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Lydiate Lane Quarry

Environmental Setting and Installation Design

J A Jackson Contractors (Leyland) Limited

Report No. 14-K0217-BLP-ENV-00010
01 October 2024
Revision 02

Document Control

Project: Lydiate Lane Quarry

Document: Environmental Setting and Installation Design

Client: J A Jackson Contractors (Leyland) Limited

Report Number: 14-K0217-BLP-ENV-00010

Document Checking:

Revision	Revision/ Review Date	Details of Issue	Authorised		
			Prepared By	Checked By	Approved By
00	16 November 2023	Issued to Client	E Greenhalgh	John Baxter	John Baxter
01	11 December 2023	Issued to EA	E Greenhalgh	P Roberts	John Baxter
02	01 October 2024	Reissued to EA	G Sharkey	E Greenhalgh	John Baxter
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Contents

1 Introduction

1.1 Report Objectives

This Environmental Setting and Installation Design (ESID) report has been prepared by ByrneLooby Partners (UK) Limited on behalf of J A Jackson Contractors (Leyland) Limited (the Operator) to support an application to vary environmental permit reference EPR/LB3834AE/V004 for Lydiate Lane Quarry (the Site). The Site is currently permitted to operate as an inert landfill.

This permit variation application proposes to vary the permit to change the classification of the inert landfill to allow for silt and clay from a soil washing activity at another site within the Operators portfolio to be used in the quarry restoration.

This assessment builds on the conceptualisation of the Site detailed within the 2012 ESID and associated Hydrogeological Risk Assessment (HRA) that accompanied the inert permit application dated December 2012, referenced 1607 (reports 1607/R/001/1 to 1607/R/003/1, LL_ESID, LL_HRA, 1607/R/005/1 to 1607/R/007/1 and 1607/R/010/1 including drawings as amended during determination). It also utilises information from the recent 2020 HRAR (report 1607/R/011/01) and updated 2023 HRAR (report 14-K0217-BLP-ENV-00013) submitted with this permit variation application.

This ESID report develops the Conceptual Site Model (CSM) for the landfill, and hence characterises the source term, potential pathways and receptors for the subsequent environmental risk assessments and follows the appropriate Environment Agency template[1].

1.2 Proposed Development – Overview

Lydiate Lane Quarry is an active quarry for the extraction of sand and gravel from Devensian (Quaternary Period) superficial strata. These materials are of glacial origin and are extracted above the water table.

To date, out of the originally proposed 10 Phases (drawing reference 1607/1/005B) the "inert waste" infilling has partially restored Phases 1 and 6 within the central area of the landfill complex (installation). An overview of site development, including post permit issue is provided in Section 2.1.

The proposal is to complete the infilling of the remaining void with "non-hazardous" wastes. There are two reasons for this change of classification.

- The scarcity of inert waste (as specified by the Landfill Directive) has limited the progress restoring the quarry as is evidenced by the acceptance of zero waste inputs during the period January to December 2022.

[1] Landfill operators: environmental permits - What to include in your environmental setting and installation design report - Guidance - GOV.UK (www.gov.uk)

- The applicant has a soil wash plant at another site which generates silt and clay residues (washed from recovered aggregate) and may contain residues of gypsum material. Testing of this material has indicated that the silts and clays are compliant with the Annex to Council Decision (2003/33/EC) Section 2.1 other than occasional elevated levels of sulphate. On this basis the current inert landfill permit is proposed to be varied to allow for the acceptance of such wastes. The ability to accept silt and clay generated from the wash plant will accelerate the restoration of the quarry.

Widening the waste acceptance (that geotechnically are the same as the excavation, construction and demolition wastes already consented) that includes materials associated with larger development projects (like HS2) will enable a more efficient use of the site and to achieve the approved restoration scheme in a shorter timeframe. The current Planning Permission end dated for completion and restoration of the site is 01/06/2031 (LCC/2016/0035).

Using a conversion factor of 1.8 - 2.2 tonnes / m^3 it has been estimated[2] that the remaining capacity at site approximates to between ~936,000 and 950,000m^3. The infilling of the associated void will be completed to a level coincident with previous infilling of Phases 1 and 6, and accord with the profile previously consented[3,4].

It is proposed to utilise a supply of waste materials associated with excavation and construction works for the infilling scheme, these wastes are of lower polluting potential than those infilled at typical non-hazardous waste landfill sites (i.e. there are no biodegradable wastes). The infill material is to comprise only of the low activity wastes specified by His Majesty's Revenue and Customs (HMRC) in The Landfill Tax (Qualifying Material) Order 2011 (as amended) (*i.e.* Qualifying Materials (QMs)). The permit application submission addresses the requirement for a revised scheme for restoration for the quarry, this assessment report supports the submission to the Environment Agency.

The proposals are as follows:

- installation of a suitable engineered barrier;
- continue landfilling using low pollution potential material (Qualifying Materials) – non-hazardous soil wastes (including residual silt and clays from wash plants);
- restoration in accordance with the existent planning permission and permit; and
- landscaping of the site to a suitable restored surface.

[2] Lydiate Lane Quarry Landfill Site. J A Jacksons (Leyland) Limited. Annual Report 2022, Report No. 1798/R/023/01. 12 January 2023
[3] Permit - EPR/LB3834AE/V004
[4] LCC/2016/0035. VARIATION OF CONDITION 1 OF PERMISSION 07/11/0739 TO ALLOW THE DEVELOPMENT TO CONTINUE UNTIL 01 JUNE 2031 AND VARIATION OF CONDITION 26 OF PERMISSION 07/11/0739 TO ALLOW SITE OPERATIONS FROM 06.30AM MONDAYS TO FRIDAYS, IN RELATION TO THE EXTRACTION OF SAND AND RESTORATION TO AGRICULTURAL LAND BY THE IMPORTATION OF WASTE AT LYDIATE LANE SAND QUARRY, LYDIATE LANE, FARINGTON, LEYLAND.

1.3 Pre-Operational Conditions

There are no Pre-Operational Conditions detailed in the current permit.

1.4 Site Location and Surrounding Land Use

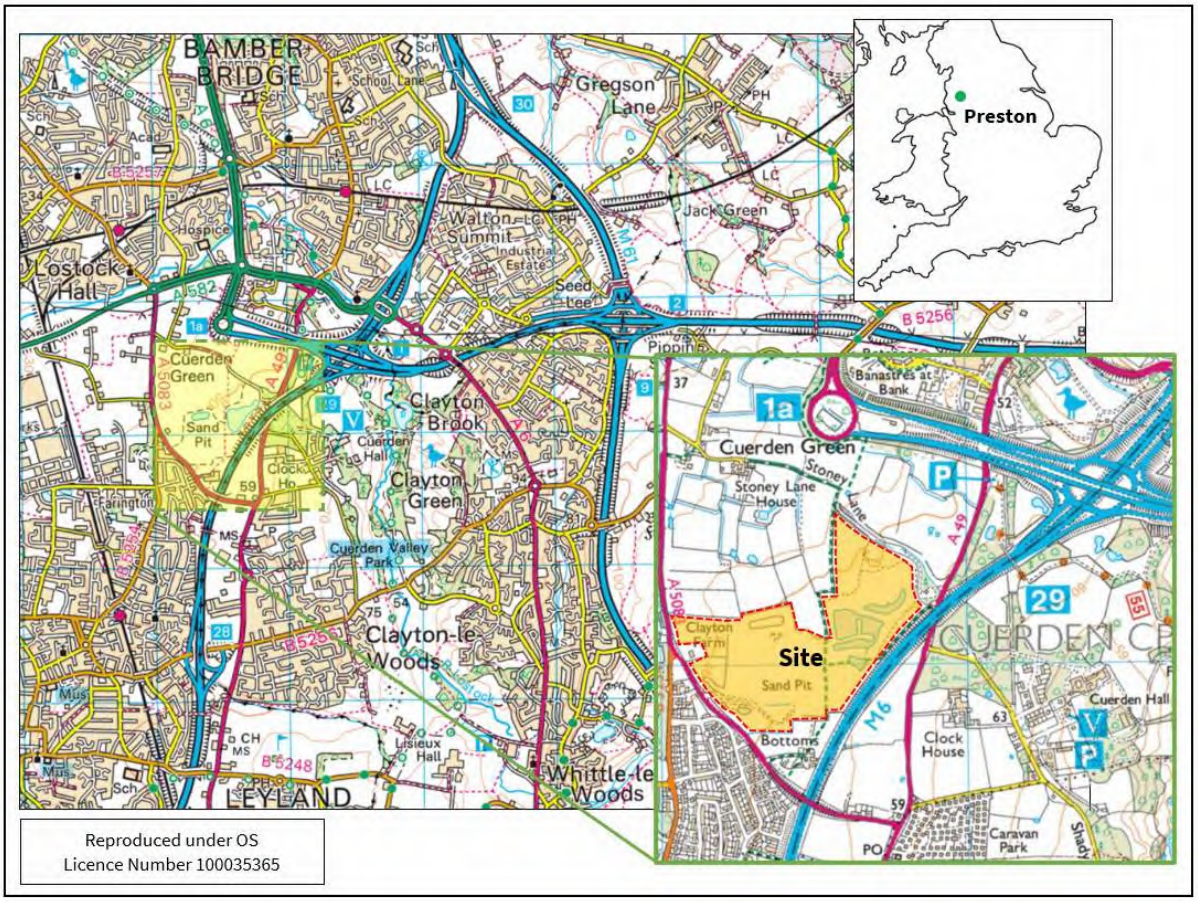
The Site is a landfill occupying the void resulting from extraction of sand and gravel. Lydiate Lane Quarry is located at Cuerden Green, Lancashire, approximately 5km south of Preston and 3.5km north-northwest of Leyland at National Grid Reference (NGR) SD 55376 23956. Access to the site is from the A5083, Lydiate Lane, located to the southwest. The M6 motorway is located immediately to the east of the installation.

The surrounding area is a mixture of semi-rural with some agricultural areas to the northwest, with significant areas of urban development to the south and southwest (Leyland) and southeast (Clayton-le-Woods). Bamber Bridge and Preston are located to the north.

Peripheral areas to the west of the installation range between 52mAOD and 50mAOD (south to north), ~60mAOD at the boundary with the M6, with a fall on the eastern permitter from ~60mAOD to ~50mAOD in a north-westerly direction. To the east beyond the M6, topographic level increase to ~82mAOD towards the north-south ridge at Cuerdon Hall (defined by the lithological transgression from the Singleton and Tarporley Mudstones / Siltstones to the Sherwood Sandstone Group strata) which then fall within the Cuerdon Country Park to ~52mAOD and River Lostock (US Farrington Wier). Overall, topography increases to the east (towards Blackburn) and falls in a westerly direction towards the coast at Lytham St Annes and Southport and marsh areas associated with the tidal influences of the River Ribble.

The Site location is shown in Figure 1.

Figure 1 Site Location



1.5 Local Amenity Receptors

A sensitive receptor review has been undertaken within a 1km screening distance, receptors are identified in drawing K0217.2.002 and Table 1. An Environment Agency Conservation & Heritage Screen was requested (referenced: EPR/LB3834AE/P001) and identified Ribble & Alt Estuaries which is designated as a Special Protection Area (SPA) and Ramsar within 10km. It also identified Preston Junction which is designated as a Local Nature Reserve (LNR) within 2km. The Ribble & Alt Estuaries is located 9.4 km west northwest, and Preston Junction is located 1.3 km north of the Site. Both are outside the 1km screening distance.

The Screen also identified a number of Local Wildlife Site (LWS) including Cuerden Farm Ponds, Cuerden Valley Park and River Lostock, River Lostock and Tennis Courts Ponds. These have been included in Table 1 were relevant. No National Nature Reserves, Sites of Special Scientific Interest (SSSI), Special Areas of Conservation, protected habitats or species, or heritage sites were identified.

