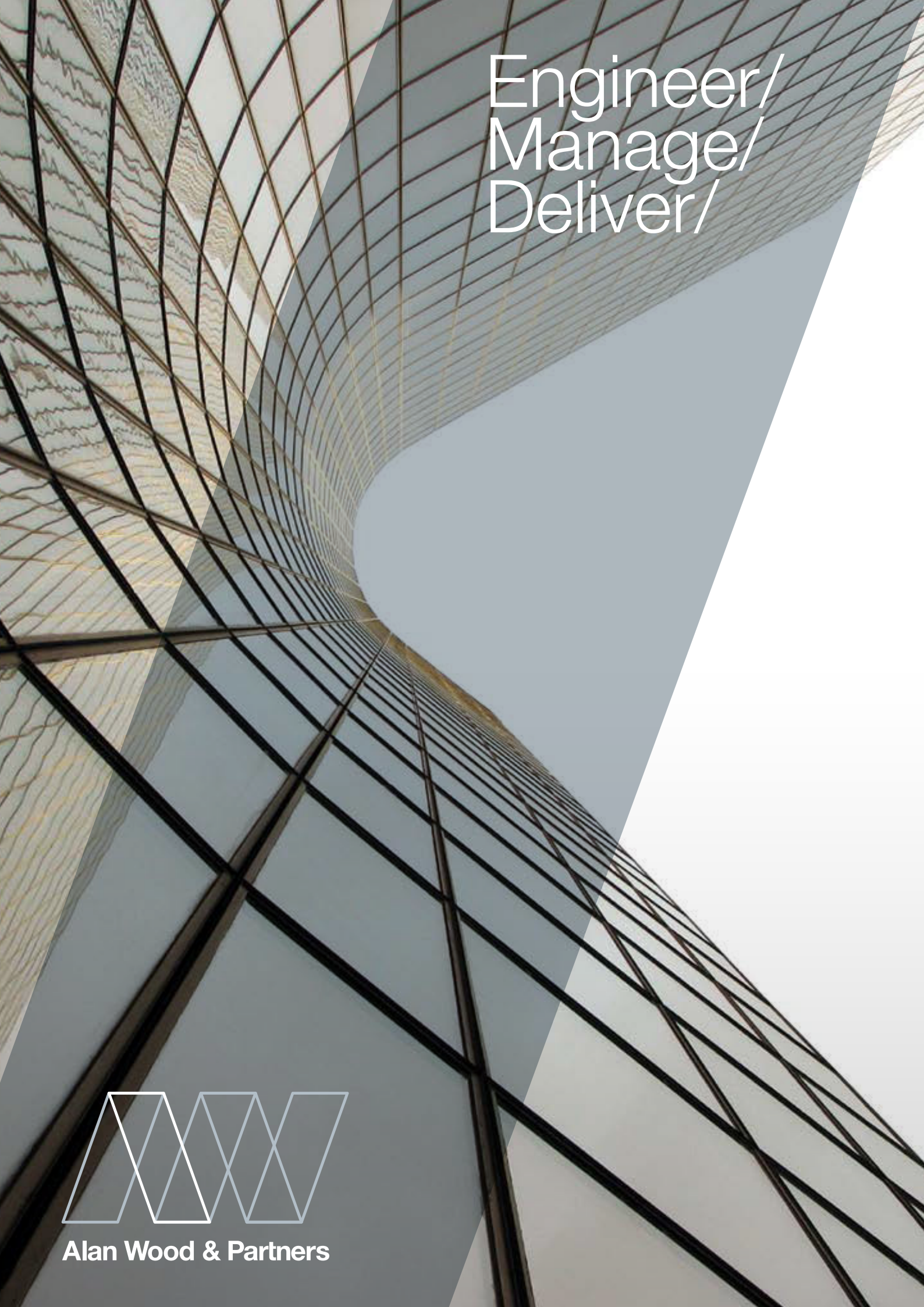

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PHASE I GEO-ENVIRONMENTAL APPRAISAL – BACK LANE, HELPERBY

for

TRUSTEES OF THE LADY MILNES COATES

Project Reference: JMS/SLR/JP/51258-Rp001

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Date: 10th September 2024

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[redacted]

Signed: ……

Date: 10th September 2024

Issue	Revision	Revised by	Approved by	Revised Date

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EXECUTIVE SUMMARY

Site Location	The site is located to the north east of Back Lane on the eastern fringe of Helperby village and is centred at National Grid Reference (NGR) 443991 470080.
Site Size and Shape	The site area is approximately 0.30ha and it is irregular shaped in plan. The site slopes gently from the north western boundary down to the south east.
Current Site Use	The northern two thirds of the site have most recently been utilised as an overflow car park for the village, a track provides access from Back Lane orientated north east to south west across the site. The southern third of the site comprises part of a larger agricultural field.
Site History	Historically the site has remained undeveloped agricultural land until 2013 when the northern two thirds were converted into the overflow car park. The surrounding area has also been primarily agricultural in nature. The village of Helperby and Bafferton has existed since prior to the mid 1800's with some minor expansion in the 1970's.
Geology	**Superficial Deposits:** The Vale of York Formation comprising glacial sandy clay, clayey sand and clay with gravel and/or boulders. Two other superficial formations are mapped within close proximity to the site comprising the Beighton Sand Formation and the Newby Wiske – Alwark Esker Formation. **Bedrock:** Sherwood Sandstone Formation.
Hydrogeology	**Aquifer within Superficial Deposits:** Secondary B Aquifer **Aquifer within Bedrock:** Principal Aquifer There are no source protection zones within 500m of the site.
Hydrology	The Groundsure report holds no records of surface water features within 250m of the site boundary. The closest surface water feature to the site is the River Swale approximately 330m to the south west.
Mining	On the basis of available information the risk associated with shallow coal mining subsidence is considered to be negligible. The Groundsure report holds one record of a surface worked feature within 250m of the site boundary which relates to the Helperby Sand Pit 475m to the south west. No other signs of extraction were observed during the historical map review however should any evidence of quarrying be encountered during redevelopment this should be brought to the attention of Alan Wood & Partners.
Anticipated ground conditions	Topsoil is expected to cover the site excluding the location of the access track. Made ground deposits are not anticipated to be extensive across the site. The construction of the access track is expected to be approximately 250mm thick. Superficial clayey sand deposits are expected to underlie any made ground and/or topsoil to around 7.0m below ground level (bgl) underlain by sandstone bedrock.

Groundwater	A shallow groundwater table is not expected to underlie the site. The closest BGS borehole records groundwater at 8.53m bgl. It should be noted that groundwater levels can fluctuate with seasonal changes.
Unexploded Ordnance (UXO)	The site is situated in a low risk area of unexploded ordnance.
ENVIRONMENTAL APPRAISAL	
Sources of Potential Contamination	The onsite soils could contain elevated concentrations associated with a waste exemption record at 'The Bungalow' Back Lane (a farm 69m south east) allowing waste to be spread on agricultural land and incorporation of ash into soil. Should made ground deposits be encountered onsite there is the potential for elevated contaminants.
Radon	No radon protective measures are required in new construction.
Ground Gases	Potential peat deposits within the offsite Beighton Sand Formation were considered to be a potential source of ground gas generation. However, no viable migration pathway could be identified therefore there is an incomplete contaminant linkage and the risk to the proposed development from fugitive ground gases is considered to be very low. No other significant sources of fugitive ground gas have been identified and no further investigation is deemed to be necessary.
Invasive Plant Species	Japanese Knotweed was not observed during the site walkover. It would be prudent however to undertaken invasive plant specific survey to confirm this prior to development.
Risk to End Users and Site Workers	The risk to end users of the site is considered to be very low to low.
Remediation Requirements	The need for remedial measures to mitigate risk associated with any contamination will be provided following completion of laboratory analysis and risk assessment. Considering the undeveloped nature of the site protective measures are unlikely to be required in gardens and landscaped areas. It is likely that any made ground soils will be suitable to be placed below areas of hardstanding.
Protection of Potable Water Supplies	It is considered, at this stage, that protective measures are unlikely to be required where potable water supply pipes are to be laid. Confirmation of the need for protective measures will however be given following completion of the ground investigation and laboratory analysis.
GEOTECHNCIAL APPRAISAL	
Principal Bearing Strata	The Vale of York Formation expected to be medium dense clayey sand deposits.
Estimated Nett Allowable Bearing Pressure	Made ground or reworked soils of any kind are not considered to be suitable founding stratum. No strength indications are included on the local BGS borehole logs however it is expected that these deposits could provide a bearing capacity of around 75kN/m^2.

Influence from Trees and Volume Change Potential	Due to the expected granular nature of the superficial deposits heave precautions due to trees are not expected to be required for proposed structures within influencing distance. Should cohesive deposits be encountered precautions may be required within influencing distance of existing trees, where trees are to be removed, or new planting is proposed.
Likely Foundation Types	The most appropriate foundation solution will be confirmed following completion of the ground investigation and receipt of finalised construction proposals/development layout. At this stage it is considered, where competent undisturbed natural strata is encountered at founding depth, that for 2-3 storey structures of typical construction traditional strip or trench-fill foundations should be suitable.
Likely Foundation Depth Range	Due to the expected granular nature of the superficial deposits a founding depth of around 750mm is deemed adequate. Should cohesive deposits be encountered this depth would need to be increased depending on the results of the geotechnical laboratory testing and after reviewing the site specific ground conditions.
Likely Ground Slab	In situ suspended floor slabs are likely to be the most suitable for use at the site, particularly where in excess of 600mm of unsuitable material is present below floor slabs following site preparation/regrading. Ground bearing slabs could also be suitable, where less than 600mm of made ground remains, however car must be taken to ensure that shallow strata do not become heavily disturbed during clearance / construction activities.
Buried Concrete	Considering the expected lack of made ground soils sulphate protective measures for subsurface structures are not expected to be required. However, should made ground soils be identified and in contact with buried concrete structures a sulphate class of DS-2 would probably be suitable, this would need to be confirmed through chemical analysis.
Soakaways	Alan Wood & Partners have recently carried out soakaway tests at the site, none of the tests drained sufficiently to calculate an accurate infiltration rate. Soakaways are therefore not considered to be a viable form of surface water drainage for the proposed development.
Obstruction & Excavations	Obstructions to excavations are not considered to be a significant risk to the development due to the lack of significant previous development. A foul sewer passes below the eastern half of the site, orientated roughly north to south.
Boundary Conditions	The site is relatively level and corresponds to the surrounding area. Regrading is not expected to be required for the proposed redevelopment and no retaining structures were observed during the walkover. Care should be taken to the location of proposed plots to the existing residential properties to the north east and the telephone exchange to the north west so as to not undermine existing structures.
Roads	A preliminary CBR value of <2.5% is currently considered for road and pavement design. It is recommended that in-situ CBR testing is carried out when final site levels will be known and after construction of the development platform.

FURTHER WORKS

	• Phase II intrusive investigation to facilitate the collection of samples of the onsite soils for chemical and geotechnical laboratory testing; • In-situ CBRs to inform road design.

1 INTRODUCTION

1.1 Details of Commission

1.1.1 Alan Wood & Partners were appointed by the Trustees of the Lady Milnes Coates (the 'Client') to undertake a Phase I Geo-Environmental Assessment. This report covers the proposed development area only.

1.1.2 This report provides geotechnical and environmental information in relation to the proposed redevelopment of the site for a residential development, assuming that the site is to be redeveloped with two detached properties and that ground levels will remain similar to present. Interpretation and recommendations should not be assumed valid for adjacent areas of land, or for alternative land uses. Should the proposed site usage change, the recommendations and conclusions presented in this report may need to be re-assessed.

1.1.3 The assessment undertaken and presented in this report includes potential sources of historical ground contamination, likely impacts on sensitive receptors and, where necessary, the identification of any remediation and/or subsequent investigative works that may be required.

1.1.4 The report has been prepared for the sole use and reliance of the Client. No other third party may rely on, reproduce or redistribute any content of this report without the prior written consent of Alan Wood & Partners. Any unauthorised third parties using the information presented in this report do so entirely at their own risk and are duly excluded from any warranty, duty of care or skill.

1.2 Previous Reports

1.2.1 Alan Wood & Partners are not aware of any historical assessment or ground investigation reports, with respect to the site or neighbouring property, which may be used to facilitate the assessment presented herein.

1.3 Scope of Works

1.3.1 This report constitutes the findings of the Phase I Geo-Environmental Assessment for the site and is based on a review of available geological, hydrogeological and environmental records. The scope of works undertaken within the context of this report comprised:

- A site walkover;
- A review of environmental site sensitivity and historical mapping data;
- A review of available British Geological Survey (BGS) records and plans;
- A review of BGS on-shore borehole records (where available);
- A review of Environment Agency information; and the
- Review of Coal Authority data.

1.3.2 The principal objectives of the Phase I assessment was to:

- Obtain information from accessible sources about the soil and groundwater conditions within the area of the site;
- Determine the possible ground related geotechnical and environmental hazards within the site boundaries that may affect the proposed development;
- Develop an initial Conceptual Site Model (CSM) of potential *source-pathway-receptor* contaminant linkages and undertake a preliminary Risk Assessment in accordance with the proposed development end use scenario;
- Outline preliminary development recommendations;
- Provide advice on any additional phases of work that need to be completed to satisfy the regulatory authorities.

2 ENVIRONMENTAL SETTING

2.1 Introduction

2.1.1 Published environmental, geological and historical data relating to the site area has been reviewed, in conjunction with a walkover survey undertaken on the 29th March 2022, the findings of which are presented below. The principal considerations of immediate relevance are presented in the following sections.

2.2 Site Location & Description

2.2.1 The site is located to the north east of Back Lane on the eastern fringe of Helperby village and is centred at National Grid Reference (NGR) 443991 470080. A site location plan is presented as Figure 51258/002.

2.2.2 The site area is approximately 0.30ha and it is irregularly shaped. A photographic record of the walkover is presented as Plates 1 to 8. Key site features are shown on figure 51258/003

2.2.3 The site slopes gently from the north western boundary down to the south east. There are no buildings or structures present onsite although a track provides access from Back Lane, orientated north east to south west across the site. The track comprises plastic grassblock paving infilled with topsoil with maintained grass growth. Either side of the track is surfaced with grass excluding the southern third of the site which is still utilised as part of an agricultural field. Anecdotal evidence indicates the field has recently been used for grazing.

2.2.4 A bund, measuring approximately 28m by 6m, is located along the north eastern boundary and surfaced with grass. It is expected that the bund comprises topsoil stripped from below the access track.

2.2.5 The site is bound by a wooden fence to the north east and north west with a hedgerow lining the south western boundary along Back Lane. Residential properties are located directly beyond the majority of the north eastern boundary, a telephone mast and a telephone exchange are located directly to the north west. Two mature trees are located on the north eastern boundary adjacent to Balk Avenue. No solid boundary denotes the

south eastern boundary as this end of the site is part of a larger field. A wooden post has been erected next to Back Lane to give an indicator to the boundary of the site.

2.2.6 No tanks, above or below ground, were observed during the walkover. Service drawings indicate a foul sewer passes roughly north to south through the eastern half of the site. Manhole covers relating to this feature were observed in the field to the south east of the site boundary and on Balk Avenue indicating its rough orientation. A metal manhole cover was observed onsite in the vicinity of this feature but on removal of the cover there was no sign of any underground service, only topsoil was present.

2.2.7 No signs of suspected invasive plant species were observed during the walkover onsite or along the site boundaries.

3 GEO-ENVIRONMENTAL DATA

3.1 Anticipated Geology, Hydrogeology & Mining

3.1.1 A summary of the available published geological and hydrogeological information is provided in Table 3.1 below and overleaf. A review of the following information was undertaken:

- British Geological Survey 1:50,000 scale series, Sheet 62 Harrogate, Solid & Drift Edition;
- Coal Authority online ground stability database;
- Environment Agency online aquifer designation database; and
- Groundsure EnviroInsight and GeoInsight Data Report Ref. EMS-768866_994492 (Appendix A), dated 23rd March 2022.

Table 3.1 - Geological Information

Made Ground and Surface Ground Workings	Information presented in the Groundsure report indicates that there are no areas of artificial/made ground within 500m of the site. There is one recorded surface ground worked feature within 250m of the site relating to a sewage works circa 128m to the east. This feature was first mapped in 1978 and aerial imagery indicates it is still operational today. The BritPit (British Pit) database holds one record of a surface mineral working within 500m of the site. This relates to Helperby Sand Pit, located 476m to the south west, for the extraction of sand. All workings are considered to have ceased although the site may have active, dormant or expired planning permissions by the Mineral Planning Authority. Aerial imagery (dated 2020) appears to show this area to correspond with the surrounding ground level and has recent stockpiled materials which could indicate it has been backfilled.
Geology	The geological map indicates the site is underlain by superficial deposits of The Vale of York Formation which predominantly comprises glacial till (sandy clay, clayey sand and clay with gravel and/or boulders) with interbedded sand, gravel and laminated clay. The superficial deposits are bound by the Beighton Sand Formation to the north east (119m) and the Newby Wiske – Alwark Esker Member to the west (11m) which both comprise glacial sand deposits. The BGS Lexicon indicates that the Beighton Sand Formation can also contain 'variably developed very dusky red to black compressible peat to clayey sandy peat'. The solid geology underlying the site area is recorded as being red, yellow and brown sandstone of the Sherwood Sandstone Group. A BGS borehole (SE47SW9) located within the Balk Avenue development, also located within the Vale of York Formation extents, records the presence of sand to 6.8m below ground level (bgl). Therefore it is expected that superficial sand deposits will underlie the site. Groundwater was struck at a depth of 8.5m bgl.
Discontinuities	Information presented in the Groundsure report indicates that there are six linear features within 500m of the site. The three closest features relate

	to an esker between 11m and 334m from the site. The closest fault (inferred) lies 352m to the south of the site.
Hydrogeology	**Aquifer within Superficial Deposits:** 'Secondary B'. These aquifers are predominantly lower permeability layers which may store/yield groundwater due to localised features such as fissures, thin permeable horizons and weathers. **Aquifer within Bedrock:** Principal aquifers are rock or drift deposits with high intergranular and/or fracture permeability and can provide a high level of water storage. These deposits are capable of supporting water supply and/or base river flow on a strategic scale. **Source Protection Zones:** There are no source protection zones within 500m of the site.
	Source Protection Zones within Confined Aquifer: There are no source protection zones within 500m of the site. **Vulnerability & Leaching Potential:** The western two thirds of the site is recorded to be a high vulnerability secondary superficial aquifer characterised by high leaching soils and the absence of low permeability deposits. These soils are considered to have a high recharge potential with more than 70% infiltration and <300mm/year dilution. The eastern third of the site is recorded as a medium vulnerability secondary superficial aquifer characterised by a low leaching and recharge potential. The superficial deposits are reported to have an infiltration value of 40% to 70% with a dilution value of <300mm/year.
Hydrology	There are no reported surface water features within 250m of the site. The nearest feature is likely to be the River Swale approximately 330m to the south west. Data from the Water Framework Directive (WFD) indicates the groundwater body within the Sherwood Sandstone had a poor chemical and overall rating with a good quantitative rating in 2019.
Mining & Ground Stability	***Historic Underground Working Features*** Information presented in the Groundsure report indicates that there are no underground workings, historical mineral planning areas or mining cavities within 500m of the site boundary. The surface workings have been addressed earlier in the report. ***Coal Mining*** Information presented on the Coal Authority website (*www.coal.decc.gov.uk*) indicates that the site does not lie within a Coal Mining Reporting area or Development High Risk area. Therefore, no Coal Authority mining report has been obtained and no further assessment is deemed to be necessary. On the basis of available information risk associated with shallow coal mining subsidence is considered to be **very low**.
Non-coal Mining	Historical information indicates that there are no non-coal mining areas within 1km of the site.
Natural Cavities	The GroundSure data indicates that there are no natural cavities recorded within 1km of the study site.
Radon, Landfill and Mine Gas	The site lies within an area where less than 1% of homes are at or exceeding the Radon Action Level. No radon protective measures are required in construction.

	Risk associated with mine gas emission requiring action by the Coal Authority within the boundary of the site is not anticipated due to being outside the coal mining reporting area. The lack of historical development on site indicates there is a very low potential for the presence of a significant thickness of made ground deposits which could act as a potential onsite gas source. There is the potential for variably developed compressible peat to be present in the Breighton Sand Formation mapped approximately 120m to the north east of the site boundary. These deposits could be a potential offsite source of ground gas generation which could migrate onto site. The former Helperby Sand Pit, located 476m to the south west, has potentially been backfilled. Although it covers a small area, circa 0.15 hectares, the final depth of the feature and the backfill material is unknown and therefore could act as a potential source of ground gas generation. However due to the distance from the site it is unlikely to present a potential risk to the subject site. Any affect this has on the site should be confirmed through a programme of monitoring sufficient for the site's proposed end use.

3.2 Environmental Records

3.2.1 A summary of the available environmental information is presented in Table 3.2.

Table 3.2 - Environmental Data

Potentially Harmful Discharges (Red List) to Controlled Waters	There are no records of red list discharge consents reported to be within 500m of the site.
Licensed Discharge Consents	There are twenty three records of licensed discharge consents reported within 500m of the site. The closest ten records to the site are associated with Helperby Sewage Treatment Works located 160m to the south west in relation to the discharge of treated sewage and/or storm water overflow into a culverted tributary of Swale. Two of the licenses dated 2010 do not contain a revocation date and may still be in effect; all other licenses have been revoked.
EA Recorded Pollution Incidents to Controlled Waters	There are no recorded pollution incidents to controlled waters within 500m of the site.
Landfill and Other Waste Sites	There are no Local Authority, Environment Agency historic landfill sites or BGS/DoE non-operational landfill sites within 500m of the site. In addition, there are no recorded licensed waste sites within 500m of the site boundary. There are eighty waste exemption records within 500m of the site which comprise activities involving the storage, treatment, use or disposal of waste that are exempt from needing a permit. The closest location is 69m south east of the site at 'The Bungalow' Back Lane (a farm) which holds thirteen records for various activities including depositing of waste from dredging of inland rivers, burning waste in the open, spreading waste on agricultural land and incorporation of ash into soil.

Flooding	The Groundsure report indicates that the site does not lie within 250m of a river and/or the sea with the potential risk of flooding to the site. There are no recorded flood zones within 50m of the site, there has been no historical flood events and the area does not benefit from flood defences. The risk of surface water flooding to the site is considered to be negligible and the highest risk within 50m of the site boundary is a 1 in 30 year event, 0.1m to 0.3m. The majority of the site is recorded to be at a low risk of groundwater flooding which is caused by unusually high groundwater levels. This occurs when the water table rises above ground level or within underground structures such as basements. A portion of the southern boundary is recorded to be at moderate risk.
Abstractions	There are six historical groundwater abstractions located within 2km of the site, they all relate to general farming and domestic purposes in the 1960's and 70's. There are twenty five recorded surface water abstractions within 2km of the site, only six remain active. The closest active license relates to the extraction of water from the River Swale, 538m west of the site, associated with spray irrigation.
Invasive Plant Species	Japanese Knotweed was not observed during the site walkover. It would be prudent however to undertake an invasive plant species survey to confirm this prior to redevelopment.
Public Register of Contaminated Land: Part 2A (EPA 1990)	There are no sites designated as contaminated land under, Section 78R of the EPA 1990, within 500m of the site.
Dangerous or Hazardous Sites	There are no NIHHS or COMAH sites or high pressure underground pipelines within 500m of the site. There are no active, historical, proposed or obsolete petrol stations within 500m of the site.
Potentially Contaminative Current Land Uses	The Groundsure report holds records of five current potentially contaminative land uses within 250m of the site. The closest feature is reported to be onsite in relation to a telecommunications mast on the northern site boundary and 4m to the north west relating to a telephone exchange. The other features are reported as a car repair and servicing, an electricity substation and a sewage works. These land uses are unlikely to have affected the site or its intended redevelopment.

3.3 Historical Land Use

3.3.1 A study of historical Ordnance Survey maps has been undertaken to identify any potentially contaminative former land-uses at the site. The main historical features of the site and surrounding area are summarised in the following table, whilst a copy of the historical maps is presented in Appendix B.

3.3.2 Ordnance Survey map editions may not however be complete and it is possible, therefore, that additional land uses to those presented in the plans have occurred. Alan

Wood & Partners have tried to ascertain the complete record of the site's history, but the possibility that other potentially significant land uses may have taken place cannot be ignored.

3.3.3 A summary of the historical land use and surrounding area is presented in Table 3.3 and Table 3.4.

Table 3.3 - Summary of Principal Historical Features (On Site)

Year	Scale(s)	Principal Features
1853	1:10,560	Part of a larger agricultural field. Back Lane passes along the western site boundary.
1889	1:10,560	A track is shown to pass through the southern half of the site, orientated north east to south west.
1890 to 1892	1:2,500	No significant changes.
1909	1:2,500	
1910 to 1913	1:10,560	
1951 to 1956	1:10,560	
1975 to 1976	1:2,500	The track is no longer mapped.
1976*	1:2,500	Mapping not available.
1977 to 1978	1:10,560	No significant changes.
1989 to 1994	1:2,500	
1994*	1:2,500	Partial mapping available.
2001	1:10,000	No significant changes.
2003	1:1,250	
2010	1:10,000	
2022	1:10,000	

***** No mapping detail/part mapping detail shown

Table 3.4 - Summary of Principal Historical Features (Off Site)

Year	Scale	Principal Features
1853	1:10,560	The town of Brafferton and Helperby is located approximately 160m to the south west of the site. The surrounding area (north, east and south) primarily comprises agricultural land. The River Swale is located around 340m to the south west.
1889	1:10,560	No significant changes.
1890 to 1892	1:2,500	Two smithy's are located circa 175m to the west of the site off Main Street and Hall Lane. A brewery and malthouses are mapped between 175m and 255m west of the site. Up to fourteen pumps and one well are mapped within 250m of the site.
1909	1:2,500	The pumps and wells are no longer mapped.
1910 to 1913	1:10,560	A sand pit (the Helperby Sand Pit) is shown around 480m to the south west.

1951 to 1956	1:10,560	The sand pit has been extended to the north. Limited development has occurred to the north of the site off Rasklef Road.
1975 to 1976	1:2,500	Development has continued along Raskelf Road to the east including residential properties off Manor Drive and Balk Avenue. Directly beyond the northern site boundary a telephone exchange has been constructed. A sewage works has been constructed around 140m to the east comprising three tanks and filter beds. The Bungalow, associated out buildings and allotments are shown between 60m and 170m south east of the site. An electricity substation is shown around 180m to the south west. The smithy's are no longer mapped.
1976*	1:2,500	No significant changes.
1977 to 1978	1:10,560	The sand pit is no longer mapped.
1989 to 1994	1:2,500	Balk Avenue has been extended to the west to come into contact with the eastern site boundary. A second electricity substation is shown circa 190m to the west.
1994*	1:2,500	No significant changes.
2001	1:10,000	
2003	1:1,250	
2010	1:10,000	A new water feature is mapped circa 450m to the north east of the site.
2022	1:10,000	No significant changes.

***** No mapping detail/part mapping detail shown

3.3.4 Historical mapping does not pick up every detail, therefore recent aerial imagery has also been reviewed. In addition, aerial imagery dated 2013 shows the construction of a track orientated roughly north east to south west through the site from an access point off Back Lane. Anecdotal evidence indicates the site has been used as an overflow carpark for the local village. Two thirds of the site is no longer shown to be worked as agricultural land instead parked cars are shown.

3.3.5 By 2020, The Bungalow and most of the associated buildings around 55m south of the site have been demolished and foundations for five new buildings, assumed to be residential, are shown.

3.3.6 In summary the site has remained undeveloped agricultural land until early 2013 when a gravel track was constructed across the northern two thirds. No other significant developments have occurred.

3.3.7 The towns of Helperby and Brafferton have existed since the middle of the 1800's and the surrounding area has primarily been utilised as agricultural land. Some minor

development and expansion of the towns in an easterly trajectory was undertaken in the 1970's.

4 PHASE I GEOTECHNICAL APPRAISAL

4.1 Topsoil

4.1.1 The majority of the site is expected to be surfaced with topsoil, excluding the track. The southern third of the site remains part of a larger agricultural field while the northern two thirds is partially surfaced with maintained grass.

4.2 Made Ground

4.2.1 Due to the absence of previous development on-site laterally and vertically extensive made ground soils are not anticipated. Shallow made ground soils could be present below the recently constructed access track for the temporary onsite car park.

4.2.2 A drawing (ref. 3514-02 Rev A, dated October 2011) showing the proposed general arrangement layout plan for the overflow car park, available to view on the planning portal, indicates the track is constructed of grassblock (103mm thick) filled with topsoil underlain by 150mm of type 1 subbase mixed with 20mm sharp sand generating a total construction thickness of approximately 250mm.

4.2.3 The presence, type and extent of any on-site made ground soils should be established through ground investigation.

4.3 Natural Strata

4.3.1 The closest BGS record to the site, off Balk Avenue dated 1933, indicates that the site is likely to be underlain by superficial sand deposits to a depth of 6.8m bgl. This log indicates the local superficial deposits are significantly more granular in nature than the expected composition of the Vale of York Formation shown to cover the site on geological maps. The Newby Wiske – Aldwark Esker Member is mapped approximately 11m to the west of the site boundary which comprises unconsolidated gravelly sands, the close proximity of this formation could account for the more granular nature of the local superficial soils.

4.3.2 ‘Hard sand rock’ of the Sherwood Sandstone formation was recorded below the superficial deposits from 6.8m to the base of the borehole at 9.5m depth.

4.3.3 Alan Wood and Partners have recently undertaken some soakaway tests at the site which recorded the presence of brown clayey sand below topsoil to an average depth of 1.2m underlain by damp reddish brown clayey sand with pockets of clay. Therefore

confirming the superficial deposits of the Newby Wiske – Aldwark Esker Member likely cover the site.

4.4 Groundwater

4.4.1 A shallow groundwater table is not expected to underlie the site.

4.4.2 The local BGS record for Balk Avenue indicates groundwater was struck at 8.53m bgl. This log is dated 1933 and therefore may not be representative of the present day water regime below the site, there is also the potential for seasonal fluctuations.

4.4.3 No groundwater was encountered during the recently soakaway tests however the soils were noted to be damp below 1.0m depth.

4.5 Foundations

4.5.1 The development plans show the site is to be redeveloped with two storey residential properties.

4.5.2 The most appropriate foundation solution will be confirmed following completion of the ground investigation and receipt of finalised construction proposals/development layout.

4.5.3 At this stage it is considered, where competent undisturbed natural strata is encountered at founding depth, that for 2-3 storey structures of typical construction traditional strip or trench-fill foundations should be suitable. A minimum footing depth of around 750mm in this instance will probably be adequate considering the granular nature of the soils. Should cohesive deposits be encountered and structures lie within influencing distance of trees the depth of foundations may need to be increased. Made ground soils of any type are **not** suitable founding stratum.

4.5.4 Two trees are located on the north eastern boundary and the south western boundary is denoted by a hedgerow. Should cohesive deposits be encountered, although not expected, precautions may be required should structures lie within influencing distance when in clay. In addition, precautions may be required where trees are to be removed or where new planting is proposed. All foundations should be constructed in accordance with current guidelines (e.g. NHBC Standards, Chapter 4.2). If foundations are built off competent bedrock, no precautions are likely to be required.

4.5.5 The widening, strengthening and reinforcement of foundations in accordance with current guidelines would be required where footings are found to straddle strata of

different type (e.g. clay and rock) or where soft and/or where locally unstable ground is encountered at founding depth.

4.5.6 Due to the previously undeveloped nature of the site, excluding the access track, areas of deep fill are not expected to be present. Should areas of deeper fill be unexpectedly identified a rafted foundation solution may potentially be required, subject to the presence of an even thickness of uniform soil type being provided. Specific information with respect to foundation design and any earthworks required to facilitate construction will need to be given in a remedial strategy.

4.6 Coal Mining Induced Subsidence

4.6.1 Based on the site not being located within a coal mining reporting area it is considered that foundations do not need to be reinforced / strengthened to accommodate any potential movement associated with historic coal mining activity and any ground instability that may occur post development. Should further information become available this assessment may need to be revised.

4.7 Floor Slabs

4.7.1 *In situ* suspended floor slabs are likely to be the most suitable for use at the site, particularly where in excess of 600mm of unsuitable material is present below floor slabs following site preparation/regrading. Should ground bearing slabs be suitable however, care must be taken to ensure that shallow strata do not become heavily disturbed by site clearance/construction activities (especially during inclement weather). Where this occurs, this could result in an increased requirement for suspended slabs.

4.7.2 Although considered unlikely a suspended floor system incorporating a sub-floor void, such as beam and block, will be required for any properties where the foundations lie within the heave zone of trees as defined by NHBC Standards (Chapter 4.2), or where seasonally desiccated soils are present at the time of construction.

4.8 Non-Coal Mining

4.8.1 There is no evidence to suggest that mineral extraction has occurred on site, although Helperby Sand Pit was located 476m to the south west of the site. Should evidence of quarrying be encountered during redevelopment this should be brought to the attention of Alan Wood and Partners. Where this is found to affect construction appropriate

precautions may need to be incorporated in to the design (e.g. deepened foundations, reinforced superstructure).

4.9 Excavation Conditions

4.9.1 Obstructions to excavations are not considered to be a significant risk to the development due to the lack of significant previous development. Hard shallow bedrock is not expected to be present. Excavation of soils encountered should be easily achieved using conventional hydraulic excavation techniques.

4.9.2 It is likely that shallow excavations should be relatively stable in the short term, although if deepened the long term stability of soils is likely to decrease. However, some materials such as granular soils and made ground are liable to collapse without warning. This situation is likely to be exacerbated by water ingress or bad weather. No man entry into unsupported excavations should be allowed without an appropriate risk assessment. Reference to CIRIA report 97 (2001) should be made to establish suitable means of support, or battering of excavation sides.

