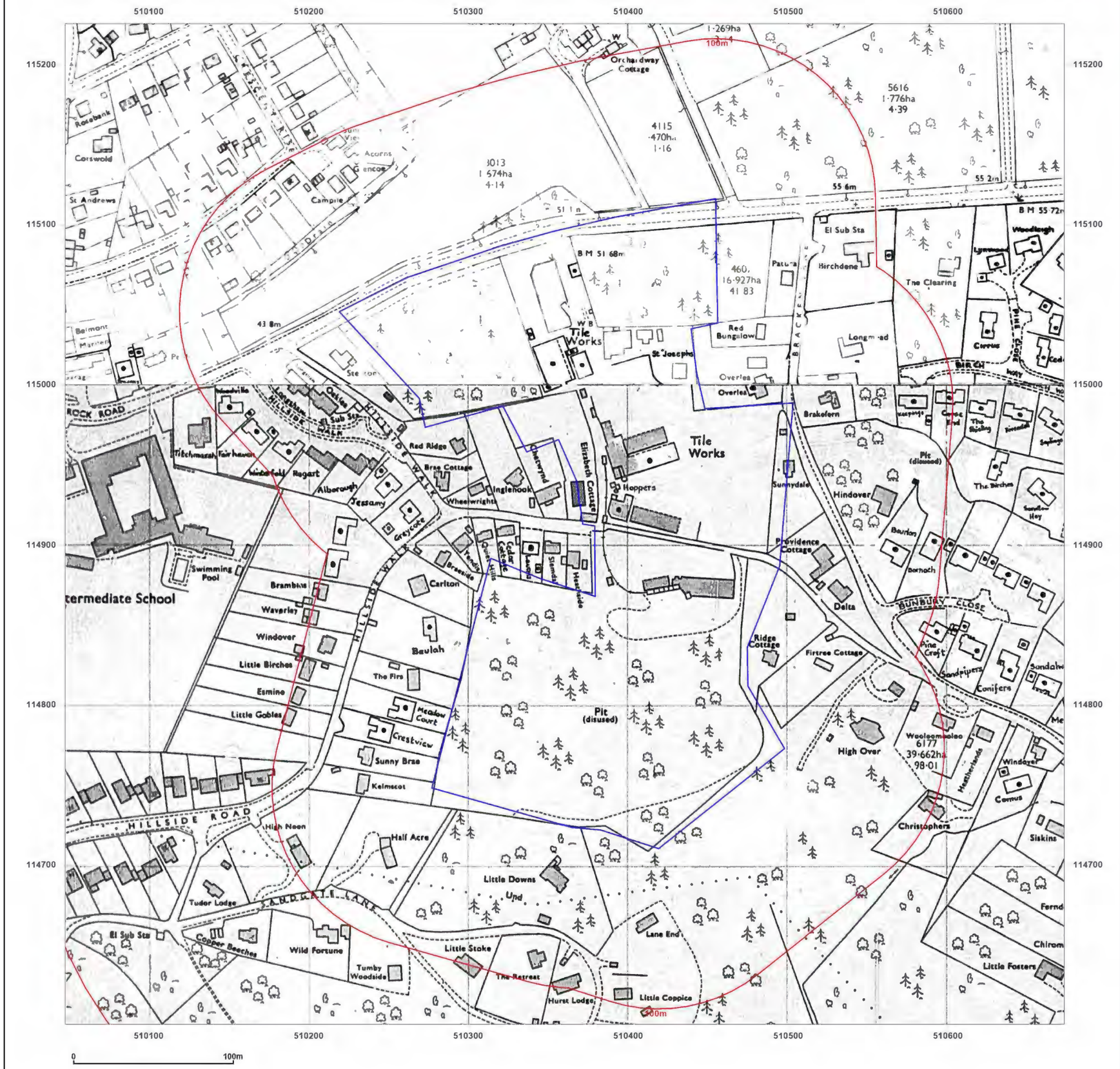

Groundsure INSIGHTS

Site Details:

37212-GELO

Client Ref: PO39879
Report Ref: HYD-VUG-LK4-FNV-QHO_2500
Grid Ref: 510360, 114913

Map Name: National Grid

Map date: **1980-1982**

Scale: 1:2,500

Printed at: 1:2,500

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

Surveyed 1966
Revised 1980
Edition N/A
Copyright 1980
Levelled 1966

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Production date: 07 March 2025

Map legend available at:
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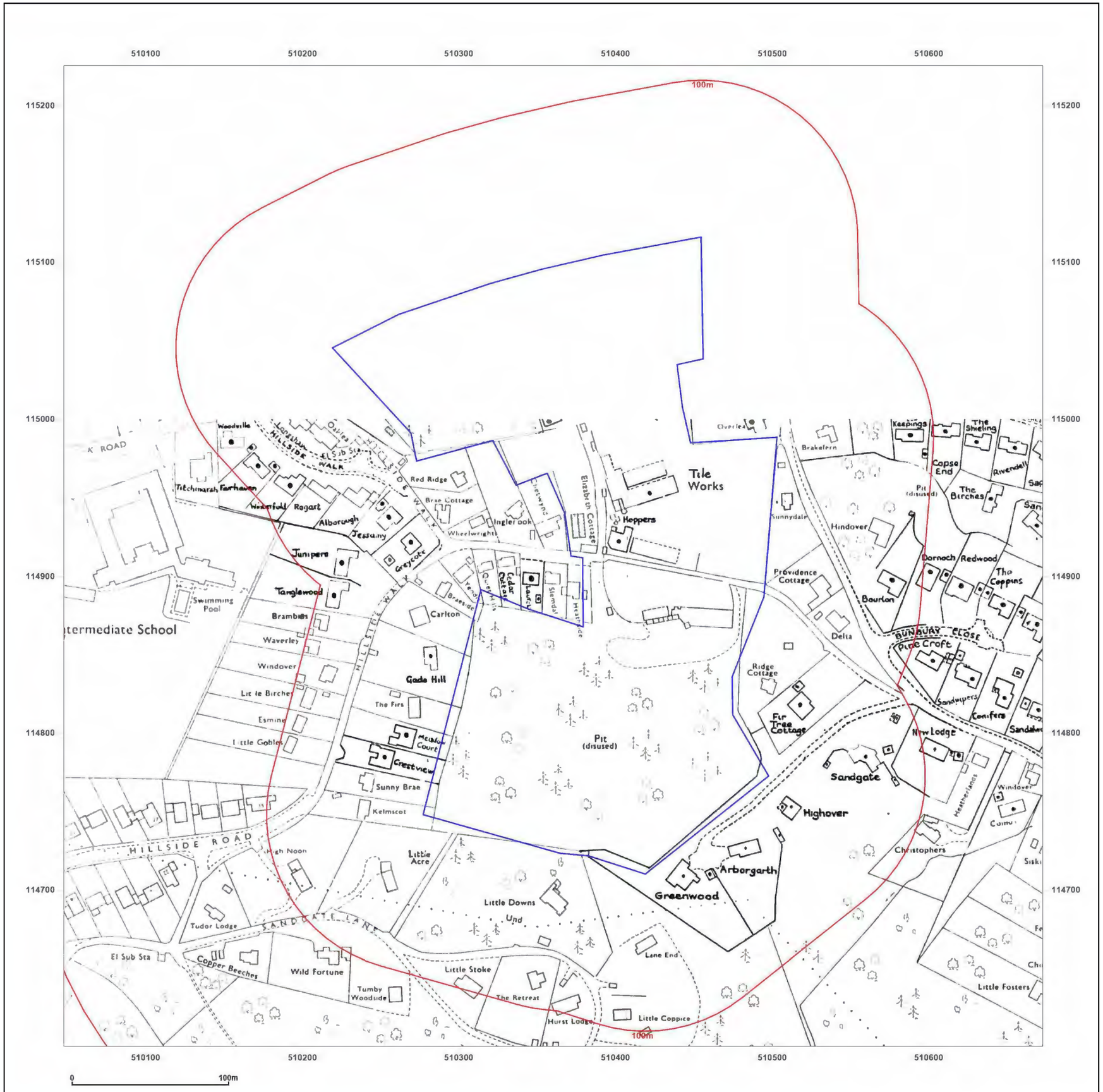

Groundsure INSIGHTS

Site Details:

37212-GELO

Client Ref: PO39879
Report Ref: HYD-VUG-LK4-FNV-QHO_2500
Grid Ref: 510360, 114913

Map Name: National Grid

Map date: **1985**

Scale: 1:2,500

Printed at: 1:2,500

N
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Surveyed N/A
Revised N/A
Edition N/A
Copyright 1985
Levelled 1966

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Map legend available at:
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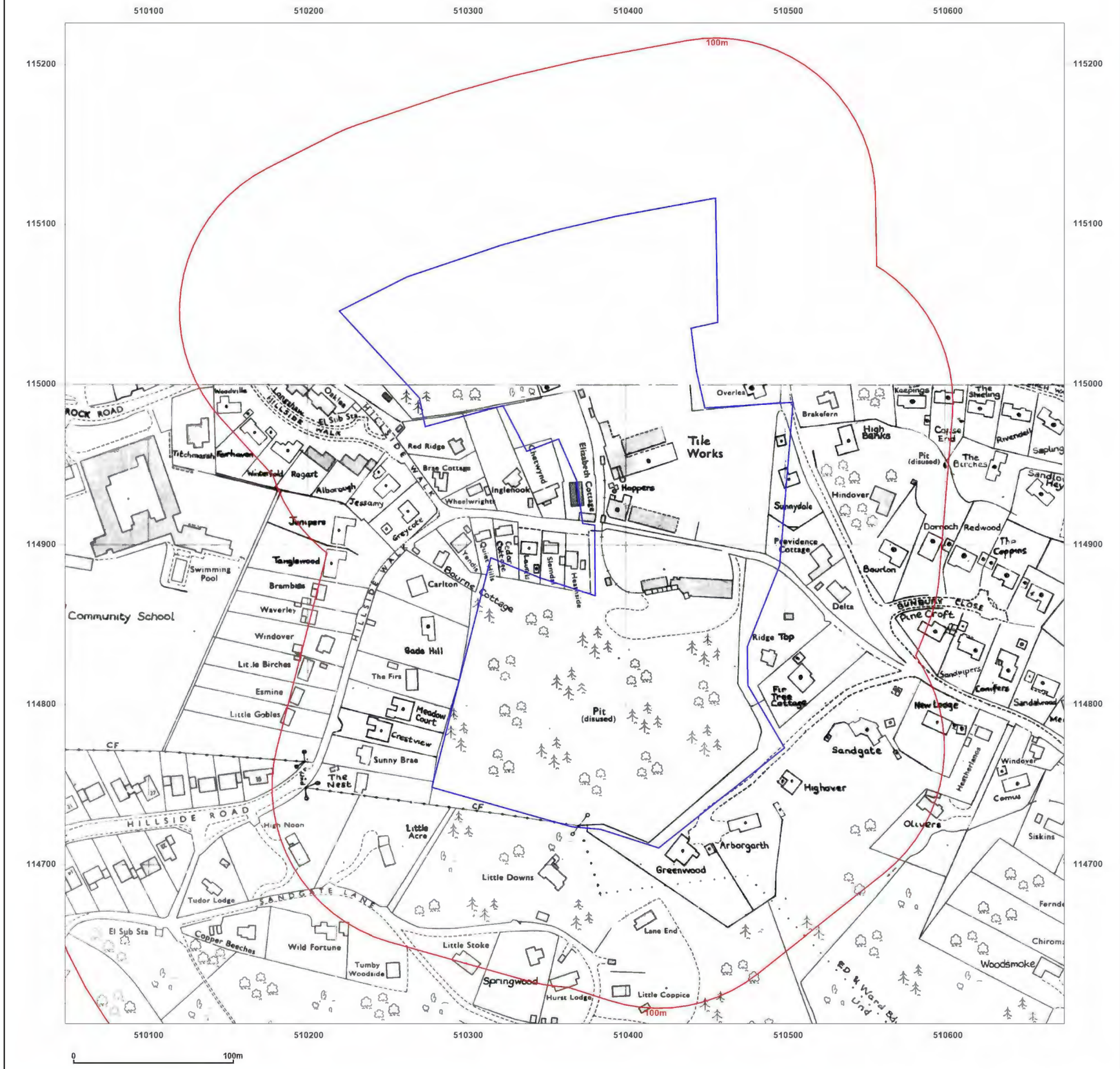

Groundsure INSIGHTS

Site Details:

37212-GELO

Client Ref: PO39879
Report Ref: HYD-VUG-LK4-FNV-QHO_2500
Grid Ref: 510360, 114913

Map Name: National Grid

Map date: **1990**

Scale: 1:2,500

Printed at: 1:2,500

N
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Surveyed 1966
Revised 1990
Edition N/A
Copyright 1990
Levelled 1966

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Production date: 07 March 2025

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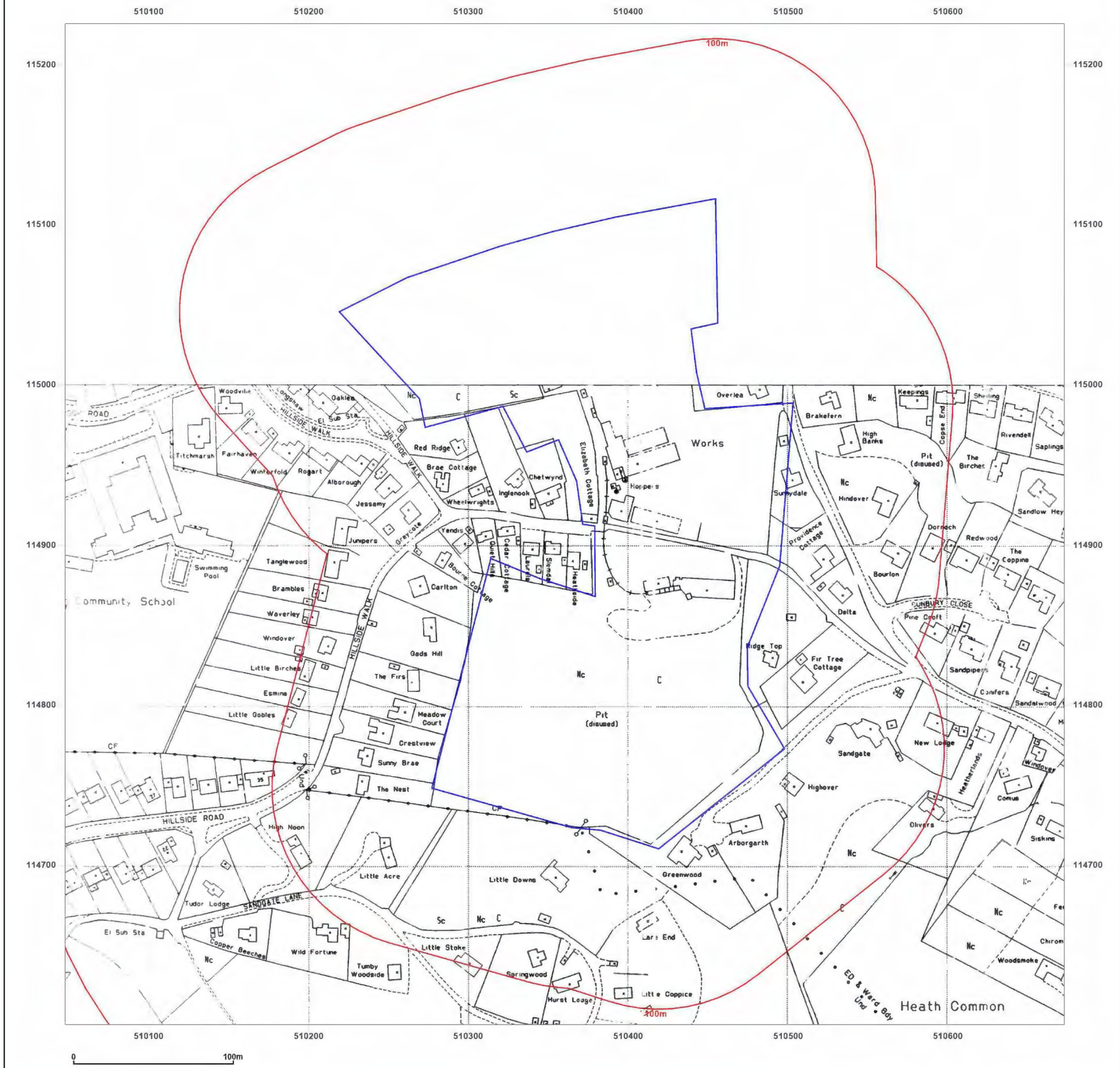

Groundsure INSIGHTS

Site Details:

37212-GELO

Client Ref: PO39879
Report Ref: HYD-VUG-LK4-FNV-QHO_2500
Grid Ref: 510360, 114913

Map Name: National Grid

Map date: **1993**

Scale: 1:2,500

Printed at: 1:2,500

N
W E
S

Surveyed N/A
Revised N/A
Edition N/A
Copyright 1993
Levelled N/A

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Production date: 07 March 2025

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Groundsure INSIGHTS

Site Details:

37212-GELO

Client Ref: PO39879
Report Ref: HYD-VUG-LK4-FNV-QHO_2500
Grid Ref: 510360, 114913

Map Name: National Grid

Map date: **1990-1993**

Scale: 1:2,500

Printed at: 1:2,500

N
W E
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Surveyed 1993
Revised N/A
Edition N/A
Copyright 1993
Levelled N/A

Surveyed 1966
Revised 1990
Edition N/A
Copyright 1990
Levelled 1966

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Production date: 07 March 2025

Map legend available at:
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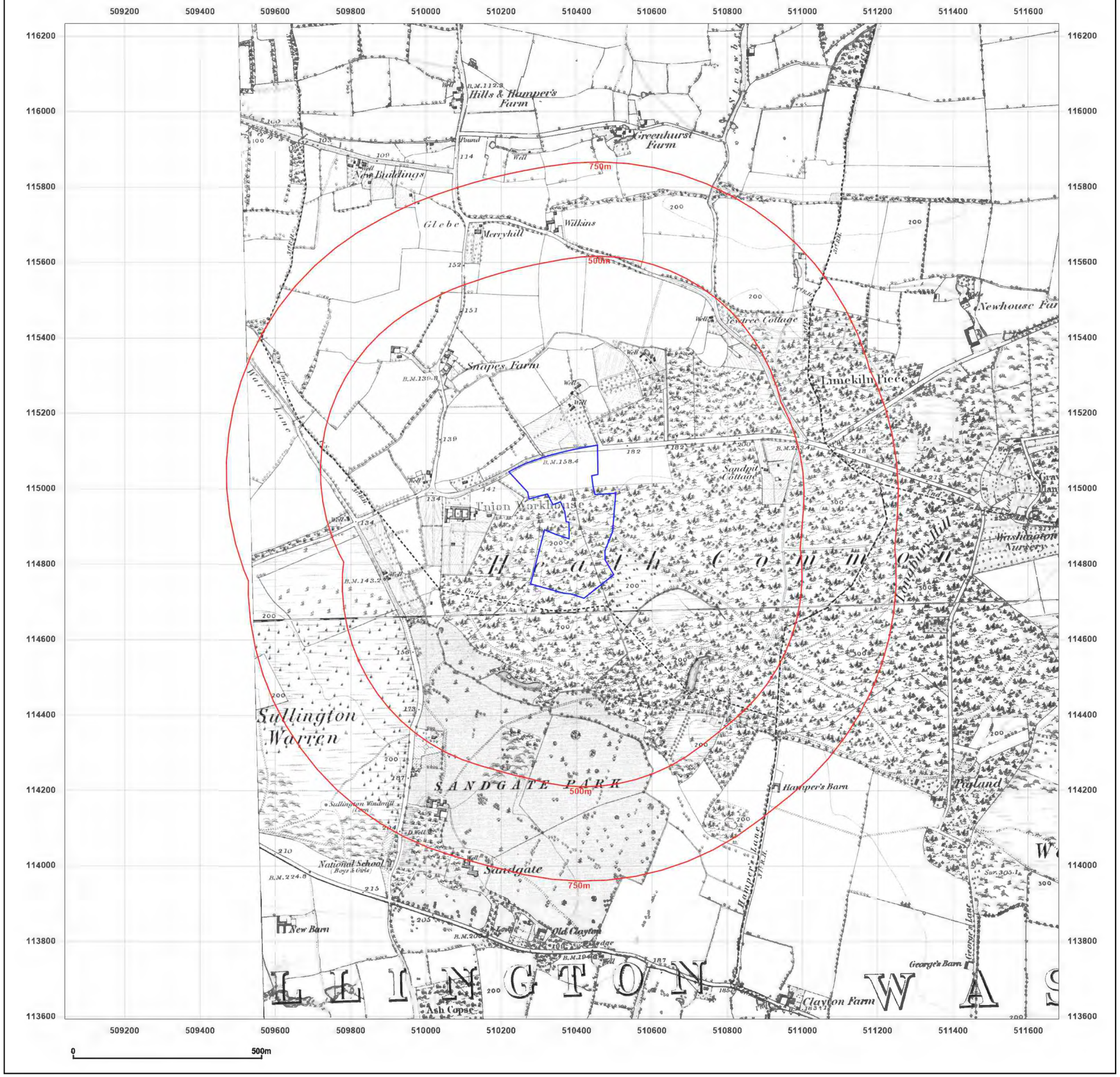


Groundsure INSIGHTS

Site Details:

37212-GELO

Client Ref: PO39879
Report Ref: HYD-VUG-LK4-FNV-QHO
Grid Ref: 510360, 114913

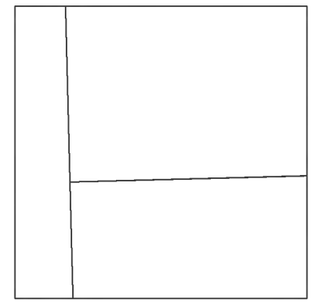
Map Name: County Series

Map date: **1875**

Scale: 1:10,560

Printed at: 1:10,560

N
W E
S



Surveyed 1875
Revised 1875
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1875
Revised 1875
Edition N/A
Copyright N/A
Levelled N/A

Powered by OS

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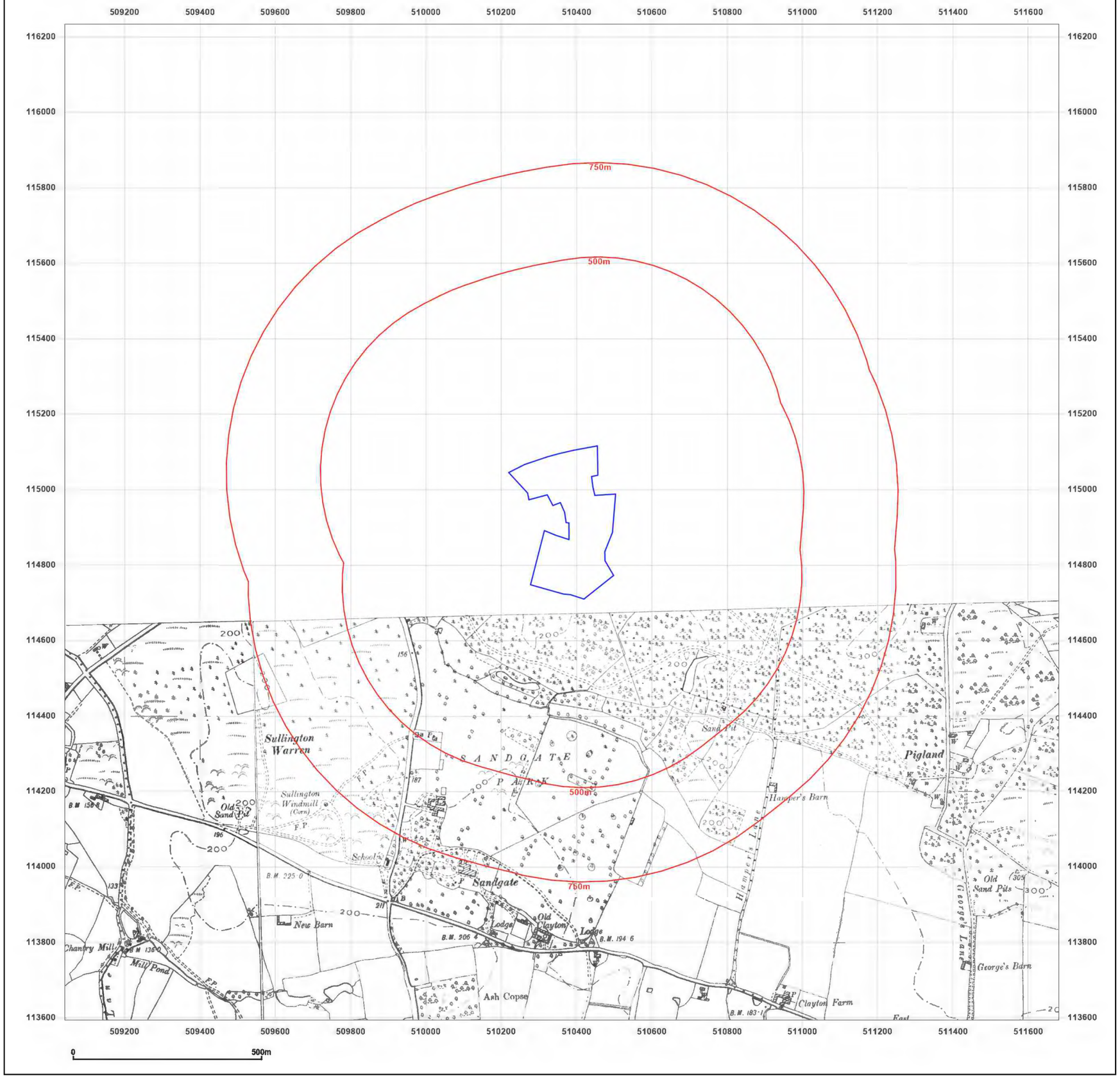
W: www.groundsure.com

Production date: 07 March 2025

Map legend available at:
www.groundsure.com/sites/default/files/groundsure_legend.pdf



Groundsure INSIGHTS

Site Details:

37212-GELO

Client Ref: PO39879
Report Ref: HYD-VUG-LK4-FNV-QHO
Grid Ref: 510360, 114913

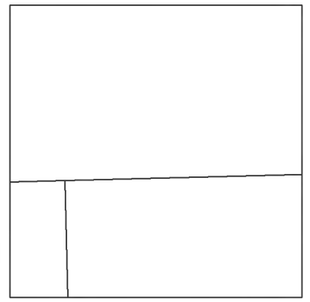
Map Name: County Series

Map date: **1896**

Scale: 1:10,560

Printed at: 1:10,560

N
W E
S



Surveyed 1876
Revised 1896
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1875
Revised 1896
Edition N/A
Copyright N/A
Levelled N/A

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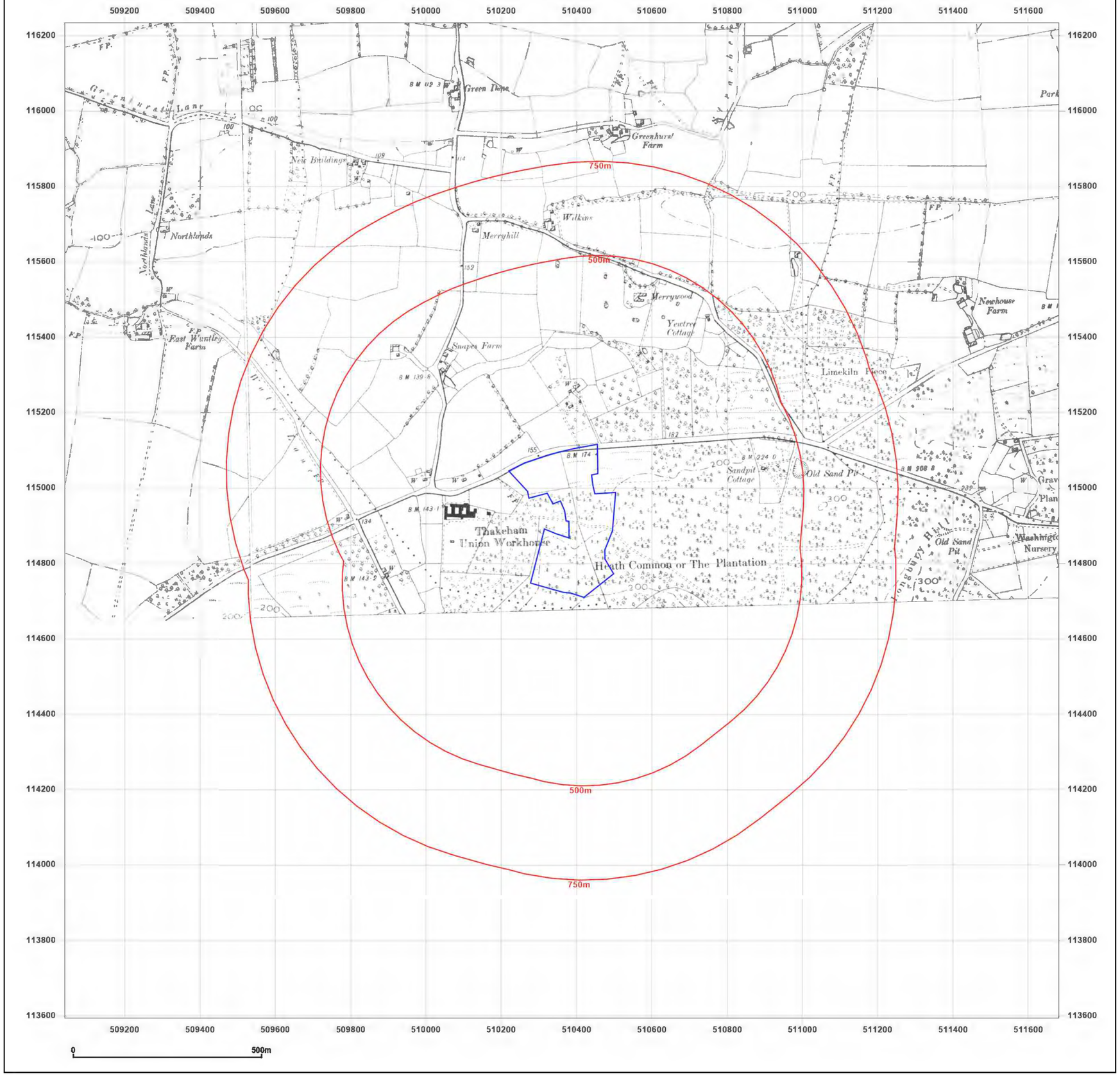

Groundsure INSIGHTS

Site Details:

37212-GELO

Client Ref: PO39879
Report Ref: HYD-VUG-LK4-FNV-QHO
Grid Ref: 510360, 114913

Map Name: County Series

Map date: **1896**

Scale: 1:10,560

Printed at: 1:10,560

N
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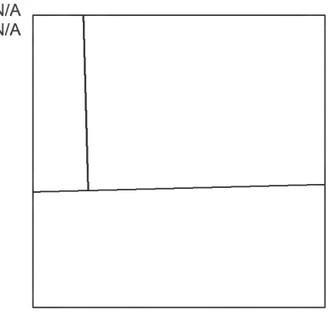
Surveyed 1876
Revised 1896
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1876
Revised 1896
Edition N/A
Copyright N/A
Levelled N/A



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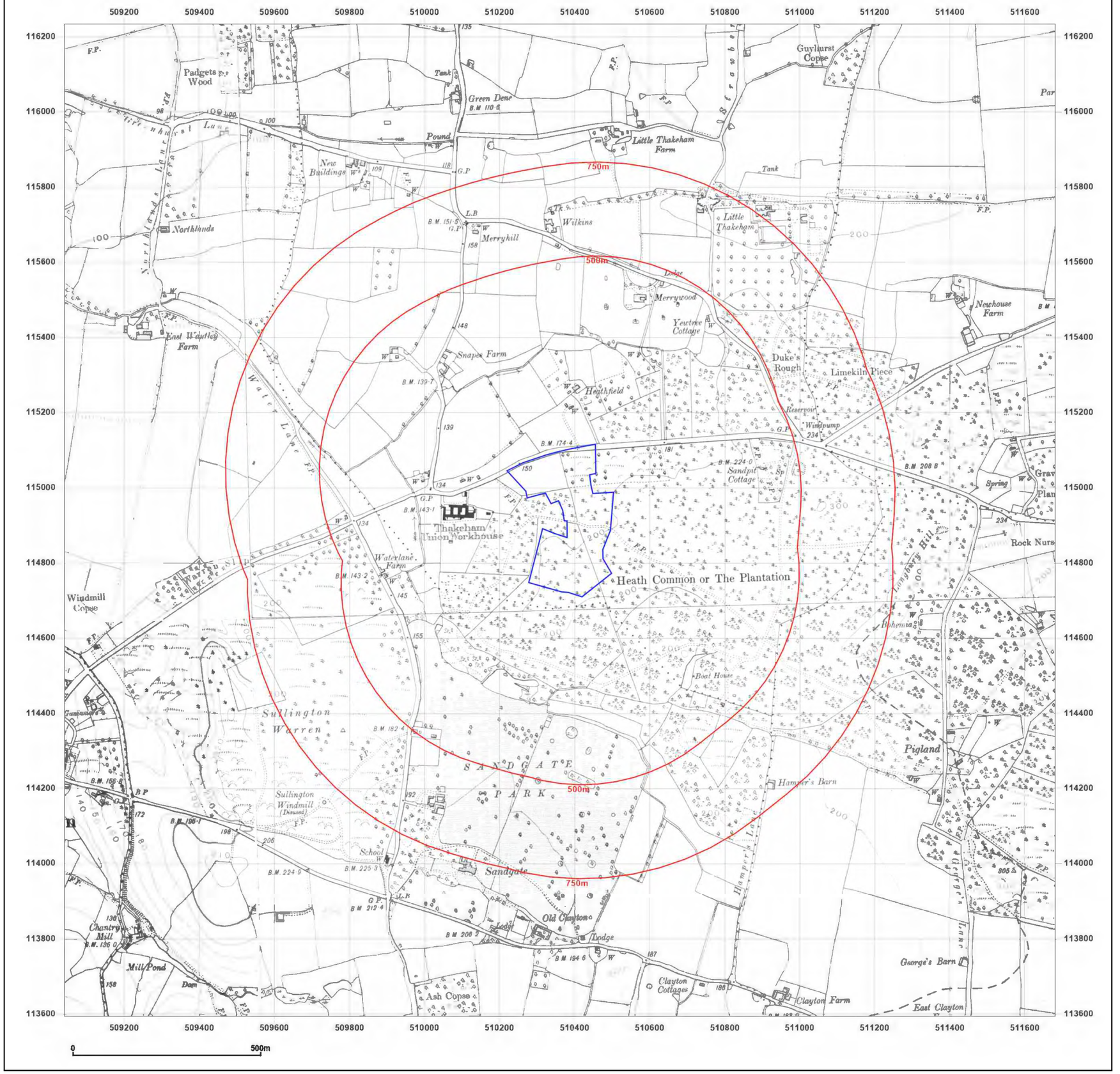

Site Details:

37212-GELO

Client Ref: PO39879
Report Ref: HYD-VUG-LK4-FNV-QHO
Grid Ref: 510360, 114913

Map Name: County Series

Map date: **1909-1914**

Scale: 1:10,560

Printed at: 1:10,560

N
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Surveyed 1875
Revised 1909
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1875
Revised 1909
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1875
Revised 1910
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1875
Revised 1914
Edition N/A
Copyright N/A
Levelled N/A

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Production date: 07 March 2025

