



Geo-Environmental Report

Mill Lane, Bolsover

Dragonfly Developments Ltd.

MAN.1788.001.GE.R.003



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Geo-environmental Report

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Executive Summary

Proposed Development

A residential development comprising residential two story units are proposed.

Investigation

Site works were undertaken by Enzygo Geoenvironmental Ltd. in April 2020, together with monitoring visits.

Ground Conditions

Ground conditions for the site are reported in the Previous Solmek Report and generally comprised variable thickness of Made Ground up to depths in excess of 3.80m thick over drift materials and weathered limestone.

No groundwater was encountered.

Contamination

The previous investigation - Solmek recorded PAH, lead and arsenic contamination for the deep landfill type materials (below of 1.50mbgl), together with a shallow TPH exceedance. Localised hotspot removal is recommended.

Foundations

Piled or mini piled foundations for the site due to the thickness of the Made Ground.

Re-use of Materials

Made Ground is not considered suitable for re-use as general fill.

Pavement Design

An equilibrium CBR of 2% is recommended following proof rolling and removal of loose materials. Soils are not considered to be frost susceptible.

Buried Concrete

It is considered that Class AC-2 conditions of Special Digest 1 can be used site.

Gas and Radon

Basic Radon protection are recommended. Gas monitoring undertaken as part of the previous investigation carried out gas monitoring however we have not had a copy of these gas monitoring results and therefore cannot comment for this site. Based on the present of Made Ground and TPH it is likely that Characteristic situation 2 will be recommended and gas precautionary measures included. Further assessment for this site will be required to confirm this gas risk classification.

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1.0 INTRODUCTION

1.1 Background

1.1.1 Enzygo Geoenvironmental Limited has been commissioned by Dragonfly Developments Ltd to undertake a ground investigation at Land at Mill Lane, Bolsover, Derbyshire, S44 6NP.

1.2 Proposed Development

1.2.1 Dragonfly Developments Ltd are seeking to develop the site for residential use, including site clearance and demolition of the existing buildings.

1.2.2 The Proposed development comprises residential development. The existing layout drawings are given in MAN.1788.001.GE.D001.

1.3 Objectives

1.3.1 The objectives of the study are to:

- Review desk study information, a copy of which is included within Appendix 1;
- Review any available ground investigation data, a copy of the previous report is included in Appendix 2;
- Undertake a targeted ground investigation based on the previous investigation;
- Assess the implications of any potential environmental risks, liabilities and development constraints associated with the site in relation to the future use of the site and in relation to off-site receptors; and
- Provide a factual and interpretative report relating to the desk study and site investigations. Provide a revised conceptual model and recommendations on any potential development issues and mitigation measures, where appropriate.
- Provide geotechnical recommendations in relation to foundations and infrastructure.

1.4 Risk Classification

1.4.1 Enzygo Geoenvironmental has utilised the available information, together with our experience to assess the likely risks to development from land quality issues. Definitions of the risk terms used are provided on the following table.

Table 1.4.1 Risk Classification

Risk	Description
Negligible	No contamination risk has been identified which is likely to affect development.
Low	No significant contaminated land risks have been encountered affecting development and a low risk that remediation will be required.
Low-Moderate	There are unlikely to be significant contaminated land issue associated with the site which will adversely affect its re-development. However, minor or localised contamination may be present requiring remediation. Remediation should be possible under a discovery strategy and with a call out service.
Moderate	Some potential contaminated land risks have been encountered or identified which may affect re- development. The risks identified are unlikely to affect the entire site or preclude development. Remediation is considered feasible as part of the development process and no further investigation is considered necessary.
Moderate-High	Some potentially significant contaminated land risks have been identified at the property that requires remediation. It is recommended that a separate remedial methodology is prepared supported by a site-specific risk assessment
High	Significant potential contaminated land risks have been identified and remediation is required supported by further intrusive ground investigation, risk assessment and remedial design.

1.4.2 Where adverse risks from ground instability are identified these are discussed within the report.

2.0 SITE SETTING

Table 2.0 Site Description

Item	Description
Site Address	Mill Lane, Bolsover, S44 6NP
National Grid Reference	447569,371292

2.1 Current Site Description

- 2.1.1 The following site description has been compiled from the site inspection undertaken by Enzygo Geoenvironmental Limited in April 2020.
- 2.1.2 At the time of the previous reporting the Mill Lane comprised three large buildings surrounded by hardstanding (Yards and car parking).
- 2.1.3 At the time of the current investigation there was no substantial changes the site still comprised hardstanding and three buildings.
- 2.1.4 The site generally slopes gently to the north, however the eastern part of the site is at a lower level than the remainder of the site.
- 2.1.5 The site is surrounded by metal fencing.
- 2.1.6 Drainage and service scars were noted on the hardstanding together with former over-head lighting.
- 2.1.7 There was no evidence of fuel storage on the site.
- 2.1.8 No visible spillages were noted on the site.

2.2 Surrounding Area

- 2.2.1 Land uses surrounding the site are summarised as follows:

Table 2.2.1 Land Use Surrounding the Area

Direction	Land Use
North	Cemetery, Mill Lane and open fields beyond.
South	Allotments, residential houses and playing fields with the school and agricultural fields beyond.
West	Residential Buildings.
East	Agricultural Land.

- 2.2.2 Potential contamination risks are identified associated with the existing industrial/commercial uses of the site. No evidence of spillage or leakage noted risks are considered negligible.
- 2.2.3 There is not considered to be a risk from metals, hydrocarbons and asbestos from Made Ground potentially below areas of hardstanding of the site. As this can easily be remediated during development the risks are considered low.
- 2.2.4 No other significant surrounding or site risks were identified.

3.0 SITE HISTORY

3.1 Historical Maps

3.1.1 A review of historical Ordnance Survey maps and information pertinent to the site and within a 250m radius is summarised below:

Table 3.1.1 Historical Maps

Potentially Contaminative Historical Land Use		
Map Edition	Site	Surrounding Area
1880	Open fields with a road bordering the site (eastern) with access tracks shown on the northern and southern boundaries of the site.	Lime Kiln is shown 20m W with pits 0m S and a quarry 150m SW. a further Lime Kiln is shown 80m NW with a small associated pit. A pond is shown 110m S. A windmill is shown 90m W.
1892	Tracks no longer shown. Footpath dissects from the south west to the north east.	Lime kiln 20m W not referenced however still shown. Lime Kiln 80m N is shown as old Lime Kiln. Quarry 150m SW has enlarged south and south west. Well shown on northern boundary of site. Windmill shown as disused.
1918	Road bordering the site referenced as Oxcroft Lane.	Well no t shown. Lime kiln fields still shown however shown as open land with no workings (possibly infilled). Chimney 80m W.
1961	The site shown as caravan site with amenity buildings in the north section and Mill Lane bordering the western and northern site boundaries. Earthworks and shown to the south of this section of the site (Possibly infilling).	The limekiln Field has been infilled to the north of Quarry roads 150m S and now shown as King George Recreation ground. Works building is shown 10m N . Cemetery 10m NE. Residential development 100m E and SE. Allotments 150m SE. Remining unfilled quarry 150m to 300m S.
1978	The site is infilled with industrial development including a Works and Deport surrounding by hardstanding.	Quarry 150m to 300m S infilled with residential housing. 2 additional works buildings 10mN. Sutherland Farm 120mNE. Allotments 0m SE. works buildings 80m SE.
1991-2010	The site shows three additional works buildings.	Works 0m N reprofiling and shown as a factory.
2010-2020	No significant change.	No significant change.

3.1.2 Made Ground is likely to be present on site resulting from the construction of current development of the site and the infill of the Lime Kiln fields to the south of the site. This will be assessed as part of the investigation. The risk is considered negligible as this can be addressed during development.

3.1.3 There is a potential risk of localised hydrocarbons from the historic depot, although the use of hardstanding should minimise the risk. The risk of widespread contamination is minimal.

3.1.4 No new significant contamination or ground engineering risks are identified.

4.0 ENVIRONMENTAL SETTING

4.1 Ground Conditions

4.1.1 The British Geological Survey (BGS) indicates that the site is underlain by the following geological sequence:

Table 4.1.1 Geological Sequence

Geological Unit	Type	Descriptions	Aquifer Classification
Drift	N/a	N/a	N/a
Solid	Cadeby Formation	Dolostone/ Limestone	Principal

4.1.2 BGS records shows Made Ground on and adjacent to the site associated with the line kiln field being backfilled.

4.1.3 There are no records of landslips on or near to the site.

4.1.4 Records of background soil chemistry for the site show no exceedances above soil guideline values for residential use with plant uptake.

4.1.5 There are no BGS borehole records for the site and the surrounding areas.

4.2 Groundwater

4.2.1 Permeability for the Cadeby Formation is very high to high and fracture based. As this is designated as Principal Aquifer, it is likely that the Dolostone has weathered up to a sand and the high permeability is directly related to the fractures within the dolostone and the granular nature of the weathered materials.

4.2.2 The Ground Sure Report indicates the site is not located within a Source Protection Zone.

4.2.3 There is one groundwater abstraction license within 500m of the site. This is a historical groundwater abstraction from a borehole 311m north and used for general farming and domestic use. It is unknown if this is still in operation. Given the distance and the high permeability and if active this could be considered to be a viable receptor.

4.2.4 BGS records indicate that the site is not within an area where the underlying geology will affect the groundwater levels.

4.3 Coal Mining

4.3.1 The Groundsure Geo Insight report indicates the site is located within an area of potential coal mining and a separate coal mining report was obtained.

4.3.2 A coal mining report from the coal authority was obtained and this is given in Appendix 1. This report confirms that the site has been worked by 7 seams of coal at depths from 200m to 690m and last worked in 1979. Based on this any movement in the ground due to coal mining activity should have stopped. The coal authority reports also indicates that there are no mine shafts within 20m of the site and there are not future plans for opencast workings for coal within 250m of the site.

4.3.3 Based on the Coal mining report the risk of coal mining is dismissed.

4.4 Non-Coal Mining and Cavities

4.4.1 The Groundsure GeolInsight report indicates the site is not at risk from non-coal mining activities.

4.4.2 No significant risks are identified.

4.5 Natural Cavities

4.5.1 No natural cavities are identified below or near to the site.

4.6 Ground Workings

4.6.1 There are a number of Historical Ground workings within 1000m of the site. The closest is associated with the Limekiln filed quarry 0m south of the site and associated with the extraction of dolomite from a surface quarry. This has since been infilled and is marked by the presence of the Made Ground on the southern boundary of the site. There are a number of further lime kilns located 71m to 117m south and to 245m to 284m south west. All of which have ceased and were worked from dolomite. Given the distance of the lime kiln field and the fact that it has been backfilled, further assessment will be undertaken as part of the investigation.

4.6.2 A further ground working feature is located 224m north west and comprises an opencast coal mineral working referenced Shuttlewood. The coal authority mining report confirms no risk to the site from coal mining activities and therefore this potential risk is dismissed.

4.7 Hydrology

4.7.1 The Groundsure Envirolnsight Report indicates there are no inland surface water features within 250m of the site.

4.7.2 There are no surface water abstraction licences within 500m of the site.

4.7.3 Environment Agency records show that the site is located within a flood plain.

4.8 Radon Risk Potential

4.8.1 The Groundsure GeolInsight Report indicates that the site is situated within an area where basic Radon protective measures are necessary for new developments or extensions.

4.9 Natural Hazards Finding

4.9.1 BGS information presented within the Groundsure report identified the following ground conditions:

Table 4.9.1 Natural Hazards

Hazard	Risk Designation (Groundsure)
Shrink Swell	Negligible
Landslides	Very Low
Soluble Rocks	Very low
Compressible Ground	Negligible
Collapsible Rocks	Very low
Running Sands	Negligible

4.9.2 There is a Low risk associated with swelling / shrinking clay. This is likely to be related to the low plasticity of the ground and will be assessed during the phase II investigation. No significant ground hazards are identified.

4.10 Sensitive Land Uses

4.10.1 The site comprises a hardstanding area and agricultural land and so is considered to be of low sensitivity.

4.10.2 No historical features are identified on the site.

4.11 Environmental Sensitivity

4.11.1 Overall the site is currently considered to be of low to moderate environmental sensitivity due to the following:

- The underlying stratum are designated as a Secondary A Aquifer;
- There are several inland water courses on or close to the site;
- The site is not located within a source protection zone;
- There are no potable groundwater abstraction wells within 500m of the site; and
- No ecological designations on the site.

4.11.2 The proposed end use of the site is for residential use and so future sensitivity will be high for end users.

4.12 Industrial Land Uses

4.12.1 Historic industrial land uses on site comprise a works, depot, lime kiln and electricity sub station, together with a further lime kiln field 19m south. All are located on the site and are to be demolished and any contamination risk remediated as part of the proposed development.

4.12.2 In addition to the industrial land uses identified on site and related to the site, further industrial land uses within 250m of the site are generally limited to substations and a chimney, (closest 80m west. Given the distance these are not considered a risk to the site.

4.12.3 There are no fuel filling stations within 250m of the site.

4.12.4 There are no high pressure gas pipelines or electricity cables within 500m of the site.

4.12.5 No other significant potential contamination sources are identified from the register of current land uses.

4.13 Regulatory Database

4.13.1 The following information has been obtained from a commercially available environmental database.

Table 4.12.1 Regulatory Database

Environmental Permits, Incidents and Registers	0-250m	250-500m	Details
Site determined as contaminated land	0	0	Not applicable.
Authorised industrial processes	1	1	9m NW Coalite Chemical Division. Combustions processing, which has been revoked since 2003 and therefore is no risk, however chemical analysis has been undertaken on the boundary of the site as part of the site works
Registered radioactive substances	0	0	Not applicable.
Enforcements, prohibitions or prosecutions	0	0	Not applicable.
Pollution Incidents	0	0	Not applicable.
Consents issued under the Planning (Hazardous Substances) Act 1990	0	0	Not applicable.
Control of Major Accident Hazard (COMAH)/ Notification of Installations Handling Hazardous Substances (NIHHS) sites	0	0	Not applicable.
Records of Licensed Discharge Consents	0	0	Not applicable.

4.13.2 No significant risks are identified from the regulatory data base.

4.14 Landfill Sites and Waste Treatment Sites

4.14.1 The Groundsure report indicates there are no Environment Agency licensed waste sites within 500m of the site.

4.14.2 There is one waste exemption site located 167m to 173m north at Sutherland Farm and was used for disposing waste from dredging, screening and sorting mixed waste, treatment of wood and green waste and on site burning of green waste. Given this distance this is not considered to be a significant risk to the site.

4.14.3 There are no new risks are identified from waste activities.

5.0 PRELIMINARY CONCEPTUAL MODEL

Table 5.1.1 Preliminary Conceptual Model

Source	Location	Exposure Pathway	Potential Receptor	Probability of Exposure	Details
Human Health					
Asbestos, metals and hydrocarbons.	Potential Made Ground.	Ingestion dermal and inhalation.	Construction Workers.	Negligible	Normal construction PPE will address risk under CDM.
			Site users.	Low.	Significant contamination unlikely. Investigation to confirm.
Asbestos, metals and hydrocarbons.	Unforeseen Contamination.	Ingestion dermal and inhalation.	Construction Workers.	Dismissed.	Normal construction PPE will address risk under CDM.
			Site users.	Negligible.	Low sensitivity end use.
Hydrocarbon and metals.	Migration from off-site sources.	Ingestion dermal and inhalation.	Construction Workers.	Low.	Significant contamination unlikely. Investigation to confirm.
			Site users.		
Ground Gas.	Landfill.	Inhalation & Explosive.	Construction Workers.	Dismissed.	No source identified.
			Site users.		
	Potential Made Ground.	Inhalation & Explosive.	Construction Workers.	Negligible.	Significant putrescible material unlikely and gas monitoring to be undertaken as a precaution.
			Site users.		
Radon	bedrock	Inhalation & Explosive	Site users.	Low	Basic radon protection measures recommended
Groundwater					
Hydrocarbon and metals.	Unforeseen Contamination.	Vertical Migration.	Groundwater.	Low.	High permeability soils but widespread contamination unlikely.
Surface Water					
Hydrocarbon and metals.	Unforeseen Contamination.	Horizontal Migration.	River Network.	Low.	High permeability soils but widespread contamination unlikely.
Environmental Receptors					
On site contaminants		Ingestion dermal and inhalation.	Ecology.	Dismissed.	No sensitive ecology designation.
		Direct.	Archaeology.	Dismissed.	None present.
		Direct.	Geology.	Negligible.	No significant source identified. Investigation to confirm.
		Phytotoxic.	Woodland.	Negligible.	Small trees present.
		Phytotoxic.	Crops.	Dismissed.	None present.
		Ingestion dermal and inhalation.	Livestock.	Dismissed.	None present.
Building Services					
On site contaminants		Direct.	Historic Buildings.	Dismissed.	No receptors.
		Direct.	Proposed Buildings.	Dismissed.	No sources identified.
		Permeate into pipework.	Water Pipes/ HP Gas Main	Negligible.	Requirements of Water Authority to be followed.

5.1.1 There are contamination risks associated with the current use of the site as a depot and industrial units and potential fuel storage on the site. In addition, there is likely to be Made

Ground surrounding associated with infilling the adjacent lime kilns fields and the regarding of the site.

5.1.2 The ground investigation will include a standard suite of contamination tests and speciated Total Hydrocarbons.

6.0 PREVIOUS INVESTIGATION

6.1 General

6.1.1 A previous Desk study and site investigation has been undertaken for the site. A copy of this report is given in Appendix 2.

6.1.2 Details of the desk study and ground investigation are included in Phase 2 Site Investigation report (Ref Report S191022) prepared by Solmek Ltd in November 2019. The desk study for the site has been further assessed and is given in the sections above. Summary details of the investigation and provided below:

6.2 Phase II Investigation

6.2.1 The Phase II ground investigation works for the site comprised:

- 6 No shallow boreholes
- 10 trial pits;
- Chemical analysis of soils (10 number samples);
- Chemical testing leachate samples (4 number samples);
- Soakaway testing;
- Geotechnical testing, and
- Groundwater and ground gas monitoring.

6.2.2 Samples of soil were tested for the CLEA metal suite, pH, sulphate, cyanide, phenols, speciated Polycyclic Aromatic Hydrocarbons (PAH), organic carbon Petroleum Hydrocarbon (TPH) and asbestos. In additional Leachate testing was undertaken

6.2.3 Samples for geotechnical testing were sent to the laboratories for the following analysis:

- Moisture content;
- Atterberg Limits Determination; and,
- Soluble sulphate and pH.

6.2.4 Soakaway testing were carried out in trial pits TP4 and TP10 returned infiltration values of 5.49 and 14.2×10^{-06} m/s.

6.3 Summary of Ground and groundwater conditions

6.3.1 The ground conditions encountered comprised Made Ground to depths of between 0.75mbgl to 3.40mbgl. Superficial materials were encountered in Borehole BH1 and Trial pit TP1 and comprised (firm) sandy gravelly clay from 2.20mbgl. Bedrock (weathered limestone) was encountered in nine out of sixteen positions and at depths ranging from 0.75m bgl to 3.60mbgl. Groundwater was not encountered.

6.4 Contamination

- 6.4.1 Contamination was encountered across the site and specifically in Trial pit TP1 (north west of the site), Trial pit TP2 in the centre of the site and Trial pit TP5 towards the south east of the site. The determinants which exceeded the GAC values for lead and arsenic at depths below 1.20m bgl.
- 6.4.2 Further contamination was encountered at shallow levels probably associated with historical spillages (TP10) in the south east of the site where TPH exceeded the Aromatic C₂₁ to C₃₅ threshold (2300mg/kg compared to GAC of 1700mg/kg).
- 6.4.3 PAH exceedances (Benzo(a)pyrene, Benzo(b) fluoranthene and Dibenzo(ah)anthracene) were also encountered below 1.20mbgl and within the Made Ground in trial pits TP1 and TP5. Further analysis of these results indicate that the likely PAH source was combustion products.
- 6.4.4 No asbestos was encountered.
- 6.4.5 A sulphate exceedance of the leachate was encountered in one sample (TP2 at 1.20mbgl to 1.70mbgl).

6.5 Ground gas

- 6.5.1 Ground gas monitoring was undertaken as part of the investigation however Enzygo has not seen a copy of the addendum report for these results. As a very minimum basic radon protection measures are recommended.

6.6 Buried concrete

- 6.6.1 Results of the sulphate testing indicate that soils have soluble sulphate concentrations of less than 0.5 g/l consistent with DS1 Conditions of BRE Special Digest 1 and as such buried concrete may be designed in accordance with ACEC Class AC-1s.

6.7 Conceptual model

- 6.7.1 Based on the findings of the desk study and ground investigation a revised conceptual model has been incorporated into the final conceptual model presented.

7.0 SITE INVESTIGATION

7.1 General

7.1.1 A site investigation was undertaken by Enzygo Geoenvironmental Limited during March 2020 and 5 soakaway trial pits (SA06 to SA10). The ground investigation was undertaken in addition to the investigation outlined in the previous report. Details of the previous investigation have been summarised in the sections below.

7.1.2 Locations of exploratory holes advanced by Enzygo Geoenvironmental Limited and Solmek are presented on Drawing MAN.1788.001.GE.D.001. Exploratory holes were located taking account of the proposed development, existing structures and to avoid known services Five soakaway tests were undertaken site.

7.1.3 Locations of exploratory holes are summarised on the table below:

Table 6.1.3 Exploratory Holes for both the current and previous ground investigations

Rational	Exploratory Holes	Notes
Groundwater and gas.	BH01, BH03, BH04 and BH06	Installation.
Site Coverage	TP1 to TP10, BH01 to BH06 and SA6 to SA10.	Site Coverage.
Foundations to proposed	BH01 to BH06 and TP1 to TP10.	Below adjacent to proposed structure.

7.2 Site Works

7.2.1 The density of granular soils and shear strength of the cohesive soils was measured using a Standard Penetration Tests (SPT). Results are included on the logs presented in Appendix 3 and within the previous ground investigation report for the western site.

7.2.2 Representative soil samples were collected for chemical and geotechnical testing. Soil samples destined for chemical analysis were collected in appropriate containers provided by the analytical laboratory. Samples were stored in cool boxes prior to dispatch to the laboratory for analysis. All samples were collected using appropriate sampling equipment that was cleaned at each sampling location.

7.2.3 Generally samples were collected from Made Ground, which may contain potential inclusions of contaminating materials and also materials displaying evidence of potential contamination.

7.2.4 In the absence of any evidence of contamination samples were collected near surface as this material is more likely to be contaminated by surface spillages and also will potentially be in contact with future land uses.

7.3 Laboratory Testing

7.3.1 Based on the previous report samples for geotechnical testing were sent to the laboratories for the following analysis:

- California Bearing Ratio (CBR) undertaken on a re-compacted samples;
- Moisture Content;
- Atterberg Limits Determinations;

- Particle Size Distribution Tests (PSD); and
- Soluble sulphate and pH.

7.3.2 Soil samples for chemical analysis were sent to the Laboratories. Samples were tested for the CLEA metal suite, pH, sulphate, cyanide, phenols, speciated Polycyclic Aromatic Hydrocarbons (PAH), organic carbon, banded aliphatic and aromatic Total Petroleum Hydrocarbon (TPH), and asbestos screen.

7.4 Soakaway testing

7.4.1 Five soakaway tests were undertaken on the site in the trial pits (SA6 to SA10) and to a depth of 2.00mbgl, however three of the pits on the site were not undertaken as deep Made Ground was encountered to beyond 3.80mbgl. The soakaway tests were undertaken to provide soil infiltration clause for the formation materials surrounding the proposed basin areas. The two soakaway pits are referenced as Trial Pits SA06 to SA10 and are provided in Appendix 3.

8.0 GROUND AND GROUNDWATER CONDITIONS

8.1 Summary of Ground and Groundwater Conditions

8.1.1 Ground and groundwater conditions have been assessed by Enzygo Geoenvironmental Limited investigation and by Solmek). The ground conditions for the site have been discussed by Solmek in their report and have been summarised below. The following strata are summarised below for each section:

Table 8.1.1 Ground and groundwater conditions

Strata	Summary Description	Thickness (m)
Made Ground (Hardstanding).	Locally concrete (80mm thick) or Tarmac (80 to 100mm thick) over yellow brown sandy angular and subangular fine to coarse gravel of limestone, dolomite and brick	0.20 to 0.5
Made Ground (General)	Sandy gravelly clay fill.	0.4 to 0.85
Made Ground (Landfill materials)	Dark brown ashy slightly clayey gravelly fine to coarse SAND with frequent glass, plastic, wood and metal fragments. Gravel is angular and subangular fine to coarse brick, limestone, concrete, tarmac and slate with a high concrete and limestone cobble content.	0.3 to 2.5
Drift materials (TP1, BH1, SA07 and SA06)	Firm slightly sandy gravelly CLAY and Yellowish brown and orangish brown gravelly fine to coarse SAND. Gravel is angular and subangular fine to coarse limestone with a high limestone cobble content.	in excess of 1.50
Weathered Limestone (Cadeby Formation)	Extremely weak reddish brown locally yellowish brown weathered LIMESTONE.	in excess of 0.5
Groundwater.	None encountered.	

8.1.2 Details of the ground and groundwater conditions encountered are given on the exploratory hole records in the previous report Appendix 2. The ground conditions are summarised in the sections below:

8.2 Made Ground

8.2.1 Made Ground was noted to The made ground broadly consisted of a surface covering of tarmac (concrete in TP3) generally overlying sandy gravel fill of limestone over sandy gravel fill of dolomite. Locally, this was underlain by a sandy gravelly clay fill, which was possibly a capping layer. Generally, the deeper made ground comprised landfill material of slightly clayey sandy gravel of brick, concrete, ash, shale, coal, metal glass and ceramics. This landfill type material was encountered across the site except BH2, TP4, TP6 and TP10, all of which were located on the east of the site.

8.2.2 The deeper Made Ground recorded in the previous investigation was described as Landfill like material consistent with general fill and demolition material. This material is not considered Landfill Waste as the site is not identified as a Landfill.

8.3 Drift materials

8.3.1 Drift materials were noted across the site to depths ranging from 0.75mbgl to 3.60mbgl. These materials generally comprised brown and orangish brown slightly sandy gravelly clay. As no drift

materials are recorded on the plans these materials could either be un-recorded drift materials or completely weathered bedrock.

8.4 Weathered Limestone

8.4.1 The weathered Limestone (Dolostone) was encountered at depths ranging from 0.75mbgl to 3.6mbgl and comprised extremely weak yellowish brown weathered limestone. These materials are thought to represent the weathered Cadeby Formation.

8.5 Visual and Olfactory Evidence of Contamination

8.5.1 No significant visual olfactory evidence of contamination was encountered during the site works.

8.6 Groundwater

8.6.1 Groundwater was not encountered. Results of subsequent monitoring rounds are summarised below:

8.7 Ground Gas

8.7.1 As part of the previous investigation gas monitoring has been undertaken however Enzygo has not seen a copy of these results. Based on the identified contamination given in the contamination assessment conclusions have however been drawn in relation to the potential gas regime across the site.

8.8 Soil Infiltration.

8.8.1 Full BRE 365 Soakaway tests were undertaken in Trial pits SA6 to SA10 to a depth of 2.00mbgl. The results of the soakaway testing are given below. The complete soakaway sheets are given in Appendix 3.

Table 8.8.2 Soakaway test results

Exploratory Hole	Soil Infiltration Rate (Test number)			Design infiltration rate
	1	2	3	
SA6 (0.00-2.00mbgl)	3.4 E-06 m/s	-	-	-
SA7 (0.00-2.00mbgl)	1.9 E-05 m/s	1.3 E-05 m/s	1.7 E-05 m/s	1.3 E-05 m/s
SA8 (0.00-3.80mbgl)	Terminated due to deep Made Ground to a depth of in excess of 3.80mbgl			
SA9 (0.00-2.40mbgl)	Terminated due to deep Made Ground to a depth of in excess of 2.40mbgl			
SA10 (0.00-2.50mbgl)	Terminated due to deep Made Ground to a depth of in excess of 2.50mbgl			

9.0 CONTAMINATION ASSESSMENT

9.1 General

9.1.1 A Tier I risk assessment has been undertaken using available and current screening values for human health and where appropriate controlled waters. The risk assessment is undertaken based on the findings of the preliminary conceptual model presented in Section 5. Based on the contamination testing and Tier I assessment a revised Conceptual Model has been prepared, which is presented later in this section.

9.1.2 Where significant risks are identified remedial measures are recommended.

9.2 Human Health

9.2.1 Assessment of the risks to human health has been undertaken by comparing the soil quality data with reference values obtained from the Contaminated Land Exposure Assessment (CLEA), Soil Guideline Values (SGV) and General Acceptance Criteria (GAC) published by LQM/CIEH. The LQM/CIEH S4ULs values are used and summary tables of the reference values are included in Appendix 3.

9.2.2 Where an exceedance is identified the risk is assessed by considering the sensitivity of the proposed development and the potential pathway. The proposed development is to include residential houses with garden areas and therefore the GAC values for residential with plant uptake are considered suitable.

9.2.3 Results of the chemical testing from the investigation for the western part of the site are included in previous report carried out by Solmeck (Appendix 2).