4.9.3 It is considered unlikely that dewatering will be required for shallow short-term excavations. Anticipated groundwater conditions suggest that simple dewatering techniques (e.g. sump pumping) are likely to be adequate to control water ingress on a routine basis. However, it is recommended that provision for the drainage of surface water is allowed for to prevent surface water ponding or collection both during and post construction, as this may lead to deterioration of the founding stratum.

4.10 Stability Issues & Retaining Structures

4.10.1 The site slopes gently from the north west down to the south east, however the proposed layouts do not indicate a significant change in levels. No risk to slope stability has been identified and no further assessment is deemed necessary.

4.10.2 Where excavations are proposed close to site boundaries, properties and/or any other existing structures, a risk assessment of the integrity/stability should be undertaken prior to such works being carried out. Designed and engineered temporary/permanent measures should be adopted to ensure their continued stability.

4.10.3 The site is currently relatively level with a very gradual slope from the north western boundary down to the south east. It is considered highly unlikely that levels will be significantly altered for redevelopment therefore any future ground profiles are unlikely

to require earth retaining structures; if this changes, further advice may be required when more information is available.

4.10.4 With respect to natural ground subsidence, the site has been classified as having a 'very low' risk rating for shrink/swell clay, running sands, collapsible deposits and landslide hazards and ‘negligible’ risk rating for compressible deposits and ground dissolution of soluble rock hazards.

4.11 Surface Water Drainage

4.11.1 It was initially considered, that soakaways could potentially be suitable based on the expected granular deposits present below the site. Alan Wood and Partners have undertaken three soakaway tests across the site in March 2022.

4.11.2 The details of the test have not been reproduced herein although all three tests failed to reach the 25% effective depth and it was therefore not possible to calculate an accurate soil infiltration rate. The damp nature of the superficial deposits combined with a varying clay content in the near surface soils are the most likely explanation for the slow infiltration.

4.11.3 Based on the preliminary tests completed, soakaways are not considered to be a viable form of surface water drainage for the proposed development and surface water will therefore need to be disposed of to a suitable drainage system, subject to obtaining approvals from regulatory authorities.

4.12 Roads and Pavement

4.12.1 A preliminary CBR value of <2.5% is currently considered for road and pavement design. It is recommended that *in-situ* CBR testing is carried out when final site levels will be known and after construction of the development platform. Highways Agency document HD25 Interim Advice Note 73/06 Revision 1 (2009) states that where a subgrade has a

CBR lower than 2.5%, it is considered unsuitable support for a pavement foundation since it would tend to deform under construction traffic and must be improved.

4.12.2 All road design should be discussed with the local authority if highways are to be subject to a Section 38 agreement.

4.13 Concrete

4.13.1 Due to the previously undeveloped nature of the site, excluding the access track, extensive made ground deposits are not expected to be present onsite. Where concrete is only in contact with the natural deposits no sulphate protective measures are expected to be required.

4.13.2 Should made ground be exposed and in contact with proposed concrete structures increased sulphate protective measures are likely to be required, Sulphate Class DS-2 would probably be appropriate although this would need to be confirmed through laboratory analysis.

5 PHASE I ENVIRONMENTAL APPRAISAL

5.1 Introduction

5.1.1 The following section summaries the Preliminary Phase I Conceptual Site Model (CSM), which has been produced following the review of available pertinent desk study and third party information. The CSM summarises the understanding of surface and sub-surface features, the potential sources of contamination, pathways and receptors in order to support the identification and assessment of plausible contaminant linkages.

5.2 Initial Conceptual Site Model & Risk Assessment

5.2.1 The risk assessment has been carried out to assess the likelihood of risk to human health and the wider environment, on the basis of information reviewed. The risk assessment is a qualitative *source-pathway-receptor* assessment and its function is to assess the likelihood that each possible linkage exists and to decide whether they pose potentially unacceptable risks to identified receptors (i.e. people, structures, water bodies or ecosystems) that may be harmed.

5.2.2 Risk can be defined as the combination of the consequence of a harmful effect and the probability of its occurrence. The existence of a contaminant linkage is dependent on-site use, as well as environmental conditions: **if no contaminant linkage(s) can be proven, then the risk(s) may be discounted**.

5.3 Site Summary & Environmental Sensitivity

5.3.1 A review of available desk study information indicates that the proposed development area and the adjacent land was previously agricultural prior to the northern two thirds being utilised as a temporary overflow car park. The southern third of the site remains part of a larger agricultural field.

5.3.2 No considerable amounts of made ground soils are expected on site, only as a result of the access track construction, although the extent of such material would need to be confirmed through ground investigation.

5.3.3 The underlying geology is indicated to comprise clay, sand and gravel of the Vale of York Formation although the site is bound to the east and west by granular superficial

deposits. A BGS borehole in Balk Avenue records the presence of sand to around 6.8m depth underlain by sandstone bedrock.

5.3.4 Shallow groundwater is not expected to be present below the site with local data indicating the groundwater table is situated within the bedrock at around 8.5m bgl. Some perched/shallow groundwater may be present within the near surface deposits, but this is likely to be localised.

5.3.5 Due to the lack of previous mining activity in the area and the absence of any operational or historic landfills elevated concentrations of CO_2 and CH_4 are not expected to be present (see BS 8576:2013, 'Guidance on Investigations for Ground Gas - Permanent Gases and Volatile Organic Compounds).

5.3.6 The potentially backfilled sand pit located 475m to the south west is considered to be a potential source of ground gas generation. It's approximate location is shown on the offsite features plan in Figure 51258/004. However, considering the age of the potential backfill (last mapped in 1956), the distance from the site and the small size of the pit the risk to the site is considered to be very low.

5.3.7 The BGS records indicate that the Beighton Sand Formation, located 119m to the east of the site, contains variably developed peat and/or clayey sandy peat which is considered to be a potential source of ground gas generation which could migrate onto site. There are no borehole logs located within the extents of these deposits to confirm whether local deposits contain peat. The approximate extent of these soils based on the geological map are shown on Figure 51258/004. No development has taken place over these deposits, or on the land between where it is mapped and the site proposed for redevelopment, and the land is currently used for agricultural purposes. Therefore, should any ground gas be generated from this potential source it is unlikely to migrate sufficient distance horizontally to present a potential risk to the site. risk of any gases migrating laterally 120m to the west into the proposed development is considered to be very low.

5.3.8 There is the potential that the topsoil onsite could potentially be ashy in nature and/or contain extraneous materials considering the waste exemptions relating to the surrounding farm for spreading waste and incorporation of ash into soil.

5.3.9 Although the likely sources of significant contamination are expected to be limited, there remains the potential for on-site soils to contain elevated concentrations of metals and

metalloids (e.g. arsenic), non-metal inorganics and organic contamination (e.g. PAH). The site has more recently been used as a car park, as the site is not surfaced with hardstanding there is the potential for petroleum hydrocarbons to be present within the near surface soils as a result of fuel leaks or breakages.

5.3.10 Although considered unlikely, asbestos containing materials may be present given the previous agricultural land use and the potential historical burial of materials on farms.

5.3.11 The potential leaching of mobile contaminants of concern to the underlying Secondary A aquifer is considered to be low to moderate given the reported low to moderate permeability potential of soils within the vicinity to the site.

5.3.12 In summary, given the site history, the anticipated contaminant load within the on-site soils, its underlying geology, gassing potential and the nature of controlled waters

receptors, sensitivity of the site is considered, at this stage, to be **low**. The nature and concentration of any contamination will need to be confirmed through testing.

5.4 Potential Sources

5.4.1 A potential source is defined as 'a contaminant which is in, or under the land and has the potential to cause harm to human health or to cause pollution of controlled waters'.

5.4.2 The following potential contaminants that may be associated with the site are summarised in Table 5.1 below.

Table 5.1 - Summary of Potential Contaminant Sources

Potential Sources	**Associated Potential Contaminants** (*not limited to*)	
	Metals, inorganics and other contaminants	*Organics*
Ashy topsoil with potential extraneous materials	Metals/metalloids	PAHs
Potential made ground soils	Metals/metalloids and asbestos	PAHs
Vehicle storage / overflow car park	-	TPH/PAHs

* Invasive plant species to be assessed separately if encountered.

5.5 Potential Receptors

5.5.1 A receptor is the potential target of the source pollutant, to which either significant harm or deterioration in quality may be caused.

5.5.2 The potential sensitive receptors with respect to the potential contamination hazards identified above are considered in Table 5.2 below.

Table 5.2 - Summary of Potential Receptors

Potential Receptor	Comment
Human Health	Site end-users Site operatives (during construction phase only)
Construction	Potable water supply pipes Foundations
Underlying natural strata	Near surface soils and/or any perched groundwater
Controlled Waters	Principal Aquifer in the Sherwood Sandstone Formation.

5.6 Plausible Pathways

5.6.1 Migration pathways are routes by which contaminant sources may come into contact with receptors. Potential pathways for different types of contaminants vary depending on the properties of the contaminant, the mechanism of its release and the nature of the receptor. The principal potential pollution pathways by which receptors might become exposed to potential contamination at the site are summarised as follows in Table 5.3 below.

Table 5.3 - Summary of Plausible Pathways

Potential Source	Pathway
Potentially contaminated made ground soils, ashy topsoil and underlying natural strata / perched groundwater	Direct ingestion, dermal contact, dust and/or vapour inhalation
	Direct ingestion and/or dermal contact with liquid contaminants
	Leaching and direct contact with foundations and potable water supply pipes. Lateral migration of contaminants through preferential pathways

5.7 Risk Assessment

5.7.1 The potential contaminant linkages listed above are based on available data and the features noted during the ‘walkover’. Therefore, the linkages identified are tentative in

nature and are subject to the following uncertainties (to be followed up through ground investigation):

- Nature and extent of the made ground at the site;
- Nature of the underlying natural strata at the site;
- The actual distribution of contaminants within the made ground and underlying natural soils;
- The hydrogeological regime beneath the site.

5.7.2 The assessment presented herein assumes that the site end-use is to be *residential with gardens.* The assessment is not valid for other land uses. Should the proposed end-use of the site change, the assessment contained herein would need to be revised to accommodate this.

5.7.3 The identified potential contaminants and receptors have been considered in relation to the pathways that may link them. The risk classification has been estimated in accordance with those methods prescribed in CIRIA publication C552 '*Contaminated Land Risk Assessment: A Guide to Good Practice*', 2001.

5.7.4 Risk is regarded as a combination of the likelihood of an 'event' occurring and its severity: both elements must be taken into account when assessing risk. The method for risk assessment, or evaluation, is purely qualitative. As defined in CIRIA C552:2001, the magnitude of the potential 'severity' of risk occurring may be assessed against:

- **Severe**: short term risk to human health likely to result in significant harm as defined under EPA 1990, Part 2A. Short term risk of pollution to sensitive water receptor;
- **Medium**: significant harm to human health, pollution of sensitive water resource or significant change to an ecosystem or specific organism;
- **Mild**: pollution of non-sensitive water resource but significant damage to crops, buildings, structures and services or the environment;
- **Minor**: harm, which may result in financial loss, or expenditure to resolve. Non-permanent effects to human health. Easily repairable effects of damage to buildings, structures and services.

5.7.5 Similarly, the classification of the magnitude of the 'probability' of the risk occurring may be assessed against:

- **High Likelihood**: a contaminant linkage exists and an event appears very likely in the short term, or almost inevitable in the long term, or pollution is causing harm at the receptor;
- **Likely**: a contaminant linkage exists and it is probable that an event will occur. An event may not occur, but it is possible in the short term and likely over the long term;
- **Low Likelihood**: a contaminant linkage exists, and it is possible that an event will occur. It is not certain that an event will occur over time but it is less likely in the short term;
- **Unlikely**: a contaminant linkage exists but it is not possible to say if an event will occur even over a very long time.

5.7.6 Following completion of the severity and probability assessment, classifications can be compared to indicate the actual risk each contaminant linkage presents: this can only be undertaken where there is a possibility of there being an active contaminant linkage.

5.7.7 The risk categories which can be assigned are presented in Table 5.4 overleaf and range between 'very high risk' to 'very low risk'. *NB - it is not possible to classify an identified risk as 'no-risk'*.

Table 5.4 - Risk Categories

		Consequence			
		Severe	**Medium**	**Mild**	**Minor**
Probability	**Highly Likely**	Very High	High	Moderate	Moderate / Low
	Likely	High	Moderate	Moderate / Low	Low
	Low Likelihood	Moderate	Moderate / Low	Low	Very Low
	Unlikely	Moderate / Low	Low	Very Low	Very Low

Reproduced from Table 6.5, CIRIA C552/2001.

- **Very High** – severe harm could arise to a designated receptor or that severe harm is occurring. Urgent investigation and remediation is likely to be required;
- **High** – harm could occur to a designated receptor and that urgent investigation and remediation may be needed in the short term, but are likely over the longer term;
- **Moderate** – harm could occur. It is unlikely to be severe, most probably relatively mild. Investigation is normally required to clarify the risk with some remedial works being required in the longer term;
- **Low** – possible that harm could occur, but if it did, at worst it would be mild;
- **Very Low** – low possibility of harm arising, and that if it does it is not likely to be severe.

5.7.8 The identified potential contaminants and receptors have been considered in relation to the pathways that may link them. The resulting contaminant linkages are presented in Table 5.5.

Table 5.5 - Summary of Phase I Conceptual Site Model & Risk Assessment

Potential Source	Potential Receptor	Plausible Pathway	Probability	Severity	Initial Risk Rating	Solution
Potentially contaminated made ground, ashy topsoil, near surface natural strata / perched groundwater	Human Health Site end-users, inc. maintenance and site workers (short term risk during construction)	Direct ingestion or dermal contact with soil, dust and/or vapour inhalation	Low likelihood	Mild	**Low**	Soil capping or removal of contaminated soils where necessary
		Direct ingestion and/or dermal contact with liquid contaminants	Unlikely	Mild	**Very Low**	
		Inhalation of asbestos fibres	Low likelihood	Severe	**Moderate**	Although the presence of asbestos is considered unlikely risk cannot be downgraded due to severity.
	Construction (Potable Water Supply Pipes)	Direct contact/leaching (tainting)	Unlikely	Mild	**Very Low**	Upgraded water pipes/clean backfill material where necessary
	Construction (Foundations)	Direct contact/leaching	Unlikely	Mild	**Very Low**	Appropriate concrete specification
	Controlled Waters	Surface run-off / lateral migration	Unlikely	Mild	**Very Low**	No risk anticipated due to low soil leaching potential

5.7.9 The preliminary conceptual site model (CSM) presented above has indicated that limited contaminant linkages may exist on-site.

5.7.10 In order to investigate any potential risk presented by these, intrusive investigation is required. The intrusive works will provide information on actual contaminants present on-site and plausible pathways to potentially sensitive receptors.

5.7.11 Due to the potential for ashy and/or extraneous materials within the topsoil chemical testing of the soil will be required to confirm suitability for re-use and that there is no unacceptable risk posed to future end users.

5.7.12 At this stage it is considered unlikely that a soil capping layer would be required in gardens and soft landscaped areas given the expected lack of made ground soils onsite. Any made ground soils that are identified should be of low volume and could be placed below areas of hardstanding to remove any potential pathway to receptors. The need for remedial measures to mitigate risk associated with any contamination will be provided following the completion of laboratory analysis and risk assessment.

5.7.13 Due to topsoil surfacing onsite, also expected to be within the onsite bund, and the expected lack of capping system it is unlikely that soils will need to be imported to site for use in soft landscaped areas. Should any materials need to be brought to site they will need to be certified as clean with the EHO/NHBC prior to importation.

5.7.14 Due to there being no identified pathway between potential source (peat in the Beighton Sand Formation) and receptor (future users of the site) the risk of ground gas generation and migration is considered to be very low on the basis of available information. Therefore a programme of ground gas monitoring is not considered to be necessary and no protective measures are deemed to be required.

5.7.15 No radon protective measures are required in construction.

5.7.16 It is considered unlikely, at this stage, that protective measures may be required where potable water supply pipes are to be laid due to the expected lack of made ground soils. Confirmation will however be given following completion of the ground investigation and laboratory analysis. Analytical work may need to be carried out in accordance with those guidelines prescribed in UKWIR (2010) (Ref. 10/WM/03/21). If the concentrations of contaminants within the soils are found to be below the acceptable levels listed in the

UKWIR guidelines, standard PE/PVC pipes should be suitable for the development, these being placed in a clean backfill surround where made ground soils are present. The local utility provider should be contacted however to determine its exact requirements in respect of the levels of contamination encountered.

5.7.17 Sulphate protection is not expected to be required in buried structures due to the expected lack of made ground soils. Should made ground be exposed and in contact with buried concrete structures Sulphate Design class DS2 will most probably be suitable, in accordance with Special Digest 1:2005. This will need to be confirmed by chemical testing.

5.7.18 Other currently unforeseen areas of contaminated soil may be present.

5.7.19 Any materials to be removed from site should be undertaken in accordance with the Duty of Care Regulations 1991. There will also be a requirement to classify the waste in accordance with the European Waste Catalogue, in which case the waste should be subject to Waste Acceptance Criteria (WAC) testing. In light of the new regulations it is recommended that discussion with landfill operators takes place at an early stage if this is to occur.

6 RATIONALE FOR PHASE II GROUND INVESTIGATION

6.1 Introduction

6.1.1 The overall objective of this study is to contribute towards the understanding of the ground conditions underlying the proposed residential development at the site to the south east of Back Lane, Helperby. Research into the history and evolution of the site up to the present day has been undertaken which allows a fair assessment of the risks posed to the development to be made.

6.1.2 The study has provided sufficient background data in terms of the land uses of the site and its surroundings together with details of the general geology, mining and hydrogeology.

6.1.3 The preliminary risk assessment, when considered within the context of proposed end-use, indicates that limited on-site contaminant linkages may present an unacceptable risk to human health and/or the wider environment and need to be assessed further.

6.1.4 It is proposed that a Phase II geo-environmental investigation will be required so that site-specific data can be obtained with respect to any potential soil contamination, sulphate precautions etc, so that risks can be quantified in relation to the *source-pathway-receptor* scenarios and plausible contaminant linkages postulated in the initial conceptual model above.

6.2 Scope of Works

6.2.1 The intrusive investigation will provide information to establish the nature, type and condition of the near-surface soils and underlying bedrock, thus obtaining an initial understanding of the contamination status and geotechnical properties of the on-site soil and rock conditions across the site area. As such, the following should be carried out:

- Ground investigation by trial hole excavation to facilitate the collection of samples from within the on-site made ground and the underlying near surface natural strata for chemical and geotechnical laboratory testing (should cohesive soils be identified);

- Assess the risk to human health from the identified levels of contamination specifically the topsoil;

- Assessment of the presence, thickness and nature of the made ground soils should they be identified;
- Assessment of the geotechnical properties of the underlying natural strata for foundation design purposes;
- Report on the presence of likely development abnormals (e.g. shallow bedrock, buried obstructions, soft ground, deep made ground etc), where encountered;
- *In situ* permeability testing to assess infiltration rates for drainage design (subject to favourable ground conditions) which has been recently undertaken. The results of which have been included under a separate cover;
- Invasive plant species survey (to be commissioned under separate agreement if necessary).

6.2.2 All ground investigation works and soil descriptions will be undertaken in general accordance with BS EN ISO 14688-1 'Geotechnical Investigation and Testing – Identification and Classification of Soil' (2018), BS10175 (2011), BS 5930 (2010) and/or BS EN 1997-2/2007 (EC7 Part 2).

6.3 Analytical Strategy

6.3.1 The analytical strategy to be adopted for the investigations shall be designed to provide an overall assessment of potential contaminants thought to be associated with the potential pollutant sources identified, once full and proper access to the site is achievable.

6.3.2 Whilst no specific contaminants of concern are anticipated in significant concentrations, it is anticipated that the following analytes should be tested for:

- Heavy metals suite (including As, Cd, Cr(III), Cr(VI), Cu, Hg, Se, Pb, Ni, Zn);
- Speciated Polycyclic Aromatic Hydrocarbons;
- Speciated Total Petroleum Hydrocarbons;
- BTEX;
- Cyanide (Free and Total);
- Total phenol;
- Sulphates (Total and Water Soluble);

- Sulphide;
- pH;
- TOC;
- Asbestos fibres.

6.3.3 Sampling will be undertaken in accordance with those guidelines prescribed in Sections 8.3.2 and 8.6 of BS 10175:2011, whilst the basic engineering properties of soils encountered will be recorded through visual observation.

7 REGULATORY APPROVAL

7.1.1 The conclusions and recommendations presented in this report are considered reasonable on the basis of available information and the assessment of the site as carried out by Alan Wood & Partners.

7.1.2 It should be noted however that the works undertaken cannot be guaranteed to gain approval by the Regulatory Authorities and your Warranty Provider, so copies of this report should be made available to the relevant organisations (as appropriate) for their comment and approval, prior to undertaking any irrecoverable works associated with the site.

8 INFORMATION SOURCES

In addition to the specific references cited in the text, the following references have been referred to in the production of this report, where relevant to the defined project objectives.

1 GroundSure / GeoInsight & EnviroInsight Report; EMS_768866_956664, dated 23rd March 2022

2 British Geological Survey Sheet 62 Harrogate, Solid & Drift Edition (1:50,000 scale, solid & drift edition);

3 BRE *BR211* (2015) *Radon: guidance on protective measures for new dwellings*;

4 Coal Authority, *www.coal.decc.gov.uk*;

5 CIRIA C665 (2007), *Assessing risks posed by hazardous ground gases to buildings;*

6 BS:8576 (2013), *Guidance on Investigations for Ground Gas - Permanent Gases and Volatile Organic Compounds (VOCs)*;

7 BSEN 1997-1 (2004), *Geotechnical Design Part 1 – General Rules*;

8 BSEN 1997-2 (2007), *Geotechnical Design Part 2 – Ground investigation and testing*;

9 BS5930 (1999), *Code of practice for site investigations*;

10 CIRIA C552 (2001), *Contaminated Land Risk Assessment, A Guide to Good Practice*;

11 CIRIA C758D (2019): *Construction over Abandoned Mine Workings.*

12 NHBC Chapter 4.2 (2020), *Building near trees,* NHBC Publication, 2020.

13 DETR Circular 02/2000 (2000). *Environmental Protection Act 1990 Part IIA. Contaminated Land.* Department of the Environment, Transport and the Regions, Circular 02/2000, Dated 20th March 2000;

14 Environment Agency, *www.environment-agency.org.uk*;

9 LIMITATIONS OF STUDY

9.1.1 This document has been prepared by Alan Wood & Partners for the titled project and should not be relied upon or used for any other project without prior written authorization being obtained. Alan Wood & Partners can accept no responsibility or liability for the consequences of the use of this document, wholly or in part, for any other purpose than that for which it was commissioned.

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9.1.2 The findings and opinions provided in this document are given in good faith and are subject to the limitations and constraints imposed by the methods and information sources described in this report. Factual information, including, where stated, a visual inspection of the site, has been obtained from a variety of sources. Alan Wood & Partners assumes the third party data to be reliable, but has not independently confirmed this. The validity and accuracy of this information is outside the control of Alan Wood & Partners. No guarantee can therefore be given as to the completeness of the information gathered during the study and no responsibility is accepted for errors or omissions in the third party information used to produce this report. Alan Wood & Partners' professional judgement and experience is however used to ensure that uncertainties are reduced to a level appropriate to the site conditions, the purpose of the investigation and the resources devoted to it by the Client.

9.1.3 The findings and opinions presented in this report are relevant to the dates when the assessment was undertaken, but should not necessarily be relied upon to represent conditions at a substantially later date.

9.1.4 This report provides an assessment of the potential contamination status of the ground below the site, being based only upon information available for review. Where the report refers to the potential presence of invasive plants (such as Japanese Knotweed) or

asbestos-containing materials, such observations are for information only and should be verified by a suitably qualified expert.

9.1.5 Whilst every effort has been made to carry out an assessment that enables a realistic initial characterisation of the geotechnical and environmental parameters to be identified, the possibility of significant variation in actual ground and groundwater conditions existing cannot be discounted. Further information, ground investigation, construction activities, change of site use, or the passage of time may reveal conditions that were not indicated in the data presented and therefore could not have been considered in the preparation of this report. Where such information might impact upon stated opinions, Alan Wood & Partners reserve the right to modify the opinions expressed in this report. Where opinions expressed in this report are based on current available guidelines and legislation, no liability can be accepted by Alan Wood & Partners for the effects of any future changes to such guidelines and legislation. New information of improved practices and changes in legislation may require reinterpretation of the report as a whole, or in part.

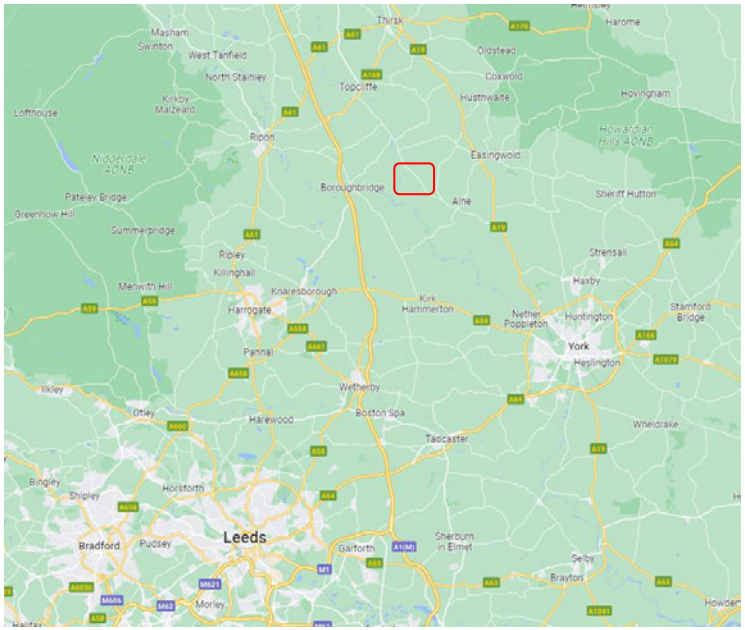
9.1.6 The conclusions and recommendations presented in this report are based on site-specific information obtained during the desk study. They are however limited to those that could be reasonably made at the time the assessment was undertaken. Alan Wood & Partners reserve the right to retract either conclusions or recommendations in light of any further information that may become available.

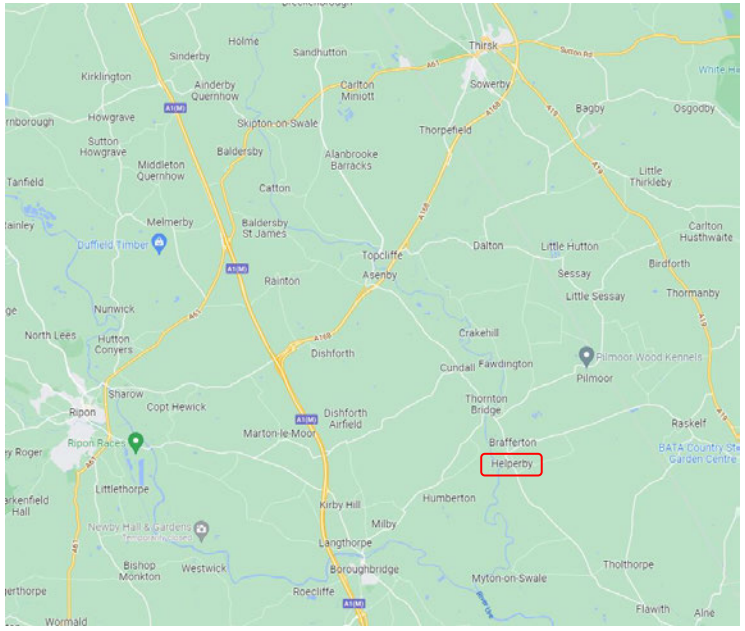
9.1.7 Interpretation and recommendations should not be assumed valid for adjacent areas of land, or for alternate land uses. Where the proposed site usage changes, the findings of this report should be re-assessed to accommodate the change in proposed end-use.

9.1.8 The limitations of liability of Alan Wood & Partners for the contents of this document have been agreed with the Client, as set out in the terms and conditions of offer and related contract documentation.

Alan Wood & Partners

FIGURES





Key

Approximate site location.

Alan Wood & Partners

DO NOT SCALE

Client.	**Trustees of the Lady Milne Coates**		
Project.	**Back Lane, Helperby, YO61 2PN**		
Drawing.	**Site Location Plan**		
Date. **10.09.2024**		Scale.	**NTS**
Drawn by. **JP**	Check by. **JMS**	Approved by. **JMS**	
Status:	**FINAL**		
Job no. **51258**	Fig. no. **002**	Rev.	

Key

1	Approximate location of photograph.

Alan Wood & Partners

DO NOT SCALE

Client.	**Trustees of the Lady Milne Coates**
Project.	**Back Lane, Helperby, YO61 2PN**
Drawing.	**Onsite Features Plan**
Date. **10.09.24**	Scale. **NTS**
Drawn by. **JP**	Check by. **JMS** / Approved by. **JMS**
Status:	**FINAL**
Job no. **51258**	Fig. no. **003** / Rev.

Key

Approx. site boundary.

Approx. location of Beighton Sand Formation potentially containing peat.

Approx. location of former Belperby Sand Pit suspected to be backfilled.

Alan Wood & Partners

DO NOT SCALE

Client.	**Trustees of the Lady Milnes Coates**		
Project.	**Back Lane, Helperby, YO61 2PN**		
Drawing.	**Offsite Features Plan**		
Date. **10.09.2024**		Scale.	**NTS**
Drawn by. **JP**	Check by. **JMS**	Approved by. **JMS**	
Status:	**FINAL**		
Job no. **51258**	Fig. no. **004**	Rev.	

Alan Wood & Partners

PHOTOGRAPHIC PLATES

Photograph No. 1
29.03.22

Looking west towards the access gate on Back Lane.

Photograph No. 2
29.03.22

Looking north from the south western corner.

Photograph No. 3
29.03.22

Looking north east from the south western site corner.

Photograph No. 4
29.03.22

Looking north east across the access track from the site entrance.

Photograph No. 5
29.03.22

Telephone exchange and mast next to the site's northern boundary.

Photograph No. 6
29.03.22

Looking south along the site boundary from the north western site corner.

Photograph No. 7
29.03.22

Looking east towards Balk Avenue from the north western site corner.

Photograph No. 8
29.03.22

Looking along the access track with the site sloping gently down to the south.