Map legend available at:
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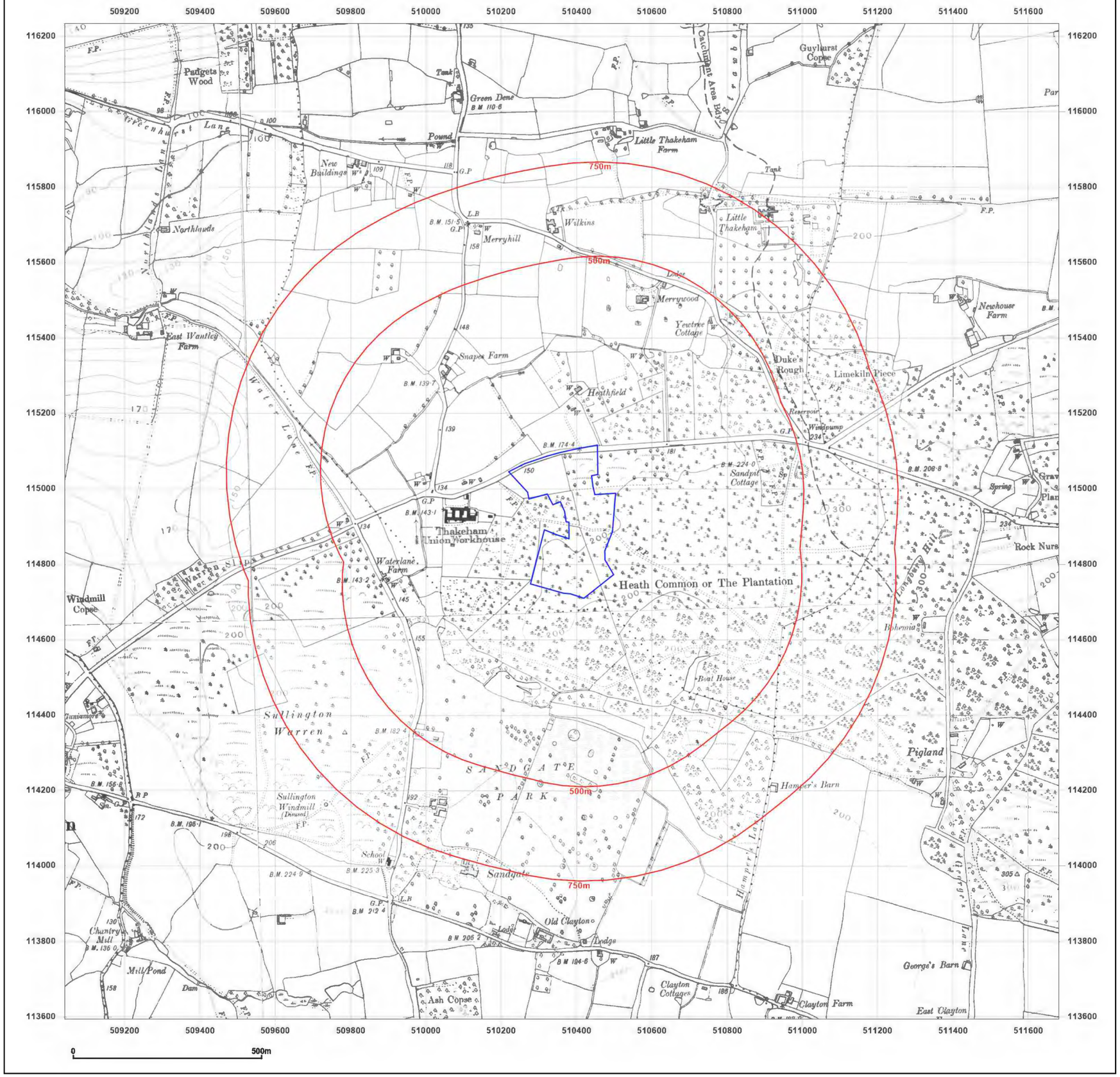

Groundsure INSIGHTS

Site Details:

37212-GELO

Client Ref: PO39879
Report Ref: HYD-VUG-LK4-FNV-QHO
Grid Ref: 510360, 114913

Map Name: County Series

Map date: **1909-1914**

Scale: 1:10,560

Printed at: 1:10,560

N
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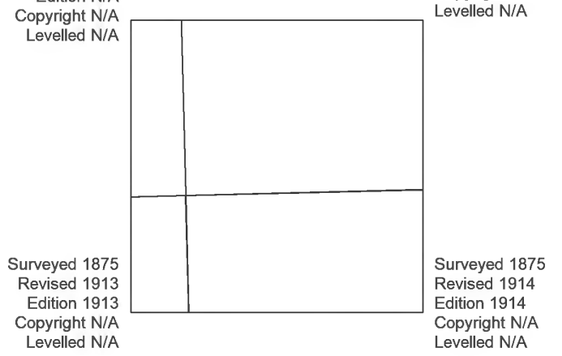

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W: www.groundsure.com

Production date: 07 March 2025

Map legend available at:
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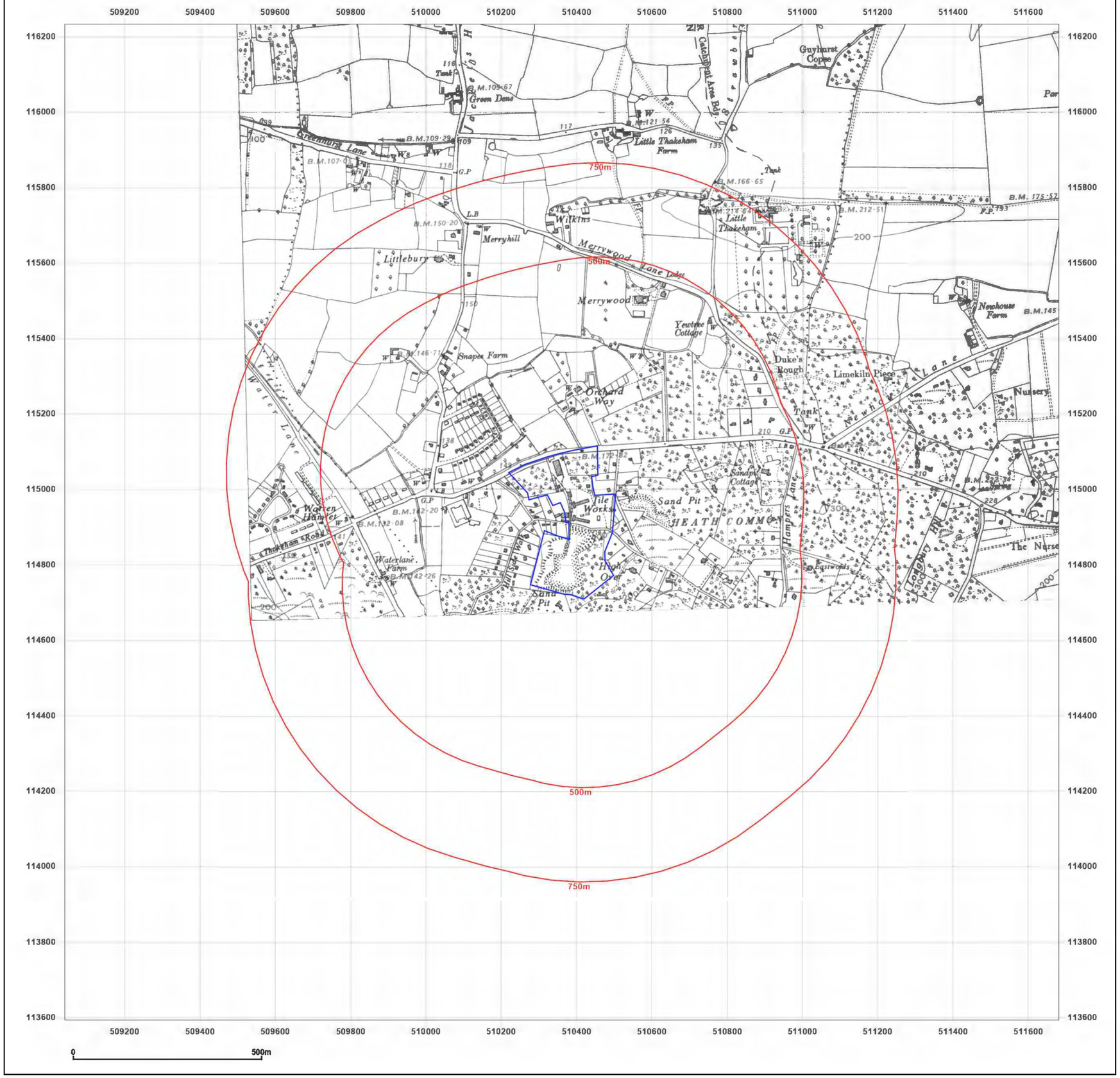

Groundsure INSIGHTS

Site Details:

37212-GELO

Client Ref: PO39879
Report Ref: HYD-VUG-LK4-FNV-QHO
Grid Ref: 510360, 114913

Map Name: County Series

Map date: **1946**

Scale: 1:10,560

Printed at: 1:10,560

N
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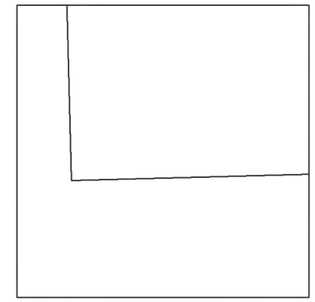
Surveyed 1875
Revised 1946
Edition N/A
Copyright N/A
Levelled N/A



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Production date: 07 March 2025

Map legend available at:
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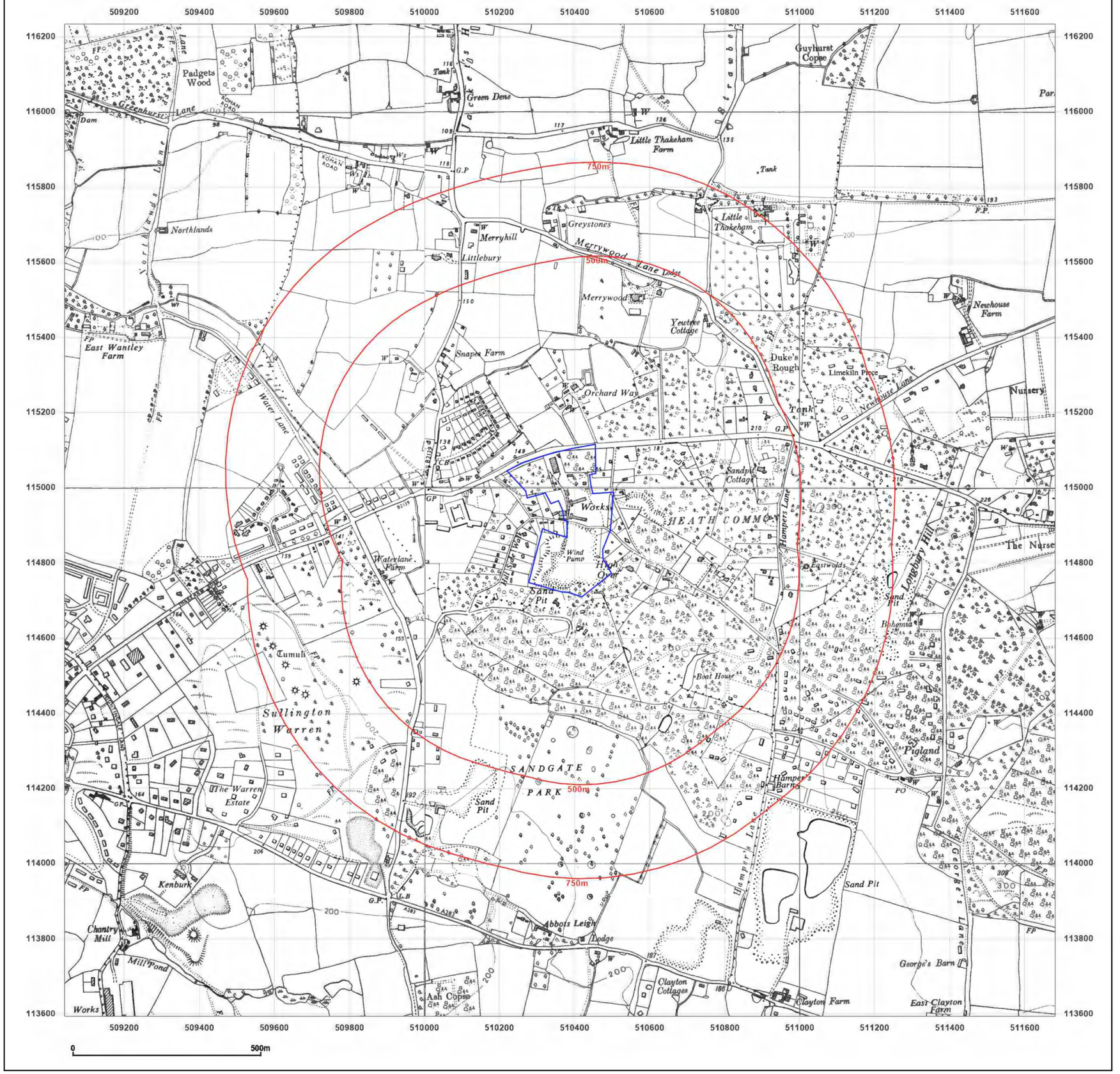

Groundsure INSIGHTS

Site Details:

37212-GELO

Client Ref: PO39879
Report Ref: HYD-VUG-LK4-FNV-QHO
Grid Ref: 510360, 114913

Map Name: Provisional

Map date: **1957-1961**

Scale: 1:10,560

Printed at: 1:10,560

N
W E
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Surveyed 1957
Revised 1957
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1957
Revised 1957
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1957
Revised 1961
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1957
Revised 1961
Edition N/A
Copyright N/A
Levelled N/A

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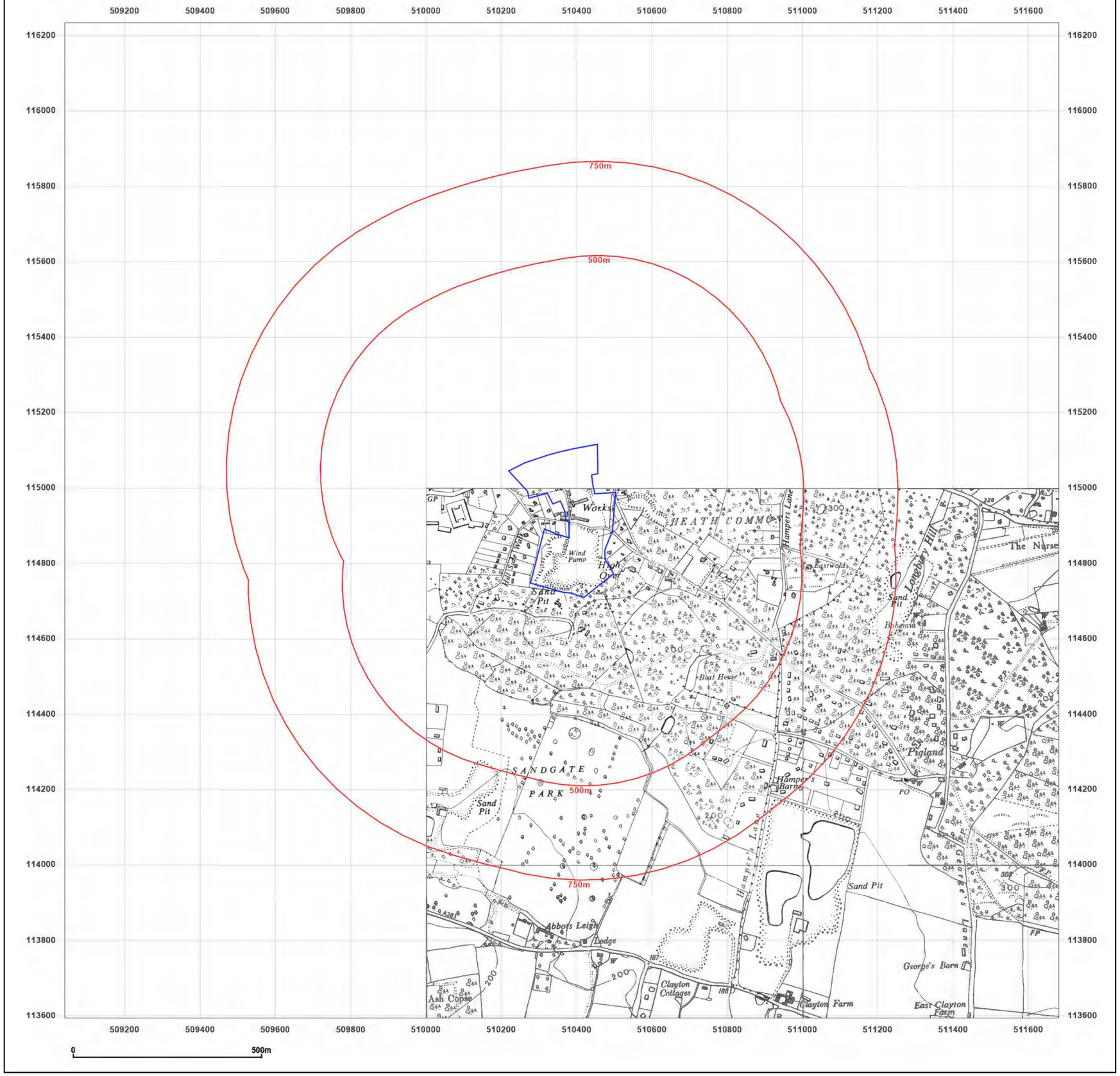

Groundsure INSIGHTS

Site Details:

37212-GELO

Client Ref: PO39879
Report Ref: HYD-VUG-LK4-FNV-QHO
Grid Ref: 510360, 114913

Map Name: Provisional
Map date: **1971**
Scale: 1:10,560
Printed at: 1:10,560

N
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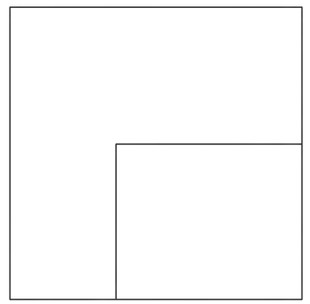

Surveyed 1957
Revised 1971
Edition N/A
Copyright N/A
Levelled N/A

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Production date: 07 March 2025

Map legend available at:
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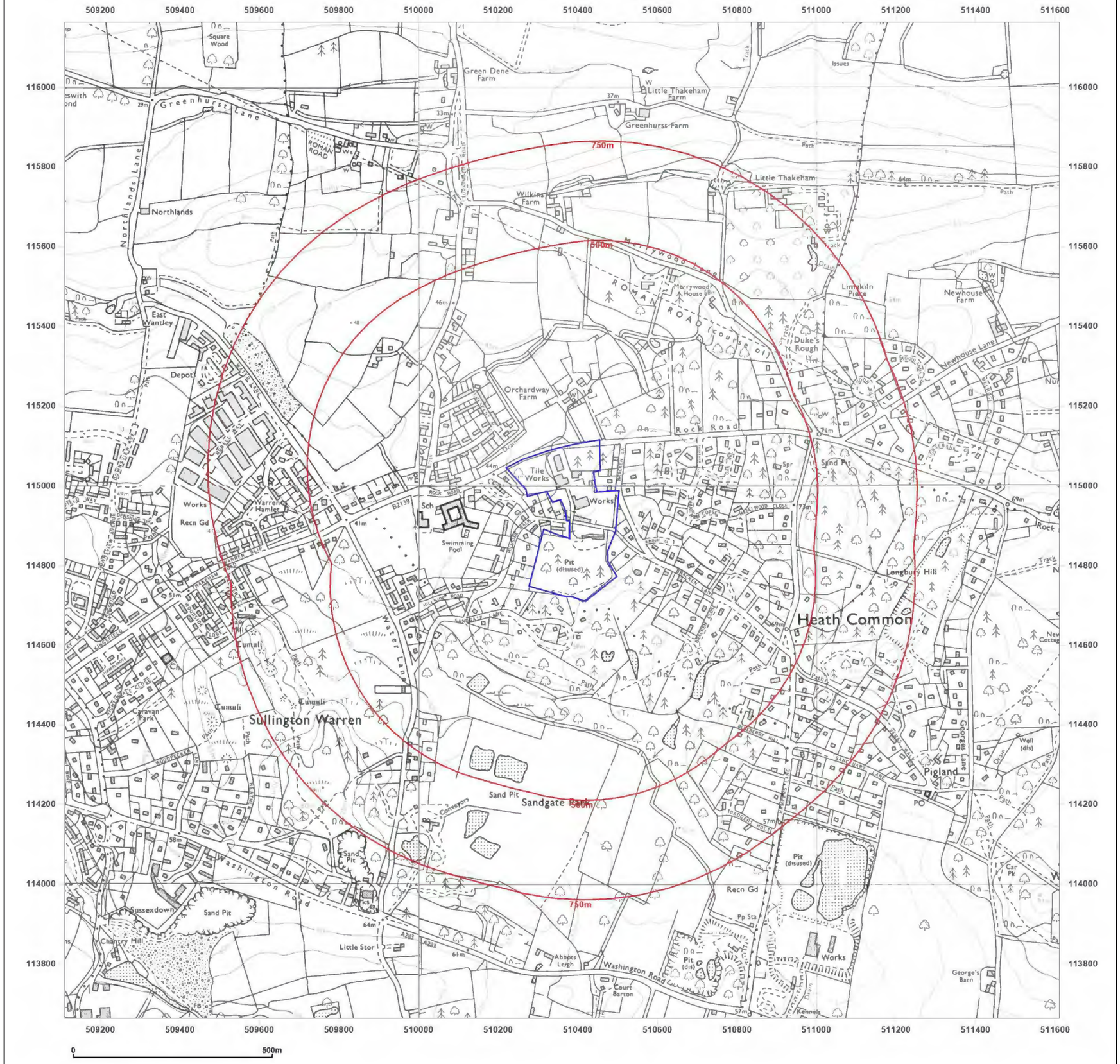

Groundsure INSIGHTS

Site Details:

37212-GELO

Client Ref: PO39879
Report Ref: HYD-VUG-LK4-FNV-QHO
Grid Ref: 510360, 114913

Map Name: National Grid

Map date: **1976-1980**

Scale: 1:10,000

Printed at: 1:10,000

N
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Surveyed 1972
Revised 1976
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1973
Revised 1980
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1977
Revised 1980
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1971
Revised 1980
Edition N/A
Copyright N/A
Levelled N/A

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Groundsure INSIGHTS

Site Details:

37212-GELO

Client Ref: PO39879
Report Ref: HYD-VUG-LK4-FNV-QHO
Grid Ref: 510360, 114913

Map Name: National Grid

Map date: **2001**

Scale: 1:10,000

Printed at: 1:10,000

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2001

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Groundsure INSIGHTS

Site Details:

37212-GELO

Client Ref: PO39879
Report Ref: HYD-VUG-LK4-FNV-QHO
Grid Ref: 510360, 114913

Map Name: National Grid

Map date: **2010**

Scale: 1:10,000

Printed at: 1:10,000

N
W E
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2010

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Production date: 07 March 2025

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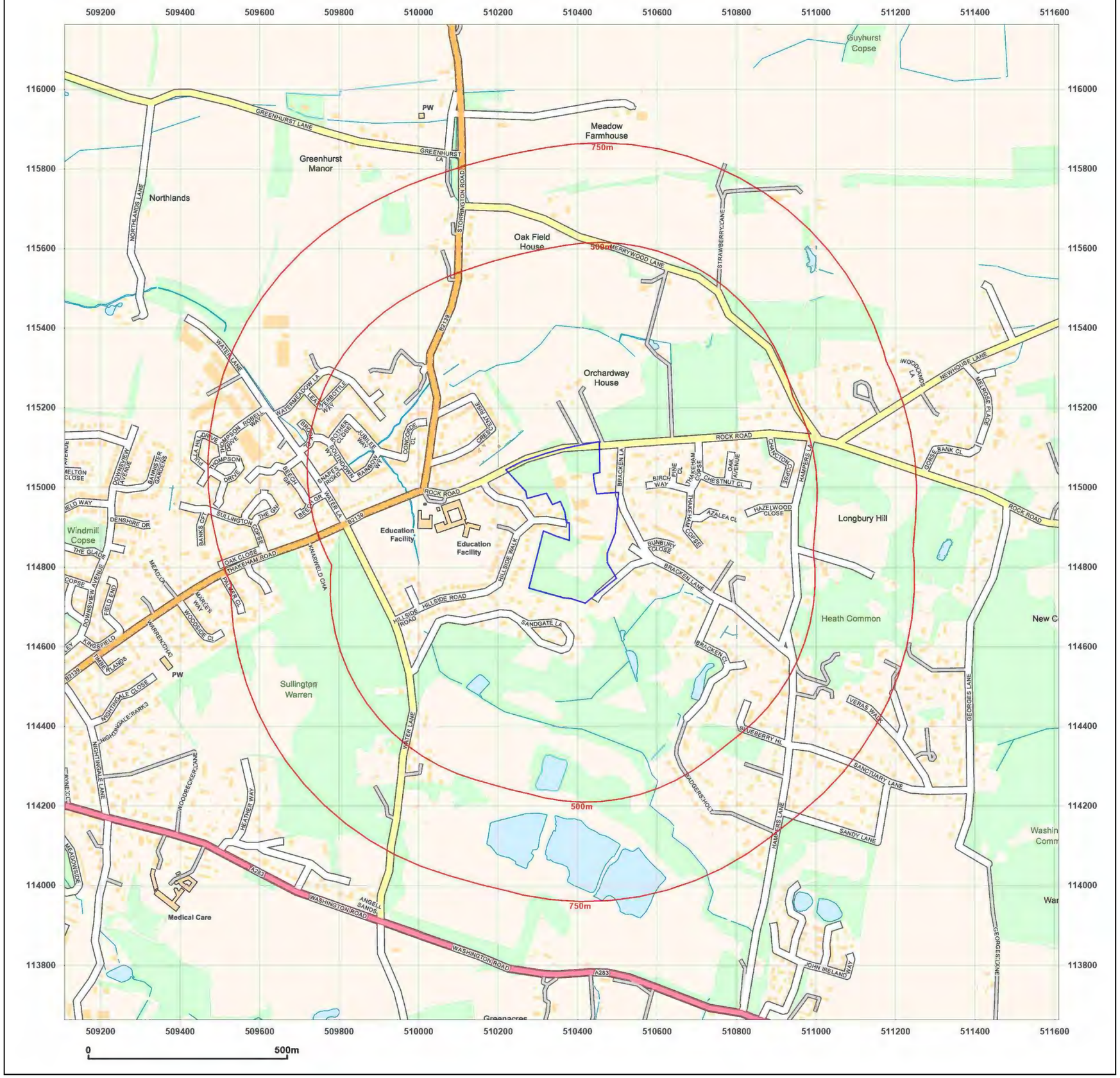

Site Details:

37212-GELO

Client Ref: PO39879
Report Ref: HYD-VUG-LK4-FNV-QHO
Grid Ref: 510360, 114913

Map Name: National Grid

Map date: **2025**

Scale: 1:10,000

Printed at: 1:10,000

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2025

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Appendix D Desk study research information

Groundsure
LOCATION INTELLIGENCE

Enviro+Geo Insight

37212-GELO

Order Details

Date: 07/03/2025

Your ref: PO39879

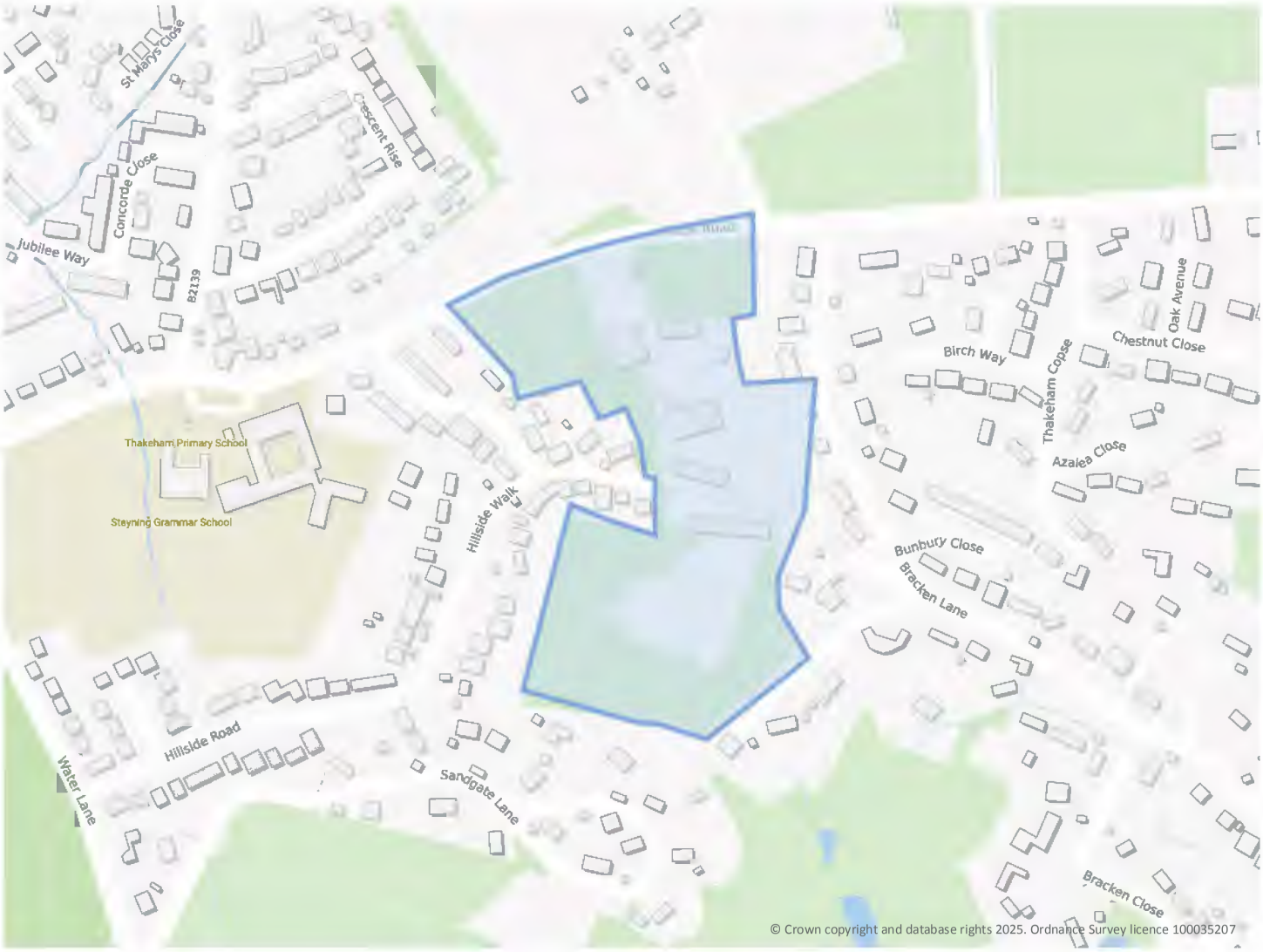
Our Ref: HYD-QKX-TF5-HSL-2U2

Site Details

Location: 510385 114913

Area: 6.5 ha

Authority: Horsham District Council ↗



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

Certified B Corporation

Summary of findings

Page	Section	Past land use >	On site	0-50m	50-250m	250-500m	500-2000m
15 >	1.1 >	Historical industrial land uses >	15	3	5	11	-
17 >	1.2 >	Historical tanks >	1	0	0	0	-
17 >	1.3 >	Historical energy features >	0	1	8	7	-
18	1.4	Historical petrol stations	0	0	0	0	-
18 >	1.5 >	Historical garages >	0	0	3	0	-
19	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
20 >	2.1 >	Historical industrial land uses >	16	3	5	15	-
22 >	2.2 >	Historical tanks >	1	0	0	0	-
22 >	2.3 >	Historical energy features >	0	6	11	13	-
24	2.4	Historical petrol stations	0	0	0	0	-
24 >	2.5 >	Historical garages >	0	0	3	0	-
Page	Section	Waste and landfill >	On site	0-50m	50-250m	250-500m	500-2000m
25	3.1	Active or recent landfill	0	0	0	0	-
25	3.2	Historical landfill (BGS records)	0	0	0	0	-
26	3.3	Historical landfill (LA/mapping records)	0	0	0	0	-
26 >	3.4 >	Historical landfill (EA/NRW records) >	1	0	0	0	-
26	3.5	Historical waste sites	0	0	0	0	-
26	3.6	Licensed waste sites	0	0	0	0	-
27 >	3.7 >	Waste exemptions >	0	0	0	4	-
Page	Section	Current industrial land use >	On site	0-50m	50-250m	250-500m	500-2000m
28 >	4.1 >	Recent industrial land uses >	1	1	7	-	-
29 >	4.2 >	Current or recent petrol stations >	0	0	1	0	-
29	4.3	Electricity cables	0	0	0	0	-
30	4.4	Gas pipelines	0	0	0	0	-
30	4.5	Sites determined as Contaminated Land	0	0	0	0	-

30	4.6	Control of Major Accident Hazards (COMAH)	0	0	0	0	-
30	4.7	Regulated explosive sites	0	0	0	0	-
30	4.8	Hazardous substance storage/usage	0	0	0	0	-
31	4.9	Historical licensed industrial activities (IPC)	0	0	0	0	-
31	4.10	Licensed industrial activities (Part A(1))	0	0	0	0	-
31 >	4.11 >	Licensed pollutant release (Part A(2)/B) >	1	0	0	0	-
31	4.12	Radioactive Substance Authorisations	0	0	0	0	-
32 >	4.13 >	Licensed Discharges to controlled waters >	0	0	5	6	-
33	4.14	Pollutant release to surface waters (Red List)	0	0	0	0	-
34	4.15	Pollutant release to public sewer	0	0	0	0	-
34	4.16	List 1 Dangerous Substances	0	0	0	0	-
34	4.17	List 2 Dangerous Substances	0	0	0	0	-
34 >	4.18 >	Pollution Incidents (EA/NRW) >	0	2	0	2	-
35	4.19	Pollution inventory substances	0	0	0	0	-
35	4.20	Pollution inventory waste transfers	0	0	0	0	-
35	4.21	Pollution inventory radioactive waste	0	0	0	0	-

Page	Section	Hydrogeology >	On site	0-50m	50-250m	250-500m	500-2000m
36 >	5.1 >	Superficial aquifer >	Identified (within 500m)				
38 >	5.2 >	Bedrock aquifer >	Identified (within 500m)				
40 >	5.3 >	Groundwater vulnerability >	Identified (within 50m)				
41	5.4	Groundwater vulnerability- soluble rock risk	None (within 0m)				
41	5.5	Groundwater vulnerability- local information	None (within 0m)				
42 >	5.6 >	Groundwater abstractions >	0	0	0	2	11
45	5.7	Surface water abstractions	0	0	0	0	0
46 >	5.8 >	Potable abstractions >	0	0	0	0	2
46	5.9	Source Protection Zones	0	0	0	0	-
47	5.10	Source Protection Zones (confined aquifer)	0	0	0	0	-

Page	Section	Hydrology >	On site	0-50m	50-250m	250-500m	500-2000m
48 >	6.1 >	Water Network (OS MasterMap) >	0	1	20	-	-

50 >	6.2 >	Surface water features >	0	1	13	-	-
50 >	6.3 >	WFD Surface water body catchments >	1	-	-	-	-
51 >	6.4 >	WFD Surface water bodies >	0	0	0	-	-
51 >	6.5 >	WFD Groundwater bodies >	1	-	-	-	-

Page	Section	River and coastal flooding	On site	0-50m	50-250m	250-500m	500-2000m
52	7.1	Risk of flooding from rivers and the sea	None (within 50m)				
52	7.2	Historical Flood Events	0	0	0	-	-
52	7.3	Flood Defences	0	0	0	-	-
53	7.4	Areas Benefiting from Flood Defences	0	0	0	-	-
53	7.5	Flood Storage Areas	0	0	0	-	-
54	7.6	Flood Zone 2	None (within 50m)				
54	7.7	Flood Zone 3	None (within 50m)				

Page	Section	Surface water flooding >	
55 >	8.1 >	Surface water flooding >	1 in 30 year, 0.1m - 0.3m (within 50m)

Page	Section	Groundwater flooding >	
57 >	9.1 >	Groundwater flooding >	Negligible (within 50m)

Page	Section	Environmental designations >	On site	0-50m	50-250m	250-500m	500-2000m
58 >	10.1 >	Sites of Special Scientific Interest (SSSI) >	0	0	0	1	1
59	10.2	Conserved wetland sites (Ramsar sites)	0	0	0	0	0
59	10.3	Special Areas of Conservation (SAC)	0	0	0	0	0
59	10.4	Special Protection Areas (SPA)	0	0	0	0	0
59	10.5	National Nature Reserves (NNR)	0	0	0	0	0
60	10.6	Local Nature Reserves (LNR)	0	0	0	0	0
60 >	10.7 >	Designated Ancient Woodland >	0	0	0	0	11
61	10.8	Biosphere Reserves	0	0	0	0	0
61	10.9	Forest Parks	0	0	0	0	0
61	10.10	Marine Conservation Zones	0	0	0	0	0
61	10.11	Green Belt	0	0	0	0	0
61	10.12	Proposed Ramsar sites	0	0	0	0	0