Table 1– Sensitive Receptors

Receptor Number	Receptor	Receptor Type	Approx. Distance from Site Boundary (m)	Direction from Site	Freq (%) Prevailing Wind Direction
1	Bottoms Farm –	Residential / Agricultural	80	S	1.4
2	Properties off Woodside	Residential	20	W	6.7
3	Oakfield	Commercial	20	W	6.7
4	Agricultural land	Agricultural	10	E	8.3
5	Public Footpath	Public Footpaths	<10	N & S	6.9-1.4
6	Deciduous Woodland	Priority Habitat	<10-60	E & W	8.3-6.7
7	M6 Motorway	Highway	30	SE	1.8
8	Properties off Bristol Avenue	Residential	35	SW	3.2
9	Stoney Lane House	Residential / Agricultural	430	N	6.9
10	A5083 Lydiate Lane	Highway	<10	W	6.7
11	Clock House	Residential / Agricultural	285	SE	1.8
12	Claytons Farm	Residential / Agricultural	<10	W	6.7
13	Rigby's Farm / Evergreen Lodge	Residential / Agricultural	60	WNW	9.8
14	Cuerden Valley Park and River Lostock	Local Wildlife Site / Priority Habitats	60	E	8.3
15	River Lostock / Cuerden Farm Ponds	Watercourse / Waterbody	875	E	8.3
16	Properties off Shady Lane	Residential	410	ESE	2.4
17	Properties off Nell Lane	Residential	350	SE	1.8
18	Properties off Lydiate Lane	Residential	280	S	1.4
19	Leyland Business Park	Industrial / Commercial	320	W	6.7
20	Railway Line	Railway	630	W	6.7
21	Stanfield Lane	Highway	<10	W	6.7
22	Waterbody / Drains	Waterbody / watercourse	190	N	6.9
23	St Catherines Hospital	Hospital	720	N	6.9
24	South Ring Business Park	Industrial / Commercial	390	N	6.9
25	Wigan Road	Highway	30	E	8.3
26	Lever House Primary School	School	395	S	1.4
27	Farrington Primary School	School	865	SW	3.2
28	Armlee Nurseries	Industrial / Commercial	675	S	1.4

2 Source Term Characterisation

2.1 Site History

The GroundSure Report (GS-9S2-2QT-S8G-IHW) indicates that sand extraction at the site was occurring as early as 1848 (County Series Map 1:10, 560) in a small area to the north in close proximity to 'Stoney Lane' / New Plantation. Significant expansion of the site area occurred after Planning Consent (referenced 07/91/648) was issued in August 1993, the current permission[4] is referenced LCC/2016/0035.

The site will continue to undergo mineral extraction, and corresponding infilling and restoration, in a phased manner, in the 10 phases identified on the Site Layout and Waste Deposition Plan (Drawing Ref: 1607/1/005B) and Phasing and Filling Plan (referenced Figure 8, part of permission LCC/2016/0035). Although extraction and infilling may vary dictated by operational constraints (e.g. location of wash plant / stockpiles).

The extraction will be completed in accordance with the requirements of the current Planning Permission. The infilling and restoration will also be completed in accordance with the environmental permit. Although it should be noted that it is proposed to leave a low-level access route to Phase 4 thus minimising surface vehicle movements and facilitating surface water drainage from Phase 4. Phase areas are presented in Figure 2 and Figure 3 for completeness.

Figure 2 Site Phasing – Permit (extract from drawing 1607/1/005B)

Figure 3 Site Phasing – Planning Ref LCC/2016/0035 (extract from Figure 8)

The infilling of inert waste to date has commenced primarily in the Phase 1 and 6 areas (Figure 2, Figure 3; drawings 1607/1/005B and Planning Figure 8). Development has been undertaken in accordance with permit EPR/LB3834AE and Construction Quality Assurance (CQA) protocol. CQA validated areas of liner are depicted on drawings 1833/2/001 (Phase 1A), 2032/1/001 (Phase 1B) and 2282/1/001 (Phase 1C).

It is noted that some of the associated areas referenced as “Phase 1B” transgress into the Phase 6 designated area on the phase layout drawings. It is also noted that some of the associated areas referenced as “Phase 1C” transgress into part of the Phase 10 area (east), Phase 6 designated area, Phase 5 area (south) and Phase 2 area (southwest).

2.2 Proposed Changes to the Landfill

2.2.1 Nature of Qualifying Materials to be Landfilled

The proposed wastes (a change from inert to non-hazardous) will consist of excavation, construction/demolition wastes and similar industrial wastes within the Qualifying Materials Order and have been selected for their low pollution potential. Currently the permit allows for disposal of mineral wastes (e.g. sand and clays), ceramics, bricks, concrete and glass, tiles, ceramics, and soil excluding top-soil. All these waste types will continue to be accepted. Topsoil will continue to be excluded. The silt/clay residue meets the definition of Qualifying Material as prescribed by the Landfill Tax (Qualifying Material) Order 2011 (as amended) and does not undergo any significant physical, chemical or biological transformation.

Further details on the nature of qualifying materials are provided in the 2023 HRAR (report 14-K0217-BLP-ENV-00013).

2.2.2 Waste Characterisation

The infill material may be sourced from excavated mineral and aggregates or similar suitable excavated waste materials and recovered aggregates. This will be enforced by rigorous waste pre-acceptance procedures ensuring only suitable wastes as listed in the European Waste Catalogue (EWC) may be used. The waste material is considered to be of a low polluting potential.

Further details on waste acceptance procedures are provided in the Waste Acceptance Criteria (WAC) (report 14-K0217-BLP-ENV-00012).

2.2.3 Waste Inputs

The permitted maximum is 200,000t/y for landfill. No changes are proposed. Infill phasing will continue to be undertaken in accordance with drawing 1607/1/005B.

2.2.4 Landfill Phasing

The proposed changes of this variation application will not necessitate a change to the already consented Phasing Scheme although Phases 1 and 6 have been partially infilled to date (to consented pre-settlement levels), any shortfall in these areas to tie in with the overall landform will be undertaken with inert wastes only. Extraction and infilling may differ from the phasing as identified sequentially as a result of operational constraints e.g. quality of reserve, stockpiles, and settlement lagoons.

2.2.5 Landfill Engineering

Landfill engineering associated with future cells is discussed in detail in section 4.4 of the 2023 HRAR (report 14-k0217-BLP-ENV-00013) and is summarised below.

A re-engineered artificial geological barrier (AGB) comprising of the silt / clay component of the superficial strata will be placed across the sidewalls and landfill base. Previous site development and liner placement / engineering under CQA has demonstrated this material far exceeds regulatory requirements.

The Directive states that the artificially established geological barrier should be no less than 0.5 m thick (Annex I, Paragraph 3.2).

Engineering requirements for the construction of an AGB are outlined in Environment Agency guidance 'How to comply with your environmental permit, Landfill (EPR 5.02)' – Now Withdrawn

(21st April 2021) and replaced with on-line guidance[5]. The 500mm minimum thickness AGB comprising at least two layers of compacted clay, each to a thickness of 250mm and to a permeability no greater than $1x10^{-8}$m/s is proposed on the base and sides of the site (an equivalency greater than 1m @ $1x10^{-7}$m/s in regard to basal seepage).

In reality, however, the compacted clay barrier and the infilled waste mass (in itself and in its entirety) are expected to act as a geological barrier with an expectation for a hydraulic conductivity / permeability in the order of $1x10^{-10}$m/s – $1x10^{-9}$m/s (as described in the additional information Section 5.1of this report). The mineral liner will be placed in accordance with the Environment Agency guidance LFE4 – Earthworks in Landfill Engineering and will be subject to independent third party CQA[6].

Under the Landfill Directive there are no requirements for an engineered low permeability cap on an inert landfill. The proposed change will now include a cap as part of the site design. On completion of the filling a cap will be placed using selected low-permeability materials to limit infiltration.

A design standard of 500mm minimum thickness, at a permeability no greater than $1x10^{-8}$m/s is proposed however it is expected that the placed wastes will be two to three orders of magnitude lower in permeability.

2.3 Groundwater Management

The depth of sand and gravel excavation is controlled by the extant planning permission (44mAOD). The current quarry void is in places at the water table however it is not intended to dewater the mineral to permit sub-water table mineral extraction. As the base of the site is above the water table, groundwater management will not be required.

2.4 Leachate / Infill pore-water Management and Monitoring

It has been demonstrated by the 2023 HRAR (report 14-k0217-BLP-ENV-00013) and through experienced gained at other similar sites that by controlling the nature of the waste inputs, leachate collection will not be necessary.

2.4.1 Requirements for Basal Drainage and Leachate Management

The overall drainage behaviour has been assessed by the 2023 HRAR (report 14-k0217-BLP-ENV-00013) and it has been concluded that a drainage layer at the base of the site would be superfluous. However, the retainment of discretionary spine drains and monitoring chamber for "monitoring purposes", i.e. to validate the anticipated source term porewater is proposed in coincidence with already consented schemes of an identical design.

[5] https://www.gov.uk/guidance/landfill-operators-environmental-permits (accessed March 2023)
[6] LFE4 - Earthworks in landfill engineering Design, construction and quality assurance of earthworks in landfill engineering (published 23 June 2014)

2.4.2 Requirements for Water Balance

Under the conditions of infilling the Lydiate Lane void, and previous understanding in regard to accumulation of water in low-permeability waste as detailed in the supporting 2023 HRAR (14-K0217-BLP-ENV-00013), a water balance is not required.

2.4.3 Leachate Monitoring

No requirement for management and no specified leachate limits required. Periodic monitoring will be undertaken for establishing surrender point. Further details provided in Section 5.1.

2.5 Landfill Gas Management and Monitoring Infrastructure

The production of landfill gas will be negligible due to the non-biodegradable nature of the permitted waste types. Testing of the clay / silt produced by the process in accordance with the Landfill Directive Waste Acceptance Criteria (WAC) has shown the Total Organic Carbon (TOC) content to be below the WAC TOC limit (3%) for an inert landfill site. The organic content of a waste is the primary driver for its ability to produce landfill gas. As the TOC in all wastes to be deposited within the site is expected to be below 3%, it has not been considered necessary to carry out a landfill gas risk assessment to support the proposed permit variation. This is because the risk remains unchanged from the previous conceptual site model of an inert landfill site. The WAC data demonstrating the low TOC content of the filter press waste is attached in Appendix C.

2.5.1 Landfill Gas Generation

Section 7.4.5 of the Environment Agency's LFTGN03[7] discusses the role of microbial populations contained within the predominantly low permeability, soil rich wastes and cover materials oxidising a proportion of the methane generated within the waste mass. With the negligible amount of methane predicted to be generated, it is considered that this methane oxidation will have a significant role in the management and control of any landfill gas generated at Site. LFTGN03 states that this biological methane oxidation is considered and appropriate method for controlling landfill gas on low gassing sites.

2.5.2 Landfill Gas Monitoring

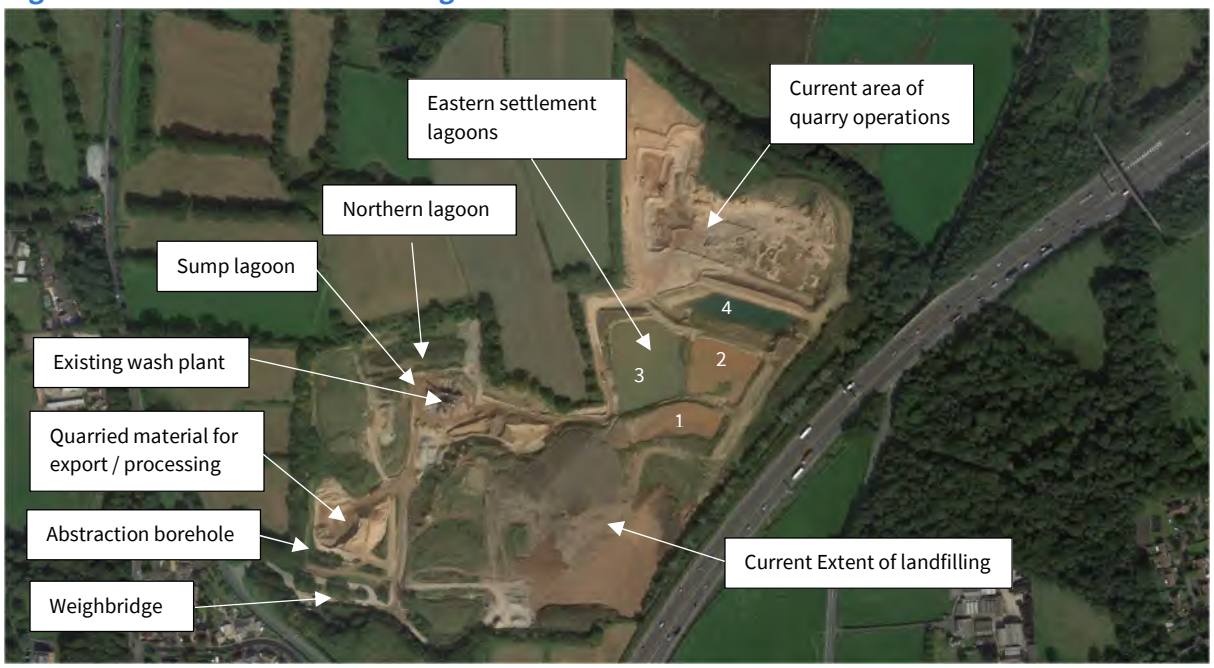
Perimeter monitoring will continue in accordance with Table S3.2A and S3.2B of the permit. In-waste monitoring will be undertaken in accordance with Table S3.2. Further details are provided in Section 5.2.