APPENDIX A

Emapsite: Groundsure Enviroinsight & Geoinsight Report

Groundsure
LOCATION INTELLIGENCE

Enviro+Geo Insight

Order Details

Date: 23/03/2022

Your ref: EMS_768866_956664

Our Ref: EMS-768866_994492

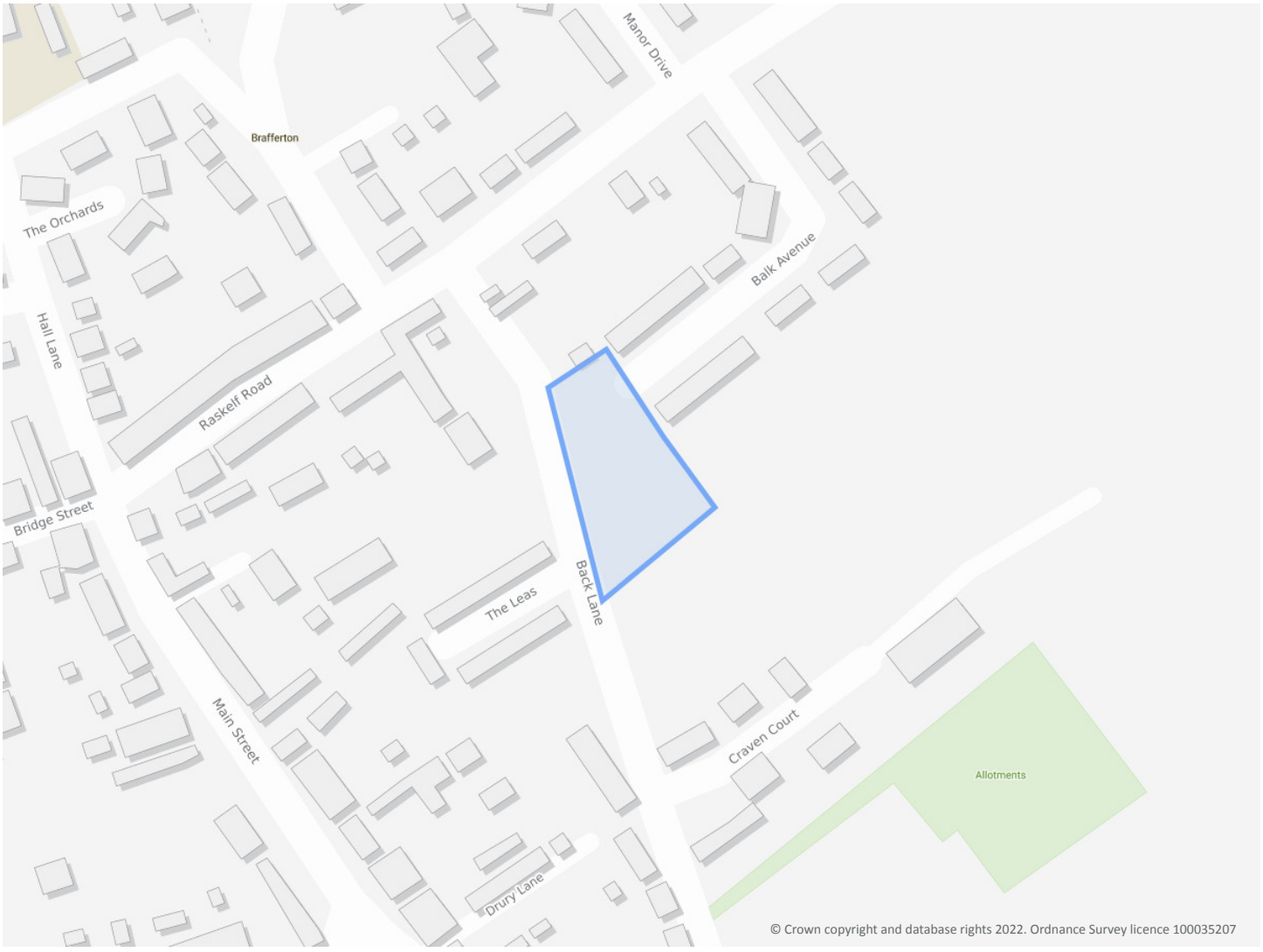
Client: emapsite

Site Details

Location: 443991 470080

Area: 0.29 ha

Authority: Hambleton District Council



Contact us with any questions at:
info@groundsure.com
08444 159 000

Summary of findings

Page	Section	Past land use	On site	0-50m	50-250m	250-500m	500-2000m
13	1.1	Historical industrial land uses	0	0	2	1	-
14	1.2	Historical tanks	0	0	3	0	-
14	1.3	Historical energy features	0	0	2	0	-
15	1.4	Historical petrol stations	0	0	0	0	-
15	1.5	Historical garages	0	0	0	0	-
15	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
16	2.1	Historical industrial land uses	0	0	2	2	-
17	2.2	Historical tanks	0	0	3	0	-
17	2.3	Historical energy features	0	0	2	0	-
18	2.4	Historical petrol stations	0	0	0	0	-
18	2.5	Historical garages	0	0	0	0	-
Page	Section	Waste and landfill	On site	0-50m	50-250m	250-500m	500-2000m
19	3.1	Active or recent landfill	0	0	0	0	-
19	3.2	Historical landfill (BGS records)	0	0	0	0	-
20	3.3	Historical landfill (LA/mapping records)	0	0	0	0	-
20	3.4	Historical landfill (EA/NRW records)	0	0	0	0	-
20	3.5	Historical waste sites	0	0	0	0	-
20	3.6	Licensed waste sites	0	0	0	0	-
20	3.7	Waste exemptions	0	0	20	60	-
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	3	-	-
29	4.2	Current or recent petrol stations	0	0	0	0	-
29	4.3	Electricity cables	0	0	0	0	-
29	4.4	Gas pipelines	0	0	0	0	-
29	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	-
30	4.9	Historical licensed industrial activities (IPC)	0	0	0	0	-
30	4.10	Licensed industrial activities (Part A(1))	0	0	0	0	-
31	4.11	Licensed pollutant release (Part A(2)/B)	0	0	0	0	-
31	4.12	Radioactive Substance Authorisations	0	0	0	0	-
31	**4.13**	**Licensed Discharges to controlled waters**	0	0	13	10	-
35	4.14	Pollutant release to surface waters (Red List)	0	0	0	0	-
35	4.15	Pollutant release to public sewer	0	0	0	0	-
35	4.16	List 1 Dangerous Substances	0	0	0	0	-
36	4.17	List 2 Dangerous Substances	0	0	0	0	-
36	4.18	Pollution Incidents (EA/NRW)	0	0	0	0	-
36	4.19	Pollution inventory substances	0	0	0	0	-
36	4.20	Pollution inventory waste transfers	0	0	0	0	-
36	4.21	Pollution inventory radioactive waste	0	0	0	0	-

Page	Section	Hydrogeology	On site	0-50m	50-250m	250-500m	500-2000m
37	**5.1**	**Superficial aquifer**	Identified (within 500m)				
39	**5.2**	**Bedrock aquifer**	Identified (within 500m)				
41	**5.3**	**Groundwater vulnerability**	Identified (within 50m)				
42	5.4	Groundwater vulnerability- soluble rock risk	None (within 0m)				
43	5.5	Groundwater vulnerability- local information	None (within 0m)				
44	**5.6**	**Groundwater abstractions**	0	0	0	2	4
46	**5.7**	**Surface water abstractions**	0	0	0	0	25
51	5.8	Potable abstractions	0	0	0	0	0
52	5.9	Source Protection Zones	0	0	0	0	-
52	5.10	Source Protection Zones (confined aquifer)	0	0	0	0	-

Page	Section	Hydrology	On site	0-50m	50-250m	250-500m	500-2000m
53	6.1	Water Network (OS MasterMap)	0	0	0	-	-

53	6.2	Surface water features	0	0	0	-	-
54	**6.3**	**WFD Surface water body catchments**	1	-	-	-	-
54	**6.4**	**WFD Surface water bodies**	0	0	0	-	-
55	**6.5**	**WFD Groundwater bodies**	1	-	-	-	-
Page	Section	River and coastal flooding	On site	0-50m	50-250m	250-500m	500-2000m
56	7.1	Risk of flooding from rivers and the sea	None (within 50m)				
56	7.2	Historical Flood Events	0	0	0	-	-
56	7.3	Flood Defences	0	0	0	-	-
57	7.4	Areas Benefiting from Flood Defences	0	0	0	-	-
57	7.5	Flood Storage Areas	0	0	0	-	-
58	7.6	Flood Zone 2	None (within 50m)				
58	7.7	Flood Zone 3	None (within 50m)				
Page	Section	Surface water flooding					
59	**8.1**	**Surface water flooding**	1 in 30 year, 0.1m - 0.3m (within 50m)				
Page	Section	Groundwater flooding					
61	**9.1**	**Groundwater flooding**	Moderate (within 50m)				
Page	Section	Environmental designations	On site	0-50m	50-250m	250-500m	500-2000m
62	10.1	Sites of Special Scientific Interest (SSSI)	0	0	0	0	0
63	10.2	Conserved wetland sites (Ramsar sites)	0	0	0	0	0
63	10.3	Special Areas of Conservation (SAC)	0	0	0	0	0
63	10.4	Special Protection Areas (SPA)	0	0	0	0	0
63	10.5	National Nature Reserves (NNR)	0	0	0	0	0
64	10.6	Local Nature Reserves (LNR)	0	0	0	0	0
64	**10.7**	**Designated Ancient Woodland**	0	0	0	0	1
64	10.8	Biosphere Reserves	0	0	0	0	0
64	10.9	Forest Parks	0	0	0	0	0
65	10.10	Marine Conservation Zones	0	0	0	0	0
65	10.11	Green Belt	0	0	0	0	0
65	10.12	Proposed Ramsar sites	0	0	0	0	0

65	10.13	Possible Special Areas of Conservation (pSAC)	0	0	0	0	0
65	10.14	Potential Special Protection Areas (pSPA)	0	0	0	0	0
66	10.15	Nitrate Sensitive Areas	0	0	0	0	0
66	**10.16**	**Nitrate Vulnerable Zones**	1	0	1	0	2
67	**10.17**	**SSSI Impact Risk Zones**	1	-	-	-	-
68	10.18	SSSI Units	0	0	0	0	0
Page	Section	Visual and cultural designations	On site	0-50m	50-250m	250-500m	500-2000m
69	11.1	World Heritage Sites	0	0	0	-	-
70	11.2	Area of Outstanding Natural Beauty	0	0	0	-	-
70	11.3	National Parks	0	0	0	-	-
70	**11.4**	**Listed Buildings**	0	0	21	-	-
72	**11.5**	**Conservation Areas**	0	1	0	-	-
72	11.6	Scheduled Ancient Monuments	0	0	0	-	-
72	11.7	Registered Parks and Gardens	0	0	0	-	-
Page	Section	Agricultural designations	On site	0-50m	50-250m	250-500m	500-2000m
73	**12.1**	**Agricultural Land Classification**	Grade 3 (within 250m)				
74	12.2	Open Access Land	0	0	0	-	-
74	12.3	Tree Felling Licences	0	0	0	-	-
74	**12.4**	**Environmental Stewardship Schemes**	0	0	1	-	-
75	**12.5**	**Countryside Stewardship Schemes**	1	0	5	-	-
Page	Section	Habitat designations	On site	0-50m	50-250m	250-500m	500-2000m
76	13.1	Priority Habitat Inventory	0	0	0	-	-
76	13.2	Habitat Networks	0	0	0	-	-
76	13.3	Open Mosaic Habitat	0	0	0	-	-
76	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
77	**14.1**	**10k Availability**	Identified (within 500m)				
78	14.2	Artificial and made ground (10k)	0	0	0	0	-
79	14.3	Superficial geology (10k)	0	0	0	0	-

79	14.4	Landslip (10k)	0	0	0	0	-
80	14.5	Bedrock geology (10k)	0	0	0	0	-
80	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
81	**15.1**	**50k Availability**	Identified (within 500m)				
82	15.2	Artificial and made ground (50k)	0	0	0	0	-
82	15.3	Artificial ground permeability (50k)	0	0	-	-	-
83	**15.4**	**Superficial geology (50k)**	1	1	2	4	-
84	**15.5**	**Superficial permeability (50k)**	Identified (within 50m)				
84	15.6	Landslip (50k)	0	0	0	0	-
84	15.7	Landslip permeability (50k)	None (within 50m)				
85	**15.8**	**Bedrock geology (50k)**	1	0	0	2	-
86	**15.9**	**Bedrock permeability (50k)**	Identified (within 50m)				
86	**15.10**	**Bedrock faults and other linear features (50k)**	0	1	1	4	-
Page	Section	Boreholes	On site	0-50m	50-250m	250-500m	500-2000m
87	**16.1**	**BGS Boreholes**	0	1	3	-	-
Page	Section	Natural ground subsidence					
89	**17.1**	**Shrink swell clays**	Very low (within 50m)				
91	**17.2**	**Running sands**	Very low (within 50m)				
93	**17.3**	**Compressible deposits**	Negligible (within 50m)				
94	**17.4**	**Collapsible deposits**	Very low (within 50m)				
95	**17.5**	**Landslides**	Very low (within 50m)				
97	**17.6**	**Ground dissolution of soluble rocks**	Negligible (within 50m)				
Page	Section	Mining, ground workings and natural cavities	On site	0-50m	50-250m	250-500m	500-2000m
99	18.1	Natural cavities	0	0	0	0	-
100	**18.2**	**BritPits**	0	0	0	1	-
100	**18.3**	**Surface ground workings**	0	0	1	-	-
100	18.4	Underground workings	0	0	0	0	0
101	18.5	Historical Mineral Planning Areas	0	0	0	0	-

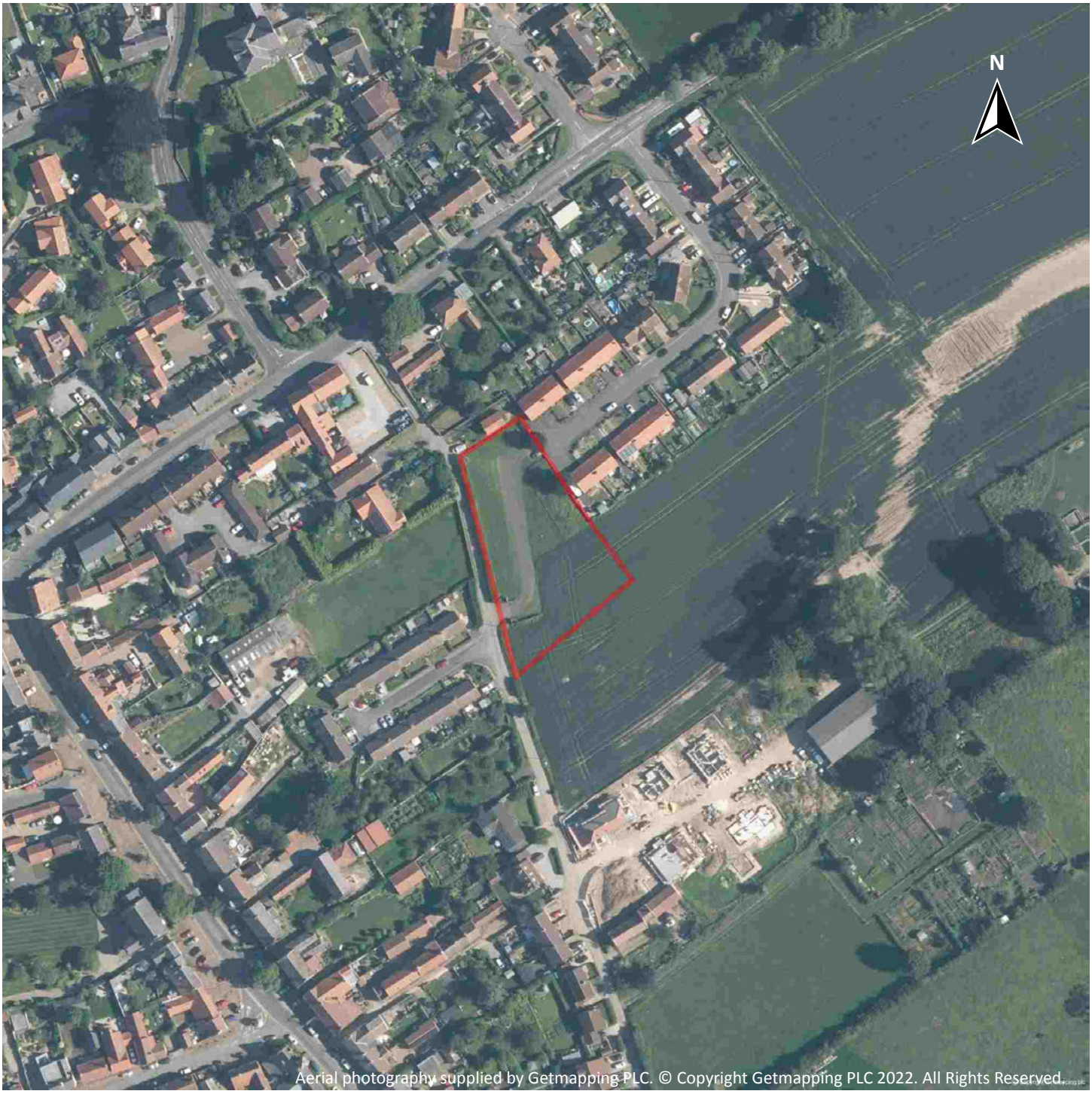
101	18.6	Non-coal mining	0	0	0	0	0
101	18.7	Mining cavities	0	0	0	0	0
101	18.8	JPB mining areas	None (within 0m)				
101	18.9	Coal mining	None (within 0m)				
102	18.10	Brine areas	None (within 0m)				
102	18.11	Gypsum areas	None (within 0m)				
102	18.12	Tin mining	None (within 0m)				
102	18.13	Clay mining	None (within 0m)				

Page	Section	Radon	
103	**19.1**	**Radon**	Less than 1% (within 0m)

Page	Section	Soil chemistry	On site	0-50m	50-250m	250-500m	500-2000m
104	**20.1**	**BGS Estimated Background Soil Chemistry**	3	7	-	-	-
105	20.2	BGS Estimated Urban Soil Chemistry	0	0	-	-	-
105	20.3	BGS Measured Urban Soil Chemistry	0	0	-	-	-

Page	Section	Railway infrastructure and projects	On site	0-50m	50-250m	250-500m	500-2000m
106	21.1	Underground railways (London)	0	0	0	-	-
106	21.2	Underground railways (Non-London)	0	0	0	-	-
106	21.3	Railway tunnels	0	0	0	-	-
106	21.4	Historical railway and tunnel features	0	0	0	-	-
106	21.5	Royal Mail tunnels	0	0	0	-	-
107	21.6	Historical railways	0	0	0	-	-
107	21.7	Railways	0	0	0	-	-
107	21.8	Crossrail 1	0	0	0	0	-
107	21.9	Crossrail 2	0	0	0	0	-
107	21.10	HS2	0	0	0	0	-

Recent aerial photograph



Capture Date: 25/06/2020

Site Area: 0.29ha

Recent site history - 2017 aerial photograph

Capture Date: 17/07/2017

Site Area: 0.29ha

Recent site history - 2011 aerial photograph

Capture Date: 13/06/2011

Site Area: 0.29ha

Recent site history - 1999 aerial photograph

Capture Date: 10/07/1999

Site Area: 0.29ha

OS MasterMap site plan

Site Area: 0.29ha

1 Past land use

Site Outline

Search buffers in metres (m)

Historical industrial land uses

Historical tanks

Historical energy features

1.1 Historical industrial land uses

Records within 500m	3

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 13**

ID	Location	Land use	Dates present	Group ID
A	128m E	Sewage Works	1978	1423768

ID	Location	Land use	Dates present	Group ID
A	201m E	Unspecified Tanks	1978	1426165
3	440m SW	Sand Pit	1910 - 1951	1474175

This data is sourced from Ordnance Survey / Groundsure.

1.2 Historical tanks

Records within 500m	3

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 13**

ID	Location	Land use	Dates present	Group ID
A	156m E	Tanks	1974	231934
A	161m E	Tanks	1974	231933
A	219m E	Tanks	1974	231945

This data is sourced from Ordnance Survey / Groundsure.

1.3 Historical energy features

Records within 500m	2

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 13**

ID	Location	Land use	Dates present	Group ID
1	178m SW	Electricity Substation	1974	130375
2	189m W	Electricity Substation	1989	130376

This data is sourced from Ordnance Survey / Groundsure.

1.4 Historical petrol stations

Records within 500m	0

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

This data is sourced from Ordnance Survey / Groundsure.

1.5 Historical garages

Records within 500m	0

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

This data is sourced from Ordnance Survey / Groundsure.

1.6 Historical military land

Records within 500m	0

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

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

2 Past land use - un-grouped

Site Outline

Search buffers in metres (m)

Historical industrial land uses

Historical tanks

Historical energy features

2.1 Historical industrial land uses

Records within 500m	4

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 16**

ID	Location	Land Use	Date	Group ID
A	128m E	Sewage Works	1978	1423768
A	201m E	Unspecified Tanks	1978	1426165
B	440m SW	Sand Pit	1951	1474175

ID	Location	Land Use	Date	Group ID
B	473m SW	Sand Pit	1910	1474175

This data is sourced from Ordnance Survey / Groundsure.

2.2 Historical tanks

Records within 500m	**3**

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 16**

ID	Location	Land Use	Date	Group ID
A	156m E	Tanks	1974	231934
A	161m E	Tanks	1974	231933
A	219m E	Tanks	1974	231945

This data is sourced from Ordnance Survey / Groundsure.

2.3 Historical energy features

Records within 500m	**2**

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 16**

ID	Location	Land Use	Date	Group ID
1	178m SW	Electricity Substation	1974	130375
2	189m W	Electricity Substation	1989	130376

This data is sourced from Ordnance Survey / Groundsure.

2.4 Historical petrol stations

Records within 500m	0

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

This data is sourced from Ordnance Survey / Groundsure.

2.5 Historical garages

Records within 500m	0

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

This data is sourced from Ordnance Survey / Groundsure.

3 Waste and landfill

Site Outline

Search buffers in metres (m)

Waste exemptions

3.1 Active or recent landfill

Records within 500m	0

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

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

3.2 Historical landfill (BGS records)

Records within 500m	0

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

This data is sourced from the British Geological Survey.

3.3 Historical landfill (LA/mapping records)

Records within 500m	0

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

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

3.4 Historical landfill (EA/NRW records)

Records within 500m	0

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

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

3.5 Historical waste sites

Records within 500m	0

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

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

3.6 Licensed waste sites

Records within 500m	0

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

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

3.7 Waste exemptions

Records within 500m	80

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 19**

ID	Location	Site	Reference	Category	Sub-Category	Description
A	69m SE	THE BUNGALOW, BACK LANE, HELPERBY, YORK, YO61 2PL	WEX005132	Disposing of waste exemption	On a farm	Deposit of waste from dredging of inland waters

ID	Location	Site	Reference	Category	Sub-Category	Description
A	69m SE	THE BUNGALOW, BACK LANE, HELPERBY, YORK, YO61 2PL	WEX005132	Disposing of waste exemption	On a farm	Burning waste in the open
A	69m SE	THE BUNGALOW, BACK LANE, HELPERBY, YORK, YO61 2PL	WEX005132	Using waste exemption	On a farm	Use of waste in construction
A	69m SE	THE BUNGALOW, BACK LANE, HELPERBY, YORK, YO61 2PL	WEX005132	Using waste exemption	On a farm	Spreading waste on agricultural land to confer benefit
A	69m SE	THE BUNGALOW, BACK LANE, HELPERBY, YORK, YO61 2PL	WEX005132	Using waste exemption	On a farm	Spreading of plant matter to confer benefit
A	69m SE	THE BUNGALOW, BACK LANE, HELPERBY, YORK, YO61 2PL	WEX005132	Using waste exemption	On a farm	Use of waste for a specified purpose
A	86m SE	The Bungalow Back Lane YORK YO61 2PL	EPR/RH0215QH/A001	Disposing of waste exemption	Agricultural Waste Only	Deposit of waste from dredging of inland waters
A	86m SE	The Bungalow Back Lane YORK YO61 2PL	EPR/RH0215QH/A001	Disposing of waste exemption	Agricultural Waste Only	Burning waste in the open
A	86m SE	The Bungalow Back Lane YORK YO61 2PL	EPR/RH0215QH/A001	Using waste exemption	Agricultural Waste Only	Use of waste in construction
A	86m SE	The Bungalow Back Lane YORK YO61 2PL	EPR/RH0215QH/A001	Using waste exemption	Agricultural Waste Only	Spreading waste on agricultural land to confer benefit
A	86m SE	The Bungalow Back Lane YORK YO61 2PL	EPR/RH0215QH/A001	Using waste exemption	Agricultural Waste Only	Spreading of plant matter to confer benefit
A	86m SE	The Bungalow Back Lane YORK YO61 2PL	EPR/RH0215QH/A001	Using waste exemption	Agricultural Waste Only	Incorporation of ash into soil
A	86m SE	The Bungalow Back Lane YORK YO61 2PL	EPR/RH0215QH/A001	Using waste exemption	Agricultural Waste Only	Use of waste for a specified purpose
1	159m NW	BRAFFERTON MANOR STATION BOROUGHBRIDGE ROAD YORK	EPR/UF0600XZ/A001	Using waste exemption	Both agricultural and non-agricultural waste	Use of waste in construction
B	236m SW	Oak Tree Farm, Pilmore, Helperby, yo61 2py	WEX043732	Disposing of waste exemption	On a farm	Deposit of waste from dredging of inland waters

ID	Location	Site	Reference	Category	Sub-Category	Description
B	236m SW	Oak Tree Farm, Pilmore, Helperby, yo61 2py	WEX043732	Disposing of waste exemption	On a farm	Deposit of agricultural waste consisting of plant tissue under a Plant Health notice
B	236m SW	Oak Tree Farm, Pilmore, Helperby, yo61 2py	WEX043732	Disposing of waste exemption	On a farm	Burning waste in the open
B	236m SW	Oak Tree Farm, Pilmore, Helperby, yo61 2py	WEX043732	Using waste exemption	On a farm	Use of waste in construction
B	236m SW	Oak Tree Farm, Pilmore, Helperby, yo61 2py	WEX043732	Using waste exemption	On a farm	Spreading waste on agricultural land to confer benefit
B	236m SW	Oak Tree Farm, Pilmore, Helperby, yo61 2py	WEX043732	Using waste exemption	On a farm	Use of waste for a specified purpose
C	261m S	Grove House Farm Tofts Lane York North Yorkshire YO61 2PU	EPR/WH0771DH/A001	Treating waste exemption	Agricultural Waste Only	Treatment of waste wood and waste plant matter by chipping, shredding, cutting or pulverising
C	261m S	Grove House Farm Tofts Lane York North Yorkshire YO61 2PU	EPR/WH0771DH/A001	Using waste exemption	Agricultural Waste Only	Use of waste in construction
C	261m S	Grove House Farm Tofts Lane York North Yorkshire YO61 2PU	EPR/WH0771DH/A001	Using waste exemption	Agricultural Waste Only	Spreading waste on agricultural land to confer benefit
C	261m S	Grove House Farm Tofts Lane York North Yorkshire YO61 2PU	EPR/WH0771DH/A001	Using waste exemption	Agricultural Waste Only	Use of mulch
C	261m S	Grove House Farm Tofts Lane York North Yorkshire YO61 2PU	EPR/WH0771DH/A001	Using waste exemption	Agricultural Waste Only	Spreading of plant matter to confer benefit
C	261m S	Grove House Farm Tofts Lane York North Yorkshire YO61 2PU	EPR/WH0771DH/A001	Disposing of waste exemption	Agricultural Waste Only	Deposit of waste from dredging of inland waters
C	261m S	Grove House Farm Tofts Lane York North Yorkshire YO61 2PU	EPR/WH0771DH/A001	Disposing of waste exemption	Agricultural Waste Only	Burning waste in the open
C	261m S	Grove House Farm Tofts Lane York North Yorkshire YO61 2PU	EPR/WH0771DH/A001	Treating waste exemption	Agricultural Waste Only	Cleaning, washing, spraying or coating relevant waste
C	261m S	Grove House Farm Tofts Lane York North Yorkshire YO61 2PU	EPR/WH0771DH/A001	Treating waste exemption	Agricultural Waste Only	Aerobic composting and associated prior treatment

ID	Location	Site	Reference	Category	Sub-Category	Description
C	261m S	Grove House Farm Tofts Lane York North Yorkshire YO61 2PU	EPR/WH0771DH/A001	Treating waste exemption	Agricultural Waste Only	Screening and blending of waste
D	266m S	LODGE FARM, MAIN STREET, HELPERBY, YORK, YO61 2PW	WEX008452	Using waste exemption	On a farm	Spreading waste on agricultural land to confer benefit
D	266m S	LODGE FARM, MAIN STREET, HELPERBY, YORK, YO61 2PW	WEX008452	Using waste exemption	On a farm	Spreading of plant matter to confer benefit
D	266m S	LODGE FARM, MAIN STREET, HELPERBY, YORK, YO61 2PW	WEX008452	Using waste exemption	On a farm	Pig and poultry ash
C	266m S	GROVE HOUSE FARM, TOFTS LANE, HELPERBY, YORK, YO61 2PU	WEX175543	Treating waste exemption	On a farm	Treatment of waste wood and waste plant matter by chipping, shredding, cutting or pulverising
C	266m S	GROVE HOUSE FARM, TOFTS LANE, HELPERBY, YORK, YO61 2PU	WEX175543	Using waste exemption	On a farm	Spreading waste on agricultural land to confer benefit
C	266m S	GROVE HOUSE FARM, TOFTS LANE, HELPERBY, YORK, YO61 2PU	WEX175543	Disposing of waste exemption	On a farm	Deposit of waste from dredging of inland waters
C	266m S	GROVE HOUSE FARM, TOFTS LANE, HELPERBY, YORK, YO61 2PU	WEX175543	Using waste exemption	On a farm	Use of mulch
C	266m S	GROVE HOUSE FARM, TOFTS LANE, HELPERBY, YORK, YO61 2PU	WEX175543	Using waste exemption	On a farm	Spreading of plant matter to confer benefit
C	266m S	GROVE HOUSE FARM, TOFTS LANE, HELPERBY, YORK, YO61 2PU	WEX175543	Disposing of waste exemption	On a farm	Burning waste in the open
C	266m S	GROVE HOUSE FARM, TOFTS LANE, HELPERBY, YORK, YO61 2PU	WEX175543	Treating waste exemption	On a farm	Aerobic composting and associated prior treatment
C	266m S	GROVE HOUSE FARM, TOFTS LANE, HELPERBY, YORK, YO61 2PU	WEX175543	Using waste exemption	On a farm	Use of waste in construction
C	266m S	GROVE HOUSE FARM, TOFTS LANE, HELPERBY, YORK, YO61 2PU	WEX175543	Treating waste exemption	On a farm	Cleaning, washing, spraying or coating relevant waste

ID	Location	Site	Reference	Category	Sub-Category	Description
C	266m S	GROVE HOUSE FARM, TOFTS LANE, HELPERBY, YORK, YO61 2PU	WEX175543	Treating waste exemption	On a farm	Screening and blending of waste
D	267m S	Lodge Farm Main Street YORK YO61 2PW	EPR/JE5755RV/A001	Disposing of waste exemption	Agricultural Waste Only	Deposit of waste from dredging of inland waters
D	267m S	Lodge Farm Main Street YORK YO61 2PW	EPR/JE5755RV/A001	Disposing of waste exemption	Agricultural Waste Only	Deposit of agricultural waste consisting of plant tissue under a Plant Health notice
D	267m S	Lodge Farm Main Street YORK YO61 2PW	EPR/JE5755RV/A001	Treating waste exemption	Agricultural Waste Only	Preparatory treatments (baling, sorting, shredding etc)
D	267m S	Lodge Farm Main Street YORK YO61 2PW	EPR/JE5755RV/A001	Treating waste exemption	Agricultural Waste Only	Treatment of waste wood and waste plant matter by chipping, shredding, cutting or pulverising
D	267m S	Lodge Farm Main Street YORK YO61 2PW	EPR/JE5755RV/A001	Disposing of waste exemption	Both agricultural and non-agricultural waste	Deposit of waste from a portable sanitary convenience
D	267m S	Lodge Farm Main Street YORK YO61 2PW	EPR/JE5755RV/A001	Disposing of waste exemption	Both agricultural and non-agricultural waste	Disposal by incineration
D	267m S	Lodge Farm Main Street YORK YO61 2PW	EPR/JE5755RV/A001	Disposing of waste exemption	Both agricultural and non-agricultural waste	Burning waste in the open
D	267m S	Lodge Farm Main Street YORK YO61 2PW	EPR/JE5755RV/A001	Using waste exemption	Both agricultural and non-agricultural waste	Use of waste in construction
D	267m S	Lodge Farm Main Street YORK YO61 2PW	EPR/JE5755RV/A001	Using waste exemption	Both agricultural and non-agricultural waste	Spreading waste on agricultural land to confer benefit

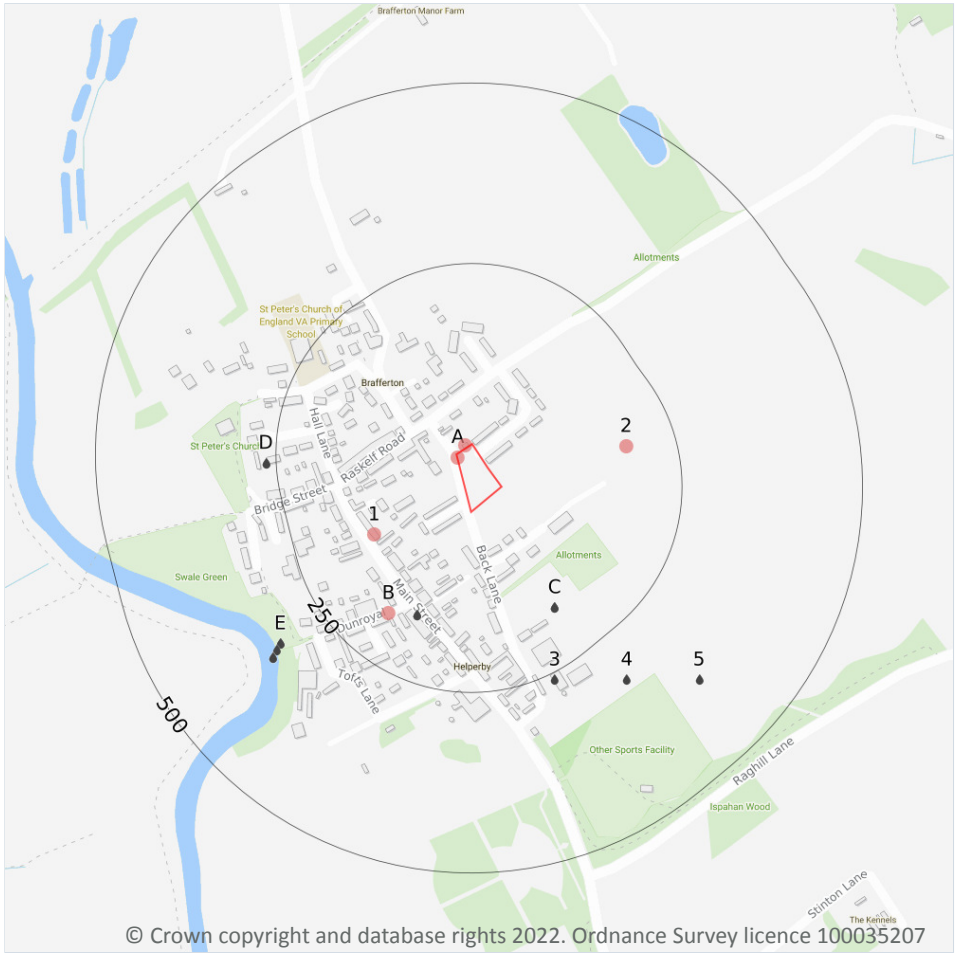
ID	Location	Site	Reference	Category	Sub-Category	Description
D	267m S	Lodge Farm Main Street YORK YO61 2PW	EPR/JE5755RV /A001	Using waste exemption	Both agricultural and non-agricultural waste	Use of waste for a specified purpose
E	295m SW	Oak Tree farm Helperby YO61 2PY	EPR/FE5380KN /A001	Disposing of waste exemption	Agricultural Waste Only	Deposit of waste from dredging of inland waters
E	295m SW	Oak Tree farm Helperby YO61 2PY	EPR/FE5380KN /A001	Disposing of waste exemption	Agricultural Waste Only	Deposit of agricultural waste consisting of plant tissue under a Plant Health notice
E	295m SW	Oak Tree farm Helperby YO61 2PY	EPR/FE5380KN /A001	Disposing of waste exemption	Agricultural Waste Only	Burning waste in the open
E	295m SW	Oak Tree farm Helperby YO61 2PY	EPR/FE5380KN /A001	Using waste exemption	Agricultural Waste Only	Spreading waste on agricultural land to confer benefit
E	295m SW	Oak Tree farm Helperby YO61 2PY	EPR/FE5380KN /A001	Using waste exemption	Agricultural Waste Only	Use of waste for a specified purpose
E	295m SW	Oak Tree farm Helperby YO61 2PY	EPR/FE5380KN /A001	Using waste exemption	Both agricultural and non-agricultural waste	Use of waste in construction
E	310m SW	GROVE HOUSE FARM, TOFTS LANE, HELPERBY, YORK, YO61 2PU	WEX168652	Using waste exemption	On a farm	Spreading of plant matter to confer benefit
E	310m SW	GROVE HOUSE FARM, TOFTS LANE, HELPERBY, YORK, YO61 2PU	WEX168652	Treating waste exemption	On a farm	Screening and blending of waste
E	310m SW	GROVE HOUSE FARM, TOFTS LANE, HELPERBY, YORK, YO61 2PU	WEX168652	Treating waste exemption	On a farm	Treatment of waste wood and waste plant matter by chipping, shredding, cutting or pulverising
E	310m SW	GROVE HOUSE FARM, TOFTS LANE, HELPERBY, YORK, YO61 2PU	WEX168652	Using waste exemption	On a farm	Spreading waste on agricultural land to confer benefit
E	310m SW	GROVE HOUSE FARM, TOFTS LANE, HELPERBY, YORK, YO61 2PU	WEX168652	Disposing of waste exemption	On a farm	Deposit of waste from dredging of inland waters

ID	Location	Site	Reference	Category	Sub-Category	Description
E	310m SW	GROVE HOUSE FARM, TOFTS LANE, HELPERBY, YORK, YO61 2PU	WEX168652	Disposing of waste exemption	On a farm	Burning waste in the open
E	310m SW	GROVE HOUSE FARM, TOFTS LANE, HELPERBY, YORK, YO61 2PU	WEX168652	Treating waste exemption	On a farm	Aerobic composting and associated prior treatment
E	310m SW	GROVE HOUSE FARM, TOFTS LANE, HELPERBY, YORK, YO61 2PU	WEX168652	Using waste exemption	On a farm	Use of mulch
E	310m SW	GROVE HOUSE FARM, TOFTS LANE, HELPERBY, YORK, YO61 2PU	WEX168652	Using waste exemption	On a farm	Use of waste in construction
E	316m SW	GROVE HOUSE FARM, TOFTS LANE, HELPERBY, YORK, YO61 2PU	WEX053675	Disposing of waste exemption	On a farm	Deposit of waste from dredging of inland waters
E	316m SW	GROVE HOUSE FARM, TOFTS LANE, HELPERBY, YORK, YO61 2PU	WEX053675	Disposing of waste exemption	On a farm	Burning waste in the open
E	316m SW	GROVE HOUSE FARM, TOFTS LANE, HELPERBY, YORK, YO61 2PU	WEX053675	Treating waste exemption	On a farm	Cleaning, washing, spraying or coating relevant waste
E	316m SW	GROVE HOUSE FARM, TOFTS LANE, HELPERBY, YORK, YO61 2PU	WEX053675	Treating waste exemption	On a farm	Aerobic composting and associated prior treatment
E	316m SW	GROVE HOUSE FARM, TOFTS LANE, HELPERBY, YORK, YO61 2PU	WEX053675	Treating waste exemption	On a farm	Screening and blending of waste
E	316m SW	GROVE HOUSE FARM, TOFTS LANE, HELPERBY, YORK, YO61 2PU	WEX053675	Treating waste exemption	On a farm	Treatment of waste wood and waste plant matter by chipping, shredding, cutting or pulverising
E	316m SW	GROVE HOUSE FARM, TOFTS LANE, HELPERBY, YORK, YO61 2PU	WEX053675	Using waste exemption	On a farm	Use of waste in construction
E	316m SW	GROVE HOUSE FARM, TOFTS LANE, HELPERBY, YORK, YO61 2PU	WEX053675	Using waste exemption	On a farm	Spreading waste on agricultural land to confer benefit
E	316m SW	GROVE HOUSE FARM, TOFTS LANE, HELPERBY, YORK, YO61 2PU	WEX053675	Using waste exemption	On a farm	Use of mulch

ID	Location	Site	Reference	Category	Sub-Category	Description
E	316m SW	GROVE HOUSE FARM, TOFTS LANE, HELPERBY, YORK, YO61 2PU	WEX053675	Using waste exemption	On a farm	Spreading of plant matter to confer benefit
E	316m SW	GROVE HOUSE FARM, TOFTS LANE, HELPERBY, YORK, YO61 2PU	WEX007566	Using waste exemption	On a farm	Use of waste in construction
E	320m SW	Grove House Farm Tofts Lane York North Yorkshire YO61 2PU	EPR/UE5858RF/A001	Using waste exemption	Both agricultural and non-agricultural waste	Use of waste in construction

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

Licensed Discharges to controlled waters

4.1 Recent industrial land uses

Records within 250m	5

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**	**Mast**	**North Yorkshire, YO61**	**Telecommunications Features**	**Infrastructure and Facilities**
A	4m NW	Telephone Exchange	North Yorkshire, YO61	Telecommunications Features	Infrastructure and Facilities

ID	Location	Company	Address	Activity	Category
1	138m W	Pete Nelson Motor Services	Oak House, Main Street, Helperby, York, North Yorkshire, YO61 2NT	Vehicle Repair, Testing and Servicing	Repair and Servicing
B	181m SW	Electricity Sub Station	North Yorkshire, YO61	Electrical Features	Infrastructure and Facilities
2	182m E	Sewage Works	North Yorkshire, YO61	Waste Storage, Processing and Disposal	Infrastructure and Facilities

This data is sourced from Ordnance Survey.