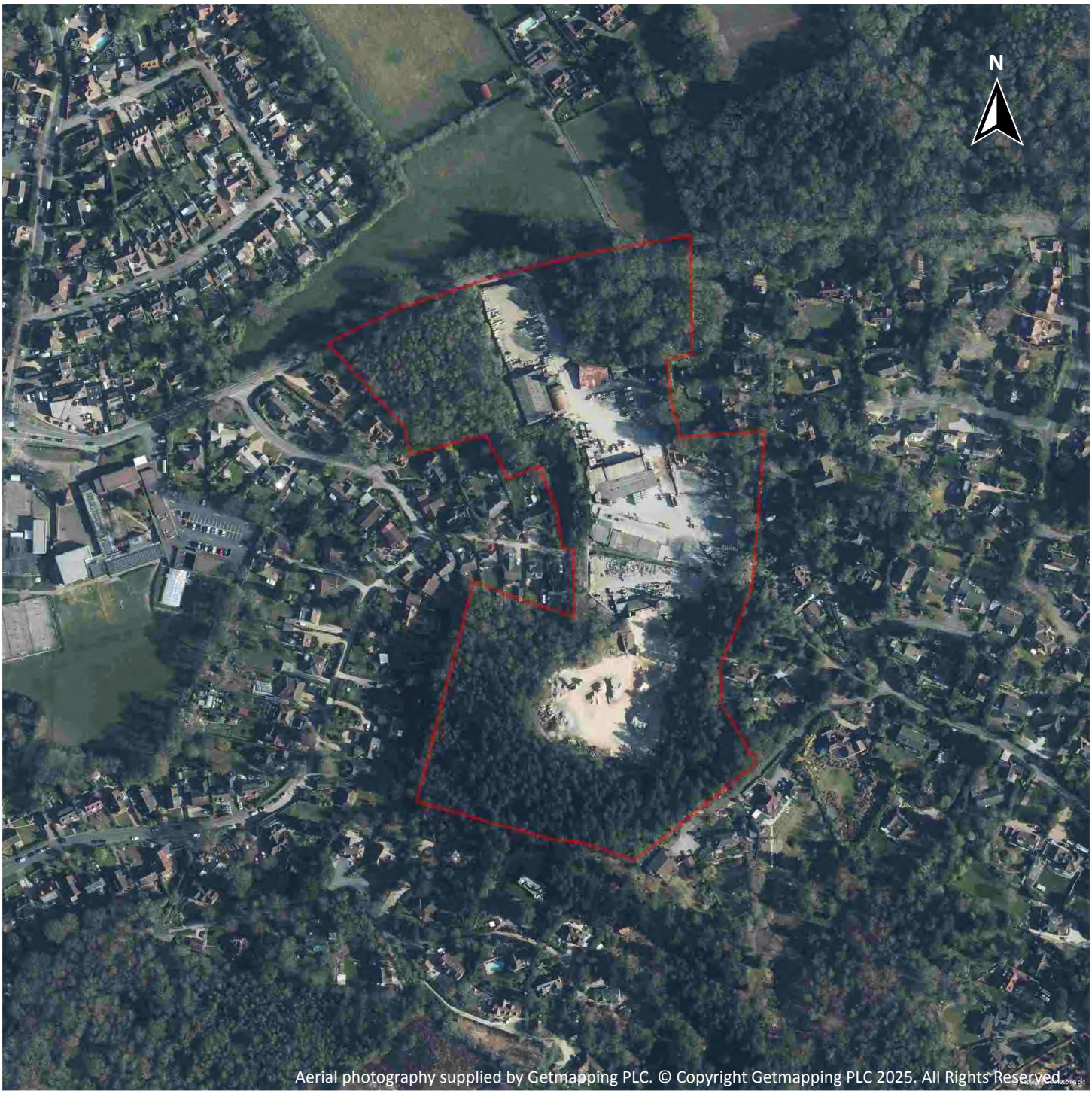
62	10.13	Possible Special Areas of Conservation (pSAC)	0	0	0	0	0
62	10.14	Potential Special Protection Areas (pSPA)	0	0	0	0	0
62	10.15	Nitrate Sensitive Areas	0	0	0	0	0
62	10.16	Nitrate Vulnerable Zones	0	0	0	0	0
63 >	10.17 >	SSSI Impact Risk Zones >	4	-	-	-	-
66 >	10.18 >	SSSI Units >	0	0	0	1	1
Page	Section	**Visual and cultural designations** >	On site	0-50m	50-250m	250-500m	500-2000m
67	11.1	World Heritage Sites	0	0	0	-	-
68	11.2	Area of Outstanding Natural Beauty	0	0	0	-	-
68	11.3	National Parks	0	0	0	-	-
68 >	11.4 >	Listed Buildings >	0	0	2	-	-
69	11.5	Conservation Areas	0	0	0	-	-
69	11.6	Scheduled Ancient Monuments	0	0	0	-	-
69	11.7	Registered Parks and Gardens	0	0	0	-	-
Page	Section	**Agricultural designations** >	On site	0-50m	50-250m	250-500m	500-2000m
70 >	12.1 >	Agricultural Land Classification >	Grade 3b (within 250m)				
71	12.2	Open Access Land	0	0	0	-	-
71 >	12.3 >	Tree Felling Licences >	0	0	2	-	-
72	12.4	Environmental Stewardship Schemes	0	0	0	-	-
72	12.5	Countryside Stewardship Schemes	0	0	0	-	-
Page	Section	**Habitat designations** >	On site	0-50m	50-250m	250-500m	500-2000m
73 >	13.1 >	Priority Habitat Inventory >	8	5	13	-	-
74 >	13.2 >	Habitat Networks >	0	0	2	-	-
75	13.3	Open Mosaic Habitat	0	0	0	-	-
75	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
76 >	14.1 >	10k Availability >	Identified (within 500m)				
78 >	14.2 >	Artificial and made ground (10k) >	2	0	0	2	-
80 >	14.3 >	Superficial geology (10k) >	0	0	3	1	-

81	14.4	Landslip (10k)	0	0	0	0	-
82 >	14.5 >	Bedrock geology (10k) >	3	1	2	3	-
83	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
84 >	15.1 >	50k Availability >	Identified (within 500m)				
85 >	15.2 >	Artificial and made ground (50k) >	2	0	0	2	-
86 >	15.3 >	Artificial ground permeability (50k) >	1	0	-	-	-
87 >	15.4 >	Superficial geology (50k) >	0	0	2	1	-
88	15.5	Superficial permeability (50k)	None (within 50m)				
88	15.6	Landslip (50k)	0	0	0	0	-
88	15.7	Landslip permeability (50k)	None (within 50m)				
89 >	15.8 >	Bedrock geology (50k) >	2	0	1	4	-
90 >	15.9 >	Bedrock permeability (50k) >	Identified (within 50m)				
90	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
91	16.1	BGS Boreholes	0	0	0	-	-
Page	Section	Natural ground subsidence >					
92 >	17.1 >	Shrink swell clays >	Negligible (within 50m)				
93 >	17.2 >	Running sands >	Low (within 50m)				
95 >	17.3 >	Compressible deposits >	Very low (within 50m)				
97 >	17.4 >	Collapsible deposits >	Very low (within 50m)				
98 >	17.5 >	Landslides >	Very low (within 50m)				
99 >	17.6 >	Ground dissolution of soluble rocks >	Negligible (within 50m)				
Page	Section	Mining and ground workings >	On site	0-50m	50-250m	250-500m	500-2000m
101 >	18.1 >	BritPits >	0	0	0	4	-
102 >	18.2 >	Surface ground workings >	4	3	9	-	-
103	18.3	Underground workings	0	0	0	0	0
103	18.4	Underground mining extents	0	0	0	0	-
104 >	18.5 >	Historical Mineral Planning Areas >	0	0	0	3	-

104 >	18.6 >	Non-coal mining >	2	0	2	0	2
105	18.7	JPB mining areas	None (within 0m)				
105	18.8	The Coal Authority non-coal mining	0	0	0	0	-
105	18.9	Researched mining	0	0	0	0	-
106	18.10	Mining record office plans	0	0	0	0	-
106	18.11	BGS mine plans	0	0	0	0	-
106	18.12	Coal mining	None (within 0m)				
106	18.13	Brine areas	None (within 0m)				
107	18.14	Gypsum areas	None (within 0m)				
107	18.15	Tin mining	None (within 0m)				
107	18.16	Clay mining	None (within 0m)				
Page	Section	Ground cavities and sinkholes	On site	0-50m	50-250m	250-500m	500-2000m
108	19.1	Natural cavities	0	0	0	0	-
108	19.2	Mining cavities	0	0	0	0	0
108	19.3	Reported recent incidents	0	0	0	0	-
108	19.4	Historical incidents	0	0	0	0	-
Page	Section	Radon >					
110 >	20.1 >	Radon >	Between 1% and 3% (within 0m)				
Page	Section	Soil chemistry >	On site	0-50m	50-250m	250-500m	500-2000m
112 >	21.1 >	BGS Estimated Background Soil Chemistry >	4	5	-	-	-
112	21.2	BGS Estimated Urban Soil Chemistry	0	0	-	-	-
113	21.3	BGS Measured Urban Soil Chemistry	0	0	-	-	-
Page	Section	Railway infrastructure and projects >	On site	0-50m	50-250m	250-500m	500-2000m
114	22.1	Underground railways (London)	0	0	0	-	-
114	22.2	Underground railways (Non-London)	0	0	0	-	-
115	22.3	Railway tunnels	0	0	0	-	-
115 >	22.4 >	Historical railway and tunnel features >	11	0	0	-	-
116	22.5	Royal Mail tunnels	0	0	0	-	-
116	22.6	Historical railways	0	0	0	-	-

116	22.7	Railways	0	0	0	-	-
116	22.8	Crossrail 2	0	0	0	0	-
116	22.9	HS2	0	0	0	0	-

Recent aerial photograph



Capture Date: 22/04/2021

Site Area: 6.5ha

Recent site history - 2018 aerial photograph

Capture Date: 26/06/2018

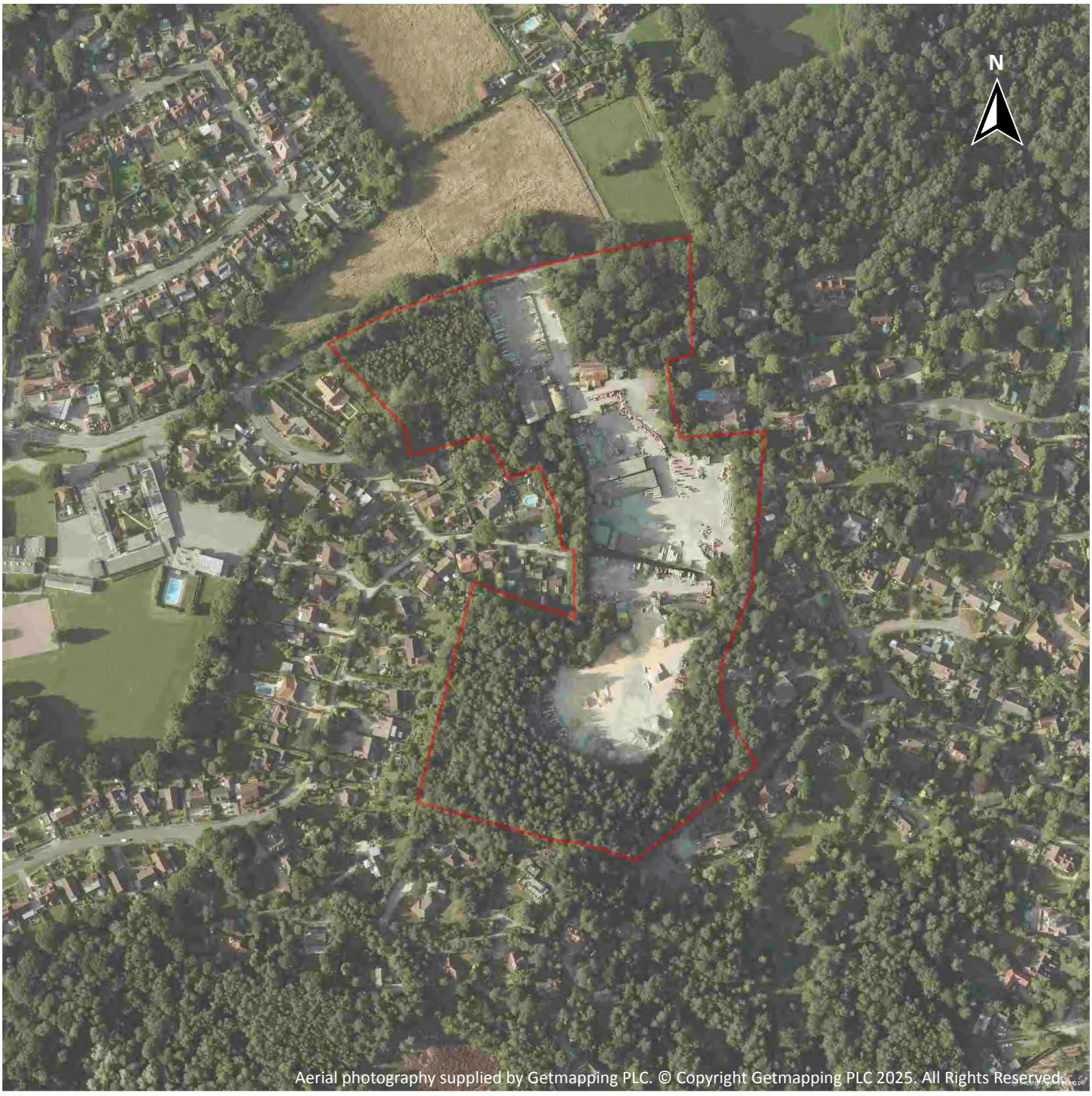
Site Area: 6.5ha

Recent site history - 2012 aerial photograph

Capture Date: 31/08/2012

Site Area: 6.5ha

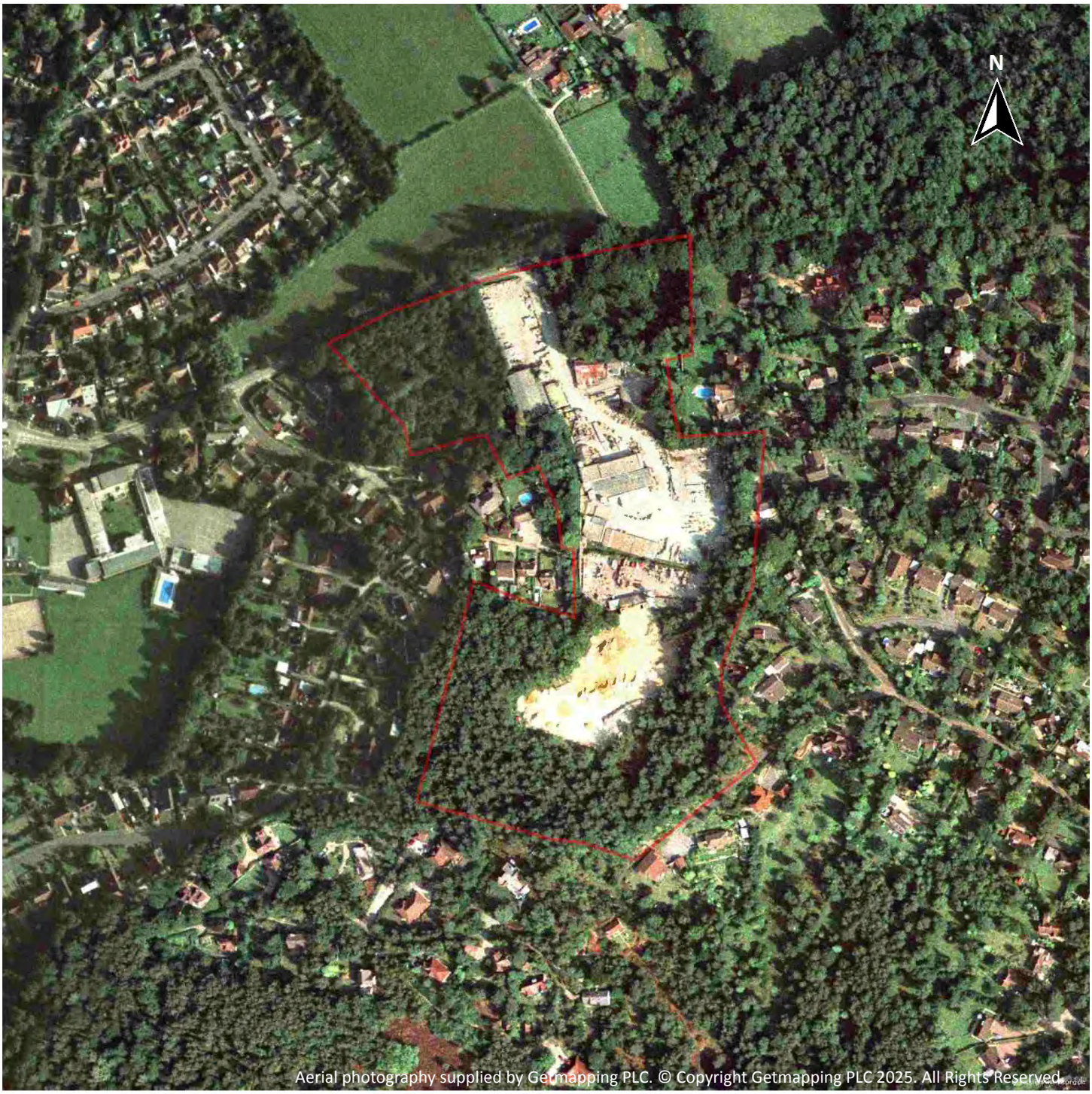
Recent site history - 2009 aerial photograph



Capture Date: 22/08/2009

Site Area: 6.5ha

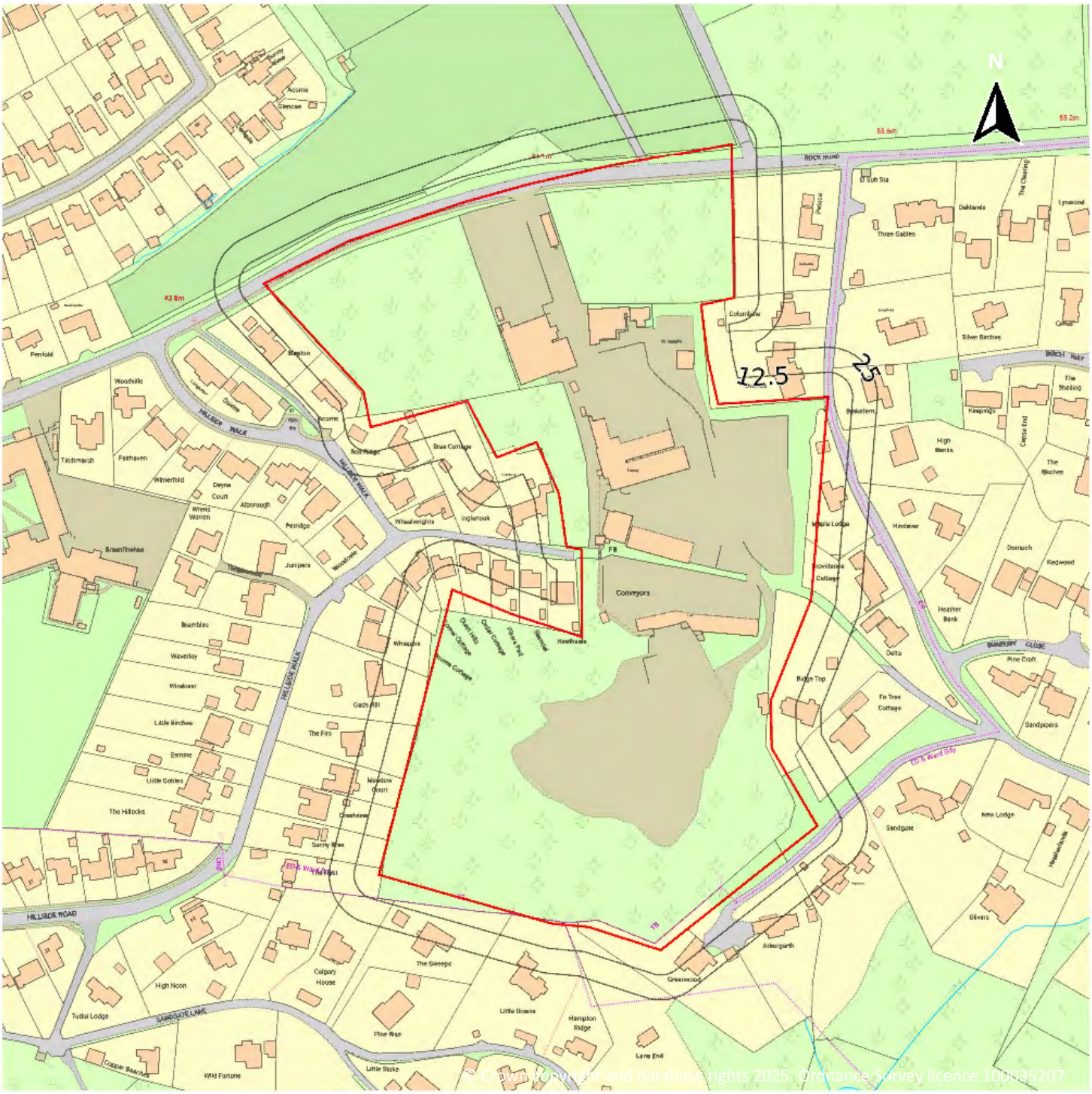
Recent site history - 1999 aerial photograph



Capture Date: 29/08/1999

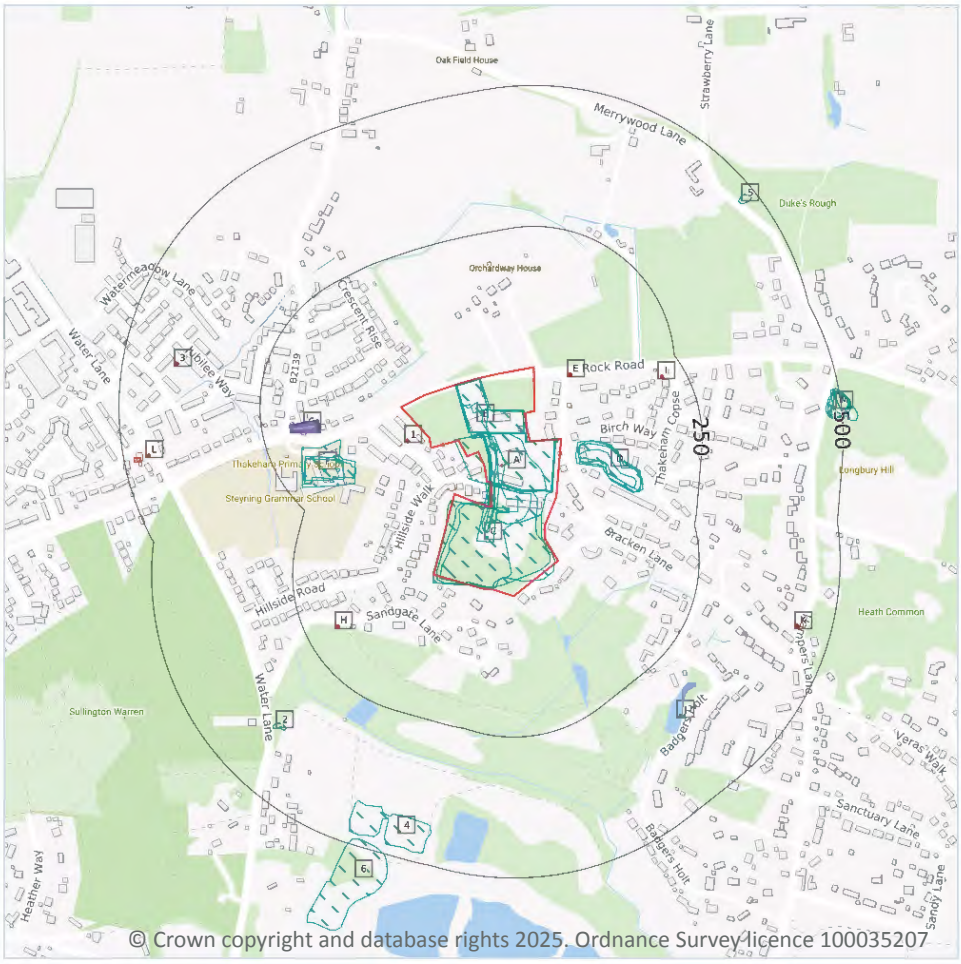
Site Area: 6.5ha

OS MasterMap site plan



Site Area: 6.5ha

1 Past land use



Site Outline

Search buffers in metres (m)

Historical industrial land uses

Historical tanks

Historical energy features

Historical garages

1.1 Historical industrial land uses

Records within 500m	34

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

Features are displayed on the Past land use map on **page 15 >**

ID	Location	Land use	Dates present	Group ID
A	**On site**	**Works**	**1971**	**2167179**

ID	Location	Land use	Dates present	Group ID
A	**On site**	**Unspecified Works**	**1980**	**2235745**
A	**On site**	**Tile Works**	**1946**	**2271798**
A	**On site**	**Unspecified Works**	**1961**	**2284123**
A	**On site**	**Railway Sidings**	**1946**	**2284385**
A	**On site**	**Railway Sidings**	**1980**	**2292500**
A	**On site**	**Railway Sidings**	**1971**	**2304725**
A	**On site**	**Railway Sidings**	**1961**	**2306757**
B	**On site**	**Unspecified Commercial/Industrial**	**1957**	**2171252**
B	**On site**	**Tile Works**	**1980**	**2207619**
B	**On site**	**Railway Sidings**	**1957**	**2249228**
C	**On site**	**Wind Pump**	**1971**	**2173249**
C	**On site**	**Unspecified Disused Pit**	**1980**	**2198877**
C	**On site**	**Sand Pit**	**1946**	**2231013**
C	**On site**	**Sand Pit**	**1961 - 1971**	**2236139**
D	28m E	Unspecified Heap	1961	2186777
D	31m E	Unspecified Ground Workings	1971	2163367
D	33m E	Sand Pit	1946	2174099
F	122m W	Unspecified Workhouse	1909	2285216
F	125m W	Unspecified Workhouse	1896	2217035
F	140m W	Unspecified Workhouse	1875	2250915
F	155m W	Unspecified Tank	1875	2190705
F	173m W	Unspecified Tank	1875	2190706
J	347m SE	Boat House	1914 - 1961	2267992
J	351m SE	Boat House	1971	2231560
2	377m SW	Unspecified Heap	1875	2186776
4	422m S	Sand Pit	1980	2174100
5	468m NE	Sand Pit	1946	2174098
M	472m E	Old Sand Pit	1896	2185996

ID	Location	Land use	Dates present	Group ID
M	475m E	Unspecified Pit	1957	2282523
M	478m E	Unspecified Pit	1909 - 1946	2220373
M	481m E	Sand Pit	1875	2268754
M	485m E	Sand Pit	1980	2247812
6	487m S	Sand Pit	1961 - 1971	2327357

This data is sourced from Ordnance Survey / Groundsure.

1.2 Historical tanks

Records within 500m	**1**

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 15 >**

ID	Location	Land use	Dates present	Group ID
A	**On site**	**Unspecified Tank**	**1972**	**394340**

This data is sourced from Ordnance Survey / Groundsure.

1.3 Historical energy features

Records within 500m	**16**

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 15 >**

ID	Location	Land use	Dates present	Group ID
1	30m NW	Electricity Substation	1972 - 1993	283059
E	61m NE	Electricity Substation	1966	302094

ID	Location	Land use	Dates present	Group ID
E	63m NE	Electricity Substation	1993	311792
E	63m NE	Electricity Substation	1974	319011
H	190m SW	Electricity Substation	1972	289148
H	191m SW	Electricity Substation	1993	297609
H	191m SW	Electricity Substation	1980 - 1990	297015
I	207m NE	Electricity Substation	1966	312095
I	208m NE	Electricity Substation	1993	318753
3	401m W	Electricity Substation	1982 - 1991	287366
K	435m SE	Electricity Substation	1993	318605
K	436m SE	Electricity Substation	1980 - 1990	279424
K	436m SE	Electricity Substation	1972	301237
L	453m W	Electricity Substation	1971 - 1980	310133
L	453m W	Electricity Substation	1990 - 1993	285516
L	471m W	Electricity Substation	1985	271569

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	3

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'.

Features are displayed on the Past land use map on **page 15 >**

ID	Location	Land use	Dates present	Group ID
G	148m W	Garage	1993	88260
G	149m W	Garage	1966	82819
G	150m W	Garage	1974	85787

This data is sourced from Ordnance Survey / Groundsure.

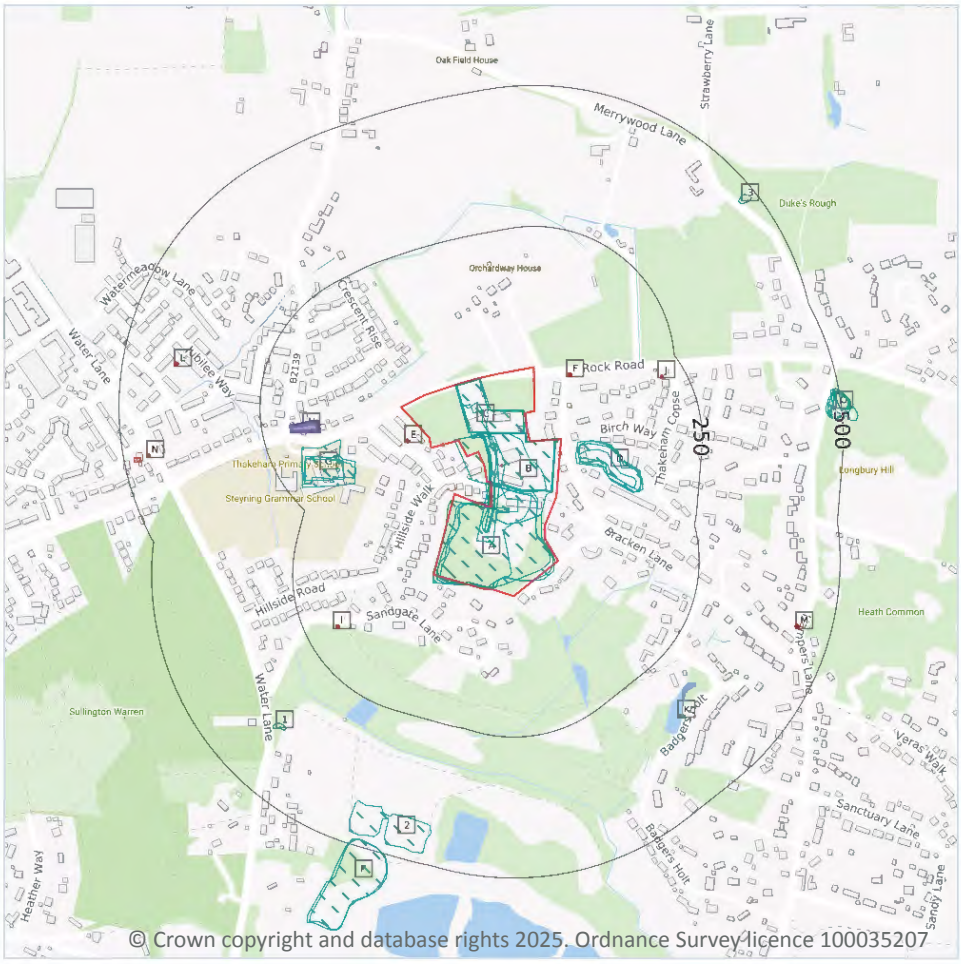
1.6 Historical military land

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

Historical garages

2.1 Historical industrial land uses

Records within 500m	39

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 20 >**

ID	Location	Land Use	Date	Group ID
A	**On site**	**Unspecified Disused Pit**	**1980**	**2198877**
A	**On site**	**Sand Pit**	**1961**	**2236139**
A	**On site**	**Sand Pit**	**1946**	**2231013**

ID	Location	Land Use	Date	Group ID
A	**On site**	**Wind Pump**	**1971**	**2173249**
A	**On site**	**Sand Pit**	**1971**	**2236139**
B	**On site**	**Unspecified Works**	**1980**	**2235745**
B	**On site**	**Railway Sidings**	**1980**	**2292500**
B	**On site**	**Railway Sidings**	**1971**	**2304725**
B	**On site**	**Works**	**1971**	**2167179**
B	**On site**	**Railway Sidings**	**1946**	**2284385**
B	**On site**	**Tile Works**	**1946**	**2271798**
B	**On site**	**Railway Sidings**	**1961**	**2306757**
B	**On site**	**Unspecified Works**	**1961**	**2284123**
C	**On site**	**Unspecified Commercial/Industrial**	**1957**	**2171252**
C	**On site**	**Railway Sidings**	**1957**	**2249228**
C	**On site**	**Tile Works**	**1980**	**2207619**
D	28m E	Unspecified Heap	1961	2186777
D	31m E	Unspecified Ground Workings	1971	2163367
D	33m E	Sand Pit	1946	2174099
G	122m W	Unspecified Workhouse	1909	2285216
G	125m W	Unspecified Workhouse	1896	2217035
G	140m W	Unspecified Workhouse	1875	2250915
G	155m W	Unspecified Tank	1875	2190705
G	173m W	Unspecified Tank	1875	2190706
K	347m SE	Boat House	1914	2267992
K	349m SE	Boat House	1961	2267992
K	350m SE	Boat House	1914	2267992
K	351m SE	Boat House	1971	2231560
1	377m SW	Unspecified Heap	1875	2186776
2	422m S	Sand Pit	1980	2174100
3	468m NE	Sand Pit	1946	2174098

ID	Location	Land Use	Date	Group ID
O	472m E	Old Sand Pit	1896	2185996
O	475m E	Unspecified Pit	1957	2282523
O	478m E	Unspecified Pit	1946	2220373
O	478m E	Unspecified Pit	1909	2220373
O	481m E	Sand Pit	1875	2268754
O	485m E	Sand Pit	1980	2247812
P	487m S	Sand Pit	1961	2327357
P	487m S	Sand Pit	1971	2327357

This data is sourced from Ordnance Survey / Groundsure.

2.2 Historical tanks

Records within 500m	**1**

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 20 >**

ID	Location	Land Use	Date	Group ID
B	**On site**	**Unspecified Tank**	**1972**	**394340**

This data is sourced from Ordnance Survey / Groundsure.