9.2.4 Contamination was encountered across the western section of the site and specifically in TP1 (north west of the site), TP2 in the centre of the site and TP5 towards the south east of the site. The determinants which exceeded the GAC values were lead and arsenic and depths below 1.20m bgl within the 'landfill type' materials.

9.2.5 Further contamination was encountered at shallow levels probably associated with historical spillages (TP10) in the south east of the site where TPH exceeded the aromatic C21 to c35 threshold (2300mg/kg compared to 1700mg/kg).

9.2.6 PAH exceedances (Benzo(a)pyrene, Benzo(b) fluoranthene and Dibenzo(ah)anthracene) were also encountered below 1.20mbgl and within the Made Ground associated with the historical 'landfill' materials in Trial pits TP1 and TP5. Further analysis of these results indicate that the likely PAH source was combustion products.

9.2.7 No asbestos was detected.

9.2.8 Additional leachate analysis confirms an exceedance in sulphate.

9.3 Controlled Waters

9.3.1 Where groundwater samples have been analysed the results are compared against reference values. These reference values are summarised in Appendix C and are taken from Fresh Water Environmental Quality Standards (EQS), UK Drinking Water Standards and World Health Organisation (WHO) values for Drinking Water.

9.3.2 Where the controlled waters receptor is a surface water course then the EQS are used as the primary reference value. Drinking Water Standards and WHO values are used where EQS values are not available. An assessment of likely risk is then made based on a source-pathway-receptor model. Based on the above the closest receptors are the underlying principal aquifer as the closest water features are a pond 84m to the west; a stream 630m west and south west and a historical groundwater abstraction 311m north. Similarly, the site is not within a source protection zone. Given the above and the principal aquifer classification the drinking water standards should be used as a comparison, however as the site is not located within a source protection point and the pond and stream are flowing away from the site then it is considered that the EQS guidelines are more appropriate for the site.

9.3.3 Risk to groundwater is assessed on the basis on the chemical analysis results for the soils and also the leachate results. GAC soil exceedances have been encountered for the site and no leachates are shown exceeding the EQS guidelines which indicates that the contaminated materials although present are not leaching to the underlying materials. The conclusions drawn are also based on the site not being within a source protection zone and the closest abstraction is for secondary uses (agricultural) and is historically.

9.4 Ground Gas

9.4.1 Following the guidance provided in CIRIA C665 an initial assessment is undertaken to determine if there are any significant sources of potential ground gas. Such sources include landfills, organic clays and made ground incorporating putrescible materials such as rags, paper and wood. Where no significant source is identified no further assessment is necessary.

9.4.2 Where significant potential risk from ground gas has been identified from the Initial Conceptual Model and the intrusive ground investigation works ground gas monitoring is undertaken and the results of the monitoring are compared against the Gas Screening Values given in CIRIA Report 665. From this the Characteristic Situation is identified, and remedial measures proposed.

9.4.3 When assessing the risk and type of remedial measures appropriate consideration is given to the likely construction of the development, the nature of the gas posing a risk and the nature of the likely source. The use of engineering judgement when determining risk from ground gas is consistent with the recommendations given in CIRIA C665. No significant natural sources of ground gas were noted from the desk study, however potential fuel related contamination was expected which could result TPH interference with the methane levels. Made Ground was also encountered on site, but this did not include significant putrescible materials.

9.4.4 Gas monitoring was undertaken during return visits to monitor groundwater levels and as part of the previous investigation. The Solmek report (Appendix 2) refers to an additional addendum letter confirming the gas monitoring undertaken for the site however Enzygo Geoenvironmental Ltd has not seen a copy of this report so cannot comment on this part of the site. Given the presence of TPH, infilled clay field and Made Ground it is likely that the gas will be encountered and therefore it is likely that gas precautionary measures will be required for the site based on Technical Note RB17. It is recommended that further assessment is made once a copy of the gas monitoring results is provided.

9.5 Revised Conceptual Model

9.5.1 The Initial Conceptual Model presented in Section 5 has been revised based on the findings of the ground investigations and the revised Conceptual Model is presented below for the site:

Table 9.5.1 Revised Conceptual Model western section of the site

Source	Location	Exposure Pathway	Potential Receptor	Probability of Exposure	Details
Human Health					
lead, Arsenic, PAH and TPH.	Made Ground.	Ingestion dermal and inhalation.	Construction Workers.	Dismissed.	Normal construction PPE will address risk under CDM.
			Site users.	Low	GAC exceedance remediation recommended.
Asbestos, metals and hydrocarbons.	Unforeseen Contamination.	Ingestion dermal and inhalation.	Construction Workers.	Dismissed.	Normal construction PPE will address risk under CDM.
			Site users.	Negligible.	Discovery strategy.
Hydrocarbon and metals.	Migration from off-site sources.	Ingestion dermal and inhalation.	Construction Workers.	Dismissed.	No Source.
			Site users.		
Ground Gas.	Made Ground.	Inhalation & Explosive.	Construction Workers.	Low	Landfill type/ Deep Made Ground encountered further assessment recommended. Likely to be Characteristic situation 2 with gas precaution measures likely
			Site users.		
	Landfill	Inhalation & Explosive.	Construction Workers.	Dismissed.	
			Site users.		
Radon	bedrock	Inhalation & Explosive	Site users.	Low	Basic radon protection measures recommended
Groundwater					
Hydrocarbon and metals.	Potential spillage on site.	Vertical Migration.	Groundwater.	Low	GAC exceedances, no EQS leachate exceedance and deep groundwater.
Surface Water					
Hydrocarbon and metals.	Potential spillage on site.	Horizontal Migration.	River Network.	Dismissed.	No significant receptor
Environmental Receptors					
On site contaminants.		Ingestion dermal and inhalation.	Ecology.	Dismissed.	No sensitive ecology designation.
		Direct.	Archaeology.	Dismissed.	None present.
		Direct.	Geology.	Dismissed.	None present.
		Phytotoxic.	Woodland.	Dismissed.	None present.
		Phytotoxic.	Crops.	Dismissed.	None present.
		Ingestion dermal and inhalation.	Livestock.	Dismissed.	None present.
Building Services					
On site contaminants.		Direct.	Historic Buildings.	Dismissed.	No receptors.
		Direct.	Proposed Buildings.	Dismissed.	No sources identified.
		Permeate into pipework.	Water Pipes.	Negligible.	Requirements of Water Authority to be used.

9.6 Remediation and Verification Strategy

9.6.1 Given the levels of contamination recorded remediation is required.

Spillage area around trial pit TP10

9.6.2 Based on the investigation report carried out by Solmek Fuel related contamination has been encountered at shallow levels and is probably associated with localised spillages. It is recommended that this area (TP10) is remediated as this could have a potential effect to human health. The remediation will comprise removal and validation of the visual recorded spillages in the vicinity of trial pit TP10 and validation of the excavation by collecting samples for TPH contamination testing each side and the base of the excavation. The open backfilled excavation will be backfilled with clean materials and the resulting excavated materials stockpiled and tested prior to be dispose off site appropriately.

Remainder of the site

9.6.3 The previous ground investigation by Solmek has identified elevated concentrations of lead, arsenic and PAH contamination at depths below 1.20mbgl and within the 'landfill' type materials.

9.6.4 Following the guidance given in British Standards BS10175, consideration has been given to whether further investigation is appropriate. The options available are either to:

- 1) Undertake Further Investigation in the hope that contamination hotspots can be delineated and the remediation works undertaken to address these area only; or,
- 2) Undertake robust site wide remediation, including a discovery strategy.

9.6.5 It is considered that the contamination identified is within the deep Made Ground and is not likely to affect human health at this is all below 1.00mbgl. Shallow contamination testing has also been undertaken at depths less than 1.00mbgl and these have returned no exceedances and therefore no future human health risk is foreseen unless substantial removal of materials (in excess of 600mm) is to be removed as part of the site redevelopment.

9.6.6 Based on the above the proposed remediation works are outline below:

- Validation and removal of the hotspot in the vicinity of Trial Pit TP10.
- It is considered that hardstanding to pavement areas and buildings will provide a suitable barrier to prevent potential risk to end users. Within areas of the soft landscaping it is proposed that clean cover soils are provided. Soils should comprise 600mm of cover with a geotextile separator below. Clean cover soils could comprise imported materials with 150mm of clean Topsoil on top or existing material if they have been confirmed as suitable by classification testing.
- Use of an encapsulation system is a recognised and widely used remediation approach which breaks the potential pollutant linkages. As such encapsulation also allows unforeseen contamination to be addressed thereby providing a robust strategy for the site. Cover soils proposed are the default thickness given in 'Cover Systems for Land Remediation' prepared by Building Research Establishment.
- When considering the remedial approach consideration was given to the nature of the development and other construction constraints. Specifically, 50% of the site will be covered by hardstanding effectively providing encapsulation through design mitigation measures. Within soft landscape areas it is considered that the use of clean cover soils will be required regardless of the soil quality impacts identified to provide a suitable planting medium.
- Cover soils will be validated. It is proposed to undertake validation using hand pits to confirm the thickness of cover soils, presence of a geotextile and also collect samples for chemical

analysis of the clean cover soils. The number and location of validation pits and number of chemical samples analysed will be in accordance with guidance developed by the NHBC in consultation with the Environment Agency.

- 9.6.7 On completion of the site works a Verification Report will be prepared and submitted for approval to the Local Planning Authority.
- 9.6.8 Given the level of contamination identified any new pipework is to follow the requirements of the water authority and is likely to require the installation of barrier pipes.
- 9.6.9 If unforeseen contamination is encountered during construction works such as localised spillage outside the areas investigated an environmental consultant will be available on a 'call out' basis to undertake an assessment of risk. If 'unforeseen contamination' is encountered the local planning authority will be advised and a remediation strategy agreed.

9.7 Waste Classification

- 9.7.1 No WAC analysis was undertaken as part of the previous site investigation works however both TPH and PAH exceed the threshold for inert classification and are likely therefore to be classified as stable non reactive. Given the exceedances are recorded it is recommended that should any materials be required to be disposed of off site it is recommended that these materials are separated out and Waste Classification Testing (WAC) is undertaken to confirm the waste classification of the stockpiled heaps prior to disposal.
- 9.7.2 Natural soils should be classified as Inert Waste.
- 9.7.3 The Waste Management paper 3 requires the landfill to make an appropriate assessment of the waste classification. As such final assessment will be undertaken by the receiving landfill based on the requirements of their permit.

10.0 GEOTECHNICAL ASSESSMENT

10.1 Proposed Development

10.1.1 The proposed development will comprise residential units. No structural loadings are available and therefore a provisional loading of 50kN per m is used for assessment purposes.

10.1.2 It is considered that the scheme meets the criteria of Geotechnical Category 1 of Eurocode 7.

10.2 Ground Conditions

10.2.1 Ground conditions comprise variable thickness of Made Ground over localised drift materials over weathered Limestone (Cadeby Formation) Ground water was not encountered. Substantial thickness of Made Ground were encountered up to 3.80m thick.

10.3 Site Preparation

10.3.1 The site should be cleared and any vegetation below areas of proposed development stripped in accordance with Series 200 of the Specification for Highway Works. This should include:

- Any redundant services should be sealed off and grubbed out and replaced with suitable compacted engineered fill;
- All spillages and hot spot areas (TP10) should be removed and replaced with clean materials; and
- All buried structures and old foundations should be excavated from below the proposed structures with the resulting void backfilled prior to foundations works.

10.4 Foundations

10.4.1 The foundation assessment has already been undertaken for the site and this is reported in the Solmek Site investigation report.

10.4.2 In order to summarise this information three different options have been recommended which are dependent on the extent and depth of the 'landfill' materials. The conclusions drawn in the Solmek report indicate that deep strips/trench fill foundations are suitable for the north west of the site; Mini piled/piled foundations for the majority of the site and strip foundations upon the natural bedrock for the eastern section of the site.

10.4.3 Given the variation across the site and the potential for foundations to span across different foundation types and materials it is recommended that although some shallow refusal will be encountered that a piled or mini piled solution is adopted whereby all foundations will found on similar density materials are thereby removing the potential for differential foundation settlements between differing foundation types and materials. It will have to be understood that however some of these piles will be shallow and if shallow bedrock is encountered the piling type may need to drill into bedrock to achieve the minimum foundation depth and appropriate end bearing pressures. This solution is still likely to avoid any long term settlement issues which could occur if different foundation solutions are adopted. The use of vibro granular columns has been considered and it is likely that this foundation solution will not be suitable given the consistency of the underlying 'landfill' type Made Ground preventing suitable compaction.

10.5 Ground Floor Slab

10.5.1 Due to the depth of Made Ground and requirement for gas protection measures it is recommended that suspended floor slabs are used.

10.5.2 Full Radon protection measures should be included in ground floor slabs in accordance with BRE211. Typically, these comprise;

- Radon membrane in place of DPM, jointed and sealed around service entry points and cavity tray; and
- Ventilated underfloor void.

10.5.3 Given the risk of ground gas it is recommended that the membrane is up-rated to a gas and Radon barrier. This should be revised once the gas monitoring data has been provided and reviewed.

10.6 Materials Re-use

10.6.1 An assessment of the shallow soils suitability for re-use has been undertaken based on the description of the soils and it is considered that the Made Ground and shallow soils are not suitable for re-use as engineered fill.

10.7 Pavement Construction

10.7.1 An assessment of the likely California Bearing Ratio (CBR) has been assessed from the following sources:

- Laboratory CBR test to mimic proof rolling;
- Description of the materials encountered in the exploratory holes; and
- Guidance given in HD25/94 and 73/06.

10.7.2 Based on this it is recommended that an equilibrium CBR of 2% is used for the sites following proof rolling and with any loose materials removed and replaced with suitable capping. Soils are not considered to be frost susceptible.

10.8 Drainage

10.8.1 The use of soakaways is not recommended in site due to the presence of deep landfill type Made Ground. For the site and due to the thickness of the materials across the majority of the site only one soakaway test was suitable which return a soils infiltration rate of $1.3 \text{ E}^{-05} \text{ m/s}$.

10.8.2 Final selection of potable water supply pipes will be determined by the water authority and it is recommended that the chemical results are provided to them so that they can specify pipework accordingly. Based on a preliminary assessment and the recorded PAH values barrier pipes are likely to be required, however the water authority is likely to require specific testing once the validation has been completed as the pipe design is affected by the presence of PAH in the shallow soils.

10.9 Buried Concrete

10.9.1 Results of the sulphate testing indicate that soils have soluble sulphate concentrations of greater than 0.5 g/l consistent with DS2 Conditions of BRE Special Digest. Based on pH and

groundwater conditions it is considered that buried concrete may be designed in accordance with ACEC Class AC-2.

10.10 Excavation

10.10.1 Based on the various site observations it is considered that excavations should be feasible with normal plant, however the concrete/tarmac surfacing will require a large breaker to remove any reinforced concrete or tarmac.

10.10.2 Should deep excavations below 1.50mbgl be required for services within the site 'landfill' type materials will be exposed and therefore further consideration should be given for the protection of construction workers and replacing the cover materials after exposure or order to mitigate any future risk to site users.





10.10.3 Should deep excavations be required on either site the consideration will need to be given to shallow bedrock which may require ripping techniques to remove.

10.10.4 Excavations where access is required should be supported in accordance with CIRIA RR97.

10.10.5 Significant de-watering is not anticipated.



Key

-  Site Boundary
-  Trial Pit Locations (TP)
(TP1 - TP10)
-  Borehole Locations (BH)
(BH1 - BH6)
-  Soakaway Locations (SA)
(SA6 - SA10)



Samuel House, 5 Fox Valley Way, Stocksbridge, Sheffield, S36 2AA

CLIENT:
Dragonfly Developments Limited

SCALE: **1:1,000@A3** PROJECT REF: **MAN.1788.001**

DRAWN: **MG** CHECKED: **RH** DATE: **April 2021**

PROJECT:
Mill Lane, Bolsover

TITLE:
Location Plan

DRAWING NO:
MAN.1788.001.GE.D.001

Appendix 1 – Desk Study Information

447569 371292

Order Details

Date: 18/05/2020
Your ref: EMS_610151_814804
Our Ref: EMS-610151_814804
Client: emapsite

Site Details

Location: 447569 371292
Area: 3.35 ha
Authority: [Bolsover District Council](#)



Summary of findings

p. 2 **Aerial image**

p. 8

OS MasterMap site plan

p.11 groundsure.com/insightuserguide

Summary of findings

Page	Section	Past land use	On site	0-50m	50-250m	250-500m	500-2000m
12	1.1	<u>Historical industrial land uses</u>	7	3	23	9	-
14	1.2	Historical tanks	0	0	0	0	-
14	1.3	<u>Historical energy features</u>	0	2	2	1	-
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	<u>Historical industrial land uses</u>	8	7	24	12	-
18	2.2	Historical tanks	0	0	0	0	-
19	2.3	<u>Historical energy features</u>	0	2	3	3	-
19	2.4	Historical petrol stations	0	0	0	0	-
19	2.5	Historical garages	0	0	0	0	-
Page	Section	Waste and landfill	On site	0-50m	50-250m	250-500m	500-2000m
20	3.1	Active or recent landfill	0	0	0	0	-
20	3.2	Historical landfill (BGS records)	0	0	0	0	-
21	3.3	Historical landfill (LA/mapping records)	0	0	0	0	-
21	3.4	Historical landfill (EA/NRW records)	0	0	0	0	-
21	3.5	Historical waste sites	0	0	0	0	-
21	3.6	Licensed waste sites	0	0	0	0	-
21	3.7	<u>Waste exemptions</u>	0	0	33	3	-
Page	Section	Current industrial land use	On site	0-50m	50-250m	250-500m	500-2000m
26	4.1	<u>Recent industrial land uses</u>	4	1	2	-	-
27	4.2	Current or recent petrol stations	0	0	0	0	-
27	4.3	Electricity cables	0	0	0	0	-
27	4.4	Gas pipelines	0	0	0	0	-
27	4.5	Sites determined as Contaminated Land	0	0	0	0	-



28	4.6	Control of Major Accident Hazards (COMAH)	0	0	0	0	-
28	4.7	Regulated explosive sites	0	0	0	0	-
28	4.8	Hazardous substance storage/usage	0	0	0	0	-
28	4.9	<u>Historical licensed industrial activities (IPC)</u>	0	100	0	0	-
41	4.10	<u>Licensed industrial activities (Part A(1))</u>	0	0	0	8	-
42	4.11	Licensed pollutant release (Part A(2)/B)	0	0	0	0	-
43	4.12	Radioactive Substance Authorisations	0	0	0	0	-
43	4.13	Licensed Discharges to controlled waters	0	0	0	0	-
43	4.14	Pollutant release to surface waters (Red List)	0	0	0	0	-
43	4.15	Pollutant release to public sewer	0	0	0	0	-
43	4.16	List 1 Dangerous Substances	0	0	0	0	-
44	4.17	List 2 Dangerous Substances	0	0	0	0	-
44	4.18	Pollution Incidents (EA/NRW)	0	0	0	0	-
44	4.19	<u>Pollution inventory substances</u>	0	0	0	3	-
45	4.20	<u>Pollution inventory waste transfers</u>	0	0	0	1	-
46	4.21	Pollution inventory radioactive waste	0	0	0	0	-
Page	Section	Hydrogeology	On site	0-50m	50-250m	250-500m	500-2000m
47	5.1	Superficial aquifer	None (within 500m)				
48	5.2	<u>Bedrock aquifer</u>	Identified (within 500m)				
50	5.3	<u>Groundwater vulnerability</u>	Identified (within 50m)				
51	5.4	<u>Groundwater vulnerability- soluble rock risk</u>	Identified (within 0m)				
51	5.5	Groundwater vulnerability- local information	None (within 0m)				
52	5.6	<u>Groundwater abstractions</u>	0	0	0	2	5
54	5.7	<u>Surface water abstractions</u>	0	0	0	0	3
55	5.8	Potable abstractions	0	0	0	0	0
56	5.9	Source Protection Zones	0	0	0	0	-
56	5.10	Source Protection Zones (confined aquifer)	0	0	0	0	-
Page	Section	Hydrology	On site	0-50m	50-250m	250-500m	500-2000m
57	6.1	Water Network (OS MasterMap)	0	0	0	-	-



57	6.2	Surface water features	0	0	0	-	-
58	6.3	<u>WFD Surface water body catchments</u>	2	-	-	-	-
58	6.4	<u>WFD Surface water bodies</u>	0	0	0	-	-
59	6.5	<u>WFD Groundwater bodies</u>	1	-	-	-	-
Page	Section	River and coastal flooding	On site	0-50m	50-250m	250-500m	500-2000m
60	7.1	Risk of Flooding from Rivers and Sea (RoFRaS)	None (within 50m)				
60	7.2	Historical Flood Events	0	0	0	-	-
60	7.3	Flood Defences	0	0	0	-	-
60	7.4	Areas Benefiting from Flood Defences	0	0	0	-	-
61	7.5	Flood Storage Areas	0	0	0	-	-
62	7.6	Flood Zone 2	None (within 50m)				
62	7.7	Flood Zone 3	None (within 50m)				
Page	Section	Surface water flooding					
63	8.1	<u>Surface water flooding</u>	1 in 30 year, 0.3m - 1.0m (within 50m)				
Page	Section	Groundwater flooding					
65	9.1	<u>Groundwater flooding</u>	Negligible (within 50m)				
Page	Section	Environmental designations	On site	0-50m	50-250m	250-500m	500-2000m
66	10.1	Sites of Special Scientific Interest (SSSI)	0	0	0	0	0
67	10.2	Conserved wetland sites (Ramsar sites)	0	0	0	0	0
67	10.3	Special Areas of Conservation (SAC)	0	0	0	0	0
67	10.4	Special Protection Areas (SPA)	0	0	0	0	0
67	10.5	National Nature Reserves (NNR)	0	0	0	0	0
68	10.6	Local Nature Reserves (LNR)	0	0	0	0	0
68	10.7	<u>Designated Ancient Woodland</u>	0	0	0	0	2
68	10.8	Biosphere Reserves	0	0	0	0	0
68	10.9	Forest Parks	0	0	0	0	0
69	10.10	Marine Conservation Zones	0	0	0	0	0
69	10.11	Green Belt	0	0	0	0	0
69	10.12	Proposed Ramsar sites	0	0	0	0	0



69	10.13	Possible Special Areas of Conservation (pSAC)	0	0	0	0	0
69	10.14	Potential Special Protection Areas (pSPA)	0	0	0	0	0
70	10.15	Nitrate Sensitive Areas	0	0	0	0	0
70	10.16	<u>Nitrate Vulnerable Zones</u>	4	0	0	0	0
71	10.17	<u>SSSI Impact Risk Zones</u>	2	-	-	-	-
72	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
73	11.1	World Heritage Sites	0	0	0	-	-
74	11.2	Area of Outstanding Natural Beauty	0	0	0	-	-
74	11.3	National Parks	0	0	0	-	-
74	11.4	<u>Listed Buildings</u>	0	0	2	-	-
75	11.5	Conservation Areas	0	0	0	-	-
75	11.6	Scheduled Ancient Monuments	0	0	0	-	-
75	11.7	Registered Parks and Gardens	0	0	0	-	-

Page	Section	Agricultural designations	On site	0-50m	50-250m	250-500m	500-2000m
76	12.1	<u>Agricultural Land Classification</u>	Grade 3a (within 250m)				
77	12.2	Open Access Land	0	0	0	-	-
78	12.3	Tree Felling Licences	0	0	0	-	-
78	12.4	Environmental Stewardship Schemes	0	0	0	-	-
78	12.5	Countryside Stewardship Schemes	0	0	0	-	-

Page	Section	Habitat designations	On site	0-50m	50-250m	250-500m	500-2000m
79	13.1	Priority Habitat Inventory	0	0	0	-	-
79	13.2	Habitat Networks	0	0	0	-	-
80	13.3	<u>Open Mosaic Habitat</u>	0	1	0	-	-
80	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
81	14.1	<u>10k Availability</u>	Identified (within 500m)				
82	14.2	<u>Artificial and made ground (10k)</u>	1	0	0	1	-
83	14.3	Superficial geology (10k)	0	0	0	0	-



83	14.4	Landslip (10k)	0	0	0	0	-
84	14.5	<u>Bedrock geology (10k)</u>	1	0	1	5	-
85	14.6	<u>Bedrock faults and other linear features (10k)</u>	0	0	0	2	-
Page	Section	Geology 1:50,000 scale	On site	0-50m	50-250m	250-500m	500-2000m
86	15.1	<u>50k Availability</u>	Identified (within 500m)				
87	15.2	<u>Artificial and made ground (50k)</u>	1	0	1	1	-
88	15.3	<u>Artificial ground permeability (50k)</u>	1	0	-	-	-
89	15.4	Superficial geology (50k)	0	0	0	0	-
89	15.5	Superficial permeability (50k)	None (within 50m)				
89	15.6	Landslip (50k)	0	0	0	0	-
89	15.7	Landslip permeability (50k)	None (within 50m)				
90	15.8	<u>Bedrock geology (50k)</u>	1	0	1	5	-
91	15.9	<u>Bedrock permeability (50k)</u>	Identified (within 50m)				
91	15.10	<u>Bedrock faults and other linear features (50k)</u>	0	0	0	2	-
Page	Section	Boreholes	On site	0-50m	50-250m	250-500m	500-2000m
92	16.1	BGS Boreholes	0	0	0	-	-
Page	Section	Natural ground subsidence					
93	17.1	<u>Shrink swell clays</u>	Negligible (within 50m)				
94	17.2	<u>Running sands</u>	Very low (within 50m)				
96	17.3	<u>Compressible deposits</u>	Moderate (within 50m)				
98	17.4	<u>Collapsible deposits</u>	Very low (within 50m)				
99	17.5	<u>Landslides</u>	Very low (within 50m)				
100	17.6	<u>Ground dissolution of soluble rocks</u>	Very low (within 50m)				
Page	Section	Mining, ground workings and natural cavities	On site	0-50m	50-250m	250-500m	500-2000m
102	18.1	Natural cavities	0	0	0	0	-
103	18.2	<u>BritPits</u>	1	0	4	2	-
104	18.3	<u>Surface ground workings</u>	2	3	9	-	-
105	18.4	Underground workings	0	0	0	0	0
105	18.5	<u>Historical Mineral Planning Areas</u>	0	0	1	0	-



105	18.6	<u>Non-coal mining</u>	0	0	0	1	0
106	18.7	Mining cavities	0	0	0	0	0
106	18.8	JPB mining areas	None (within 0m)				
106	18.9	<u>Coal mining</u>	Identified (within 0m)				
106	18.10	Brine areas	None (within 0m)				
107	18.11	Gypsum areas	None (within 0m)				
107	18.12	Tin mining	None (within 0m)				
107	18.13	Clay mining	None (within 0m)				
Page	Section	Radon					
108	19.1	<u>Radon</u>	Between 3% and 5% (within 0m)				
Page	Section	Soil chemistry	On site	0-50m	50-250m	250-500m	500-2000m
109	20.1	<u>BGS Estimated Background Soil Chemistry</u>	2	0	-	-	-
109	20.2	BGS Estimated Urban Soil Chemistry	0	0	-	-	-
109	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
110	21.1	Underground railways (London)	0	0	0	-	-
110	21.2	Underground railways (Non-London)	0	0	0	-	-
110	21.3	Railway tunnels	0	0	0	-	-
110	21.4	Historical railway and tunnel features	0	0	0	-	-
110	21.5	Royal Mail tunnels	0	0	0	-	-
111	21.6	Historical railways	0	0	0	-	-
111	21.7	Railways	0	0	0	-	-
111	21.8	Crossrail 1	0	0	0	0	-
111	21.9	Crossrail 2	0	0	0	0	-
111	21.10	HS2	0	0	0	0	-



Recent aerial photograph



Capture Date: 08/04/2017

Site Area: 3.35ha



Recent site history - 2010 aerial photograph



Capture Date: 25/10/2010

Site Area: 3.35ha



Recent site history - 1999 aerial photograph



Capture Date: 06/07/1999

Site Area: 3.35ha



OS MasterMap site plan



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Site Area: 3.35ha



1 Past land use



- Site Outline
- Search buffers in metres (m)
- Historical industrial land uses
- Historical energy features

1.1 Historical industrial land uses

Records within 500m **42**

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 12**

ID	Location	Land use	Dates present	Group ID
1	On site	Unspecified Ground Workings	1967	1566763

ID	Location	Land use	Dates present	Group ID
2	On site	Lime Kiln Field	1973 - 1993	1673794
3	On site	Lime Kiln Field	1967	1684468
4	On site	Unspecified Depot	1993	1583482
A	On site	Lime Kiln Field	1897	1658698
A	On site	Lime Kiln Field	1921 - 1938	1663262
B	On site	Unspecified Quarry	1876	1749223
C	6m N	Unspecified Factory	1993	1586646
C	6m N	Unspecified Works	1967 - 1973	1744123
5	7m N	Cemetery	1967 - 1993	1655964
D	52m W	Disused Windmill	1921	1657100
D	55m W	Disused Windmill	1938	1737872
D	71m W	Chimney	1973 - 1993	1689172
6	73m N	Lime Kilns	1876	1570980
D	79m W	Flour Windmill	1876	1589008
D	79m W	Disused Windmill	1897	1644727
D	81m W	Lime Kiln	1876	1612380
D	84m W	Disused Windmill	1921	1727239
D	84m W	Disused Windmill	1914	1708070
D	85m W	Disused Windmill	1950	1624901
D	85m W	Disused Windmill	1967	1648812
D	85m W	Disused Windmill	1993	1663771
D	85m W	Disused Windmill	1973	1728868
E	113m S	Unspecified Quarry	1897	1662546
E	138m S	Unspecified Quarry	1921	1697339
B	158m S	Unspecified Quarry	1938	1672712
B	161m S	Unspecified Quarry	1967	1682847
B	165m S	Unspecified Ground Workings	1921	1566762
B	165m S	Unspecified Quarry	1897	1733120



ID	Location	Land use	Dates present	Group ID
B	196m S	Unspecified Quarry	1897	1680522
B	196m S	Unspecified Quarry	1921	1660176
B	198m S	Unspecified Quarry	1950	1646547
7	215m W	Smithy	1876	1612831
F	313m SW	Police Station	1967 - 1993	1634146
F	318m SW	Police Station	1938 - 1950	1748439
G	481m S	Flour Mill	1876	1589784
G	481m S	Unspecified Mill	1938	1643326
G	481m S	Unspecified Mill	1897	1680681
G	485m S	Unspecified Disused Mill	1950	1595179
G	487m S	Unspecified Mill	1914	1685228
G	489m S	Unspecified Mill	1921	1739509
G	497m S	Unspecified Mill	1921	1740242

This data is sourced from Ordnance Survey / Groundsure.