[7] Guidance on the Management of landfill gas, LFTGN03

2.6 Surface Water Management System - Infilling Phase

Surface water management bunds and a series of ditch-courses and ponds are present as necessary to direct surface water run-off away from the active landfill area during its operational phases. This water management is described below and will change as dictated by operational constraints and progression of infilling. The current site arrangements are shown in the aerial photograph in Figure 4.

Figure 4 Current Site Arrangements



The active area of quarrying is currently in the north-eastern area of Site. An existing aggregate wash plant treats quarried material extracted from the Site and is located toward the north of the site. Quarried mineral stockpiled for treatment is located in the southwest corner of the site. Clean water is fed from the licensed abstraction borehole located to the southwest of the site and the lagoons to the east and north of the wash plant. Silty process water run-off draining from the treated material drains to the Sump Lagoon immediately north of the plant. This lagoon also receives water draining from the materials storage area to the southwest and the haul road that connects the weighbridge to the wash plant. This is then pumped via a pipe to Lagoon 1 which acts as the primary point of settlement. The water then flows passively via a pipe into Lagoon 2 to the north and then Lagoon 3 to the west of Lagoon 2. Lagoon 4 to the north of Lagoon 2 acts as an overflow to Lagoon 3 and collects water flowing from the quarrying area. Clean water shed from the restored areas of landfilling also discharges into Lagoon 3. The clean water is pumped back from Lagoon 3 to the Northern Lagoon located to the immediate north of the wash plant. It is this water which is abstracted for use in the wash plant.

The quarrying operations extracted sand and gravel until the underlying clay was encountered. The area where silty process water collects from the wash plant is constructed on the natural clay which prevents liquid from soaking away into the sandy strata beneath. The settlement and holding lagoons are also founded on clay with the perimeter retaining bunds formed from this clay which

also enables the liquid to be retained. The pipework used to pump the silty process water from the collection area to the lagoons is regularly checked for leaks to maximise the amount of water retained on site for use in the wash plant.

2.7 Capping System

Under the Landfill Directive there are no requirements for an engineered low permeability cap on an inert landfill. The proposed change will now include a cap as part of the site design. On completion of the filling a cap will be placed using selected low-permeability materials to limit infiltration.

A design standard of 500mm minimum thickness, at a permeability no greater than $1x10^{-8}$m/s is proposed however it is expected that the placed wastes will be two to three orders of magnitude lower in permeability.

The final capping layer will be installed over the site as filling is completed, the cap is designed to:

- prevent the waste from being disturbed;
- control water infiltration (albeit that this will be achieved indirectly by the placement and nature of the infill);
- be stable to erosion;
- be resistant to penetration by roots; and
- be able to tolerate the long-term strains caused by differential settlement.

2.8 Restoration and Aftercare

Restoration soils (~1m in thickness) placed over the waste will comprise of topsoil and subsoil stripped from the site prior to mineral extraction (if available). The restoration scheme will be in keeping with the surrounding area and will undergo a period of maintenance and aftercare management in accordance with the Planning Permission[4].

2.9 Surface Water Management System – Post Infilling / Restoration Phase

Post-operation, the restoration profile is such that drainage will occur from the southeast to the northwest, draining passively to the superficial strata at the site periphery.

2.10 Post Closure Controls

Completion criteria (when the waste is physically and chemically stabilised) will be determined having regard to the collection and assessment of monitoring data. This information will be assessed at least annually and used as input parameters into future risk assessments which will delineate when the operator can apply to surrender the Permit.

The conceptualisation of how the containment systems will operate throughout the life cycle of the proposed development is presented within Table 2.

Monitoring of placed fill pore-water (leachate / porewater) and gas will continue until permit surrender. Post closure checks will be undertaken to periodically review the on-site management systems, and to check for subsidence or differential settlement.

Table 2 – Management Measures and Technical Controls Throughout the Landfill Cycle

Landfill Phase	Leachate Management	Gas Management	Containment System	Landfill Cap
			Artificial Geological Barrier	
Operational (non-hazardous wastes)	No requirement for management, no specified leachate limits required. Periodic monitoring undertaken for establishing surrender point	No requirement for management, no specified leachate limits required. Periodic monitoring undertaken for establishing surrender point	Operates as designed	N/A
Post Closure & Aftercare Period	Periodic monitoring undertaken for establishing surrender point, some degradation/ clogging of the drainage system	Periodic monitoring undertaken for establishing surrender point, some degradation/ well clogging of the monitoring system	Operates as designed	Operates as designed
Site Completion	None	None	Operates as designed	Operates as designed
Post Site Completion	None	None	Operates as designed	Operates as designed

3 Pathway and Receptor Characterisation

3.1 Climate

Information contained on the Met Office website[8] provides details for the local area. Key statistical information is presented below in Table 3 and Table 4.

Table 3– Myerscough Climate Statistics (1991-2020)

Month	Max Temp °C	Min Temp °C	Rainfall (mm)
January	7.67	1.80	94.74
February	8.41	1.90	80.82
March	10.63	2.96	67.93
April	13.65	4.59	56.87
May	16.79	7.13	60.88
June	19.15	10.19	72.35
July	20.76	12.18	82.41
August	20.44	12.00	99.45
September	18.13	9.91	96.92
October	14.49	7.31	116.15
November	10.70	4.27	108.70
December	8.11	1.90	120.85
Annual	14.11	6.37	1058.07

3.2 Rainfall

Table 4 presents the 30-year statistical averages for the area, covering the date period 1991-2020. The data is taken from the Myerscough, altitude 14m above mean sea level, 16.5km southeast of site, annual rainfall (1,058.07 mm/yr). The Myerscough annual rainfall is ~279.8mm less than the 1991-2020 annual total for the England NW & Wales N.

Table 4–Climate England NW & Wales N (1991-2020)

Month	Max Temp °C	Min Temp °C	Days of air frost (days)	Sunshine (hours)	Rainfall (mm)	Days of Rainfall >=1 mm (days	Monthly mean wind speed at 10m (knots)
January	6.64	1.45	10.39	44.88	133.4	16.25	11.05
February	7.09	1.39	9.8	69.4	110.03	13.51	11
March	9.08	2.38	7.09	107.15	94.36	13.23	10.4
April	11.95	4.02	3.48	154.28	77.29	12.1	9.3
May	15.07	6.59	0.85	190.88	78.86	11.66	8.8
June	17.54	9.32	0.03	172.5	89.17	12.1	8.21
July	19.21	11.28	0	172.64	98.04	13.29	7.93
August	18.83	11.26	0	155.83	109.51	14.22	8
September	16.54	9.27	0.04	124.42	109.76	13.16	8.41
October	13	6.68	1.38	88.23	140.45	15.87	9.41

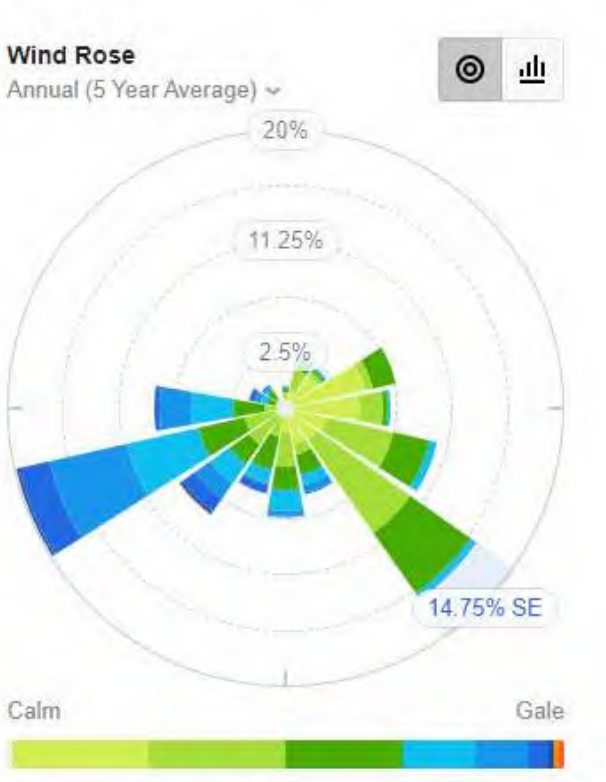
[8] Myerscough (Lancashire) UK climate averages - Met Office

Month	Max Temp °C	Min Temp °C	Days of air frost (days)	Sunshine (hours)	Rainfall (mm)	Days of Rainfall >=1 mm (days	Monthly mean wind speed at 10m (knots)
November	9.46	3.88	4.74	54.21	141.69	17.3	9.87
December	7.1	1.7	9.9	40.1	155.31	17.22	10.39
Annual	12.66	5.79	47.69	1374.52	1337.87	169.91	9.39

3.3 Wind

Weather and wind statistics are taken from Warton Bank Weather Station[9] located 15.1 km west northwest of the Site boundary. The windrose shows that the dominant wind direction is from the west southwest and southeast blowing towards the east northeast and northwest (Figure 5).

Figure 5 Windrose Warton Bank



[9] Warton Bank Wind Forecast, Lancashire PR4 1 - WillyWeather

3.4 Geological Succession

3.4.1 Worked Ground and Made Ground

Areas of "worked ground" are noted at 'BGS GeoIndex' to the west of the installation, areas of landfilling are reported to the west and southwest at distances >0.7km and to the southeast at distances >1.5km.

3.4.2 Geological Succession – Overview

The geological succession has been outlined fully in the previous ESID and HRA and subsequent 2020/2023 HRAR, a summarised account is provided below for context. There are extensive thicknesses of natural Superficial Strata in the area (Till, Glaciofluvial deposits) with minor deposits of "head" and "alluvium" present to the east in the course of the River Lostock.

The site is located above the Singleton Mudstone with the eastern most margin of Phase 3 above the Tarporley Siltstone, the geological sequence transgresses into the Sherwood Sandstone Group Strata to the east beyond the M6.

3.4.3 Superficial Geology

The superficial strata have been described previous as a varied sequence of interbedded fine grained silty sand, sand and gravel, silt, clay and occasional cobbles. BGS GeoIndex indicates the area is predominantly covered by "Till" and "Glaciofluvial Deposits" (Devensian Substage of the Pleistocene Epoch).

3.4.4 Bedrock Geology

3.4.4.1 Stratigraphy

The Preston geological map (BGS, 1982, Solid[10]) indicates near surface Permo-Triassic strata of the Mercia Mudstone Group which overlies the Sherwood Sandstone Group. Underneath the Sherwood Sandstone are the Permian Manchester Marls which unconformably overlie the Westphalian (Coal Measures) and Namurian 'Millstone Grit'. As such, the Preston district is described within published literature as commencing with the formation of the upper part of the Bowland Shale Group[11]. *Deposition towards the end of the Lower Carboniferous period introduced large quantities of argillaceous sediment with minor amounts of sandy detritus were introduced, and a sequence of shales and mudstones with thin sandstones and limestones was deposited. Sedimentation was accompanied by somewhat variable subsidence, and a thick sequence of shales, mudstones and sandstones was formed. In later Millstone Grit times, and throughout the period of the Coal Measures,*

[10] BGS Map Sheet 75 Preston. Solid, 1:50 000 New Series
[11] Price, D. et al. 1963. Geology of the Country around Preston (One-inch geological sheet 75 New Series). London: Her Majesty's Stationery Office [for Geological Survey of Great Britain].

silting up of the depositional basin sometimes occurred, leading to the formation of seatearths and coals.

Recent changes in nomenclature indicate that the Mercia Mudstone strata are subdivided into:

- Singleton Mudstone (Halite and Mudstone) – early Triassic (Anisian Age), at site
- Tarporley Siltstone (Siltstone, Mudstone) – early Triassic (Anisian Age), east of site
- Sherwood Sandstone, part of New Red Sandstone Supergroup (Sandstone) - Triassic (Induan to Anisian Age), east of site.

3.4.4.2 Structure

Carboniferous sedimentation was terminated by the oncoming of the later and more intense phases of the Armorican orogeny. The area was subjected to uplift, folding and faulting, which produced the major tectonic features now recognizable in the Carboniferous rocks. Extensive denudation occurred[11]. The fault pattern of the Carboniferous is also seen in the Permo-Triassic. The major faults vary in trend from north to north-west.

3.5 Hydrogeology

3.5.1 Superficial Strata

Hydraulic details are not available from site, on account of the heterogeneous nature of glacial deposits[12,13], large variations in permeability can be reported. *The spatial variability of tills makes it difficult to select representative samples. The size of samples in relation to the fabric makes it difficult to determine the mass strength, stiffness and permeability of these tills.*

Matrix-dominated tills with a fine-grained content in excess of 35% have a conductivity of less than 10^{-9} m/s. The conductivity of clast-dominated soils is typically greater than 10^{-7} m/s. There is a transition zone between these two, which depends on the soil density, type of fine-grained particle and confining pressure[12].