2.3 Historical energy features

Records within 500m	**30**

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 20 >**

ID	Location	Land Use	Date	Group ID
E	30m NW	Electricity Substation	1972	283059
E	30m NW	Electricity Substation	1980	283059

ID	Location	Land Use	Date	Group ID
E	30m NW	Electricity Substation	1985	283059
E	30m NW	Electricity Substation	1990	283059
E	30m NW	Electricity Substation	1990	283059
E	30m NW	Electricity Substation	1993	283059
F	61m NE	Electricity Substation	1966	302094
F	63m NE	Electricity Substation	1993	311792
F	63m NE	Electricity Substation	1974	319011
I	190m SW	Electricity Substation	1972	289148
I	191m SW	Electricity Substation	1993	297609
I	191m SW	Electricity Substation	1980	297015
I	191m SW	Electricity Substation	1985	297015
I	191m SW	Electricity Substation	1990	297015
I	191m SW	Electricity Substation	1990	297015
J	207m NE	Electricity Substation	1966	312095
J	208m NE	Electricity Substation	1993	318753
L	401m W	Electricity Substation	1982	287366
L	403m W	Electricity Substation	1991	287366
M	435m SE	Electricity Substation	1993	318605
M	436m SE	Electricity Substation	1980	279424
M	436m SE	Electricity Substation	1985	279424
M	436m SE	Electricity Substation	1990	279424
M	436m SE	Electricity Substation	1990	279424
M	436m SE	Electricity Substation	1972	301237
N	453m W	Electricity Substation	1980	310133
N	453m W	Electricity Substation	1971	310133
N	453m W	Electricity Substation	1990	285516
N	453m W	Electricity Substation	1993	285516
N	471m W	Electricity Substation	1985	271569

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	3

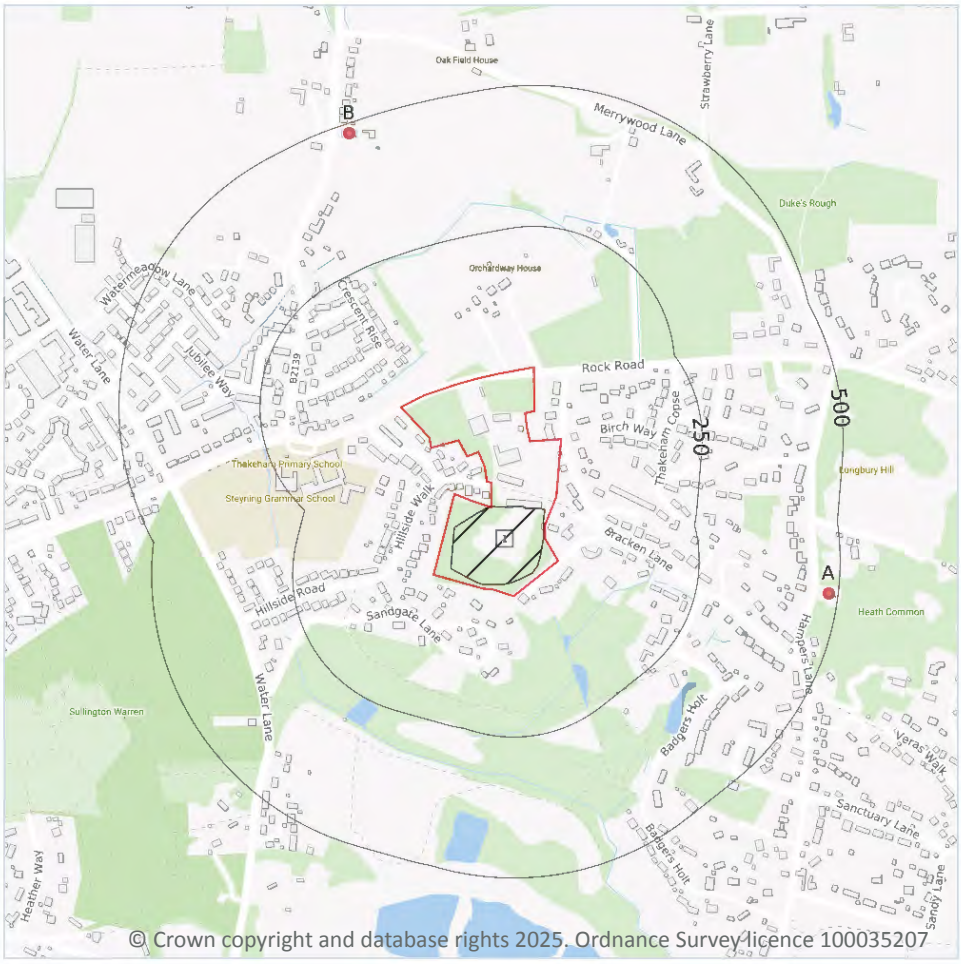
Garages digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale. Any records shown are available intelligently grouped in section 1. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

Features are displayed on the Past land use - un-grouped map on **page 20 >**

ID	Location	Land Use	Date	Group ID
H	148m W	Garage	1993	88260
H	149m W	Garage	1966	82819
H	150m W	Garage	1974	85787

This data is sourced from Ordnance Survey / Groundsure.

3 Waste and landfill



Site Outline

Search buffers in metres (m)

Historical landfill (EA/NRW)

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	1

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

Features are displayed on the Waste and landfill map on **page 25 >**

ID	Location	Details		
1	**On site**	**Site Address: Thakeham Tiles, Storrington, Sussex** **Licence Holder Address: -**	**Waste Licence: Yes** **Site Reference: WD27/212, WD13/38** **Waste Type: Inert** **Environmental Permitting Regulations (Waste) Reference: -** **Licence Issue: 09/06/1980** **Licence Surrender: 30/04/1994**	**Operator: -** **Licence Holder: Thakeham Tiles Limited** **First Recorded 31/12/1970** **Last Recorded: 31/12/1982**

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	4

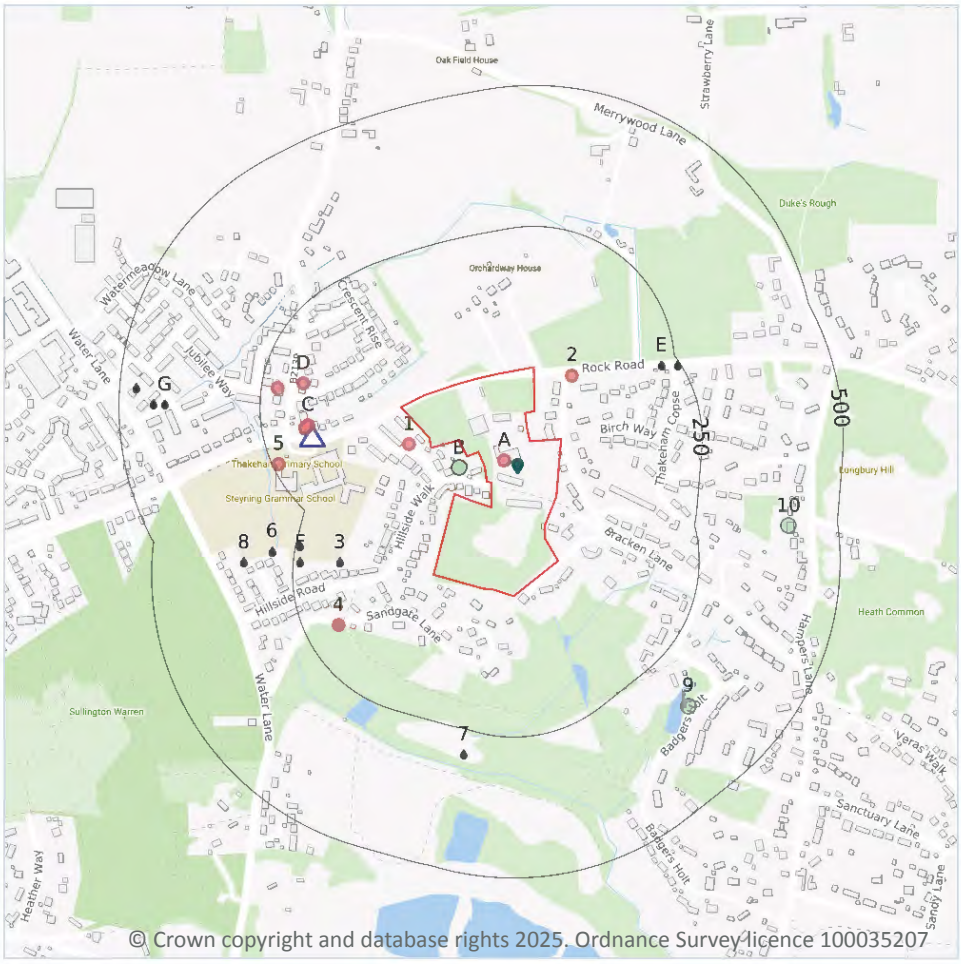
Activities involving the storage, treatment, use or disposal of waste that are exempt from needing a permit. Exemptions have specific limits and conditions that must be adhered to.

Features are displayed on the Waste and landfill map on **page 25 >**

ID	Location	Site	Reference	Category	Sub-Category	Description
A	482m E	Capel, Hampers Lane, Storrington, Pulborough, Rh20 3hy	WEX405541	Disposing of waste exemption	Not on a farm	Burning waste in the open
A	482m E	Capel, Hampers Lane, Storrington, Pulborough, Rh20 3hy	WEX276962	Disposing of waste exemption	Not on a farm	Burning waste in the open
B	483m NW	Fairlands, Storrington Road, Thakeham, Pulborough, Rh20 3ed	WEX298418	Disposing of waste exemption	Not on a farm	Burning waste in the open
B	483m NW	Fairlands, Storrington Road, Thakeham, Pulborough, Rh20 3ed	WEX160865	Disposing of waste exemption	Not on a farm	Burning waste in the open

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)

Licensed Discharges to controlled waters

Pollution Incidents (EA/NRW)

4.1 Recent industrial land uses

Records within 250m	9

Current potentially contaminative industrial sites.

Features are displayed on the Current industrial land use map on **page 28 >**

ID	Location	Company	Address	Activity	Category
A	**On site**	**Factory**	**West Sussex, RH20**	**Unspecified Works Or Factories**	**Industrial Features**
1	34m NW	Electricity Sub Station	West Sussex, RH20	Electrical Features	Infrastructure and Facilities
2	67m NE	Electricity Sub Station	West Sussex, RH20	Electrical Features	Infrastructure and Facilities

ID	Location	Company	Address	Activity	Category
C	168m W	Rhino Rental	Rock Road, Storrington, Pulborough, West Sussex, RH20 3AB	Vehicle Hire and Rental	Hire Services
C	174m W	Autochek	Thakeham Garage, Rock Road, Storrington, West Sussex, RH20 3AB	Vehicle Repair, Testing and Servicing	Repair and Servicing
D	178m NW	Southdown Saddlery	Trott Interiors, Storrington Road, Thakeham, West Sussex, RH20 3NA	Hobby, Sports and Pastime Products	Consumer Products
4	191m SW	Electricity Sub Station	West Sussex, RH20	Electrical Features	Infrastructure and Facilities
D	221m NW	A J Frost Ltd	33, Jubilee Way, Storrington, West Sussex, RH20 3NZ	Vehicle Repair, Testing and Servicing	Repair and Servicing
5	239m W	Gas Meter House	West Sussex, RH20	Gas Features	Infrastructure and Facilities

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 28 >**

ID	Location	Company	Address	LPG	Status
C	167m W	MURCO	Rock Road, Storrington Road, Heath Common, Storrington, West Sussex, RH20 3AB	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 28 >**

ID	Location	Address	Details	
A	**On site**	**Thakeham Tiles Ltd, Rock Road, Heath Common, Storrington, West Sussex, RH20 3AD**	**Process: Use of Bulk Cement** **Status: Current Permit** **Permit Type: Part B**	**Enforcement: No Enforcements Notified** **Date of enforcement: No Enforcements Notified** **Comment: No Enforcements Notified**

This data is sourced from Local Authority records.

4.12 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	11

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

Features are displayed on the Current industrial land use map on **page 28 >**

ID	Location	Address	Details	
3	168m SW	ESTATEROADS,ESTATEROADS,WATERLANE(EASTSIDE,SULLINGTONWESTSUSSEX	Effluent Type: MISCELLANEOUS DISCHARGES - SURFACE WATER Permit Number: S01145 Permit Version: 1 Receiving Water: FRESHWATER RIVER	Status: LAPSED UNDER SCHEDULE 23 ENVIRONMENT ACT 1995 Issue date: 29/03/1962 Effective Date: 29/03/1962 Revocation Date: 31/03/1997
E	221m NE	RESIDENTIALDEVELOPMENT,RESIDENTIALDEVELOPMENT,LANDADJOINNINGYAFFLES,ROCKROA,THAKEHAM,WESTSUSSEX	Effluent Type: MISCELLANEOUS DISCHARGES - SURFACE WATER Permit Number: N01405 Permit Version: 1 Receiving Water: FRESHWATER RIVER	Status: PRE NRA LEGISLATION WHERE ISSUE DATE 01-SEP-89 (HISTORIC ONLY) Issue date: 14/01/1974 Effective Date: 14/01/1974 Revocation Date: 01/07/1991
F	238m SW	ESTATEROADS,ESTATEROADS,WATERLANE(EASTSIDE,SULLINGTONWESTSUSSEX	Effluent Type: MISCELLANEOUS DISCHARGES - SURFACE WATER Permit Number: S01145 Permit Version: 1 Receiving Water: FRESHWATER RIVER	Status: LAPSED UNDER SCHEDULE 23 ENVIRONMENT ACT 1995 Issue date: 29/03/1962 Effective Date: 29/03/1962 Revocation Date: 31/03/1997
F	242m W	ESTATEROADS,ESTATEROADS,WATERLANE(EASTSIDE,SULLINGTONWESTSUSSEX	Effluent Type: MISCELLANEOUS DISCHARGES - SURFACE WATER Permit Number: S01145 Permit Version: 1 Receiving Water: FRESHWATER RIVER	Status: LAPSED UNDER SCHEDULE 23 ENVIRONMENT ACT 1995 Issue date: 29/03/1962 Effective Date: 29/03/1962 Revocation Date: 31/03/1997
E	245m NE	RESIDENTIALDEVELOPMENT,RESIDENTIALDEVELOPMENT,LANDADJOINNINGYAFFLES,ROCKROA,THAKEHAM,WESTSUSSEX	Effluent Type: MISCELLANEOUS DISCHARGES - SURFACE WATER Permit Number: N01405 Permit Version: 1 Receiving Water: FRESHWATER RIVER	Status: PRE NRA LEGISLATION WHERE ISSUE DATE 01-SEP-89 (HISTORIC ONLY) Issue date: 14/01/1974 Effective Date: 14/01/1974 Revocation Date: 01/07/1991
6	290m W	ESTATEROADS,ESTATEROADS,WATERLANE(EASTSIDE,SULLINGTONWESTSUSSEX	Effluent Type: MISCELLANEOUS DISCHARGES - SURFACE WATER Permit Number: S01145 Permit Version: 1 Receiving Water: FRESHWATER RIVER	Status: LAPSED UNDER SCHEDULE 23 ENVIRONMENT ACT 1995 Issue date: 29/03/1962 Effective Date: 29/03/1962 Revocation Date: 31/03/1997

ID	Location	Address	Details	
7	294m S	SANDGATEPIT,SANDGATEPIT,WATERLANE,STORRINGTON,WESTSUSSEX,RH203LY	Effluent Type: TRADE DISCHARGES - MINERAL WORKINGS Permit Number: S02231 Permit Version: 1 Receiving Water: FRESHWATER STREAM OR RIVER	Status: PRE NRA LEGISLATION WHERE ISSUE DATE 01-SEP-89 (HISTORIC ONLY) Issue date: 12/11/1973 Effective Date: 12/11/1973 Revocation Date: -
8	338m W	ESTATEROADS,ESTATEROADS,WATERLANE(EASTSIDE,SULLINGTONWESTSUSSEX	Effluent Type: MISCELLANEOUS DISCHARGES - SURFACE WATER Permit Number: S01145 Permit Version: 1 Receiving Water: FRESHWATER RIVER	Status: LAPSED UNDER SCHEDULE 23 ENVIRONMENT ACT 1995 Issue date: 29/03/1962 Effective Date: 29/03/1962 Revocation Date: 31/03/1997
G	419m W	RESIDENTIALDEVELOPMENT,RESIDENTIALDEVELOPMENT,WATERLANE,STORRINGTON,WESTSUSSEX	Effluent Type: MISCELLANEOUS DISCHARGES - SURFACE WATER Permit Number: N02034 Permit Version: 1 Receiving Water: FRESHWATER RIVER	Status: PRE NRA LEGISLATION WHERE ISSUE DATE 01-SEP-89 (HISTORIC ONLY) Issue date: 24/01/1977 Effective Date: 24/01/1977 Revocation Date: 01/07/1991
G	439m W	RESIDENTIALDEVELOPMENT,RESIDENTIALDEVELOPMENT,WATERLANE,STORRINGTON,WESTSUSSEX	Effluent Type: MISCELLANEOUS DISCHARGES - SURFACE WATER Permit Number: N02034 Permit Version: 1 Receiving Water: FRESHWATER RIVER	Status: PRE NRA LEGISLATION WHERE ISSUE DATE 01-SEP-89 (HISTORIC ONLY) Issue date: 24/01/1977 Effective Date: 24/01/1977 Revocation Date: 01/07/1991
G	470m W	RESIDENTIALDEVELOPMENT,RESIDENTIALDEVELOPMENT,WATERLANE,STORRINGTON,WESTSUSSEX	Effluent Type: MISCELLANEOUS DISCHARGES - SURFACE WATER Permit Number: N02034 Permit Version: 1 Receiving Water: FRESHWATER RIVER	Status: PRE NRA LEGISLATION WHERE ISSUE DATE 01-SEP-89 (HISTORIC ONLY) Issue date: 24/01/1977 Effective Date: 24/01/1977 Revocation Date: 01/07/1991

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	4

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

Features are displayed on the Current industrial land use map on **page 28 >**

ID	Location	Details	
B	25m W	Incident Date: 26/07/2001 Incident Identification: 19314 Pollutant: General Biodegradable Materials and Wastes Pollutant Description: Natural Organic Material	Water Impact: Category 3 (Minor) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
B	25m W	Incident Date: 26/07/2001 Incident Identification: 19314 Pollutant: General Biodegradable Materials and Wastes Pollutant Description: Natural Organic Material	Water Impact: Category 3 (Minor) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)

ID	Location	Details	
9	345m SE	Incident Date: 13/03/2003 Incident Identification: 142829 Pollutant: Sewage Materials Pollutant Description: Crude Sewage	Water Impact: Category 3 (Minor) Land Impact: Category 3 (Minor) Air Impact: Category 3 (Minor)
10	413m E	Incident Date: 18/02/2003 Incident Identification: 137737 Pollutant: Oils and Fuel Pollutant Description: Gas and Fuel Oils	Water Impact: Category 3 (Minor) Land Impact: Category 3 (Minor) Air Impact: Category 3 (Minor)

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

4.19 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.

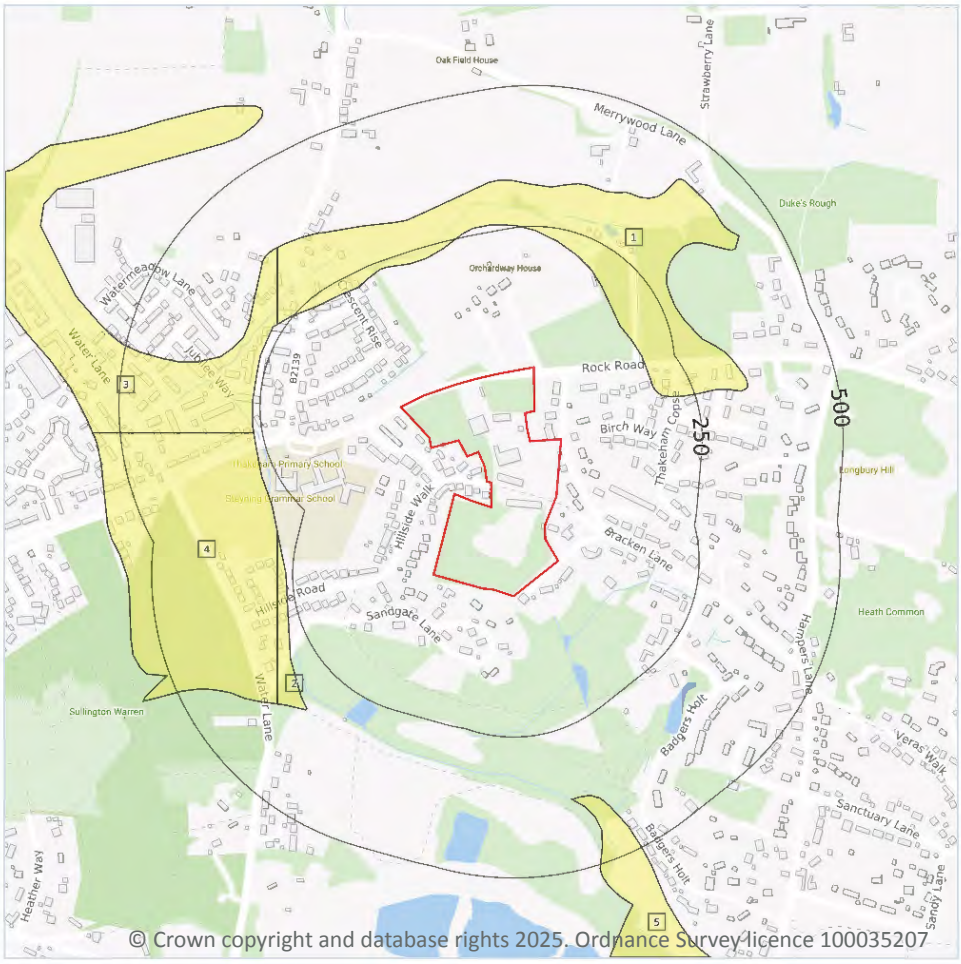
4.21 Pollution inventory radioactive waste

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	5

Aquifer status of groundwater held within superficial geology.

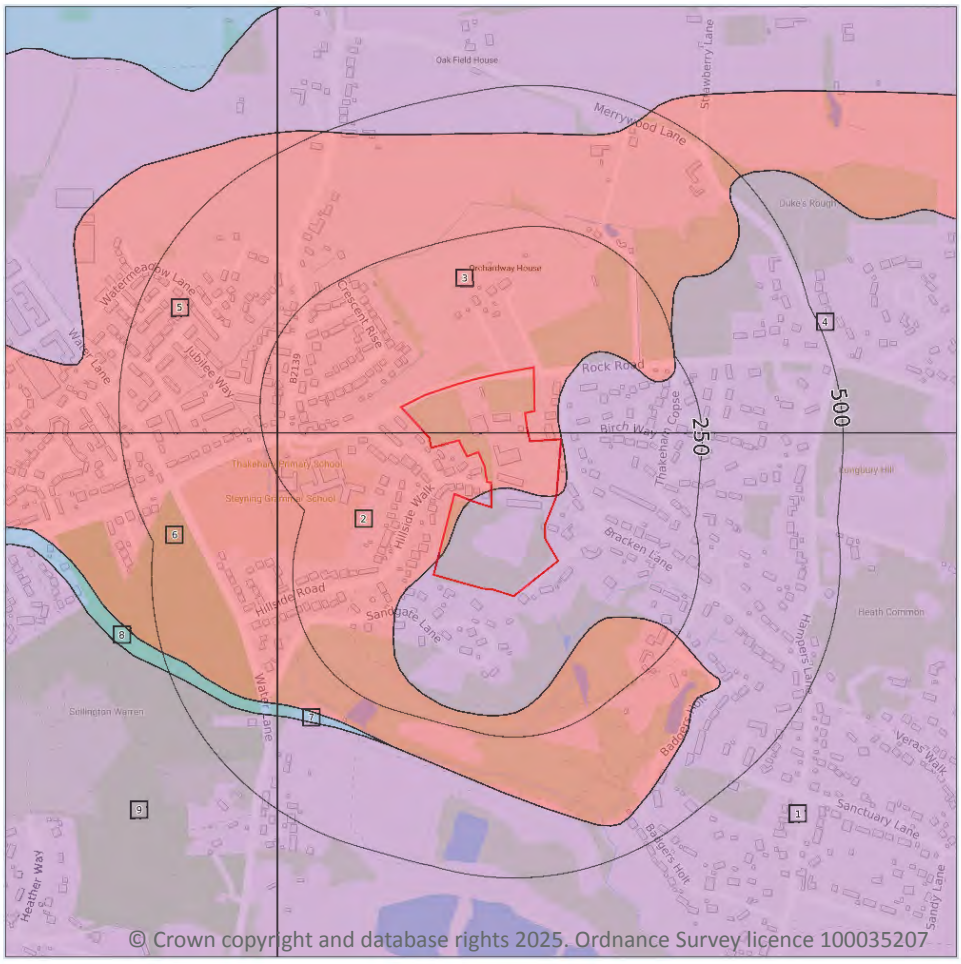
Features are displayed on the Hydrogeology map on page 36 >

ID	Location	Designation	Description
1	170m NE	Secondary Undifferentiated	Assigned where it is not possible to attribute either category A or B to a rock type. In general these layers have previously been designated as both minor and non-aquifer in different locations due to the variable characteristics of the rock type
2	261m SW	Secondary Undifferentiated	Assigned where it is not possible to attribute either category A or B to a rock type. In general these layers have previously been designated as both minor and non-aquifer in different locations due to the variable characteristics of the rock type

ID	Location	Designation	Description
3	262m W	Secondary Undifferentiated	Assigned where it is not possible to attribute either category A or B to a rock type. In general these layers have previously been designated as both minor and non-aquifer in different locations due to the variable characteristics of the rock type
4	265m W	Secondary Undifferentiated	Assigned where it is not possible to attribute either category A or B to a rock type. In general these layers have previously been designated as both minor and non-aquifer in different locations due to the variable characteristics of the rock type
5	375m S	Secondary Undifferentiated	Assigned where it is not possible to attribute either category A or B to a rock type. In general these layers have previously been designated as both minor and non-aquifer in different locations due to the variable characteristics of the rock type

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	9

Aquifer status of groundwater held within bedrock geology.

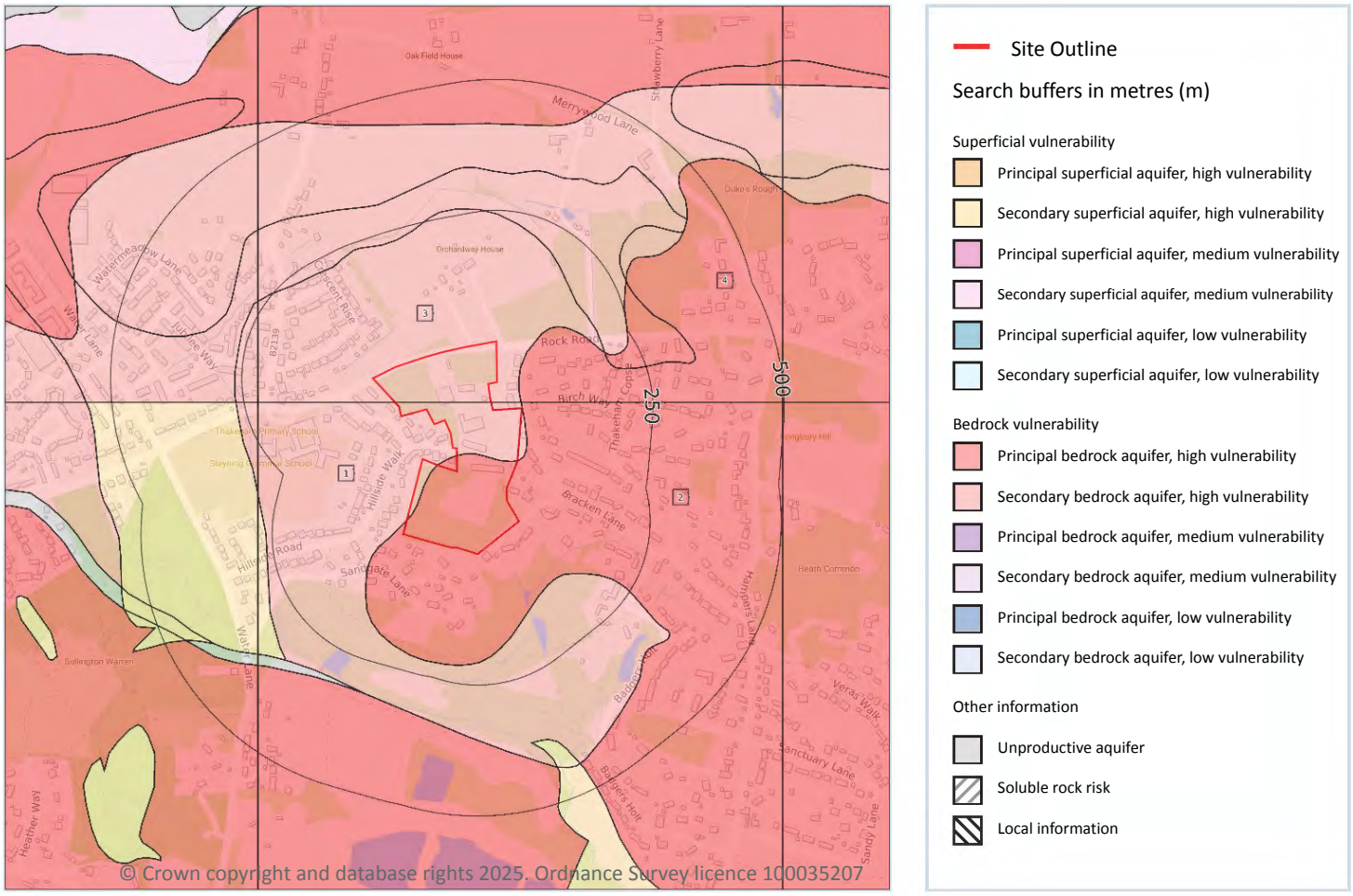
Features are displayed on the Bedrock aquifer map on **page 38 >**

ID	Location	Designation	Description
1	On site	Principal	Geology of high intergranular and/or fracture permeability, usually providing a high level of water storage and may support water supply/river base flow on a strategic scale. Generally principal aquifers were previously major aquifers
2	On site	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers

ID	Location	Designation	Description
3	**On site**	**Secondary A**	**Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers**
4	11m NE	Principal	Geology of high intergranular and/or fracture permeability, usually providing a high level of water storage and may support water supply/river base flow on a strategic scale. Generally principal aquifers were previously major aquifers
5	219m 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
6	224m 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
7	306m SW	Unproductive	These are rock layers or drift deposits with low permeability that have negligible significance for water supply or river base flow
8	359m SW	Unproductive	These are rock layers or drift deposits with low permeability that have negligible significance for water supply or river base flow
9	373m SW	Principal	Geology of high intergranular and/or fracture permeability, usually providing a high level of water storage and may support water supply/river base flow on a strategic scale. Generally principal aquifers were previously major aquifers

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

Groundwater vulnerability



5.3 Groundwater vulnerability

Records within 50m	4

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 40 >**

ID	Location	Summary	Soil / surface	Superficial geology	Bedrock geology
1	**On site**	**Summary Classification: Secondary bedrock aquifer - High Vulnerability Combined classification: Productive Bedrock Aquifer, No Superficial Aquifer**	**Leaching class: High Infiltration value: >70% Dilution value: >550mm/year**	**Vulnerability: - Aquifer type: - Thickness: <3m Patchiness value: <90% Recharge potential: No Data**	**Vulnerability: High Aquifer type: Secondary Flow mechanism: Well connected fractures**
2	**On site**	**Summary Classification: Principal bedrock aquifer - High Vulnerability Combined classification: Productive Bedrock Aquifer, No Superficial Aquifer**	**Leaching class: High Infiltration value: >70% Dilution value: >550mm/year**	**Vulnerability: - Aquifer type: - Thickness: <3m Patchiness value: <90% Recharge potential: No Data**	**Vulnerability: High Aquifer type: Principal Flow mechanism: Well connected fractures**
3	**On site**	**Summary Classification: Secondary bedrock aquifer - High Vulnerability Combined classification: Productive Bedrock Aquifer, No Superficial Aquifer**	**Leaching class: Intermediate Infiltration value: >70% Dilution value: 300-550mm/year**	**Vulnerability: - Aquifer type: - Thickness: <3m Patchiness value: <90% Recharge potential: No Data**	**Vulnerability: High Aquifer type: Secondary Flow mechanism: Well connected fractures**
4	11m NE	Summary Classification: Principal bedrock aquifer - High Vulnerability Combined classification: Productive Bedrock Aquifer, No Superficial Aquifer	Leaching class: Intermediate Infiltration value: >70% Dilution value: 300-550mm/year	Vulnerability: - Aquifer type: - Thickness: <3m Patchiness value: <90% Recharge potential: No Data	Vulnerability: High Aquifer type: Principal Flow mechanism: Well connected fractures

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

5.4 Groundwater vulnerability- soluble rock risk

Records on site	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.

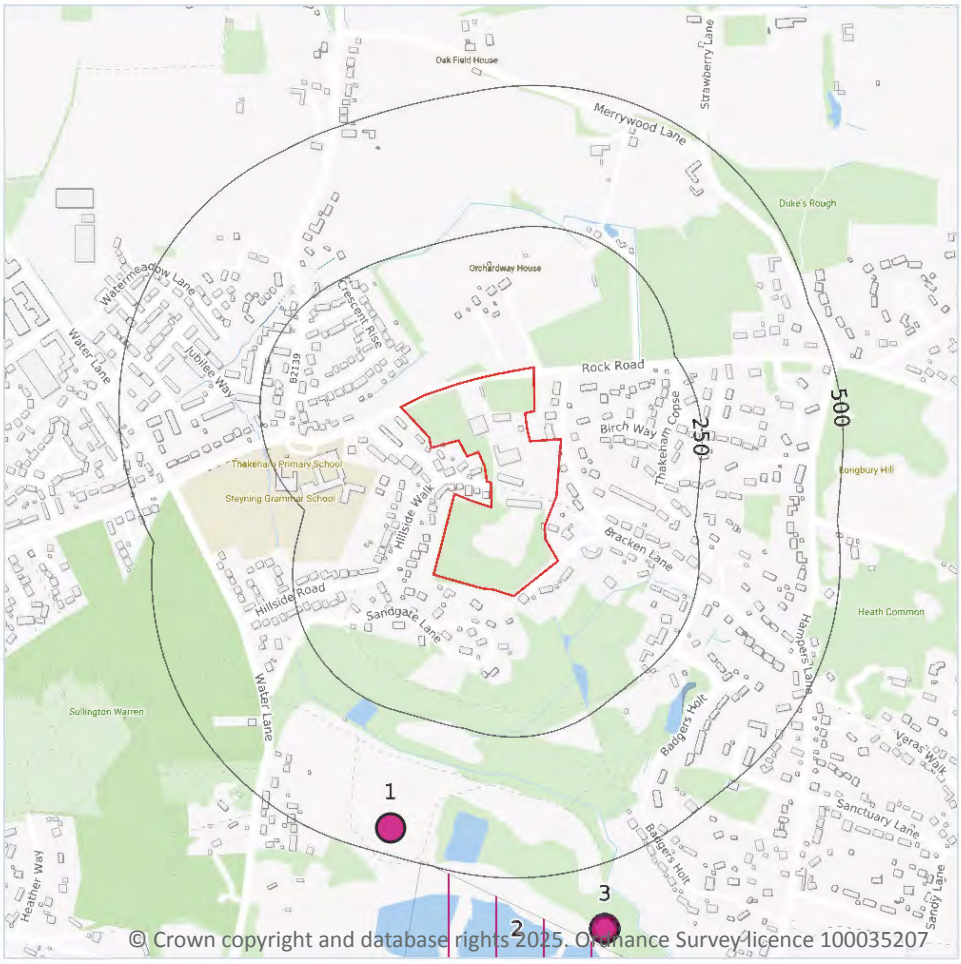
5.5 Groundwater vulnerability- local information

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	13

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 42 >**

ID	Location	Details	
1	452m S	Status: Active Licence No: 25/084 Details: Mineral Washing Direct Source: Southern Region Groundwater Point: POINT A, SANDGATE PIT, STORRINGTON Data Type: Point Name: Cemex UK Materials Ltd Easting: 510200 Northing: 114300	Annual Volume (m^3): 250000 Max Daily Volume (m^3): 910 Original Application No: NPS/WR/030715 Original Start Date: 21/05/1993 Expiry Date: - Issue No: 103 Version Start Date: 21/12/2018 Version End Date: -
2	495m S	Status: Active Licence No: SO/041/0025/006 Details: Dewatering Direct Source: Southern Region Groundwater Point: FOKLSTONE BEDS AT SANDGATE QUARRY Data Type: Poly4 Name: Cemex UK Materials Ltd Easting: 510255 Northing: 114241	Annual Volume (m^3): 2295120 Max Daily Volume (m^3): 6288 Original Application No: NPS/NA/000103 Original Start Date: 18/01/2022 Expiry Date: 31/03/2028 Issue No: 1 Version Start Date: 18/01/2022 Version End Date: -
3	612m S	Status: Active Licence No: 25/084 Details: Mineral Washing Direct Source: Southern Region Groundwater Point: POINT B, SANDGATE PIT, STORRINGTON Data Type: Point Name: Cemex UK Materials Ltd Easting: 510580 Northing: 114120	Annual Volume (m^3): 250000 Max Daily Volume (m^3): 910 Original Application No: NPS/WR/030715 Original Start Date: 21/05/1993 Expiry Date: - Issue No: 103 Version Start Date: 21/12/2018 Version End Date: -
-	829m W	Status: Active Licence No: SO/041/0025/012 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: Southern Region Groundwater Point: BOREHOLE B DOWNSVIEW AVENUE Data Type: Point Name: Croudace Homes Limited Easting: 509405 Northing: 115203	Annual Volume (m^3): 11805 Max Daily Volume (m^3): 33 Original Application No: NPS/WR/036778 Original Start Date: 21/09/2023 Expiry Date: 31/03/2040 Issue No: 1 Version Start Date: 21/09/2023 Version End Date: -
-	840m W	Status: Active Licence No: SO/041/0025/012 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: Southern Region Groundwater Point: BOREHOLE A DOWNSVIEW AVENUE Data Type: Point Name: Croudace Homes Limited Easting: 509386 Northing: 115156	Annual Volume (m^3): 11805 Max Daily Volume (m^3): 33 Original Application No: NPS/WR/036778 Original Start Date: 21/09/2023 Expiry Date: 31/03/2040 Issue No: 1 Version Start Date: 21/09/2023 Version End Date: -

ID	Location	Details	
-	1192m SW	Status: Active Licence No: 10/41/415407 Details: Mineral Washing Direct Source: Southern Region Groundwater Point: SAND QUARRY AT CHANTRY LANE Data Type: Point Name: Dudman Chantry (Industries) Ltd Easting: 509430 Northing: 113910	Annual Volume (m^3): 99000 Max Daily Volume (m^3): 660 Original Application No: - Original Start Date: 10/07/1989 Expiry Date: - Issue No: 102 Version Start Date: 16/04/2019 Version End Date: -
-	1419m E	Status: Historical Licence No: 10/41/331102 Details: Animal Watering & General Use in non Farming situations Direct Source: Southern Region Groundwater Point: BARNARDS NURSERY Data Type: Point Name: Muntz Easting: 511910 Northing: 114640	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: - Expiry Date: - Issue No: 100 Version Start Date: 20/01/1966 Version End Date: -
-	1830m N	Status: Historical Licence No: 10/41/415302 Details: Horticultural Watering Direct Source: Southern Region Groundwater Point: CHESSWOOD NURSERIES POINT 2 Data Type: Point Name: Heveco Mushrooms Ltd Easting: 510210 Northing: 116930	Annual Volume (m^3): 88650 Max Daily Volume (m^3): 330 Original Application No: - Original Start Date: - Expiry Date: - Issue No: 101 Version Start Date: 01/04/2001 Version End Date: -
-	1830m N	Status: Historical Licence No: 25/097 Details: Horticultural Watering Direct Source: Southern Region Groundwater Point: CHESSWOOD NURSERIES POINT B Data Type: Point Name: Thakeham Mushrooms Limited Easting: 510210 Northing: 116930	Annual Volume (m^3): 88650 Max Daily Volume (m^3): 330 Original Application No: - Original Start Date: 06/10/2008 Expiry Date: 31/03/2016 Issue No: 2 Version Start Date: 06/06/2013 Version End Date: -
-	1832m E	Status: Active Licence No: 23/073 Details: Spray Irrigation - Direct Direct Source: Southern Region Groundwater Point: WASHINGTON GARDEN CENTRE Data Type: Point Name: D J Squire & Company Ltd Easting: 512250 Northing: 114240	Annual Volume (m^3): 8000 Max Daily Volume (m^3): 40 Original Application No: NPS/WR/011325 Original Start Date: 10/12/1999 Expiry Date: - Issue No: 3 Version Start Date: 01/04/2016 Version End Date: -

ID	Location	Details	
-	1835m N	Status: Historical Licence No: 25/097/R01 Details: Horticultural Watering Direct Source: Southern Region Groundwater Point: CHESSWOOD NURSERIES POINT B Data Type: Point Name: Thakeham Mushrooms Limited Easting: 510179 Northing: 116931	Annual Volume (m^3): 88650 Max Daily Volume (m^3): 330 Original Application No: - Original Start Date: 04/05/2016 Expiry Date: 31/03/2028 Issue No: 1 Version Start Date: 04/05/2016 Version End Date: -
-	1839m E	Status: Historical Licence No: 23/072 Details: Fish Farm/Cress Pond Throughflow Direct Source: Southern Region Groundwater Point: THE BUNGALOW, WASHINGTON Data Type: Point Name: Quick Easting: 512300 Northing: 114410	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 03/12/1999 Expiry Date: 02/12/2004 Issue No: 1 Version Start Date: 03/12/1999 Version End Date: -
-	1956m N	Status: Historical Licence No: 10/41/415302 Details: Horticultural Watering Direct Source: Southern Region Groundwater Point: CHESSWOOD NURSERIES POINT 1 Data Type: Point Name: Heveco Mushrooms Ltd Easting: 510350 Northing: 117070	Annual Volume (m^3): 88650 Max Daily Volume (m^3): 330 Original Application No: - Original Start Date: - Expiry Date: - Issue No: 101 Version Start Date: 01/04/2001 Version End Date: -

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

5.7 Surface water abstractions

Records within 2000m	**0**

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.