1.2 Historical tanks

Records within 500m

0

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

This data is sourced from Ordnance Survey / Groundsure.

1.3 Historical energy features

Records within 500m

5

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



Features are displayed on the Past land use map on **page 12**

ID	Location	Land use	Dates present	Group ID
C	2m E	Electricity Substation	1996	149003
C	11m N	Electricity Substation	1977	149002
E	157m S	Electricity Substation	1977 - 1996	162236
E	158m S	Electricity Substation	1991	164141
8	423m SW	Electricity Substation	1991 - 1995	161334

This data is sourced from Ordnance Survey / Groundsure.

1.4 Historical petrol stations

Records within 500m

0

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

This data is sourced from Ordnance Survey / Groundsure.

1.5 Historical garages

Records within 500m

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 ungrouped 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 energy features

2.1 Historical industrial land uses

Records within 500m **51**

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 ungrouped 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	On site	Lime Kiln Field	1967	1684468
2	On site	Unspecified Ground Workings	1967	1566763
3	On site	Unspecified Depot	1993	1583482

ID	Location	Land Use	Date	Group ID
A	On site	Lime Kiln Field	1938	1663262
A	On site	Lime Kiln Field	1897	1658698
B	On site	Unspecified Quarry	1876	1749223
C	On site	Lime Kiln Field	1973	1673794
C	On site	Lime Kiln Field	1993	1673794
D	6m N	Unspecified Works	1973	1744123
D	6m N	Unspecified Works	1967	1744123
D	6m N	Unspecified Factory	1993	1586646
A	7m S	Lime Kiln Field	1921	1663262
E	7m N	Cemetery	1973	1655964
E	7m N	Cemetery	1967	1655964
E	7m N	Cemetery	1993	1655964
F	52m W	Disused Windmill	1921	1657100
F	55m W	Disused Windmill	1938	1737872
F	71m W	Chimney	1973	1689172
F	71m W	Chimney	1993	1689172
4	73m N	Lime Kilns	1876	1570980
F	79m W	Disused Windmill	1897	1644727
F	79m W	Flour Windmill	1876	1589008
F	81m W	Lime Kiln	1876	1612380
F	84m W	Disused Windmill	1921	1727239
F	84m W	Disused Windmill	1914	1708070
F	85m W	Disused Windmill	1973	1728868
F	85m W	Disused Windmill	1950	1624901
F	85m W	Disused Windmill	1967	1648812
F	85m W	Disused Windmill	1993	1663771
A	113m S	Unspecified Quarry	1897	1662546
A	138m S	Unspecified Quarry	1921	1697339



ID	Location	Land Use	Date	Group ID
B	158m S	Unspecified Quarry	1938	1672712
B	161m S	Unspecified Quarry	1967	1682847
B	165m S	Unspecified Quarry	1897	1733120
B	165m S	Unspecified Ground Workings	1921	1566762
B	196m S	Unspecified Quarry	1897	1680522
B	196m S	Unspecified Quarry	1921	1660176
B	198m S	Unspecified Quarry	1950	1646547
5	215m W	Smithy	1876	1612831
G	313m SW	Police Station	1973	1634146
G	313m SW	Police Station	1967	1634146
G	313m SW	Police Station	1993	1634146
G	318m SW	Police Station	1950	1748439
G	319m SW	Police Station	1938	1748439
I	481m S	Unspecified Mill	1938	1643326
I	481m S	Unspecified Mill	1897	1680681
I	481m S	Flour Mill	1876	1589784
I	485m S	Unspecified Disused Mill	1950	1595179
I	487m S	Unspecified Mill	1914	1685228
I	489m S	Unspecified Mill	1921	1739509
I	497m S	Unspecified Mill	1921	1740242

This data is sourced from Ordnance Survey / Groundsure.

2.2 Historical tanks

Records within 500m

0

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'.

This data is sourced from Ordnance Survey / Groundsure.



2.3 Historical energy features

Records within 500m

8

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
D	2m E	Electricity Substation	1996	149003
D	11m N	Electricity Substation	1977	149002
A	157m S	Electricity Substation	1996	162236
A	158m S	Electricity Substation	1991	164141
A	159m S	Electricity Substation	1977	162236
H	423m SW	Electricity Substation	1995	161334
H	424m SW	Electricity Substation	1991	161334
H	424m SW	Electricity Substation	1991	161334

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



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 **36**

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 20**

ID	Location	Site	Reference	Category	Sub-Category	Description
A	166m N	SUTHERLAND FARM, OXCROFT LANE, BOLSOVER, CHESTERFIELD, S44 6DW	WEX190810	Using waste exemption	On a Farm	Use of waste in construction
A	166m N	SUTHERLAND FARM, OXCROFT LANE, BOLSOVER, CHESTERFIELD, S44 6DW	WEX190810	Using waste exemption	On a Farm	Use of waste for a specified purpose
A	166m N	SUTHERLAND FARM, OXCROFT LANE, BOLSOVER, CHESTERFIELD, S44 6DW	WEX190810	Using waste exemption	On a Farm	Spreading waste on agricultural land to confer benefit
A	166m N	SUTHERLAND FARM, OXCROFT LANE, BOLSOVER, CHESTERFIELD, S44 6DW	WEX190810	Using waste exemption	On a Farm	Use of mulch
A	166m N	SUTHERLAND FARM, OXCROFT LANE, BOLSOVER, CHESTERFIELD, S44 6DW	WEX190810	Treating waste exemption	On a Farm	Cleaning, washing, spraying or coating relevant waste
A	166m N	SUTHERLAND FARM, OXCROFT LANE, BOLSOVER, CHESTERFIELD, S44 6DW	WEX190810	Treating waste exemption	On a Farm	Screening and blending of waste
A	166m N	SUTHERLAND FARM, OXCROFT LANE, BOLSOVER, CHESTERFIELD, S44 6DW	WEX190810	Treating waste exemption	On a Farm	Treatment of waste wood and waste plant matter by chipping, shredding, cutting or pulverising
A	166m N	SUTHERLAND FARM, OXCROFT LANE, BOLSOVER, CHESTERFIELD, S44 6DW	WEX190810	Treating waste exemption	On a Farm	Sorting mixed waste
A	166m N	SUTHERLAND FARM, OXCROFT LANE, BOLSOVER, CHESTERFIELD, S44 6DW	WEX190810	Disposing of waste exemption	On a Farm	Deposit of waste from dredging of inland waters
A	166m N	SUTHERLAND FARM, OXCROFT LANE, BOLSOVER, CHESTERFIELD, S44 6DW	WEX190810	Disposing of waste exemption	On a Farm	Burning waste in the open



ID	Location	Site	Reference	Category	Sub-Category	Description
A	166m N	SUTHERLAND FARM, OXCROFT LANE, BOLSOVER, CHESTERFIELD, S44 6DW	WEX190810	Storing waste exemption	On a Farm	Storage of waste in a secure place
A	167m N	SUTHERLAND FARM, OXCROFT LANE, BOLSOVER, CHESTERFIELD, S44 6DW	WEX044730	Disposing of waste exemption	On a farm	Deposit of waste from dredging of inland waters
A	167m N	SUTHERLAND FARM, OXCROFT LANE, BOLSOVER, CHESTERFIELD, S44 6DW	WEX044730	Disposing of waste exemption	On a farm	Burning waste in the open
A	167m N	SUTHERLAND FARM, OXCROFT LANE, BOLSOVER, CHESTERFIELD, S44 6DW	WEX044730	Storing waste exemption	On a farm	Storage of waste in a secure place
A	167m N	SUTHERLAND FARM, OXCROFT LANE, BOLSOVER, CHESTERFIELD, S44 6DW	WEX044730	Treating waste exemption	On a farm	Cleaning, washing, spraying or coating relevant waste
A	167m N	SUTHERLAND FARM, OXCROFT LANE, BOLSOVER, CHESTERFIELD, S44 6DW	WEX044730	Treating waste exemption	On a farm	Sorting mixed waste
A	167m N	SUTHERLAND FARM, OXCROFT LANE, BOLSOVER, CHESTERFIELD, S44 6DW	WEX044730	Treating waste exemption	On a farm	Screening and blending of waste
A	167m N	SUTHERLAND FARM, OXCROFT LANE, BOLSOVER, CHESTERFIELD, S44 6DW	WEX044730	Treating waste exemption	On a farm	Treatment of waste wood and waste plant matter by chipping, shredding, cutting or pulverising
A	167m N	SUTHERLAND FARM, OXCROFT LANE, BOLSOVER, CHESTERFIELD, S44 6DW	WEX044730	Using waste exemption	On a farm	Use of waste in construction
A	167m N	SUTHERLAND FARM, OXCROFT LANE, BOLSOVER, CHESTERFIELD, S44 6DW	WEX044730	Using waste exemption	On a farm	Spreading waste on agricultural land to confer benefit



ID	Location	Site	Reference	Category	Sub-Category	Description
A	167m N	SUTHERLAND FARM, OXCROFT LANE, BOLSOVER, CHESTERFIELD, S44 6DW	WEX044730	Using waste exemption	On a farm	Use of mulch
A	167m N	SUTHERLAND FARM, OXCROFT LANE, BOLSOVER, CHESTERFIELD, S44 6DW	WEX044730	Using waste exemption	On a farm	Use of waste for a specified purpose
A	173m N	Sutherland Farm Oxcroft Lane CHESTERFIELD Derbyshire S44 6DW	EPR/XF0939M K/A001	Disposing of waste exemption	Agricultural Waste Only	Deposit of waste from dredging of inland waters
A	173m N	Sutherland Farm Oxcroft Lane CHESTERFIELD Derbyshire S44 6DW	EPR/XF0939M K/A001	Disposing of waste exemption	Agricultural Waste Only	Burning waste in the open
A	173m N	Sutherland Farm Oxcroft Lane CHESTERFIELD Derbyshire S44 6DW	EPR/XF0939M K/A001	Storing waste exemption	Agricultural Waste Only	Storage of waste in a secure place
A	173m N	Sutherland Farm Oxcroft Lane CHESTERFIELD Derbyshire S44 6DW	EPR/XF0939M K/A001	Treating waste exemption	Agricultural Waste Only	Cleaning, washing, spraying or coating relevant waste
A	173m N	Sutherland Farm Oxcroft Lane CHESTERFIELD Derbyshire S44 6DW	EPR/XF0939M K/A001	Treating waste exemption	Agricultural Waste Only	Sorting mixed waste
A	173m N	Sutherland Farm Oxcroft Lane CHESTERFIELD Derbyshire S44 6DW	EPR/XF0939M K/A001	Treating waste exemption	Agricultural Waste Only	Screening and blending of waste
A	173m N	Sutherland Farm Oxcroft Lane CHESTERFIELD Derbyshire S44 6DW	EPR/XF0939M K/A001	Treating waste exemption	Agricultural Waste Only	Treatment of waste wood and waste plant matter by chipping, shredding, cutting or pulverising
A	173m N	Sutherland Farm Oxcroft Lane CHESTERFIELD Derbyshire S44 6DW	EPR/XF0939M K/A001	Using waste exemption	Agricultural Waste Only	Use of waste in construction
A	173m N	Sutherland Farm Oxcroft Lane CHESTERFIELD Derbyshire S44 6DW	EPR/XF0939M K/A001	Using waste exemption	Agricultural Waste Only	Spreading waste on agricultural land to confer benefit
A	173m N	Sutherland Farm Oxcroft Lane CHESTERFIELD Derbyshire S44 6DW	EPR/XF0939M K/A001	Using waste exemption	Agricultural Waste Only	Use of mulch
A	173m N	Sutherland Farm Oxcroft Lane CHESTERFIELD Derbyshire S44 6DW	EPR/XF0939M K/A001	Using waste exemption	Agricultural Waste Only	Use of waste for a specified purpose



ID	Location	Site	Reference	Category	Sub-Category	Description
B	369m N	Wyandotte Farm Shuttlewood Road Bolsover Derbyshire S44 6PB	EPR/SH0470CY /A001	Disposing of waste exemption	Both agricultural and non- agricultural waste	Burning waste in the open
B	369m N	Wyandotte Farm Shuttlewood Road Bolsover Derbyshire S44 6PB	EPR/SH0470CY /A001	Using waste exemption	Both agricultural and non- agricultural waste	Spreading waste on agricultural land to confer benefit
B	369m N	Wyandotte Farm Shuttlewood Road Bolsover Derbyshire S44 6PB	EPR/SH0470CY /A001	Using waste exemption	Both agricultural and non- agricultural waste	Use of mulch

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
- Historical licensed industrial activities
- Part A(1) industrial activities
- Pollution inventory substances
- Pollution inventory waste transfers

4.1 Recent industrial land uses

Records within 250m **7**

Current potentially contaminative industrial sites.

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

ID	Location	Company	Address	Activity	Category
1	On site	Works	Derbyshire, S44	Unspecified Works Or Factories	Industrial Features
A	On site	Depot	Derbyshire, S44	Container and Storage	Transport, Storage and Delivery
A	On site	Limekiln	Derbyshire, S44	Lime Kilns	Industrial Features

ID	Location	Company	Address	Activity	Category
A	On site	Electricity Sub Station	Derbyshire, S44	Electrical Features	Infrastructure and Facilities
2	19m S	Limekiln Field	Derbyshire, S44	Lime Kilns	Industrial Features
3	80m W	Chimney	Derbyshire, S44	Chimneys	Industrial Features
4	164m S	Electricity Sub Station	Derbyshire, S44	Electrical Features	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

100

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

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

ID	Location	Details	
B	9m NW	Operator: Coalite Products Ltd T/a Coalite Chemicals Division Address: Coalite Chemicals Division, P O Box 152, Buttermilk Lane, Chesterfield, Derbyshire, S44 6AZ Process: Manufacture And Use Of Organic Chemicals Permit Number: BJ4396	Original Permit Number: IPCMINVAR Date Approved: - Effective Date: - Status: Valid

ID	Location	Details	
B	9m NW	Operator: Coalite Ltd T/a Coalite Chemicals Division Address: P O Box 152, Buttermilk Lane, Bolsover, Chesterfield, Derbyshire, S44 6AE Process: Carbonisation And Associated Processes Permit Number: AF7738	Original Permit Number: IPCAIRAPP Date Approved: 21-10-1992 Effective Date: 21-10-1992 Status: Superseded By Variation
B	9m NW	Operator: Coalite Products Ltd T/a Coalite Chemicals Address: Coalite Chemicals Division, P O Box 152, Buttermilk Lane, Bolsover, Chesterfield, Derbyshire, S44 6AE Process: Manufacture And Use Of Organic Chemicals Permit Number: AG2570	Original Permit Number: IPCAIRAPP Date Approved: 27-1-1993 Effective Date: 27-1-1993 Status: Superseded By Variation
B	9m NW	Operator: Coalite Products Ltd T/a Coalite Chemicals Address: PO Box 152, Buttermilk Lane, Bolsover, Chesterfield, Derbyshire, S44 6AZ Process: Incineration Permit Number: AG8136	Original Permit Number: IPCAIRAPP Date Approved: 30-4-1993 Effective Date: 30-4-1993 Status: Revoked
B	9m NW	Operator: Coalite Ltd T/a Coalite Chemicals Division Address: PO Box 152, Buttermilk Lane, Bolsover, Chesterfield, Derbyshire, S44 6AZ Process: Combustion Processes Permit Number: AI2228	Original Permit Number: IPCAPP Date Approved: 1-3-1994 Effective Date: 1-3-1994 Status: Superseded By Variation
B	9m NW	Operator: Coalite Ltd T/a Coalite Chemicals Division Address: Coalite Chemicals Division, P O Box 152, Buttermilk Lane, Bolsover, Chesterfield, Derbyshire, S44 6AE Process: Manufacture And Use Of Organic Chemicals Permit Number: AJ8273	Original Permit Number: IPCAPP Date Approved: 1-1-1994 Effective Date: 1-1-1994 Status: Superseded By Variation
B	9m NW	Operator: Coalite Ltd T/a Coalite Chemicals Division Address: Coalite Chemicals Division, P O Box 152, Buttermilk Lane, Bolsover, Chesterfield, Derbyshire, S44 6AE Process: Manufacture And Use Of Organic Chemicals Permit Number: AK6390	Original Permit Number: IPCAIRAPP Date Approved: 1-3-1994 Effective Date: 1-3-1994 Status: Superseded By Variation
B	9m NW	Operator: Coalite Ltd T/a Coalite Chemicals Division Address: PO Box 152, Buttermilk Lane, Bolsover, Chesterfield, Derbyshire, S44 6AE Process: Manufacture And Use Of Organic Chemicals Permit Number: AK6411	Original Permit Number: IPCAIRAPP Date Approved: 1-3-1994 Effective Date: 1-3-1994 Status: Superseded By Variation
B	9m NW	Operator: Coalite Ltd T/a Coalite Chemicals Division Address: PO Box 152, Buttermilk Lane, Bolsover, Chesterfield, Derbyshire, S44 6AE Process: Carbonisation And Associated Processes Permit Number: AK7426	Original Permit Number: IPCAIRAPP Date Approved: 25-2-1994 Effective Date: 1-3-1994 Status: Superseded By Variation



ID	Location	Details	
B	9m NW	Operator: Coalite Ltd T/a Coalite Chemicals Division Address: P O Box 152, Buttermilk Lane, Bolsover, Chesterfield, Derbyshire, S44 6AE Process: Acid Processes Permit Number: AL9408	Original Permit Number: IPCAIRAPP Date Approved: 13-6-1994 Effective Date: 1-7-1994 Status: Superseded By Variation
B	9m NW	Operator: Coalite Ltd T/a Coalite Chemicals Division Address: Coalite Chemicals Division, P O Box 152, Buttermilk Lane, Bolsover, Chesterfield, Derbyshire, S44 6AE Process: Processes Involving Halogens Permit Number: AL9432	Original Permit Number: IPCAIRAPP Date Approved: 22-12-1994 Effective Date: 1-1-1995 Status: Superseded By Variation
B	9m NW	Operator: Coalite Ltd T/a Coalite Chemicals Division Address: Coalite Chemicals Division, P O Box 152, Buttermilk Lane, Bolsover, Chesterfield, Derbyshire, S44 6AE Process: Manufacture And Use Of Organic Chemicals Permit Number: AM5378	Original Permit Number: IPCAIRAPP Date Approved: 30-8-1994 Effective Date: 30-8-1994 Status: Superseded By Variation
B	9m NW	Operator: Coalite Products Ltd T/a Coalite Chemicals Address: PO Box 152, Buttermilk Lane, Bolsover, Chesterfield, Derbyshire, S44 6AZ Process: Manufacture And Use Of Organic Chemicals Permit Number: AM5424	Original Permit Number: IPCAIRAPP Date Approved: 8-8-1994 Effective Date: 8-8-1994 Status: Superseded By Variation
B	9m NW	Operator: Coalite Ltd T/a Coalite Chemicals Division Address: PO Box 152, Buttermilk Lane, Bolsover, Chesterfield, Derbyshire, S44 6AZ Process: Manufacture And Use Of Organic Chemicals Permit Number: AM5432	Original Permit Number: IPCAIRAPP Date Approved: 30-8-1994 Effective Date: 30-8-1994 Status: Superseded By Variation
B	9m NW	Operator: Coalite Products Ltd T/a Coalite Chemicals Address: PO Box 152, Buttermilk Lane, Bolsover, Chesterfield, Derbyshire, S44 6AE Process: Inorganic Chemical Processes Permit Number: AO1055	Original Permit Number: IPCAIRAPP Date Approved: 28-11-1994 Effective Date: 1-1-1995 Status: Revoked
B	9m NW	Operator: Coalite Ltd T/a Coalite Chemicals Division Address: Coalite Chemicals Division, P O Box 152, Buttermilk Lane, Bolsover, Chesterfield, Derbyshire, S44 6AE Process: Processes Involving Halogens Permit Number: AP8144	Original Permit Number: IPCMINVAR Date Approved: 26-1-1995 Effective Date: 26-1-1995 Status: Superseded By Variation
B	9m NW	Operator: Coalite Ltd T/a Coalite Chemicals Division Address: Coalite Chemicals Division, P O Box 152, Buttermilk Lane, Bolsover, Chesterfield, Derbyshire, S44 6AE Process: Manufacture And Use Of Organic Chemicals Permit Number: AQ4861	Original Permit Number: IPCMINVAR Date Approved: 28-3-1995 Effective Date: 1-4-1995 Status: Superseded By Variation



ID	Location	Details	
B	9m NW	Operator: Coalite Ltd T/a Coalite Chemicals Division Address: PO Box 152, Buttermilk Lane, Bolsover, Chesterfield, Derbyshire, S44 6AZ Process: Combustion Processes Permit Number: AQ7194	Original Permit Number: IPCMINVAR Date Approved: 15-3-1995 Effective Date: 15-3-1995 Status: Superseded By Variation
B	9m NW	Operator: Coalite Ltd T/a Coalite Chemicals Division Address: Coalite Chemicals Division, P O Box 152, Buttermilk Lane, Bolsover, Chesterfield, Derbyshire, S44 6AE Process: Manufacture And Use Of Organic Chemicals Permit Number: AQ7208	Original Permit Number: IPCMINVAR Date Approved: 28-3-1995 Effective Date: 28-3-1995 Status: Superseded By Variation
B	9m NW	Operator: Coalite Ltd T/a Coalite Chemicals Division Address: Coalite Chemicals Division, P O Box 152, Buttermilk Lane, Bolsover, Chesterfield, Derbyshire, S44 6AE Process: Processes Involving Halogens Permit Number: AQ7216	Original Permit Number: IPCMINVAR Date Approved: 24-3-1995 Effective Date: 24-3-1995 Status: Superseded By Variation
B	9m NW	Operator: Coalite Ltd T/a Coalite Chemicals Division Address: Coalite Chemicals Division, P O Box 152, Buttermilk Lane, Bolsover, Chesterfield, Derbyshire, S44 6AE Process: Manufacture And Use Of Organic Chemicals Permit Number: AR2104	Original Permit Number: IPCMINVAR Date Approved: 21-4-1995 Effective Date: 24-4-1995 Status: Superseded By Variation
B	9m NW	Operator: Coalite Ltd T/a Coalite Chemicals Division Address: Coalite Chemicals Division, P O Box 152, Buttermilk Lane, Bolsover, Chesterfield, Derbyshire, S44 6AE Process: Manufacture And Use Of Organic Chemicals Permit Number: AR6886	Original Permit Number: IPCMINVAR Date Approved: 12-6-1995 Effective Date: 13-6-1995 Status: Superseded By Variation
B	9m NW	Operator: Coalite Ltd T/a Coalite Chemicals Division Address: Coalite Chemicals Division, P O Box 152, Buttermilk Lane, Bolsover, Chesterfield, Derbyshire, S44 6AE Process: Manufacture And Use Of Organic Chemicals Permit Number: AS9046	Original Permit Number: IPCMINVAR Date Approved: 11-8-1995 Effective Date: 11-8-1995 Status: Superseded By Variation
B	9m NW	Operator: Coalite Ltd T/a Coalite Chemicals Division Address: PO Box 152, Buttermilk Lane, Bolsover, Chesterfield, Derbyshire, S44 6AE Process: Carbonisation And Associated Processes Permit Number: AT5135	Original Permit Number: IPCMINVAR Date Approved: 29-9-1995 Effective Date: 1-10-1995 Status: Superseded By Variation
B	9m NW	Operator: Coalite Ltd T/a Coalite Chemicals Division Address: P O Box 152, Buttermilk Lane, Bolsover, Chesterfield, Derbyshire, S44 6AE Process: Acid Processes Permit Number: AT6204	Original Permit Number: IPCMAJVAR Date Approved: 1-2-1996 Effective Date: 1-2-1996 Status: Superseded By Variation



ID	Location	Details	
B	9m NW	Operator: Coalite Ltd T/a Coalite Chemicals Division Address: PO Box 152, Buttermilk Lane, Bolsover, Chesterfield, Derbyshire, S44 6AZ Process: Manufacture And Use Of Organic Chemicals Permit Number: AU2310	Original Permit Number: IPCMAJVAR Date Approved: 9-2-1996 Effective Date: 19-2-1996 Status: Superseded By Variation
B	9m NW	Operator: Coalite Products Ltd T/a Coalite Chemicals Address: Coalite Chemicals Division, P O Box 152, Buttermilk Lane, Bolsover, Chesterfield, Derbyshire, S44 6AE Process: Tar And Bitumen Processes Permit Number: AU7613	Original Permit Number: IPCAIRAPP Date Approved: 10-7-1996 Effective Date: 1-8-1996 Status: Superseded By Variation
B	9m NW	Operator: Coalite Ltd T/a Coalite Chemicals Division Address: Coalite Chemicals Division, P O Box 152, Buttermilk Lane, Bolsover, Chesterfield, Derbyshire, S44 6AE Process: Manufacture And Use Of Organic Chemicals Permit Number: AV1157	Original Permit Number: IPCMAJVAR Date Approved: 30-4-1996 Effective Date: 1-5-1996 Status: Superseded By Variation
B	9m NW	Operator: Coalite Ltd T/a Coalite Chemicals Division Address: Coalite Chemicals Division, P O Box 152, Buttermilk Lane, Bolsover, Chesterfield, Derbyshire, S44 6AE Process: Processes Involving Halogens Permit Number: AV3893	Original Permit Number: IPCMINVAR Date Approved: 29-3-1996 Effective Date: 29-3-1996 Status: Superseded By Variation
B	9m NW	Operator: Coalite Ltd T/a Coalite Chemicals Division Address: Coalite Chemicals Division, P O Box 152, Buttermilk Lane, Bolsover, Chesterfield, Derbyshire, S44 6AE Process: Manufacture And Use Of Organic Chemicals Permit Number: AV3907	Original Permit Number: IPCMINVAR Date Approved: 29-3-1996 Effective Date: 29-3-1996 Status: Superseded By Variation
B	9m NW	Operator: Coalite Ltd T/a Coalite Chemicals Division Address: Coalite Chemicals Division, P O Box 152, Buttermilk Lane, Bolsover, Chesterfield, Derbyshire, S44 6AE Process: Manufacture And Use Of Organic Chemicals Permit Number: AW2213	Original Permit Number: IPCMINVAR Date Approved: 23-7-1996 Effective Date: 24-7-1996 Status: Superseded By Variation
B	9m NW	Operator: Coalite Ltd T/a Coalite Chemicals Division Address: PO Box 152, Buttermilk Lane, Bolsover, Chesterfield, Derbyshire, S44 6AZ Process: Combustion Processes Permit Number: AW9692	Original Permit Number: IPCMINVAR Date Approved: 2-12-1996 Effective Date: 2-12-1996 Status: Superseded By Variation
B	9m NW	Operator: Coalite Ltd T/a Coalite Chemicals Division Address: P O Box 152, Buttermilk Lane, Bolsover, Chesterfield, Derbyshire, S44 6AE Process: Carbonisation And Associated Processes Permit Number: AX1646	Original Permit Number: IPCMINVAR Date Approved: 2-12-1996 Effective Date: 1-1-1997 Status: Superseded By Variation