4.2 Current or recent petrol stations

Records within 500m	0

Open, closed, under development and obsolete petrol stations.

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	0

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.

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	23

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	
B	160m SW	HELPERBY SEWAGE TREATMENT WORKS, LEASMIRE AVENUE, HELPERBY, YORK, NORTH YORKSHIRE, YO61 2PZ	Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - WATER COMPANY Permit Number: 27/23/0264 Permit Version: 1 Receiving Water: CULVERTED TRIB OF SWALE	Status: NEW CONSENT (WRA 91, S88 & SCHED 10 AS AMENDED BY ENV ACT 1995) Issue date: 31/12/2004 Effective Date: 31/12/2004 Revocation Date: 30/12/2005
B	160m SW	HELPERBY SEWAGE TREATMENT WORKS, LEASMIRE AVENUE, HELPERBY, YORK, NORTH YORKSHIRE, YO61 2PZ	Effluent Type: SEWAGE DISCHARGES - STW STORM OVERFLOW/STORM TANK - WATER COMPANY Permit Number: 27/23/0264 Permit Version: 1 Receiving Water: CULVERTED TRIB OF SWALE	Status: NEW CONSENT (WRA 91, S88 & SCHED 10 AS AMENDED BY ENV ACT 1995) Issue date: 31/12/2004 Effective Date: 31/12/2004 Revocation Date: 30/12/2005

ID	Location	Address	Details	
B	160m SW	HELPERBY SEWAGE TREATMENT WORKS, LEASMIRE AVENUE, HELPERBY, YORK, NORTH YORKSHIRE, YO61 2PZ	Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - WATER COMPANY Permit Number: 27/23/0264 Permit Version: 2 Receiving Water: CULVERTED TRIB OF SWALE	Status: NEW CONSENT (WRA 91, S88 & SCHED 10 AS AMENDED BY ENV ACT 1995) Issue date: 31/12/2004 Effective Date: 31/12/2005 Revocation Date: 30/03/2007
B	160m SW	HELPERBY SEWAGE TREATMENT WORKS, LEASMIRE AVENUE, HELPERBY, YORK, NORTH YORKSHIRE, YO61 2PZ	Effluent Type: SEWAGE DISCHARGES - STW STORM OVERFLOW/STORM TANK - WATER COMPANY Permit Number: 27/23/0264 Permit Version: 2 Receiving Water: CULVERTED TRIB OF SWALE	Status: NEW CONSENT (WRA 91, S88 & SCHED 10 AS AMENDED BY ENV ACT 1995) Issue date: 31/12/2004 Effective Date: 31/12/2005 Revocation Date: 30/03/2007
B	160m SW	HELPERBY SEWAGE TREATMENT WORKS, LEASMIRE AVENUE, HELPERBY, YORK, NORTH YORKSHIRE, YO61 2PZ	Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - WATER COMPANY Permit Number: 27/23/0264 Permit Version: 3 Receiving Water: CULVERTED TRIB OF SWALE	Status: MODIFIED - (WRA 91 SCHED 10 - AS AMENDED BY ENV ACT 1995) Issue date: 31/12/2004 Effective Date: 31/03/2007 Revocation Date: 31/03/2009
B	160m SW	HELPERBY SEWAGE TREATMENT WORKS, LEASMIRE AVENUE, HELPERBY, YORK, NORTH YORKSHIRE, YO61 2PZ	Effluent Type: SEWAGE DISCHARGES - STW STORM OVERFLOW/STORM TANK - WATER COMPANY Permit Number: 27/23/0264 Permit Version: 3 Receiving Water: CULVERTED TRIB OF SWALE	Status: MODIFIED - (WRA 91 SCHED 10 - AS AMENDED BY ENV ACT 1995) Issue date: 31/12/2004 Effective Date: 31/03/2007 Revocation Date: 31/03/2009
B	160m SW	HELPERBY SEWAGE TREATMENT WORKS, LEASMIRE AVENUE, HELPERBY, YORK, NORTH YORKSHIRE, YO61 2PZ	Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - WATER COMPANY Permit Number: 27/23/0264 Permit Version: 4 Receiving Water: CULVERTED TRIB OF SWALE	Status: MODIFIED - (WRA 91 SCHED 10 - AS AMENDED BY ENV ACT 1995) Issue date: 14/10/2008 Effective Date: 01/04/2009 Revocation Date: 09/03/2010
B	160m SW	HELPERBY SEWAGE TREATMENT WORKS, LEASMIRE AVENUE, HELPERBY, YORK, NORTH YORKSHIRE, YO61 2PZ	Effluent Type: SEWAGE DISCHARGES - STW STORM OVERFLOW/STORM TANK - WATER COMPANY Permit Number: 27/23/0264 Permit Version: 4 Receiving Water: CULVERTED TRIB OF SWALE	Status: MODIFIED - (WRA 91 SCHED 10 - AS AMENDED BY ENV ACT 1995) Issue date: 14/10/2008 Effective Date: 01/04/2009 Revocation Date: 09/03/2010

ID	Location	Address	Details	
B	160m SW	HELPERBY SEWAGE TREATMENT WORKS, LEASMIRE AVENUE, HELPERBY, YORK, NORTH YORKSHIRE, YO61 2PZ	Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - WATER COMPANY Permit Number: 27/23/0264 Permit Version: 5 Receiving Water: CULVERTED TRIB OF SWALE	Status: MODIFIED - (WRA 91 SCHED 10 - AS AMENDED BY ENV ACT 1995) Issue date: 10/03/2010 Effective Date: 10/03/2010 Revocation Date: -
B	160m SW	HELPERBY SEWAGE TREATMENT WORKS, LEASMIRE AVENUE, HELPERBY, YORK, NORTH YORKSHIRE, YO61 2PZ	Effluent Type: SEWAGE DISCHARGES - STW STORM OVERFLOW/STORM TANK - WATER COMPANY Permit Number: 27/23/0264 Permit Version: 5 Receiving Water: CULVERTED TRIB OF SWALE	Status: MODIFIED - (WRA 91 SCHED 10 - AS AMENDED BY ENV ACT 1995) Issue date: 10/03/2010 Effective Date: 10/03/2010 Revocation Date: -
C	175m SE	HELPERBY WPC WORKS STORM TANKS EFFL, UENT	Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - WATER COMPANY Permit Number: COPA/E212 Permit Version: 1 Receiving Water: RIVER SWALE	Status: POST NRA LEGISLATION WHERE ISSUE DATE > 31-AUG-89 (HISTORIC ONLY) Issue date: 01/10/1985 Effective Date: 01/10/1985 Revocation Date: 09/11/1985
C	175m SE	HELPERBY WPC WORKS STORM TANKS EFFL, UENT	Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - WATER COMPANY Permit Number: COPA/E212 Permit Version: 2 Receiving Water: RIVER SWALE	Status: REVOKED (WRA 91, S88 & SCHED 10 AS AMENDED BY ENV ACT 1995) Issue date: 10/11/1985 Effective Date: 10/11/1985 Revocation Date: 30/12/2004
C	175m SE	HELPERBY WPC WORKS STORM TANKS EFFL, UENT	Effluent Type: SEWAGE DISCHARGES - STW STORM OVERFLOW/STORM TANK - WATER COMPANY Permit Number: E212 Permit Version: 1 Receiving Water: RIVER SWALE	Status: REVOKED (WRA 91, S88 & SCHED 10 AS AMENDED BY ENV ACT 1995) Issue date: 01/01/1982 Effective Date: 01/01/1982 Revocation Date: 30/12/2004
3	259m SE	LODGE FARM, HELPERBY, YORK, NORTH YORKSHIRE	Effluent Type: AGRICULTURE - LIVESTOCK FARMING Permit Number: C5237 Permit Version: 1 Receiving Water: DISCHARGE TO LAND	Status: REVOKED - UNSPECIFIED Issue date: 10/09/1988 Effective Date: 10/09/1988 Revocation Date: 10/06/1992

ID	Location	Address	Details	
D	264m W	PROPOSED DWELLING (HELPERBY), PLOT 2 (WOLF CLEUGH), BRIDGE STREET, HELPERBY, YORK, NORTH YORKSHIRE	Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - NOT WATER COMPANY Permit Number: C4175 Permit Version: 1 Receiving Water: DISCHARGE TO LAND	Status: TRANSFERRED FROM COPA 1974 Issue date: 13/03/1986 Effective Date: 13/03/1986 Revocation Date: 25/07/2012
D	264m W	PROPOSED DWELLING (HELPERBY), PLOT 2 (WOLF CLEUGH), BRIDGE STREET, HELPERBY, YORK, NORTH YORKSHIRE	Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - NOT WATER COMPANY Permit Number: C4175 Permit Version: 2 Receiving Water: DISCHARGE TO LAND	Status: TRANSFERRED FROM COPA 1974 Issue date: 26/07/2012 Effective Date: 26/07/2012 Revocation Date: -
4	316m SE	MOOR HOUSE FARM, HELPERBY, YORK, NORTH YORKSHIRE	Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - NOT WATER COMPANY Permit Number: S/P/123 Permit Version: 1 Receiving Water: TRIB RIVER SWALE	Status: NEW CONSENT (WRA 91, S88 & SCHED 10 AS AMENDED BY ENV ACT 1995) Issue date: 29/01/1963 Effective Date: 29/01/1963 Revocation Date: -
E	321m SW	HELPERBY MARKET CSO, MAIN STREET, HELPERBY, YORK, NORTH YORKSHIRE, YO61 2PR	Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: WADC1121 Permit Version: 1 Receiving Water: RIVER SWALE	Status: TRANSFERRED FROM WATER ACT 1989 Issue date: 19/09/1989 Effective Date: 19/09/1989 Revocation Date: 13/04/2009
E	321m SW	HELPERBY MARKET CSO, MAIN STREET, HELPERBY, YORK, NORTH YORKSHIRE, YO61 2PR	Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: WADC1121 Permit Version: 2 Receiving Water: RIVER SWALE	Status: TRANSFERRED FROM WATER ACT 1989 Issue date: 14/04/2009 Effective Date: 14/04/2009 Revocation Date: 12/02/2018
E	330m SW	HELPERBY MARKET CSO, MAIN STREET, HELPERBY, YORK, NORTH YORKSHIRE, YO61 2PR	Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: WADC1121 Permit Version: 3 Receiving Water: CULV TRIB OF RIVER SWALE	Status: VARIED UNDER EPR 2010 Issue date: 13/02/2018 Effective Date: 13/02/2018 Revocation Date: -
E	340m SW	HELPERBY (BRAFFERTON) SPS, DUNROYAL, HELPERBY, YORK, YO61 2PX	Effluent Type: SEWAGE DISCHARGES - PUMPING STATION - WATER COMPANY Permit Number: 27/23/0174 Permit Version: 1 Receiving Water: RIVER SWALE	Status: NEW CONSENT (WRA 91, S88 & SCHED 10 AS AMENDED BY ENV ACT 1995) Issue date: 20/03/2002 Effective Date: 31/03/2002 Revocation Date: -

ID	Location	Address	Details	
E	340m SW	HELPERBY (BRAFFERTON) SPS, DUNROYAL, HELPERBY, YORK, YO61 2PX	Effluent Type: SEWAGE DISCHARGES - PUMPING STATION - WATER COMPANY Permit Number: 27/23/0174 Permit Version: 1 Receiving Water: RIVER SWALE	Status: NEW CONSENT (WRA 91, S88 & SCHED 10 AS AMENDED BY ENV ACT 1995) Issue date: 20/03/2002 Effective Date: 31/03/2002 Revocation Date: -
5	382m SE	FAWDINGTON GRANGE, HELPERBY, YORK, NORTH YORKSHIRE	Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - NOT WATER COMPANY Permit Number: S/P/1163 Permit Version: 1 Receiving Water: RIVER SWALE	Status: NEW CONSENT (WRA 91, S88 & SCHED 10 AS AMENDED BY ENV ACT 1995) Issue date: 21/05/1963 Effective Date: 21/05/1963 Revocation Date: -

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

4.14 Pollutant release to surface waters (Red List)

Records within 500m	**0**

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

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

4.15 Pollutant release to public sewer

Records within 500m	**0**

Discharges of Special Category Effluents to the public sewer.

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

4.16 List 1 Dangerous Substances

Records within 500m	**0**

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

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

4.17 List 2 Dangerous Substances

Records within 500m	0

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

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

4.18 Pollution Incidents (EA/NRW)

Records within 500m	0

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

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

4.19 Pollution inventory substances

Records within 500m	0

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

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

4.20 Pollution inventory waste transfers

Records within 500m	0

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

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

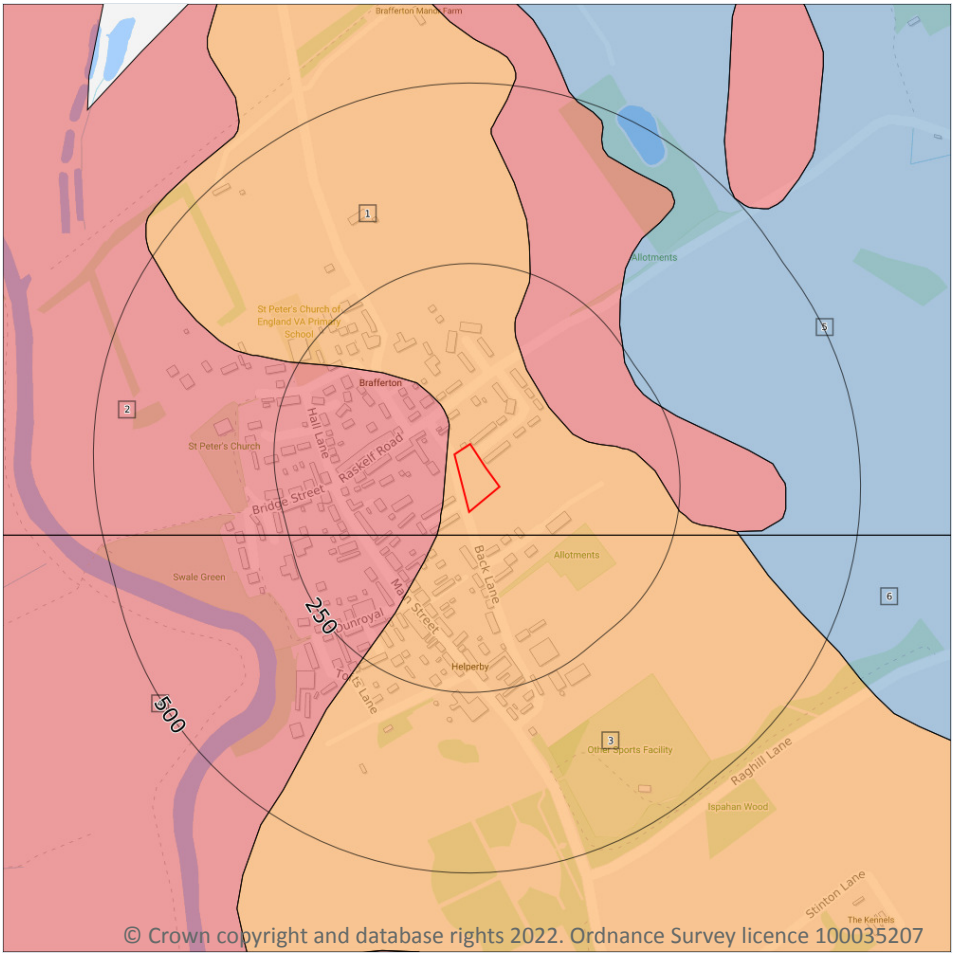
4.21 Pollution inventory radioactive waste

Records within 500m	0

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

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

5 Hydrogeology - Superficial aquifer



Site Outline

Search buffers in metres (m)

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

5.1 Superficial aquifer

Records within 500m	6

Aquifer status of groundwater held within superficial geology.

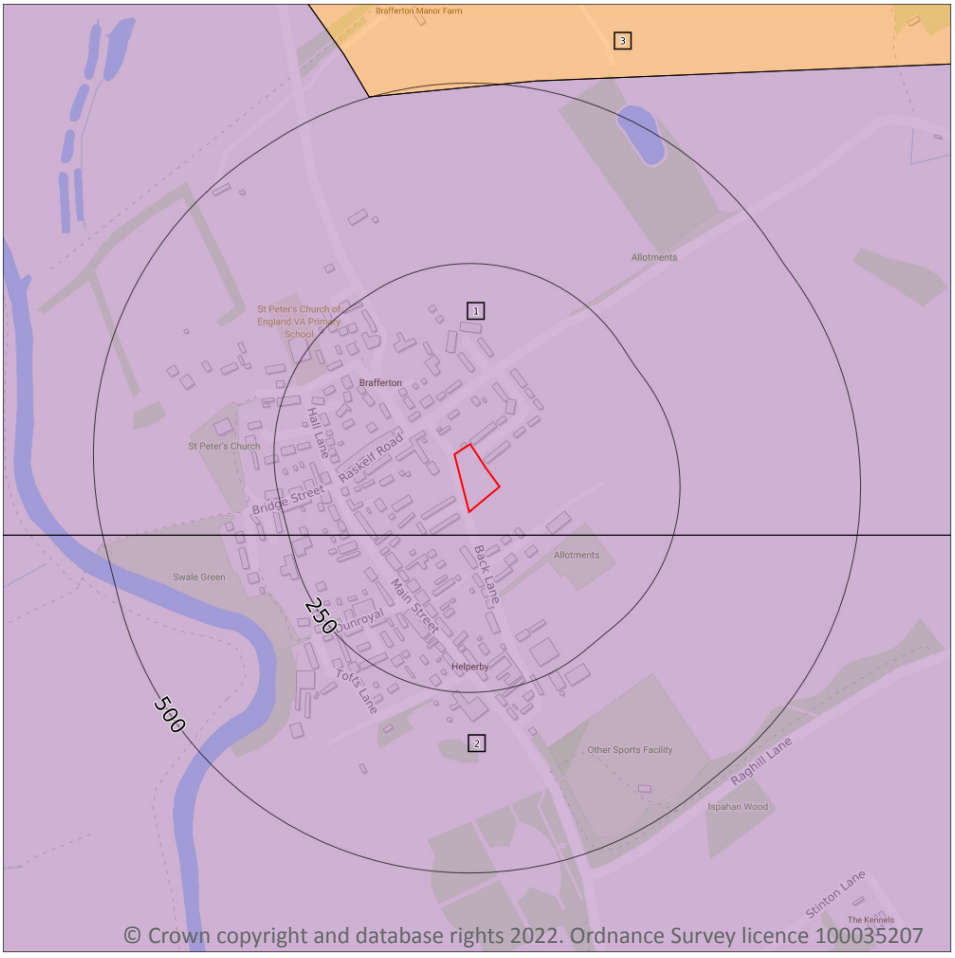
Features are displayed on the Hydrogeology map on **page 37**

ID	Location	Designation	Description
1	**On site**	**Secondary B**	**Predominantly lower permeability layers which may store/yield limited amounts of groundwater due to localised features such as fissures, thin permeable horizons and weathering. These are generally the water-bearing parts of the former non-aquifers**
2	11m 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

ID	Location	Designation	Description
3	32m S	Secondary B	Predominantly lower permeability layers which may store/yield limited amounts of groundwater due to localised features such as fissures, thin permeable horizons and weathering. These are generally the water-bearing parts of the former non-aquifers
4	55m SW	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
5	235m NE	Unproductive	These are rock layers or drift deposits with low permeability that have negligible significance for water supply or river base flow
6	339m E	Unproductive	These are rock layers or drift deposits with low permeability that have negligible significance for water supply or river base flow

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

Bedrock aquifer



Site Outline

Search buffers in metres (m)

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

5.2 Bedrock aquifer

Records within 500m	3

Aquifer status of groundwater held within bedrock geology.

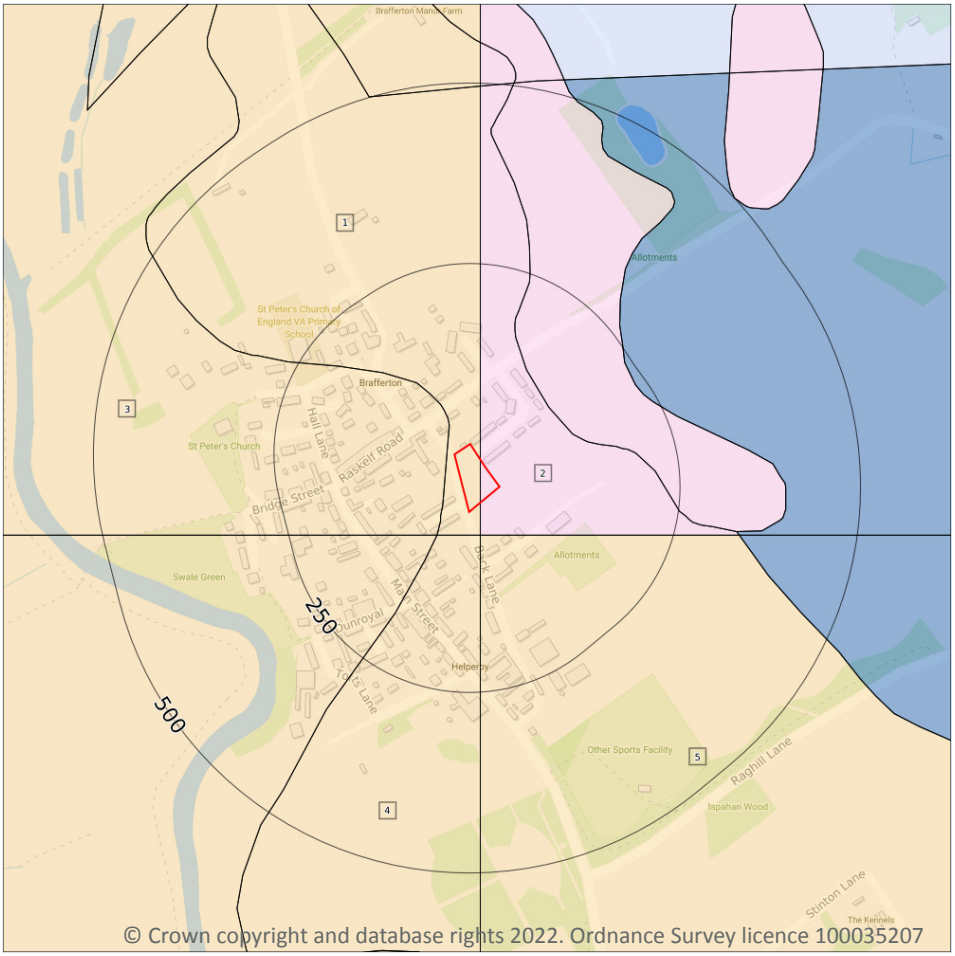
Features are displayed on the Bedrock aquifer map on **page 39**

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	32m S	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

ID	Location	Designation	Description
3	492m N	Secondary B	Predominantly lower permeability layers which may store/yield limited amounts of groundwater due to localised features such as fissures, thin permeablehorizons and weathering. These are generally the water-bearing parts of the former non-aquifers

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

Groundwater vulnerability



Site Outline

Search buffers in metres (m)

Superficial vulnerability

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

Bedrock vulnerability

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

Other information

- Unproductive aquifer
- Soluble rock risk
- Local information

5.3 Groundwater vulnerability

Records within 50m	5

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 41**

ID	Location	Summary	Soil / surface	Superficial geology	Bedrock geology
1	**On site**	**Summary Classification: Secondary superficial aquifer - High Vulnerability Combined classification: Productive Bedrock Aquifer, Productive Superficial Aquifer**	**Leaching class: High Infiltration value: >70% Dilution value: <300mm/year**	**Vulnerability: High Aquifer type: Secondary Thickness: >10m Patchiness value: >90% Recharge potential: High**	**Vulnerability: Medium Aquifer type: Principal Flow mechanism: Well connected fractures**
2	**On site**	**Summary Classification: Secondary superficial aquifer - Medium Vulnerability Combined classification: Productive Bedrock Aquifer, Productive Superficial Aquifer**	**Leaching class: Low Infiltration value: 40-70% Dilution value: <300mm/year**	**Vulnerability: Medium Aquifer type: Secondary Thickness: >10m Patchiness value: >90% Recharge potential: Low**	**Vulnerability: Low Aquifer type: Principal Flow mechanism: Well connected fractures**
3	10m W	Summary Classification: Secondary superficial aquifer - High Vulnerability Combined classification: Productive Bedrock Aquifer, Productive Superficial Aquifer	Leaching class: High Infiltration value: >70% Dilution value: <300mm/year	Vulnerability: High Aquifer type: Secondary Thickness: >10m Patchiness value: >90% Recharge potential: High	Vulnerability: Medium Aquifer type: Principal Flow mechanism: Well connected fractures
4	32m S	Summary Classification: Secondary superficial aquifer - High Vulnerability Combined classification: Productive Bedrock Aquifer, Productive Superficial Aquifer	Leaching class: Intermediate Infiltration value: >70% Dilution value: <300mm/year	Vulnerability: High Aquifer type: Secondary Thickness: >10m Patchiness value: >90% Recharge potential: High	Vulnerability: Low Aquifer type: Principal Flow mechanism: Mixed
5	35m SE	Summary Classification: Secondary superficial aquifer - High Vulnerability Combined classification: Productive Bedrock Aquifer, Productive Superficial Aquifer	Leaching class: High Infiltration value: >70% Dilution value: <300mm/year	Vulnerability: High Aquifer type: Secondary Thickness: >10m Patchiness value: >90% Recharge potential: Low	Vulnerability: Low Aquifer type: Principal Flow mechanism: Mixed

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	6

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 44**

ID	Location	Details	
A	278m W	Status: Historical Licence No: 2/27/23/300 Details: General Farming & Domestic Direct Source: GROUNDWATERS Point: WELL Data Type: Point Name: FAULKNER Easting: 443700 Northing: 470200	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 26/05/1966 Expiry Date: - Issue No: 100 Version Start Date: 26/05/1966 Version End Date: -
A	278m W	Status: Historical Licence No: 2/27/23/300 Details: General Farming & Domestic Direct Source: GROUNDWATERS Point: WELL Data Type: Point Name: FAULKNER Easting: 443700 Northing: 470200	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 26/05/1966 Expiry Date: - Issue No: 100 Version Start Date: 26/05/1966 Version End Date: -
-	1333m NE	Status: Historical Licence No: 2/27/23/044 Details: General Farming & Domestic Direct Source: GROUNDWATERS Point: BOREHOLE Data Type: Point Name: REDESDALE ESTATES LTD Easting: 445200 Northing: 470700	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 14/12/1965 Expiry Date: - Issue No: 100 Version Start Date: 17/10/1970 Version End Date: -
-	1333m NE	Status: Historical Licence No: 2/27/23/044 Details: General Farming & Domestic Direct Source: GROUNDWATERS Point: BOREHOLE - SHERWOOD SANDSTONE - HELPERBY Data Type: Point Name: REDESDALE ESTATES LTD Easting: 445200 Northing: 470700	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 14/12/1965 Expiry Date: - Issue No: 100 Version Start Date: 17/10/1970 Version End Date: -
-	1902m E	Status: Historical Licence No: 2/27/23/059 Details: General Farming & Domestic Direct Source: GROUNDWATERS Point: BOREHOLE Data Type: Point Name: MILNES-COATE Easting: 445900 Northing: 470400	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 14/12/1965 Expiry Date: - Issue No: 100 Version Start Date: 14/12/1965 Version End Date: -

ID	Location	Details	
-	1902m E	Status: Historical Licence No: 2/27/23/059 Details: General Farming & Domestic Direct Source: GROUNDWATERS Point: BOREHOLE - OOLITIC LIMESTONE - HELPERBY Data Type: Point Name: TRUSTEES OF THE BRODRICK SETTLEMENT Easting: 445900 Northing: 470400	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 14/12/1965 Expiry Date: - Issue No: 101 Version Start Date: 01/01/1983 Version End Date: -

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

5.7 Surface water abstractions

Records within 2000m	**25**

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

Features are displayed on the Abstractions and Source Protection Zones map on **page 44**

ID	Location	Details	
B	538m W	Status: Historical Licence No: 2/27/23/112 Details: Spray Irrigation - Direct Direct Source: SURFACE WATER Point: RIVER SWALE Data Type: Line Name: SOWRAY Easting: 443200 Northing: 470950	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 20/01/1966 Expiry Date: - Issue No: 100 Version Start Date: 19/11/1982 Version End Date: -
B	538m W	Status: Active Licence No: 2/27/23/112 Details: Spray Irrigation - Direct Direct Source: SURFACE WATER Point: RIVER SWALE - HELPERBY Data Type: Line Name: SOWRAY Easting: 443200 Northing: 470950	Annual Volume (m^3): 32,730 Max Daily Volume (m^3): 772.80 Original Application No: 4178 Original Start Date: 20/01/1966 Expiry Date: - Issue No: 100 Version Start Date: 19/11/1982 Version End Date: -