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

5.8 Potable abstractions

Records within 2000m	2

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

Features are displayed on the Abstractions and Source Protection Zones map on **page 42 >**

ID	Location	Details	
-	829m W	Status: Active Licence No: SO/041/0025/012 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: Southern Region Groundwater Point: BOREHOLE B DOWNSVIEW AVENUE Data Type: Point Name: Croudace Homes Limited Easting: 509405 Northing: 115203	Annual Volume (m^3): 11805 Max Daily Volume (m^3): 33 Original Application No: NPS/WR/036778 Original Start Date: 21/09/2023 Expiry Date: 31/03/2040 Issue No: 1 Version Start Date: 21/09/2023 Version End Date: -
-	840m W	Status: Active Licence No: SO/041/0025/012 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: Southern Region Groundwater Point: BOREHOLE A DOWNSVIEW AVENUE Data Type: Point Name: Croudace Homes Limited Easting: 509386 Northing: 115156	Annual Volume (m^3): 11805 Max Daily Volume (m^3): 33 Original Application No: NPS/WR/036778 Original Start Date: 21/09/2023 Expiry Date: 31/03/2040 Issue No: 1 Version Start Date: 21/09/2023 Version End Date: -

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.

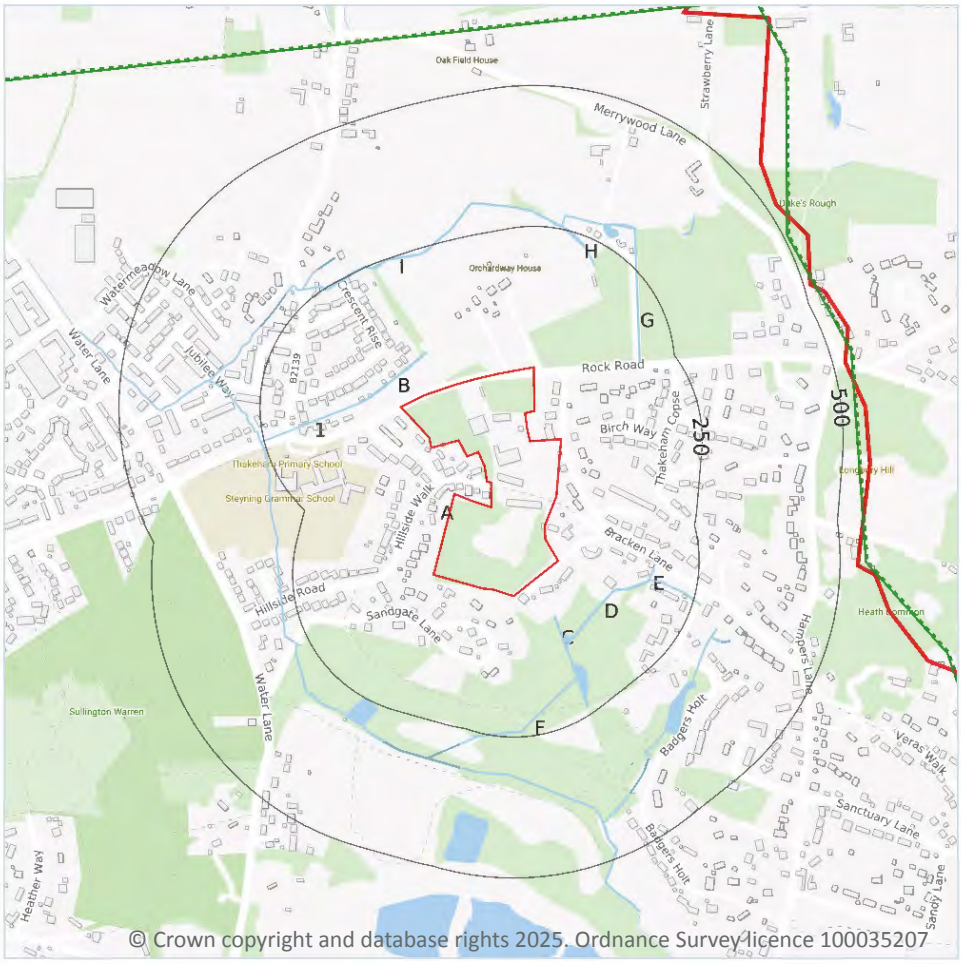
5.10 Source Protection Zones (confined aquifer)

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



6.1 Water Network (OS MasterMap)

Records within 250m	21

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

Features are displayed on the Hydrology map on **page 48 >**

ID	Location	Type of water feature	Ground level	Permanence	Name
B	46m NW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-

ID	Location	Type of water feature	Ground level	Permanence	Name
1	67m NW	Inland river not influenced by normal tidal action.	Not provided	Watercourse contains water year round (in normal circumstances)	-
C	72m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
D	108m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
C	119m SE	Lake, loch or reservoir.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
C	127m SE	Lake, loch or reservoir.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
C	130m SE	Lake, loch or reservoir.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
C	134m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
C	160m SE	Lake, loch or reservoir.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
E	163m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
E	163m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
E	170m SE	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
E	175m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
C	183m S	Lake, loch or reservoir.	On ground surface	Watercourse contains water year round (in normal circumstances)	-

ID	Location	Type of water feature	Ground level	Permanence	Name
F	183m S	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
C	187m SE	Lake, loch or reservoir.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
G	188m NE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
E	196m SE	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
E	207m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
H	209m NE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
I	240m N	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-

This data is sourced from the Ordnance Survey.

6.2 Surface water features

Records within 250m	14

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

Features are displayed on the Hydrology map on **page 48 >**

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 48 >**

ID	Location	Type	Water body catchment	Water body ID	Operational catchment	Management catchment
A	**On site**	**River**	**Stor**	**GB107041012100**	**Arun Lower**	**Arun and Western Streams**

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 48 >**

ID	Location	Type	Name	Water body ID	Overall rating	Chemical rating	Ecological rating	Year
-	2581m W	River	Stor	GB107041012100 ↗	Moderate	Fail	Moderate	2019

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

6.5 WFD Groundwater bodies

Records on site	**1**

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 48 >**

ID	Location	Name	Water body ID	Overall rating	Chemical rating	Quantitative	Year
A	**On site**	**Lower Greensand Arun & Western Streams**	**GB40701G503100 ↗**	**Poor**	**Poor**	**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

Site Outline
Search buffers in metres (m)

1 in 1000 return period
- Depth between 0.1m - 0.3m
- Depth between 0.3m - 1.0m
- Depth greater than 1.0m

1 in 250 return period
- Depth between 0.1m - 0.3m
- Depth between 0.3m - 1.0m
- Depth greater than 1.0m

1 in 100 return period
- Depth between 0.1m - 0.3m
- Depth between 0.3m - 1.0m
- Depth greater than 1.0m

1 in 30 return period
- Depth between 0.1m - 0.3m
- Depth between 0.3m - 1.0m
- Depth greater than 1.0m

8.1 Surface water flooding

Highest risk on site	**1 in 30 year, 0.1m - 0.3m**
Highest risk within 50m	**1 in 30 year, 0.1m - 0.3m**

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

Features are displayed on the Surface water flooding map on **page 55 >**

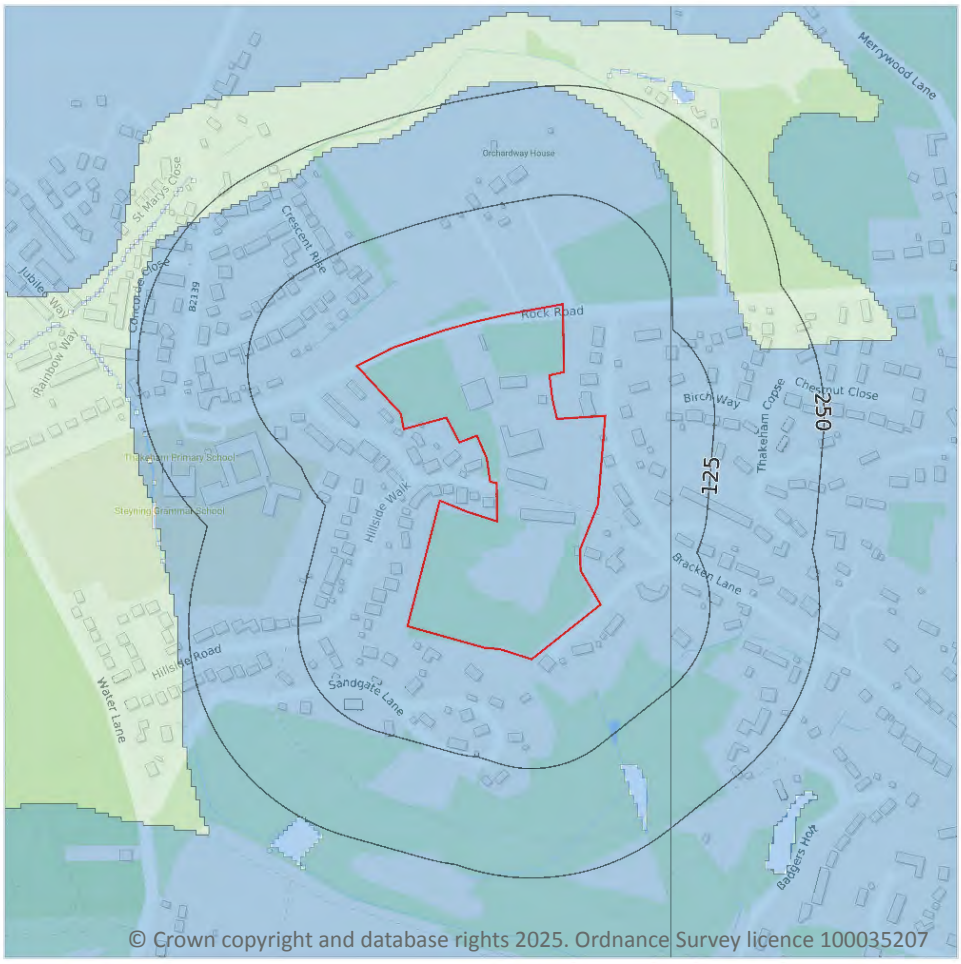
The data shown on the map and in the table above shows the highest likelihood of flood events happening at the site. Lower likelihood events may have greater flood depths and hence a greater potential impact on a site.

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

Return period	Maximum modelled depth
1 in 1000 year	Between 0.3m and 1.0m
1 in 250 year	Between 0.3m and 1.0m
1 in 100 year	Between 0.3m and 1.0m
1 in 30 year	Between 0.1m and 0.3m

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

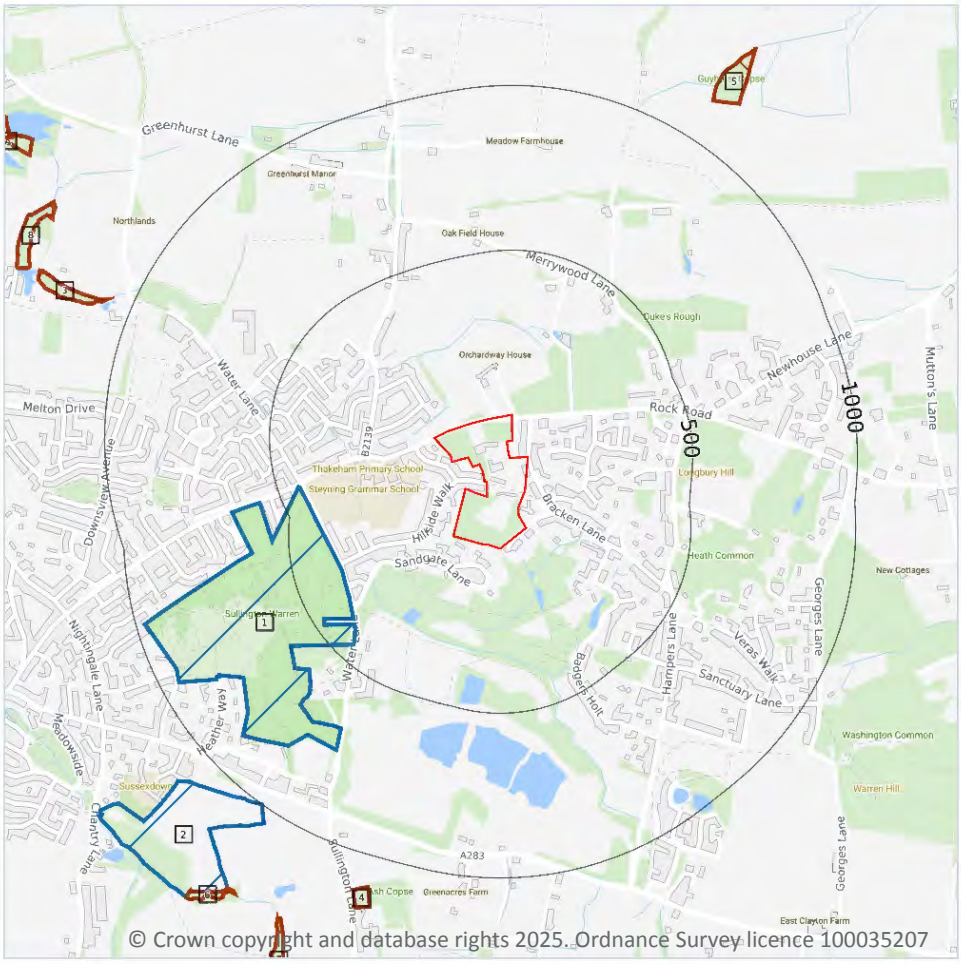
Highest risk on site	**Negligible**
Highest risk within 50m	**Negligible**

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 57 >**

This data is sourced from Ambiental Risk Analytics.

10 Environmental designations



Site Outline

Search buffers in metres (m)

Sites of Special Scientific Interest (SSSI)

Designated Ancient Woodland

10.1 Sites of Special Scientific Interest (SSSI)

Records within 2000m	2

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 58 >**

ID	Location	Name	Data source
1	354m SW	Sullington Warren	Natural England

ID	Location	Name	Data source
2	1000m SW	Chantry Mill	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	0

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

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

10.3 Special Areas of Conservation (SAC)

Records within 2000m	0

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

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

10.4 Special Protection Areas (SPA)

Records within 2000m	0

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

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

10.5 National Nature Reserves (NNR)

Records within 2000m	0

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

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

10.6 Local Nature Reserves (LNR)

Records within 2000m	0

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

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

10.7 Designated Ancient Woodland

Records within 2000m	11

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.

Features are displayed on the Environmental designations map on **page 58 >**

ID	Location	Name	Woodland Type
3	1078m NW	Unknown	Ancient & Semi-Natural Woodland
4	1095m S	Unknown	Ancient & Semi-Natural Woodland
5	1132m NE	Unknown	Ancient & Semi-Natural Woodland
6	1267m SW	Unknown	Ancient & Semi-Natural Woodland
7	1274m SW	Unknown	Ancient & Semi-Natural Woodland
8	1334m NW	Unknown	Ancient & Semi-Natural Woodland
A	1498m NW	Unknown	Ancient & Semi-Natural Woodland
-	1514m SE	Unknown	Ancient & Semi-Natural Woodland
A	1575m NW	Unknown	Ancient & Semi-Natural Woodland
-	1662m NE	Unknown	Ancient & Semi-Natural Woodland
-	1929m NW	Furze Field	Ancient & Semi-Natural Woodland

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.

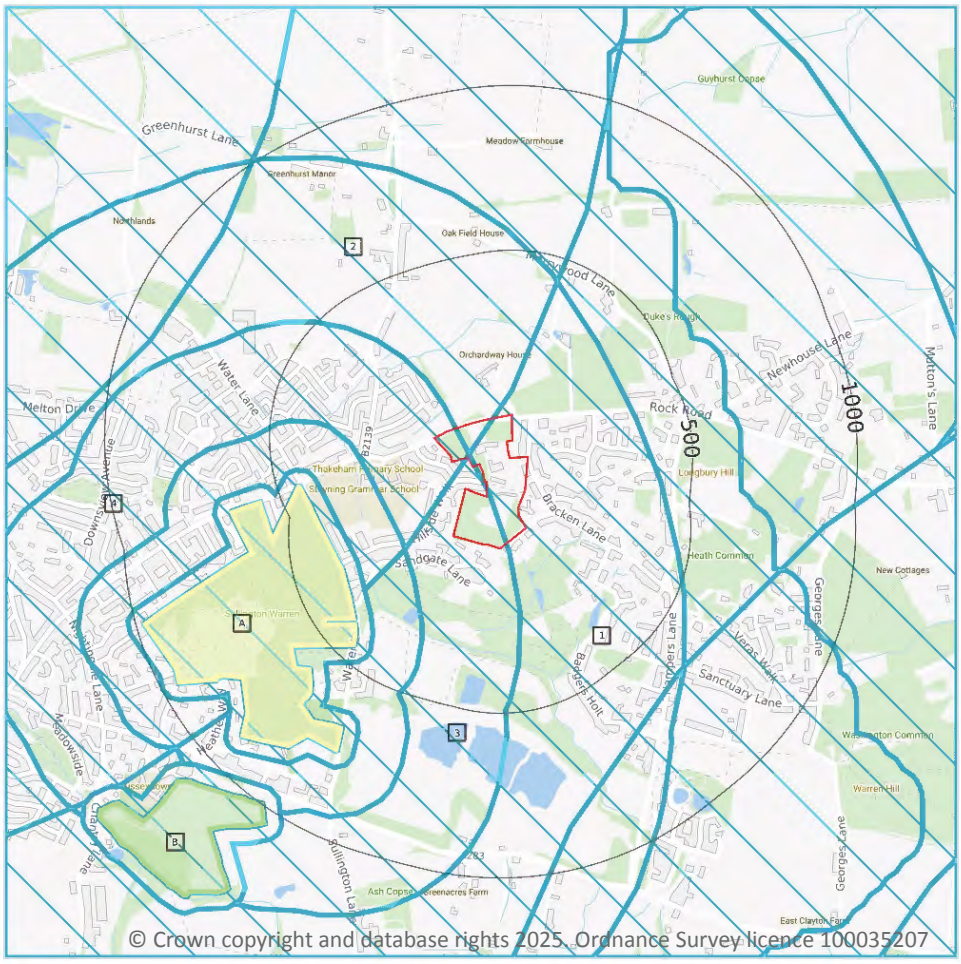
10.16 Nitrate Vulnerable Zones

Records within 2000m	0

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.

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	4

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 63 >**

ID	Location	Type of developments requiring consultation
1	On site	**Infrastructure - Airports, helipads and other aviation proposals. Wind and Solar - Wind turbines. 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 500 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 20m³/day to ground (ie to seep away) or to surface water, such as a beck or stream. Notes: SUSSEX NORTH WATER SUPPLY ZONE. All new development that requires a public water supply requires an HRA to assess the impacts of groundwater abstraction on Arun Valley SPA/SAC/Ramsar. LPAs to refer to Natural England's Statement and Advice Note.**
2	On site	**Infrastructure - Airports, helipads and other aviation proposals. Wind and Solar - 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. 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 500 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. Notes: SUSSEX NORTH WATER SUPPLY ZONE. All new development that requires a public water supply requires an HRA to assess the impacts of groundwater abstraction on Arun Valley SPA/SAC/Ramsar. LPAs to refer to Natural England's Statement and Advice Note.**

ID	Location	Type of developments requiring consultation
3	On site	Infrastructure - Pipelines and underground cables, 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: new proposals or extensions, outside or extending outside existing settlements/urban areas affecting greenspace, farmland or semi natural habitats. Oil & gas exploration/extraction. Rural non-residential - Large non residential developments outside existing settlements/urban areas where footprint exceeds 1ha. Rural residential - Any residential development of 50 or more houses outside existing settlements/urban areas. Air pollution - Any development that could cause AIR POLLUTION (incl: industrial/commercial processes, livestock & poultry units, slurry lagoons & digestate stores, manure stores). Combustion - All general combustion processes. Incl: energy from waste incineration, other incineration, landfill gas generation plant, pyrolysis/gasification, anaerobic digestion, sewage treatment works, other incineration/ combustion. Waste - Mechanical and biological waste treatment, inert landfill, non-hazardous landfill, hazardous landfill, household civic amenity recycling facilities construction, demolition and excavation waste, other waste management. Composting - Any composting proposal. Incl: open windrow composting, in-vessel composting, anaerobic digestion, other waste management. Discharges - Any discharge of water or liquid waste of more than 20m³/day to ground (ie to seep away) or to surface water, such as a beck or stream. Notes: SUSSEX NORTH WATER SUPPLY ZONE. All new development that requires a public water supply requires an HRA to assess the impacts of groundwater abstraction on Arun Valley SPA/SAC/Ramsar. LPAs to refer to Natural England's Statement and Advice Note.
4	On site	Infrastructure - Pipelines and underground cables, 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 footprint exceeds 1ha. Rural residential - Any residential development of 50 or more houses outside existing settlements/urban areas. Air pollution - Any development that could cause AIR POLLUTION (incl: industrial/commercial processes, livestock & poultry units, slurry lagoons & digestate stores, manure stores). Combustion - All general combustion processes. Incl: energy from waste incineration, other incineration, landfill gas generation plant, pyrolysis/gasification, anaerobic digestion, sewage treatment works, other incineration/ combustion. Waste - Mechanical and biological waste treatment, inert landfill, non-hazardous landfill, hazardous landfill, household civic amenity recycling facilities construction, demolition and excavation waste, other waste management. Composting - Any composting proposal. 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. Notes: SUSSEX NORTH WATER SUPPLY ZONE. All new development that requires a public water supply requires an HRA to assess the impacts of groundwater abstraction on Arun Valley SPA/SAC/Ramsar. LPAs to refer to Natural England's Statement and Advice Note.

This data is sourced from Natural England.

10.18 SSSI Units

Records within 2000m	2

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 63 >**

ID: A
Location: 354m SW
SSSI name: Sullington Warren
Unit name: 1
Broad habitat: Dwarf Shrub Heath - Lowland
Condition: Unfavourable - Recovering
Reportable features:

Feature name	Feature condition	Date of assessment
Assemblages of breeding birds - Mixed: Scrub, Woodland	Unfavourable - Recovering	29/07/2009
Lowland dry heath	Unfavourable - Recovering	03/03/2022

ID: B
Location: 1000m SW
SSSI name: Chantry Mill
Unit name: 1
Broad habitat: Earth Heritage
Condition: Favourable
Reportable features:

Feature name	Feature condition	Date of assessment
EA - Aptian - Albian	Favourable	16/11/2021

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	2

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 67 >**

ID	Location	Name	Grade	Reference Number	Listed date
1	122m W	Penfold	II	1181375	09/05/1980
2	229m W	Water Lane Farmhouse	II	1354063	15/03/1955

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

11.5 Conservation Areas

Records within 250m	0

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

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

11.6 Scheduled Ancient Monuments

Records within 250m	0

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

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

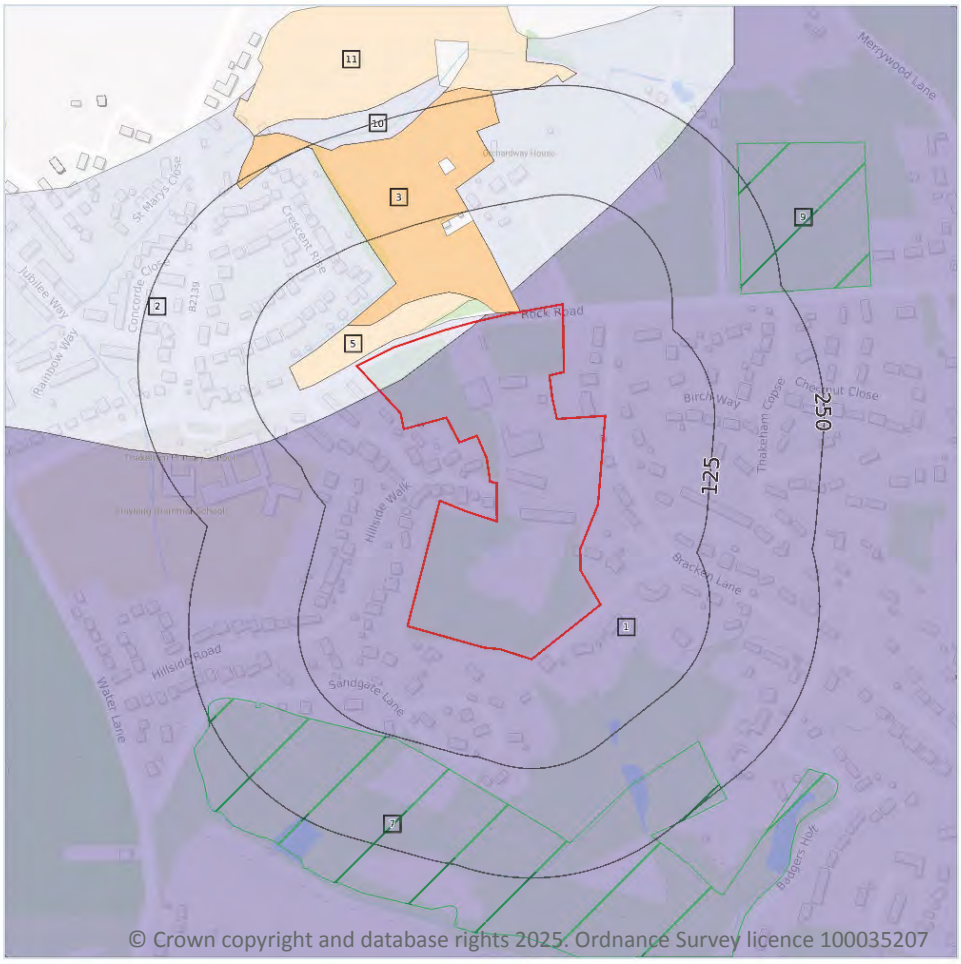
11.7 Registered Parks and Gardens

Records within 250m	0

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

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

12 Agricultural designations



Site Outline

Search buffers in metres (m)

- Grade 1 - excellent quality
- Grade 2 - very good quality
- Grade 3 - good to moderate quality
- Grade 3a - good quality
- Grade 3b - moderate quality
- Grade 4 - poor quality
- Grade 5 - very poor quality
- Non-agricultural land
- Urban land
- Exclusion land
- Tree felling licences
- Open Access land

12.1 Agricultural Land Classification

Records within 250m	6

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 70 >**

ID	Location	Classification	Description
1	**On site**	**Non Agricultural**	**Non-agricultural/no quality assigned**

ID	Location	Classification	Description
2	**On site**	**Grade 4**	**Poor quality agricultural land. Land with severe limitations which significantly restrict the range of crops and/or level of yields. It is mainly suited to grass with occasional arable crops (e.g. cereals and forage crops) the yields of which are variable. In moist climates, yields of grass may be moderate to high but there may be difficulties in utilisation. The grade also includes very droughty arable land.**
3	1m N	Grade 3a	Good quality agricultural land. Land capable of consistently producing moderate to high yields of a narrow range of arable crops, especially cereals, or moderate yields of a wide range of crops including cereals, grass, oilseed rape, potatoes, sugar beet and the less demanding horticultural crops.
5	5m NW	Grade 3b	Moderate quality agricultural land. Land capable of producing moderate yields of a narrow range of crops, principally cereals and grass or lower yields of a wider range of crops or high yields of grass which can be grazed or harvested over most of the year.
10	228m N	Grade 4	Poor quality agricultural land. Land with severe limitations which significantly restrict the range of crops and/or level of yields. It is mainly suited to grass with occasional arable crops (e.g. cereals and forage crops) the yields of which are variable. In moist climates, yields of grass may be moderate to high but there may be difficulties in utilisation. The grade also includes very droughty arable land.
11	248m N	Grade 3b	Moderate quality agricultural land. Land capable of producing moderate yields of a narrow range of crops, principally cereals and grass or lower yields of a wider range of crops or high yields of grass which can be grazed or harvested over most of the year.

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	2

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.

Features are displayed on the Agricultural designations map on **page 70 >**

ID	Location	Description	Reference	Application date
7	128m SW	Selective Fell/Thin (Unconditional)	019/109/04-05	13/01/2008
9	204m NE	Selective Fell/Thin (Unconditional)	019/93/12-13	11/06/2012

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.

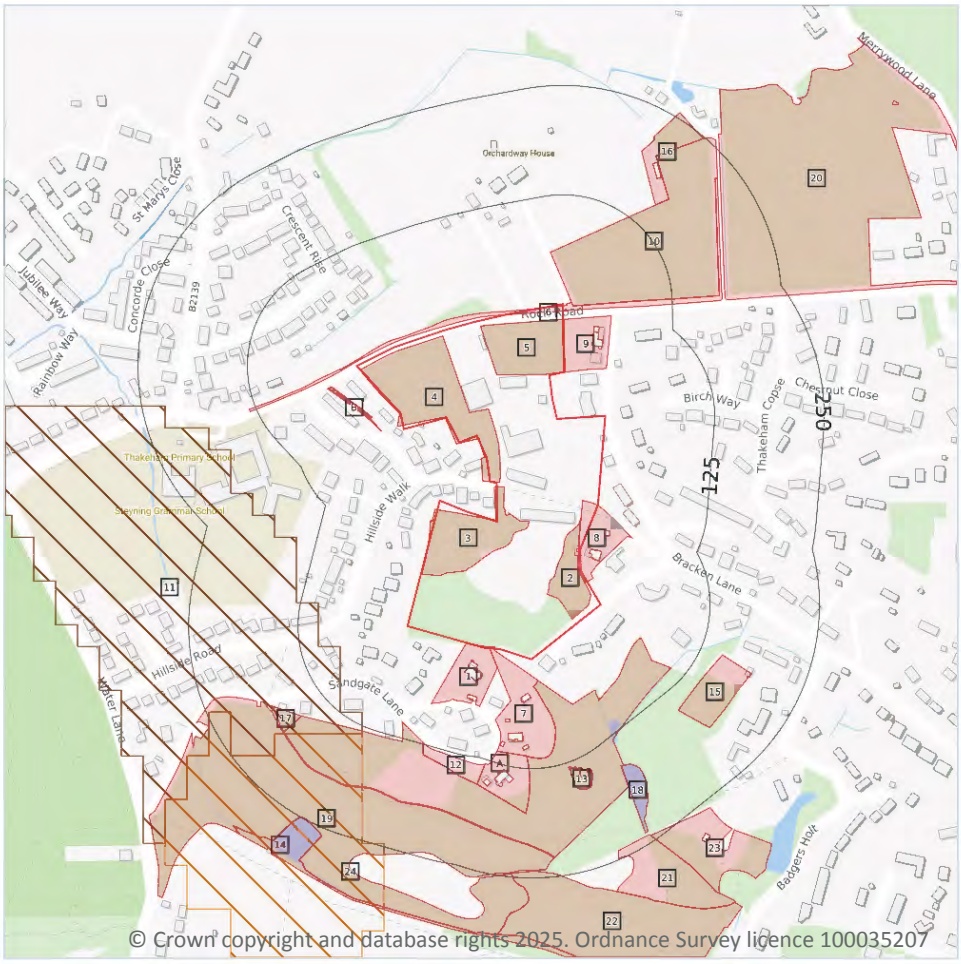
12.5 Countryside Stewardship Schemes

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



Site Outline

Search buffers in metres (m)

Priority Habitat Inventory
Open Mosaic Habitat
Limestone Pavement Orders

Habitat Networks
Primary Habitat
Restorable Habitat
Associated Habitats
Habitat Restoration-Creation
Network Enhancement Zone 1
Network Enhancement Zone 2

13.1 Priority Habitat Inventory

Records within 250m	26

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

Features are displayed on the Habitat designations map on **page 73 >**

ID	Location	Main Habitat	Other habitats
1	On site	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
2	On site	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
3	On site	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
4	On site	Deciduous woodland	Main habitat: DWOOD (INV > 50%)

ID	Location	Main Habitat	Other habitats
5	**On site**	**Deciduous woodland**	**Main habitat: DWOOD (INV > 50%)**
6	**On site**	**Deciduous woodland**	**Main habitat: DWOOD (INV > 50%)**
7	**On site**	**No main habitat but additional habitats present**	**Main habitat: DWOOD (INV > 50%)**
8	**On site**	**No main habitat but additional habitats present**	**Main habitat: DWOOD (INV > 50%)**
9	1m N	No main habitat but additional habitats present	Main habitat: DWOOD (INV > 50%)
10	10m N	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
A	26m S	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
B	26m W	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
B	27m NW	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
A	110m S	No main habitat but additional habitats present	Main habitat: DWOOD (INV > 50%)
12	123m S	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
13	130m S	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
15	143m SE	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
16	156m NE	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
17	159m SW	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
18	159m SE	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
19	183m SW	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
20	185m NE	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
21	240m S	Deciduous woodland	Main habitat: LHEAT (INV > 50%); DWOOD (INV > 50%)
22	242m S	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
23	243m SE	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
24	249m SW	Deciduous woodland	Main habitat: DWOOD (INV > 50%)

This data is sourced from Natural England.