ID	Location	Details	
B	9m NW	Operator: Coalite Ltd T/a Coalite Chemicals Division Address: Coalite Chemicals Division, P O Box 152, Buttermilk Lane, Bolsover, Chesterfield, Derbyshire, S44 6AE Process: Processes Involving Halogens Permit Number: AX4041	Original Permit Number: IPCMINVAR Date Approved: 10-12-1996 Effective Date: 11-12-1996 Status: Superseded By Variation
B	9m NW	Operator: Coalite Ltd T/a Coalite Chemicals Division Address: Coalite Chemicals Division, P O Box 152, Buttermilk Lane, Bolsover, Chesterfield, Derbyshire, S44 6AE Process: Manufacture And Use Of Organic Chemicals Permit Number: AX6362	Original Permit Number: IPCMAJVAR Date Approved: 27-11-1997 Effective Date: 1-12-1997 Status: Superseded By Variation
B	9m NW	Operator: Coalite Ltd T/a Coalite Chemicals Division Address: Coalite Chemicals Division, P O Box 152, Buttermilk Lane, Bolsover, Chesterfield, Derbyshire, S44 6AE Process: Manufacture And Use Of Organic Chemicals Permit Number: AX6699	Original Permit Number: IPCMAJVAR Date Approved: 19-3-1997 Effective Date: 20-3-1997 Status: Superseded By Variation
B	9m NW	Operator: Coalite Ltd T/a Coalite Chemicals Division Address: Coalite Chemicals Division, P O Box 152, Buttermilk Lane, Bolsover, Chesterfield, Derbyshire, S44 6AE Process: Manufacture And Use Of Organic Chemicals Permit Number: AX7792	Original Permit Number: IPCMINVAR Date Approved: 3-2-1997 Effective Date: 3-2-1997 Status: Superseded By Variation
B	9m NW	Operator: Coalite Products Ltd T/a Coalite Chemicals Address: Coalite Chemicals Division, P O Box 152, Buttermilk Lane, Bolsover, Chesterfield, Derbyshire, S44 6AE Process: Manufacture And Use Of Organic Chemicals Permit Number: AY1439	Original Permit Number: IPCMINVAR Date Approved: 11-4-1997 Effective Date: 1-5-1997 Status: Superseded By Variation
B	9m NW	Operator: Coalite Products Ltd T/a Coalite Chemicals Address: PO Box 152, Buttermilk Lane, Bolsover, Chesterfield, Derbyshire, S44 6AZ Process: Manufacture And Use Of Organic Chemicals Permit Number: AZ6088	Original Permit Number: IPCMINVAR Date Approved: 7-11-1997 Effective Date: 17-11-1997 Status: Superseded By Variation
B	9m NW	Operator: Coalite Ltd T/a Coalite Chemicals Division Address: PO Box 152, Buttermilk Lane, Bolsover, Chesterfield, Derbyshire, S44 6AZ Process: Combustion Processes Permit Number: BA6895	Original Permit Number: IPCMINVAR Date Approved: 7-4-1998 Effective Date: 10-4-1998 Status: Superseded By Variation
B	9m NW	Operator: Coalite Ltd T/a Coalite Chemicals Division Address: PO Box 152, Buttermilk Lane, Bolsover, Chesterfield, Derbyshire, S44 6AZ Process: Combustion Processes Permit Number: BC2602	Original Permit Number: IPCMINVAR Date Approved: 20-10-1998 Effective Date: 1-11-1998 Status: Superseded By Variation



ID	Location	Details	
B	9m NW	Operator: Coalite Ltd T/a Coalite Chemicals Division Address: PO Box 152, Buttermilk Lane, Bolsover, Chesterfield, Derbyshire, S44 6AZ Process: Combustion Processes Permit Number: BC3285	Original Permit Number: IPCMINVAR Date Approved: 12-11-1998 Effective Date: 12-11-1998 Status: Superseded By Variation
B	9m NW	Operator: Coalite Ltd T/a Coalite Chemicals Division Address: PO Box 152, Buttermilk Lane, Bolsover, Chesterfield, Derbyshire, S44 6AE Process: Manufacture And Use Of Organic Chemicals Permit Number: BC6837	Original Permit Number: IPCMINVAR Date Approved: 24-11-1998 Effective Date: 30-11-1998 Status: Superseded By Variation
B	9m NW	Operator: Coalite Ltd T/a Coalite Chemicals Division Address: Coalite Chemicals Division, P O Box 152, Buttermilk Lane, Bolsover, Chesterfield, Derbyshire, S44 6AE Process: Manufacture And Use Of Organic Chemicals Permit Number: BD1440	Original Permit Number: IPCMINVAR Date Approved: 24-11-1998 Effective Date: 30-11-1998 Status: Superseded By Variation
B	9m NW	Operator: Coalite Ltd T/a Coalite Chemicals Division Address: PO Box 152, Buttermilk Lane, Bolsover, Chesterfield, Derbyshire, S44 6AE Process: Carbonisation And Associated Processes Permit Number: BD2969	Original Permit Number: IPCMINVAR Date Approved: 24-11-1998 Effective Date: 30-11-1998 Status: Superseded By Variation
B	9m NW	Operator: Coalite Ltd T/a Coalite Chemicals Division Address: P O Box 152, Buttermilk Lane, Bolsover, Chesterfield, Derbyshire, S44 6AE Process: Acid Processes Permit Number: BD3035	Original Permit Number: IPCMINVAR Date Approved: 24-11-1998 Effective Date: 30-11-1998 Status: Superseded By Variation
B	9m NW	Operator: Coalite Ltd T/a Coalite Chemicals Division Address: PO Box 152, Buttermilk Lane, Bolsover, Chesterfield, Derbyshire, S44 6AZ Process: Manufacture And Use Of Organic Chemicals Permit Number: BD3710	Original Permit Number: IPCMINVAR Date Approved: 24-11-1998 Effective Date: 30-11-1998 Status: Superseded By Variation
B	9m NW	Operator: Coalite Products Ltd T/a Coalite Chemicals Address: Coalite Chemicals Division, P O Box 152, Buttermilk Lane, Bolsover, Chesterfield, Derbyshire, S44 6AE Process: Tar And Bitumen Processes Permit Number: BD4627	Original Permit Number: IPCMINVAR Date Approved: 24-11-1998 Effective Date: 30-11-1998 Status: Superseded By Variation
B	9m NW	Operator: Coalite Ltd T/a Coalite Chemicals Division Address: P O Box 152, Buttermilk Lane, Bolsover, Chesterfield, Derbyshire, S44 6AE Process: Carbonisation And Associated Processes Permit Number: BD7677	Original Permit Number: IPCMINVAR Date Approved: 24-11-1998 Effective Date: 30-11-1998 Status: Superseded By Variation



ID	Location	Details	
B	9m NW	Operator: Coalite Ltd T/a Coalite Chemicals Division Address: Coalite Chemicals Division, P O Box 152, Buttermilk Lane, Bolsover, Chesterfield, Derbyshire, S44 6AE Process: Processes Involving Halogens Permit Number: BD8002	Original Permit Number: IPCMINVAR Date Approved: 24-11-1998 Effective Date: 30-11-1998 Status: Superseded By Variation
B	9m NW	Operator: Coalite Ltd T/a Coalite Chemicals Division Address: Coalite Chemicals Division, P O Box 152, Buttermilk Lane, Bolsover, Chesterfield, Derbyshire, S44 6AE Process: Manufacture And Use Of Organic Chemicals Permit Number: BD8304	Original Permit Number: IPCMINVAR Date Approved: 24-11-1998 Effective Date: 30-11-1998 Status: Superseded By Variation
B	9m NW	Operator: Coalite Ltd T/a Coalite Chemicals Division Address: Coalite Chemicals Division, P O Box 152, Buttermilk Lane, Bolsover, Chesterfield, Derbyshire, S44 6AE Process: Manufacture And Use Of Organic Chemicals Permit Number: BD8541	Original Permit Number: IPCMINVAR Date Approved: 24-11-1998 Effective Date: 30-11-1998 Status: Revoked
B	9m NW	Operator: Coalite Products Ltd T/a Coalite Chemicals Address: Coalite Chemicals Division, P O Box 152, Buttermilk Lane, Bolsover, Chesterfield, Derbyshire, S44 6AE Process: Manufacture And Use Of Organic Chemicals Permit Number: BD8789	Original Permit Number: IPCMINVAR Date Approved: 24-11-1998 Effective Date: 30-11-1998 Status: Superseded By Variation
B	9m NW	Operator: Coalite Products Ltd T/a Coalite Chemicals Address: PO Box 152, Buttermilk Lane, Bolsover, Chesterfield, Derbyshire, S44 6AZ Process: Manufacture And Use Of Organic Chemicals Permit Number: BE1054	Original Permit Number: IPCMINVAR Date Approved: 24-11-1998 Effective Date: 30-11-1998 Status: Superseded By Variation
B	9m NW	Operator: Coalite Ltd T/a Coalite Chemicals Division Address: PO Box 152, Buttermilk Lane, Bolsover, Chesterfield, Derbyshire, S44 6AZ Process: Combustion Processes Permit Number: BE6838	Original Permit Number: IPCMINVAR Date Approved: 24-11-1998 Effective Date: 30-11-1998 Status: Superseded By Variation
B	9m NW	Operator: Coalite Ltd T/a Coalite Chemicals Division Address: PO Box 152, Buttermilk Lane, Bolsover, Chesterfield, Derbyshire, S44 6AZ Process: Combustion Processes Permit Number: BG1276	Original Permit Number: IPCMINVAR Date Approved: 1-7-1999 Effective Date: 5-7-1999 Status: Superseded By Variation
B	9m NW	Operator: Coalite Ltd T/a Coalite Chemicals Division Address: Coalite Chemicals Division, P O Box 152, Buttermilk Lane, Bolsover, Chesterfield, Derbyshire, S44 6AE Process: Manufacture And Use Of Organic Chemicals Permit Number: BG1284	Original Permit Number: IPCMINVAR Date Approved: 1-7-1999 Effective Date: 5-7-1999 Status: Revoked



ID	Location	Details	
B	9m NW	Operator: Coalite Ltd T/a Coalite Chemicals Division Address: PO Box 152, Buttermilk Lane, Bolsover, Chesterfield, Derbyshire, S44 6AE Process: Manufacture And Use Of Organic Chemicals Permit Number: BG9226	Original Permit Number: IPCMINVAR Date Approved: 26-10-1999 Effective Date: 1-11-1999 Status: Superseded By Variation
B	9m NW	Operator: Coalite Ltd T/a Coalite Chemicals Division Address: PO Box 152, Buttermilk Lane, Bolsover, Chesterfield, Derbyshire, S44 6AE Process: Carbonisation And Associated Processes Permit Number: BG9269	Original Permit Number: IPCMINVAR Date Approved: 26-10-1999 Effective Date: 1-11-1999 Status: Superseded By Variation
B	9m NW	Operator: Coalite Products Ltd T/a Coalite Chemicals Address: Coalite Chemicals Division, P O Box 152, Buttermilk Lane, Bolsover, Chesterfield, Derbyshire, S44 6AE Process: Tar And Bitumen Processes Permit Number: BG9641	Original Permit Number: IPCMINVAR Date Approved: 1-11-1999 Effective Date: 1-11-1999 Status: Superseded By Variation
B	9m NW	Operator: Coalite Ltd T/a Coalite Chemicals Division Address: Coalite Chemicals Division, P O Box 152, Buttermilk Lane, Bolsover, Chesterfield, Derbyshire, S44 6AE Process: Manufacture And Use Of Organic Chemicals Permit Number: BH0542	Original Permit Number: IPCMINVAR Date Approved: 11-10-1999 Effective Date: 11-10-1999 Status: Superseded By Variation
B	9m NW	Operator: Coalite Ltd T/a Coalite Chemicals Division Address: Coalite Chemicals Division, P O Box 152, Buttermilk Lane, Bolsover, Chesterfield, Derbyshire, S44 6AE Process: Manufacture And Use Of Organic Chemicals Permit Number: BH2065	Original Permit Number: IPCMINVAR Date Approved: 2-11-1999 Effective Date: 9-11-1999 Status: Superseded By Variation
B	9m NW	Operator: Coalite Ltd T/a Coalite Chemicals Division Address: PO Box 152, Buttermilk Lane, Bolsover, Chesterfield, Derbyshire, S44 6AZ Process: Manufacture And Use Of Organic Chemicals Permit Number: BH2871	Original Permit Number: IPCMINVAR Date Approved: 16-12-1999 Effective Date: 1-1-2000 Status: Revoked
B	9m NW	Operator: Coalite Products Ltd T/a Coalite Chemicals Address: PO Box 152, Buttermilk Lane, Bolsover, Chesterfield, Derbyshire, S44 6AZ Process: Manufacture And Use Of Organic Chemicals Permit Number: BH2880	Original Permit Number: IPCMINVAR Date Approved: 16-12-1999 Effective Date: 1-1-2000 Status: Revoked
B	9m NW	Operator: Coalite Ltd T/a Coalite Chemicals Division Address: Coalite Chemicals Division, P O Box 152, Buttermilk Lane, Bolsover, Chesterfield, Derbyshire, S44 6AE Process: Manufacture And Use Of Organic Chemicals Permit Number: BH2898	Original Permit Number: IPCMINVAR Date Approved: 16-12-1999 Effective Date: 1-1-2000 Status: Superseded By Variation



ID	Location	Details	
B	9m NW	Operator: Coalite Ltd T/a Coalite Chemicals Division Address: PO Box 152, Buttermilk Lane, Bolsover, Chesterfield, Derbyshire, S44 6AZ Process: Combustion Processes Permit Number: BH5986	Original Permit Number: IPCMINVAR Date Approved: 23-12-1999 Effective Date: 1-1-2000 Status: Superseded By Variation
B	9m NW	Operator: Coalite Ltd T/a Coalite Chemicals Division Address: P O Box 152, Buttermilk Lane, Bolsover, Chesterfield, Derbyshire, S44 6AE Process: Acid Processes Permit Number: BH6664	Original Permit Number: IPCMINVAR Date Approved: 8-2-2000 Effective Date: 11-2-2000 Status: Revoked
B	9m NW	Operator: Coalite Ltd T/a Coalite Chemicals Division Address: Coalite Chemicals Division, P O Box 152, Buttermilk Lane, Bolsover, Chesterfield, Derbyshire, S44 6AE Process: Processes Involving Halogens Permit Number: BH6672	Original Permit Number: IPCMINVAR Date Approved: 8-2-2000 Effective Date: 11-2-2000 Status: Superseded By Variation
B	9m NW	Operator: Coalite Ltd T/a Coalite Chemicals Division Address: Coalite Chemicals Division, P O Box 152, Buttermilk Lane, Bolsover, Chesterfield, Derbyshire, S44 6AE Process: Manufacture And Use Of Organic Chemicals Permit Number: BH6699	Original Permit Number: IPCMINVAR Date Approved: 8-2-2000 Effective Date: 11-2-2000 Status: Superseded By Variation
B	9m NW	Operator: Coalite Ltd T/a Coalite Chemicals Division Address: PO Box 152, Buttermilk Lane, Bolsover, Chesterfield, Derbyshire, S44 6AZ Process: Combustion Processes Permit Number: BI6848	Original Permit Number: IPCMINVAR Date Approved: 27-6-2000 Effective Date: 30-6-2000 Status: Superseded By Variation
B	9m NW	Operator: Coalite Products Ltd T/a Coalite Chemicals Address: Coalite Chemicals Division, P O Box 152, Buttermilk Lane, Bolsover, Chesterfield, Derbyshire, S44 6AE Process: Tar And Bitumen Processes Permit Number: BI7828	Original Permit Number: IPCMINVAR Date Approved: 27-6-2000 Effective Date: 30-6-2000 Status: Superseded By Variation
B	9m NW	Operator: Coalite Ltd T/a Coalite Chemicals Division Address: Coalite Chemicals Division, P O Box 152, Buttermilk Lane, Bolsover, Chesterfield, Derbyshire, S44 6AE Process: Processes Involving Halogens Permit Number: BJ0935	Original Permit Number: IPCMINVAR Date Approved: 10-11-2000 Effective Date: 16-11-2000 Status: Superseded By Variation
B	9m NW	Operator: Coalite Ltd T/a Coalite Chemicals Division Address: PO Box 152, Buttermilk Lane, Bolsover, Chesterfield, Derbyshire, S44 6AZ Process: Combustion Processes Permit Number: BJ3918	Original Permit Number: IPCMINVAR Date Approved: 14-9-2000 Effective Date: 14-9-2000 Status: Superseded By Variation



ID	Location	Details	
B	9m NW	Operator: Coalite Ltd T/a Coalite Chemicals Division Address: PO Box 152, Buttermilk Lane, Bolsover, Chesterfield, Derbyshire, S44 6AZ Process: Combustion Processes Permit Number: BJ7042	Original Permit Number: IPCMINVAR Date Approved: 3-11-2000 Effective Date: 6-11-2000 Status: Superseded By Variation
B	9m NW	Operator: Coalite Ltd T/a Coalite Chemicals Division Address: PO Box 152, Buttermilk Lane, Bolsover, Chesterfield, Derbyshire, S44 6AZ Process: Combustion Processes Permit Number: BK3581	Original Permit Number: IPCMINVAR Date Approved: 13-1-2001 Effective Date: 15-1-2001 Status: Superseded By Variation
B	9m NW	Operator: Coalite Ltd T/a Coalite Chemicals Division Address: P O Box 152, Buttermilk Lane, Bolsover, Chesterfield, Derbyshire, S44 6AE Process: Carbonisation And Associated Processes Permit Number: BK3930	Original Permit Number: IPCMINVAR Date Approved: 22-1-2001 Effective Date: 22-1-2001 Status: Superseded By Variation
B	9m NW	Operator: Coalite Ltd T/a Coalite Chemicals Division Address: PO Box 152, Buttermilk Lane, Bolsover, Chesterfield, Derbyshire, S44 6AZ Process: Combustion Processes Permit Number: BK4634	Original Permit Number: IPCMINVAR Date Approved: 8-3-2001 Effective Date: 15-3-2001 Status: Superseded By Variation
B	9m NW	Operator: Coalite Ltd T/a Coalite Chemicals Division Address: PO Box 152, Buttermilk Lane, Bolsover, Chesterfield, Derbyshire, S44 6AE Process: Manufacture And Use Of Organic Chemicals Permit Number: BK6297	Original Permit Number: IPCMINVAR Date Approved: 4-5-2001 Effective Date: 11-5-2001 Status: Revoked
B	9m NW	Operator: Coalite Products Ltd T/a Coalite Chemicals Address: Coalite Chemicals Division, P O Box 152, Buttermilk Lane, Bolsover, Chesterfield, Derbyshire, S44 6AE Process: Manufacture And Use Of Organic Chemicals Permit Number: BK6319	Original Permit Number: IPCMINVAR Date Approved: 31-7-2001 Effective Date: 7-8-2001 Status: Revoked
B	9m NW	Operator: Coalite Ltd T/a Coalite Chemicals Division Address: PO Box 152, Buttermilk Lane, Bolsover, Chesterfield, Derbyshire, S44 6AZ Process: Combustion Processes Permit Number: BK7374	Original Permit Number: IPCMINVAR Date Approved: 18-6-2001 Effective Date: 18-6-2001 Status: Superseded By Variation
B	9m NW	Operator: Coalite Products Ltd T/a Coalite Chemicals Address: Coalite Chemicals Division, P O Box 152, Buttermilk Lane, Bolsover, Chesterfield, Derbyshire, S44 6AE Process: Tar And Bitumen Processes Permit Number: BK8842	Original Permit Number: IPCMINVAR Date Approved: 1-5-2001 Effective Date: 1-5-2001 Status: Superseded By Variation



ID	Location	Details	
B	9m NW	Operator: Coalite Ltd T/a Coalite Chemicals Division Address: PO Box 152, Buttermilk Lane, Bolsover, Chesterfield, Derbyshire, S44 6AZ Process: Combustion Processes Permit Number: BL4141	Original Permit Number: IPCMINVAR Date Approved: 26-6-2001 Effective Date: 26-6-2001 Status: Superseded By Variation
B	9m NW	Operator: Coalite Ltd T/a Coalite Chemicals Division Address: PO Box 152, Buttermilk Lane, Bolsover, Chesterfield, Derbyshire, S44 6AZ Process: Combustion Processes Permit Number: BL7426	Original Permit Number: IPCMINVAR Date Approved: 6-9-2001 Effective Date: 10-9-2001 Status: Superseded By Variation
B	9m NW	Operator: Coalite Ltd T/a Coalite Chemicals Division Address: PO Box 152, Buttermilk Lane, Bolsover, Chesterfield, Derbyshire, S44 6AE Process: Carbonisation And Associated Processes Permit Number: BL9542	Original Permit Number: IPCMINVAR Date Approved: 5-10-2001 Effective Date: 8-10-2001 Status: Superseded By Variation
B	9m NW	Operator: Coalite Ltd T/a Coalite Chemicals Division Address: Coalite Chemicals Division, P O Box 152, Buttermilk Lane, Bolsover, Chesterfield, Derbyshire, S44 6AE Process: Processes Involving Halogens Permit Number: BM0613	Original Permit Number: IPCMINVAR Date Approved: 6-9-2001 Effective Date: 10-9-2001 Status: Revoked
B	9m NW	Operator: Coalite Ltd T/a Coalite Chemicals Division Address: PO Box 152, Buttermilk Lane, Bolsover, Chesterfield, Derbyshire, S44 6AZ Process: Combustion Processes Permit Number: BM1440	Original Permit Number: IPCMINVAR Date Approved: 21-9-2001 Effective Date: 27-9-2001 Status: Superseded By Variation
B	9m NW	Operator: Coalite Products Ltd T/a Coalite Chemicals Address: Coalite Chemicals Division, P O Box 152, Buttermilk Lane, Bolsover, Chesterfield, Derbyshire, S44 6AE Process: Tar And Bitumen Processes Permit Number: BM3191	Original Permit Number: IPCMINVAR Date Approved: 16-10-2001 Effective Date: 1-11-2001 Status: Revoked
B	9m NW	Operator: Coalite Ltd T/a Coalite Chemicals Division Address: PO Box 152, Buttermilk Lane, Bolsover, Chesterfield, Derbyshire, S44 6AE Process: Carbonisation And Associated Processes Permit Number: BM7782	Original Permit Number: IPCMINVAR Date Approved: 15-3-2002 Effective Date: 18-3-2002 Status: Superseded By Variation
B	9m NW	Operator: Coalite Ltd T/a Coalite Chemicals Division Address: PO Box 152, Buttermilk Lane, Bolsover, Chesterfield, Derbyshire, S44 6AZ Process: Combustion Processes Permit Number: BQ4289	Original Permit Number: IPCMINVAR Date Approved: 28-2-2002 Effective Date: 1-3-2002 Status: Superseded By Variation



ID	Location	Details	
B	9m NW	Operator: Coalite Ltd T/a Coalite Chemicals Division Address: PO Box 152, Buttermilk Lane, Bolsover, Chesterfield, Derbyshire, S44 6AZ Process: Combustion Processes Permit Number: BR5698	Original Permit Number: IPCMINVAR Date Approved: 28-2-2002 Effective Date: 1-3-2002 Status: Superseded By Variation
B	9m NW	Operator: Coalite Ltd T/a Coalite Chemicals Division Address: PO Box 152, Buttermilk Lane, Bolsover, Chesterfield, Derbyshire, S44 6AE Process: Carbonisation And Associated Processes Permit Number: BR8999	Original Permit Number: IPCMINVAR Date Approved: 30-4-2002 Effective Date: 1-5-2002 Status: Superseded By Variation
B	9m NW	Operator: Coalite Ltd T/a Coalite Chemicals Division Address: PO Box 152, Buttermilk Lane, Bolsover, Chesterfield, Derbyshire, S44 6AZ Process: Combustion Processes Permit Number: BR9006	Original Permit Number: IPCMINVAR Date Approved: 30-4-2002 Effective Date: 1-5-2002 Status: Superseded By Variation
B	9m NW	Operator: Coalite Ltd T/a Coalite Chemicals Division Address: PO Box 152, Buttermilk Lane, Bolsover, Chesterfield, Derbyshire, S44 6AE Process: Carbonisation And Associated Processes Permit Number: BS0515	Original Permit Number: IPCMINVAR Date Approved: 1-5-2002 Effective Date: 1-5-2002 Status: Superseded By Variation
B	9m NW	Operator: Coalite Ltd T/a Coalite Chemicals Division Address: PO Box 152, Buttermilk Lane, Bolsover, Chesterfield, Derbyshire, S44 6AZ Process: Combustion Processes Permit Number: BS4529	Original Permit Number: IPCMINVAR Date Approved: 31-3-2003 Effective Date: 1-4-2003 Status: Superseded By Variation
B	9m NW	Operator: Coalite Ltd T/a Coalite Chemicals Division Address: PO Box 152, Buttermilk Lane, Bolsover, Chesterfield, Derbyshire, S44 6AZ Process: Combustion Processes Permit Number: BT7167	Original Permit Number: IPCMINVAR Date Approved: 31-3-2003 Effective Date: 1-4-2003 Status: Superseded By Variation
B	9m NW	Operator: Coalite Ltd T/a Coalite Chemicals Division Address: P O Box 152, Buttermilk Lane, Bolsover, Chesterfield, Derbyshire, S44 6AE Process: Carbonisation And Associated Processes Permit Number: BU4139	Original Permit Number: IPCMINVAR Date Approved: 31-3-2003 Effective Date: 1-4-2003 Status: Superseded By Variation
B	9m NW	Operator: Coalite Ltd T/a Coalite Chemicals Division Address: PO Box 152, Buttermilk Lane, Bolsover, Chesterfield, Derbyshire, S44 6AE Process: Carbonisation And Associated Processes Permit Number: BU4147	Original Permit Number: IPCMINVAR Date Approved: 14-7-2003 Effective Date: 1-8-2003 Status: Revoked



ID	Location	Details	
B	9m NW	Operator: Coalite Ltd T/a Coalite Chemicals Division Address: Coalite Chemicals Division, P O Box 152, Buttermilk Lane, Bolsover, Chesterfield, Derbyshire, S44 6AE Process: Manufacture And Use Of Organic Chemicals Permit Number: BU4163	Original Permit Number: IPCMINVAR Date Approved: 14-7-2003 Effective Date: 1-8-2003 Status: Revoked
B	9m NW	Operator: Coalite Ltd T/a Coalite Chemicals Division Address: PO Box 152, Buttermilk Lane, Bolsover, Chesterfield, Derbyshire, S44 6AZ Process: Combustion Processes Permit Number: BV4401	Original Permit Number: IPCMINVAR Date Approved: 29-7-2003 Effective Date: 1-8-2003 Status: Revoked
B	9m NW	Operator: Coalite Ltd T/a Coalite Chemicals Division Address: P O Box 152, Buttermilk Lane, Bolsover, Chesterfield, Derbyshire, S44 6AE Process: Carbonisation And Associated Processes Permit Number: BY0186	Original Permit Number: IPCMINVAR Date Approved: 29-6-2004 Effective Date: 1-7-2004 Status: Revoked

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

4.10 Licensed industrial activities (Part A(1))

Records within 500m

8

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

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

ID	Location	Details	
C	304m N	Operator: SUTHERLAND FARMS LTD Installation Name: SUTHERLAND FARM POULTRY UNIT - EPR/KP3434UX Process: INTENSIVE FARMING; > 40,000 POULTRY Permit Number: FP3836JS Original Permit Number: KP3434UX	EPR Reference: - Issue Date: 24/07/2018 Effective Date: 24/07/2018 Last date noted as effective: 15/05/2020 Status: EFFECTIVE
C	304m N	Operator: SUTHERLAND FARMS LTD Installation Name: SUTHERLAND FARM POULTRY UNIT - EPR/KP3434UX Process: ASSOCIATED PROCESS Permit Number: FP3836JS Original Permit Number: KP3434UX	EPR Reference: - Issue Date: 24/07/2018 Effective Date: 24/07/2018 Last date noted as effective: 15/05/2020 Status: EFFECTIVE



ID	Location	Details	
C	304m N	Operator: SUTHERLAND FARMS LTD Installation Name: SUTHERLAND FARM POULTRY UNIT Process: ASSOCIATED PROCESS Permit Number: JP3237VK Original Permit Number: KP3434UX	EPR Reference: - Issue Date: 14/11/2014 Effective Date: 14/11/2014 Last date noted as effective: 15/05/2020 Status: SUPERCEDED
C	304m N	Operator: SUTHERLAND FARMS LTD Installation Name: SUTHERLAND FARM POULTRY UNIT Process: INTENSIVE FARMING; > 40,000 POULTRY Permit Number: JP3237VK Original Permit Number: KP3434UX	EPR Reference: - Issue Date: 14/11/2014 Effective Date: 14/11/2014 Last date noted as effective: 15/05/2020 Status: SUPERCEDED
C	304m N	Operator: SUTHERLAND FARMS LTD Installation Name: SUTHERLAND FARMS LTD. BOLSOVER Process: ASSOCIATED PROCESS Permit Number: KP3434UX Original Permit Number: KP3434UX	EPR Reference: - Issue Date: 11/10/2007 Effective Date: 11/10/2007 Last date noted as effective: 15/05/2020 Status: SUPERCEDED
C	304m N	Operator: SUTHERLAND FARMS LTD Installation Name: SUTHERLAND FARMS LTD. BOLSOVER Process: INTENSIVE FARMING; > 40,000 POULTRY Permit Number: KP3434UX Original Permit Number: KP3434UX	EPR Reference: - Issue Date: 11/10/2007 Effective Date: 11/10/2007 Last date noted as effective: 15/05/2020 Status: SUPERCEDED
C	304m N	Operator: SUTHERLAND FARMS LTD Installation Name: SUTHERLAND FARMS LTD. BOLSOVER Process: ASSOCIATED PROCESS Permit Number: MP3830FW Original Permit Number: KP3434UX	EPR Reference: - Issue Date: 19/04/2011 Effective Date: 19/04/2011 Last date noted as effective: 15/05/2020 Status: SUPERCEDED
C	304m N	Operator: SUTHERLAND FARMS LTD Installation Name: SUTHERLAND FARMS LTD. BOLSOVER Process: INTENSIVE FARMING; > 40,000 POULTRY Permit Number: MP3830FW Original Permit Number: KP3434UX	EPR Reference: - Issue Date: 19/04/2011 Effective Date: 19/04/2011 Last date noted as effective: 15/05/2020 Status: SUPERCEDED

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

0

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

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

4.14 Pollutant release to surface waters (Red List)

Records within 500m

0

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

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

4.15 Pollutant release to public sewer

Records within 500m

0

Discharges of Special Category Effluents to the public sewer.