ID	Location	Details	
C	564m W	Status: Historical Licence No: 2/27/23/367 Details: Spray Irrigation - Direct Direct Source: SURFACE WATER Point: RIVER SWALE Data Type: Line Name: KEY Easting: 443400 Northing: 469900	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 16/06/1976 Expiry Date: - Issue No: 100 Version Start Date: 16/06/1976 Version End Date: -
C	564m W	Status: Historical Licence No: 2/27/23/367 Details: Spray Irrigation - Direct Direct Source: SURFACE WATER Point: RIVER SWALE - BRAFFERTON Data Type: Line Name: POWELL Easting: 443400 Northing: 469900	Annual Volume (m^3): 7705 Max Daily Volume (m^3): 190.9 Original Application No: - Original Start Date: 16/06/1976 Expiry Date: - Issue No: 101 Version Start Date: 25/11/2005 Version End Date: -
D	587m SW	Status: Historical Licence No: 2/27/23/225 Details: Spray Irrigation - Direct Direct Source: SURFACE WATER Point: RIVER SWALE Data Type: Line Name: D W CUPIT Easting: 443500 Northing: 469700	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 17/03/1966 Expiry Date: - Issue No: 101 Version Start Date: 11/10/1999 Version End Date: -
D	587m SW	Status: Active Licence No: 2/27/23/225 Details: Spray Irrigation - Direct Direct Source: SURFACE WATER Point: RIVER SWALE - ELLERBECK Data Type: Line Name: Cupit Farming Ltd Easting: 443500 Northing: 469700	Annual Volume (m^3): 13,600 Max Daily Volume (m^3): 545 Original Application No: NPS/WR/010445 Original Start Date: 17/03/1966 Expiry Date: - Issue No: 102 Version Start Date: 06/06/2012 Version End Date: -
E	594m W	Status: Historical Licence No: 2/27/23/301 Details: Spray Irrigation - Direct Direct Source: SURFACE WATER Point: RIVER SWALE WEST BANK Data Type: Line Name: FAULKNER Easting: 443400 Northing: 470300	Annual Volume (m^3): 9092 Max Daily Volume (m^3): 545.531 Original Application No: - Original Start Date: 26/05/1966 Expiry Date: - Issue No: 100 Version Start Date: 26/05/1966 Version End Date: -

ID	Location	Details	
E	620m W	Status: Active Licence No: 2/27/23/301 Details: Spray Irrigation - Direct Direct Source: SURFACE WATER Point: RIVER SWALE Data Type: Line Name: BRAFFERTON MANOR FARMERS Easting: 443660 Northing: 471850	Annual Volume (m^3): 9,092 Max Daily Volume (m^3): 545.53 Original Application No: 2206(2) Original Start Date: 26/05/1966 Expiry Date: - Issue No: 101 Version Start Date: 01/04/2007 Version End Date: -
-	1032m SW	Status: Historical Licence No: 2/27/23/586 Details: Spray Irrigation - Direct Direct Source: SURFACE WATER Point: RIVER SWALE Data Type: Line Name: SOWRAY Easting: 443520 Northing: 469110	Annual Volume (m^3): 22730 Max Daily Volume (m^3): 822.64 Original Application No: - Original Start Date: 27/03/1997 Expiry Date: 30/09/2006 Issue No: 100 Version Start Date: 27/03/1997 Version End Date: -
-	1032m SW	Status: Historical Licence No: 2/27/23/714 Details: Spray Irrigation - Direct Direct Source: SURFACE WATER Point: RIVER SWALE Data Type: Line Name: SOWRAY Easting: 443520 Northing: 469110	Annual Volume (m^3): 4000 Max Daily Volume (m^3): 822.64 Original Application No: - Original Start Date: 01/04/2007 Expiry Date: 31/03/2017 Issue No: 1 Version Start Date: 01/04/2007 Version End Date: -
-	1032m SW	Status: Active Licence No: 2/27/23/714/R01 Details: Spray Irrigation - Direct Direct Source: SURFACE WATER Point: RIVER SWALE Data Type: Line Name: SOWRAY Easting: 443524 Northing: 469108	Annual Volume (m^3): 4,000 Max Daily Volume (m^3): 823 Original Application No: NPS/WR/021480 Original Start Date: 11/05/2017 Expiry Date: 31/03/2029 Issue No: 1 Version Start Date: 11/05/2017 Version End Date: -
-	1432m NW	Status: Historical Licence No: 2/27/23/581 Details: Spray Irrigation - Direct Direct Source: SURFACE WATER Point: RIVER SWALE (1) Data Type: Line Name: J T SWIERS & SONS Easting: 442450 Northing: 473370	Annual Volume (m^3): 26709 Max Daily Volume (m^3): 898.97 Original Application No: - Original Start Date: 27/03/1997 Expiry Date: 30/09/2006 Issue No: 100 Version Start Date: 27/03/1997 Version End Date: -

ID	Location	Details	
-	1446m NW	Status: Historical Licence No: 2/27/23/301 Details: Spray Irrigation - Direct Direct Source: SURFACE WATER Point: RIVER SWALE EAST BANK Data Type: Line Name: FAULKNER Easting: 443300 Northing: 471400	Annual Volume (m^3): 9092 Max Daily Volume (m^3): 545.531 Original Application No: - Original Start Date: 26/05/1966 Expiry Date: - Issue No: 100 Version Start Date: 26/05/1966 Version End Date: -
-	1742m S	Status: Historical Licence No: 2/27/23/378 Details: Spray Irrigation - Direct Direct Source: SURFACE WATER Point: RIVER SWALE Data Type: Point Name: A J SPILMAN & SON Easting: 443800 Northing: 468300	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 17/05/1977 Expiry Date: - Issue No: 100 Version Start Date: 17/05/1977 Version End Date: -
-	1742m S	Status: Historical Licence No: 2/27/23/378 Details: Spray Irrigation - Direct Direct Source: SURFACE WATER Point: RIVER SWALE - HELPERBY Data Type: Point Name: A J SPILMAN & SON Easting: 443800 Northing: 468300	Annual Volume (m^3): 5650 Max Daily Volume (m^3): 308.18 Original Application No: - Original Start Date: 17/05/1977 Expiry Date: - Issue No: 100 Version Start Date: 17/05/1977 Version End Date: -
-	1797m S	Status: Active Licence No: 2/27/23/378 Details: Spray Irrigation - Direct Direct Source: SURFACE WATER Point: RIVER SWALE - HELPERBY Data Type: Point Name: A J SPILMAN & SON Easting: 443750 Northing: 468250	Annual Volume (m^3): 5,650 Max Daily Volume (m^3): 308.18 Original Application No: 5503 Original Start Date: 17/05/1977 Expiry Date: - Issue No: 100 Version Start Date: 17/05/1977 Version End Date: -
-	1797m S	Status: Active Licence No: NE/027/0023/030 Details: Spray Irrigation - Direct Direct Source: SURFACE WATER Point: RIVER SWALE - HELPERBY Data Type: Point Name: A J Spilman & Son Easting: 443750 Northing: 468250	Annual Volume (m^3): 90,000 Max Daily Volume (m^3): 1,600 Original Application No: NPS/WR/021830 Original Start Date: 07/04/2016 Expiry Date: 31/03/2029 Issue No: 1 Version Start Date: 07/04/2016 Version End Date: -

ID	Location	Details	
-	1811m NW	Status: Historical Licence No: 2/27/23/390 Details: Spray Irrigation - Direct Direct Source: SURFACE WATER Point: CUNDALL BECK Data Type: Line Name: D W CUPIT Easting: 442000 Northing: 471200	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 15/06/1978 Expiry Date: - Issue No: 101 Version Start Date: 11/10/1999 Version End Date: -
-	1811m NW	Status: Historical Licence No: 2/27/23/390 Details: Spray Irrigation - Direct Direct Source: SURFACE WATER Point: CUNDALL BECK - THORNTON BRIDGE Data Type: Line Name: Cupit Farming Ltd Easting: 442000 Northing: 471200	Annual Volume (m^3): 4500 Max Daily Volume (m^3): 272 Original Application No: - Original Start Date: 15/06/1978 Expiry Date: - Issue No: 102 Version Start Date: 06/06/2012 Version End Date: -
-	1813m S	Status: Historical Licence No: 2/27/23/580 Details: Spray Irrigation - Direct Direct Source: SURFACE WATER Point: RIVER SWALE Data Type: Line Name: JOHN RAMSDEN & SON Easting: 444060 Northing: 467500	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 27/03/1997 Expiry Date: 30/09/2006 Issue No: 100 Version Start Date: 27/03/1997 Version End Date: -
-	1813m S	Status: Historical Licence No: 2/27/23/580 Details: Spray Irrigation - Direct Direct Source: SURFACE WATER Point: RIVER SWALE - MYTON ON SWALE Data Type: Line Name: JOHN RAMSDEN & SON Easting: 444060 Northing: 467500	Annual Volume (m^3): 38800 Max Daily Volume (m^3): 1000 Original Application No: - Original Start Date: 27/03/1997 Expiry Date: 30/09/2006 Issue No: 100 Version Start Date: 27/03/1997 Version End Date: -
-	1813m S	Status: Historical Licence No: 2/27/23/708 Details: Spray Irrigation - Direct Direct Source: SURFACE WATER Point: RIVER SWALE - MYTON ON SWALE Data Type: Line Name: JOHN RAMSDEN & SON Easting: 444030 Northing: 467640	Annual Volume (m^3): 30000 Max Daily Volume (m^3): 960 Original Application No: - Original Start Date: 01/06/2007 Expiry Date: 31/03/2017 Issue No: 1 Version Start Date: 01/06/2007 Version End Date: -

ID	Location	Details	
-	1993m SW	Status: Historical Licence No: 2/27/23/566 Details: Spray Irrigation - Direct Direct Source: SURFACE WATER Point: RIVER SWALE Data Type: Line Name: ROBERT CHESTER FARMS LTD C/O JOHN ROBERT CHESTER Easting: 443200 Northing: 468200	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 27/03/1997 Expiry Date: 30/09/2006 Issue No: 100 Version Start Date: 27/03/1997 Version End Date: -
-	1993m SW	Status: Historical Licence No: 2/27/23/566 Details: Spray Irrigation - Direct Direct Source: SURFACE WATER Point: RIVER SWALE - ELLENTHORPE Data Type: Line Name: ROBERT CHESTER FARMS LTD Easting: 443200 Northing: 468200	Annual Volume (m^3): 37270 Max Daily Volume (m^3): 883.74 Original Application No: - Original Start Date: 27/03/1997 Expiry Date: 30/09/2006 Issue No: 100 Version Start Date: 27/03/1997 Version End Date: -
-	1993m SW	Status: Historical Licence No: 2/27/23/709 Details: Spray Irrigation - Direct Direct Source: SURFACE WATER Point: RIVER SWALE - ELLENTHORPE Data Type: Line Name: CHESTER & DALE Easting: 443200 Northing: 468200	Annual Volume (m^3): 12526 Max Daily Volume (m^3): 883.74 Original Application No: - Original Start Date: 01/04/2007 Expiry Date: 31/03/2017 Issue No: 3 Version Start Date: 08/10/2012 Version End Date: -

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

5.8 Potable abstractions

Records within 2000m	**0**

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

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

5.9 Source Protection Zones

Records within 500m	0

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

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

5.10 Source Protection Zones (confined aquifer)

Records within 500m	0

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

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

6 Hydrology

Site Outline

Search buffers in metres (m)

Water Network (OS MasterMap)

Surface water features (wider than 5m)

Surface water features (narrower than 5m)

WFD River, canal and surface water transfer water bodies

WFD Lake water bodies

WFD Transitional and coastal water bodies

WFD Surface water body catchments boundaries

WFD Groundwater body boundaries

6.1 Water Network (OS MasterMap)

Records within 250m	0

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

This data is sourced from the Ordnance Survey.

6.2 Surface water features

Records within 250m	0

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

This data is sourced from the Ordnance Survey.

6.3 WFD Surface water body catchments

Records on site	1

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

Features are displayed on the Hydrology map on **page 53**

ID	Location	Type	Water body catchment	Water body ID	Operational catchment	Management catchment
2	**On site**	**River**	**Derrings Beck from Source to River Kyle**	**GB104027063920**	**Ouse Upper Yorkshire**	**Swale Ure Nidd and Ouse Upper**

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 53**

ID	Location	Type	Name	Water body ID	Overall rating	Chemical rating	Ecological rating	Year
-	2871m SE	River	Derrings Beck from Source to River Kyle	GB104027063920	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 53**

ID	Location	Name	Water body ID	Overall rating	Chemical rating	Quantitative	Year
1	**On site**	**SUNO Sherwood Sandstone**	**GB40401G702100**	**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.

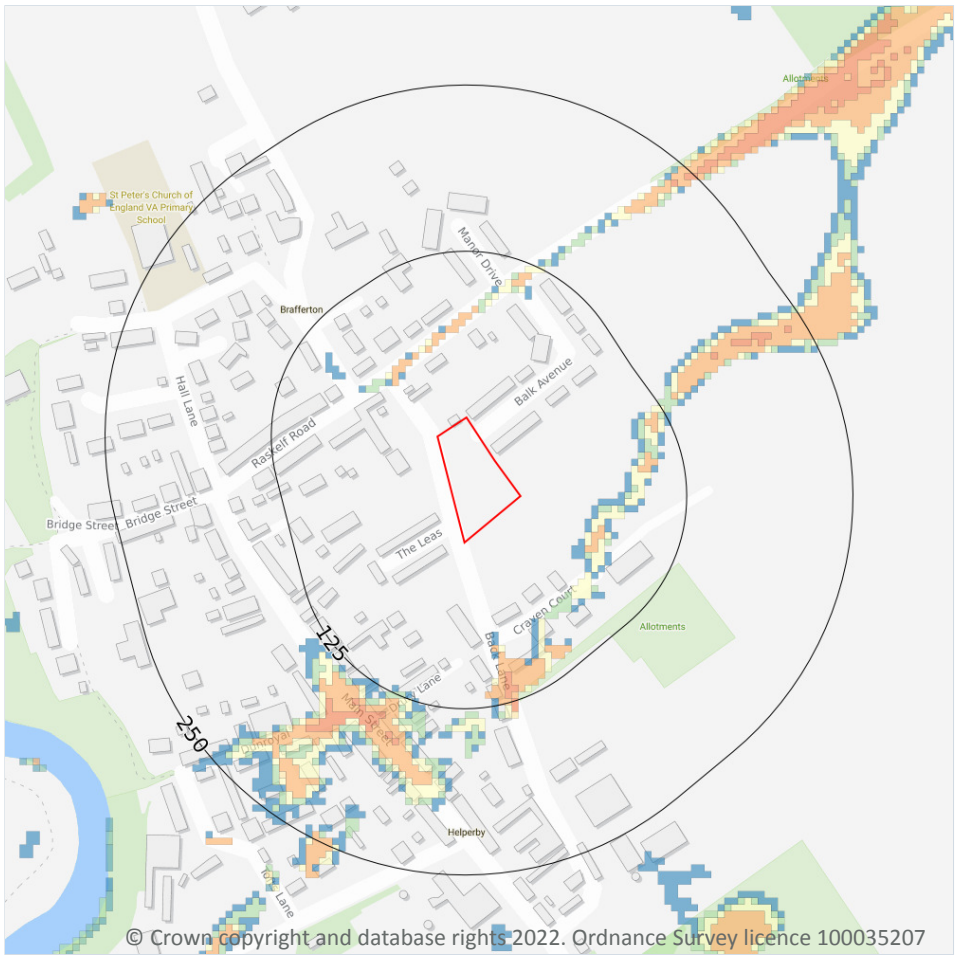
7.7 Flood Zone 3

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



8.1 Surface water flooding

Highest risk on site	**Negligible**
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 59**

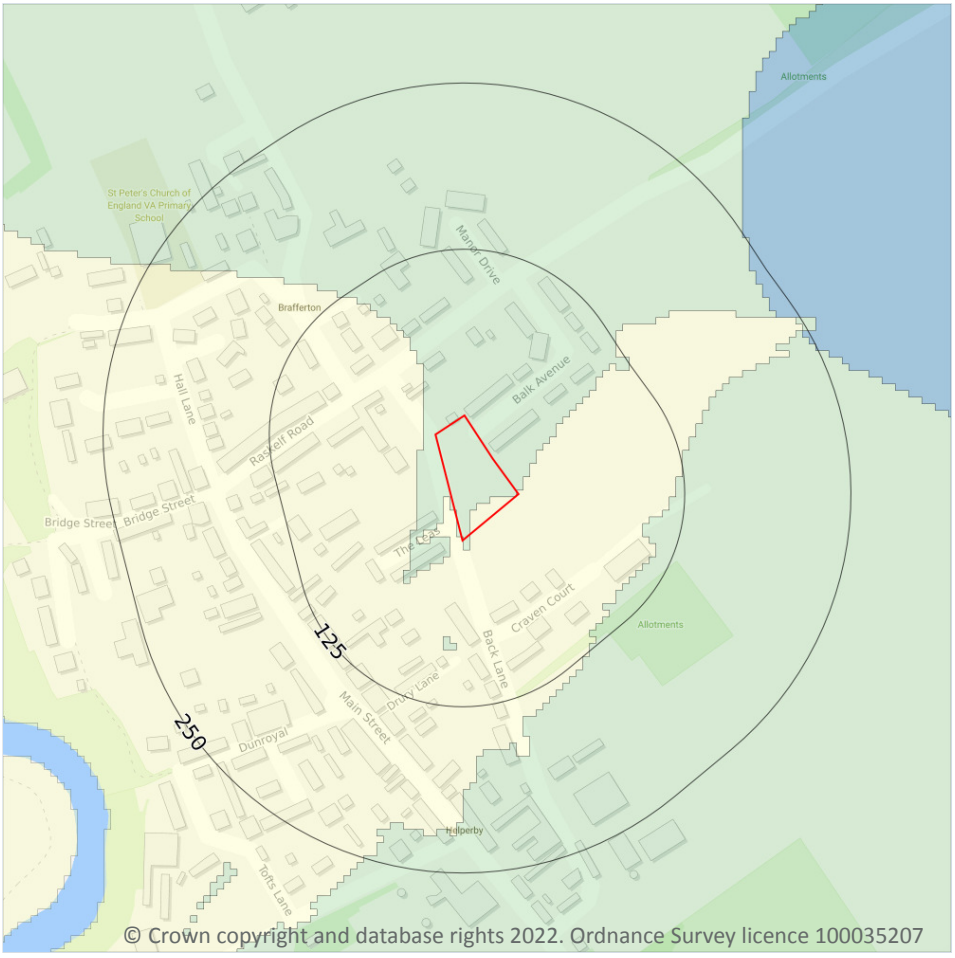
The data shown on the map and in the table above shows the highest likelihood of flood events happening at the site. Lower likelihood events may have greater flood depths and hence a greater potential impact on a site.

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

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

This data is sourced from Ambiental Risk Analytics.

9 Groundwater flooding



Site Outline

Search buffers in metres (m)

High

Moderate - High

Moderate

Low

Negligible

9.1 Groundwater flooding

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

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

Features are displayed on the Groundwater flooding map on **page 61**

This data is sourced from Ambiental Risk Analytics.

10 Environmental designations

Site Outline

Search buffers in metres (m)

Designated Ancient Woodland

10.1 Sites of Special Scientific Interest (SSSI)

Records within 2000m	0

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

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

10.2 Conserved wetland sites (Ramsar sites)

Records within 2000m	0

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

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

10.3 Special Areas of Conservation (SAC)

Records within 2000m	0

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

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

10.4 Special Protection Areas (SPA)

Records within 2000m	0

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

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

10.5 National Nature Reserves (NNR)

Records within 2000m	0

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

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

10.6 Local Nature Reserves (LNR)

Records within 2000m	0

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

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

10.7 Designated Ancient Woodland

Records within 2000m	1

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 62**

ID	Location	Name	Woodland Type
1	1486m NE	Brafferton Spring	Ancient Replanted 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

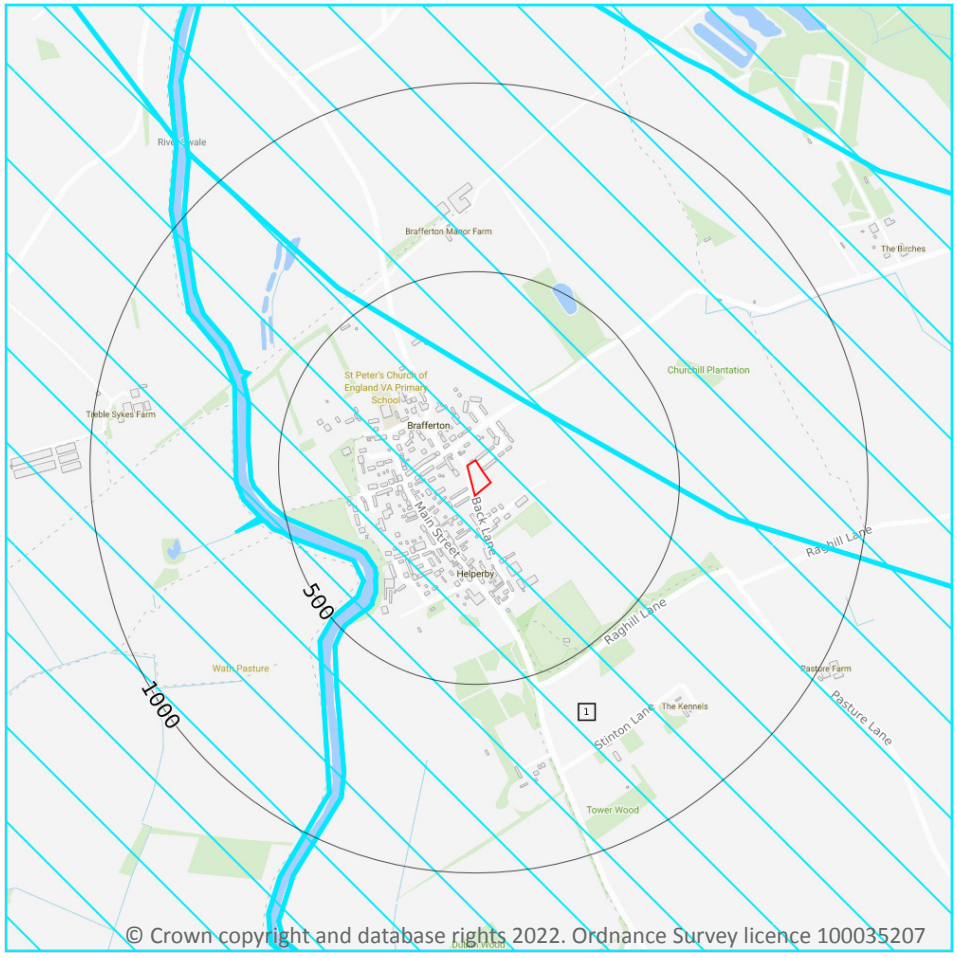
Records within 2000m	4

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

Location	Name	Type	NVZ ID	Status
On site	**Vale of York**	**Groundwater**	**103**	**Existing**
65m SE	Vale of York	Groundwater	103	Existing
804m E	River Kyle from New Parks Beck to River Ouse NVZ	Surface Water	292	Existing
1302m NW	Cundall Beck/Soppa Gutter Catch (trib of Swale) NVZ	Surface Water	305	Existing

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

SSSI Impact Zones and Units



Site Outline

Search buffers in metres (m)

SSSI Impact Risk Zones

SSSI Units

- Not recorded
- Favourable
- Unfavourable - Recovering
- Unfavourable - No change
- Unfavourable - Declining
- Partially destroyed
- Destroyed

10.17 SSSI Impact Risk Zones

Records on site	1

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

Features are displayed on the SSSI Impact Zones and Units map on **page 67**

ID	Location	Type of developments requiring consultation
1	**On site**	**Infrastructure - Airports, helipads and other aviation proposals.** **Air pollution - Livestock & poultry units with floorspace > 500m², slurry lagoons & digestate stores > 750m², manure stores > 3500t.**

This data is sourced from Natural England.

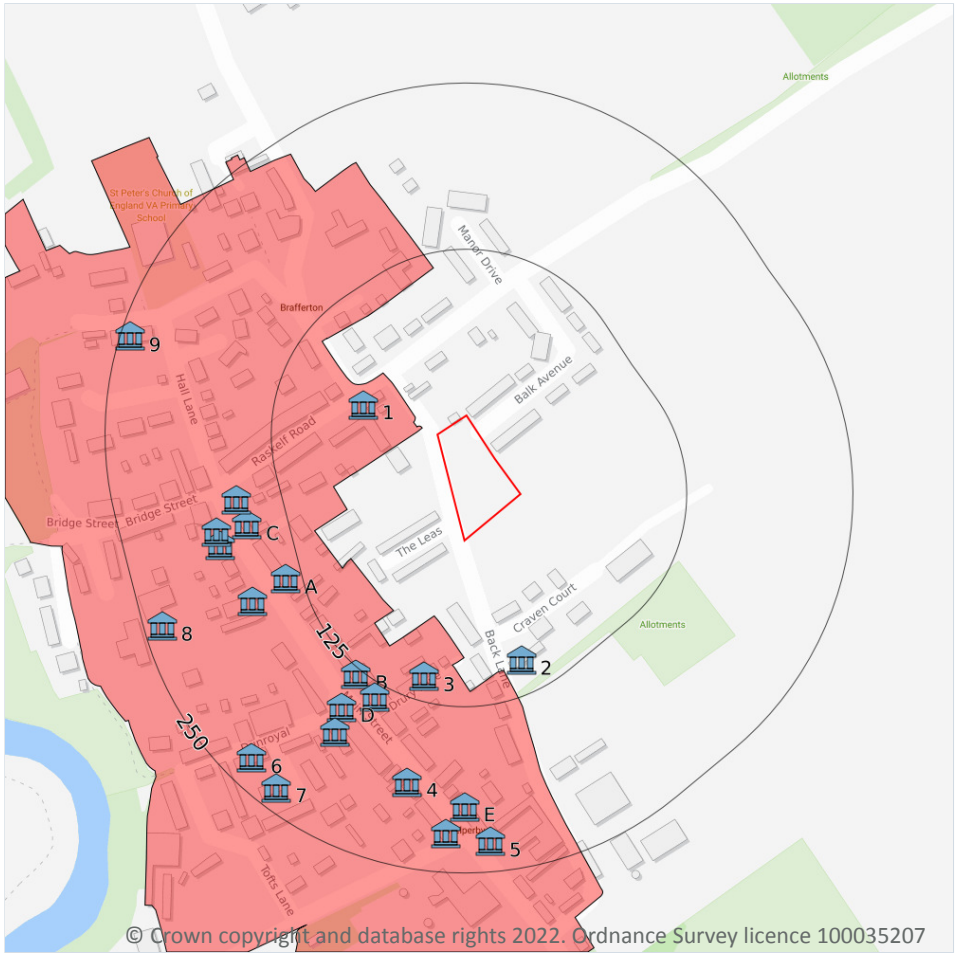
10.18 SSSI Units

Records within 2000m	0

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

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

11 Visual and cultural designations



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	21

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 69**

ID	Location	Name	Grade	Reference Number	Listed date
1	60m W	The Oak Tree Public House, Helperby, Hambleton, North Yorkshire, YO61	II	1151269	26/06/1984
2	100m SE	Old Star Cottage, Helperby, Hambleton, North Yorkshire, YO61	II	1151302	26/06/1984
3	106m S	1, Drury Lane, Helperby, Hambleton, North Yorkshire, YO61	II	1189438	26/06/1984
B	130m SW	Lime Garth, Helperby, Hambleton, North Yorkshire, YO61	II	1151305	26/06/1984

ID	Location	Name	Grade	Reference Number	Listed date
B	136m SW	Golden Lion Public House Old Fountain Stores, Helperby, Hambleton, North Yorkshire,GOLDEN LION PUBLIC HOUSE	II	1189460	01/02/1980
A	137m W	Oak House, Helperby, Hambleton, North Yorkshire, YO61	II	1189458	17/05/1960
C	156m W	High Farm House, Helperby, Hambleton, North Yorkshire, YO61	II	1151304	17/05/1960
D	156m SW	Town Well, Helperby, Hambleton, North Yorkshire, YO61	II	1314946	26/06/1984
C	159m W	Rose And Crown House, Helperby, Hambleton, North Yorkshire, YO61	II	1294259	26/06/1984
A	166m W	Kirkholme, Helperby, Hambleton, North Yorkshire, YO61	II	1189478	26/06/1984
D	174m SW	Fountain House, Helperby, Hambleton, North Yorkshire, YO61	II	1314927	26/06/1984
C	179m W	Helperby House, Helperby, Hambleton, North Yorkshire, YO61	II	1151310	26/06/1984
C	179m W	2, Main Street, Helperby, Hambleton, North Yorkshire, YO61	II	1294271	26/06/1984
4	187m S	Valley Shop, Helperby, Hambleton, North Yorkshire, YO61	II	1189481	26/06/1984
E	200m S	Hall View Cottages, Helperby, Hambleton, North Yorkshire, YO61	II	1151306	26/06/1984
E	221m S	Half Moon Inn, Helperby, Hambleton, North Yorkshire, YO61	II	1151268	26/06/1984
5	227m S	Anthonys Cottage Estate Office Grooms Cottage, Helperby, Hambleton, North Yorkshire,ANTHONYS COTTAGE ESTATE OFFICE	II	1189463	26/06/1984
6	229m SW	Dunroyal House, Helperby, Hambleton, North Yorkshire, YO61	II	1189439	26/06/1984
7	234m SW	Dovecot To South Of Dunroyal House, Helperby, Hambleton, North Yorkshire, YO61	II	1151303	26/06/1984
8	236m W	Dovecot To Rear Of Kirkholme, Helperby, Hambleton, North Yorkshire, YO61	II	1151267	13/04/1984
9	243m W	Brafferton Hall East Brafferton Hall West, Brafferton, Hambleton, North Yorkshire,BRAFFERTON HALL EAST	II	1151300	26/06/1984

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

11.5 Conservation Areas

Records within 250m	1

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

Features are displayed on the Visual and cultural designations map on **page 69**

ID	Location	Name	District	Date of designation
A	13m NW	Brafferton and Helperby	Hambleton	30/04/1985

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.

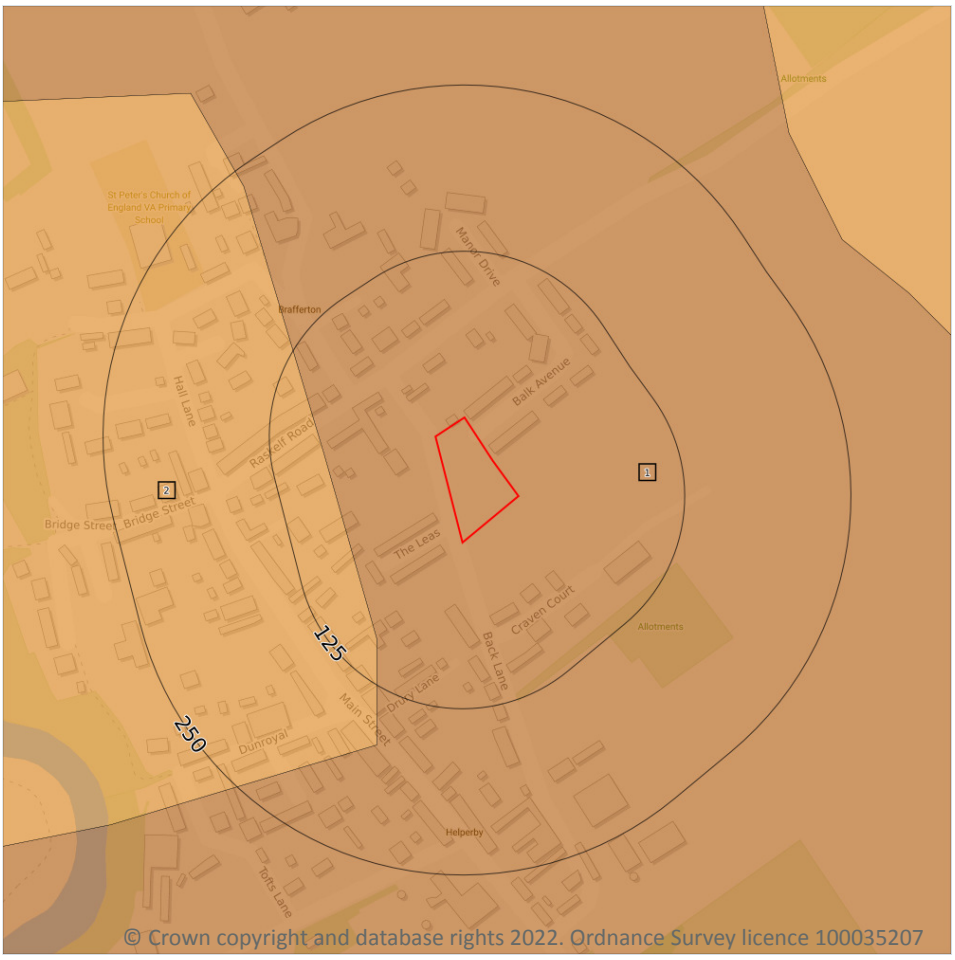
11.7 Registered Parks and Gardens

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	2

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 73**

ID	Location	Classification	Description
1	**On site**	**Grade 2**	**Very good quality agricultural land. Land with minor limitations which affect crop yield, cultivations or harvesting. A wide range of agricultural and horticultural crops can usually be grown but on some land in the grade there may be reduced flexibility due to difficulties with the production of the more demanding crops such as winter harvested vegetables and arable root crops. The level of yield is generally high but may be lower or more variable than Grade 1.**
2	82m W	Grade 3	Good to moderate quality agricultural land. Land with moderate limitations which affect the choice of crops, timing and type of cultivation, harvesting or the level of yield. Where more demanding crops are grown yields are generally lower or more variable than on land in Grades 1 and 2.

This data is sourced from Natural England.

12.2 Open Access Land

Records within 250m	**0**

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

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

12.3 Tree Felling Licences

Records within 250m	**0**

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

This data is sourced from the Forestry Commission.

12.4 Environmental Stewardship Schemes

Records within 250m	**1**

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.

Location	Reference	Scheme	Start Date	End date
131m N	AG00460198	Entry Level Stewardship	01/11/2013	31/10/2018

This data is sourced from Natural England.