13.2 Habitat Networks

Records within 250m	**2**

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

Features are displayed on the Habitat designations map on **page 73 >**

ID	Location	Type	Habitat
11	80m SW	Network Enhancement Zone 2	Not specified
14	134m SW	Network Enhancement Zone 1	Not specified

This data is sourced from Natural England.

13.3 Open Mosaic Habitat

Records within 250m	**0**

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

This data is sourced from Natural England.

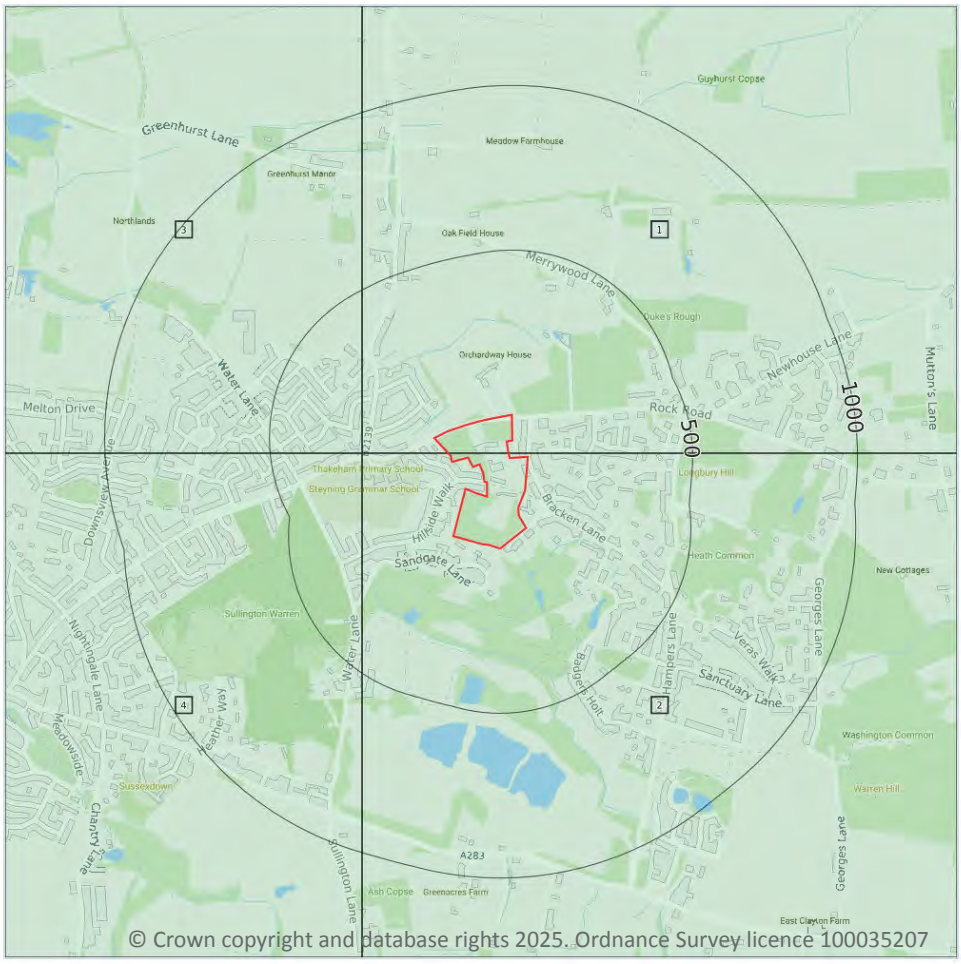
13.4 Limestone Pavement Orders

Records within 250m	**0**

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

This data is sourced from Natural England.

14 Geology 1:10,000 scale - Availability



Site Outline

Search buffers in metres (m)

- Full coverage
- Partial coverage
- No coverage

14.1 10k Availability

Records within 500m **4**

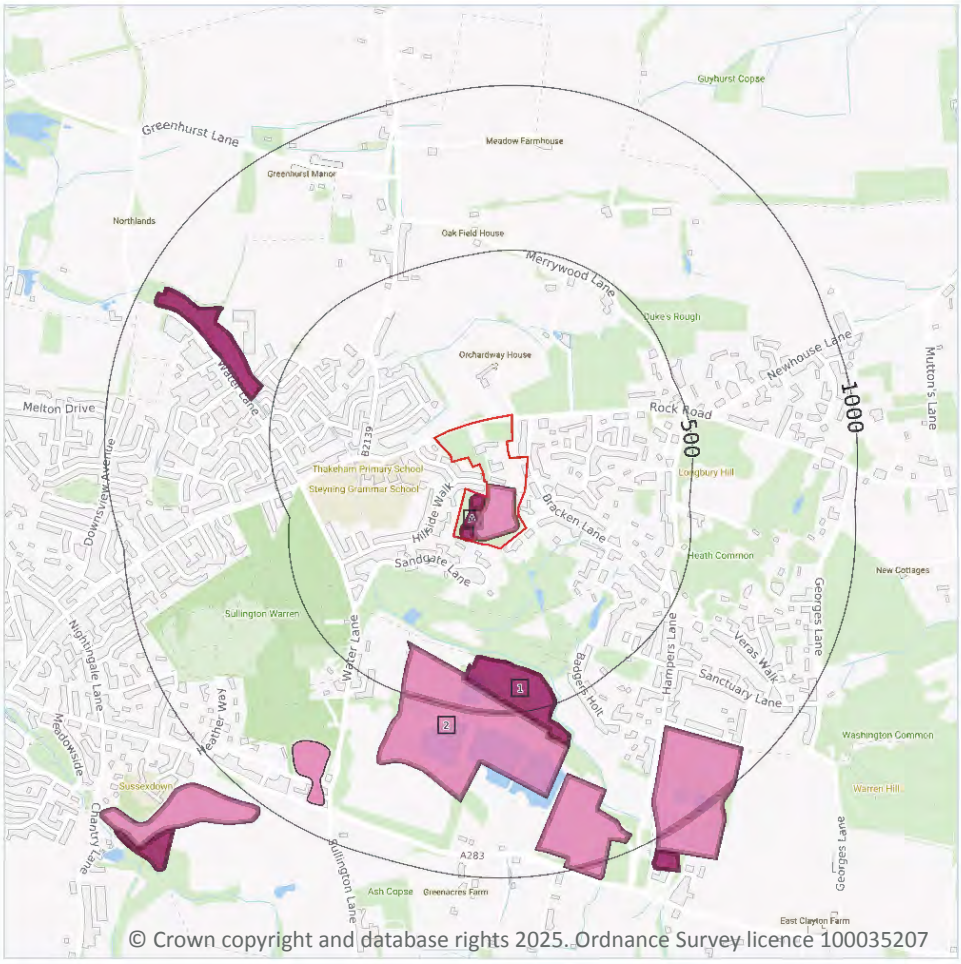
An indication on the coverage of 1:10,000 scale geology data for the site, the most detailed dataset provided by the British Geological Survey. Either 'Full', 'Partial' or 'No coverage' for each geological theme.

Features are displayed on the Geology 1:10,000 scale - Availability map on **page 76 >**

ID	Location	Artificial	Superficial	Bedrock	Mass movement	Sheet No.
1	**On site**	**No coverage**	**Full**	**Full**	**No coverage**	**TQ11NW**
2	**On site**	**Full**	**Full**	**Full**	**Full**	**TQ11SW**
3	219m W	Full	Full	Full	Full	TQ01NE
4	224m W	Full	Full	Full	Full	TQ01SE

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 **4**

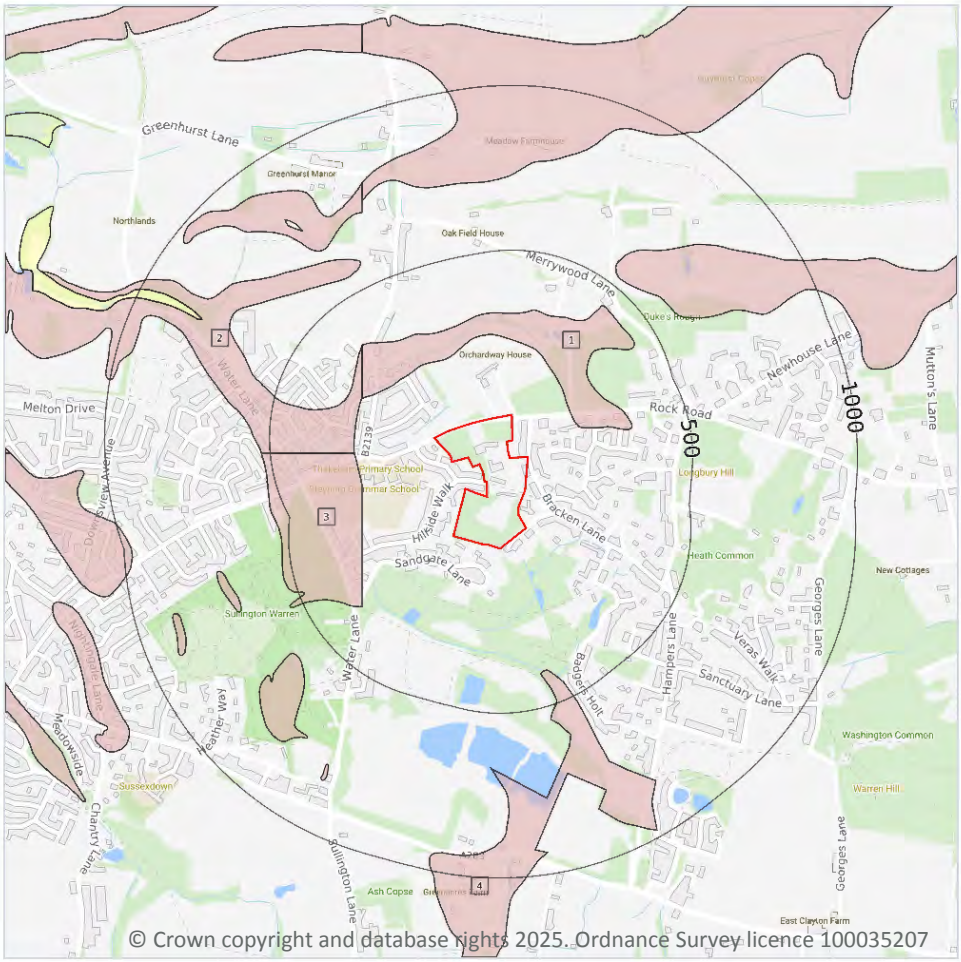
Details of made, worked, infilled, disturbed and landscaped ground at 1:10,000 scale. Artificial ground can be associated with potentially contaminated material, unpredictable engineering conditions and instability.

Features are displayed on the Geology 1:10,000 scale - Artificial and made ground map on **page 78 >**

ID	Location	LEX Code	Description	Rock description
A	**On site**	**MGR-ARTDP**	**Made Ground (Undivided)**	**Artificial Deposit**
A	**On site**	**WGR-VOID**	**Worked Ground (Undivided)**	**Void**
1	330m S	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
2	348m SW	WGR-VOID	Worked Ground (Undivided)	Void

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 **4**

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 80 >**

ID	Location	LEX Code	Description	Rock description
1	170m NE	HEAD-XCZS	Head - Clay, Silt And Sand	Clay, Silt And Sand
2	241m W	HEAD-DMTN	Head - Diamicton	Diamicton
3	246m W	HEAD-DMTN	Head - Diamicton	Diamicton

ID	Location	LEX Code	Description	Rock description
4	394m S	HEAD-DMTN	Head - Diamicton	Diamicton

This data is sourced from the British Geological Survey.

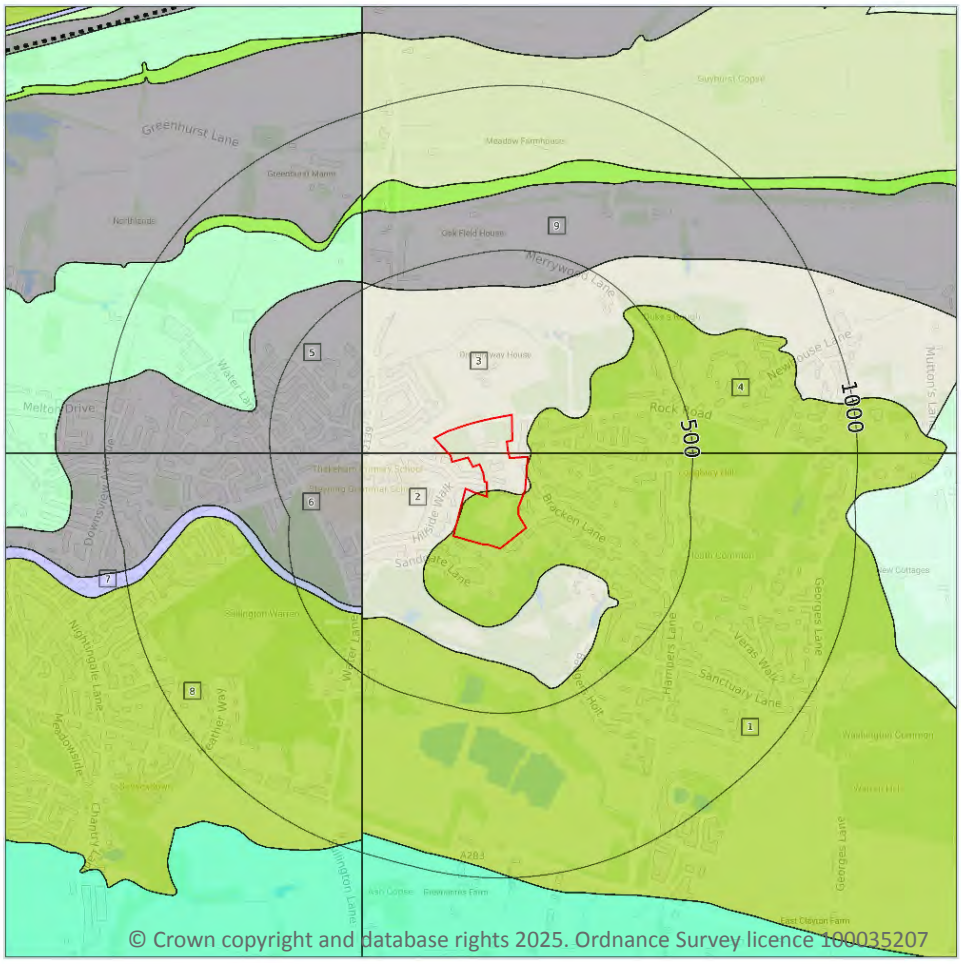
14.4 Landslip (10k)

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 **9**

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 82 >**

ID	Location	LEX Code	Description	Rock age
1	**On site**	**FO-SDST**	**Folkestone Formation - Sandstone**	**Albian Age - Aptian Age**
2	**On site**	**SAB-STMD**	**Sandgate Formation - Sandstone And Mudstone**	**Aptian Age**
3	**On site**	**SAB-SDSM**	**Sandgate Formation - Sandstone, Siltstone And Mudstone**	**Aptian Age**
4	15m NE	FO-SDST	Folkestone Formation - Sandstone	Albian Age - Aptian Age

ID	Location	LEX Code	Description	Rock age
5	219m W	FIB-SDST	Fittleworth Member - Sandstone	Aptian Age
6	224m W	FIB-SDST	Fittleworth Member - Sandstone	Aptian Age
7	350m SW	MHC-MDST	Marehill Clay Member - Mudstone	Aptian Age
8	364m SW	FO-SDST	Folkestone Formation - Sandstone	Albian Age - Aptian Age
9	389m N	HY-STMD	Hythe Formation - Sandstone And Mudstone	Aptian Age

This data is sourced from the British Geological Survey.

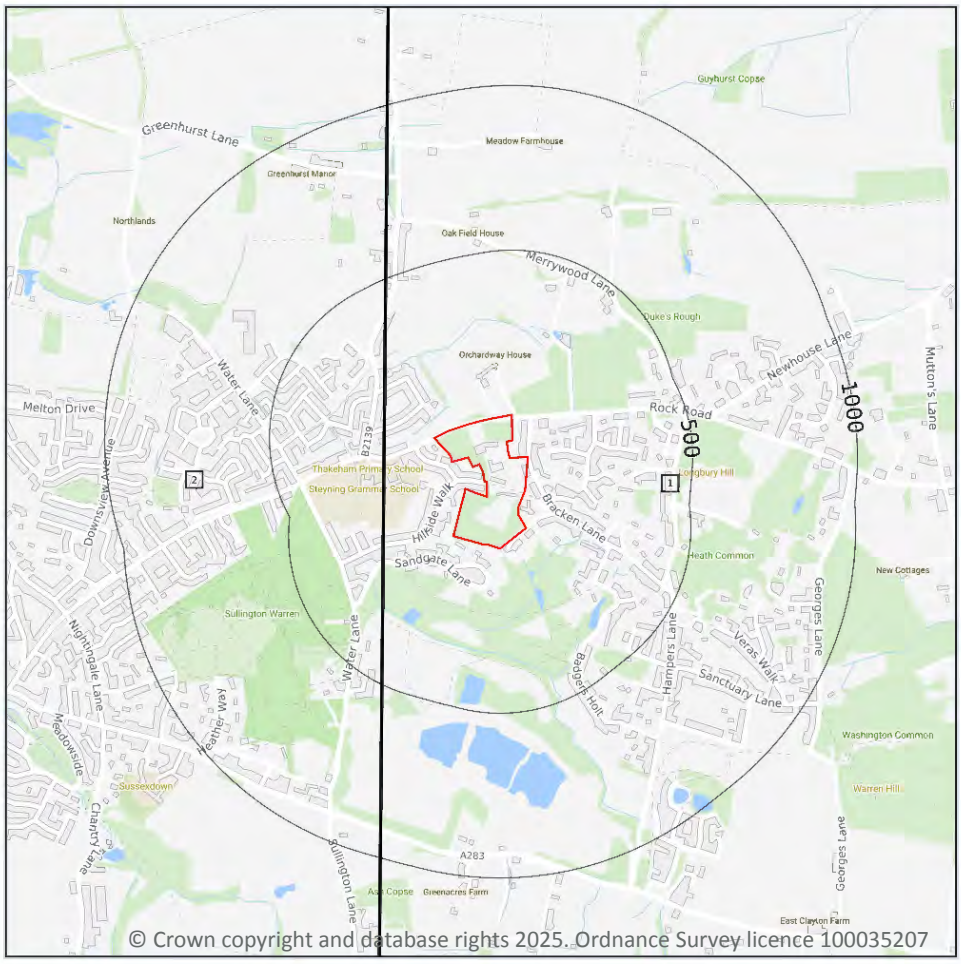
14.6 Bedrock faults and other linear features (10k)

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



15.1 50k Availability

Records within 500m	2

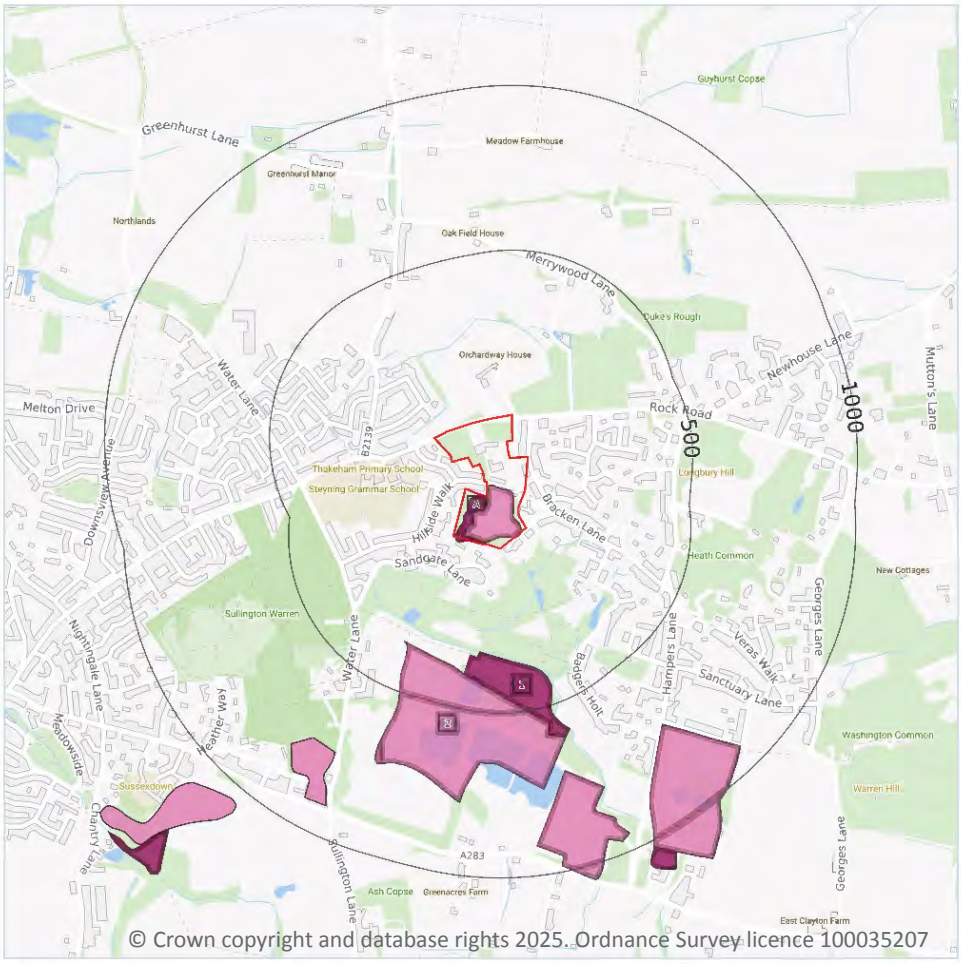
An indication on the coverage of 1:50,000 scale geology data for the site. Either 'Full' or 'No coverage' for each geological theme.

Features are displayed on the Geology 1:50,000 scale - Availability map on page 84 >

ID	Location	Artificial	Superficial	Bedrock	Mass movement	Sheet No.
1	**On site**	**Full**	**Full**	**Full**	**Full**	**EW318_333_brighton_and_worthing_v4**
2	152m NW	Full	Full	Full	Full	EW317_332_chichester_and_bognor_v4

This data is sourced from the British Geological Survey.

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



15.2 Artificial and made ground (50k)

Records within 500m	4

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 85 >**

ID	Location	LEX Code	Description	Rock description
A	**On site**	**MGR-ARTDP**	**MADE GROUND (UNDIVIDED)**	**ARTIFICIAL DEPOSIT**
A	**On site**	**WGR-VOID**	**WORKED GROUND (UNDIVIDED)**	**VOID**
1	320m S	MGR-ARTDP	MADE GROUND (UNDIVIDED)	ARTIFICIAL DEPOSIT
2	352m SW	WGR-VOID	WORKED GROUND (UNDIVIDED)	VOID

This data is sourced from the British Geological Survey.

15.3 Artificial ground permeability (50k)

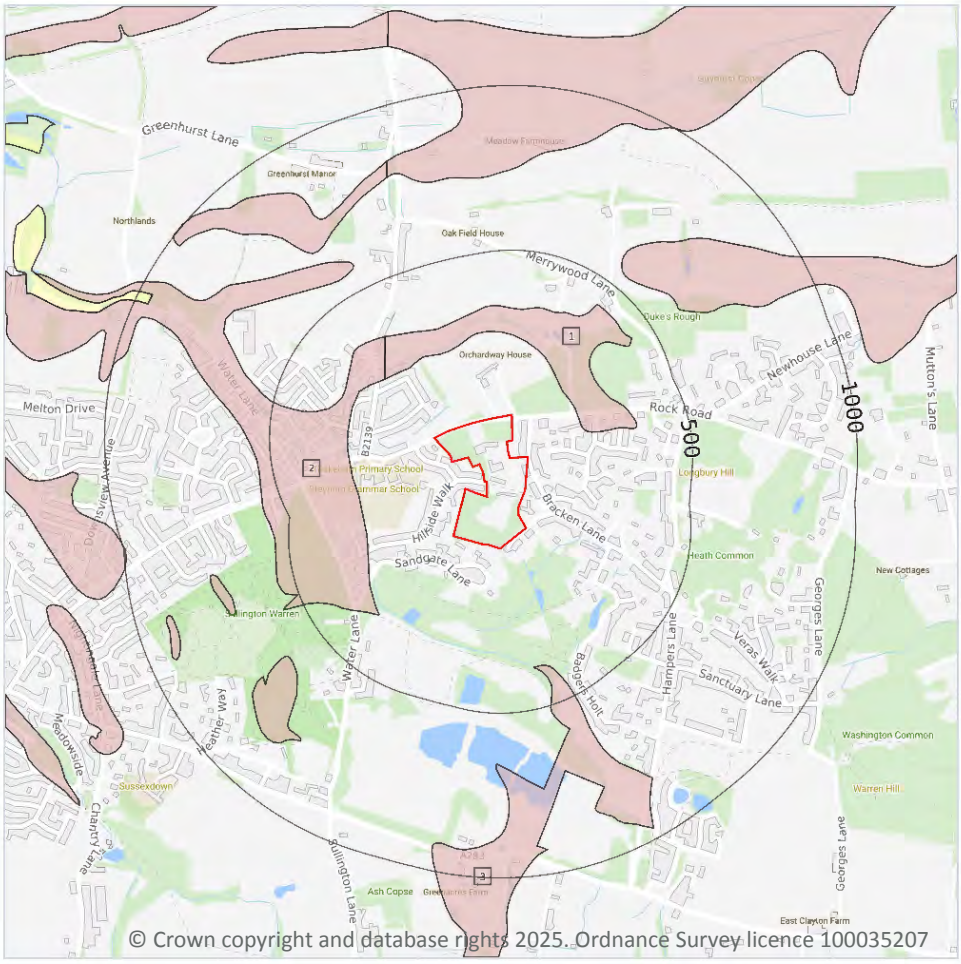
Records within 50m	1

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

Location	Flow type	Maximum permeability	Minimum permeability
On site	**Mixed**	**Very High**	**Low**

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 **3**

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 87 >**

ID	Location	LEX Code	Description	Rock description
1	170m NE	HEAD-XCZSV	HEAD	CLAY, SILT, SAND AND GRAVEL
2	233m NW	HEAD-XCZSV	HEAD	CLAY, SILT, SAND AND GRAVEL

ID	Location	LEX Code	Description	Rock description
3	375m S	HEAD-XCZSV	HEAD	CLAY, SILT, 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.

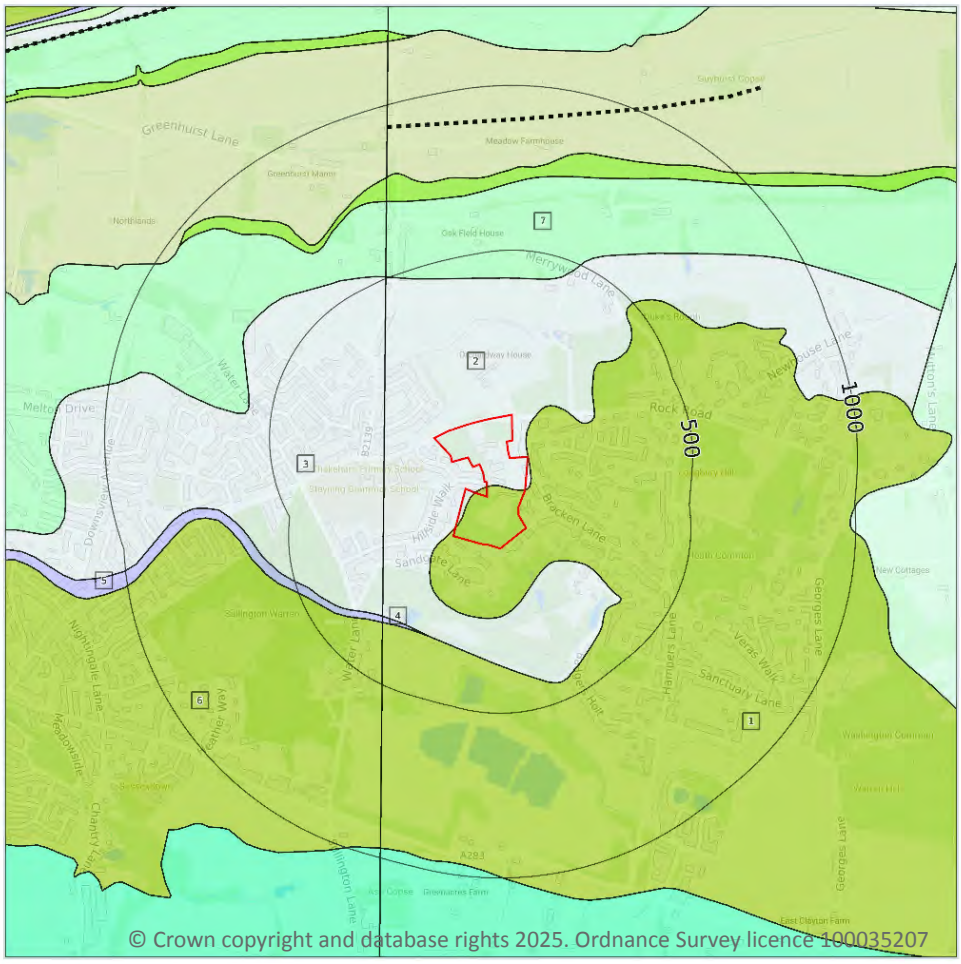
15.7 Landslip permeability (50k)

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 **7**

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 89 >**

ID	Location	LEX Code	Description	Rock age
1	**On site**	**FO-SDST**	**FOLKESTONE FORMATION - SANDSTONE**	**APTIAN**
2	**On site**	**FIB-STMD**	**FITTLEWORTH MEMBER - SANDSTONE AND MUDSTONE**	**APTIAN**
3	152m W	FIB-STMD	FITTLEWORTH MEMBER - SANDSTONE AND MUDSTONE	APTIAN
4	306m SW	MHC-MDST	MAREHILL CLAY MEMBER - MUDSTONE	APTIAN

ID	Location	LEX Code	Description	Rock age
5	325m SW	MHC-MDST	MAREHILL CLAY MEMBER - MUDSTONE	APTIAN
6	339m SW	FO-SDST	FOLKESTONE FORMATION - SANDSTONE	APTIAN
7	415m N	HY-SDST	HYTHE FORMATION - SANDSTONE	APTIAN

This data is sourced from the British Geological Survey.

15.9 Bedrock permeability (50k)

Records within 50m	**4**

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

Location	Flow type	Maximum permeability	Minimum permeability
On site	**Mixed**	**Moderate**	**Low**
On site	**Mixed**	**Moderate**	**Low**
On site	**Intergranular**	**High**	**High**
11m NE	Intergranular	High	High

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

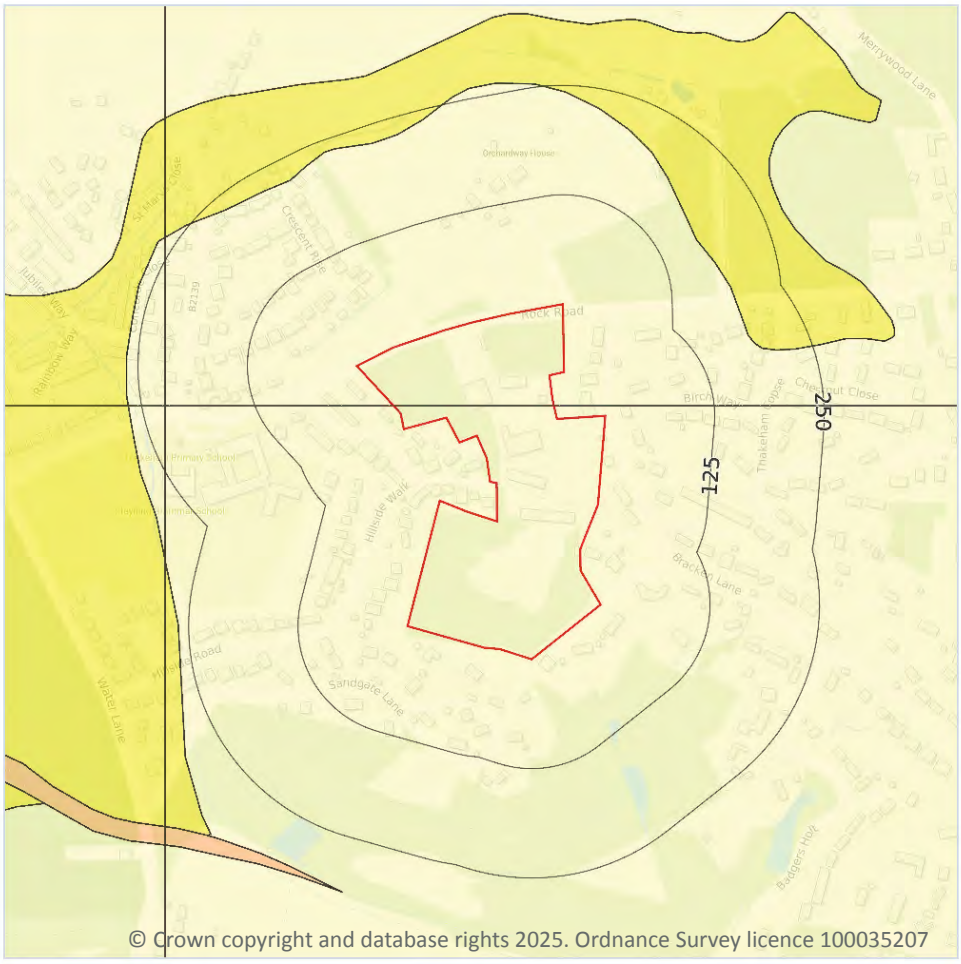
16.1 BGS Boreholes

Records within 250m	0

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.

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	1

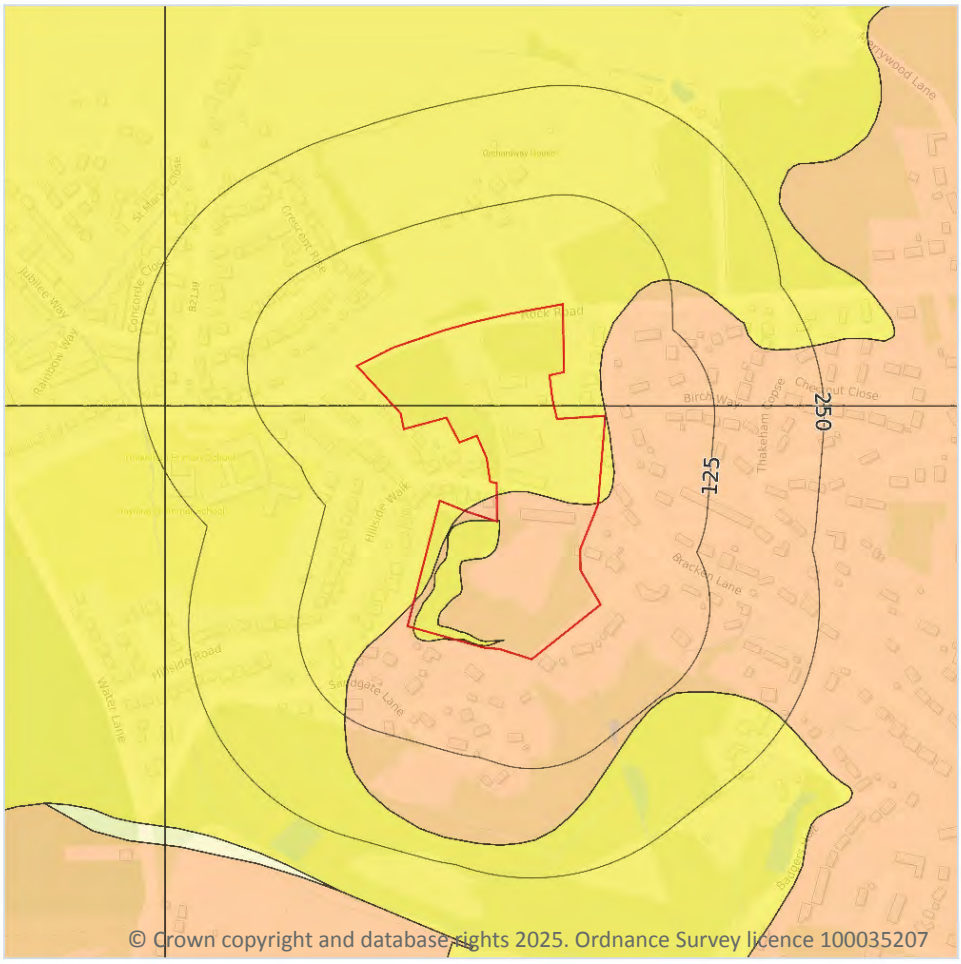
The potential hazard presented by soils that absorb water when wet (making them swell), and lose water as they dry (making them shrink). This shrink-swell behaviour is controlled by the type and amount of clay in the soil, and by seasonal changes in the soil moisture content (related to rainfall and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

Features are displayed on the Natural ground subsidence - Shrink swell clays map on **page 92 >**

Location	Hazard rating	Details
On site	**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	3

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.