It is additionally noted that *"The mass (in situ) permeability of glacial tills is a function of the intrinsic conductivity and the secondary conductivity, which is a function of the soil fabric, which in glacial soils can have a significant effect. Thus, the mass permeability is likely to exceed the intrinsic permeability".*

[12] The engineering properties of glacial tills. Clarke, B.G. Research Article Paper. Geotechnical Research, https://doi.org/10.1680/jgere.18.00020
[13] An approach to hydrogeological assessment of Quaternary deposits in the UK Part 2 Methodology and Testing October 2006. Project WFD 34.

3.5.2 Groundwater Level and Flow Direction

Water levels from the glacial deposits are monitored at 4 locations as depicted on the monitoring location plan referenced 1607/1/007. Flow direction is westerly with a gradient of 0.016 falling from ~43 – 45mAOD in the east to ~34 – 36m AOD in the west.

3.5.3 Aquifers and Groundwater Status

3.5.3.1 Aquifer Classification

The "Till" superficial strata are classified as Secondary "undifferentiated" aquifers, referenced as *Secondary undifferentiated are aquifers where it is not possible to apply either a Secondary A or B definition because of the variable characteristics of the rock type. These have only a minor value*[14].

3.5.3.2 Source Protection Zones (SPZ) and Safeguard zones (SgZs)

The site is outside any Source Protection Zone (SPZ), Total Catchment area (SPZ3). The closest SPZ is located 3.8km to the northeast, as such the site is not within a SgZs (Groundwater), mapping available at: https://environment.data.gov.uk/farmers/.

3.5.3.3 Abstractions and Private Water Supplies

There are no known active groundwater abstractions or private water supplies within 2km. There are two historical mineral washing licences related to the site, current usage is below 20m^3/d.

3.5.3.4 Drinking Water protected areas (DrWP's)

The site is located within a DrWPAs, all groundwater bodies in England are designated, identified as a requirement of the Water Framework Directive[15] (West Lancashire Quaternary Sand and Gravel Aquifers)[16,17].

3.5.3.5 Groundwater Vulnerability

Vulnerability is classified as low - medium.

[14] Protect groundwater and prevent groundwater pollution Published 14 March 2017. https://www.gov.uk/government/publications/protect-groundwater-and-prevent-groundwater-pollution/protect-groundwater-and-prevent-groundwater-pollution

[15] Water Framework Directive (2000/60/EC) https://eur-lex.europa.eu/legal-content/EN/ALL/?uri=celex%3A32000L0060

[16] WFD Groundwater Bodies (Cycle 2) | Catchment Based Approach Data Hub

[17] WFD Groundwater Bodies Cycle 2 - data.gov.uk

3.5.3.6 Springs

A water features survey has not identified any springs within 1km, however it was reported historically that a spring was located near Lydiate farm (<1km to southeast of site) but was stated as being capped according to local resident.

3.6 Hydrology

The site lies within River Lostock catchment with the closest part of the river approximately 1.6 km to the west. Topography of site indicates drainage towards west towards River Lostock. An ephemeral stream located near Stoney Lane to north of site.

Drainage ditches located primarily to north of site and on site itself. On site ditches located in proximity to quarry access road which transfers run-off to the collection pond (SW01), location depicted on drawing 1607/1/007A. Water is not currently discharged, on-site water management is discussed further in Section 2.6.

A spring was referenced in the 2012 ESID, located near Lydiate farm (<1km to southeast) however the report states that it had been "capped". There are no direct connections to surface water courses.

3.6.1 Surface Water Abstractions

There are no known active surface water abstractions within 2km.

3.6.2 Flooding

The site is not within an area prone to flooding (river and coastal), designated Flood Zone 1 for planning[18]. Surface water flooding 0.3-1m is not predicted at site, groundwater flooding is considered "moderate".

[18] Get flood risk information for planning in England. https://flood-map-for-planning.service.gov.uk/location

4 Receptors and Compliance Points

4.1 Groundwater and Surface Water

The location of the site is not considered to fall within a particularly sensitive hydrogeological / hydrological area. There are no public water supply (potable) abstractions within 2km, and all historical nearby uses were for industrial processes, and any baseflow contributions to surface water ecosystems are at a distance of at least 1.6km downgradient of the landfill.

It is clear from the conceptual model and the very limited (if any) pollution potential of the proposed infill Qualifying Materials that the hazards are low, and the environmental setting is sufficiently insensitive to negate the possibility of significant impacts (aquifer status of secondary A, 'undifferentiated' which is considered by the Environment Agency as having "a minor value").

Notwithstanding the above, in accordance with good environmental practices and due consideration of the water quality in the receiving superficial strata, a 2023 HRAR has been submitted with this application (report 14/K0217/BLP/ENV/00013) for completeness.

4.2 Amenity

The nearby receptors are identified within Table 1 and are described briefly within this document. An Environmental Risk Assessment (ERA) has been undertaken and is provided as part of the permit variation application (report 14/K0217/BLP/ENV/00011). The assessment includes qualitative assessments of odour, noise and vibration, fugitive and visible emissions (dust, mud, litter, pests & vermin) and includes mitigation and appropriate controls and monitoring. Receptor locations are provided on drawing reference K0217/2/002.

4.3 Habitats

As discussed in Section 1.5, an Environment Agency Conservation & Heritage Screen was requested (referenced: EPR/LB3834AE/P001) and obtained. The Screen stated that there were no National Nature Reserves, Sites of Special Scientific Interest (SSSI), Special Areas of Conservation, protected habitats or species, or heritage sites located nearby. The Ribble & Alt Estuaries (SPA & Ramsar) and Preston Junction (LNR) were both outside the 1km screening distance. The Screen did identify a number of LWS, and these are included in Table 1 were relevant.

4.4 Source – Pathway – Receptor Framework

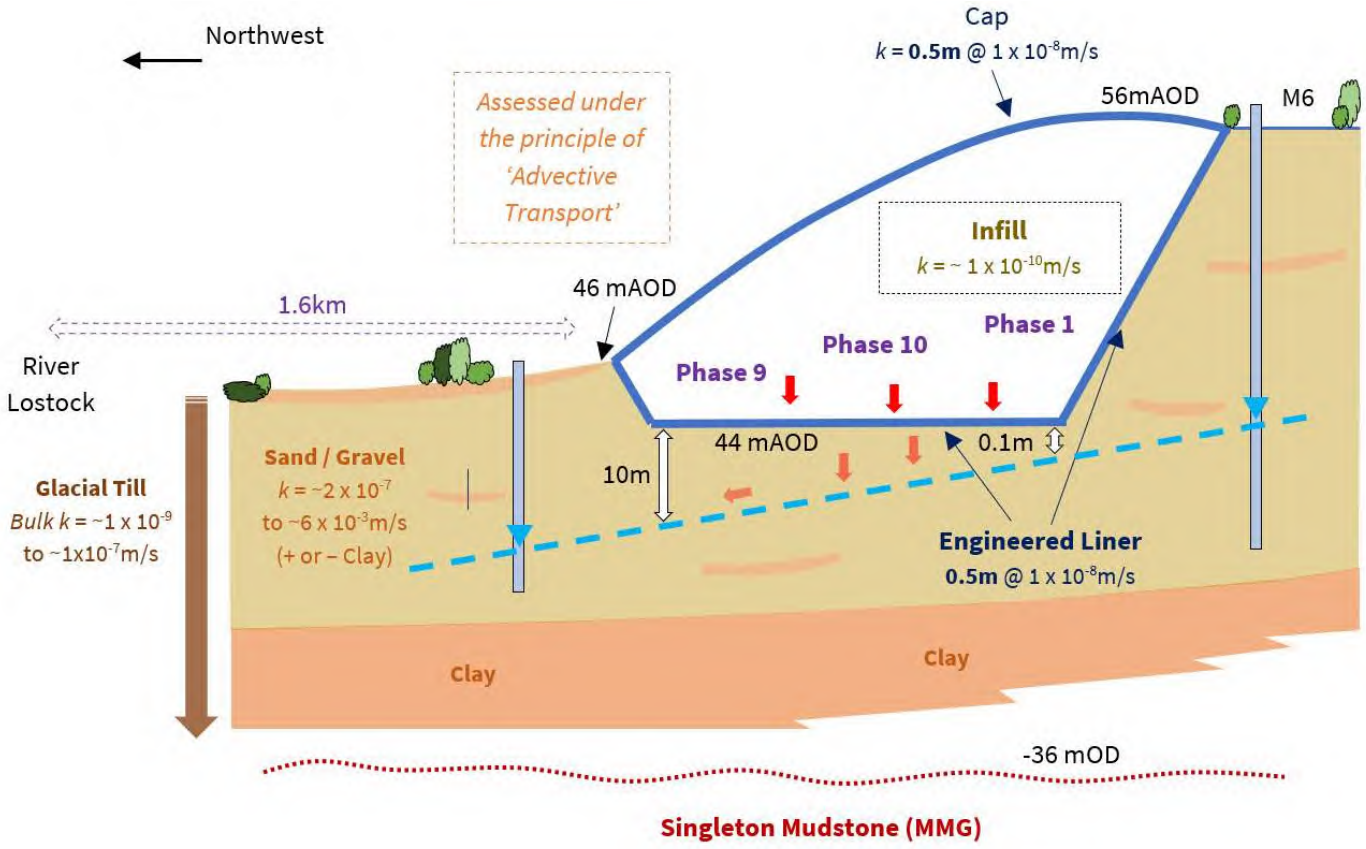
A simple Conceptual Site Model (CSM) can be constructed for this site based on the relationship; Source → Pathway → Receptor

Where the:

- Landfill is the source,
- The pathway is the engineered containment system and the variable underlying superficial sands, gravels, clays,
- The receptor is the groundwater in the sands / gravels measured at the down gradient site boundary.

A representation of the CSM is provided in Figure 6Figure 6 for completeness.

Figure 6 Conceptual Site Model



Sand and gravels predominate the glacial sequence based on the previous intrusive investigations.

5 Monitoring

5.1 Leachate Monitoring

It has been demonstrated by the 2023 HRAR (report 14-k0217-BLP-ENV-00013) and through experienced gained at other similar sites that by controlling the nature of the waste inputs, leachate extraction will not be necessary and specified leachate limits will not be required.

Periodic monitoring is proposed for establishing the surrender point. One leachate monitoring chamber will be installed in each cell with radial spine drains. Imported stone (or similar applicable material) will be utilised to surround the spine drains. The spine drains will fall to sidewall risers as illustrated on updated drawing referenced 1607/1/006 Rev A. Drains and sidewall risers will not be installed in cells where pumped silts and clays are to be deposited directly on the base of the cell because the fine silt and clay will block the drains and risers. In these cells the pumped water will be sampled until the cell is full at which point the retrospectively installed gas monitoring points will be used to obtain liquid samples from the waste.

No leachate extraction is proposed due to the likely high density, low permeability of the fill and low leachate generation, although incidental surface water run-off will be managed in accordance with the existing surface water management scheme appended to the 2023 HRAR (report 14-K0217-BLP-ENV-00013).

5.2 Landfill Gas Monitoring

Perimeter landfill gas monitoring will continue in accordance with Table S3.2A and S3.2B of the permit. Monitoring is currently obtained from the following boreholes:

- BH08/01R;
- BH08/02;
- BH08/03;
- BH08/04; and,
- BH13/03

In-waste monitoring points will be retro-installed following the completion of each phase of waste deposition at the Site, with a minimum of two per hectare in accordance with current Environment Agency guidance and monitored in accordance with Table S3.2 of the permit.

5.3 Groundwater Monitoring

Groundwater monitoring will continue in accordance with Tables S3.1 and S3.3 of the permit. Monitoring is currently obtained from the superficial strata at:

- BH08/03 (upgradient – east) monitored periodically;
- BH08/04 and BH13/03 (cross gradient – north and south);
- BH08/02 (downgradient) monitored historically; and,
- BH08/01R (downgradient – west).

5.4 Surface Water Monitoring

Surface water will continue in accordance with Table S3.4 of the permit. Monitoring is currently obtained from the reedbed outflow location (SW1).

6 Site Condition Report

This Section has been produced in accordance with the Environment Agency H5 SCR Guidance (LIT 8001 Version 3.0 April 2013)[19] using the H5 template. It updates the 2012 Site Report included in the ESID (report LL_ESID) submitted with the original permit application.