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

4.16 List 1 Dangerous Substances

Records within 500m

0

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

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



4.17 List 2 Dangerous Substances

Records within 500m

0

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

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

4.18 Pollution Incidents (EA/NRW)

Records within 500m

0

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

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

4.19 Pollution inventory substances

Records within 500m

3

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.

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

ID: C, Location: 304m N, Permit: KP3434UX
 Operator: Sutherland Farms Ltd
 Activity: INTENSIVE FARMING; > 40,000 POULTRY
 Address: Sutherland Farm Poultry Unit Sutherland Farm Oxcroft Lane Bolsover Derbyshire S44 6DW
 Sector: Agriculture, Sub-sector: Intensive Farming
 Releases:

Route	Substance	Reporting threshold (kg)	Quantity (kg)
Air	Nitrogen oxides (NO and NO2) as NO2	100000kg	Below Reporting Threshold

ID: C, Location: 304m N, Permit: KP3434UX
 Operator: Sutherland Farms Ltd
 Activity: INTENSIVE FARMING; > 40,000 POULTRY
 Address: Sutherland Farm Poultry Unit Sutherland Farm Oxcroft Lane Bolsover Derbyshire S44 6DW
 Sector: Agriculture, Sub-sector: Intensive Farming
 Releases:



Route	Substance	Reporting threshold (kg)	Quantity (kg)
Air	Ammonia	1000kg	9044kg

ID: C, Location: 304m N, Permit: KP3434UX
 Operator: Sutherland Farms Ltd
 Activity: INTENSIVE FARMING; > 40,000 POULTRY
 Address: Sutherland Farm Poultry Unit Sutherland Farm Oxcroft Lane Bolsover Derbyshire S44 6DW
 Sector: Agriculture, Sub-sector: Intensive Farming
 Releases:

Route	Substance	Reporting threshold (kg)	Quantity (kg)
Air	Particulate matter - PM10	1000kg	8866kg

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

4.20 Pollution inventory waste transfers

Records within 500m

1

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.

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

ID: C, Location: 304m N, Permit: KP3434UX
 Operator: Sutherland Farms Ltd
 Activity: INTENSIVE FARMING; > 40,000 POULTRY
 Address: Sutherland Farm Poultry Unit Sutherland Farm Oxcroft Lane Bolsover Derbyshire S44 6DW
 Sector: Agriculture, Sub-sector: Intensive Farming
 Releases:

Route	Route description	Quantity (tonnes)	Release level	EWC code	EWC description	Hazardous waste
R4	Recycling/reclamation of metals and metal compounds	Below Reporting Threshold	Below Reporting Threshold	02 01 10	waste metal	No
D1	Deposit into or onto land (eg landfill, etc.)	Below Reporting Threshold	Below Reporting Threshold	15 01 01	paper and cardboard packaging	No



Route	Route description	Quantity (tonnes)	Release level	EWC code	EWC description	Hazardous waste
R5	Recycling/reclamation of other inorganic materials	Below Reporting Threshold	Below Reporting Threshold	15 01 02	plastic packaging	No

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

4.21 Pollution inventory radioactive waste

Records within 500m	0
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The pollution inventory (radioactive wastes) includes reporting on annual releases of radioactive substances from a site, including the means of release. Where releases fall below the reporting threshold, no value will be given. The data is given for the most recent complete year available.

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

5 Hydrogeology - Superficial aquifer

5.1 Superficial aquifer

Records within 500m

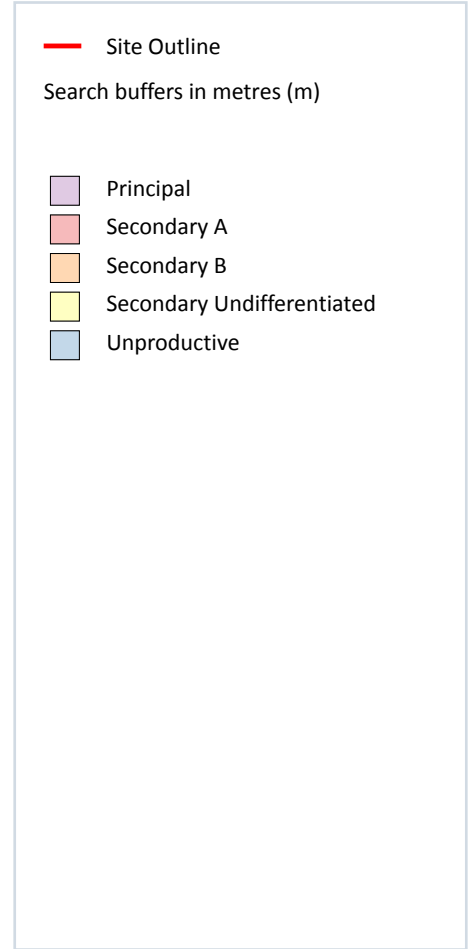
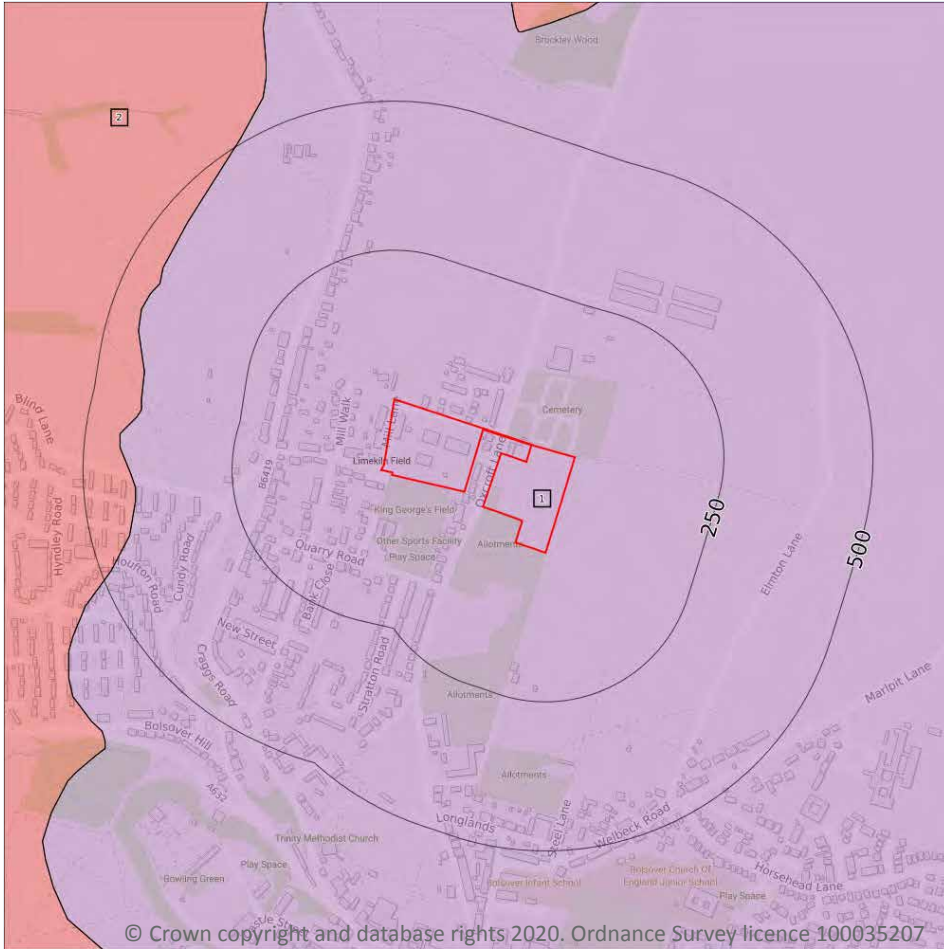
0

Aquifer status of groundwater held within superficial geology.

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



Bedrock aquifer



5.2 Bedrock aquifer

Records within 500m

2

Aquifer status of groundwater held within bedrock geology.

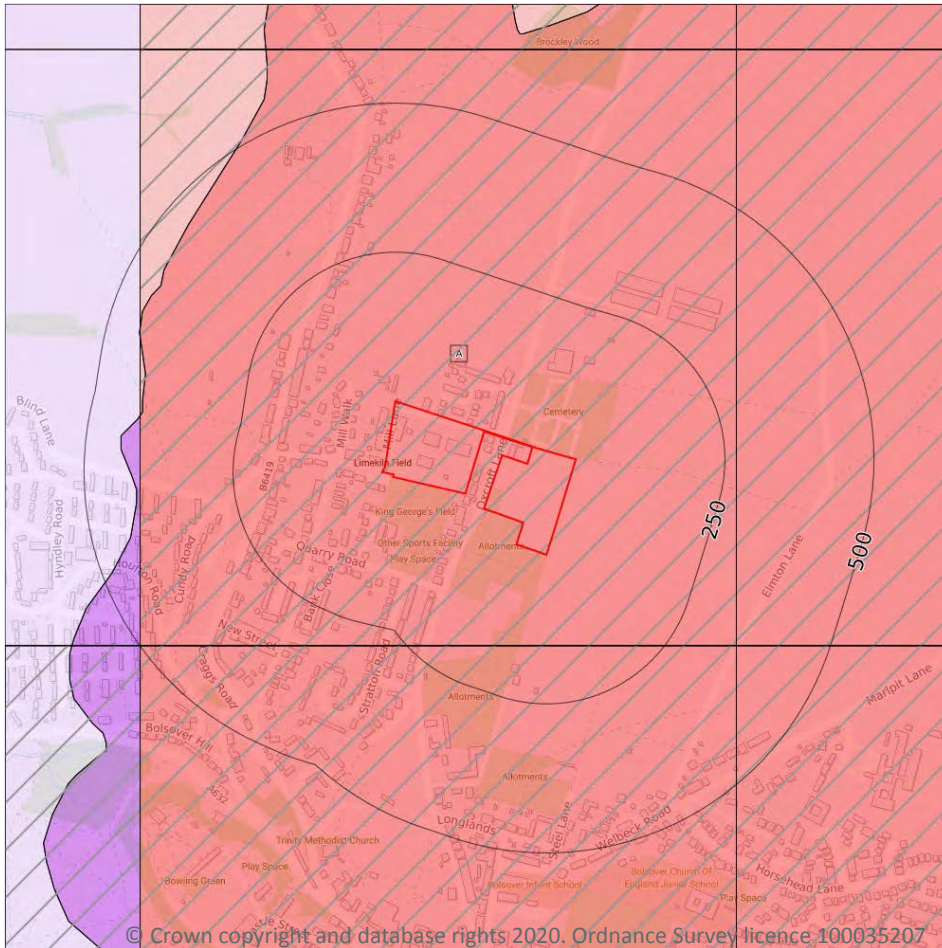
Features are displayed on the Bedrock aquifer map on **page 48**

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	413m 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

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



Groundwater vulnerability



5.3 Groundwater vulnerability

Records within 50m

1

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 50**

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

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

5.4 Groundwater vulnerability- soluble rock risk

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

ID	Maximum soluble risk category	Percentage of grid square covered by maximum risk
A	Significant soluble rocks are likely to be present. Problems unlikely except with considerable surface or subsurface water flow.	76.0%

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

5.5 Groundwater vulnerability- local information

Records on site	0
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This dataset identifies areas where additional local information affecting vulnerability is held by the Environment Agency. Further information can be obtained by contacting the Environment Agency local Area groundwater team through the Environment Agency National Customer Call Centre on 03798 506 506 or by email on enquiries@environment-agency.gov.uk.

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

Abstractions and Source Protection Zones



5.6 Groundwater abstractions

Records within 2000m

7

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 52**

ID	Location	Details	
A	311m N	Status: Historical Licence No: 2/27/01/022 Details: General use relating to Secondary Category (Medium Loss) Direct Source: GROUNDWATERS Point: BOREHOLE-SUTHERLAND FARM-MAGNESIAN LIMESTONE Data Type: Point Name: ADSETTS Easting: 447850 Northing: 371600	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 09/05/2003 Expiry Date: 31/03/2017 Issue No: 1 Version Start Date: 09/05/2003 Version End Date: -
A	311m N	Status: Historical Licence No: 2/27/01/022 Details: General Farming & Domestic Direct Source: GROUNDWATERS Point: BOREHOLE-SUTHERLAND FARM-MAGNESIAN LIMESTONE Data Type: Point Name: ADSETTS Easting: 447850 Northing: 371600	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 09/05/2003 Expiry Date: 31/03/2017 Issue No: 1 Version Start Date: 09/05/2003 Version End Date: -
-	1619m W	Status: Historical Licence No: 2/27/01/009 Details: General Cooling (Existing Licences Only) (High Loss) Direct Source: GROUNDWATERS Point: WELL Data Type: Point Name: COALITE SMOKELESS FUELS Easting: 445800 Northing: 371500	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: 20/01/1966 Version End Date: -
-	1619m W	Status: Historical Licence No: 2/27/01/009 Details: General Cooling (Existing Licences Only) (Low Loss) Direct Source: GROUNDWATERS Point: WELL Data Type: Point Name: COALITE SMOKELESS FUELS Easting: 445800 Northing: 371500	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: 20/01/1966 Version End Date: -



ID	Location	Details	
-	1619m W	Status: Historical Licence No: 2/27/01/009 Details: General Cooling (Existing Licences Only) (High Loss) Direct Source: GROUNDWATERS Point: WELL - MAGNESIAN LIMESTONE - BOLSOVER WOODHOUSE Data Type: Point Name: COALITE SMOKELESS FUELS Easting: 445800 Northing: 371500	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: 20/01/1966 Version End Date: -
-	1619m W	Status: Historical Licence No: 2/27/01/009 Details: General Cooling (Existing Licences Only) (Low Loss) Direct Source: GROUNDWATERS Point: WELL - MAGNESIAN LIMESTONE - BOLSOVER WOODHOUSE Data Type: Point Name: COALITE SMOKELESS FUELS Easting: 445800 Northing: 371500	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: 20/01/1966 Version End Date: -
-	1625m N	Status: Historical Licence No: 2/27/01/021 Details: General Farming & Domestic Direct Source: GROUNDWATERS Point: BOREHOLE - COAL MEASURES - BOLSOVER Data Type: Point Name: ADSETTS Easting: 448100 Northing: 372900	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 03/12/1996 Expiry Date: - Issue No: 100 Version Start Date: 03/12/1996 Version End Date: -

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

5.7 Surface water abstractions

Records within 2000m

3

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 52**



ID	Location	Details	
-	1718m W	Status: Historical Licence No: 2/27/01/008 Details: General Cooling (Existing Licences Only) (High Loss) Direct Source: SURFACE WATER Point: RIVER DOE LEA Data Type: Point Name: COALITE SMOKELESS FUELS Easting: 445700 Northing: 371500	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: 20/01/1966 Version End Date: -
-	1718m W	Status: Historical Licence No: 2/27/01/008 Details: General Cooling (Existing Licences Only) (Low Loss) Direct Source: SURFACE WATER Point: RIVER DOE LEA Data Type: Point Name: COALITE SMOKELESS FUELS Easting: 445700 Northing: 371500	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: 20/01/1966 Version End Date: -
-	1968m SW	Status: Active Licence No: 2/27/01/015 Details: Lake & Pond Throughflow Direct Source: SURFACE WATER Point: TRIBUTARY OF RIVER DOE LEA Data Type: Point Name: VALE ANGLING CLUB Easting: 446350 Northing: 369630	Annual Volume (m ³): 150,300 Max Daily Volume (m ³): 423 Original Application No: - Original Start Date: 06/09/1979 Expiry Date: - Issue No: 101 Version Start Date: 02/05/2002 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)

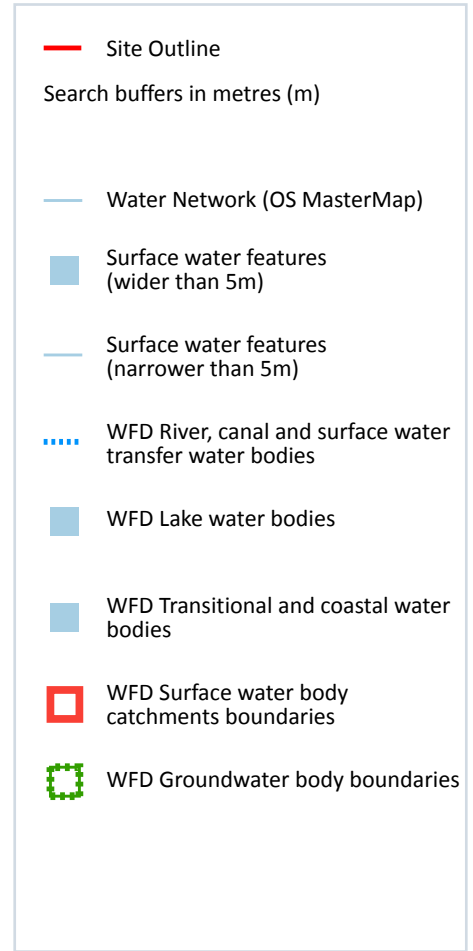
Records within 500m

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



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

2

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

Features are displayed on the Hydrology map on **page 57**

ID	Location	Type	Water body catchment	Water body ID	Operational catchment	Management catchment
1	On site	River WB catchment	Doe Lea from Source to Hawke Brook	GB104027057290	Rother and Doe Lea	Don and Rother
3	On site	River WB catchment	Millwood Brook Catchment (trib of Poulter)	GB104028058150	Idle River	Idle and Torne

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

6.4 WFD Surface water bodies

Records identified

2

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 57**

ID	Location	Type	Name	Water body ID	Overall rating	Chemical rating	Ecological rating	Year
-	1417m W	River	Doe Lea from Source to Hawke Brook	GB104027057290	Moderate	Good	Moderate	2016
-	3938m NE	River	Millwood Brook Catchment (trib of Poulter)	GB104028058150	Poor	Good	Poor	2016

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 57**

ID	Location	Name	Water body ID	Overall rating	Chemical rating	Quantitative	Year
2	On site	Idle Torne - Magnesian Limestone	<u>GB40401G300600</u>	Poor	Poor	Good	2015

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 Sea (RoFRaS)

Records within 50m

0

The chance of flooding from rivers and/or the sea in any given year, based on cells of 50m. Each cell is allocated one of four flood risk categories, taking into account flood defences and their condition; 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).

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

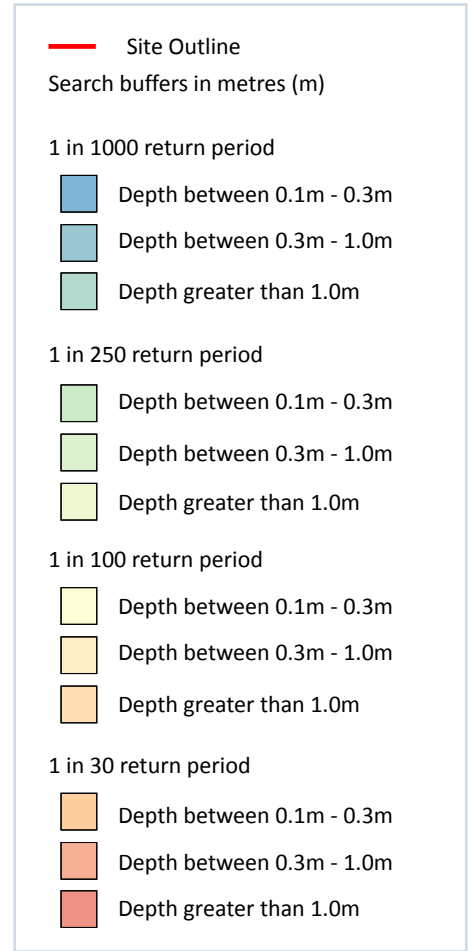
0

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, 0.3m - 1.0m

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

Features are displayed on the Surface water flooding map on **page 63**

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



9.1 Groundwater flooding

Highest risk on site

Negligible

Highest risk within 50m

Negligible

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

Features are displayed on the Groundwater flooding map on **page 65**

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

2

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 66**

ID	Location	Name	Woodland Type
A	585m N	Unknown	Ancient & Semi-Natural Woodland
A	610m N	Unknown	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

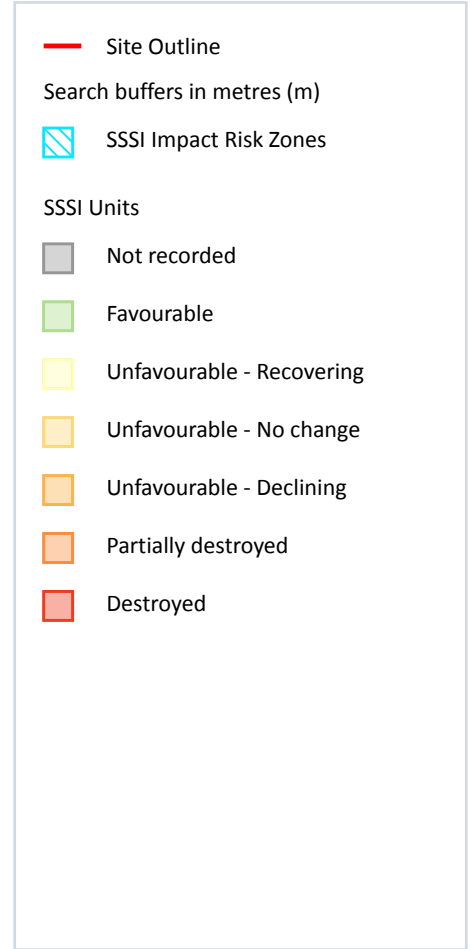
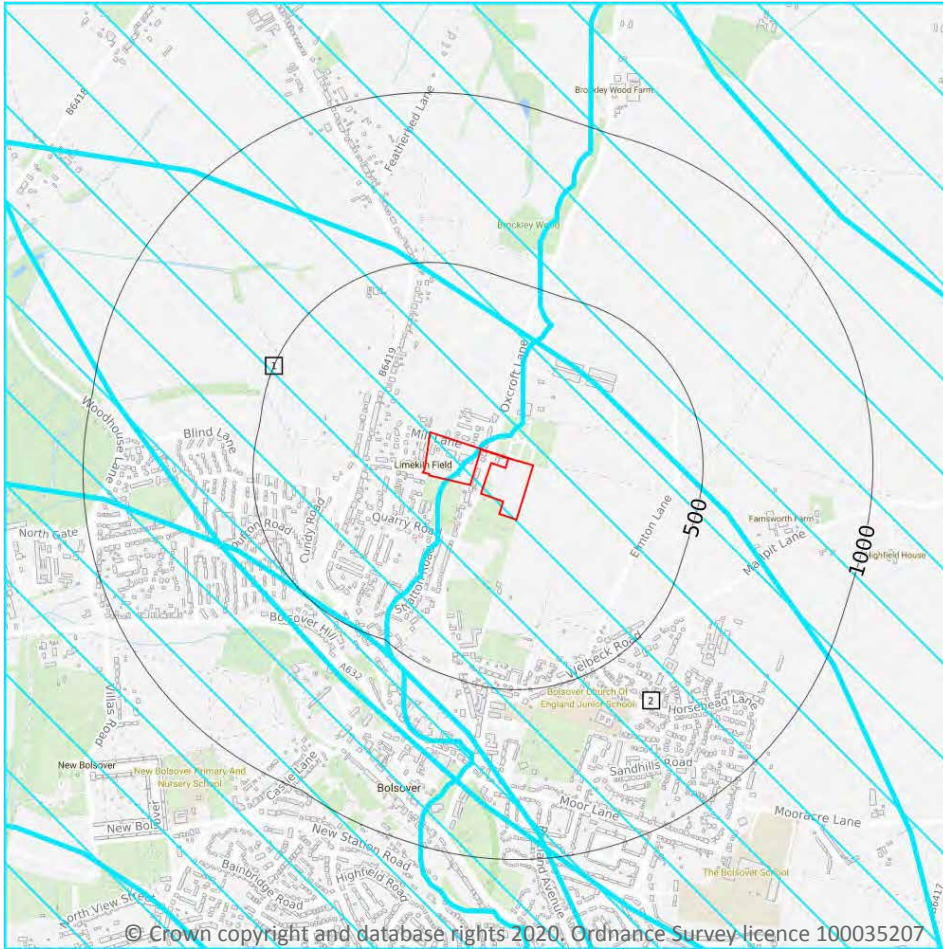
Areas at risk from agricultural nitrate pollution designated under the EC Nitrate Directive (91/676/EEC). These are areas of land that drain into waters polluted by nitrates. Farmers operating within these areas have to follow mandatory rules to tackle nitrate loss from agriculture.

Location	Name	Type	NVZ ID	Status
On site	River Rother (source to Don) NVZ	Surface Water	S267	Changed
On site	Nottinghamshire	Groundwater	G40	Existing
On site	Clumber Lake & Welbeck Great Lake Eutrophic lake NVZ	Eutrophic Water	EL125	Changed
On site	River Idle from River Ryton to River Trent NVZ	Surface Water	S335	Existing

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



SSSI Impact Zones and Units



10.17 SSSI Impact Risk Zones

Records on site

2

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 71**

ID	Location	Type of developments requiring consultation
1	On site	<p>Infrastructure - Airports, helipads and other aviation proposals.</p> <p>Minerals, Oil and Gas - Planning applications for quarries, including: new proposals, Review of Minerals Permissions (ROMP), extensions, variations to conditions etc. Oil & gas exploration/extraction.</p> <p>Air pollution - Livestock & poultry units with floorspace > 500m², slurry lagoons > 750m² & manure stores > 3500t.</p>

ID	Location	Type of developments requiring consultation
2	On site	<p>Infrastructure - Airports, helipads and other aviation proposals.</p> <p>Minerals, Oil and Gas - Planning applications for quarries, including: new proposals, Review of Minerals Permissions (ROMP), extensions, variations to conditions etc. Oil & gas exploration/extraction.</p> <p>Air pollution - Livestock & poultry units with floorspace > 500m², slurry lagoons > 750m² & manure stores > 3500t.</p> <p>Discharges - Any discharge of water or liquid waste of more than 20m³/day to ground (ie to seep away) or to surface water, such as a beck or stream (NB This does not include discharges to mains sewer which are unlikely to pose a risk at this location).</p>

This data is sourced from Natural England.

10.18 SSSI Units

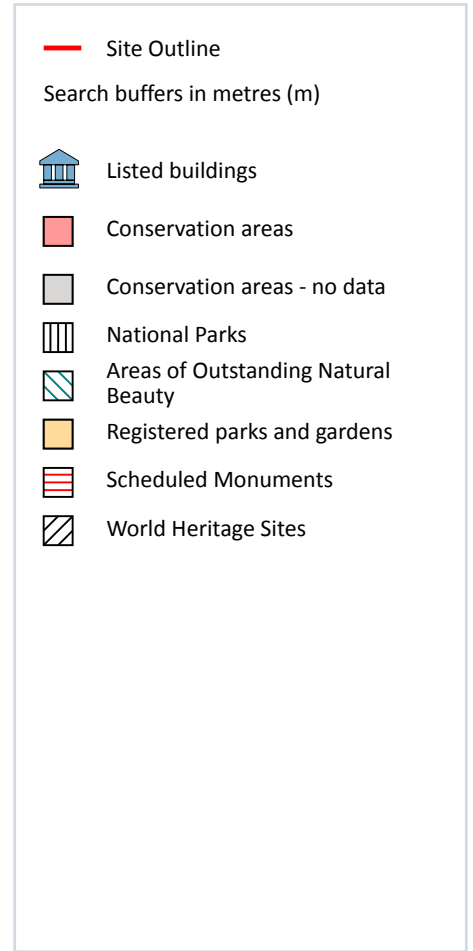
Records within 2000m	0
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Divisions of SSSIs used to record management and condition details. Units are the smallest areas for which Natural England gives a condition assessment, however, the size of units varies greatly depending on the types of management and the conservation interest.