12.5 Countryside Stewardship Schemes

Records within 250m	6

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.

Location	Reference	Scheme	Start Date	End Date
On site	**829250**	**Countryside Stewardship (Middle Tier)**	**01/01/2020**	**31/12/2024**
121m SE	107803	Countryside Stewardship (Middle Tier)	01/01/2016	31/12/2021
127m E	107803	Countryside Stewardship (Middle Tier)	01/01/2016	31/12/2021
131m N	1062721	Countryside Stewardship (Middle Tier)	01/01/2021	31/12/2025
176m SE	829250	Countryside Stewardship (Middle Tier)	01/01/2020	31/12/2024
218m S	107803	Countryside Stewardship (Middle Tier)	01/01/2016	31/12/2021

This data is sourced from Natural England.

13 Habitat designations

13.1 Priority Habitat Inventory

Records within 250m	0

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

This data is sourced from Natural England.

13.2 Habitat Networks

Records within 250m	0

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

This data is sourced from Natural England.

13.3 Open Mosaic Habitat

Records within 250m	0

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

This data is sourced from Natural England.

13.4 Limestone Pavement Orders

Records within 250m	0

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

This data is sourced from Natural England.

14 Geology 1:10,000 scale - Availability

Site Outline

Search buffers in metres (m)

Full coverage

Partial coverage

No coverage

14.1 10k Availability

Records within 500m	1

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

Features are displayed on the Geology 1:10,000 scale - Availability map on **page 77**

ID	Location	Artificial	Superficial	Bedrock	Mass movement	Sheet No.
1	**On site**	**No coverage**	**No coverage**	**No coverage**	**No coverage**	**NoCov**

This data is sourced from the British Geological Survey.

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

14.2 Artificial and made ground (10k)

Records within 500m	0

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.

This data is sourced from the British Geological Survey.

Geology 1:10,000 scale - Superficial

14.3 Superficial geology (10k)

Records within 500m	0

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.

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

14.5 Bedrock geology (10k)

Records within 500m	0

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.

This data is sourced from the British Geological Survey.

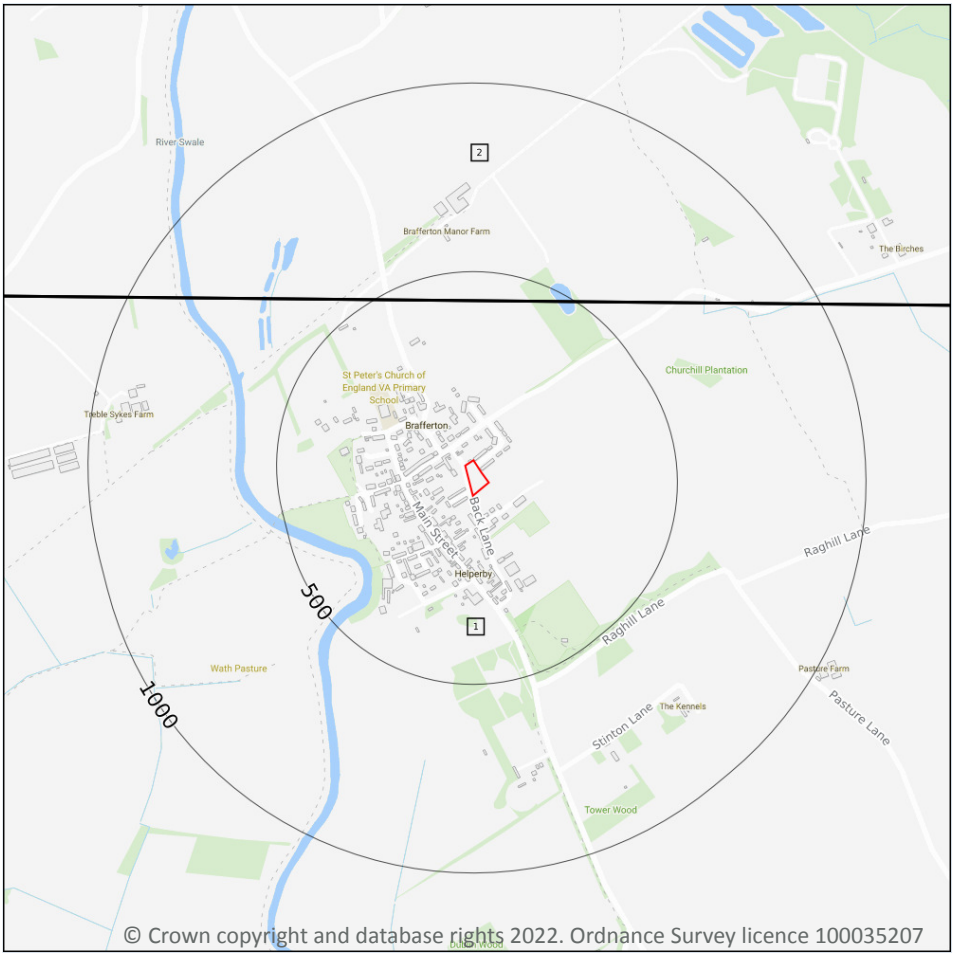
14.6 Bedrock faults and other linear features (10k)

Records within 500m	0

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

This data is sourced from the British Geological Survey.

15 Geology 1:50,000 scale - Availability



Site Outline

Search buffers in metres (m)

Geological map tile

15.1 50k Availability

Records within 500m	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 81**

ID	Location	Artificial	Superficial	Bedrock	Mass movement	Sheet No.
1	**On site**	**Full**	**Full**	**Full**	**Full**	**EW062_harrogate_v4**
2	423m N	Full	Full	Full	Full	EW052_thirsk_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	0

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.

This data is sourced from the British Geological Survey.

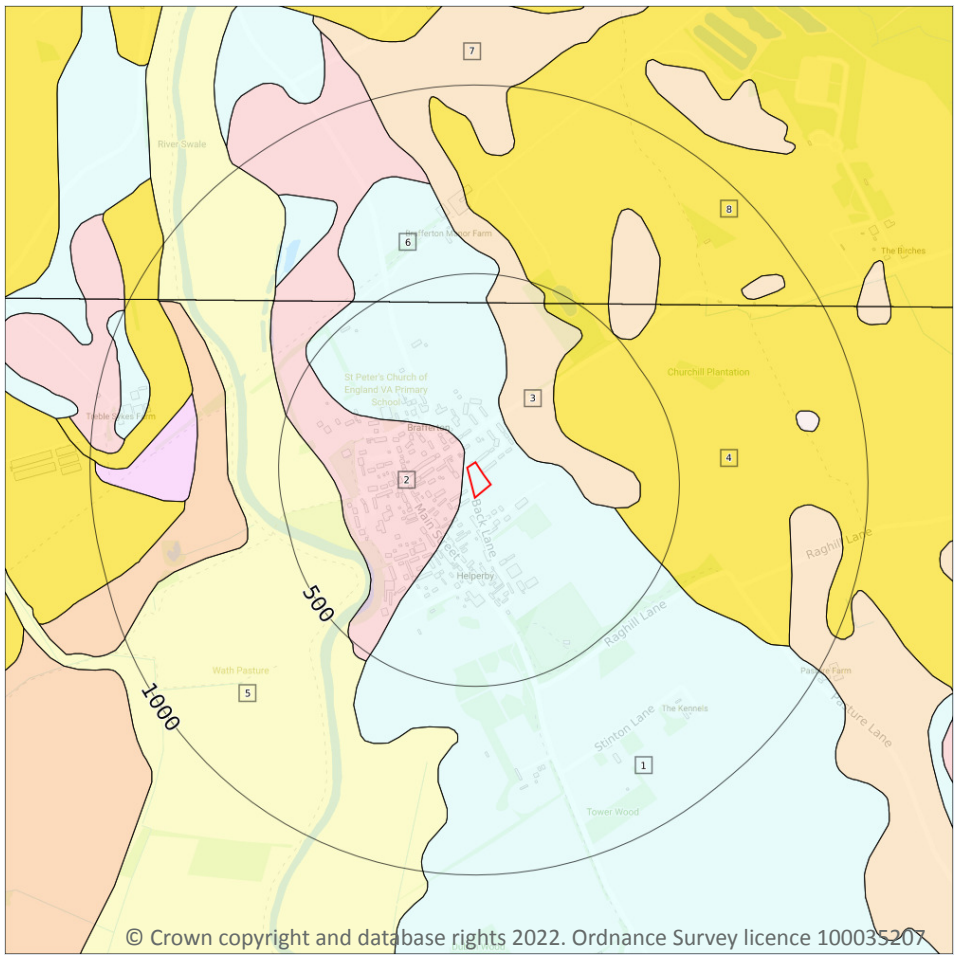
15.3 Artificial ground permeability (50k)

Records within 50m	0

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

This data is sourced from the British Geological Survey.

Geology 1:50,000 scale - Superficial



Site Outline

Search buffers in metres (m)

Landslip (50k)

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

15.4 Superficial geology (50k)

Records within 500m **8**

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 83**

ID	Location	LEX Code	Description	Rock description
1	**On site**	**VYORK-CSV**	**VALE OF YORK FORMATION**	**CLAY, SANDY, GRAVELLY**
2	11m W	NWE-SV	NEWBY WISKE - ALDWARK ESKER MEMBER	SAND, GRAVELLY
3	119m NE	BREI-SZV	BREIGHTON SAND FORMATION	SAND, SILTY, GRAVELLY
4	235m NE	ALNE-CZ	ALNE GLACIOLACUSTRINE FORMATION	CLAY, SILTY

ID	Location	LEX Code	Description	Rock description
5	334m SW	ALV-XCZSV	ALLUVIUM	CLAY, SILT, SAND AND GRAVEL
6	423m N	VYORK-CSV	VALE OF YORK FORMATION	CLAY, SANDY, GRAVELLY
7	424m N	BREI-SZV	BREIGHTON SAND FORMATION	SAND, SILTY, GRAVELLY
8	459m NE	ALNE-CZ	ALNE GLACIOLACUSTRINE FORMATION	CLAY, SILTY

This data is sourced from the British Geological Survey.

15.5 Superficial permeability (50k)

Records within 50m	**3**

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

Location	Flow type	Maximum permeability	Minimum permeability
On site	**Mixed**	**Moderate**	**Low**
10m NW	Intergranular	Very High	High
32m S	Mixed	Moderate	Low

This data is sourced from the British Geological Survey.

15.6 Landslip (50k)

Records within 500m	**0**

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

This data is sourced from the British Geological Survey.

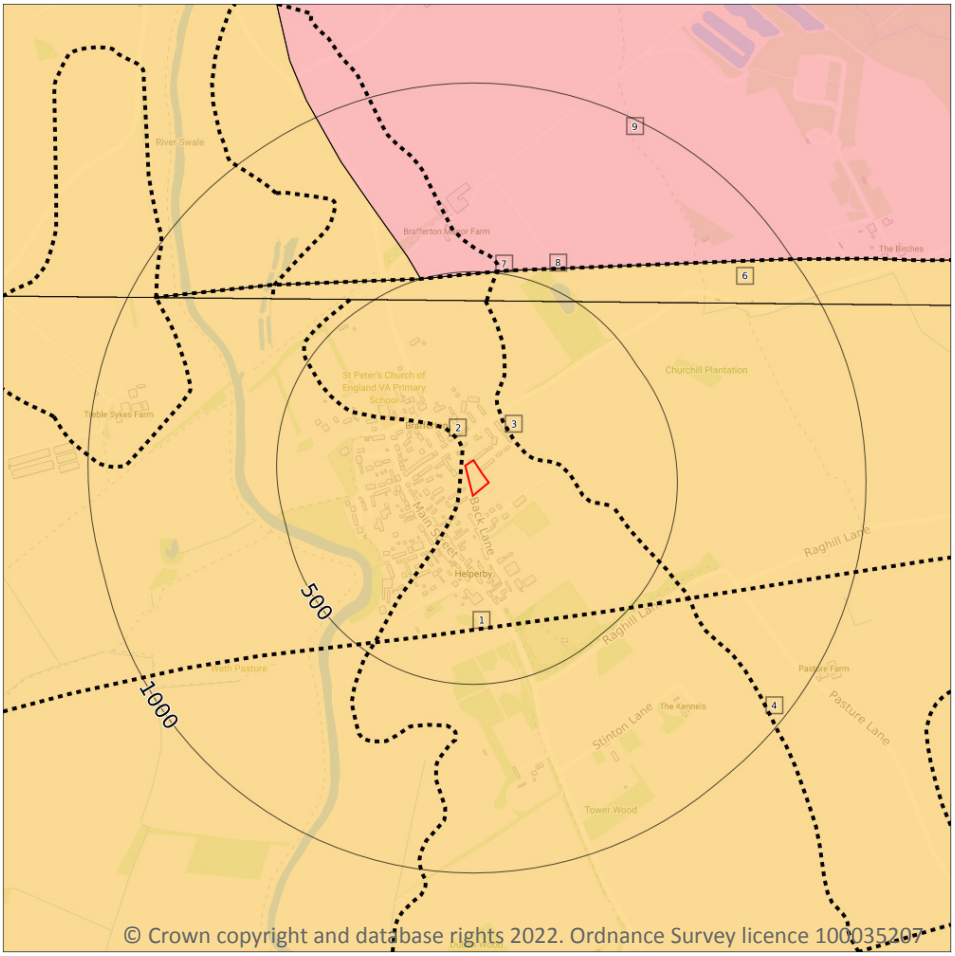
15.7 Landslip permeability (50k)

Records within 50m	**0**

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

This data is sourced from the British Geological Survey.

Geology 1:50,000 scale - Bedrock



Site Outline

Search buffers in metres (m)

Bedrock faults and other linear features (50k)

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

15.8 Bedrock geology (50k)

Records within 500m	3

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

Features are displayed on the Geology 1:50,000 scale - Bedrock map on **page 85**

ID	Location	LEX Code	Description	Rock age
1	**On site**	**SSG-SDST**	**SHERWOOD SANDSTONE GROUP - SANDSTONE**	**-**
6	423m N	SSG-SDST	SHERWOOD SANDSTONE GROUP - SANDSTONE	-
9	492m N	MMG-MDST	MERCIA MUDSTONE GROUP - MUDSTONE	-

This data is sourced from the British Geological Survey.

15.9 Bedrock permeability (50k)

Records within 50m	2

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

Location	Flow type	Maximum permeability	Minimum permeability
On site	**Mixed**	**High**	**High**
32m SW	Mixed	High	High

This data is sourced from the British Geological Survey.

15.10 Bedrock faults and other linear features (50k)

Records within 500m	6

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.

Features are displayed on the Geology 1:50,000 scale - Bedrock map on **page 85**

ID	Location	Category	Description
2	11m W	LANDFORM	Esker, form line at base
3	119m NE	LANDFORM	Esker, form line at base
4	334m E	LANDFORM	Esker, form line at base
5	352m S	FAULT	Fault, inferred
7	424m N	LANDFORM	Esker, form line at base
8	492m N	FAULT	Fault, inferred, displacement unknown

This data is sourced from the British Geological Survey.

16 Boreholes

Site Outline

Search buffers in metres (m)

- Confidential
- 0 - 10m
- 10 - 30m
- 30m+
- Unknown

16.1 BGS Boreholes

Records within 250m	4

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

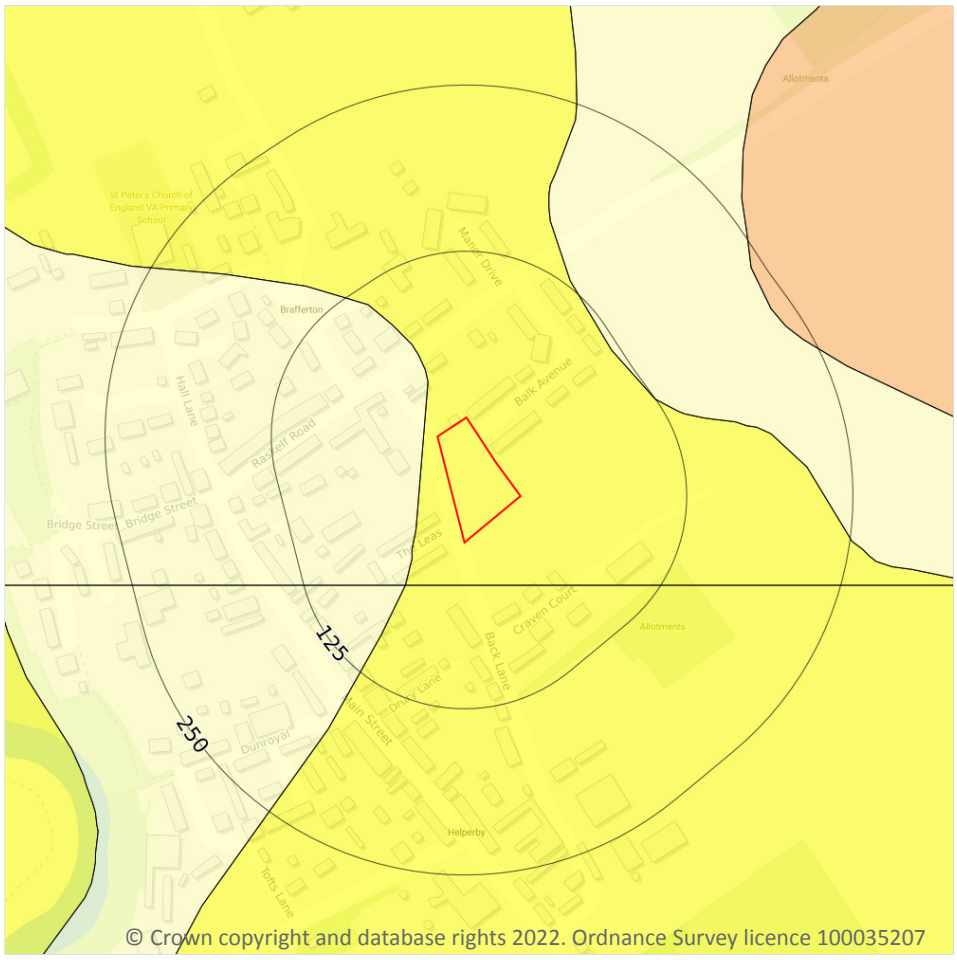
Features are displayed on the Boreholes map on **page 87**

ID	Location	Grid reference	Name	Length	Confidential	Web link
1	20m NE	444000 470140	BRAFFERTON	9.53	N	114753
2	97m N	443962 470220	NEW COUNCIL HOUSES AT BRAFFERTON	30.48	N	114752
3	122m W	443848 470072	WELL AT HIGHFIELD FARM HELPERBY	51.82	N	114757

ID	Location	Grid reference	Name	Length	Confidential	Web link
4	166m SW	443879 469904	HELPERBY	41.15	N	114166

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	3

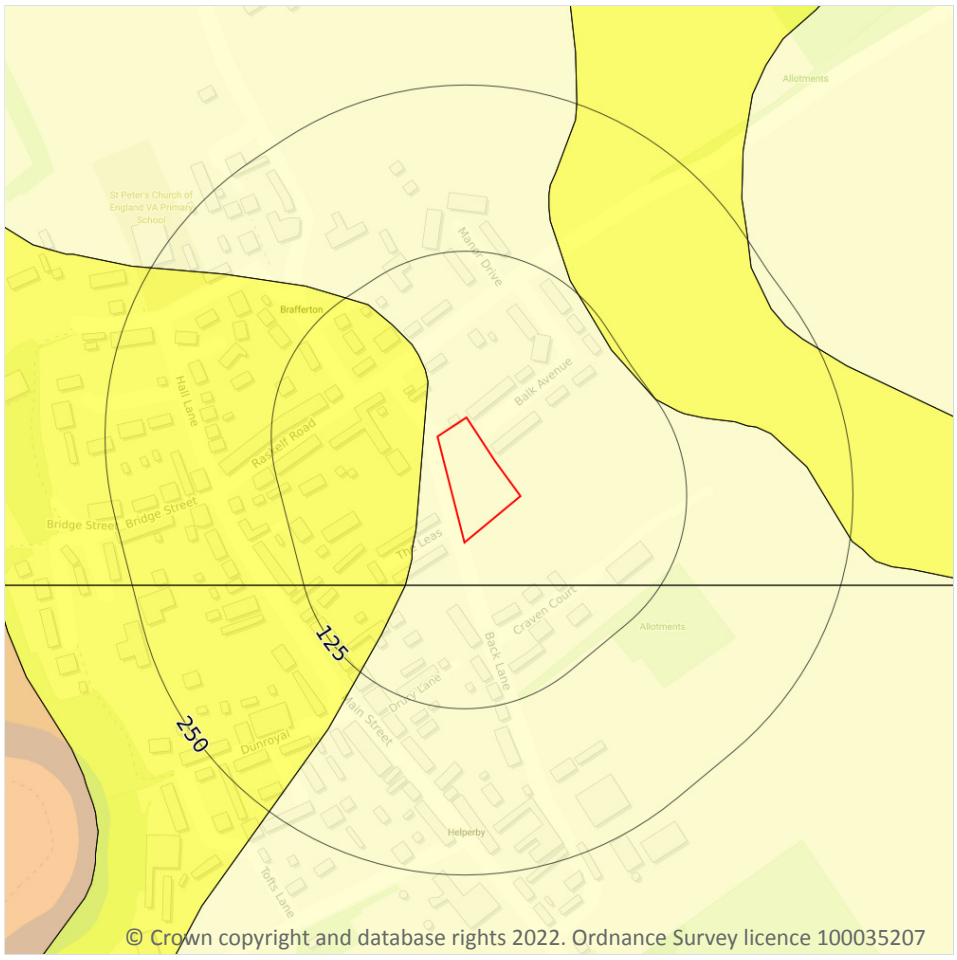
The potential hazard presented by soils that absorb water when wet (making them swell), and lose water as they dry (making them shrink). This shrink-swell behaviour is controlled by the type and amount of clay in the soil, and by seasonal changes in the soil moisture content (related to rainfall and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

Features are displayed on the Natural ground subsidence - Shrink swell clays map on **page 89**

Location	Hazard rating	Details
On site	**Very low**	**Ground conditions predominantly low plasticity.**
11m W	Negligible	Ground conditions predominantly non-plastic.
32m S	Very low	Ground conditions predominantly low plasticity.

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.

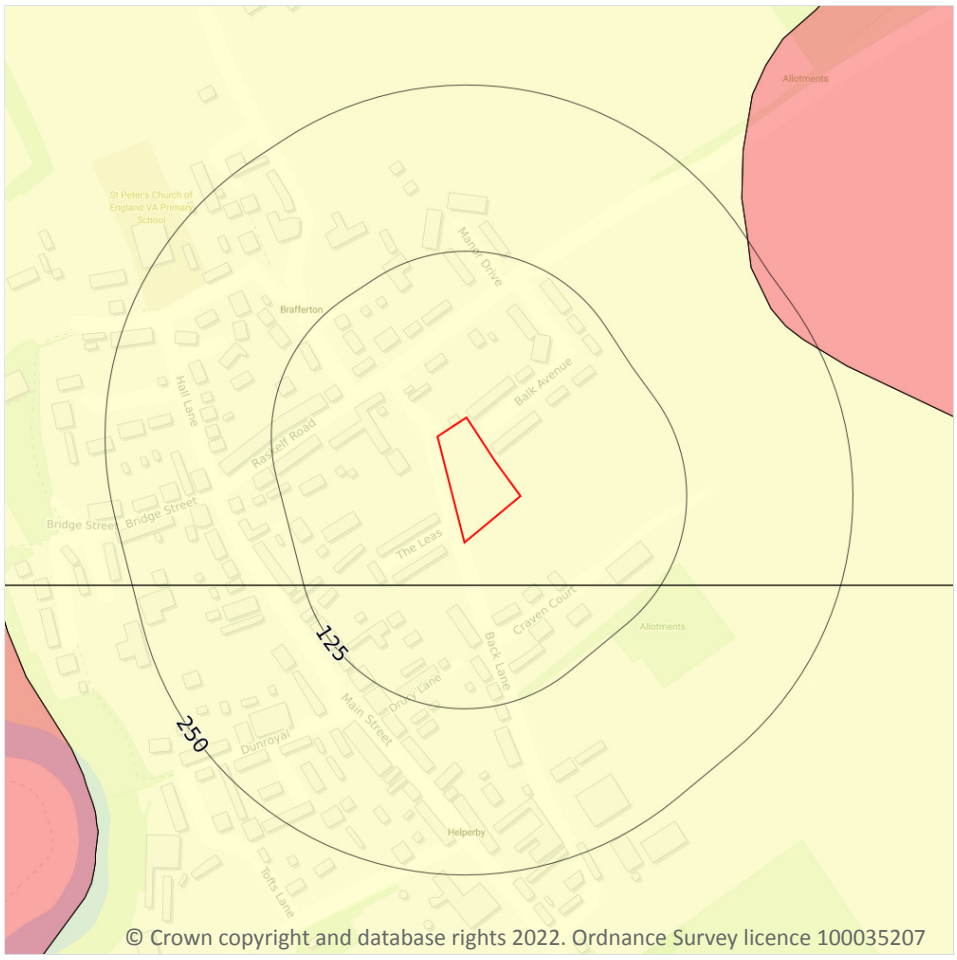
Features are displayed on the Natural ground subsidence - Running sands map on **page 91**

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

Location	Hazard rating	Details
11m W	Very low	Running sand conditions are unlikely. No identified constraints on land use due to running conditions unless water table rises rapidly.
32m S	Negligible	Running sand conditions are not thought to occur whatever the position of the water table. No identified constraints on lands use due to running conditions.

This data is sourced from the British Geological Survey.

Natural ground subsidence - Compressible deposits



Site Outline

Search buffers in metres (m)

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

17.3 Compressible deposits

Records within 50m	2

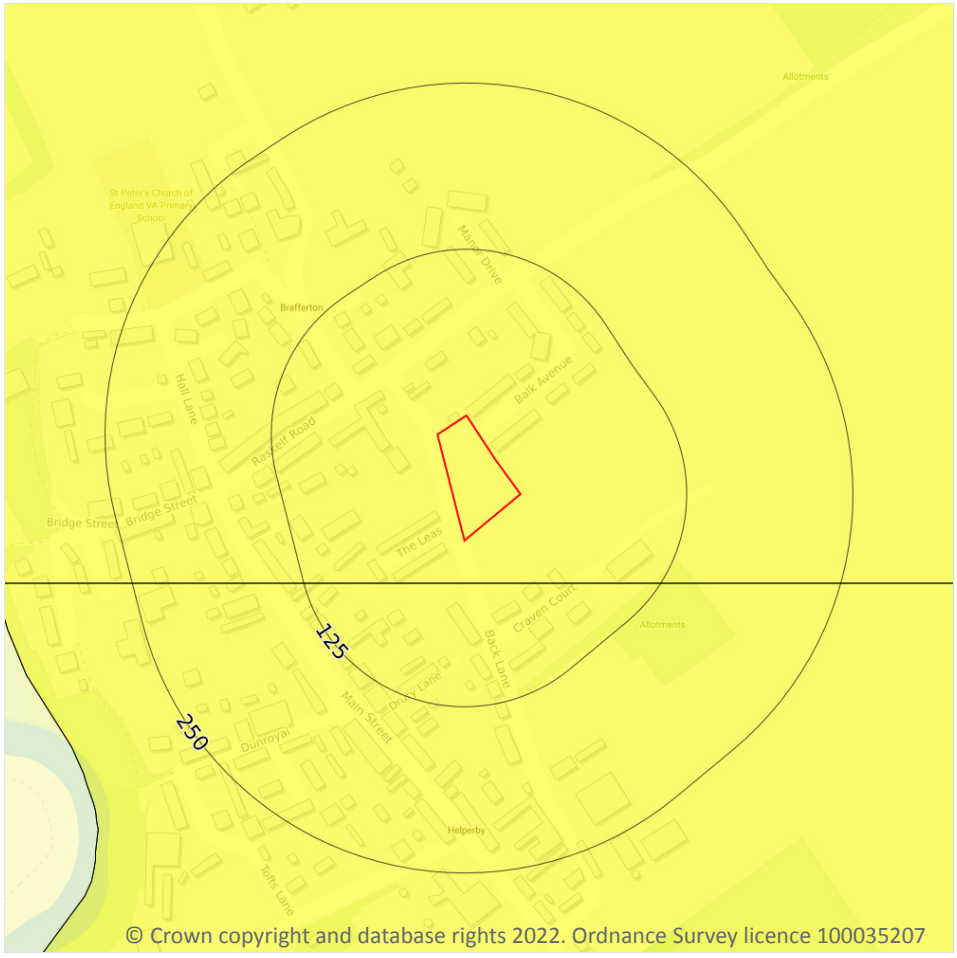
The potential hazard presented by types of ground that may contain layers of very soft materials like clay or peat and may compress if loaded by overlying structures, or if the groundwater level changes, potentially resulting in depression of the ground and disturbance of foundations.

Features are displayed on the Natural ground subsidence - Compressible deposits map on **page 93**

Location	Hazard rating	Details
On site	**Negligible**	**Compressible strata are not thought to occur.**
32m S	Negligible	Compressible strata are not thought to occur.

This data is sourced from the British Geological Survey.

Natural ground subsidence - Collapsible deposits



Site Outline

Search buffers in metres (m)

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

17.4 Collapsible deposits

Records within 50m	2

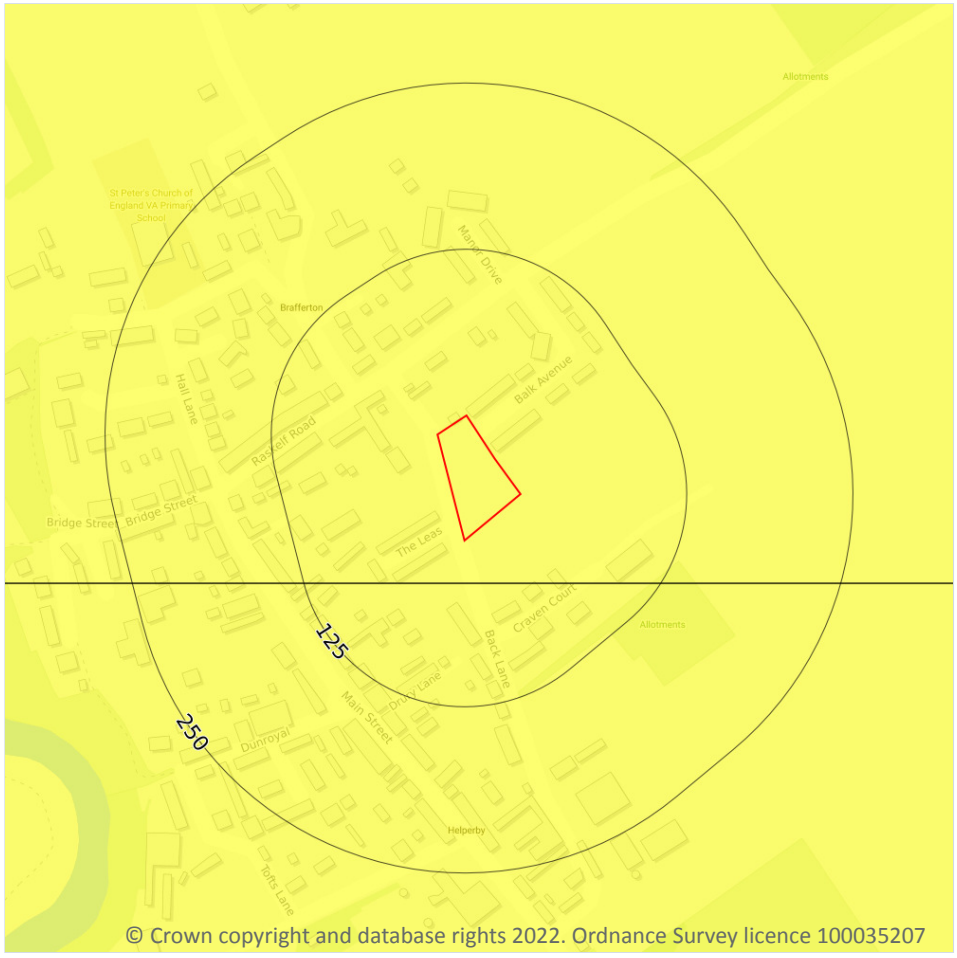
The potential hazard presented by natural deposits that could collapse when a load (such as a building) is placed on them or they become saturated with water.

Features are displayed on the Natural ground subsidence - Collapsible deposits map on **page 94**

Location	Hazard rating	Details
On site	**Very low**	**Deposits with potential to collapse when loaded and saturated are unlikely to be present.**
32m S	Very low	Deposits with potential to collapse when loaded and saturated are unlikely to be present.

This data is sourced from the British Geological Survey.