6.1 H5 Section 4.0

4.0 Changes to the activity	
Have there been any changes to the activity boundary?	No changes to activity boundary.
Have there been any changes to the permitted activities?	The site is currently permitted as an inert landfill. This variation application proposes to change the permit to allow non-hazardous low activity wastes specified by HMRC in The Landfill Tax (Qualifying Material) Order 2011 (as amended) (Qualifying Materials (QMs)). The proposal also includes the treatment of inert wastes to recover aggregates and minerals. QMs are geotechnically the same as construction and demolition wastes already consented by the permit. They do not undergo any significant physical, chemical or biological transformation. QMs do have different geochemical properties to inert materials, and these have been assessed in in the documents submitted with this application, in particular the 2023 HRAR. Due to the change in waste types, engineering specification of the landfill has changed including the cap and leachate monitoring infrastructure. The base and side-slopes of the landfill will have a minimum thickness of 0.5 m of compacted clay (max. hydraulic conductivity of 1 x 10^{-8} m/s). Previously, no cap was required, in future, there will be a cap of 0.5 m of compacted clay (max. hydraulic conductivity of 1 x 10^{-8} m/s). Previously, leachate monitoring was not required, monitoring spine drains, and a chamber will be installed in each phase. No changes are proposed to phasing, restoration specification, or gas management.
Have any 'dangerous substances' not identified in the Application Site Condition Report been used or produced as a result of the permitted activities?	No 'dangerous substances' are proposed to be used or produced as a result of the permitted activities.

[19] Environmental permitting: H5 Site condition report - GOV.UK (www.gov.uk)

Checklist of supporting information	14-K0217-BLP-ENV-00009 Permit Variation Application 14-K0217-BLP-ENV-00011 Environmental Risk Assessment 14-K0217-BLP-ENV-00012 Waste Acceptance Criteria 14-K0217-BLP-ENV-00013 Hydrogeological Risk Assessment Review 14-K0217-BLP-ENV-00014 Emissions and Monitoring

Appendix A – Drawings

Key

- Permit / Planning boundary
- Phasing boundaries
- 37.5 Restoration contours (mOD)

TerraConsult

Bold Business Centre, Bold Lane, Sutton, St Helens WA9 4TX

Client

J.A. Jackson Contractors (Leyland) Limited

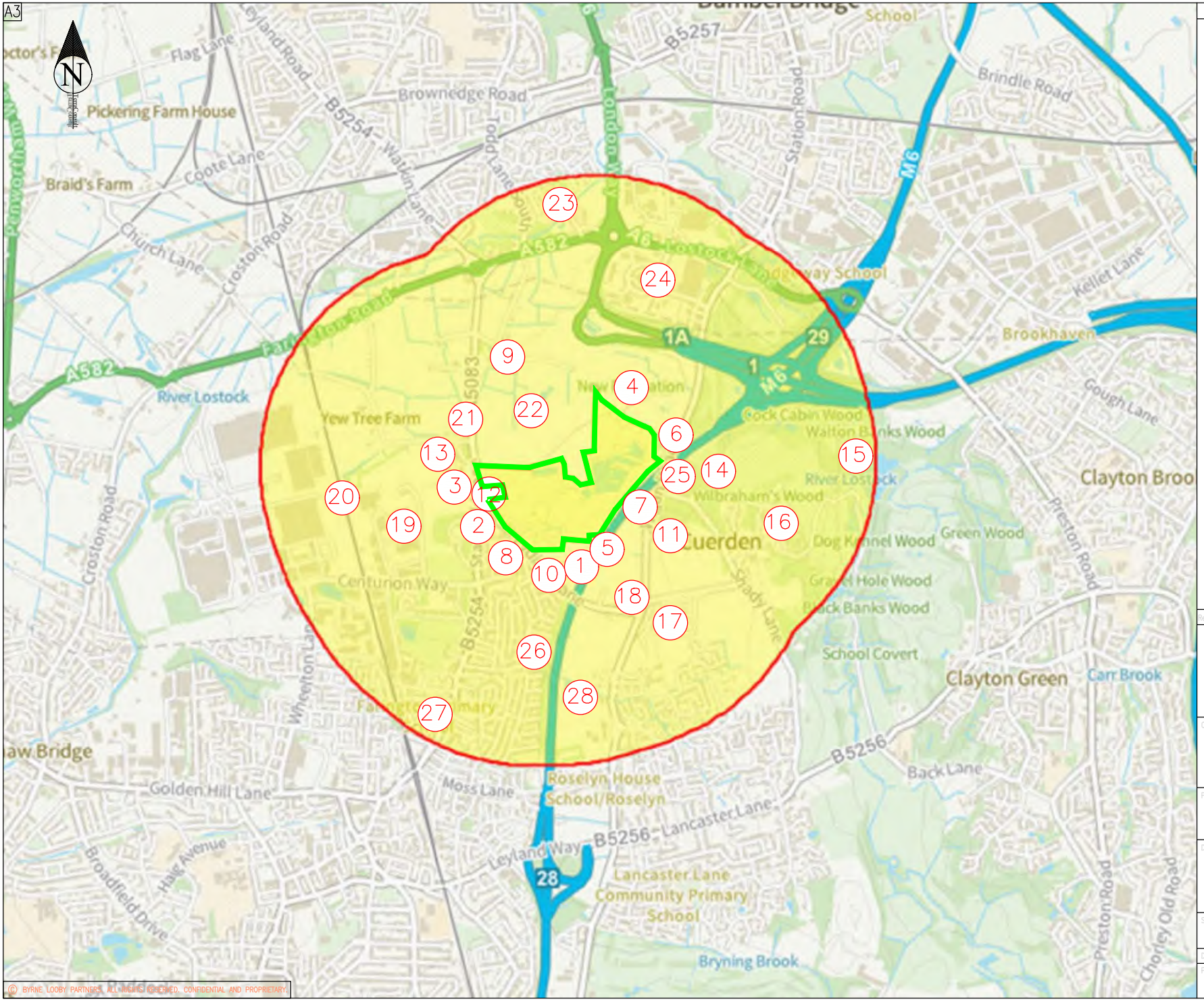
Site

Lydiate Lane Landfill

Title

Site Layout and Waste Deposition

Scale	1:3,000	@ A3	
Drawing No.	1607/1/005B/B		
Rev	Date	Description	
A	04/13	Site boundary amended	
B	11/14	Relocation of Rejection Area	
File	16071005AB-Bphasingplan.dwg		
Date	12/12	Engineer	RB
Drawn	PT	Checked	RB



GENERAL NOTES

1. SURVEY DRAWINGS PROVIDED BY J.A JACKSON
2. DO NOT SCALE
3. ALL DIMENSIONS ARE IN mm UNLESS STATED OTHERWISE.
4. ANY ANOMALIES ON THIS DRAWING SHOULD BE BROUGHT TO THE ATTENTION OF BYRNE LOOBY PARTNERS.

LEGEND

PERMIT BOUNDARY

28 RECEPTOR MARKER

1000m BUFFER ZONE

Rev	Date	Description	By	Chk	App

BYRNELOOBY

WWW.BYRNELOOBY.COM

IRELAND | UK | UAE | BAHRAIN | KSA

CLIENT
J.A JACKSON

PROJECT
LYDIATE LANE, CUERDAN

DRAWING TITLE
SENSITIVE RECEPTOR LOCATION

STATUS
FINAL

Date: 22/08/23	Scale: N/A	Drawn: JM	Chk: GH	App: JB

Project No:	Drg. No:	Rev:
K0217	K0217.2.002	

Key

Validation area

TerraConsult

Bold Business Centre, Bold Lane, Sutton, St Helens WA9 4TX

Client

J A Jackson Ltd

Site

Lydiate Lane

Title

Key Plan

Scale	1:2,500	@ A3
Drawing No.	1833/2/001	

Rev	Date	Description

File	18332001keyplan.dwg		
Date	04/14	Engineer	PS
Drawn	SK	Checked	MG

Key

Validation area

TerraConsult

Bold Business Centre, Bold Lane, Sutton, St Helens WA9 4TX

Client

J A Jackson Ltd

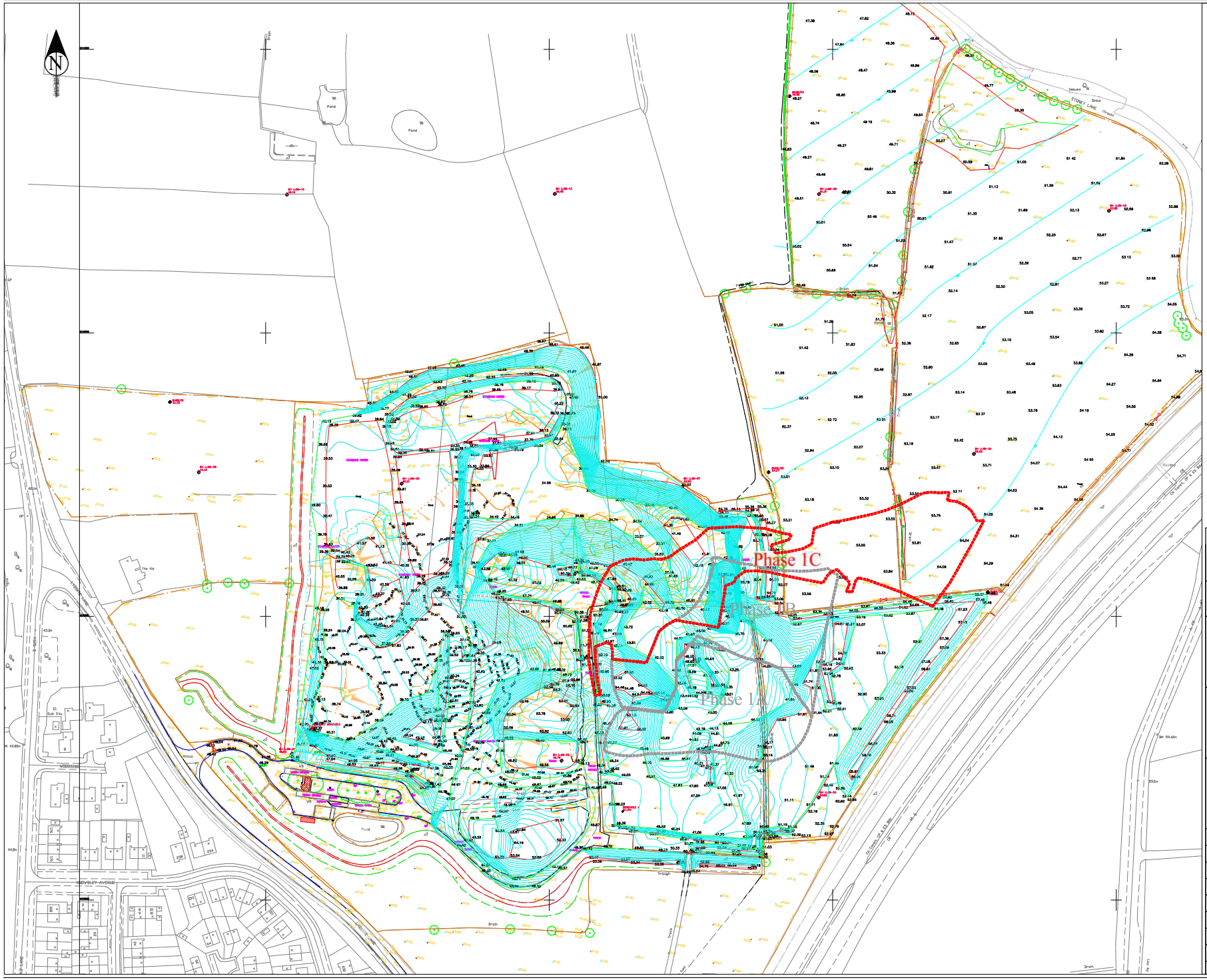
Site

Lydiate Lane Phase 1B Construction Works

Title

Key Plan

Scale	1:2,500	@ A3	
Drawing No.	2032/1/001		
Rev	Date	Description	
File	20321001keyplan.dwg		
Date	01/15	Engineer	PS
Drawn	PP	Checked	MG