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



11 Visual and cultural designations



11.1 World Heritage Sites

Records within 250m

0

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

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

11.2 Area of Outstanding Natural Beauty

Records within 250m

0

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

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

11.3 National Parks

Records within 250m

0

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

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

11.4 Listed Buildings

Records within 250m

2

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

Features are displayed on the Visual and cultural designations map on **page 73**

ID	Location	Name	Grade	Reference Number	Listed date
A	81m W	Chimney At Lime Kiln Fields Mill, Old Bolsover, Bolsover, Derbyshire, S44	II	1108982	13/08/1987
A	87m W	Lime Kiln Fields Mill, Old Bolsover, Bolsover, Derbyshire, S44	II	1054064	13/08/1987

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



11.5 Conservation Areas

Records within 250m

0

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

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

11.7 Registered Parks and Gardens

Records within 250m

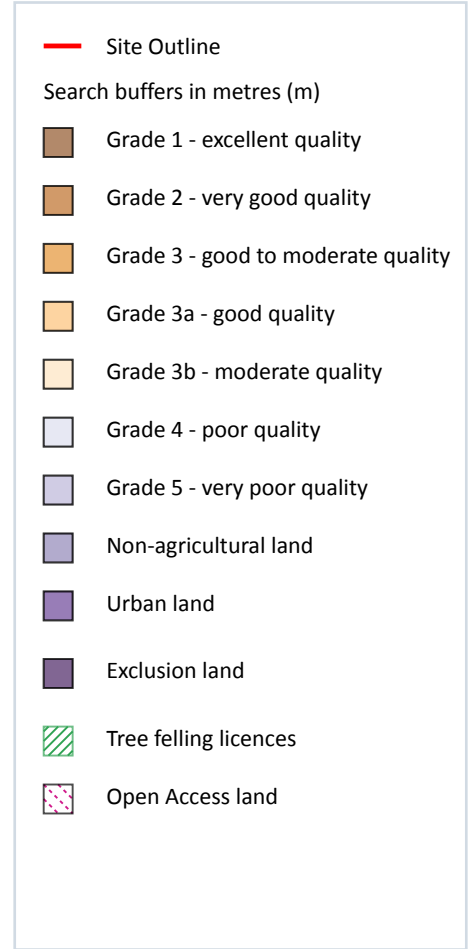
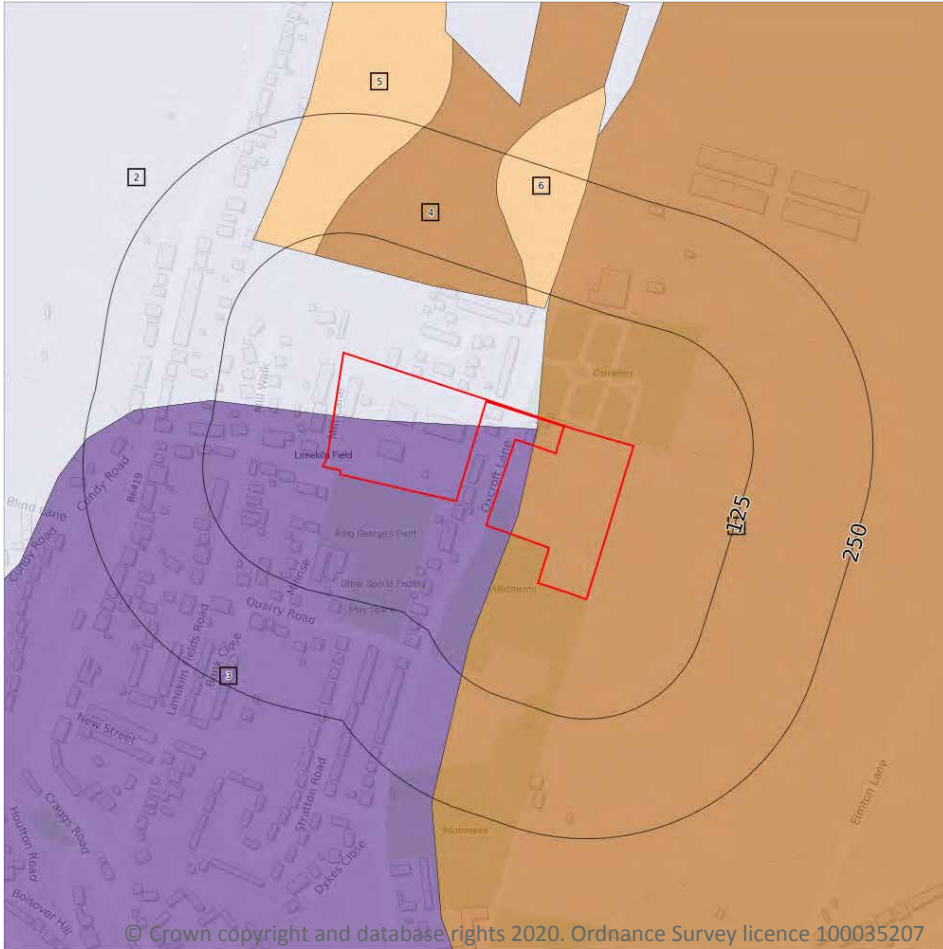
0

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 English Heritage, Cadw and Historic Environment Scotland.



12 Agricultural designations



12.1 Agricultural Land Classification

Records within 250m

6

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

Features are displayed on the Agricultural designations map on **page 76**

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	On site	Grade 4	Poor quality agricultural land. Land with severe limitations which significantly restrict the range of crops and/or level of yields. It is mainly suited to grass with occasional arable crops (e.g. cereals and forage crops) the yields of which are variable. In moist climates, yields of grass may be moderate to high but there may be difficulties in utilisation. The grade also includes very droughty arable land.
3	On site	Urban	-
4	91m N	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.
5	106m N	Grade 3a	Good quality agricultural land. Land capable of consistently producing moderate to high yields of a narrow range of arable crops, especially cereals, or moderate yields of a wide range of crops including cereals, grass, oilseed rape, potatoes, sugar beet and the less demanding horticultural crops.
6	108m N	Grade 3a	Good quality agricultural land. Land capable of consistently producing moderate to high yields of a narrow range of arable crops, especially cereals, or moderate yields of a wide range of crops including cereals, grass, oilseed rape, potatoes, sugar beet and the less demanding horticultural crops.

This data is sourced from Natural England.

12.2 Open Access Land

Records within 250m

0

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

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



12.3 Tree Felling Licences

Records within 250m

0

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

This data is sourced from the Forestry Commission.

12.4 Environmental Stewardship Schemes

Records within 250m

0

Environmental Stewardship covers a range of schemes that provide financial incentives to farmers, foresters and land managers to look after and improve the environment.

This data is sourced from Natural England.

12.5 Countryside Stewardship Schemes

Records within 250m

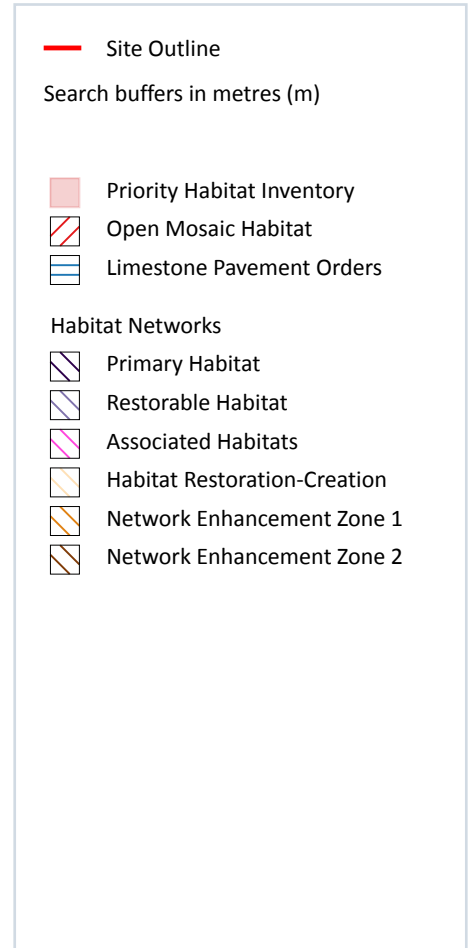
0

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

This data is sourced from Natural England.



13 Habitat designations



13.1 Priority Habitat Inventory

Records within 250m **0**

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

This data is sourced from Natural England.

13.2 Habitat Networks

Records within 250m **0**

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

This data is sourced from Natural England.

13.3 Open Mosaic Habitat

Records within 250m

1

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.

Features are displayed on the Habitat designations map on **page 79**

ID	Location	Site reference	Identification confidence	Primary source	Secondary source	Tertiary source
1	0m N	NLUD Ref: 101000316	Low	National Land Use Database - Previously Developed Land	UK Perspectives Aerial Photography	-

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

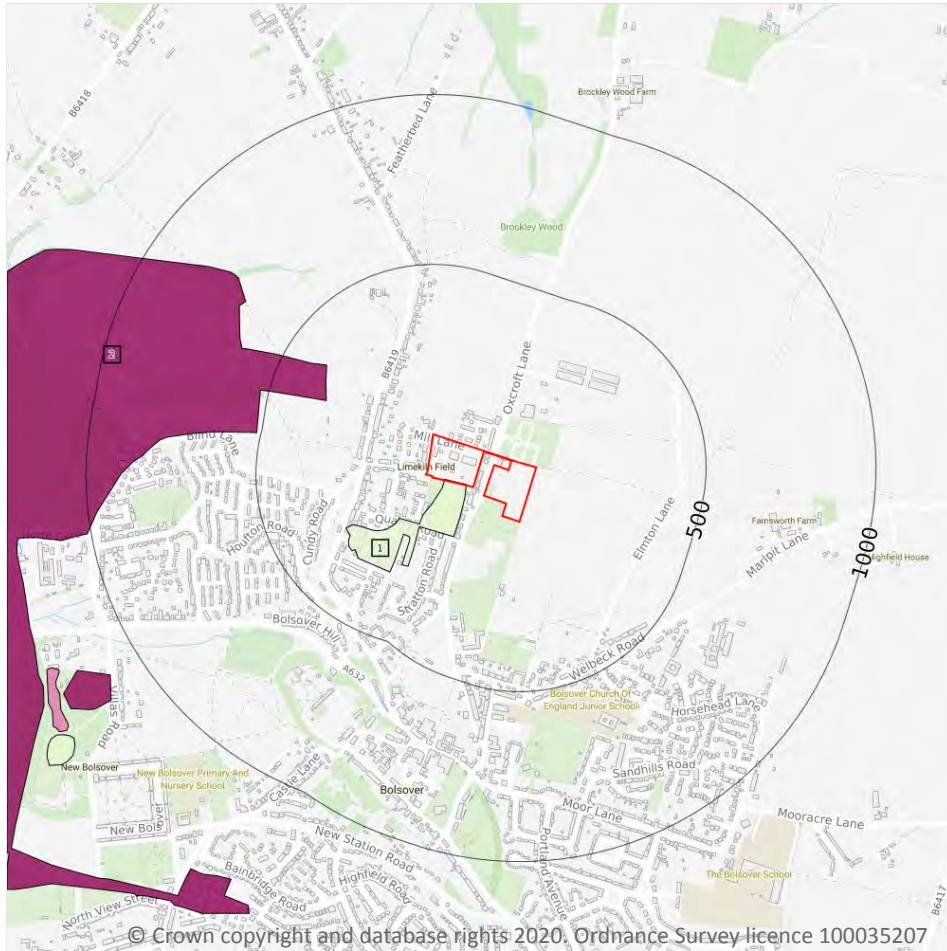
An indication on the coverage of 1:10,000 scale geology data for the site, the most detailed dataset provided by the British Geological Survey. Either 'Full', 'Partial' or 'No coverage' for each geological theme.

Features are displayed on the Geology 1:10,000 scale - Availability map on **page 81**

ID	Location	Artificial	Superficial	Bedrock	Mass movement	Sheet No.
1	On site	Full	Full	Full	Full	SK47SE

This data is sourced from the British Geological Survey.

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



Site Outline

Search buffers in metres (m)

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

14.2 Artificial and made ground (10k)

Records within 500m **2**

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

Features are displayed on the Geology 1:10,000 scale - Artificial and made ground map on **page 82**

ID	Location	LEX Code	Description	Rock description
1	On site	WMGR-ARTDP	Infilled Ground	Artificial Deposit
2	330m W	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit

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



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

14.5 Bedrock geology (10k)

Records within 500m

7

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

Features are displayed on the Geology 1:10,000 scale - Bedrock map on **page 84**

ID	Location	LEX Code	Description	Rock age
1	On site	CDF-DOLO	Cadeby Formation - Dolostone	Late Permian Epoch [Obsolete name]
2	230m W	CDF-CAMDST	Cadeby Formation - Calcareous Mudstone	Late Permian Epoch [Obsolete name]

ID	Location	LEX Code	Description	Rock age
3	403m W	PMCM-MDSS	Pennine Middle Coal Measures Formation - Mudstone, Siltstone And Sandstone	Bolsoviaian Sub-age - Duckmantian Sub-age
6	451m NW	PMCM-MDSS	Pennine Middle Coal Measures Formation - Mudstone, Siltstone And Sandstone	Bolsoviaian Sub-age - Duckmantian Sub-age
7	464m NW	PMCM-SDST	Pennine Middle Coal Measures Formation - Sandstone	Bolsoviaian Sub-age - Duckmantian Sub-age
8	471m NW	PMCM-SDST	Pennine Middle Coal Measures Formation - Sandstone	Bolsoviaian Sub-age - Duckmantian Sub-age
9	493m W	PMCM-SDST	Pennine Middle Coal Measures Formation - Sandstone	Bolsoviaian Sub-age - Duckmantian Sub-age

This data is sourced from the British Geological Survey.

14.6 Bedrock faults and other linear features (10k)

Records within 500m

2

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.

Features are displayed on the Geology 1:10,000 scale - Bedrock map on **page 84**

ID	Location	Category	Description
4	449m W	FAULT	Normal fault, inferred
5	450m NW	FAULT	Normal fault, inferred

This data is sourced from the British Geological Survey.



15 Geology 1:50,000 scale - Availability



— Site Outline

Search buffers in metres (m)

○ 500

○ 1000

□ Geological map tile

15.1 50k Availability

Records within 500m

1

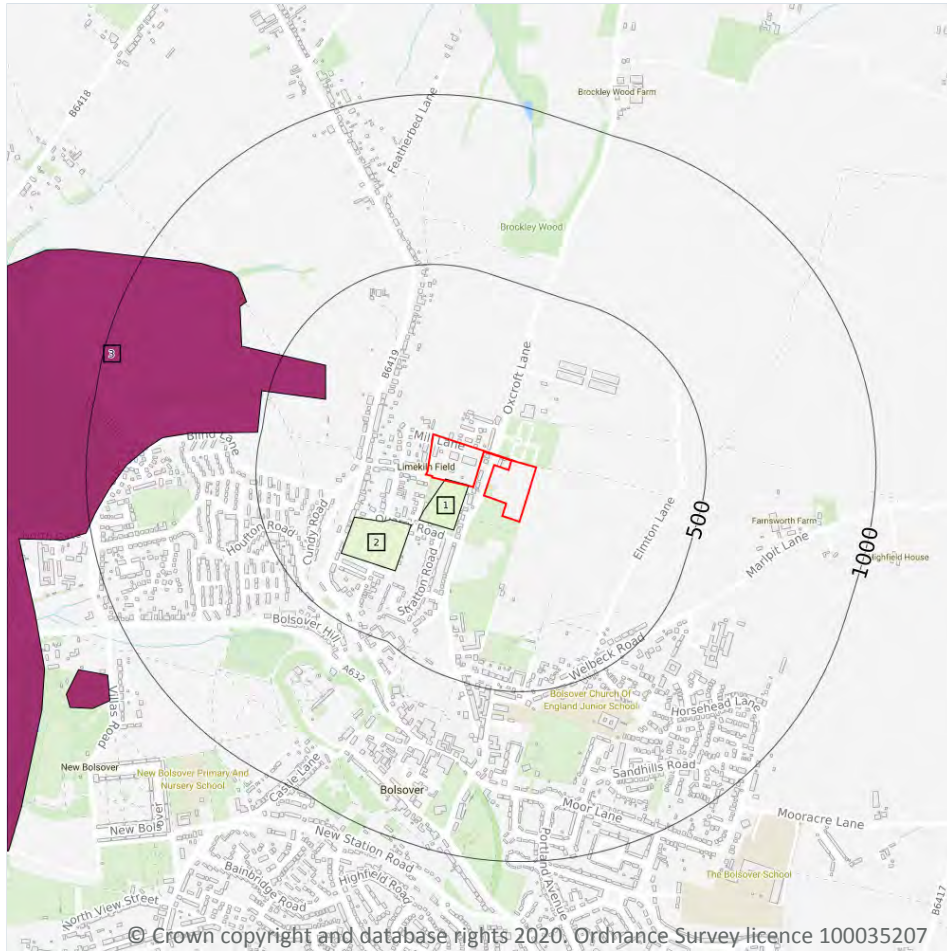
An indication on the coverage of 1:50,000 scale geology data for the site. Either 'Full' or 'No coverage' for each geological theme.

Features are displayed on the Geology 1:50,000 scale - Availability map on **page 86**

ID	Location	Artificial	Superficial	Bedrock	Mass movement	Sheet No.
1	On site	No coverage	Full	Full	Full	EW112_chesterfield_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

3

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

Features are displayed on the Geology 1:50,000 scale - Artificial and made ground map on **page 87**

ID	Location	LEX Code	Description	Rock description
1	On site	WMGR-ARTDP	INFILLED GROUND	ARTIFICIAL DEPOSIT
2	153m SW	WMGR-ARTDP	INFILLED GROUND	ARTIFICIAL DEPOSIT
3	333m W	MGR-ARTDP	MADE GROUND (UNDIVIDED)	ARTIFICIAL DEPOSIT

This data is sourced from the British Geological Survey.

15.3 Artificial ground permeability (50k)

Records within 50m

1

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

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

This data is sourced from the British Geological Survey.



Geology 1:50,000 scale - Superficial

15.4 Superficial geology (50k)

Records within 500m

0

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.

This data is sourced from the British Geological Survey.

15.5 Superficial permeability (50k)

Records within 50m

0

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

This data is sourced from the British Geological Survey.

15.6 Landslip (50k)

Records within 500m

0

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

This data is sourced from the British Geological Survey.

15.7 Landslip permeability (50k)

Records within 50m

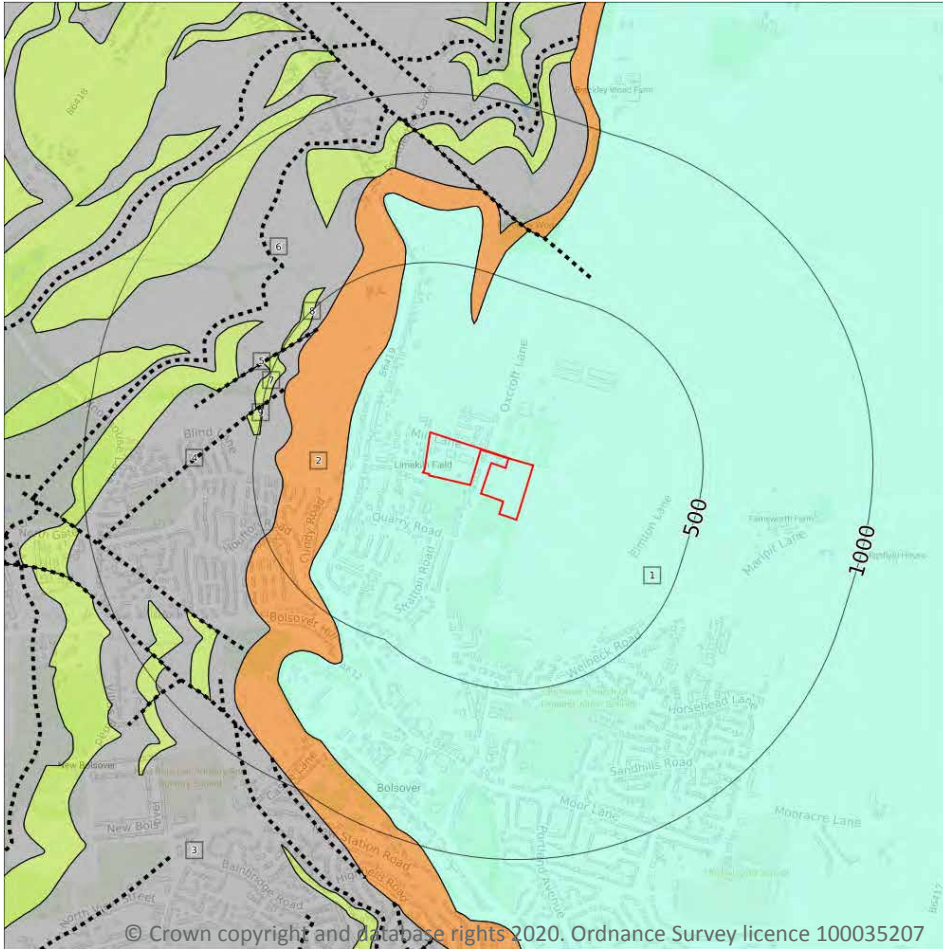
0

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

This data is sourced from the British Geological Survey.



Geology 1:50,000 scale - Bedrock



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

15.8 Bedrock geology (50k)

Records within 500m

7

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

Features are displayed on the Geology 1:50,000 scale - Bedrock map on **page 90**

ID	Location	LEX Code	Description	Rock age
1	On site	CDF-DOLO	CADEBY FORMATION - DOLOSTONE	-
2	229m W	CDF-CAMDST	CADEBY FORMATION - MUDSTONE, CALCAREOUS	-
3	403m W	PMCM-MDSS	PENNINE MIDDLE COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN



ID	Location	LEX Code	Description	Rock age
6	451m NW	PMCM-MDSS	PENNINE MIDDLE COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
7	463m NW	PMCM-SDST	PENNINE MIDDLE COAL MEASURES FORMATION - SANDSTONE	WESTPHALIAN
8	471m NW	PMCM-SDST	PENNINE MIDDLE COAL MEASURES FORMATION - SANDSTONE	WESTPHALIAN
9	493m W	PMCM-SDST	PENNINE MIDDLE COAL MEASURES FORMATION - SANDSTONE	WESTPHALIAN

This data is sourced from the British Geological Survey.

15.9 Bedrock permeability (50k)

Records within 50m

1

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

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

This data is sourced from the British Geological Survey.

15.10 Bedrock faults and other linear features (50k)

Records within 500m

2

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 90**

ID	Location	Category	Description
4	449m W	FAULT	Fault, inferred
5	450m NW	FAULT	Fault, inferred

This data is sourced from the British Geological Survey.



16 Boreholes

16.1 BGS Boreholes

Records within 250m

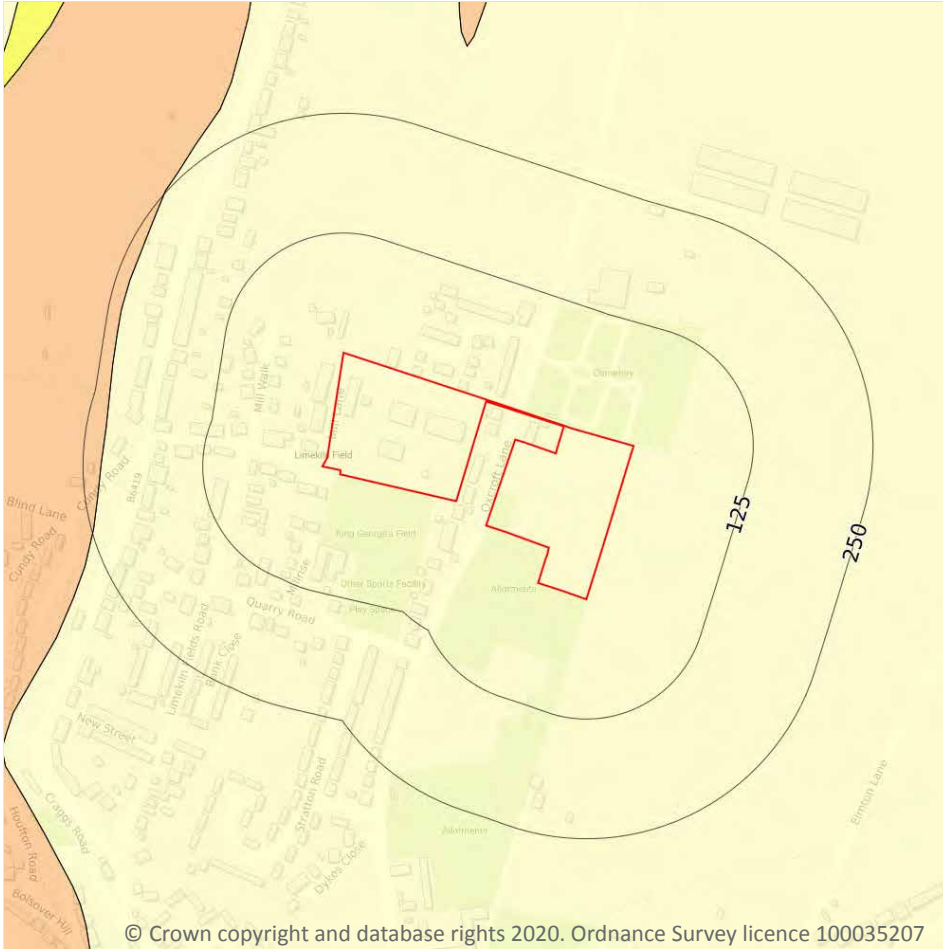
0

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

This data is sourced from the British Geological Survey.



17 Natural ground subsidence - Shrink swell clays



Site Outline

Search buffers in metres (m)

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

17.1 Shrink swell clays

Records within 50m

1

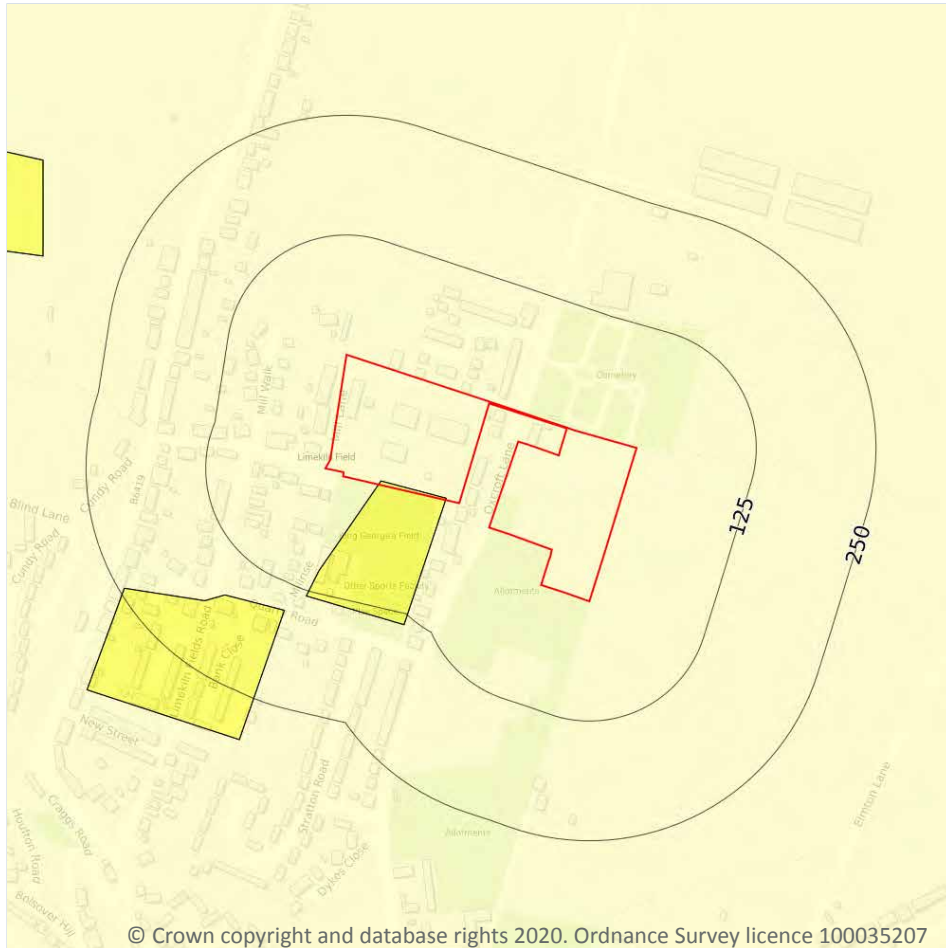
The potential hazard presented by soils that absorb water when wet (making them swell), and lose water as they dry (making them shrink). This shrink-swell behaviour is controlled by the type and amount of clay in the soil, and by seasonal changes in the soil moisture content (related to rainfall and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

Features are displayed on the Natural ground subsidence - Shrink swell clays map on **page 93**

Location	Hazard rating	Details
On site	Negligible	Ground conditions predominantly non-plastic.

This data is sourced from the British Geological Survey.