Natural ground subsidence - Landslides



Site Outline

Search buffers in metres (m)

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

17.5 Landslides

Records within 50m	2

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

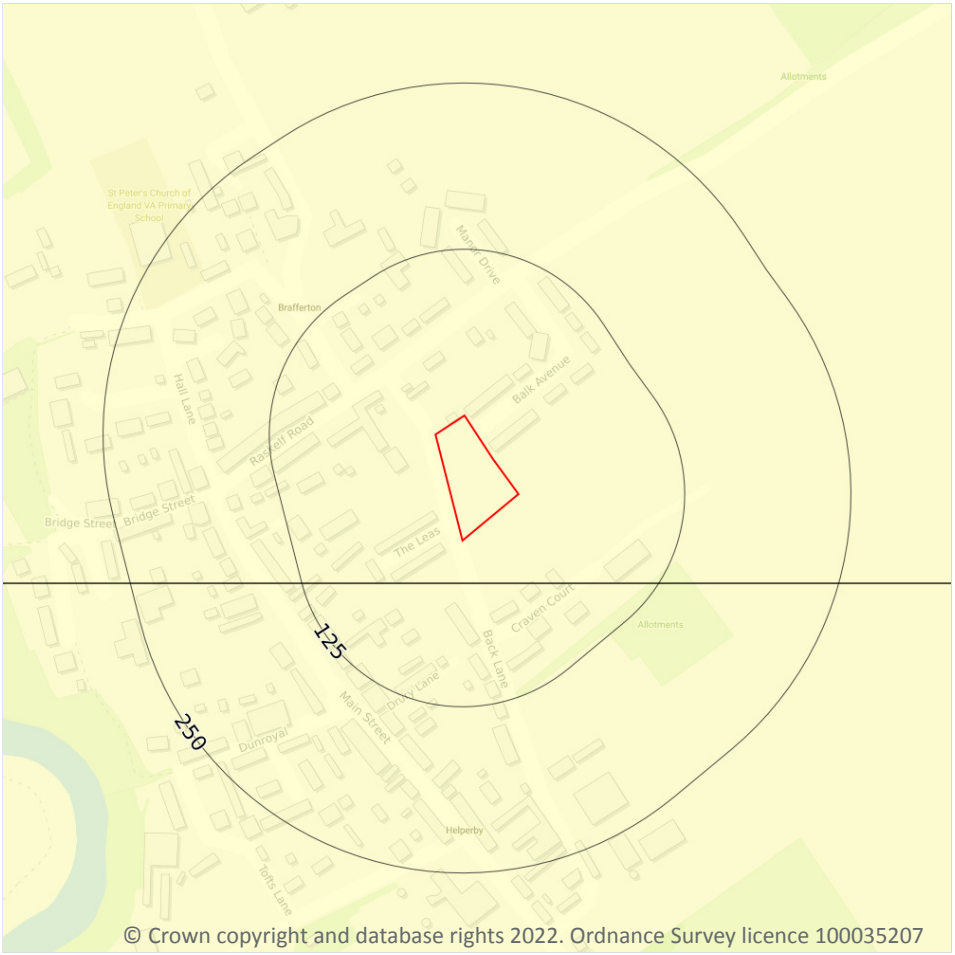
Features are displayed on the Natural ground subsidence - Landslides map on **page 95**

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

Location	Hazard rating	Details
32m S	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



Site Outline

Search buffers in metres (m)

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

17.6 Ground dissolution of soluble rocks

Records within 50m	2

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.

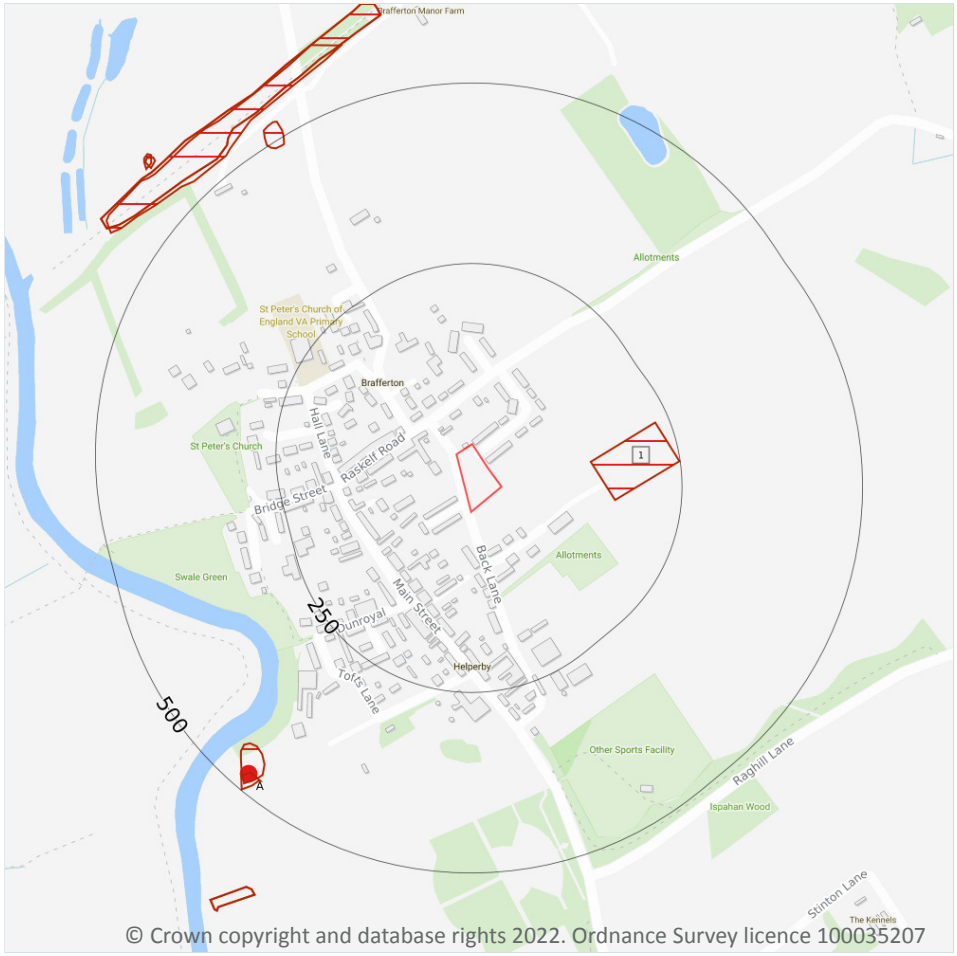
Features are displayed on the Natural ground subsidence - Ground dissolution of soluble rocks map on **page 97**

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.**

Location	Hazard rating	Details
32m S	Negligible	Soluble rocks are either not thought to be present within the ground, or not prone to dissolution. Dissolution features are unlikely to be present.

This data is sourced from the British Geological Survey.

18 Mining, ground workings and natural cavities



Site Outline

Search buffers in metres (m)

- Natural cavities (Area)
- Natural cavities (Point)
- BritPits
- Surface ground workings
- Underground workings
- Historical Mineral Planning Areas
- Mining Cavities

Non Coal Mining

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

18.1 Natural cavities

Records within 500m	0

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

This data is sourced from Stantec UK Ltd.

18.2 BritPits

Records within 500m	1

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

Features are displayed on the Mining, ground workings and natural cavities map on **page 99**

ID	Location	Details	Description
A	476m SW	Name: Helperby Sand Pit Address: Helperby, YORK, North Yorkshire 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.

18.3 Surface ground workings

Records within 250m	1

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, ground workings and natural cavities map on **page 99**

ID	Location	Land Use	Year of mapping	Mapping scale
1	128m E	Sewage Works	1978	1:10000

This is data is sourced from Ordnance Survey/Groundsure.

18.4 Underground workings

Records within 1000m	0

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

This is data is sourced from Ordnance Survey/Groundsure.

18.5 Historical Mineral Planning Areas

Records within 500m	0

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

This data is sourced from the British Geological Survey.

18.6 Non-coal mining

Records within 1000m	0

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

This data is sourced from the British Geological Survey.

18.7 Mining cavities

Records within 1000m	0

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

This data is sourced from Stantec UK Ltd.

18.8 JPB mining areas

Records on site	0

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

This data is sourced from Johnson Poole and Bloomer.

18.9 Coal mining

Records on site	0

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

This data is sourced from the Coal Authority.

18.10 Brine areas

Records on site	0

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

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

18.11 Gypsum areas

Records on site	0

Generalised areas that may be affected by gypsum extraction.

This data is sourced from British Gypsum.

18.12 Tin mining

Records on site	0

Generalised areas that may be affected by historical tin mining.

This data is sourced from Groundsure.

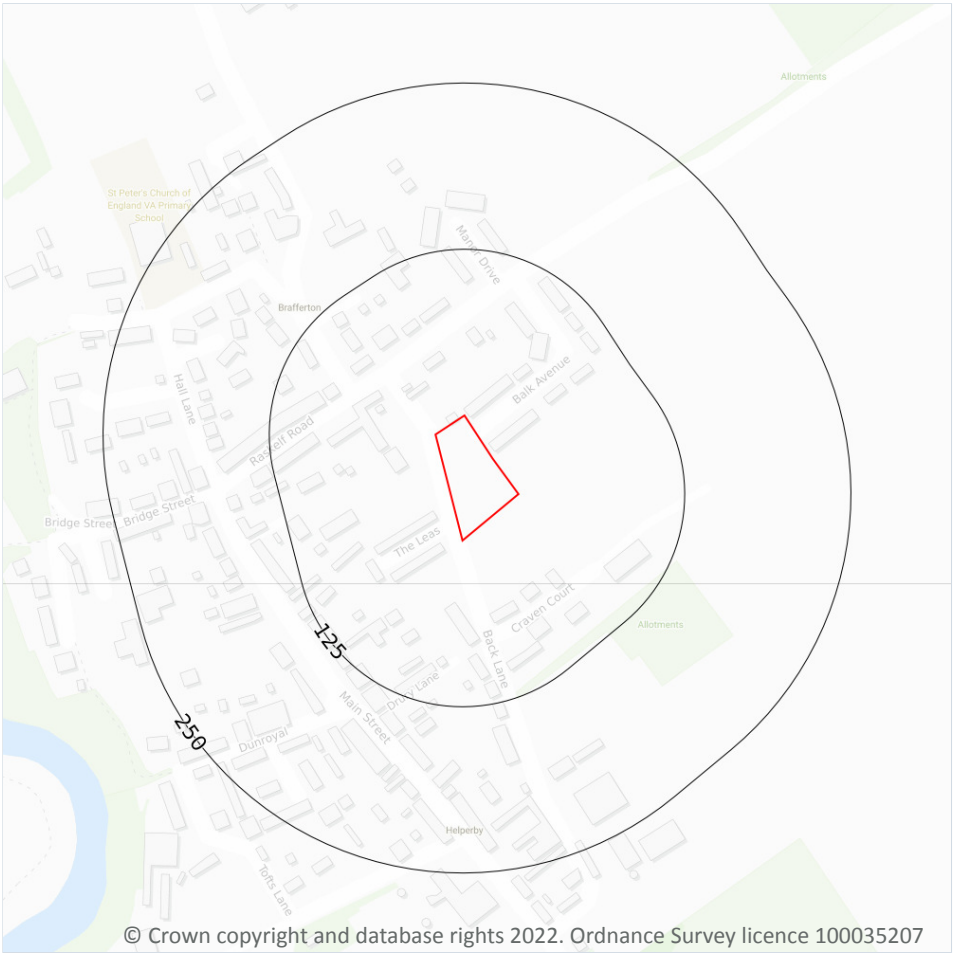
18.13 Clay mining

Records on site	0

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

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

19 Radon



Site Outline

Search buffers in metres (m)

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

19.1 Radon

Records on site	1

Estimated percentage of dwellings exceeding the Radon Action Level. This data is the highest resolution radon dataset available for the UK and is produced to a 75m level of accuracy to allow for geological data accuracy and a 'residential property' buffer. The findings of this section should supersede any estimations derived from the Indicative Atlas of Radon in Great Britain. The data was derived from both geological assessments and long term measurements of radon in more than 479,000 households.

Features are displayed on the Radon map on **page 103**

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

This data is sourced from the British Geological Survey and Public Health England.

20 Soil chemistry

20.1 BGS Estimated Background Soil Chemistry

Records within 50m	10

The estimated values provide the likely background concentration of the potentially harmful elements Arsenic, Cadmium, Chromium, Lead and Nickel in topsoil. The values are estimated primarily from rural topsoil data collected at a sample density of approximately 1 per 2 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**	**300 - 600 mg/kg**	**240 - 360 mg/kg**	**2.2 - 3.0 mg/kg**	**60 - 90 mg/kg**	**15 mg/kg**
On site	**15 mg/kg**	**No data**	**>1200 mg/kg**	**>720 mg/kg**	**>6.0 mg/kg**	**60 - 90 mg/kg**	**15 mg/kg**
On site	**15 mg/kg**	**No data**	**>1200 mg/kg**	**>720 mg/kg**	**>6.0 mg/kg**	**60 - 90 mg/kg**	**15 mg/kg**
10m W	15 mg/kg	No data	>1200 mg/kg	>720 mg/kg	>6.0 mg/kg	60 - 90 mg/kg	15 mg/kg
32m S	15 mg/kg	No data	>1200 mg/kg	>720 mg/kg	>6.0 mg/kg	40 - 60 mg/kg	15 mg/kg
32m S	15 mg/kg	No data	>1200 mg/kg	>720 mg/kg	3.0 - 6.0 mg/kg	40 - 60 mg/kg	15 mg/kg
36m S	15 mg/kg	No data	>1200 mg/kg	>720 mg/kg	>6.0 mg/kg	40 - 60 mg/kg	15 mg/kg
36m SE	15 mg/kg	No data	300 - 600 mg/kg	240 - 360 mg/kg	2.2 - 3.0 mg/kg	40 - 60 mg/kg	15 mg/kg
36m S	15 mg/kg	No data	>1200 mg/kg	>720 mg/kg	3.0 - 6.0 mg/kg	40 - 60 mg/kg	15 mg/kg
36m SE	15 mg/kg	No data	300 - 600 mg/kg	240 - 360 mg/kg	2.2 - 3.0 mg/kg	40 - 60 mg/kg	15 mg/kg

This data is sourced from the British Geological Survey.

20.2 BGS Estimated Urban Soil Chemistry

Records within 50m	0

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

This data is sourced from the British Geological Survey.

20.3 BGS Measured Urban Soil Chemistry

Records within 50m	0

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

This data is sourced from the British Geological Survey.

21 Railway infrastructure and projects

21.1 Underground railways (London)

Records within 250m	0

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

This data is sourced from publicly available information by Groundsure.

21.2 Underground railways (Non-London)

Records within 250m	0

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

This data is sourced from publicly available information by Groundsure.

21.3 Railway tunnels

Records within 250m	0

Railway tunnels taken from contemporary Ordnance Survey mapping.

This data is sourced from the Ordnance Survey.

21.4 Historical railway and tunnel features

Records within 250m	0

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

This data is sourced from Ordnance Survey/Groundsure.

21.5 Royal Mail tunnels

Records within 250m	0

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

This data is sourced from Groundsure/the Postal Museum.

21.6 Historical railways

Records within 250m	0

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

This data is sourced from OpenStreetMap.

21.7 Railways

Records within 250m	0

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

This data is sourced from Ordnance Survey and OpenStreetMap.

21.8 Crossrail 1

Records within 500m	0

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

This data is sourced from publicly available information by Groundsure.

21.9 Crossrail 2

Records within 500m	0

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

This data is sourced from publicly available information by Groundsure.

21.10 HS2

Records within 500m	0

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

This data is sourced from HS2 ltd.

Data providers

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

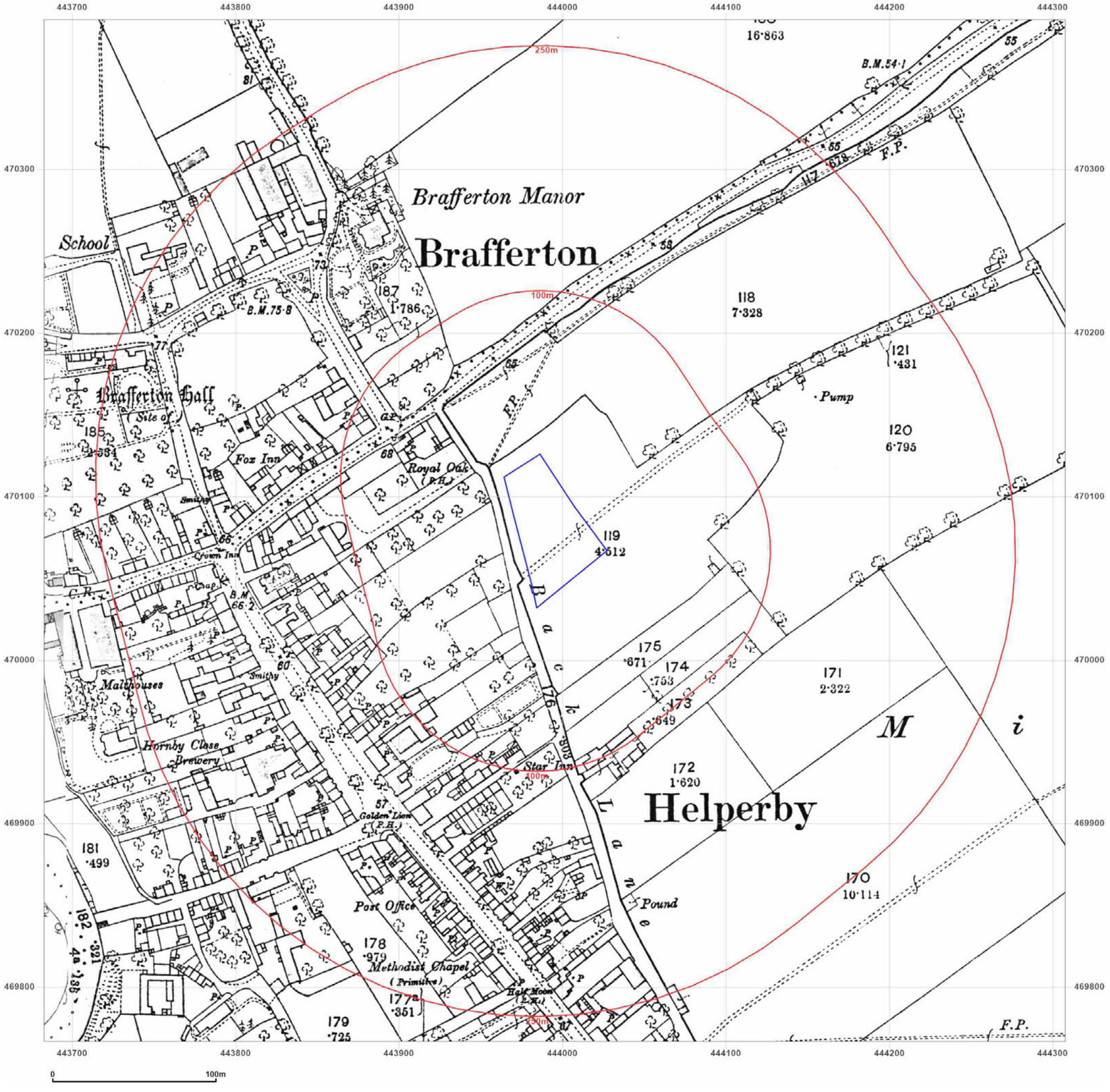
Terms and conditions

Groundsure's Terms and Conditions can be accessed at this link: https://www.groundsure.com/terms-and-conditions-jan-2020/.

Alan Wood & Partners

APPENDIX B

Emapsite: Historical Ordnance Survey Plans



emapsite™

Site Details:

Client Ref: EMS_768866_956664
Report Ref: EMS-768866_994491
Grid Ref: 443995, 470079

Map Name: County Series
Map date: **1890-1892**
Scale: 1:2,500
Printed at: 1:2,500

N
W E
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Surveyed 1892
Revised 1892
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1890
Revised 1890
Edition N/A
Copyright N/A
Levelled N/A

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Production date: 23 March 2022

Map legend available at:
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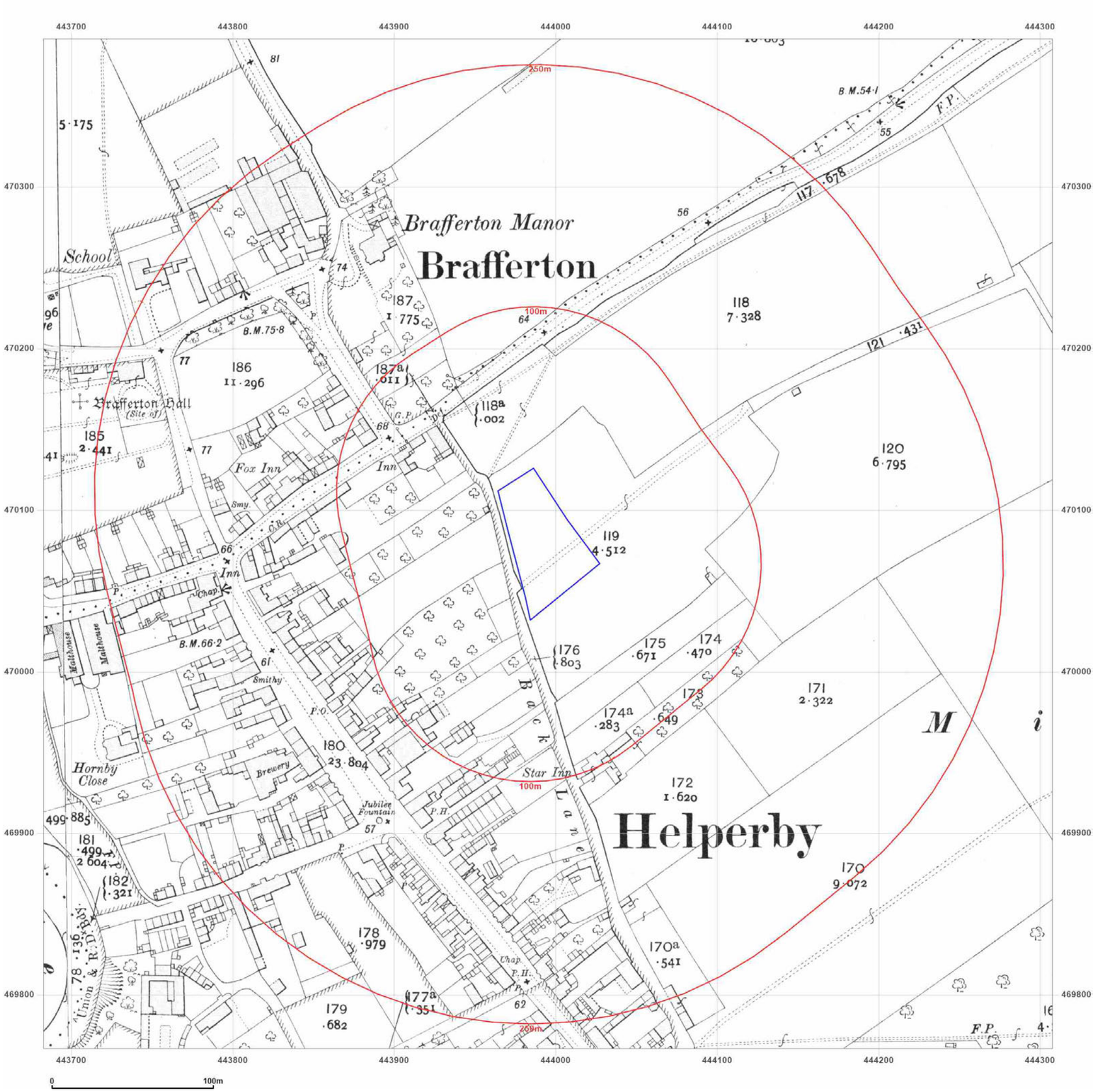

emapsite™

Site Details:

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Report Ref: EMS-768866_994491
Grid Ref: 443995, 470079

Map Name: County Series

Map date: **1909**

Scale: 1:2,500

Printed at: 1:2,500

N
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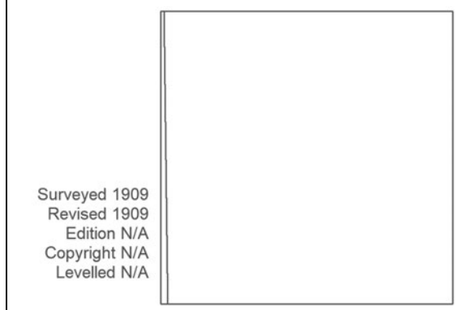

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Site Details:

Client Ref: EMS_768866_956664
Report Ref: EMS-768866_994491
Grid Ref: 443995, 470079

Map Name: National Grid

Map date: **1975-1976**

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 1974
Revised 1974
Edition N/A
Copyright 1975
Levelled 1971

Surveyed 1974
Revised 1974
Edition N/A
Copyright 1976
Levelled 1971

Surveyed 1974
Revised 1974
Edition N/A
Copyright 1975
Levelled 1971

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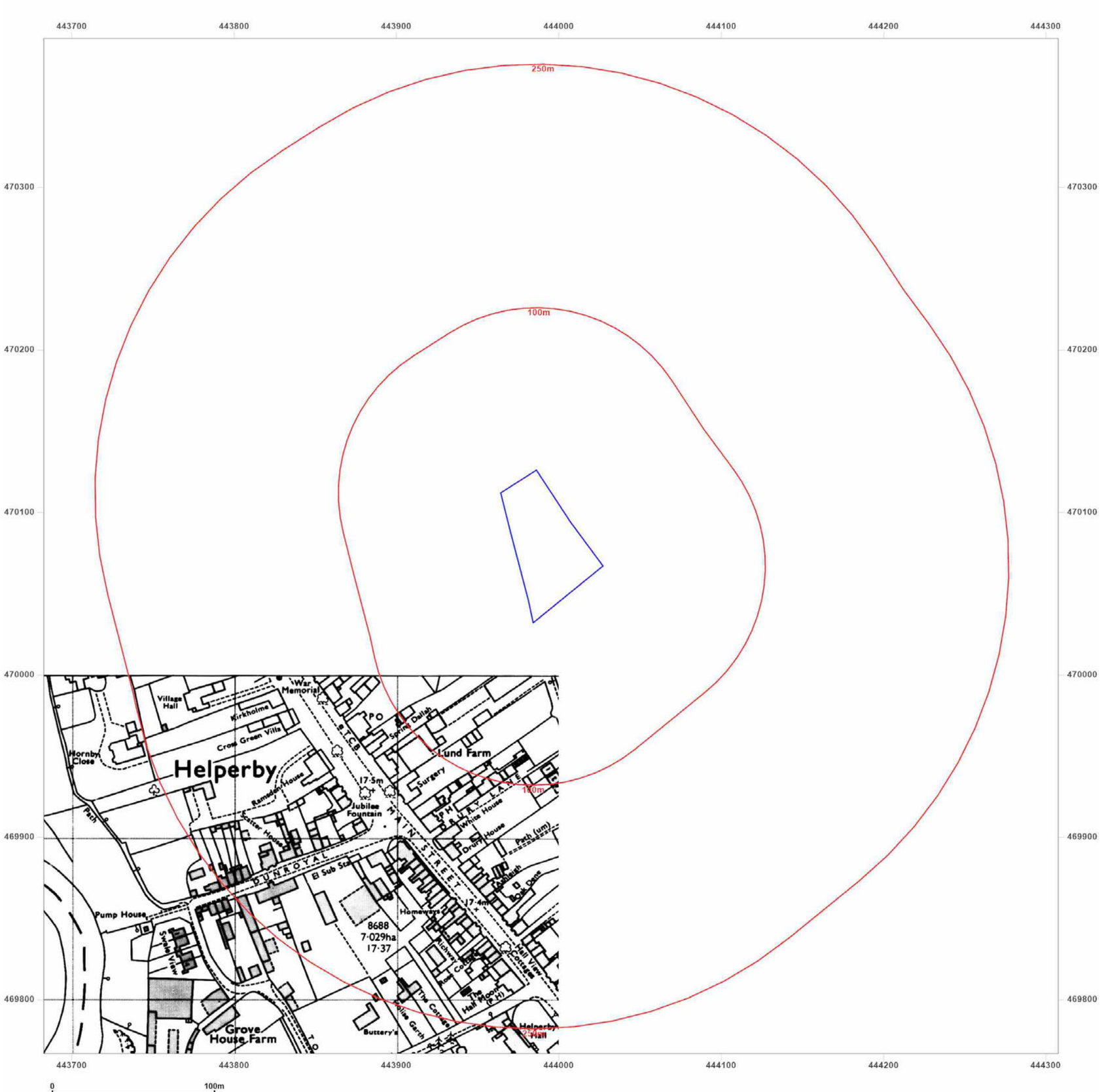

emapsite™

Site Details:

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Report Ref: EMS-768866_994491
Grid Ref: 443995, 470079

Map Name: National Grid
Map date: **1976**
Scale: 1:2,500
Printed at: 1:2,500

N
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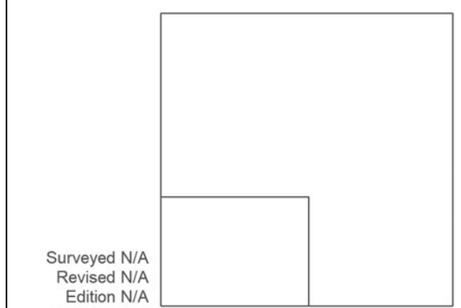

Surveyed N/A
Revised N/A
Edition N/A
Copyright N/A
Levelled N/A

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Site Details:

Client Ref: EMS_768866_956664
Report Ref: EMS-768866_994491
Grid Ref: 443995, 470079

Map Name: National Grid

Map date: **1989-1994**

Scale: 1:2,500

Printed at: 1:2,500

N
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Surveyed 1971 Revised 1989 Edition N/A Copyright 1989 Levelled 1971			Surveyed N/A Revised N/A Edition N/A Copyright 1994 Levelled N/A
Surveyed N/A Revised N/A Edition N/A Copyright 1994 Levelled N/A			Surveyed N/A Revised N/A Edition N/A Copyright 1994 Levelled N/A

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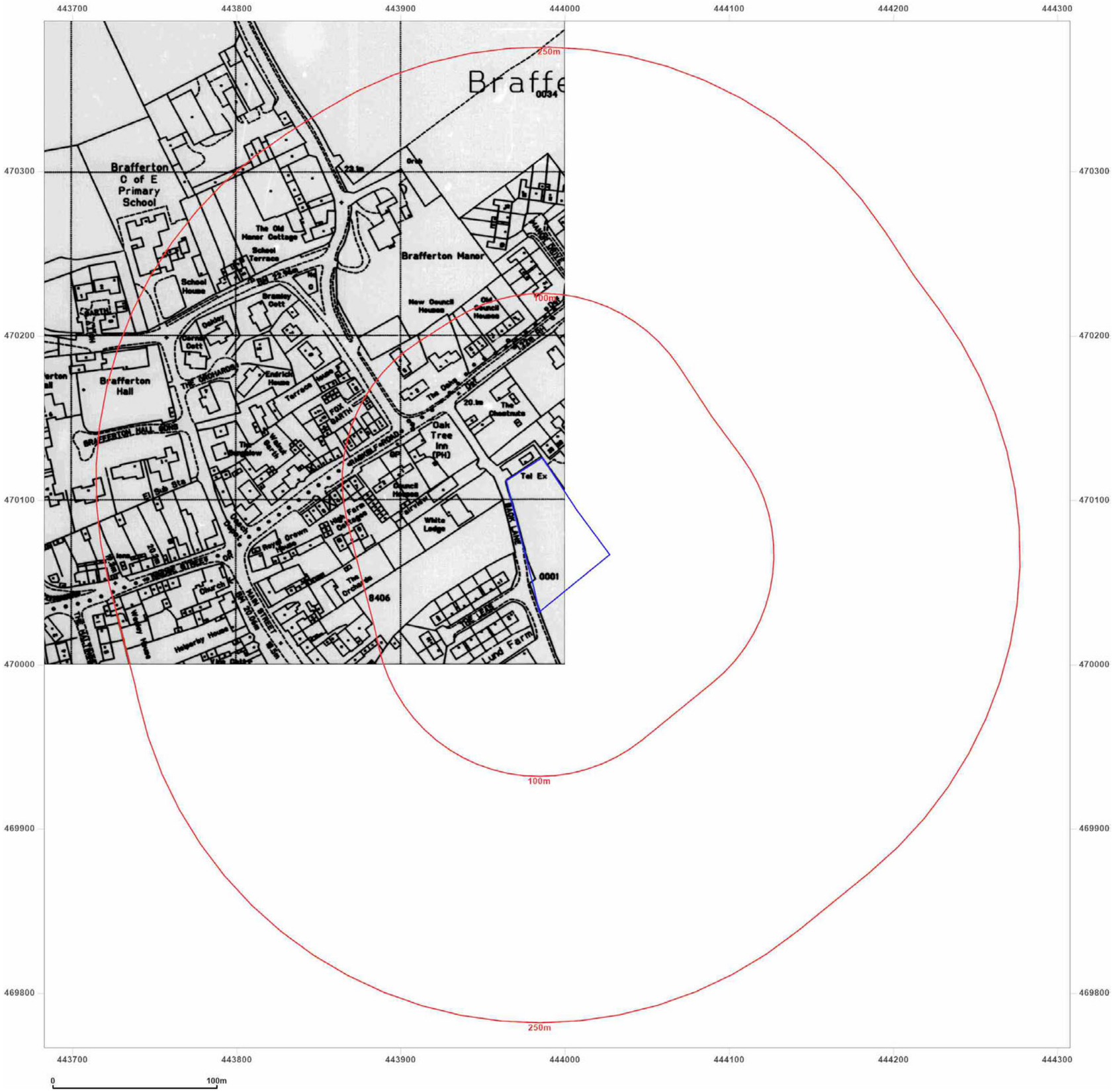

emapsite™

Site Details:

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Report Ref: EMS-768866_994491
Grid Ref: 443995, 470079

Map Name: National Grid

Map date: **1994**

Scale: 1:2,500

Printed at: 1:2,500

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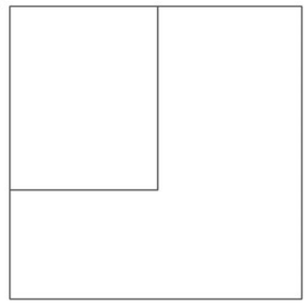
Surveyed N/A
Revised N/A
Edition N/A
Copyright 1994
Levelled N/A



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Site Details:

Client Ref: EMS_768866_956664
Report Ref: EMS-768866_994491
Grid Ref: 443995, 470079