Key

Validation area

TerraConsult

Bold Business Centre, Bold Lane, Sutton, St Helens WA9 4TX

Client

J A Jackson Ltd

Site

Lydiate Lane Phase 1C Construction Works

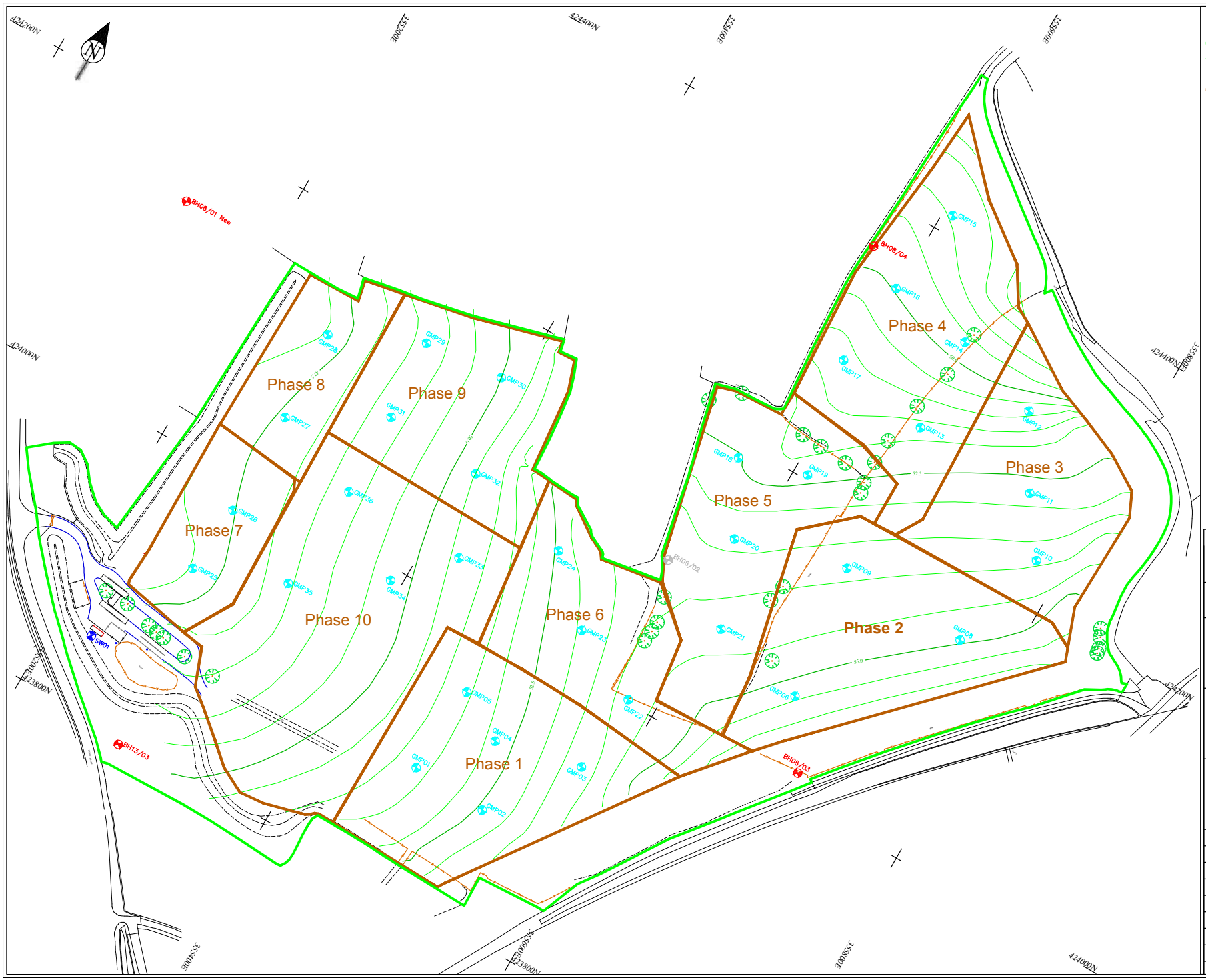
Title

Key Plan

Scale	1:2,500	@ A3
Drawing No.	2282/1/001	

Rev	Date	Description

File	22821001keyplan.dwg		
Date	10/15	Engineer	PS
Drawn	PP	Checked	MG



Key

- Permit boundary
- 37.5 Restoration contours (mOD)
- Phase boundary
- GMP20 Proposed gas monitoring borehole
- SW01 Surface water monitoring point
- BH08/02 Existing combined groundwater and gas monitoring borehole
- BH08/02 Borehole Inaccessible

TerraConsult

Bold Business Centre, Bold Lane, Sutton, St Helens WA9 4TX

Client

J.A. Jackson Contractors (Leyland) Limited

Site

Lydiate Lane, Cuerden

Title

Environmental Monitoring Point Locations

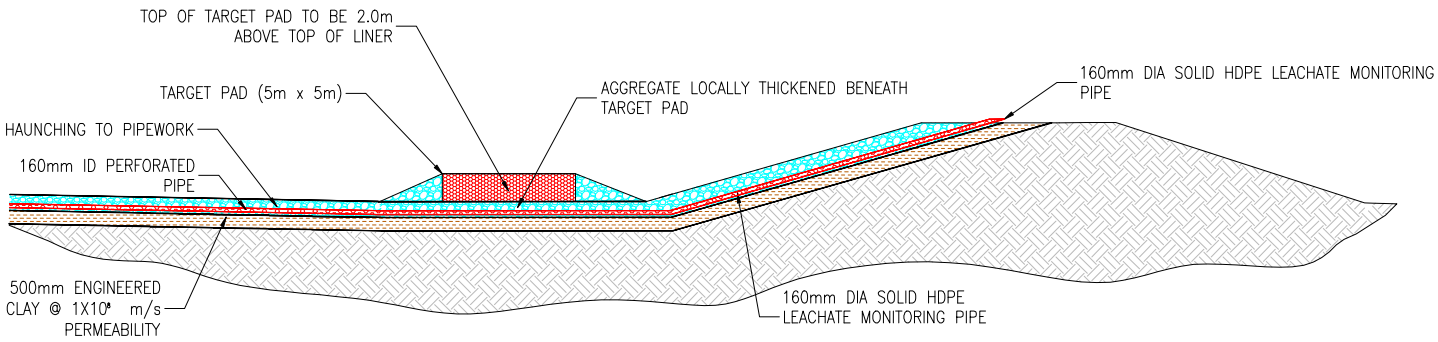
Scale	1:2,500	@ A3
Drawing No.	1798/1/007	

Rev	Date	Description
A	04/13	Site boundary amended
B	29/04/13	BH08/03 added, BH13/01 & 02 removed, BH13/03 revised
C	27/03/17	BH08/01 revised to New and existing BH08/02 revised

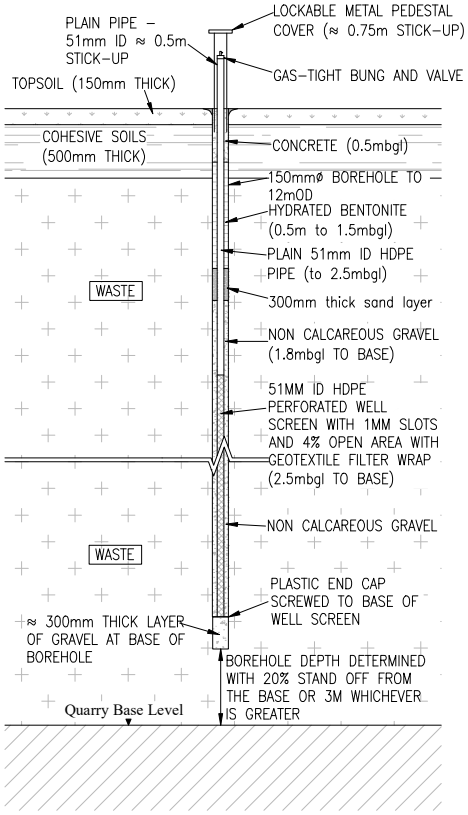
File	16071007Emonptlocs Rev C		
Date	12/12	Engineer	RB
Drawn	SK	Checked	RB

A3

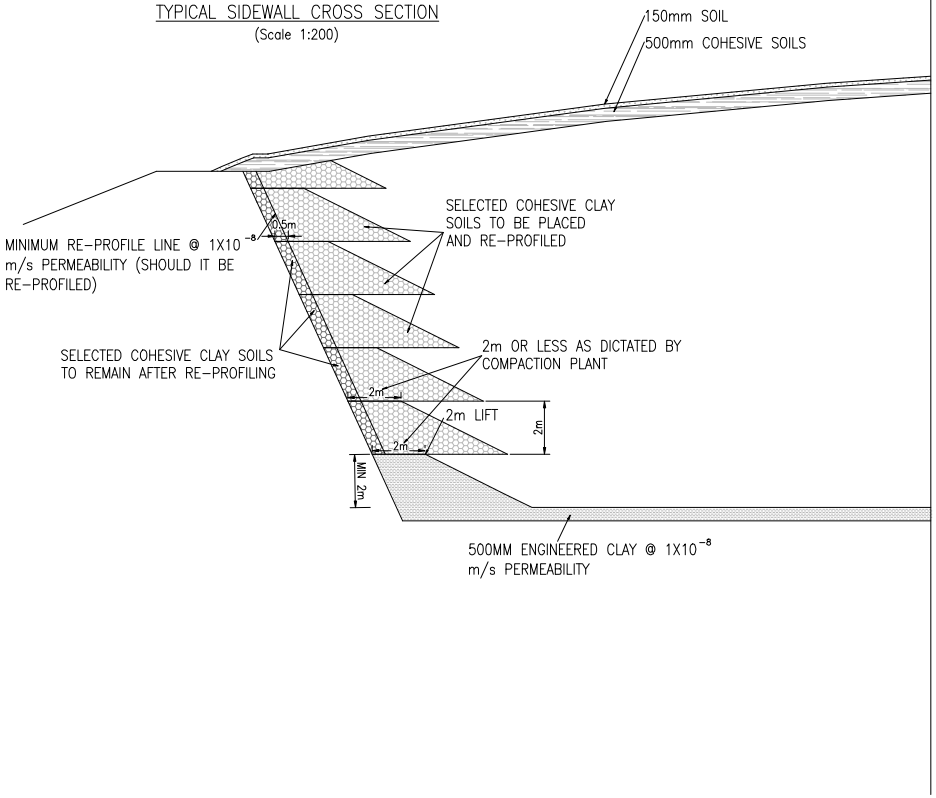
LEACHATE MONITORING POINT SIDE RISER
(Scale 1:200)



GAS BOREHOLE SCHEMATIC
(Scale 1:50)



TYPICAL SIDEWALL CROSS SECTION
(Scale 1:200)



GENERAL NOTES

Rev	Date	Description	By	Chk	App
A	11/23	DETAIL AMENDS	JM	GH	JB

ayesa

CLIENT
J.A JACKSON CONTRACTORS (LEYLAND) LTD.

PROJECT
LYDIATE LANE
CUERDAN

DRAWING TITLE
INDICATIVE INSTALLATION DESIGNS

STATUS	SUITABILITY
FINAL	–

Date: 13/11/23	Scale: AS SHOWN	Drawn: JM	Chk: GH	App: JB

Project No:	Drg. No:	Rev:
1607	1607.1.006	A

Appendix B – Groundsure Report

Groundsure LOCATION INTELLIGENCE

Enviro+Geo Insight

355376 , 423956,

Order Details

Date: 14/09/2023

Your ref: K0217_Lydiate_Lane_LF_PO142760

Our Ref: GS-9S2-2QT-S8G-IHW

Site Details

Location: 355522 424046

Area: 23.36 ha

Authority: South Ribble Borough Council ↗

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

Summary of findings

Page	Section	Past land use >	On site	0-50m	50-250m	250-500m	500-2000m
14 >	1.1 >	Historical industrial land uses >	10	1	9	16	-
16 >	1.2 >	Historical tanks >	0	0	0	5	-
16 >	1.3 >	Historical energy features >	0	0	2	4	-
17	1.4	Historical petrol stations	0	0	0	0	-
17	1.5	Historical garages	0	0	0	0	-
18	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
19 >	2.1 >	Historical industrial land uses >	15	4	17	34	-
22 >	2.2 >	Historical tanks >	0	0	0	6	-
23 >	2.3 >	Historical energy features >	0	0	2	4	-
23	2.4	Historical petrol stations	0	0	0	0	-
23	2.5	Historical garages	0	0	0	0	-
Page	Section	Waste and landfill >	On site	0-50m	50-250m	250-500m	500-2000m
24 >	3.1 >	Active or recent landfill >	1	0	0	0	-
25	3.2	Historical landfill (BGS records)	0	0	0	0	-
25	3.3	Historical landfill (LA/mapping records)	0	0	0	0	-
25	3.4	Historical landfill (EA/NRW records)	0	0	0	0	-
25 >	3.5 >	Historical waste sites >	1	0	0	0	-
26 >	3.6 >	Licensed waste sites >	2	0	0	0	-
26 >	3.7 >	Waste exemptions >	0	0	21	42	-
Page	Section	Current industrial land use >	On site	0-50m	50-250m	250-500m	500-2000m
32 >	4.1 >	Recent industrial land uses >	2	1	3	-	-
33	4.2	Current or recent petrol stations	0	0	0	0	-
33	4.3	Electricity cables	0	0	0	0	-
33	4.4	Gas pipelines	0	0	0	0	-
33	4.5	Sites determined as Contaminated Land	0	0	0	0	-