Natural ground subsidence - Running sands



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17.2 Running sands

Records within 50m

2

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

Features are displayed on the Natural ground subsidence - Running sands map on **page 94**

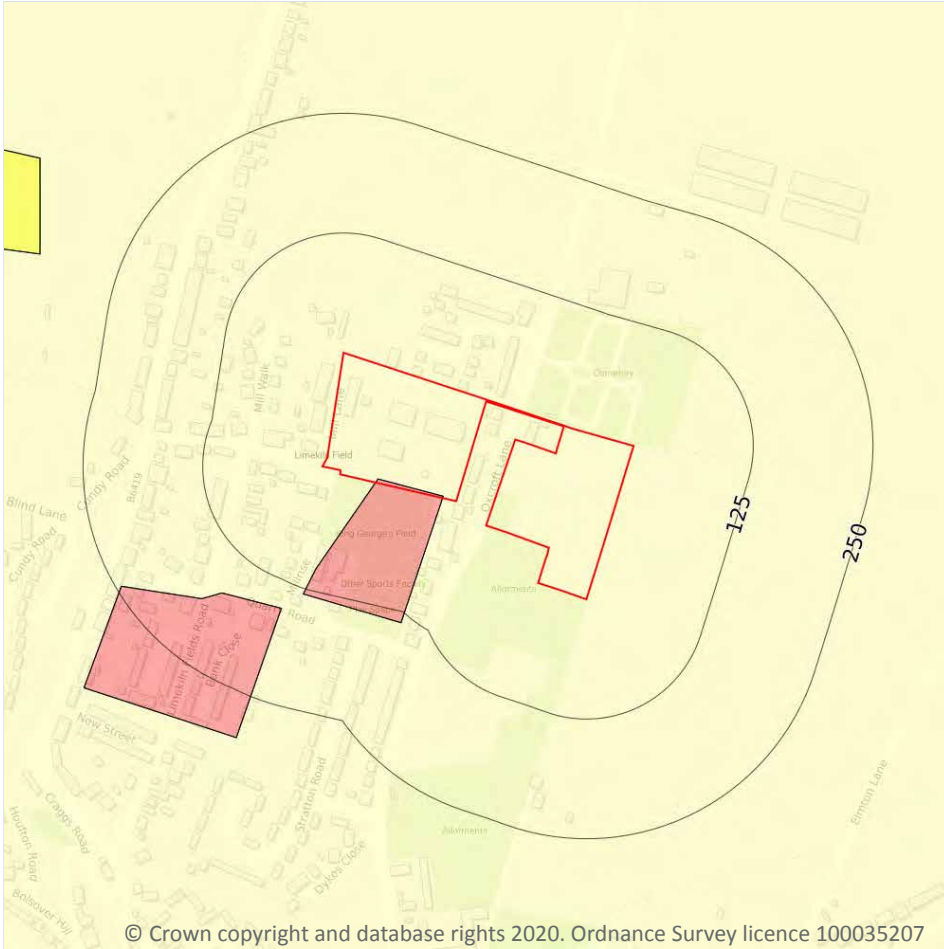
Location	Hazard rating	Details
On site	Negligible	Running sand conditions are not thought to occur whatever the position of the water table. No identified constraints on lands use due to running conditions.

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

This data is sourced from the British Geological Survey.



Natural ground subsidence - Compressible deposits



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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.

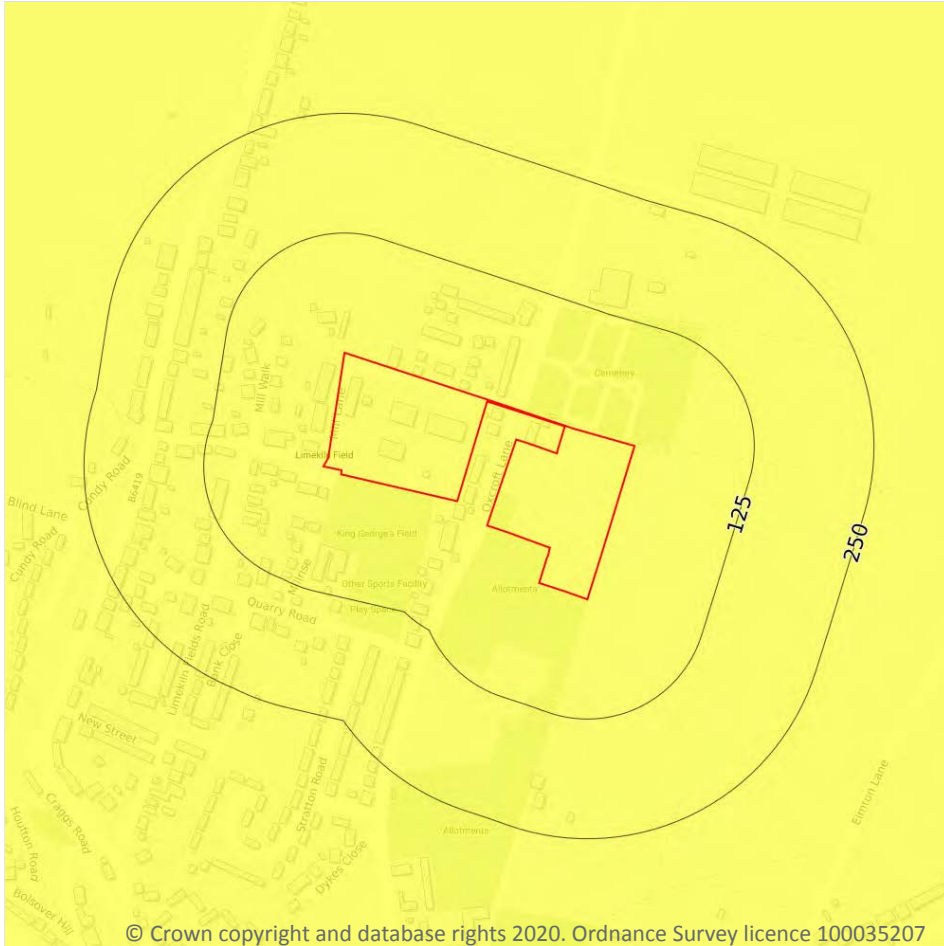
Features are displayed on the Natural ground subsidence - Compressible deposits map on **page 96**

Location	Hazard rating	Details
On site	Negligible	Compressible strata are not thought to occur.
On site	Moderate	Compressibility and uneven settlement hazards are probably present. Land use should consider specifically the compressibility and variability of the site.

This data is sourced from the British Geological Survey.



Natural ground subsidence - Collapsible deposits



Site Outline

Search buffers in metres (m)

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

17.4 Collapsible deposits

Records within 50m

1

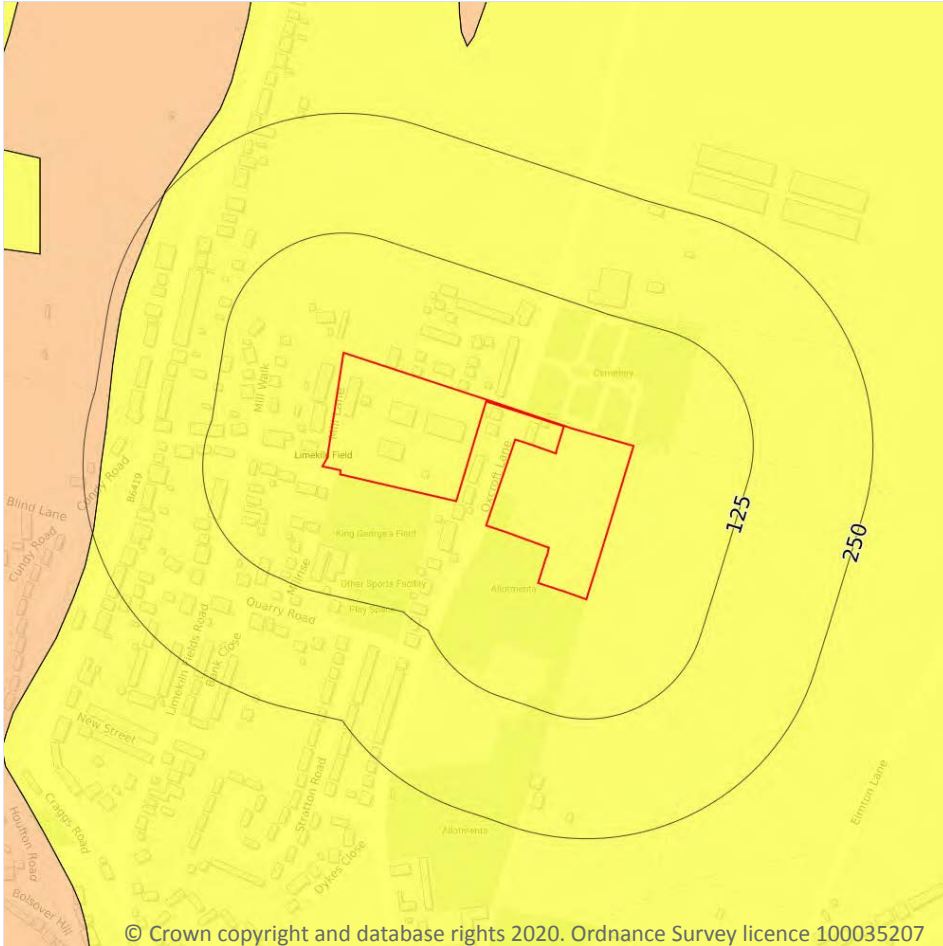
The potential hazard presented by natural deposits that could collapse when a load (such as a building) is placed on them or they become saturated with water.

Features are displayed on the Natural ground subsidence - Collapsible deposits map on **page 98**

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

This data is sourced from the British Geological Survey.

Natural ground subsidence - Landslides



— Site Outline

Search buffers in metres (m)

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

17.5 Landslides

Records within 50m

1

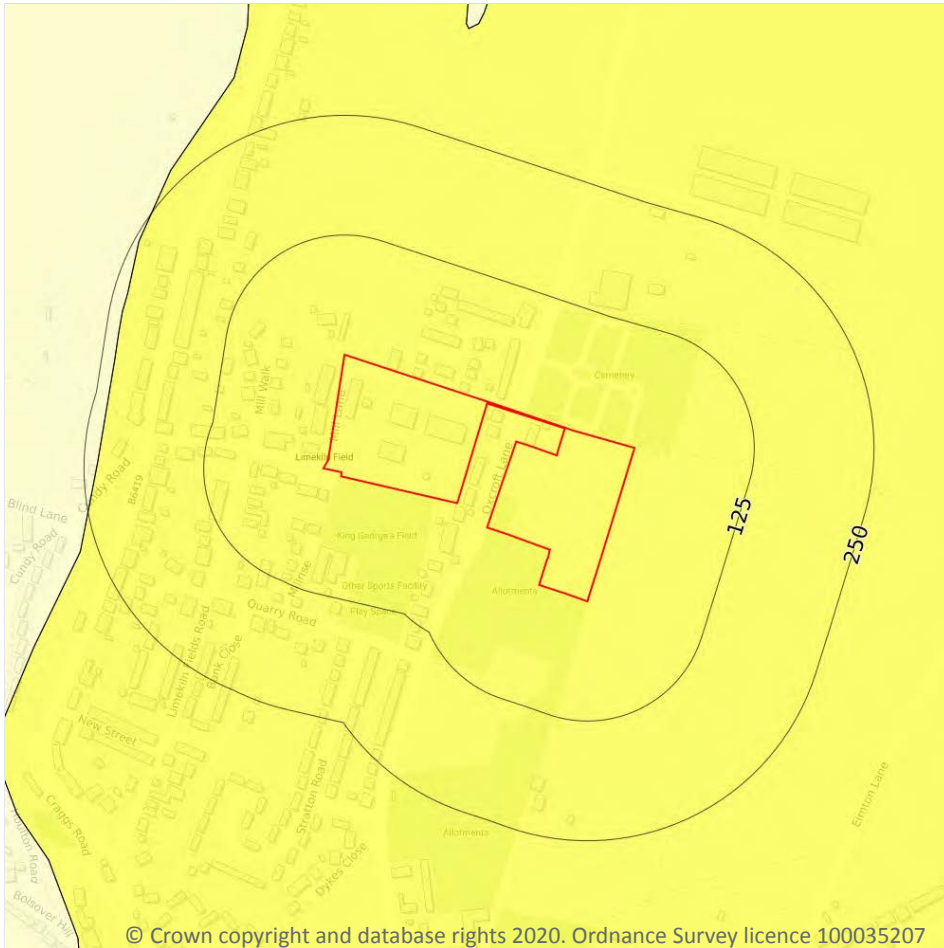
The potential for landsliding (slope instability) to be a hazard assessed using 1:50,000 scale digital maps of superficial and bedrock deposits, combined with information from the BGS National Landslide Database and scientific and engineering reports.

Features are displayed on the Natural ground subsidence - Landslides map on **page 99**

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

This data is sourced from the British Geological Survey.

Natural ground subsidence - Ground dissolution of soluble rocks



Site Outline

Search buffers in metres (m)

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

17.6 Ground dissolution of soluble rocks

Records within 50m

1

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

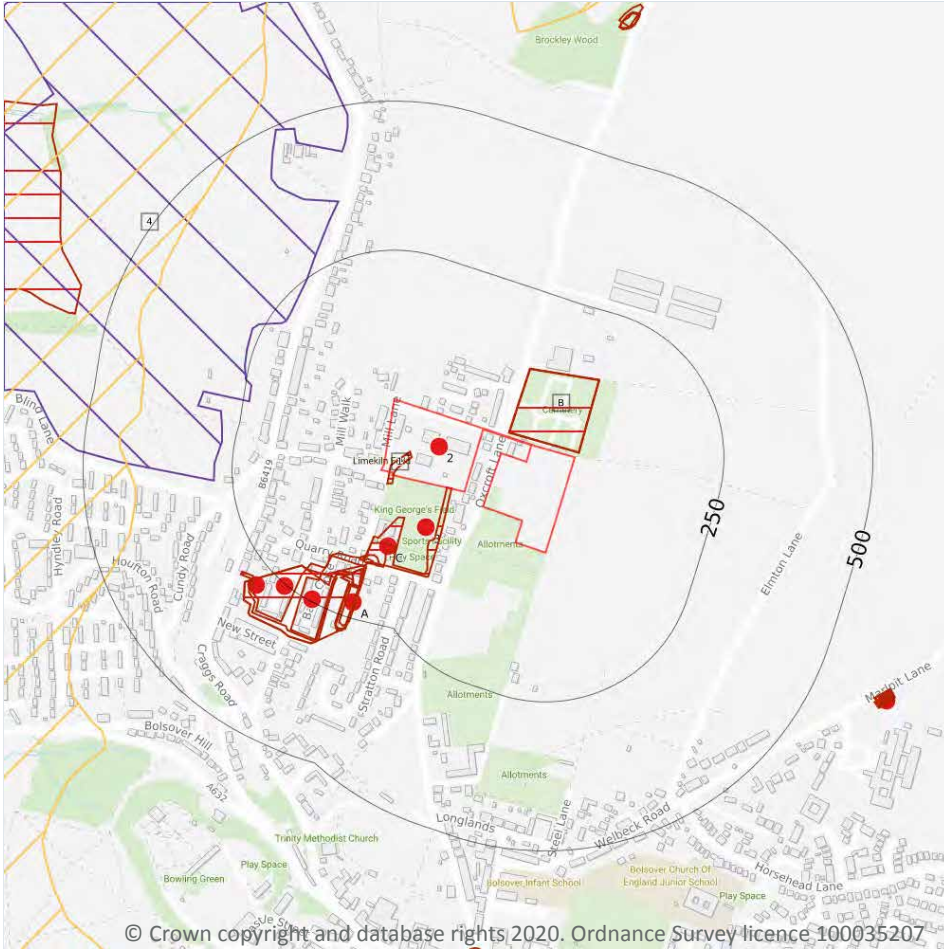
Features are displayed on the Natural ground subsidence - Ground dissolution of soluble rocks map on **page 100**

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

This data is sourced from the British Geological Survey.



18 Mining, ground workings and natural cavities



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 Peter Brett Associates (PBA).

18.2 BritPits

Records within 500m
7

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 102**

ID	Location	Details	Description
2	On site	Name: Limekiln Field Quarry Address: BOLSOVER, Derbyshire Commodity: Dolomite Status: A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Type: Ceased 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
3	71m S	Name: Limekiln Field Quarry Address: BOLSOVER, Derbyshire Commodity: Dolomite Status: A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Type: Ceased 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
C	117m S	Name: Limekiln Field Quarry Address: BOLSOVER, Derbyshire Commodity: Dolomite Status: A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Type: Ceased 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
A	222m S	Name: Limekiln Field Quarry Address: BOLSOVER, Derbyshire Commodity: Dolomite Status: A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Type: Ceased 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
A	245m SW	Name: Limekiln Field Quarry Address: BOLSOVER, Derbyshire Commodity: Dolomite Status: A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Type: Ceased 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
A	252m SW	Name: Limekiln Field Quarry Address: BOLSOVER, Derbyshire Commodity: Dolomite Status: A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Type: Ceased 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



ID	Location	Details	Description
A	284m SW	Name: Limekiln Field Quarry Address: BOLSOVER, Derbyshire Commodity: Dolomite Status: A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Type: Ceased 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	14
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Historical land uses identified from Ordnance Survey mapping that involved ground excavation at the surface. These features may or may not have been subsequently backfilled.

Features are displayed on the Mining, ground workings and natural cavities map on **page 102**

ID	Location	Land Use	Year of mapping	Mapping scale
1	On site	Unspecified Ground Workings	1967	1:10560
A	On site	Unspecified Quarry	1876	1:10560
B	7m N	Cemetery	1973	1:10000
B	7m N	Cemetery	1967	1:10560
B	7m N	Cemetery	1993	1:10000
C	113m S	Unspecified Quarry	1897	1:10560
C	138m S	Unspecified Quarry	1921	1:10560
A	158m S	Unspecified Quarry	1938	1:10560
A	161m S	Unspecified Quarry	1967	1:10560
A	165m S	Unspecified Ground Workings	1921	1:10560
A	165m S	Unspecified Quarry	1897	1:10560
A	196m S	Unspecified Quarry	1897	1:10560
A	196m S	Unspecified Quarry	1921	1:10560
A	198m S	Unspecified Quarry	1950	1:10560

This data is sourced from Ordnance Survey/Groundsure.



18.4 Underground workings

Records within 1000m

0

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

This is data is sourced from Ordnance Survey/Groundsure.

18.5 Historical Mineral Planning Areas

Records within 500m

1

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

Features are displayed on the Mining, ground workings and natural cavities map on **page 102**

ID	Location	Site Name	Mineral	Type	Planning Status	Planning Status Date
4	224m NW	Shuttlewood	Coal (opencast)	Surface mineral working	Application	Not available

This data is sourced from the British Geological Survey.

18.6 Non-coal mining

Records within 1000m

1

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

Features are displayed on the Mining, ground workings and natural cavities map on **page 102**

ID	Location	Name	Commodity	Class	Likelihood
5	413m W	Not available	Iron Ore (Bedded)	B	Localised small scale underground mining may have occurred. Potential for difficult ground conditions are unlikely or localised and are at a level where they need not be considered

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 Peter Brett Associates (PBA).

18.8 JPB mining areas

Records on site

0

Areas which could be affected by former coal 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

1

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

Location	Details
On site	The site is located within a coal mining area as defined by the Coal Authority. A Consultants Coal Mining Report is recommended to further assess coal mining issues at the site. This can be ordered directly through Groundsure or your preferred search provider.

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
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Generalised areas that may be affected by gypsum extraction.

This data is sourced from British Gypsum.

18.12 Tin mining

Records on site	0
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Generalised areas that may be affected by historical tin mining.

This data is sourced from Mining Searches UK.

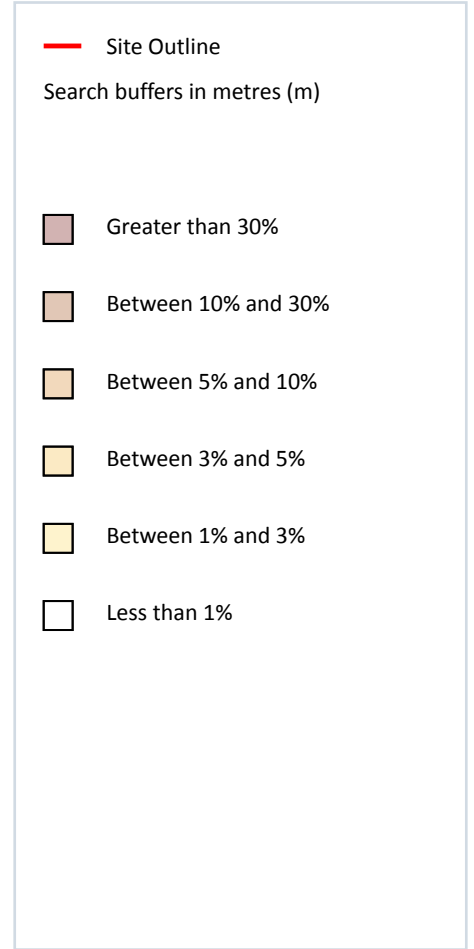
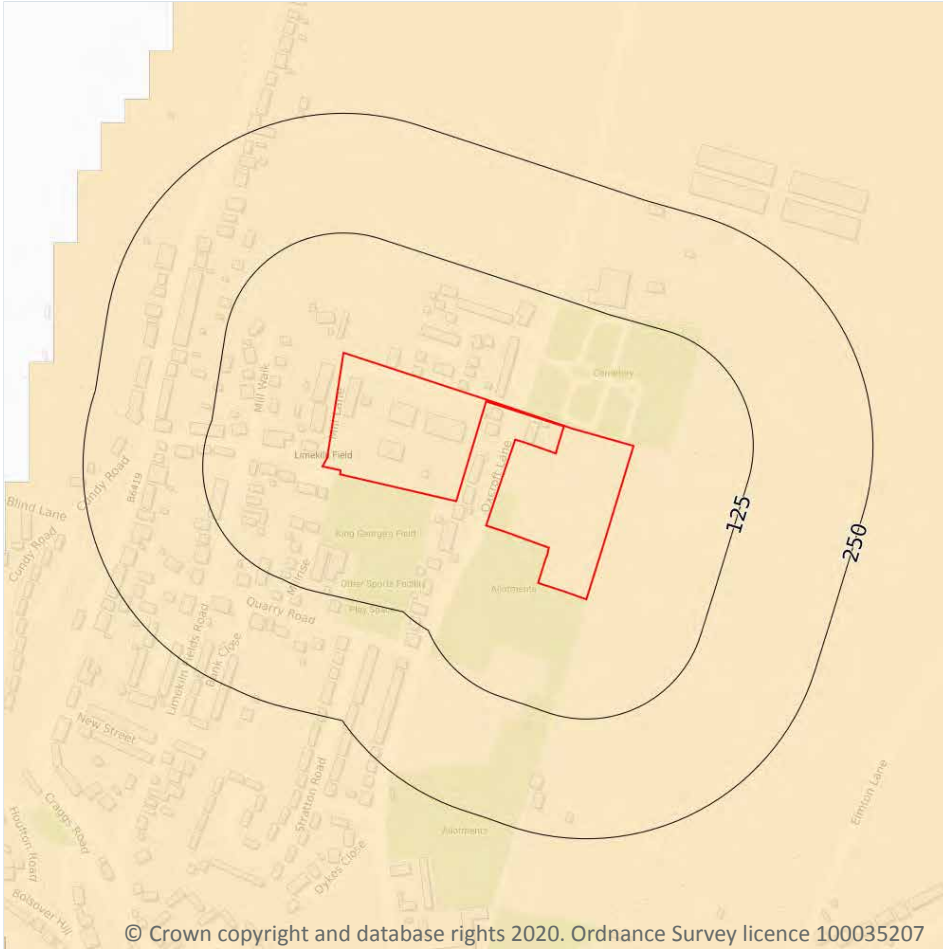
18.13 Clay mining

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



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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 108**

Location	Estimated properties affected	Radon Protection Measures required
On site	Between 3% and 5%	Basic

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

2

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

Location	Arsenic	Bioaccessible Arsenic	Lead	Bioaccessible Lead	Cadmium	Chromium	Nickel
On site	15 - 25 mg/kg	No data	100 - 200 mg/kg	60 - 120 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 - 25 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg

This data is sourced from the British Geological Survey.

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 km²).

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 km².

This data is sourced from the British Geological Survey.



21 Railway infrastructure and projects

21.1 Underground railways (London)

Records within 250m 0

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

This data is sourced from publicly available information by Groundsure.

21.2 Underground railways (Non-London)

Records within 250m 0

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

This data is sourced from publicly available information by Groundsure.

21.3 Railway tunnels

Records within 250m 0

Railway tunnels taken from contemporary Ordnance Survey mapping.

This data is sourced from the Ordnance Survey.

21.4 Historical railway and tunnel features

Records within 250m 0

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

This data is sourced from Ordnance Survey/Groundsure.

21.5 Royal Mail tunnels

Records within 250m 0

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



This data is sourced from Groundsure/the Postal Museum.

21.6 Historical railways

Records within 250m

0

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

This data is sourced from OpenStreetMap.

21.7 Railways

Records within 250m

0

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

This data is sourced from Ordnance Survey and OpenStreetMap.

21.8 Crossrail 1

Records within 500m

0

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

This data is sourced from publicly available information by Groundsure.

21.9 Crossrail 2

Records within 500m

0

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

This data is sourced from publicly available information by Groundsure.

21.10 HS2

Records within 500m

0

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

This data is sourced from HS2 Ltd.



Data providers

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

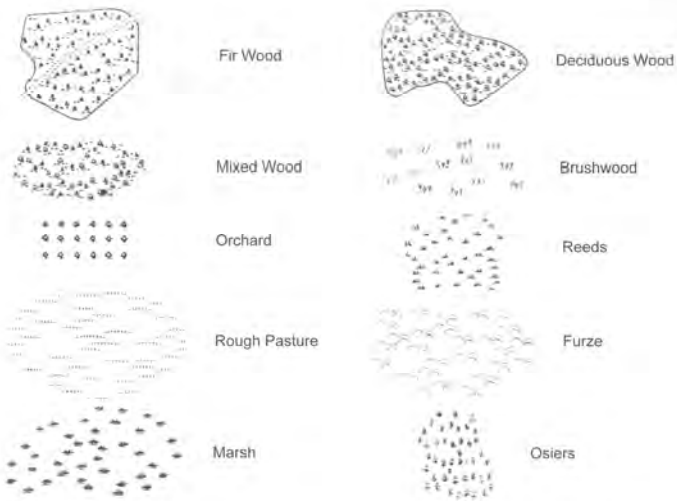
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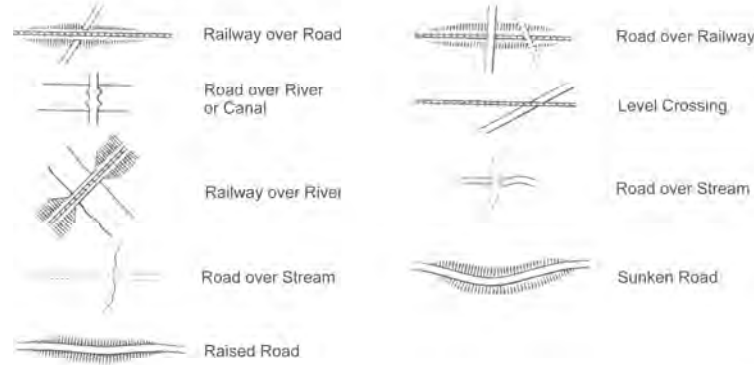


County Series 1:10,560 scale

VEGETATION



ROADS



RAILWAYS



GENERAL FEATURES



BOUNDARIES



National Grid 1:10,000 scale

HEIGHTS (METRES)

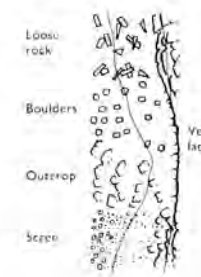
Values are given in metres above mean sea level at Newlyn.

Surface heights determined by ground survey or 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.

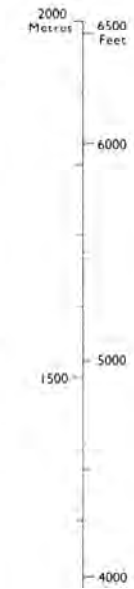
Contours are at 5 metres vertical interval.