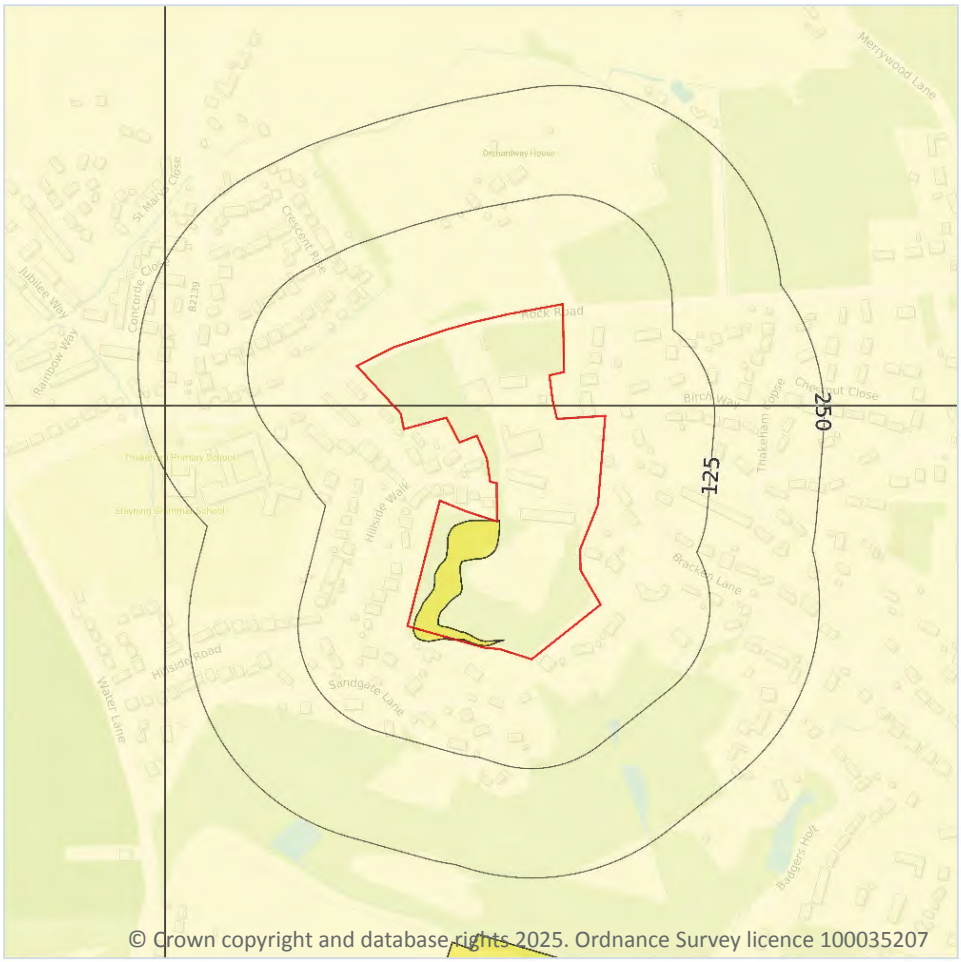
Features are displayed on the Natural ground subsidence - Running sands map on **page 93 >**

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

Location	Hazard rating	Details
On site	**Low**	**Running sand conditions may be present. Constraints may apply to land uses involving excavation or the addition or removal of water.**
11m NE	Low	Running sand conditions may be present. Constraints may apply to land uses involving excavation or the addition or removal of water.

This data is sourced from the British Geological Survey.

Natural ground subsidence - Compressible deposits



Site Outline

Search buffers in metres (m)

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

17.3 Compressible deposits

Records within 50m	2

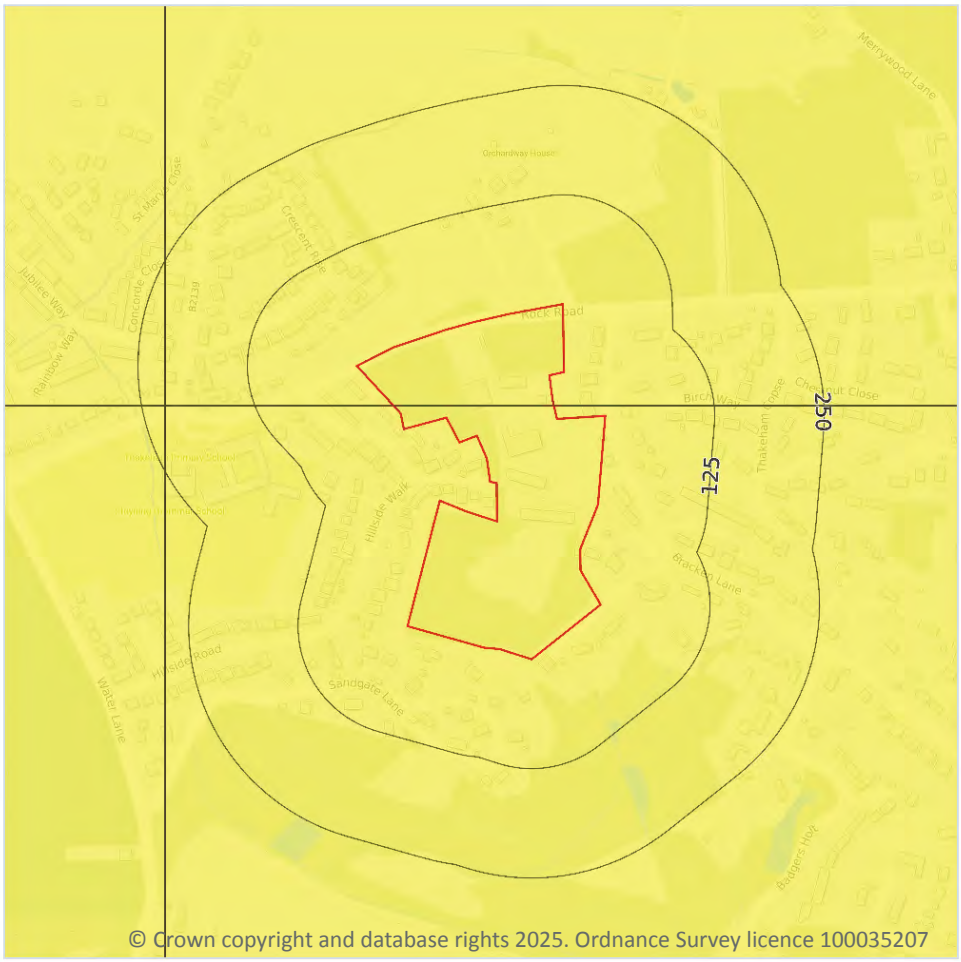
The potential hazard presented by types of ground that may contain layers of very soft materials like clay or peat and may compress if loaded by overlying structures, or if the groundwater level changes, potentially resulting in depression of the ground and disturbance of foundations.

Features are displayed on the Natural ground subsidence - Compressible deposits map on page 95 >

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

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

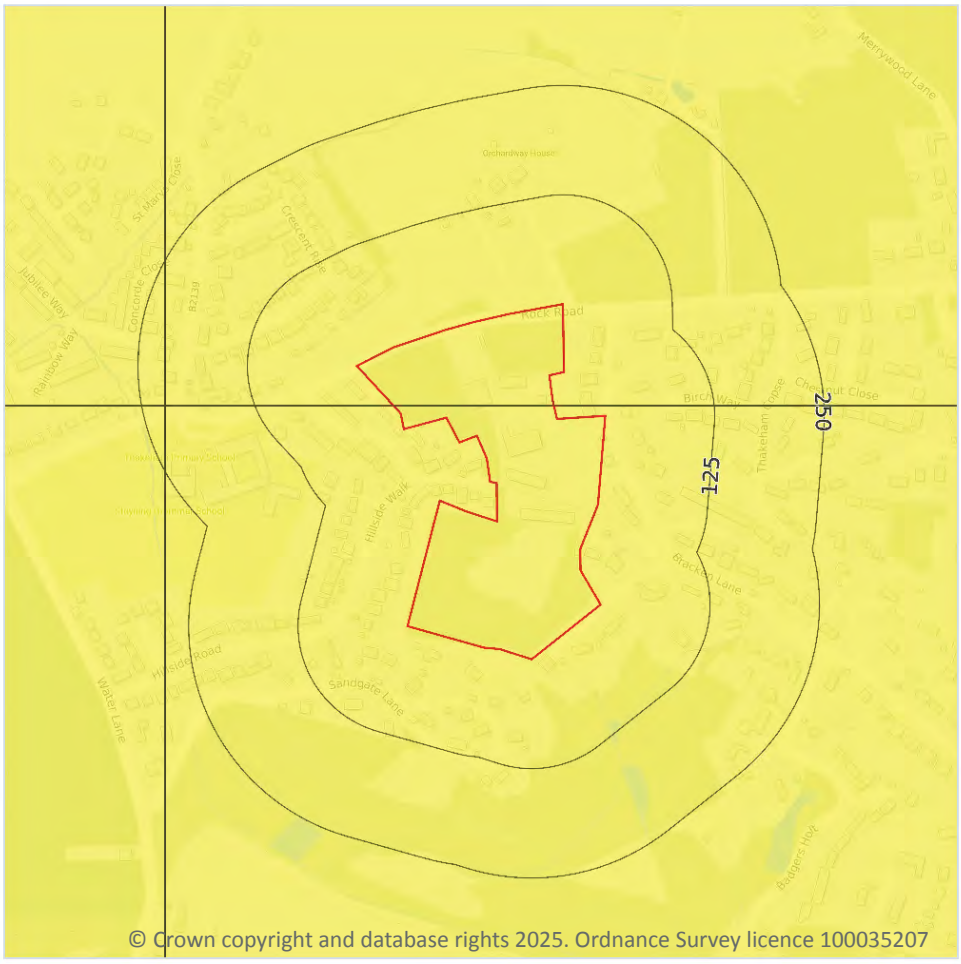
The potential hazard presented by natural deposits that could collapse when a load (such as a building) is placed on them or they become saturated with water.

Features are displayed on the Natural ground subsidence - Collapsible deposits map on **page 97 >**

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	1

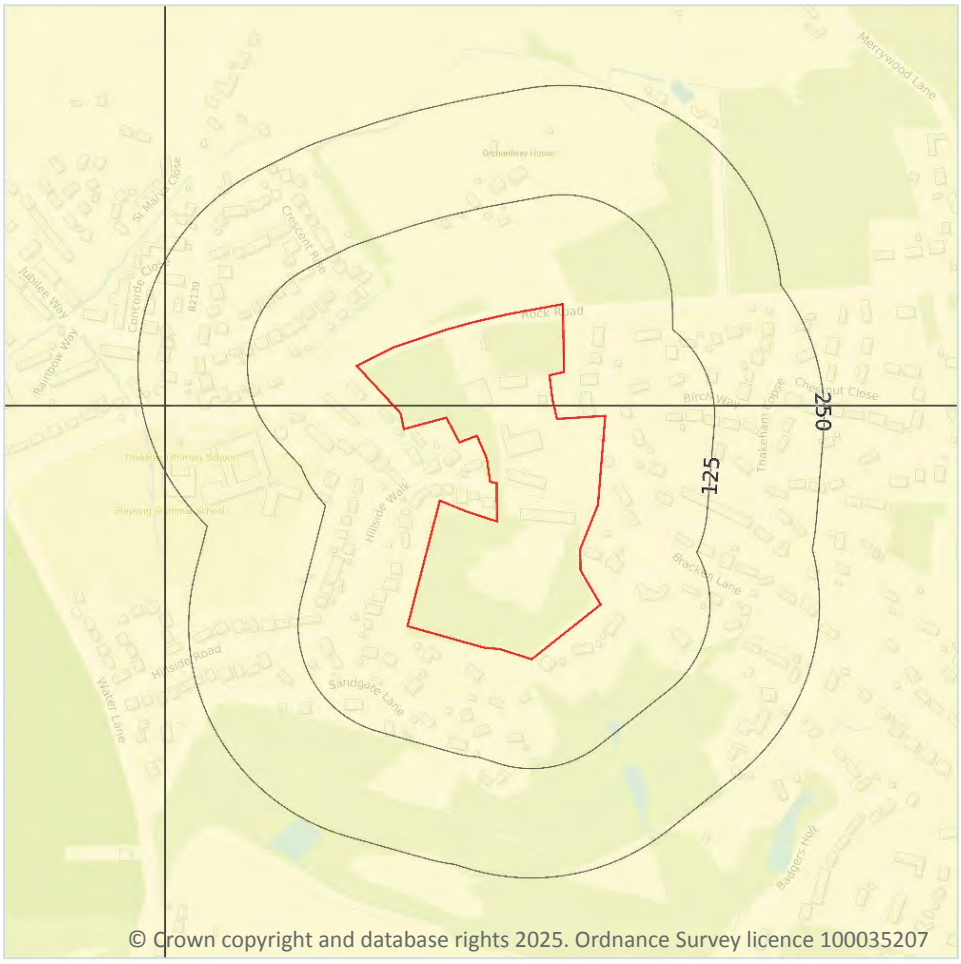
The potential for landsliding (slope instability) to be a hazard assessed using 1:50,000 scale digital maps of superficial and bedrock deposits, combined with information from the BGS National Landslide Database and scientific and engineering reports.

Features are displayed on the Natural ground subsidence - Landslides map on **page 98 >**

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

This data is sourced from the British Geological Survey.

Natural ground subsidence - Ground dissolution of soluble rocks



17.6 Ground dissolution of soluble rocks

Records within 50m	1

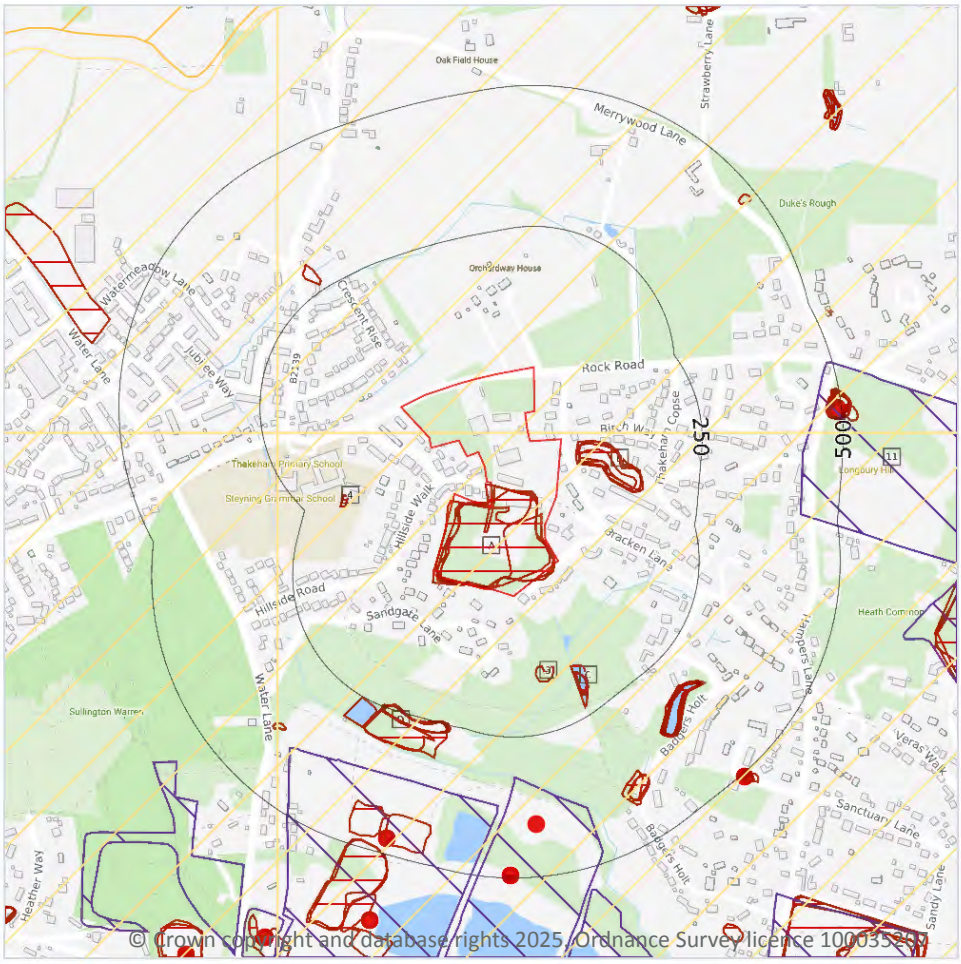
The potential hazard presented by ground dissolution, which occurs when water passing through soluble rocks produces underground cavities and cave systems. These cavities reduce support to the ground above and can cause localised collapse of the overlying rocks and deposits.

Features are displayed on the Natural ground subsidence - Ground dissolution of soluble rocks map on page 99 >

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 and ground workings



Site Outline

Search buffers in metres (m)

- BritPits
- Surface ground workings
- Underground workings
- Underground mining extents
- Historical mineral planning areas
- TCA non-coal mining

Non Coal Mining

- Sporadic underground mining of restricted extent possible
- Localised small scale underground mining possible
- Small scale mining possible
- Underground mining known or likely within or in close proximity
- Underground mining known within or in very close proximity

18.1 BritPits

Records within 500m	4

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

Features are displayed on the Mining and ground workings map on **page 101 >**

ID	Location	Details	Description
10	407m S	Name: Sandgate Park Quarry Address: Sullington, PULBOROUGH, West Sussex Commodity: Sand 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
G	473m S	Name: Sandgate Park Quarry Address: Sullington, PULBOROUGH, West Sussex Commodity: Sand 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
I	492m E	Name: Heath Common Sand Pit Address: Storrington, PULBOROUGH, West Sussex Commodity: Sand 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
F	495m S	Name: Sandgate Park Quarry Address: Sullington, PULBOROUGH, West Sussex Commodity: Sand 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.

18.2 Surface ground workings

Records within 250m **16**

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

Features are displayed on the Mining and ground workings map on **page 101 >**

ID	Location	Land Use	Year of mapping	Mapping scale
A	**On site**	**Unspecified Disused Pit**	**1980**	**1:10000**
A	**On site**	**Sand Pit**	**1961**	**1:10560**
A	**On site**	**Sand Pit**	**1946**	**1:10560**

ID	Location	Land Use	Year of mapping	Mapping scale
A	**On site**	**Sand Pit**	**1971**	**1:10560**
B	28m E	Unspecified Heap	1961	1:10560
B	31m E	Unspecified Ground Workings	1971	1:10560
B	33m E	Sand Pit	1946	1:10560
3	133m S	Pond	1980	1:10000
C	161m S	Pond	1980	1:10000
4	171m W	Pool	1980	1:10000
C	174m SE	Pond	1971	1:10560
C	175m SE	Pond	1961	1:10560
D	240m SW	Pond	1914	1:10560
D	241m SW	Pond	1914	1:10560
D	242m SW	Pond	1875	1:10560
D	242m SW	Pond	1896	1:10560

This is data is sourced from Ordnance Survey/Groundsure.

18.3 Underground workings

Records within 1000m	**0**

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

This is data is sourced from Ordnance Survey/Groundsure.

18.4 Underground mining extents

Records within 500m	**0**

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

This data is sourced from Groundsure.

18.5 Historical Mineral Planning Areas

Records within 500m	3

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 and ground workings map on **page 101 >**

ID	Location	Site Name	Mineral	Type	Planning Status	Planning Status Date
F	322m S	Sandgate Park sandpit	Sand	Surface mineral working	Valid	1964
G	363m S	Sandgate Park sandpit	Sand	Surface mineral working	Valid	20/1/61, 6/4/49
11	429m E	Hampers Lane	Sand	Surface mineral working	Refused	Not available

This data is sourced from the British Geological Survey.

18.6 Non-coal mining

Records within 1000m	6

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

Features are displayed on the Mining and ground workings map on **page 101 >**

ID	Location	Name	Commodity	Class	Likelihood
1	**On site**	**Not available**	**Sand**	**A**	**Underground mine workings are uncommon, although the geology is similar to that worked elsewhere. Potential for difficult ground conditions are unlikely and are at a level where they need not be considered.**
2	**On site**	**Not available**	**Sand**	**A**	**Underground mine workings are uncommon, although the geology is similar to that worked elsewhere. Potential for difficult ground conditions are unlikely and are at a level where they need not be considered.**
5	219m W	Not available	Sand	A	Underground mine workings are uncommon, although the geology is similar to that worked elsewhere. Potential for difficult ground conditions are unlikely and are at a level where they need not be considered.

ID	Location	Name	Commodity	Class	Likelihood
6	224m W	Not available	Sand	A	Underground mine workings are uncommon, although the geology is similar to that worked elsewhere. Potential for difficult ground conditions are unlikely and are at a level where they need not be considered.
17	689m NW	Not available	Iron Ore	B	Underground mine workings may have occurred in the past or current mines may be working at significant depth to modern engineering standards. Potential for difficult ground conditions are unlikely and are at a level where they need not be considered.
-	726m N	Not available	Iron Ore	B	Underground mine workings may have occurred in the past or current mines may be working at significant depth to modern engineering standards. Potential for difficult ground conditions are unlikely and are at a level where they need not be considered.

This data is sourced from the British Geological Survey.

18.7 JPB mining areas

Records on site	0

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

This data is sourced from Johnson Poole and Bloomer.

18.8 The Coal Authority non-coal mining

Records within 500m	0

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

This data is sourced from The Coal Authority.

18.9 Researched mining

Records within 500m	0

This data indicates areas of potential mining identified from alternative or archival sources, including; BGS Geological paper maps, Lidar data, aerial photographs (from World War II onwards), archaeological data services, websites, Tithe maps, and various text/plans from collected books and reports. Some of this data is

approximate and Groundsure have interpreted the resultant risk area and, where possible, specific areas of risk have been captured.

This data is sourced from Groundsure.

18.10 Mining record office plans

Records within 500m	0

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

This data is sourced from Groundsure.

18.11 BGS mine plans

Records within 500m	0

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

This data is sourced from Groundsure.

18.12 Coal mining

Records on site	0

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

This data is sourced from the Coal Authority.

18.13 Brine areas

Records on site	0

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

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

18.14 Gypsum areas

Records on site	0

Generalised areas that may be affected by gypsum extraction.

This data is sourced from British Gypsum.

18.15 Tin mining

Records on site	0

Generalised areas that may be affected by historical tin mining.

This data is sourced from Groundsure.

18.16 Clay mining

Records on site	0

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

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

19 Ground cavities and sinkholes

19.1 Natural cavities

Records within 500m	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.

19.2 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.

19.3 Reported recent incidents

Records within 500m	0

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

This data is sourced from Groundsure.

19.4 Historical incidents

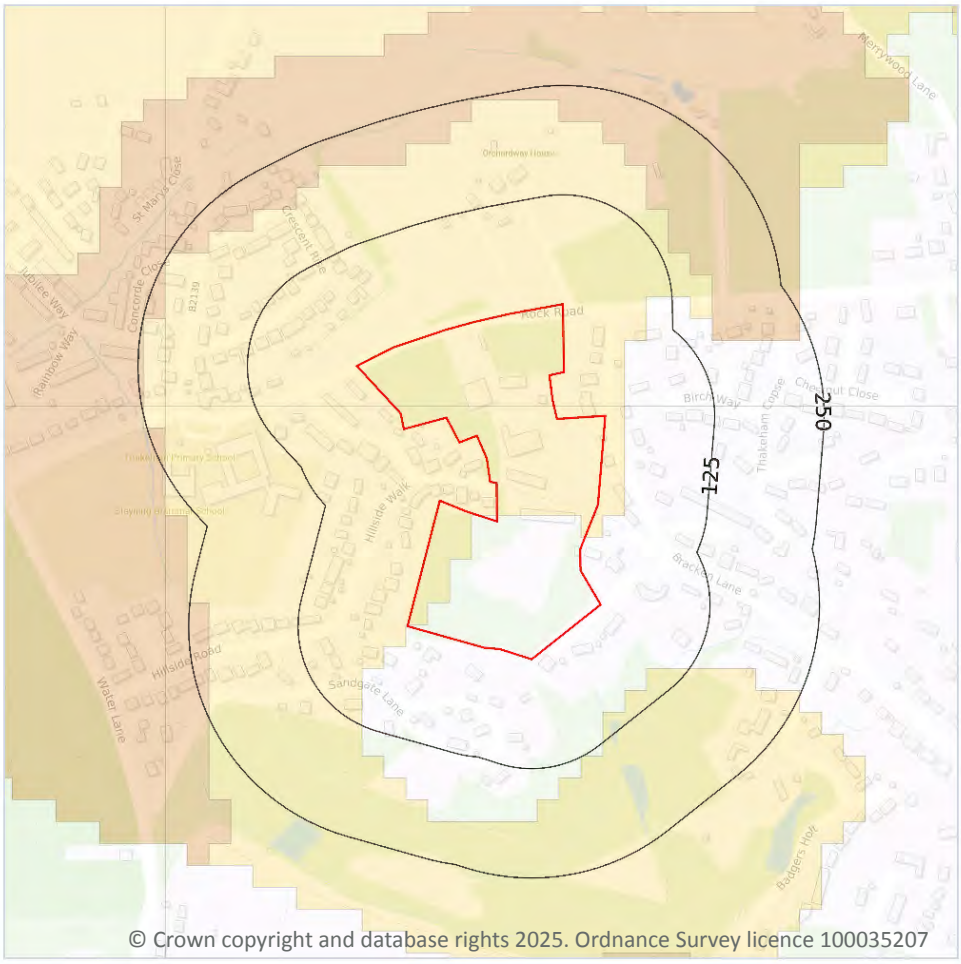
Records within 500m	0

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

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

This data is sourced from Groundsure.

20 Radon



20.1 Radon

Records on site	2

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

Features are displayed on the Radon map on **page 110 >**

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

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

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

21 Soil chemistry

21.1 BGS Estimated Background Soil Chemistry

Records within 50m 9

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	**15 mg/kg**	**No data**	**100 mg/kg**	**60 mg/kg**	**1.8 mg/kg**	**60 - 90 mg/kg**	**15 - 30 mg/kg**
On site	**15 mg/kg**	**No data**	**100 mg/kg**	**60 mg/kg**	**1.8 mg/kg**	**60 - 90 mg/kg**	**15 - 30 mg/kg**
On site	**15 mg/kg**	**No data**	**100 mg/kg**	**60 mg/kg**	**1.8 mg/kg**	**60 - 90 mg/kg**	**15 - 30 mg/kg**
On site	**15 mg/kg**	**No data**	**100 mg/kg**	**60 mg/kg**	**1.8 mg/kg**	**60 - 90 mg/kg**	**15 - 30 mg/kg**
1m NE	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
11m NE	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
11m NE	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
19m NE	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
45m NE	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg

This data is sourced from the British Geological Survey.

21.2 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.

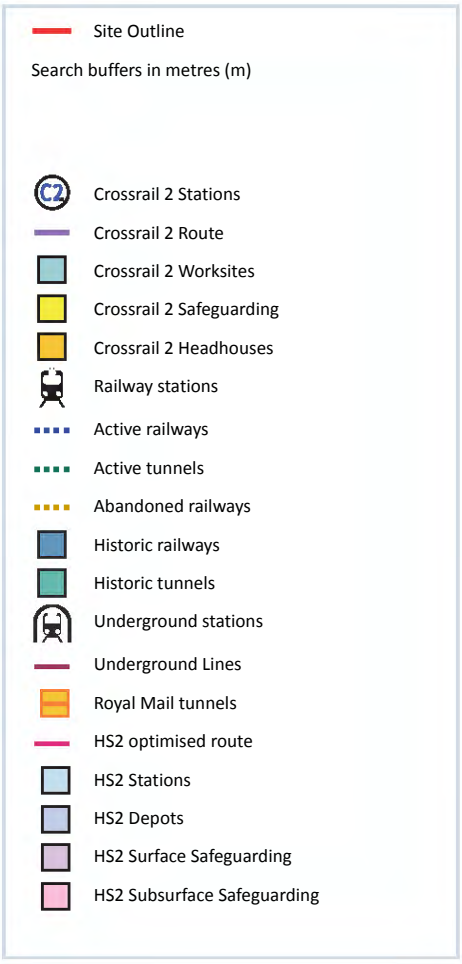
21.3 BGS Measured Urban Soil Chemistry

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.

22 Railway infrastructure and projects



22.1 Underground railways (London)

Records within 250m	0

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

This data is sourced from publicly available information by Groundsure.

22.2 Underground railways (Non-London)

Records within 250m	0

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

This data is sourced from publicly available information by Groundsure.

22.3 Railway tunnels

Records within 250m	0

Railway tunnels taken from contemporary Ordnance Survey mapping.

This data is sourced from the Ordnance Survey.

22.4 Historical railway and tunnel features

Records within 250m	11

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

Features are displayed on the Railway infrastructure and projects map on **page 114 >**

Location	Land Use	Year of mapping	Mapping scale
On site	**Railway Sidings**	**1972**	**2500**
On site	**Railway Sidings**	**1980**	**2500**
On site	**Railway Sidings**	**1985**	**2500**
On site	**Railway Sidings**	**1990**	**2500**
On site	**Railway Sidings**	**1993**	**2500**
On site	**Railway Sidings**	**1937**	**2500**
On site	**Railway Sidings**	**1961**	**10560**
On site	**Railway Sidings**	**1946**	**10560**
On site	**Railway Sidings**	**1980**	**10000**
On site	**Railway Sidings**	**1971**	**10560**
On site	**Railway Sidings**	**1957**	**10560**

This data is sourced from Ordnance Survey/Groundsure.

22.5 Royal Mail tunnels

Records within 250m	0

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

This data is sourced from Groundsure/the Postal Museum.

22.6 Historical railways

Records within 250m	0

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

This data is sourced from OpenStreetMap.

22.7 Railways

Records within 250m	0

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

This data is sourced from Ordnance Survey and OpenStreetMap.

22.8 Crossrail 2

Records within 500m	0

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

This data is sourced from publicly available information by Groundsure.

22.9 HS2

Records within 500m	0

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

This data is sourced from HS2 ltd.

Data providers

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

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UNEXPLODED BOMB RISK MAP

SITE LOCATION

Location: RH20 3AD,
Map Centre: 510392,115028

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

LEGEND

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

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

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

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

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

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

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

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

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

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

If I have any questions, who do I contact?

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

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

GeoReports

British Geological Survey

LILY CHERRY
HYDROCK CONSULTANTS LTD
OVER COURT BARNS
OVER LANE
ALMONDSBURY
BRISTOL
BS32 4DF

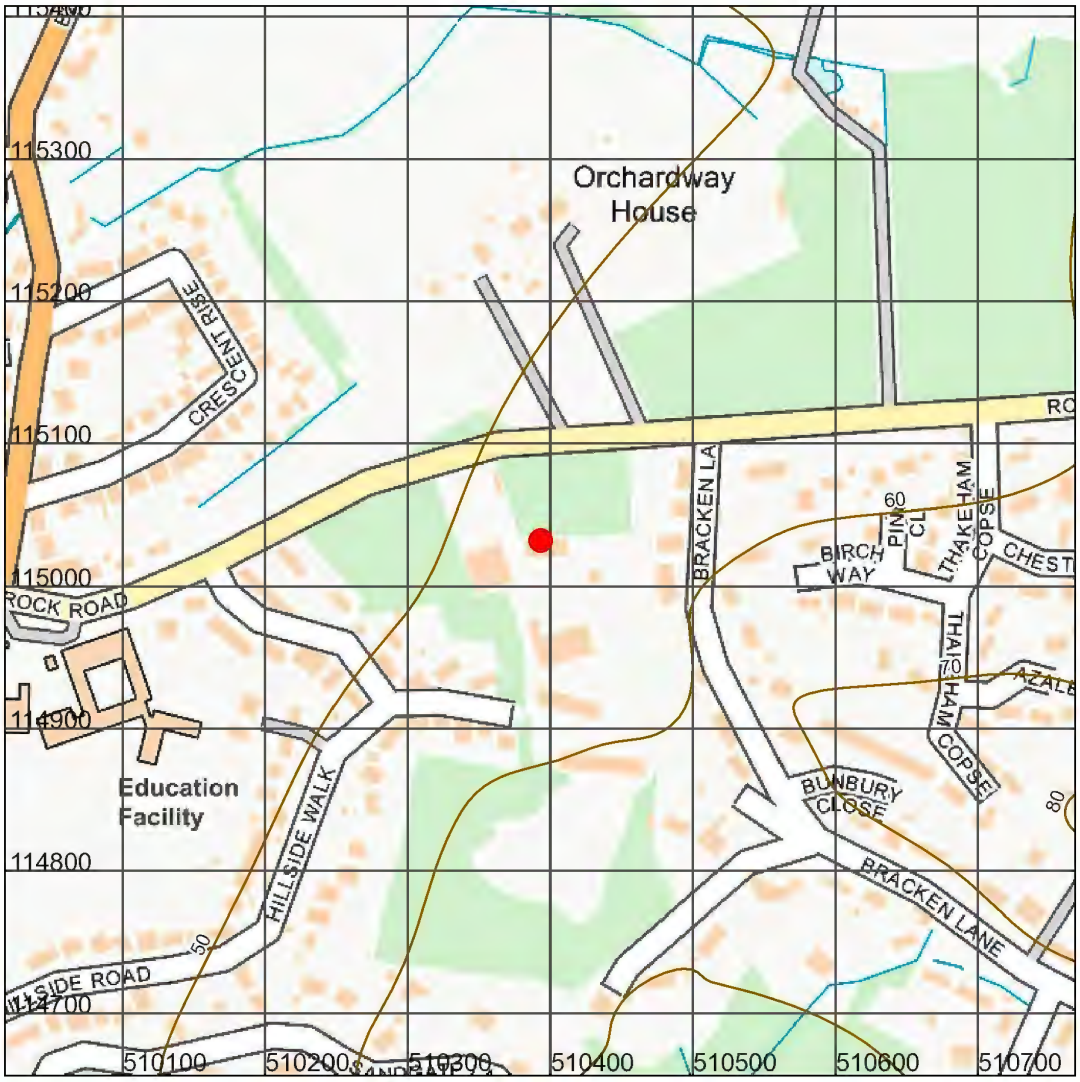
Radon Report

Advisory report on the requirement for radon protective measures in new buildings, conversions and extensions to existing buildings. The report also indicates whether a site is located within a radon Affected Area

Report Id: ***BGS_336701/51534***

Client reference:

Search location



Contains OS data © Crown Copyright and database right 2024. OS OpenMap Local: Scale: 1:5 000 (1cm = 50 m)
Search location indicated in red

Point centred at: 510393,115032

Radon Report: UK

When extensions are made to existing buildings in high radon areas, or new buildings are constructed in these areas, the Building Regulations for England, Wales, Scotland and Northern Ireland require that protective measures are taken against radon entering the building.

This report provides information on whether radon protective measures are required. Depending on the probability of buildings having high radon levels, the Regulations may require either:

1. No protective measures
2. Basic protective measures
3. Full protective measures

This is an advisory report on the requirement for radon protective measures in new buildings, conversions and extensions. The report also indicates whether a site is located within a radon Affected Area

Requirement for radon protective measures

The determination below follows advice in *BR211 Radon: Guidance on protective measures for new buildings (2023 edition), which also provides guidance on what to do if the* result *indicates that protective measures are required.*

Is the property in an area where radon protective measures are required for new buildings or extensions to existing ones as described in publication BR211 (2023 edition) Radon: Guidance on protective measures for new buildings?