34	4.6	Control of Major Accident Hazards (COMAH)	0	0	0	0	-
34	4.7	Regulated explosive sites	0	0	0	0	-
34	4.8	Hazardous substance storage/usage	0	0	0	0	-
34	4.9	Historical licensed industrial activities (IPC)	0	0	0	0	-
34	4.10	Licensed industrial activities (Part A(1))	0	0	0	0	-
35	4.11	Licensed pollutant release (Part A(2)/B)	0	0	0	0	-
35	4.12	Radioactive Substance Authorisations	0	0	0	0	-
35 >	**4.13 >**	**Licensed Discharges to controlled waters >**	0	0	1	6	-
36	4.14	Pollutant release to surface waters (Red List)	0	0	0	0	-
36	4.15	Pollutant release to public sewer	0	0	0	0	-
37	4.16	List 1 Dangerous Substances	0	0	0	0	-
37	4.17	List 2 Dangerous Substances	0	0	0	0	-
37 >	**4.18 >**	**Pollution Incidents (EA/NRW) >**	0	0	2	5	-
38	4.19	Pollution inventory substances	0	0	0	0	-
38	4.20	Pollution inventory waste transfers	0	0	0	0	-
38	4.21	Pollution inventory radioactive waste	0	0	0	0	-

Page	Section	**Hydrogeology >**	On site	0-50m	50-250m	250-500m	500-2000m
40 >	**5.1 >**	**Superficial aquifer >**	Identified (within 500m)				
42 >	**5.2 >**	**Bedrock aquifer >**	Identified (within 500m)				
44 >	**5.3 >**	**Groundwater vulnerability >**	Identified (within 50m)				
46	5.4	Groundwater vulnerability- soluble rock risk	None (within 0m)				
46	5.5	Groundwater vulnerability- local information	None (within 0m)				
47 >	**5.6 >**	**Groundwater abstractions >**	2	0	0	2	17
52 >	**5.7 >**	**Surface water abstractions >**	0	0	0	0	8
55	5.8	Potable abstractions	0	0	0	0	0
55	5.9	Source Protection Zones	0	0	0	0	-
55	5.10	Source Protection Zones (confined aquifer)	0	0	0	0	-

Page	Section	**Hydrology >**	On site	0-50m	50-250m	250-500m	500-2000m
56 >	**6.1 >**	**Water Network (OS MasterMap) >**	8	2	16	-	-

59 >	6.2 >	Surface water features >	1	2	12	-	-
59 >	6.3 >	WFD Surface water body catchments >	1	-	-	-	-
59 >	6.4 >	WFD Surface water bodies >	0	0	0	-	-
60 >	6.5 >	WFD Groundwater bodies >	1	-	-	-	-
Page	Section	River and coastal flooding	On site	0-50m	50-250m	250-500m	500-2000m
61	7.1	Risk of flooding from rivers and the sea	None (within 50m)				
61	7.2	Historical Flood Events	0	0	0	-	-
61	7.3	Flood Defences	0	0	0	-	-
62	7.4	Areas Benefiting from Flood Defences	0	0	0	-	-
62	7.5	Flood Storage Areas	0	0	0	-	-
63	7.6	Flood Zone 2	None (within 50m)				
63	7.7	Flood Zone 3	None (within 50m)				
Page	Section	Surface water flooding >					
64 >	8.1 >	Surface water flooding >	1 in 30 year, 0.3m - 1.0m (within 50m)				
Page	Section	Groundwater flooding >					
66 >	9.1 >	Groundwater flooding >	Moderate (within 50m)				
Page	Section	Environmental designations >	On site	0-50m	50-250m	250-500m	500-2000m
67	10.1	Sites of Special Scientific Interest (SSSI)	0	0	0	0	0
68	10.2	Conserved wetland sites (Ramsar sites)	0	0	0	0	0
68	10.3	Special Areas of Conservation (SAC)	0	0	0	0	0
68	10.4	Special Protection Areas (SPA)	0	0	0	0	0
68	10.5	National Nature Reserves (NNR)	0	0	0	0	0
69 >	10.6 >	Local Nature Reserves (LNR) >	0	0	0	0	3
69	10.7	Designated Ancient Woodland	0	0	0	0	0
69	10.8	Biosphere Reserves	0	0	0	0	0
70	10.9	Forest Parks	0	0	0	0	0
70	10.10	Marine Conservation Zones	0	0	0	0	0
70 >	10.11 >	Green Belt >	1	1	0	0	1
70	10.12	Proposed Ramsar sites	0	0	0	0	0

71	10.13	Possible Special Areas of Conservation (pSAC)	0	0	0	0	0
71	10.14	Potential Special Protection Areas (pSPA)	0	0	0	0	0
71	10.15	Nitrate Sensitive Areas	0	0	0	0	0
71	10.16	Nitrate Vulnerable Zones	0	0	0	0	0
72 >	10.17 >	SSSI Impact Risk Zones >	2	-	-	-	-
73	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
74	11.1	World Heritage Sites	0	0	0	-	-
75	11.2	Area of Outstanding Natural Beauty	0	0	0	-	-
75	11.3	National Parks	0	0	0	-	-
75 >	11.4 >	Listed Buildings >	0	0	1	-	-
76	11.5	Conservation Areas	0	0	0	-	-
76	11.6	Scheduled Ancient Monuments	0	0	0	-	-
76	11.7	Registered Parks and Gardens	0	0	0	-	-
Page	Section	**Agricultural designations** >	On site	0-50m	50-250m	250-500m	500-2000m
77 >	12.1 >	Agricultural Land Classification >	Grade 3b (within 250m)				
78	12.2	Open Access Land	0	0	0	-	-
79 >	12.3 >	Tree Felling Licences >	0	5	6	-	-
79	12.4	Environmental Stewardship Schemes	0	0	0	-	-
80	12.5	Countryside Stewardship Schemes	0	0	0	-	-
Page	Section	**Habitat designations** >	On site	0-50m	50-250m	250-500m	500-2000m
81 >	13.1 >	Priority Habitat Inventory >	1	2	8	-	-
82	13.2	Habitat Networks	0	0	0	-	-
82	13.3	Open Mosaic Habitat	0	0	0	-	-
82	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
84 >	14.1 >	10k Availability >	Identified (within 500m)				
85 >	14.2 >	Artificial and made ground (10k) >	4	3	8	13	-
87 >	14.3 >	Superficial geology (10k) >	2	0	4	2	-

88	14.4	Landslip (10k)	0	0	0	0	-
89 >	14.5 >	Bedrock geology (10k) >	1	0	2	1	-
90	14.6	Bedrock faults and other linear features (10k)	0	0	0	0	-
Page	Section	Geology 1:50,000 scale >	On site	0-50m	50-250m	250-500m	500-2000m
91 >	15.1 >	50k Availability >	Identified (within 500m)				
92 >	15.2 >	Artificial and made ground (50k) >	1	0	0	0	-
93	15.3	Artificial ground permeability (50k)	0	0	-	-	-
94 >	15.4 >	Superficial geology (50k) >	2	0	2	1	-
95 >	15.5 >	Superficial permeability (50k) >	Identified (within 50m)				
95	15.6	Landslip (50k)	0	0	0	0	-
95	15.7	Landslip permeability (50k)	None (within 50m)				
96 >	15.8 >	Bedrock geology (50k) >	1	1	0	1	-
97 >	15.9 >	Bedrock permeability (50k) >	Identified (within 50m)				
97	15.10	Bedrock faults and other linear features (50k)	0	0	0	0	-
Page	Section	Boreholes >	On site	0-50m	50-250m	250-500m	500-2000m
98 >	16.1 >	BGS Boreholes >	1	6	16	-	-
Page	Section	Natural ground subsidence >					
100 >	17.1 >	Shrink swell clays >	Very low (within 50m)				
101 >	17.2 >	Running sands >	Very low (within 50m)				
102 >	17.3 >	Compressible deposits >	Negligible (within 50m)				
103 >	17.4 >	Collapsible deposits >	Very low (within 50m)				
104 >	17.5 >	Landslides >	Moderate (within 50m)				
106 >	17.6 >	Ground dissolution of soluble rocks >	Negligible (within 50m)				
Page	Section	Mining and ground workings >	On site	0-50m	50-250m	250-500m	500-2000m
108 >	18.1 >	BritPits >	10	0	0	1	-
111 >	18.2 >	Surface ground workings >	15	9	26	-	-
113 >	18.3 >	Underground workings >	0	0	0	8	0
113	18.4	Underground mining extents	0	0	0	0	-
113	18.5	Historical Mineral Planning Areas	0	0	0	0	-

114	18.6	Non-coal mining	0	0	0	0	0
114 >	18.7 >	JPB mining areas >	Identified (within 0m)				
114	18.8	The Coal Authority non-coal mining	0	0	0	0	-
114 >	18.9 >	Researched mining >	6	0	7	3	-
115	18.10	Mining record office plans	0	0	0	0	-
116	18.11	BGS mine plans	0	0	0	0	-
116	18.12	Coal mining	None (within 0m)				
116	18.13	Brine areas	None (within 0m)				
116	18.14	Gypsum areas	None (within 0m)				
116	18.15	Tin mining	None (within 0m)				
117	18.16	Clay mining	None (within 0m)				
Page	Section	Ground cavities and sinkholes	On site	0-50m	50-250m	250-500m	500-2000m
118	19.1	Natural cavities	0	0	0	0	-
118	19.2	Mining cavities	0	0	0	0	0
118	19.3	Reported recent incidents	0	0	0	0	-
118	19.4	Historical incidents	0	0	0	0	-
119	19.5	National karst database	0	0	0	0	-
Page	Section	Radon >					
120 >	20.1 >	Radon >	Less than 1% (within 0m)				
Page	Section	Soil chemistry >	On site	0-50m	50-250m	250-500m	500-2000m
122 >	21.1 >	BGS Estimated Background Soil Chemistry >	13	1	-	-	-
123	21.2	BGS Estimated Urban Soil Chemistry	0	0	-	-	-
123	21.3	BGS Measured Urban Soil Chemistry	0	0	-	-	-
Page	Section	Railway infrastructure and projects	On site	0-50m	50-250m	250-500m	500-2000m
124	22.1	Underground railways (London)	0	0	0	-	-
124	22.2	Underground railways (Non-London)	0	0	0	-	-
124	22.3	Railway tunnels	0	0	0	-	-
124	22.4	Historical railway and tunnel features	0	0	0	-	-
124	22.5	Royal Mail tunnels	0	0	0	-	-

125	22.6	Historical railways	0	0	0	-	-
125	22.7	Railways	0	0	0	-	-
125	22.8	Crossrail 1	0	0	0	0	-
125	22.9	Crossrail 2	0	0	0	0	-
125	22.10	HS2	0	0	0	0	-

Recent aerial photograph

Capture Date: 23/06/2022

Site Area: 23.36ha

Recent site history - 2019 aerial photograph

Capture Date: 22/04/2019

Site Area: 23.36ha

Recent site history - 2012 aerial photograph

Capture Date: 26/03/2012

Site Area: 23.36ha

Recent site history - 2001 aerial photograph

Capture Date: 07/05/2001

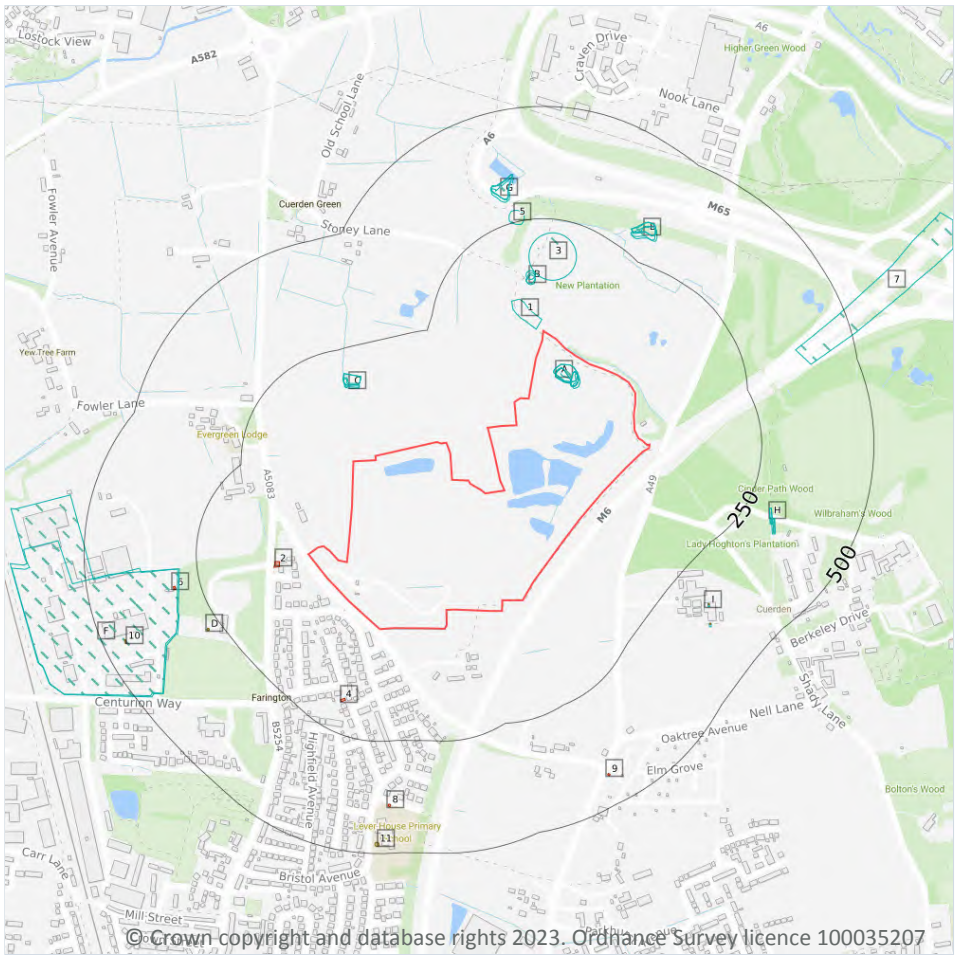
Site Area: 23.36ha

Recent site history - 2000 aerial photograph

Capture Date: 08/05/2000

Site Area: 23.36ha

1 Past land use



Site Outline

Search buffers in metres (m)