ROCK FEATURES



CONVERSION SCALE

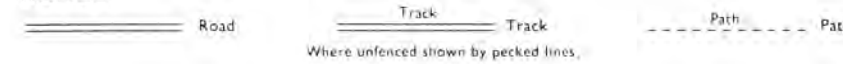
Metres - Feet



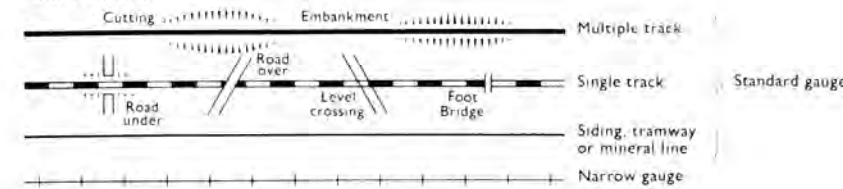
ABBREVIATIONS

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
Poi Sta	Police Station	Y	Youth hostel

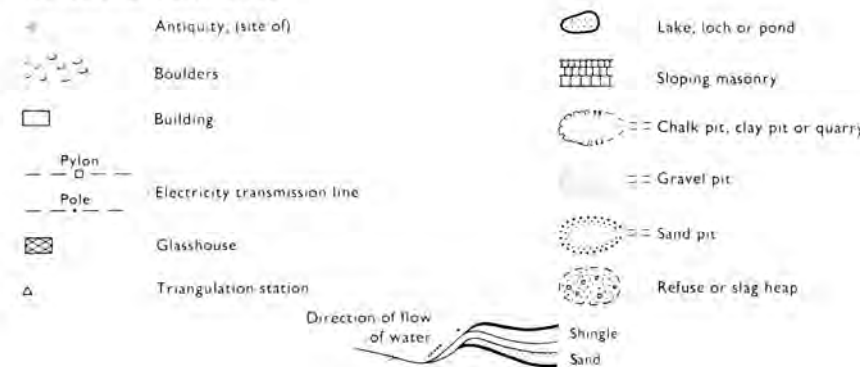
ROADS



RAILWAYS



GENERAL FEATURES



VEGETATION



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



Historical Map Pack Legend

County Series & National Grid 1:10,560 scale

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Technical Helpline

Tel 08444159000

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County Series 1:2,500 scale

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



Historical Map Pack Legend

GENERAL FEATURES

Wood	Marsh	Reeds
Fir	Mixed Wood	Brush Wood
Orchard	Bush	Rough Pasture
Ford	Stepping Stones	Ferry
Lock	Waterfall	Quarry
Shingle	Gravel Pit	

Trigonometrical Station
 507 Δ Altitude at Trigonometrical Station
 B.M. 325-9 ◊ Bench Mark
 342 + Surface Level
 Permanent Traverse Station
 Antiquities (site of)
 Arrow denotes flow of water

ROADS

Road over single stream, Road crossing railway, Road over River or Canal

RAILWAYS

Railway crossing River or Canal, Railway crossing Road, Level Crossing, Embankment, Cutting

ABBREVIATIONS

Trigonometrical Station	Sluice
Altitude at Trigonometrical Station	Trough
Bench Mark	Spring
Surface Level	Well
Permanent Traverse Station	Mooring Ring
Antiquities (site of)	Mooring Post
Arrow denotes flow of water	Boundary Stone
	Boundary Post

GENERAL FEATURES

Non-casual Trees	Sluice	Altimeter (site of)
Cholla Tree	Cliff	Culvert
Sprayed Trees	Cave Entrance	Direction of water flow
Orchard Trees	Rock	Electricity Pylon
Copse, Giller	Boulders	Electricity Transmission Line
Scrub	Sloping Masonry	Triangulation Station
Bracken	Roofed Building	Traverse Station (permanent)
Heath	Glasshouse	Bench Mark
Rough Grassland	Archway	Surface Level
Heath, listings	Change of boundary marking	Revision Point (instrumentally fixed)
Reeds	see AREAS notes	Revision Point & Bench Mark coincident

Top, Slopes, Quarry, Refuse Heap, Sloping Masonry
 Flat Rock, Sand, Sand Pit, Culvert, Archway
 Shingle, Boulders, Gravel Pit, Cliff Face, Glazed Roof Building

BOUNDARIES

England & Wales

- County Boundary (geographical)
- County & Civil Parish Boundary coterminous
- Admin County or County Borough Boundary
- London Borough Boundary
- County District Boundaries based on civil parish

England, Wales & Scotland

- Civil Parish Boundary
- Baro (or Burgh) Const. & Ward Bdy. Parly & Ward Boundaries based on civil parish
- Co Const Bdy
- Baro (or Burgh) Const & Ward Bdy. Parly & Ward Boundaries not based on civil parish

Scotland

- County Boundary (geographical)
- Co Cnl Bdy
- Co Cnl Bdy
- Co of City Bdy
- Co of City Bdy
- Burgh Bdy
- Burgh Bdy
- Dist Bdy
- Dist Bdy

* Not with parish † Coincident with parish

ABBREVIATIONS

B.H.	Beer House	F.Sta.	Fire Station	M.P.U.	Mail Pick-up	S.L.	Signal Light
B.M.	Bench Mark	G.P.	Guide Post	M.S.	Mile Stone	Sl.	Sluice
B.P.	Boundary Post	G.V.C.	Gas Valve Compound	N.T.	National Trust	S.P.	Signal Post
B.S.	Boundary Stone	H.	Hydrant or Hydraulic	N.T.S.	Normal Tidal Lines	S.P.	Spring
C.	Crane	ha	Heccaras	N.T.S.	National Trust for Scotland	S.Sta.	Signal Station
C.H.	Club House	L.B.	Letter Box	P.C.	Pillar, Pole or Post	T.C.B.	Telephone Call Box
Chy.	Chimney	L.B.Sta.	Lighthouse	P.C.	Public Convenience	T.C.P.	Telephone Call Post
Co.	Capstan	L.C.	Level Crossing	P.C.B.	Police Call Box	Tk.	Tank or Truck
D.F.	Drinking Fountain	L.G.	Loading Gauge	P.H.	Public House	Tr.	Trough
Dk.	Dock	L.Ha.	Lighthouse	P.O.	Post Office	Tr.	Traverse Station
E.P.	Electricity Pillar or Post	L.Twr.	Lighting Tower	Pp.	Pump	W.	Wall
E.T.L.	Electricity Transmission Line	m	Metres	P.T.P.	Police Telephone Pillar	W.B.	Weighbridge
F.A.	Fire Alarm	M.H.W.	Mean High Water	Rsr.	Reservoir	Wd.Pp.	Wind Pump
F.A.P.	Fire Alarm Pillar	M.H.W.S.	Mean High Water Springs	R.H.	Road House	Wks.	Works
F.B.	Filter Bed, Foot Bridge	M.L.W.	Mean Low Water	r.p.	Revision Point	W.Pi.	Water Point
F.B.M.	Fundamental Bench Mark	M.L.W.S.	Mean Low Water Springs	S.	Stone	W.T.	Water Tap
F.S.	Flagstaff	M.P.	Mile or Mooring Post	S.B.	Signal Box		

County Series 1:1,250 scale ~ County Series & National Grid 1:2,500 scale

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Report Ref: EMS-610151_814803
Grid Ref: 447568, 371281

Map Name: County Series

Map date: 1880

Scale: 1:2,500

Printed at: 1:2,500



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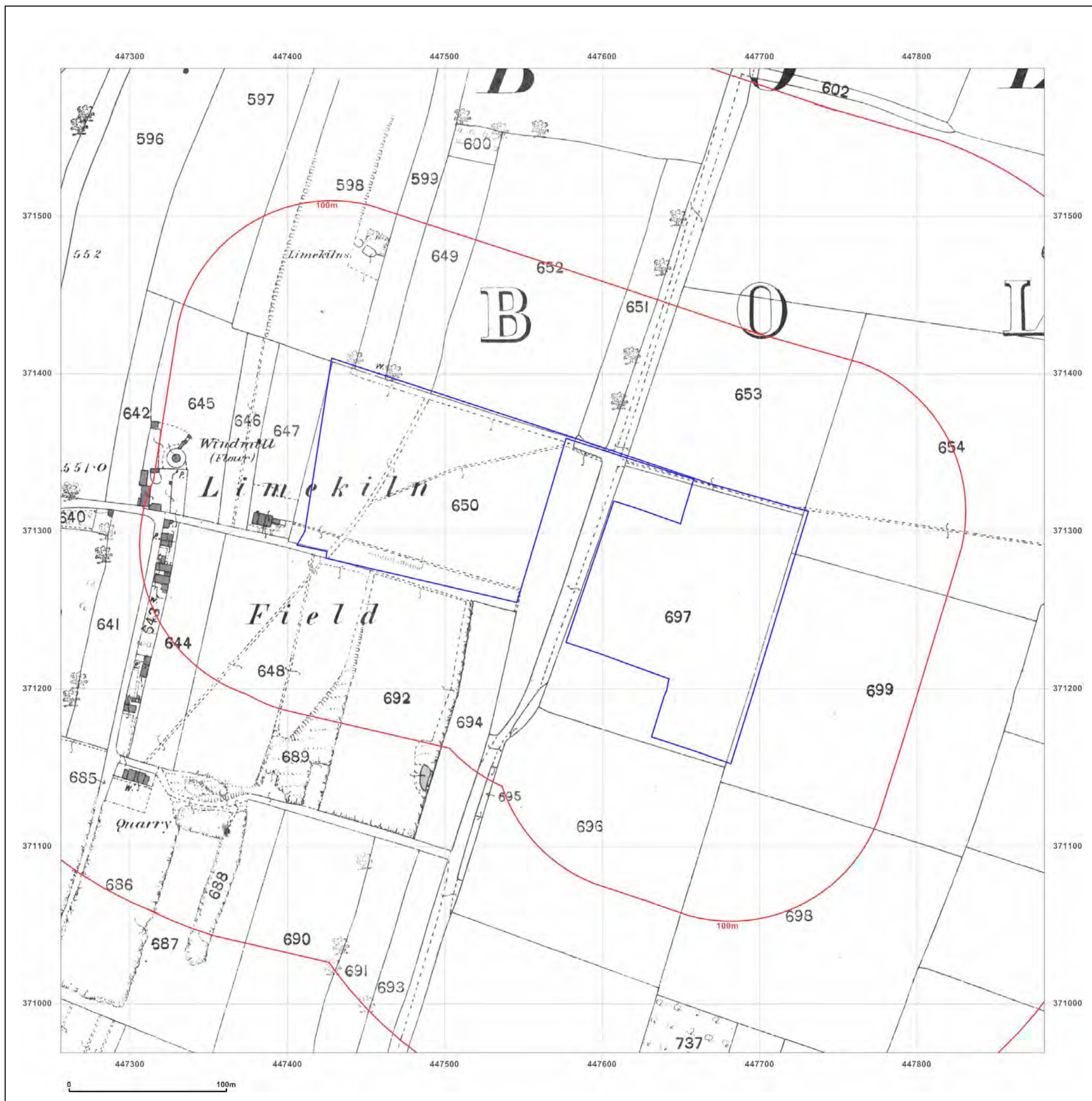


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Report Ref: EMS-610151_814803
Grid Ref: 447568, 371281

Map Name: County Series

Map date: 1898

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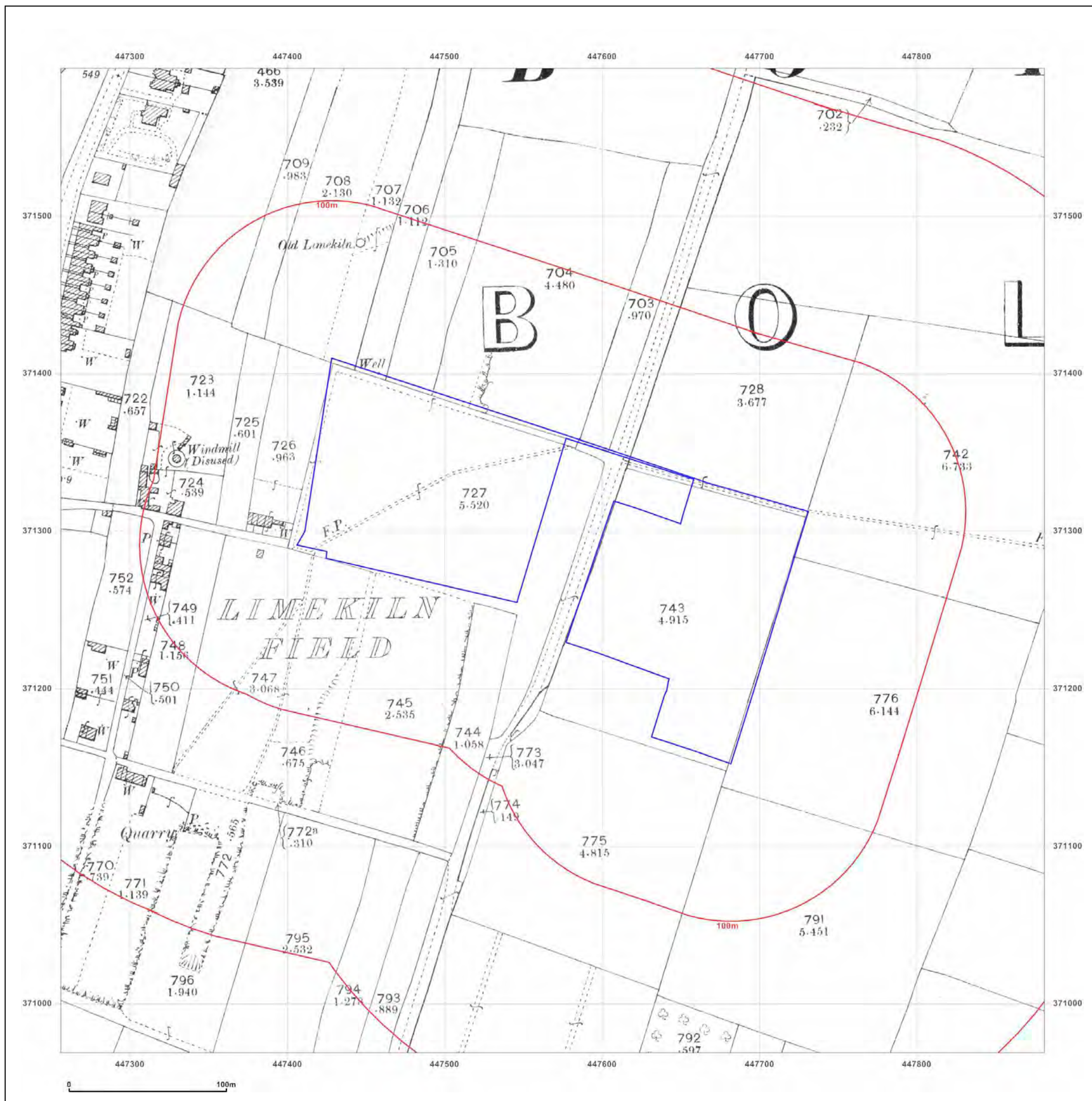


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Grid Ref: 447568, 371281

Map Name: County Series

Map date: 1918

Scale: 1:2,500

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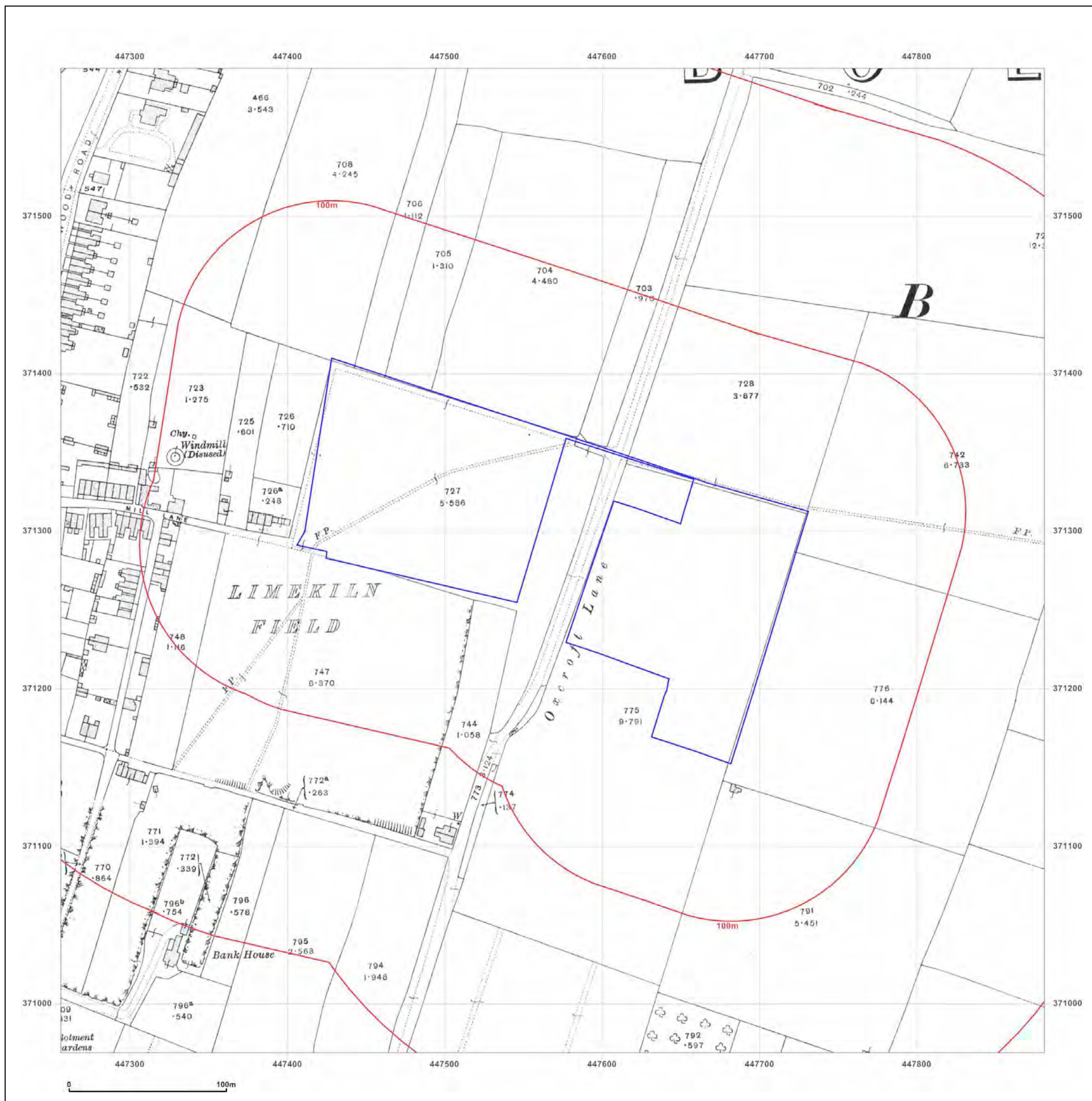


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Report Ref: EMS-610151_814803
Grid Ref: 447568, 371281

Map Name: National Grid

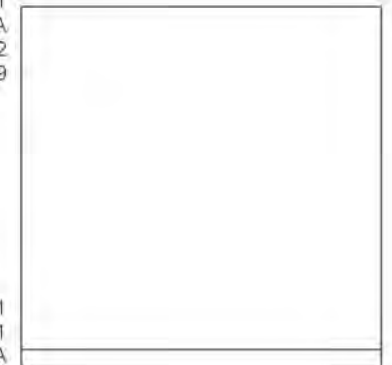
Map date: 1961

Scale: 1:2,500

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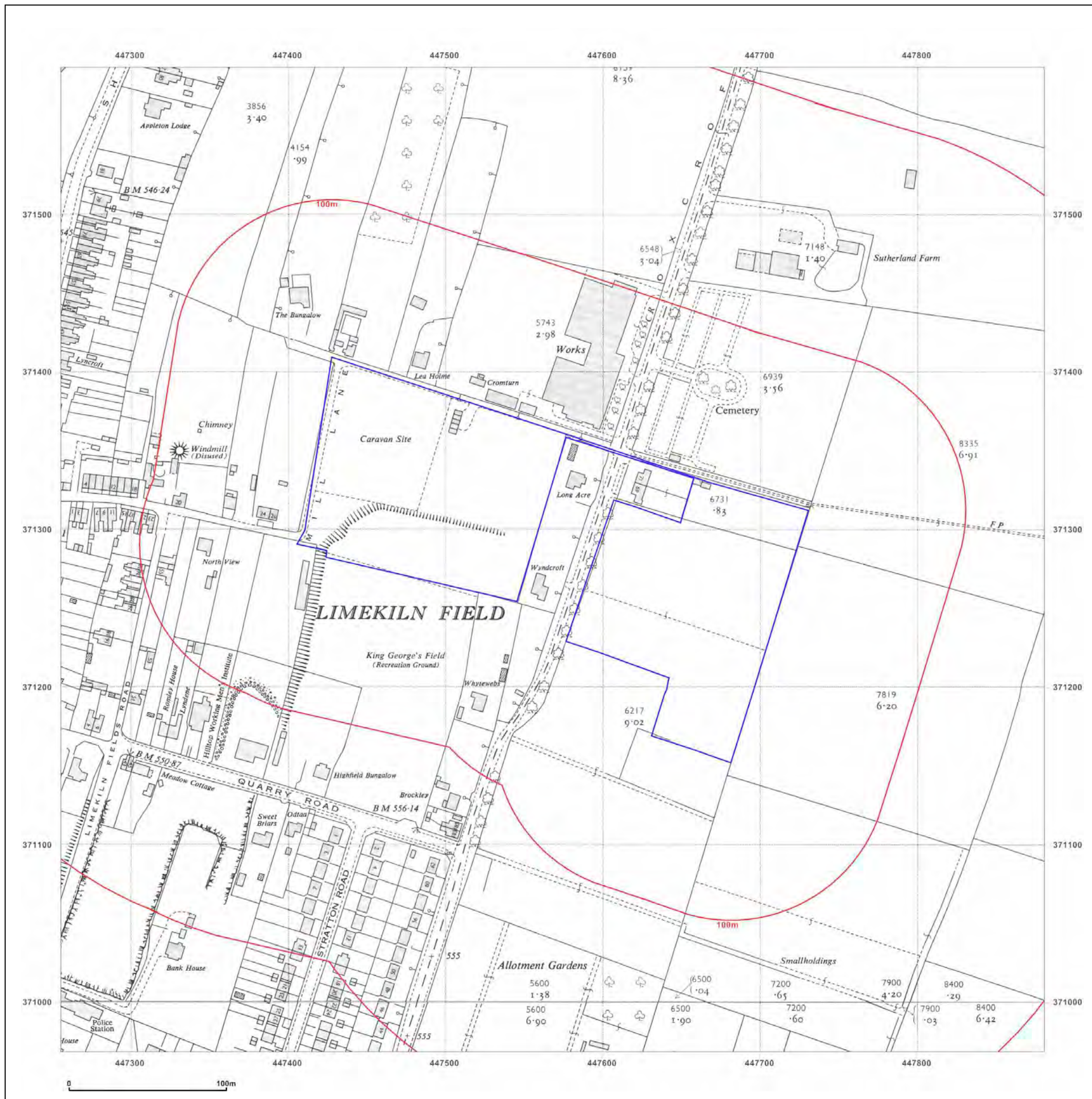


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 Grid Ref: 447568, 371281

Map Name: National Grid

Map date: 1962

Scale: 1:2,500

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 Grid Ref: 447568, 371281

Map Name: National Grid

Map date: 1978

Scale: 1:2,500

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Report Ref: EMS-610151_814803
Grid Ref: 447568, 371281

Map Name: National Grid

Map date: 1991

Scale: 1:2,500

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Map Name: National Grid

Map date: 1991-1993

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Grid Ref: 447568, 371281

Map Name: LandLine

Map date: 2003

Scale: 1:1,250

Printed at: 1:1,250



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Report Ref: EMS-610151_814803
Grid Ref: 447568, 371281

Map Name: County Series

Map date: 1875-1876

Scale: 1:10,560

Printed at: 1:10,560



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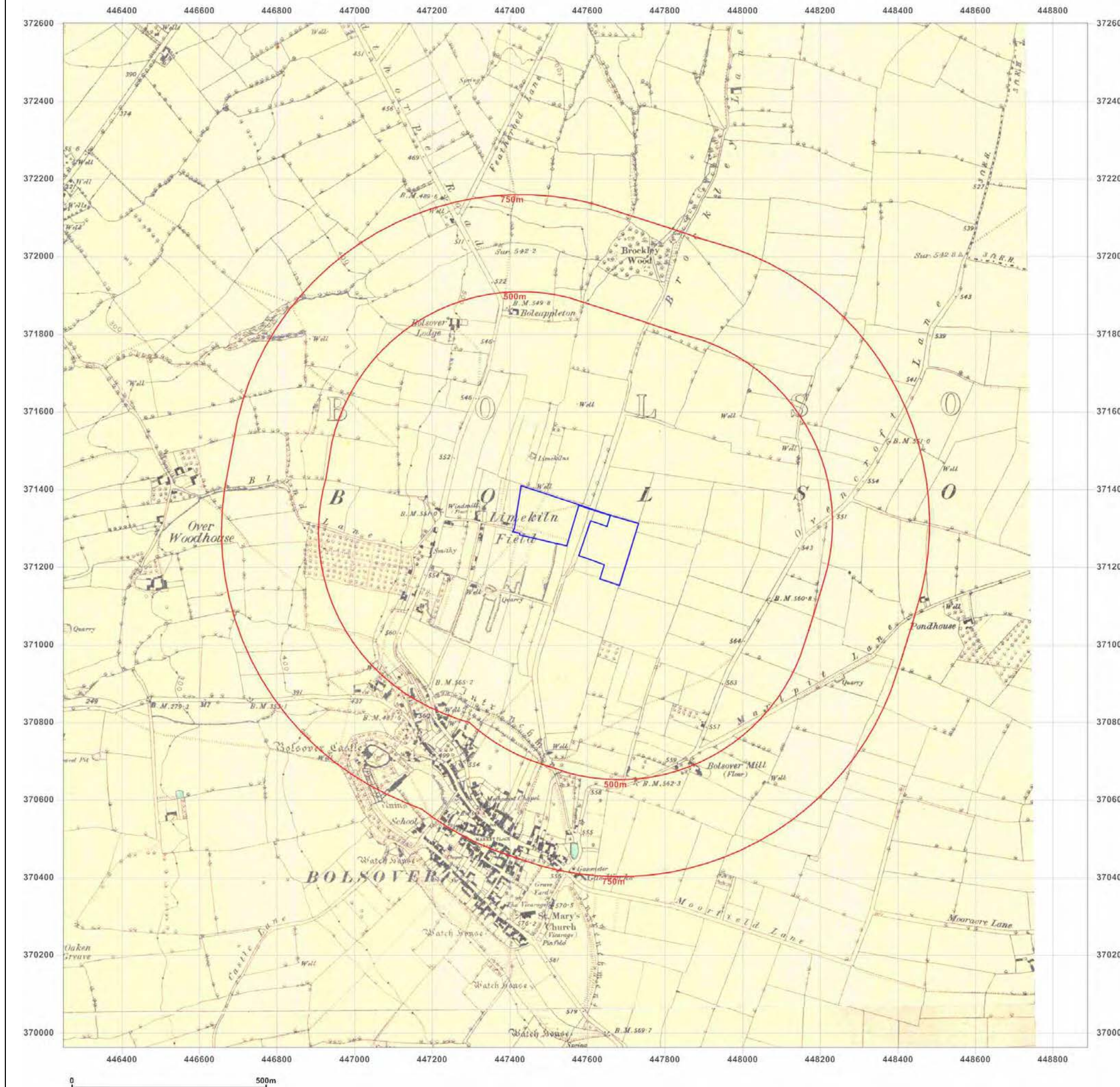


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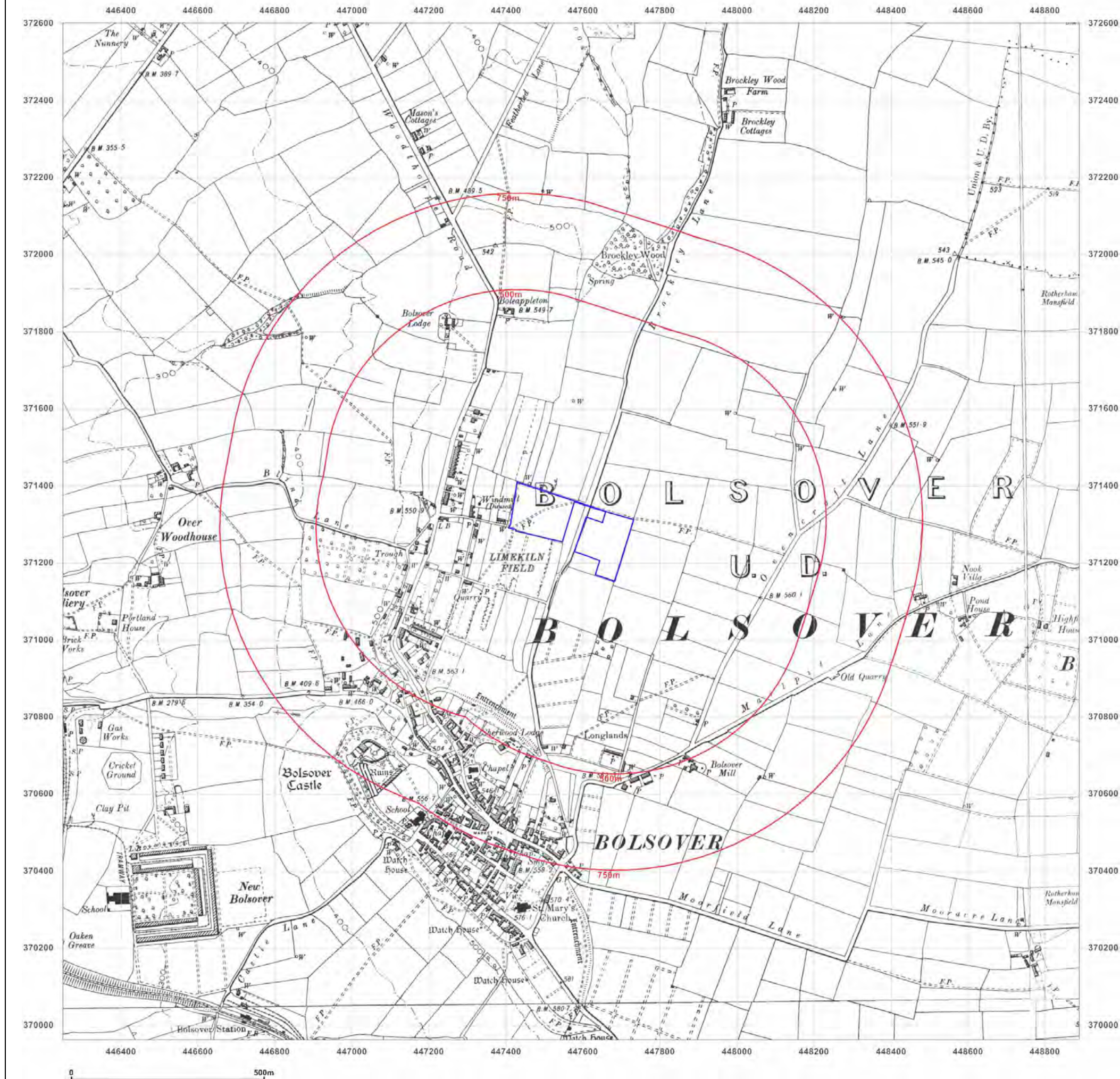
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