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

N
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2003

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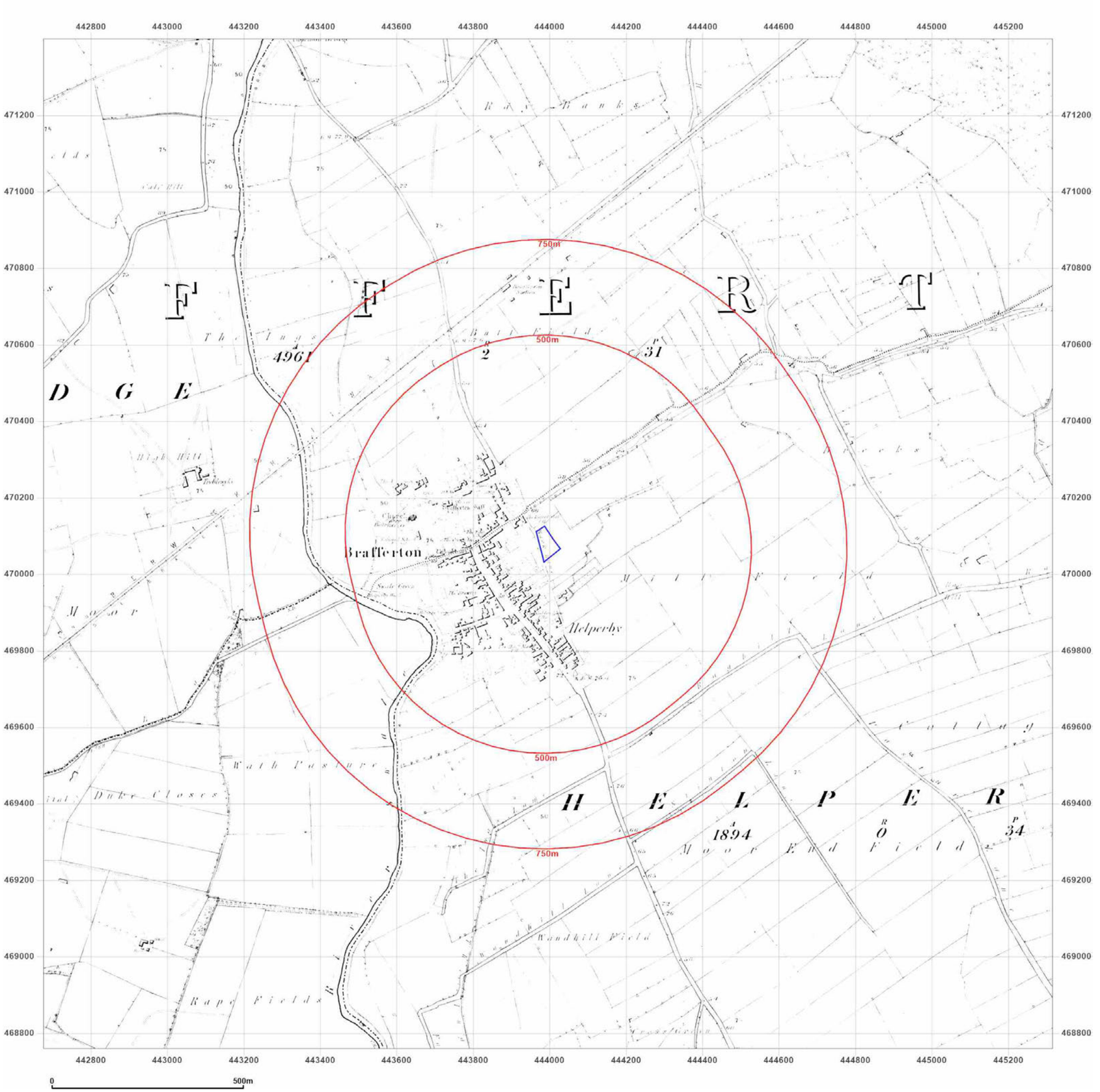

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Report Ref: EMS-768866_994491
Grid Ref: 443995, 470079

Map Name: County Series
Map date: **1853**
Scale: 1:10,560
Printed at: 1:10,560

N
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Surveyed 1853
Revised N/A
Edition N/A
Copyright N/A
Levelled N/A

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Map legend available at:
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Site Details:

Client Ref: EMS_768866_956664
Report Ref: EMS-768866_994491
Grid Ref: 443995, 470079

Map Name: County Series
Map date: **1889**
Scale: 1:10,560
Printed at: 1:10,560

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

Surveyed N/A
Revised N/A
Edition N/A
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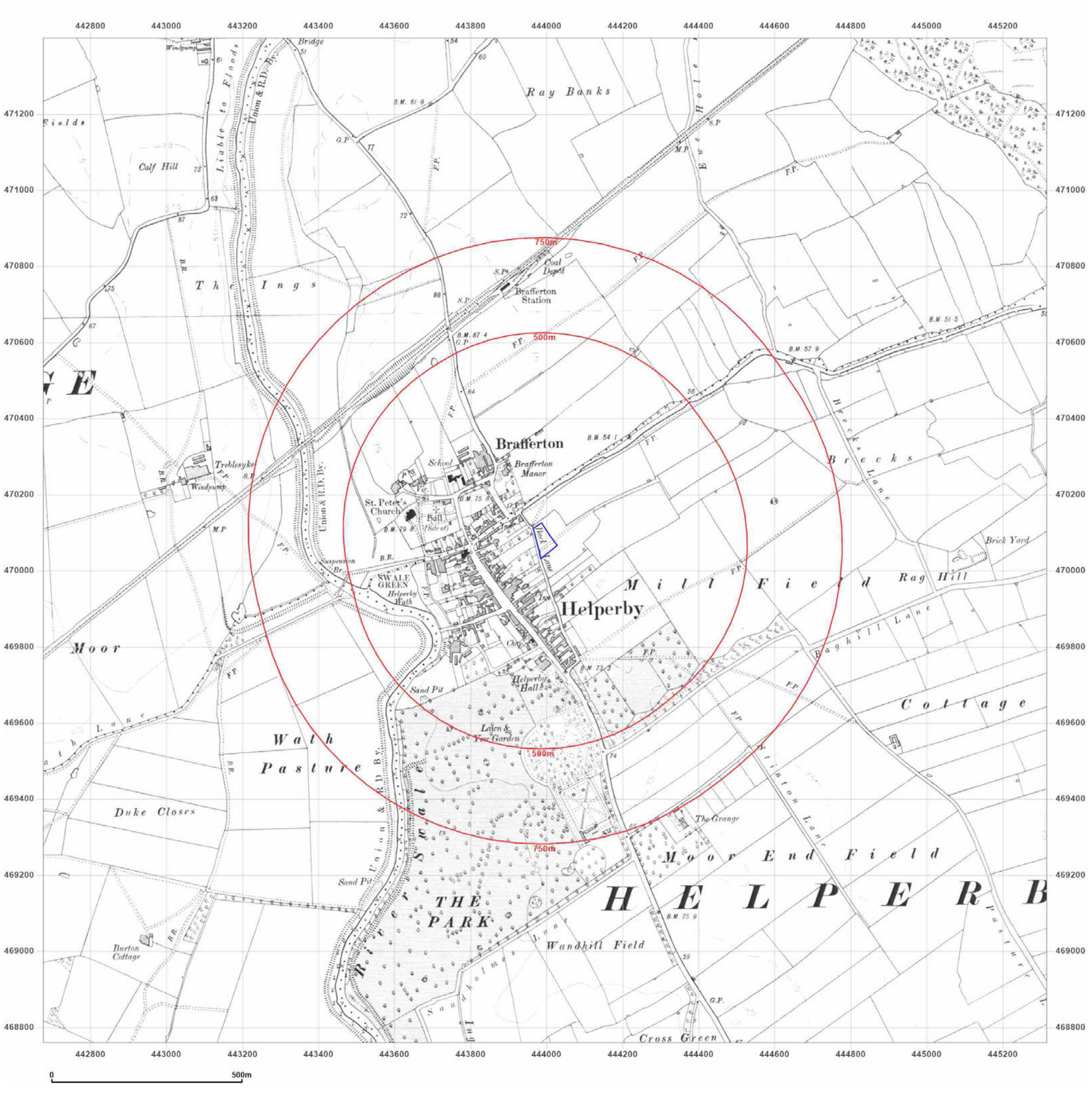

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Site Details:

Client Ref: EMS_768866_956664
Report Ref: EMS-768866_994491
Grid Ref: 443995, 470079

Map Name: County Series

Map date: **1910-1913**

Scale: 1:10,560

Printed at: 1:10,560

N
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Surveyed 1852
Revised 1913
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1852
Revised 1910
Edition N/A
Copyright N/A
Levelled N/A

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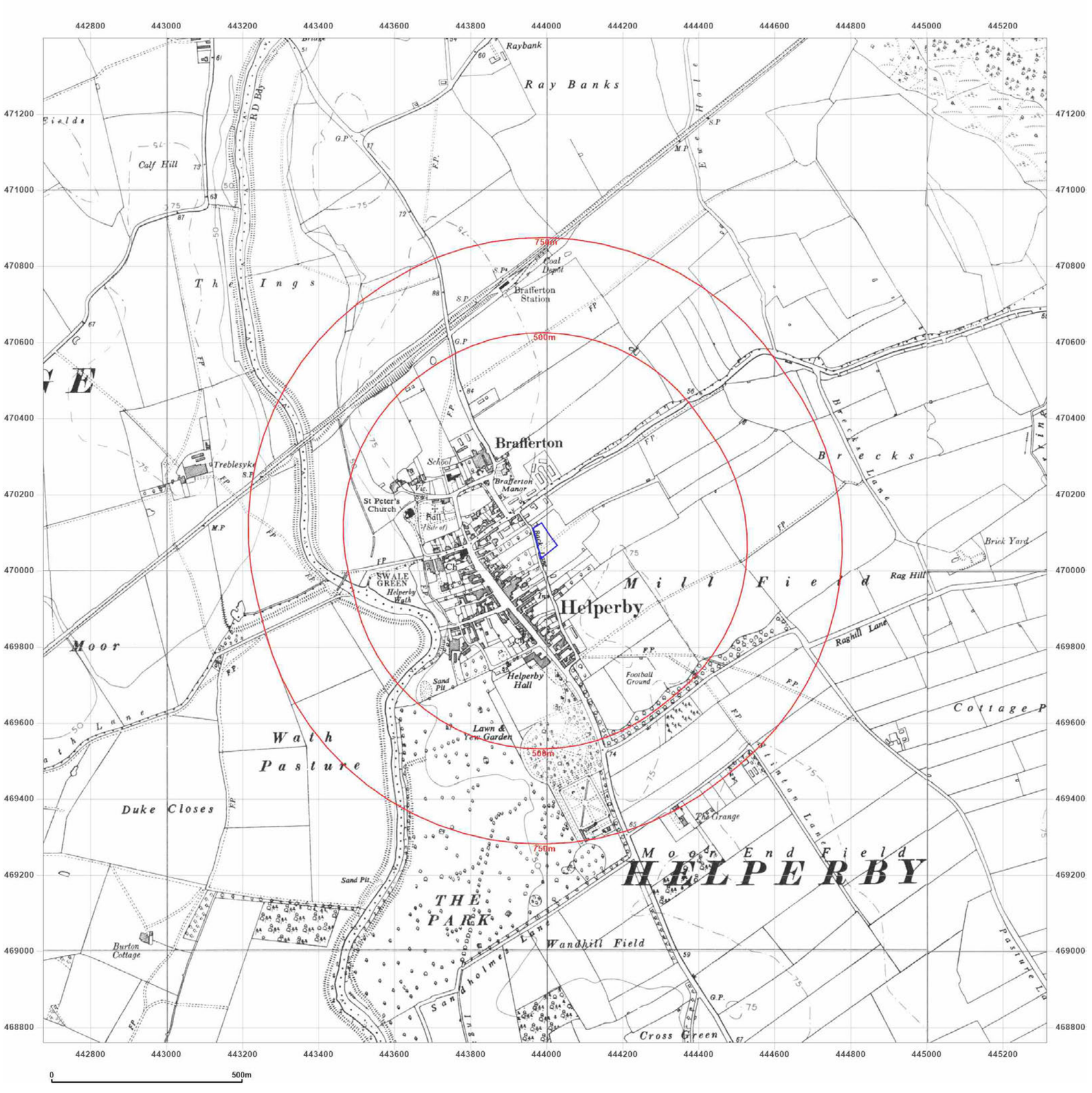

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Report Ref: EMS-768866_994491
Grid Ref: 443995, 470079

Map Name: Provisional
Map date: **1951-1956**
Scale: 1:10,560
Printed at: 1:10,560

N
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Surveyed 1951
Revised 1951
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1951
Revised 1951
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1951
Revised 1951
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1951
Revised 1951
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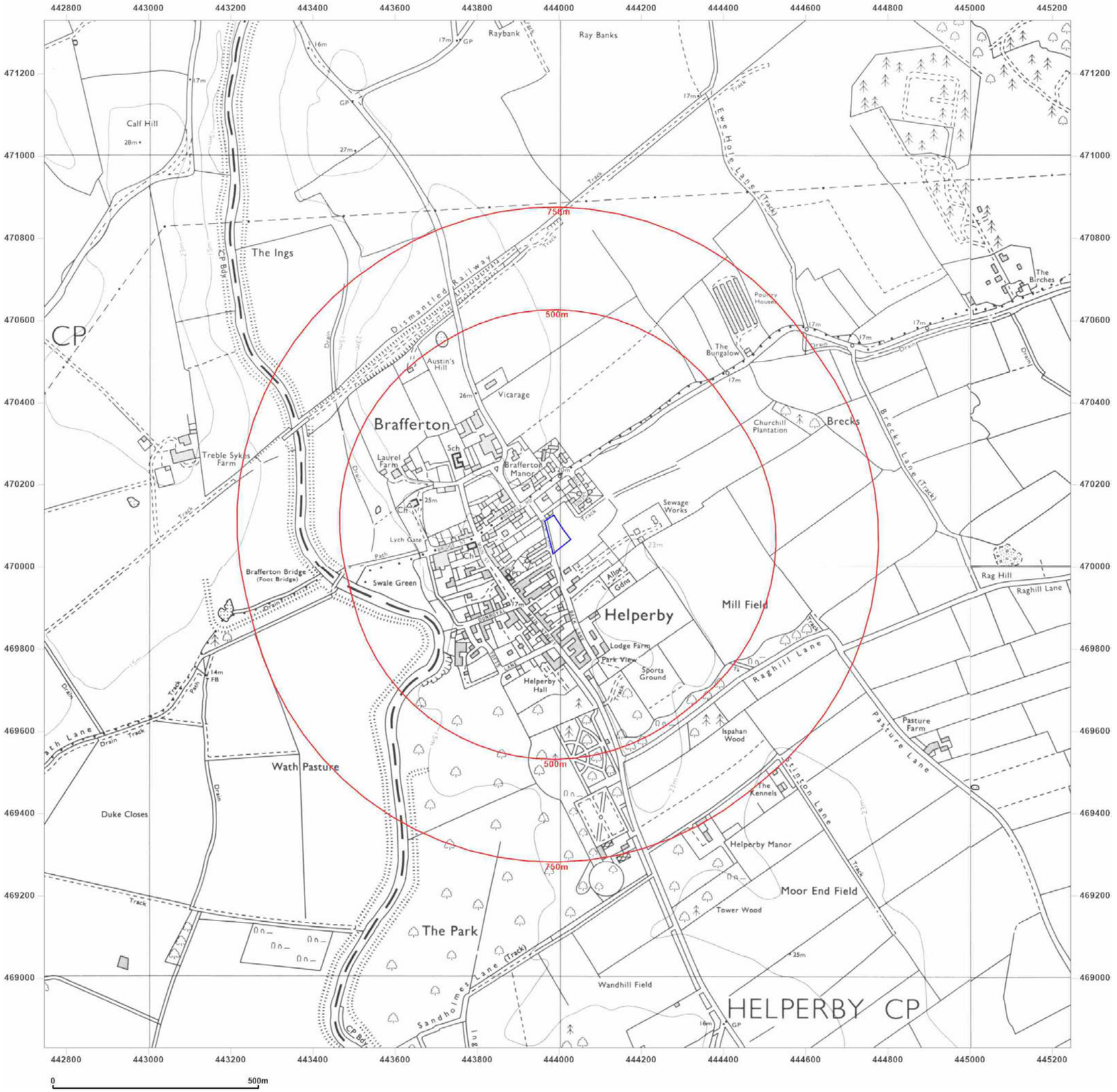

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Report Ref: EMS-768866_994491
Grid Ref: 443995, 470079

Map Name: National Grid

Map date: **1977-1978**

Scale: 1:10,000

Printed at: 1:10,000

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Surveyed 1974
Revised 1978
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1974
Revised 1977
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1974
Revised 1977
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1974
Revised 1977
Edition N/A
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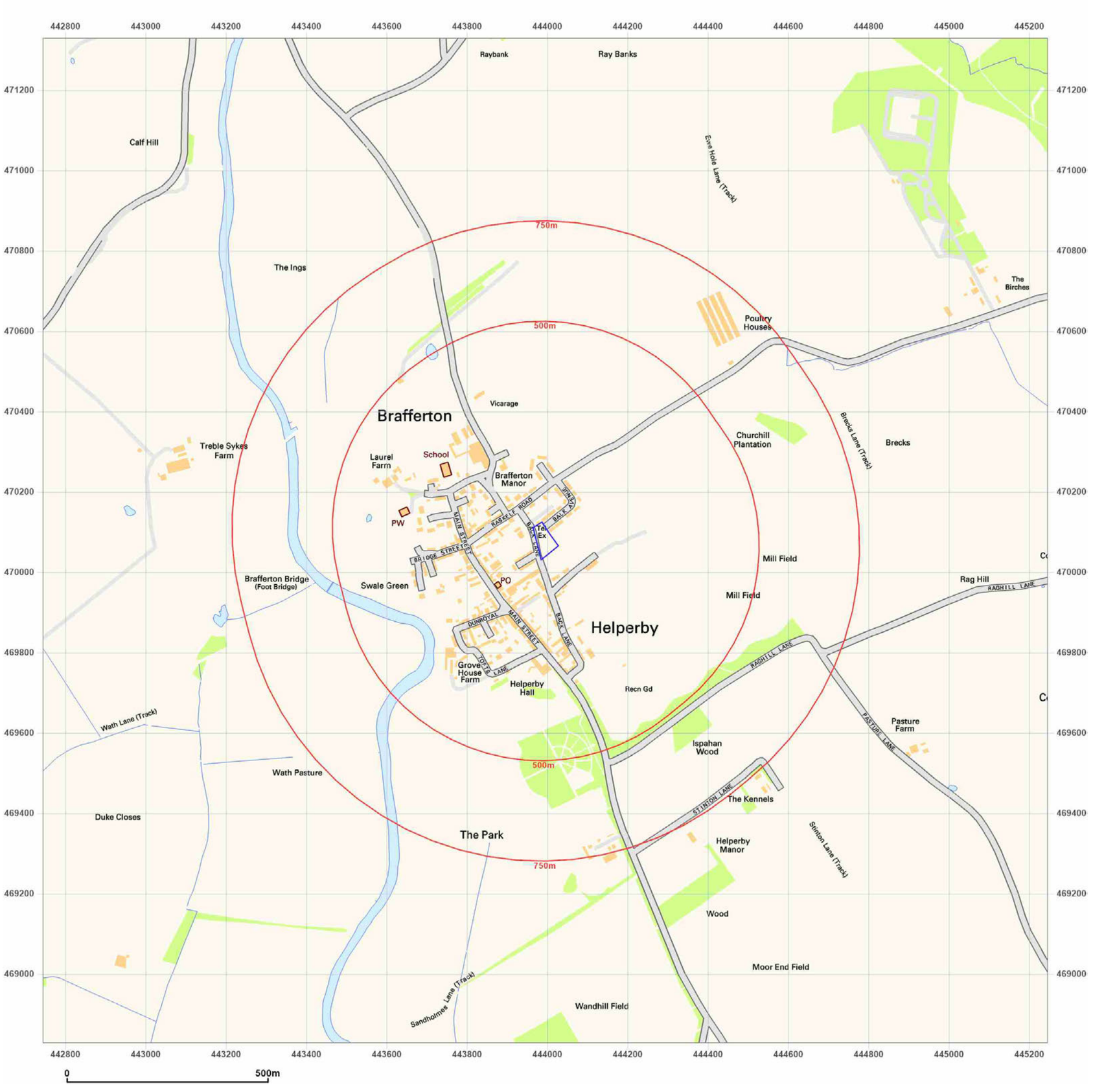

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Report Ref: EMS-768866_994491
Grid Ref: 443995, 470079

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

N
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2001

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Site Details:

Client Ref: EMS_768866_956664
Report Ref: EMS-768866_994491
Grid Ref: 443995, 470079

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

N
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2010

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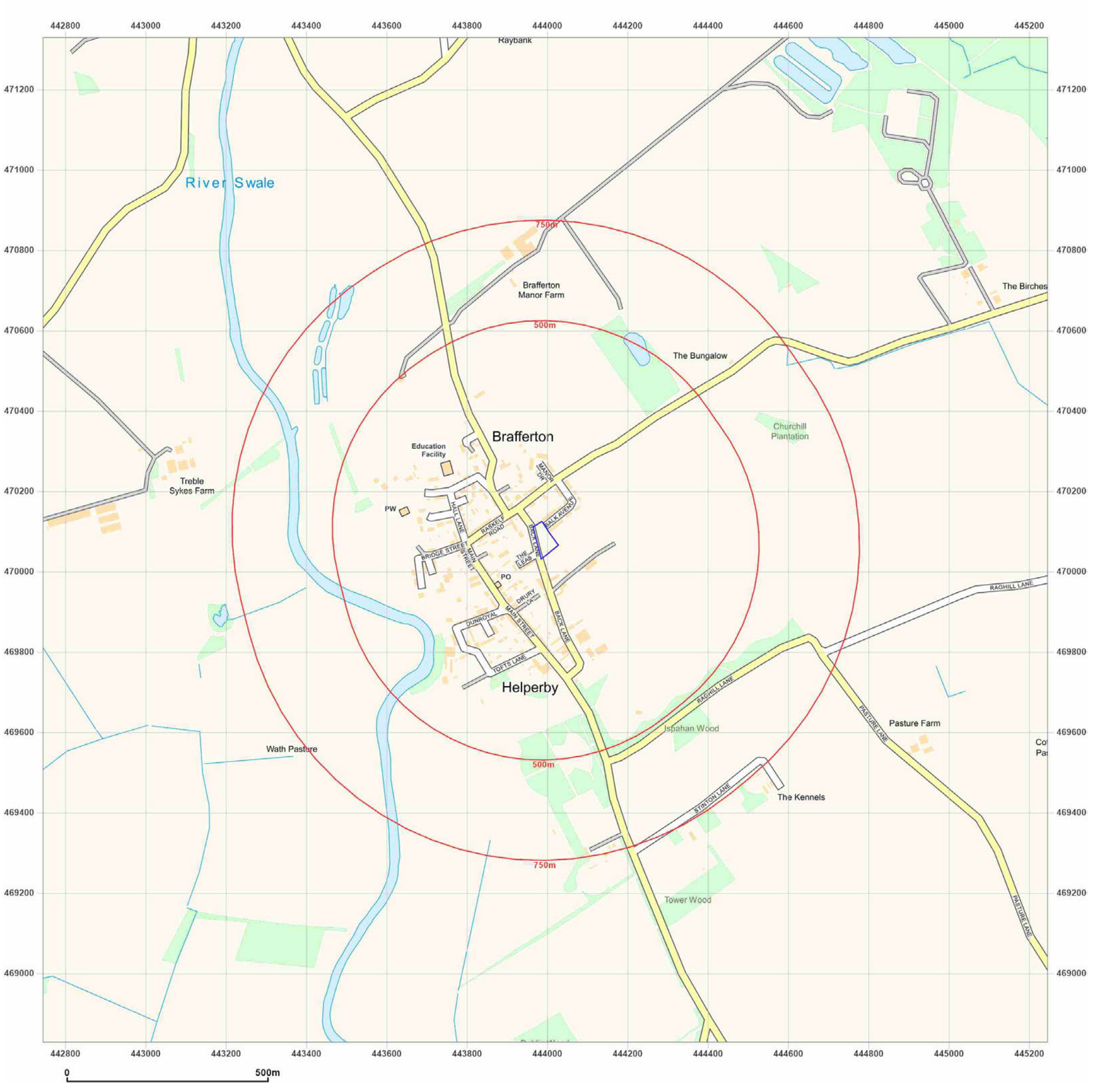

emapsite™

Site Details:

Client Ref: EMS_768866_956664
Report Ref: EMS-768866_994491
Grid Ref: 443995, 470079

Map Name: National Grid

Map date: **2022**

Scale: 1:10,000

Printed at: 1:10,000

N
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2022

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Production date: 23 March 2022

Map legend available at:
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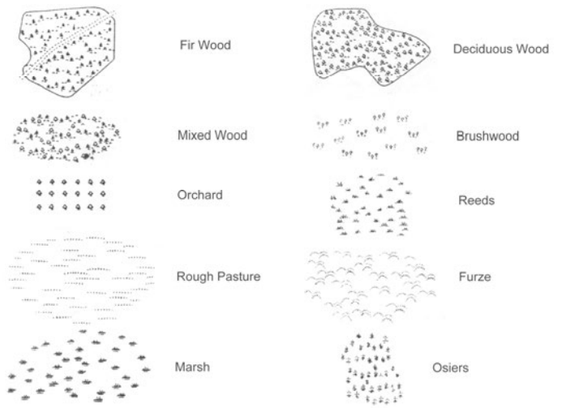
County Series 1:10,560 scale

VEGETATION



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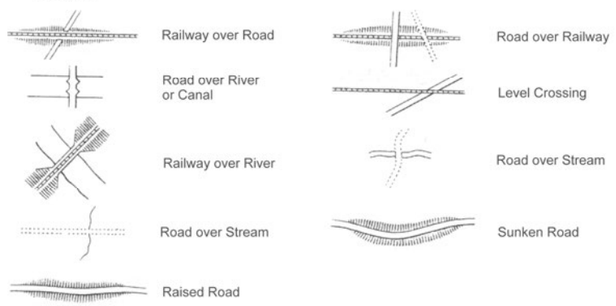
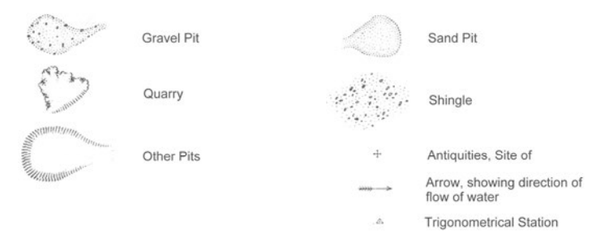


RAILWAYS

GENERAL FEATURES



BOUNDARIES

National Grid 1:10,000 scale

HEIGHTS (METRES)

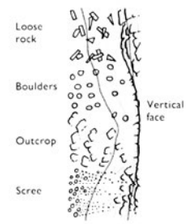
Values are given in metres above mean sea level at Newlyn.

Surface heights determined by: ground survey • 163m; air survey

Bench marks and their values are shown on large scale maps, and bench mark lists containing fuller and possibly later levelling information are obtainable from the Director General, Ordnance Survey.

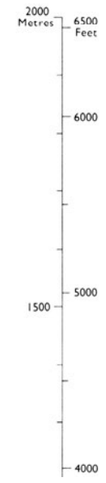
Contours are at 5 metres vertical interval.

ROCK FEATURES



CONVERSION SCALE

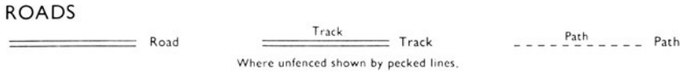
Metres - Feet



ABBREVIATIONS

BP,BS	Boundary Post or Stone	PO	Post Office
Ch	Church	PC	Public Convenience
CH	Club House	PH	Public House
F Sta	Fire Station	S	Stone
FB	Foot Bridge	Spr	Spring
Fn	Fountain	TCB	Telephone Call Box
GP	Guide Post	TCP	Telephone Call Post
MP,MS	Mile Post or Stone	TH	Town Hall
P	Pole or Post	W	Well
Pol Sta	Police Station	Y	Youth hostel

ROADS



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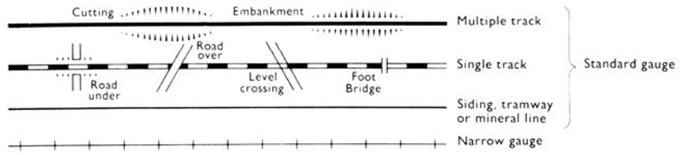

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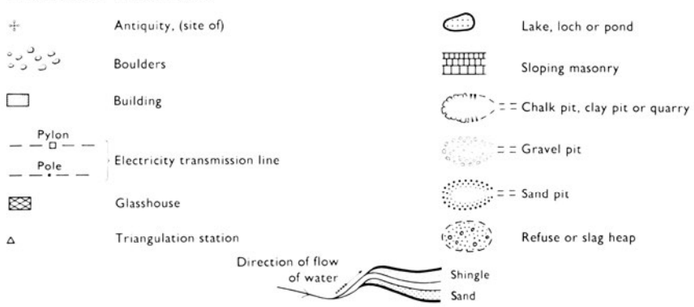


VEGETATION

In some areas bracken ( ) and rough grassland ( ) are shown separately.

GroundSure

Historical Map Pack Legend

County Series & National Grid

1:10,560 scale

Information present on these legends is sourced from the same Ordnance Survey mapping as the maps used in this product.

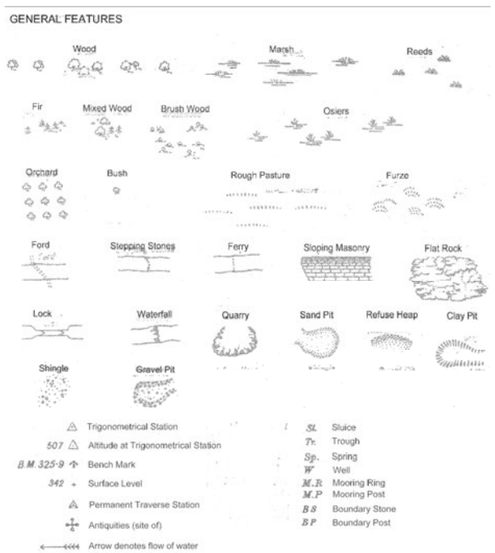
If you have a query regarding any of the maps provided please contact GroundSure's technical helpline. We will endeavour to answer any queries you may have.

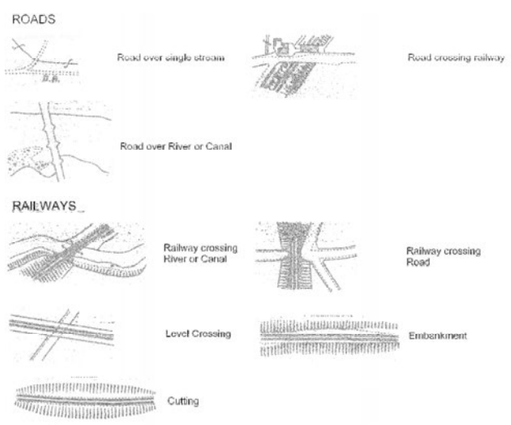
Technical Helpline

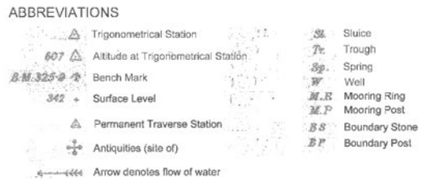
Tel 08444159000

groundsureinsight@groundsure.com
www.groundsure.com

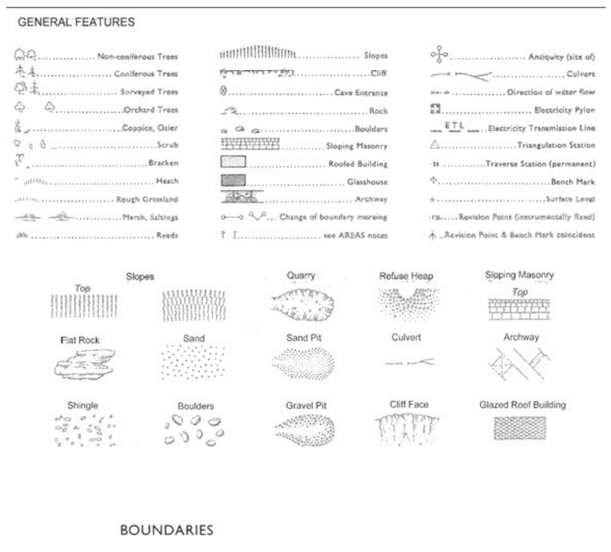
County Series 1:2,500 scale

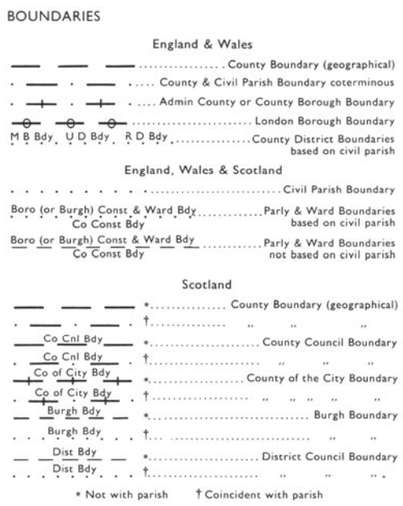


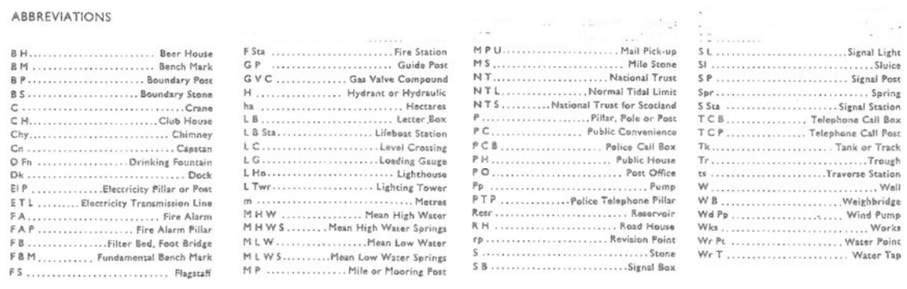




National Grid 1:2,500 / 1:1,250 scale







GroundSure

Historical Map Pack Legend

County Series

1:1,250 scale

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County Series & National Grid

1:2,500 scale

Information present on these legends is sourced from the same Ordnance Survey mapping as the maps used in this product.

If you have a query regarding any of the maps provided within this map pack, please contact GroundSure's technical helpline. We will endeavour to answer any queries you may have.

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