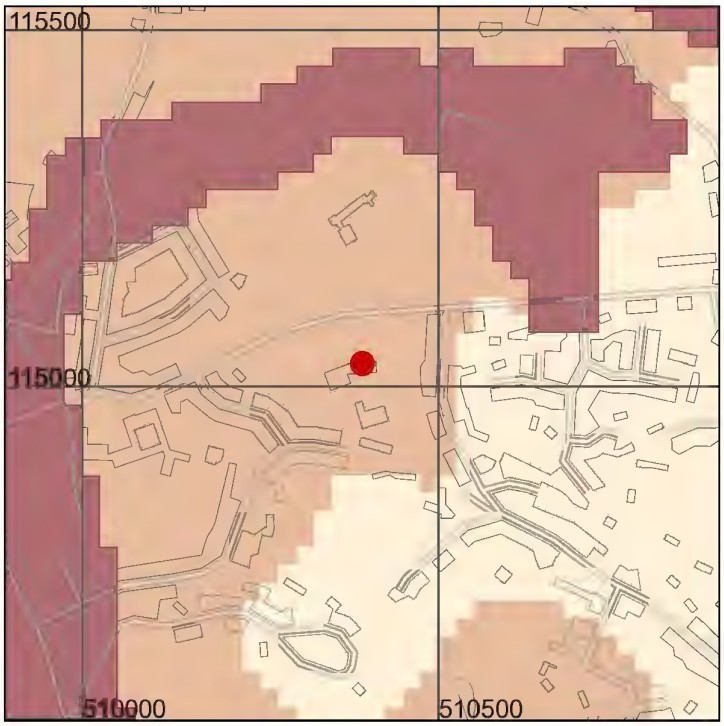
NO RADON PROTECTIVE MEASURES ARE REQUIRED FOR THE REPORT AREA.

More details of the protective measures required are available in *BR211 Radon: Guidance on protective measures for new buildings (2023 Edition)*.

Whether or not the radon level in a building is above or below the radon Action Level can only be established by having the building tested. The UKHSA provides a radon testing service which can be accessed at www.ukradon.org or by telephone (01235 822622).

If you require further information or guidance, you should contact your local authority building control officer or approved inspector.

Radon Affected Area



	% Homes estimated to be at or above the action level
	0-1%
	1-3%
	3-5%
	5-10%
	10-30%
	30-100%

Contains OS data © Crown Copyright and database right 2024
Scale: 1:10 000 (1cm = 100 m)
Search area indicated in red

Is the property in a radon Affected Area as defined by the UK Health Security Agency (UKHSA) and if so what percentage of homes are estimated to be at or above the Action Level? YES

Additional Information

THE PROPERTY IS IN A RADON AFFECTED AREAS WHERE 1 TO 3% OF HOMES ARE ESTIMATED TO BE AT OR ABOVE THE ACTION LEVEL.

The UKHSA recommends a radon 'Action Level' of 200 Becquerels per cubic metre of air (Bq m^{-3}) for the annual average of the radon gas concentration in a home. Where 1% or more of homes are estimated to be at or above the Action Level the area should be regarded as a radon Affected Area.

This report informs you whether the property is in a radon Affected Area and the percentage of homes that are estimated to be at or above the radon Action Level at this location. Being in an Affected Area does not necessarily mean there is a high radon level within the property; the only way to determine the radon level is to carry out a radon measurement.

The UKHSA advises that radon gas should be measured in all properties within radon Affected Areas and that homes with radon levels at or above the Action Level (200 Bq m^{-3}) should be remediated. Householders with levels between the Target Level (100 Bq m^{-3}) and Action Level should seriously consider reducing their radon level, especially if they are at greater risk, such as if they are current or ex smokers. Whether or not a home is in fact above or below the Action Level or Target Level can only be established by having the building tested. The UKHSA provides a validated radon testing service which can be accessed at www.ukradon.org.

The information in this report provides an answer to one of the standard legal enquiries on house purchase in England and Wales, known as Law Society CON29 Enquiries of the Local Authority (2016); 3.14 Radon Gas: Do records indicate that the property is in a “Radon Affected Area” as identified by the UKHSA. The data can also be used to advise house buyers and sellers in Scotland and Northern Ireland.

If you are buying a new build property in a Radon Affected Area, you should ask the builder whether radon protective measures were incorporated in the construction of the property.

If you are buying a currently occupied property in a radon Affected Area, you should ask the present owner whether radon levels have been measured in the property. If they have, ask whether the results were at or above the radon Action Level and if so, whether remedial measures were installed, radon levels were re-tested, and if the results of re-testing confirmed the effectiveness of the measures.

Further information on radon is available from the UKHSA at www.ukradon.org.

What is radon?

Radon is a naturally occurring radioactive gas, which is produced by the radioactive decay of radium which, in turn, is derived from the radioactive decay of uranium. Uranium is found in small quantities in all soils and rocks, although the amount varies from place to place. Radon released from rocks and soils is quickly diluted in the atmosphere. Concentrations in the open air are normally very low and do not present a hazard. Radon that enters enclosed spaces such as some buildings (particularly basements), caves, mines, and tunnels may reach high concentrations in some circumstances. The construction method and degree of ventilation will influence radon levels in individual buildings. A person's exposure to radon will also vary according to how particular buildings and spaces are used.

Inhalation of the radioactive decay products of radon gas increases the chance of developing lung cancer. If individuals are exposed to high concentrations for significant periods of time, there may be cause for concern. In order to limit the risk to individuals, the Government has adopted an Action Level for radon in homes of 200 becquerels per cubic metre (Bq m^{-3}). The Government advises householders that, where the radon level is at or above the Action Level, measures should be taken to reduce the concentration.

Radon in workplaces

The Ionising Radiation Regulations 2017 require employers to take action when radon is present above a defined level in the workplace. Advice may be obtained from your local Health and Safety Executive Area Office or the Environmental Health Department of your local authority. The BRE publishes a guide (BR293)**: Radon in the workplace.** BRE publications may be obtained from the BRE Bookshop, Tel: 01923 664262, email: bookshop@bre.co.uk website: www.brebookshop.com

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- Geological observations and interpretations are made according to the prevailing understanding of the subject at the time. The quality of such observations and interpretations may be affected by the availability of new data, by subsequent advances in knowledge, improved methods of interpretation, and better access to sampling locations.
- Raw data may have been transcribed from analogue to digital format, or may have been acquired by means of automated measuring techniques. Although such processes are subjected to quality control to ensure reliability where possible, some raw data may have been processed without human intervention and may in consequence contain undetected errors.
- Detail, which is clearly defined and accurately depicted on large-scale maps, may be lost when small-scale maps are derived from them.
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- The topography shown on any map extracts is based on the latest OS mapping and is not necessarily the same as that used in the original compilation of the BGS geological map, and to which the geological linework available at that time was fitted.
- Note that for some sites, the latest available records may be historical in nature, and while every effort is made to place the analysis in a modern geological context, it is possible in some cases that the detailed geology at a site may differ from that described.

Report issued by
BGS Enquiry Service

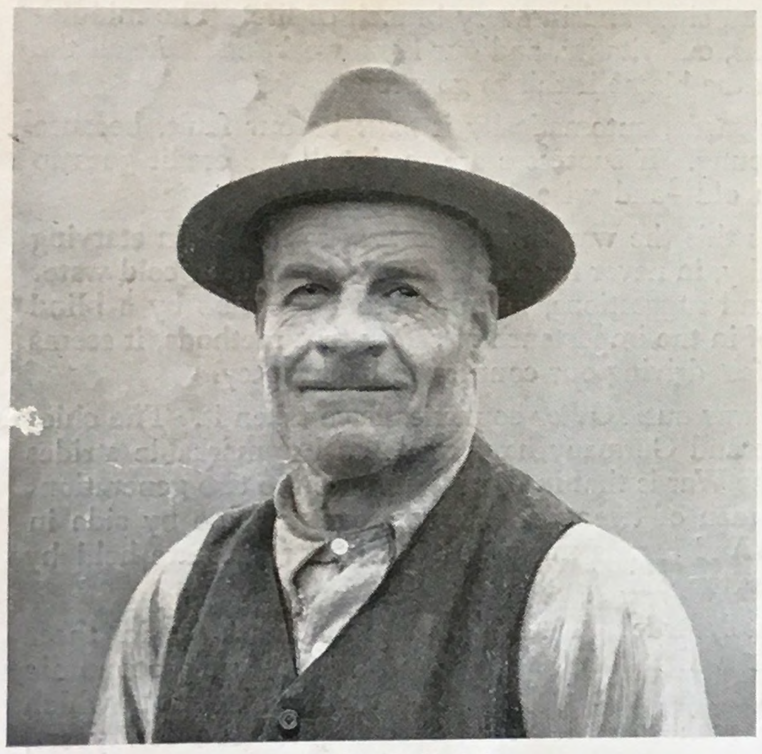
A ROOFING TILE OF OUTSTANDING MERIT

By WILLIAM HARVEY

" When we build let us think we build for ever."—RUSKIN.

Good tiles last for ever ! For centuries now they have proved their complete reliability and durability for roofing purposes—that is, when quality is made the first consideration—and for generations they have formed the favourite roofing material for the British home. In appearance the tile has no rival. It is pleasant, homely and picturesque, and harmonises perfectly with either rural or urban surroundings. While, for winter warmth, summer coolness and general hard-wearing qualities it is unequalled.

Since the war there has been a bigger demand than ever for roofing tiles. They are continually being adopted in preference to slates and other materials by architects and builders for housing schemes and every conceivable type of building throughout the country, and their employment has increased to such an extent that the manufacture of many millions every year is now essential. For this reason, it is perhaps just as well to issue a word of warning against the cheap and unsatisfactory article which is being placed on the market, at present, by makers, both at home and abroad, as a result of this keen demand.



Mr. F. Knight.

General view of the works which cover 14 acres, from the noted Sussex sand quarries of Mr. F. Knight.

True economy in building lies in the use of materials which are in themselves a permanent investment requiring low maintenance costs. Such materials are not found among those which are produced upon a basis of price only. At the same time it is a fallacy to assume, as many people do, that good tiles are necessarily expensive building items. If they are purchased in the right market there is no reason why the total cost of roofing with tiles should exceed the figure involved in the use of any other material. In fact, there are cases where a considerable saving may be effected by the use of tiles, apart from the saving in roof timber as a result of their use.

It will be appreciated, however, that the manufacture of tiles of quality calls for exceptional skill, suitable raw materials and a wide experience of building requirements, and nowhere are these factors combined more successfully than in the production of the Thakeham Roofing Tile, which is manufactured only by Frank Knight of The Thakeham Tile Works, Heath Common, Storrington, Sussex.

The new " Thakeham " tile is

Entrance from the main road to the works. On the right is a sand-loading dump

Loading the raw material for dispatch to the sheds.

produced from the finest and most noted Sussex sand and Portland cement combined, either with or without colouring. It is made in a beautiful dark red or a deep maroon, so much admired by the modern architect, and the colour goes right through the tile. It can also be left in the "natural," which soon matures, and which has been much admired by all those who have inspected it. To quote the words of a prominent architect, "it is so produced that it possesses such a remarkably fine texture, that it is difficult to distinguish it from hand-made clay tiles."

Some idea of its all-round quality and reasonable price may be gathered from the fact that Mr. Knight is at the moment completing a contract for half-a-million tiles, which he was successful in obtaining in spite of keen foreign competition. Indeed, so superior in quality is the Thakeham tile, and so close in price for delivery inland, when compared with the foreign tile, that Mr. Knight does not fear competition in that direction, except, perhaps, in the actual ports where the foreign goods are discharged. Roofing with the Thakeham tile costs, for instance, about two-thirds of that with genuine asbestos.

As regards efficiency, some tiles tested by the National Physical Laboratory, Teddington, were supported at each end and loaded in the middle. The average load carried was 76.4 lbs. After soaking in water for 48 hours the tiles were maintained at from 2 deg. to 0 deg. Fahrenheit—that is, 34 deg. frost—for 12 hours, and then allowed to warm up. There was no cracking or flacking during the whole of the test. After immersion in water for 48 hours the average absorption for the whole of the tile was 3.77 per cent. of water by weight.

Every tile before leaving the machine is subjected to a pressure of 2 tons, thus insuring the proper hydration of the cement, and consequently full strength of the mixture. Its covering powers are very good, the size of the tile being 7 ins. × 10¾ ins. and a lap of 2½ ins. only being necessary for easy laying. Undoubtedly the Thakeham is a tile which must not be compared with others of similar

Mixer for the tile maker.

make, for, by virtue of its strength, utility, covering powers, colour and close fitting, combined with its general effectiveness, it is, without question, far ahead of any other face-coloured tiles.

No one is better fitted to evolve the perfect roofing tile than Mr. Frank Knight, who was, so to speak, brought up in this industry. Mr. Knight, however, is not devoting his time solely to the production of good roof tiles, he is just putting on the market, a building brick of similar quality to the tiles and which it is anticipated will be equally successful. He comes of an old English Quaker family, and both his father and grandfather were associated with this class of manufacture, while another ancestor,

Returning for more.

From:	Lee.Money
To:	David Pethica
Cc:	Jenny.Richardson
Subject:	Thakeham Tiles, Storrington
Date:	Wednesday, May 23, 2018 4:06:38 PM
Attachments:	Thakeham Tiles historic landfill.pdf Thakeham Tiles 1959 Aerial.pdf Thakeham Tiles 1947 Aerial.pdf Thakeham tiles 1933 OS.pdf Thakeham Tiles Planning History.xlsx

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Hi David

Thanks for your enquiry and payment.

The site has an established industrial land use history first documented on the 1933 edition of the 1:2500 Ordnance Survey. The maximum extent of the workings does not appear to not exceeded boundary shown on this site. See attached map. I have also attached a planning history for the site

Waste management

The southern part of the site is a recorded licensed inert landfill site references WD27/212, WD13/38. First input was received in 1970 and last input was in 1982. These records are now held by the Environment Agency.

Controlled waters

The site overlies a Principal Aquifer with a High groundwater vulnerability.

Fuel Storage

Historic Petroleum Licensing records provided by West Sussex County Council show up to 500 gallons of petrol were stored at the site. Storage of diesel fuel was not licensed.

Environmental permits

The site is currently permitted for the blending, packing, loading, unloading and use of bulk cement. Reference for the permit is EPR19.

Pollution Incidents

No incidents of pollution have been reported to this authority.

Please note that the reply given is specific to your request and all the data is based upon information available to the officers of the local authority at the time of preparation. This authority gives no absolute guarantee as to the accuracy or validity of the data and accepts no responsibility in respect of loss or claim which may arise from its use.

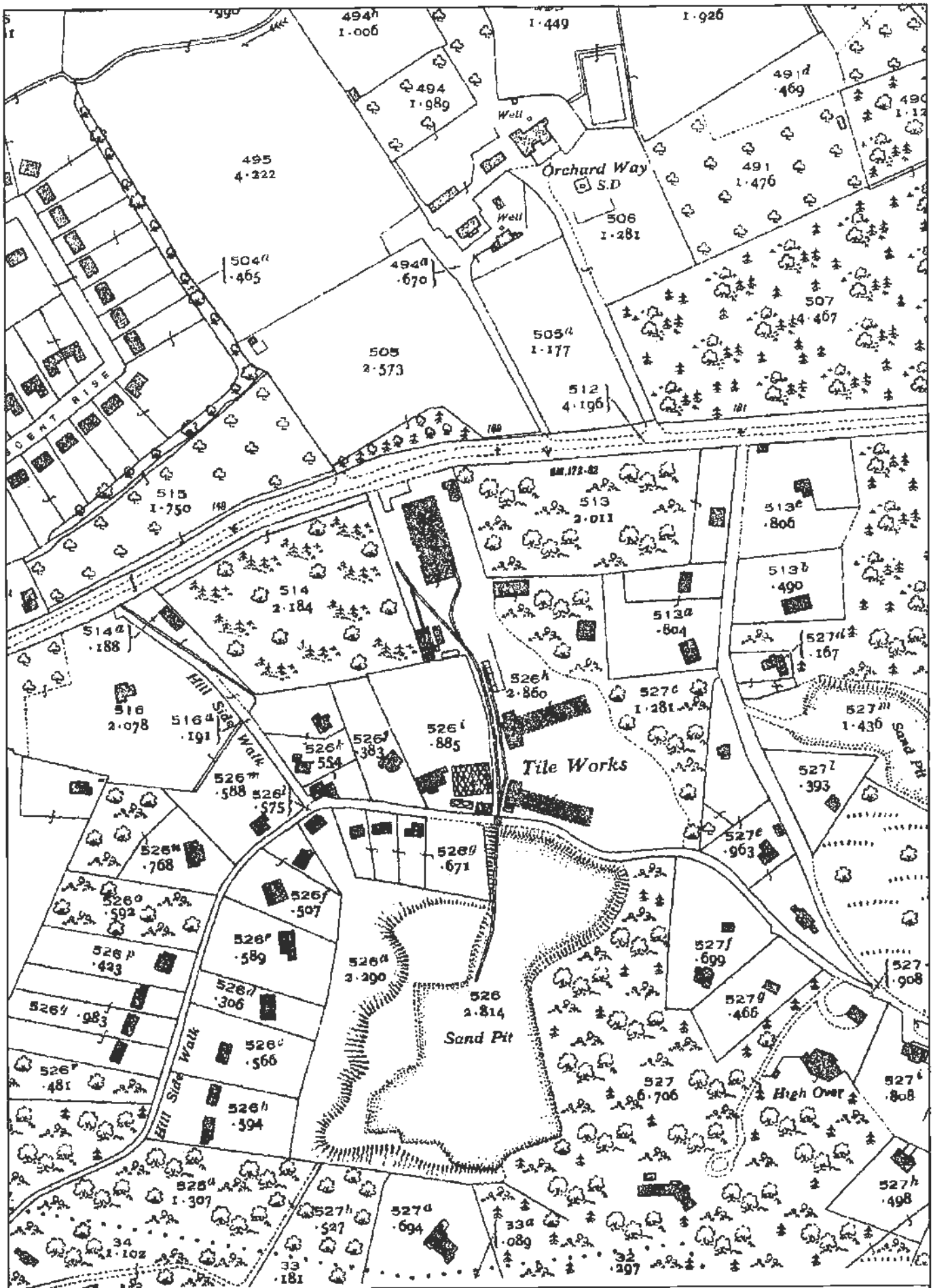
Please contact me if you would like further information or advice.

Regards

Lee Money
Area Environmental Health Officer

Telephone: 01403 215410
Email: Lee.Money@horsham.gov.uk

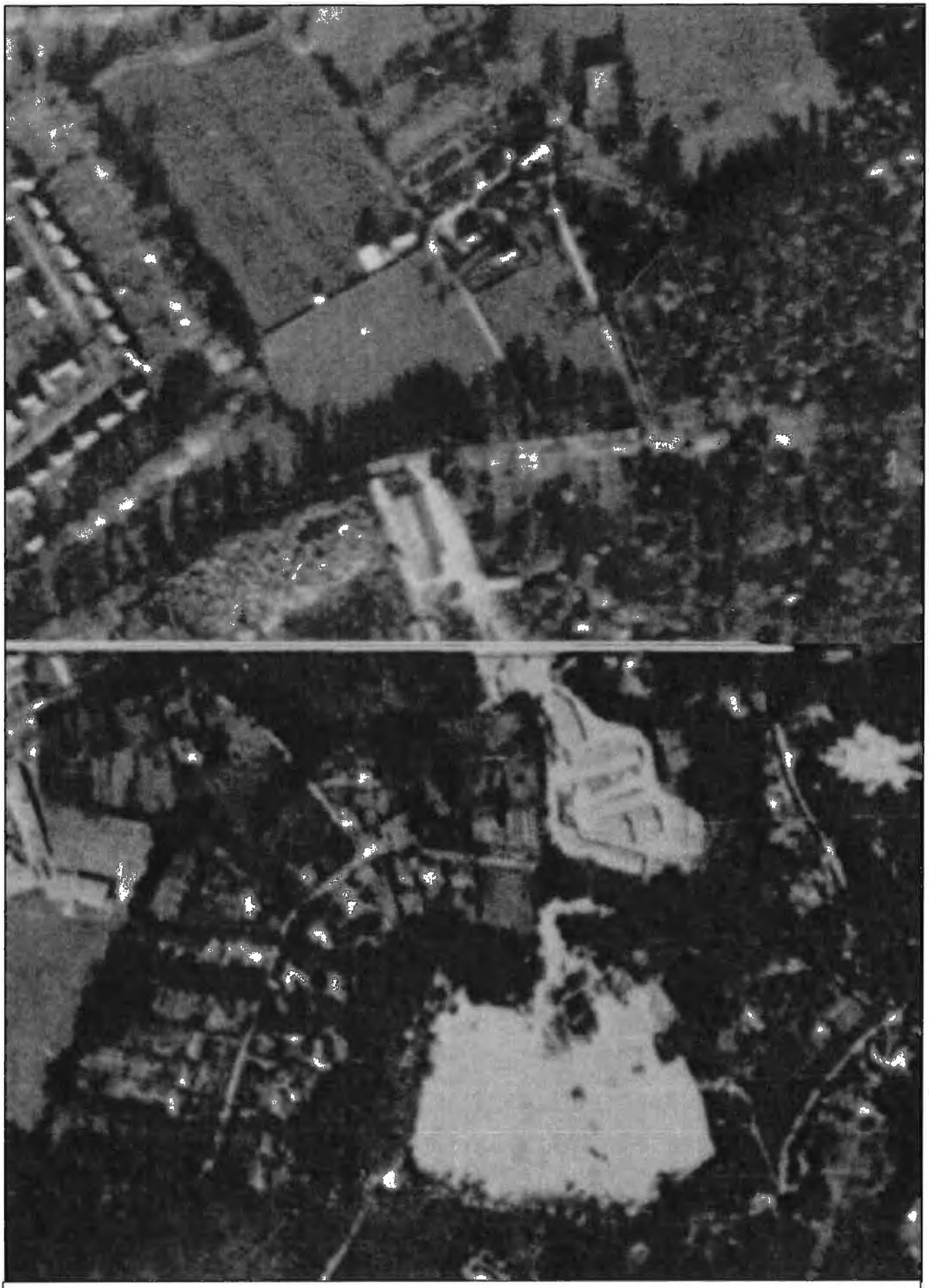
Horsham District Council, Parkside, Chart Way, Horsham, West Sussex RH12 1RL
Telephone: 01403 215100 (calls may be recorded) www.horsham.gov.uk Chief Executive: Glen Chipp



Thakeham Tiles
1933 edition 1:2500 Ordnace Survey

1:2,500

N



Thakeham Tiles
1947 Aerial survey

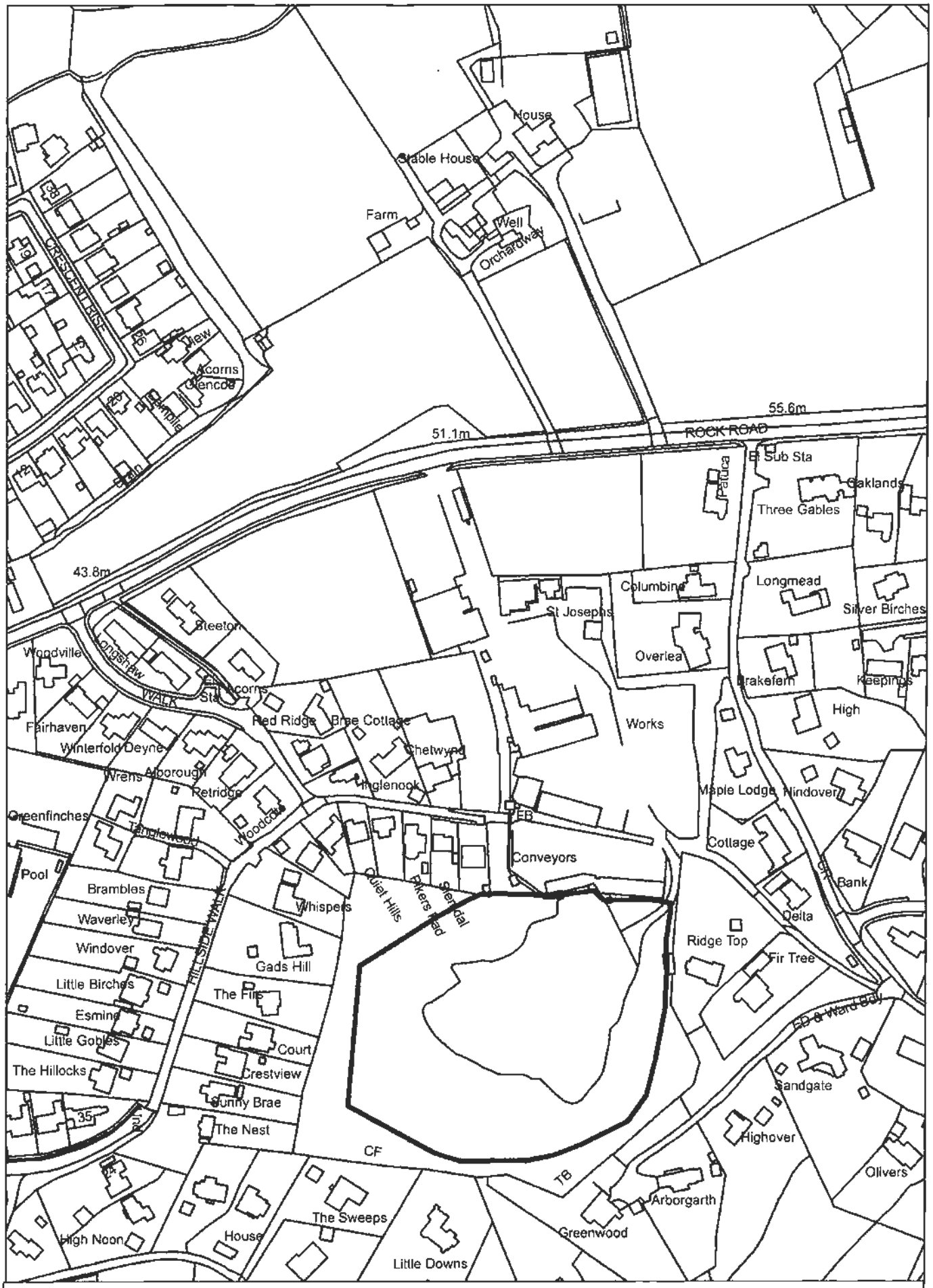
1:2,500

N

Thakeham Tiles
1959 Aerial survey

1:2,500

N



Thakeham Tiles
Extent of historic landfill

1:2,500

N

1960	Ref. No: T/11/60 | Status: Application Permitted	Installation of cement storage silo (From old Planning History)
1960	Ref. No: T/41/60 | Status: Application Permitted	Canteen (From old Planning History)
1961	Ref. No: T/11/61 | Status: Application Permitted	Pre-fab steel canteen building (From old Planning History)
1961	Ref. No: T/35/61 | Status: Application Permitted	Cement storage silo (From old Planning History)
1961	Ref. No: T/38/61 | Status: Application Permitted	Raised concrete road, platform for delivery of sand (From old Planning History)
1961	Ref. No: T/8/61 | Status: Application Permitted	Cement storage silo (From old Planning History)
1962	Ref. No: T/25/62 | Status: Application Permitted	Garage (From old Planning History)
1962	Ref. No: T/4/62 | Status: Application Permitted	Garage addition to workshop (From old Planning History)
1963	Ref. No: T/2/63 | Status: Application Refused	Site for 2 caravans (From old Planning History)
1964	Ref. No: T/29/64 | Status: Application Permitted	Extension of existing storage sand bins Comment: + br (From old Planning History)
1964	Ref. No: T/41/64 | Status: Application Permitted	Wall block making building (From old Planning History)
1965	Ref. No: T/41/65 | Status: Application Permitted	Lean-to extension cement sand block making (From old Planning History)
1966	Ref. No: T/19/66 | Status: Application Permitted	Proposed mens toilets (From old Planning History)
1966	Ref. No: T/2/66A | Status: Application Permitted	2 painted signs Comment: Temporary consent (From old Planning History)
1966	Ref. No: T/34/66 | Status: Application Permitted	Proposed mens toilets (works) (From old Planning History)
1967	Ref. No: T/11/67 | Status: Application Permitted	Block making shed (From old Planning History)
1967	Ref. No: T/12/67 | Status: Application Refused	Alterations and additions to farm store for colour mix (From old Planning History)
1967	Ref. No: T/26/67 | Status: Application Permitted	Proposed narrow gauge railway locomotive maintenance workshop building (From old Planning History)
1967	Ref. No: T/27/67 | Status: Application Permitted	Extension to office (From old Planning History)
1967	Ref. No: T/30/67 | Status: Application Permitted	Proposed 20 ton weighbridge (From old Planning History)
1968	Ref. No: T/4/68 | Status: Application Permitted	Demolition of old block making shed and new shed (From old Planning History)
1968	Ref. No: T/40/68 | Status: Application Permitted	Amendment to t/4/68 (From old Planning History)
1968	Ref. No: T/41/68 | Status: Application Permitted	Vehicle maintenance and workshop building (From old Planning History)
1969	Ref. No: T/37/69 | Status: Application Permitted	Two bay extension to block making shed (From old Planning History)
1970	Ref. No: T/5/70 | Status: Application Permitted	Portable toilet unit (From old Planning History)
1970	Ref. No: T/6/70 | Status: Application Permitted	Vehicle maintenance - amendment t/41/68 (From old Planning History)
1971	Ref. No: T/39/71 | Status: Application Permitted	Underground cable and pole transformer (From old Planning History)
1973	Ref. No: T/31/73 | Status: Application Permitted	Demolition of part of existing shed drying bays (From old Planning History)
1973	Ref. No: T/41/73 | Status: Application Permitted	Residential bungalow use as office (From old Planning History)
1976	Ref. No: T/23/76 | Status: Application Permitted	Alteration and acoustic treatment sheds (From old Planning History)
1976	Ref. No: T/19/76 | Status: Application Permitted	Additional office and stores (From old Planning History)
1976	Ref. No: T/32/76 | Status: Application Permitted	Extension to block making shed (From old Planning History)
1976	Ref. No: T/36/76 | Status: Application Permitted	Alterations and provision of acoustic treatment shed (From old Planning History)
1978	Ref. No: T/38/78 | Status: Application Permitted	Construction of a new block making shed to replace existing shed (From old Planning History)
1978	Ref. No: T/51/78 | Status: Application Permitted	Toilet block (From old Planning History)
1980	Ref. No: T/21/80 | Status: Application Permitted	Extension to slabmaking shed and making machine (From old Planning History)
1980	Ref. No: T/29/80 | Status: Application Permitted	Warehouse development site (From old Planning History)
1980	Ref. No: T/32/80 | Status: Application Refused	Change of use of land to car park area for works staff and employees Comment: Appeal dismissed may 1981 (From old Planning History)
1980	Ref. No: T/5/81 | Status: Application Withdrawn	Pole sign (From old Planning History)
1982	Ref. No: T/3/82 | Status: Application Permitted	Portakabin (demolition of damaged offices) (From old Planning History)
1983	Ref. No: T/55/83 | Status: Application Permitted	Extension to existing offices (From old Planning History)
1984	Ref. No: T/20/84 | Status: Application Permitted	New drying sheds and toilets (From old Planning History)
1985	Ref. No: T/52/85 | Status: Application Refused	Erection of light industrial building Comment: Outline (From old Planning History)
1986	Ref. No: T/41/86 | Status: Application Permitted	Extension to block making shed (From old Planning History)
1987	Ref. No: T/42/87 | Status: Application Permitted	Proposed extension to block making shed no.3 (From old Planning History)
1988	Ref. No: T/4/88 | Status: Application Permitted	Extension to block curing shed (From old Planning History)
1988	Ref. No: T/72/88 | Status: Application Refused	First floor office extension (From old Planning History)
1988	Ref. No: T/76/88 | Status: Application Permitted	Extension to block curing shed (From old Planning History)
1990	Ref. No: T/50/90 | Status: Application Withdrawn	Section 64 determination on the demolition of an unsafe property Site: Elizabeth Cottage Hilltop Walk Rock Rd Storrington
2004	Ref. No: DC/04/0612 | Status: Application Refused	Erection of first floor extension and alterations to main entrance of existing office
2005	Ref. No: DC/05/0464 | Status: Application Permitted	Single storey extension to form lobby and WC and external alterations
2005	Ref. No: DC/05/2193 | Status: Application Permitted	Use for manufacture, storage and distribution of concrete products (Lawful Development Certificate - Existing)
2012	Ref. No: DC/12/0619 | Status: Application Permitted	Surgery to 4 x Oak and 3 x Chessnut trees (Land to the south of Heathsde, Hillside Walk, Storrington)
2013	Ref. No: DC/13/0812 | Status: Application Permitted	Extension to curing sheds (Lawful Development Certificate - Proposed)
2016	Ref. No: DC/16/0214 | Status: Application Permitted	Surgery to 3 x Oak Trees, 5 x Sweet Chestnut Trees, and 1 x Beech Tree (Tree Preservation Order)
2017	Ref. No: DC/17/1315 | Status: Application Permitted	Surgery to 3 x Beech, 3 x Silver Birch, 2 x Chestnut, 3 x Pines, 1 x Oak
2018	Ref. No: DC/18/0738 | Status: Pending Consideration	Surgery to 7 x Silver Birch, 5 x Chestnut, 1 x Beech

Appendix E Climate change considerations for CSM

Table E.1 summarises the considerations that have been made in relation the possible implications of predicted climate change. These considerations have been made with reference to prevailing guidance on climate change and land contamination (SoBRA (2022), CL:AIRE)2022), Environment Agency (2010)), and climate change information published by the Met Office and the Environment Agency.

Table E.1: Possible CSM considerations related to climate change.

Climate change type	Potential climate change induced effect	Possible considerations on CSM
Increase in frequency and severity of extreme rainfall events	Temporary increasing in groundwater levels	It is possible that future groundwater level rise could be sufficient to impact potential contaminant linkages. The risk of groundwater flooding is increased but is unlikely to result in a groundwater flooding given the current depth to groundwater.
	Increased surface run-off	Site is covered in concrete hardstanding with associated surface water drainage. Surface water run-off will impact drainage network (in terms of volume of water) but is not expected to impact underlying ground conditions.
	Land-based erosion	Not relevant given current nature of site and proximity to river.
	River flooding	The location and elevation of the site in relation to projected increased flooding extents is currently situated within a Flood Zone 1, which means it is at very low risk of flooding (>1% chance per year) and a very low chance of flooding between 2036 and 2069.
Increase in frequency and severity of extreme cold and hot weather events	Soil freezing	Could cause failure of surface water drainage network (requiring repair) due to freeze/thaw action but not evident that this would cause a significant change to identified contaminant linkages.
	Soil desiccation/shrinkage	Bedrock geology of the Fittleworth is recorded to be cohesive as well as granular in nature. This could suggest a risk from shrinkage-related subsidence.
	Land fires	Not relevant to current nature and location of site.

	Temporary drop in water (GW and/or SW) levels due to increased water abstraction demand	Underlying shallow aquifer and nearby river do not have licensed abstractions registered within 250m.
	Temporary drop in water levels (GW and/or SW) due to lower rainfall.	Water levels in the shallow aquifer may fall further in the drier summer months.
Long-term sea level rise	Coastal erosion	No relevant given site location.
	Saline intrusion and marine inundation	No relevant given site location.
Long-term increase in rainfall	Increase in groundwater levels	The site is located within a river catchment that eFLAG predicts will see an increase in average groundwater recharge from BL to FF of 0.1mm per day in the spring months and 0.28mm per day in the winter months. The UKCP18 projections indicate that rainfall in this area of the UK will decrease annually by 9.9% by 2085.
Long-term decrease in rainfall	Decrease in groundwater levels	Whilst it is expected to that there will be a decrease in rainfall in the winter as well as the summer months such that there will be a long-term increase in seasonal fluctuation in shallow groundwater depth.
Long-term change in seasonal temperatures	Change in soil temperature	Worst case (RCP8.5) average temperatures are forecast to increase by 3.8 to 5.4˚ by 2085. Soil temperature at depth below the site (considering the surface cover of buildings and concrete hardstanding) is not expected to rise by this amount and may see a much smaller rise in average temperature as a result of seasonal variation in temperature. A small increase in average soil temperature is not expected to have a significant effect on contaminant fate and transport.