Historical industrial land uses

Historical tanks

Historical energy features

1.1 Historical industrial land uses

Records within 500m	36

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

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

ID	Location	Land use	Dates present	Group ID
A	**On site**	**Unspecified Ground Workings**	**1938**	**647050**

ID	Location	Land use	Dates present	Group ID
A	**On site**	**Unspecified Ground Workings**	**1938**	**647051**
A	**On site**	**Unspecified Pit**	**1929 - 1938**	**695729**
A	**On site**	**Unspecified Pit**	**1909**	**716956**
A	**On site**	**Unspecified Pit**	**1892**	**722172**
A	**On site**	**Unspecified Pit**	**1967 - 1990**	**724042**
A	**On site**	**Unspecified Pit**	**1929**	**740433**
A	**On site**	**Unspecified Pit**	**1955**	**779552**
A	**On site**	**Old Sand Pit**	**1892 - 1909**	**787086**
A	**On site**	**Unspecified Pit**	**1938**	**789302**
1	16m N	Cuttings	1967 - 1990	744773
B	107m N	Unspecified Pit	1909 - 1938	708812
B	109m N	Unspecified Pit	1938	730218
3	114m N	Old Sand Pit	1892	682488
B	118m N	Unspecified Pit	1955	702750
C	156m NW	Unspecified Ground Workings	1909 - 1938	695529
C	158m NW	Unspecified Ground Workings	1938	734287
C	163m NW	Unspecified Pit	1967 - 1990	704237
C	163m NW	Unspecified Pit	1955	778889
5	242m N	Unspecified Pit	1983 - 1990	763183
E	285m NE	Unspecified Pit	1938	735738
E	285m NE	Unspecified Pit	1909 - 1938	704011
F	290m W	Unspecified Works	1982 - 1988	743934
F	293m W	Unspecified Works	1967	756750
E	293m NE	Unspecified Pit	1955	749808
E	294m NE	Unspecified Pit	1967 - 1990	717123
G	299m N	Unspecified Ground Workings	1909 - 1938	696989
H	300m E	Tunnel	1967 - 1990	717604
H	300m E	Tunnel	1955	739058

ID	Location	Land use	Dates present	Group ID
G	302m N	Unspecified Pit	1967 - 1990	726885
G	305m N	Unspecified Pit	1955	703306
H	315m E	Tunnel	1909 - 1931	733323
H	317m E	Tunnel	1893	771143
I	340m SE	Unspecified Tanks	1909	666031
7	370m NE	Cuttings	1967 - 1990	722224
I	371m SE	Unspecified Tanks	1909	666034

This data is sourced from Ordnance Survey / Groundsure.

1.2 Historical tanks

Records within 500m	5

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

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

ID	Location	Land use	Dates present	Group ID
D	277m SW	Gasometer	1893	77975
I	340m SE	Unspecified Tank	1911	79666
I	371m SE	Unspecified Tank	1893 - 1911	96766
10	450m W	Unspecified Tank	1983	79778
11	475m S	Unspecified Tank	1971	79782

This data is sourced from Ordnance Survey / Groundsure.

1.3 Historical energy features

Records within 500m	6

Energy features digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale, intelligently grouped into contiguous features. To prevent misrepresentation of the size of historical features at any given time, features are only grouped if they have similar geometries within immediately preceding or

succeeding map editions. See section 2 for a breakdown of grouping if required. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

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

ID	Location	Land use	Dates present	Group ID
2	66m W	Electricity Substation	1974	44169
4	172m SW	Electricity Substation	1974	44170
D	277m SW	Gasometer	1893	46027
6	306m W	Electricity Substation	1983	44167
8	390m S	Electricity Substation	1987	44171
9	430m SE	Electricity Substation	1994	44130

This data is sourced from Ordnance Survey / Groundsure.

1.4 Historical petrol stations

Records within 500m	0

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

This data is sourced from Ordnance Survey / Groundsure.

1.5 Historical garages

Records within 500m	0

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

This data is sourced from Ordnance Survey / Groundsure.

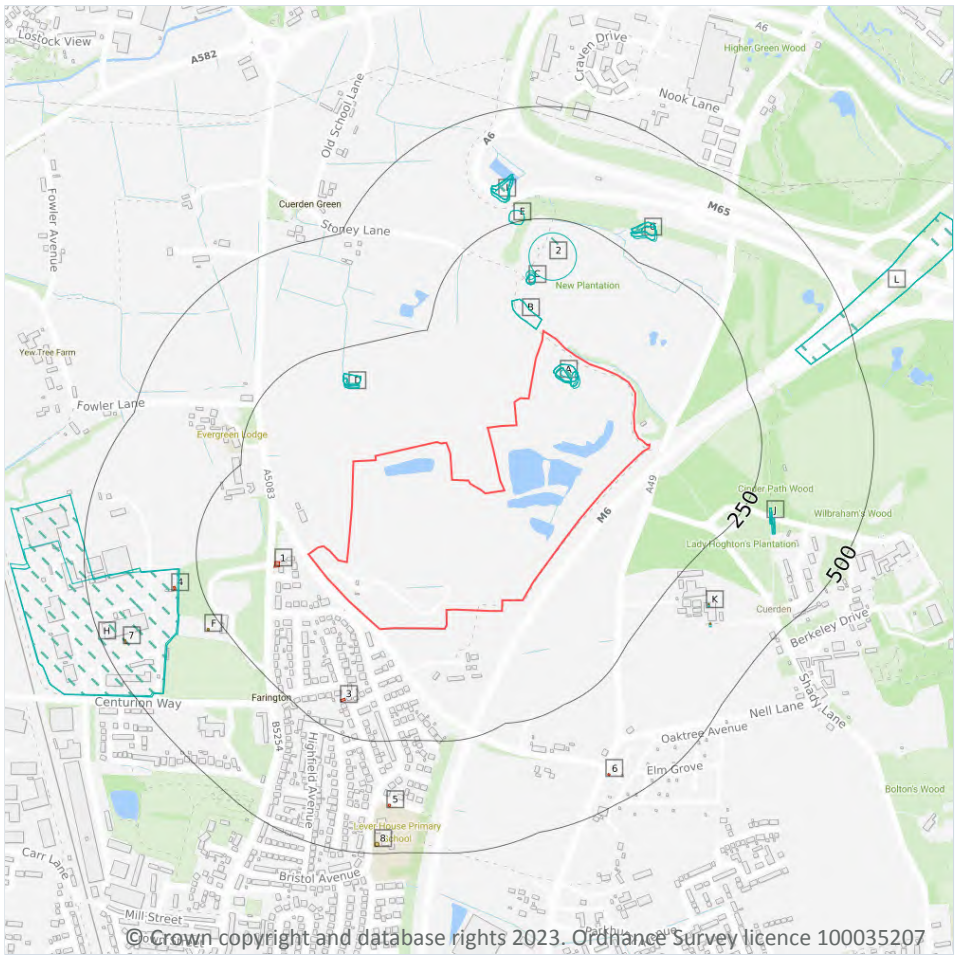
1.6 Historical military land

Records within 500m	0

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

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

2 Past land use - un-grouped



Site Outline

Search buffers in metres (m)

Historical industrial land uses

Historical tanks

Historical energy features

2.1 Historical industrial land uses

Records within 500m	70

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

Features are displayed on the Past land use - un-grouped map on **page 19 >**

ID	Location	Land Use	Date	Group ID
A	**On site**	**Unspecified Pit**	**1938**	**695729**
A	**On site**	**Unspecified Pit**	**1929**	**695729**
A	**On site**	**Unspecified Pit**	**1892**	**722172**

ID	Location	Land Use	Date	Group ID
A	**On site**	**Unspecified Pit**	**1938**	**789302**
A	**On site**	**Unspecified Pit**	**1929**	**740433**
A	**On site**	**Unspecified Pit**	**1909**	**716956**
A	**On site**	**Unspecified Pit**	**1967**	**724042**
A	**On site**	**Unspecified Pit**	**1973**	**724042**
A	**On site**	**Unspecified Pit**	**1983**	**724042**
A	**On site**	**Unspecified Pit**	**1990**	**724042**
A	**On site**	**Old Sand Pit**	**1892**	**787086**
A	**On site**	**Old Sand Pit**	**1909**	**787086**
A	**On site**	**Unspecified Ground Workings**	**1938**	**647051**
A	**On site**	**Unspecified Ground Workings**	**1938**	**647050**
A	**On site**	**Unspecified Pit**	**1955**	**779552**
B	16m N	Cuttings	1967	744773
B	16m N	Cuttings	1973	744773
B	16m N	Cuttings	1983	744773
B	16m N	Cuttings	1990	744773
C	107m N	Unspecified Pit	1938	708812
C	107m N	Unspecified Pit	1929	708812
C	107m N	Unspecified Pit	1909	708812
C	109m N	Unspecified Pit	1938	730218
2	114m N	Old Sand Pit	1892	682488
C	118m N	Unspecified Pit	1955	702750
D	156m NW	Unspecified Ground Workings	1938	695529
D	156m NW	Unspecified Ground Workings	1929	695529
D	156m NW	Unspecified Ground Workings	1909	695529
D	158m NW	Unspecified Ground Workings	1938	734287
D	163m NW	Unspecified Pit	1967	704237
D	163m NW	Unspecified Pit	1973	704237

ID	Location	Land Use	Date	Group ID
D	163m NW	Unspecified Pit	1983	704237
D	163m NW	Unspecified Pit	1990	704237
D	163m NW	Unspecified Pit	1955	778889
E	242m N	Unspecified Pit	1983	763183
E	242m N	Unspecified Pit	1990	763183
G	285m NE	Unspecified Pit	1938	735738
G	285m NE	Unspecified Pit	1938	704011
G	285m NE	Unspecified Pit	1929	704011
G	285m NE	Unspecified Pit	1909	704011
H	290m W	Unspecified Works	1982	743934
H	290m W	Unspecified Works	1988	743934
H	293m W	Unspecified Works	1967	756750
G	293m NE	Unspecified Pit	1955	749808
G	294m NE	Unspecified Pit	1967	717123
G	294m NE	Unspecified Pit	1973	717123
G	294m NE	Unspecified Pit	1983	717123
G	294m NE	Unspecified Pit	1990	717123
I	299m N	Unspecified Ground Workings	1938	696989
I	299m N	Unspecified Ground Workings	1929	696989
I	299m N	Unspecified Ground Workings	1909	696989
J	300m E	Tunnel	1967	717604
J	300m E	Tunnel	1973	717604
J	300m E	Tunnel	1983	717604
J	300m E	Tunnel	1990	717604
J	300m E	Tunnel	1955	739058
I	302m N	Unspecified Pit	1967	726885
I	302m N	Unspecified Pit	1973	726885
I	302m N	Unspecified Pit	1983	726885

ID	Location	Land Use	Date	Group ID
I	302m N	Unspecified Pit	1990	726885
I	305m N	Unspecified Pit	1955	703306
J	315m E	Tunnel	1931	733323
J	315m E	Tunnel	1909	733323
J	317m E	Tunnel	1893	771143
K	340m SE	Unspecified Tanks	1909	666031
L	370m NE	Cuttings	1967	722224
L	370m NE	Cuttings	1973	722224
L	370m NE	Cuttings	1983	722224
L	370m NE	Cuttings	1990	722224
K	371m SE	Unspecified Tanks	1909	666034

This data is sourced from Ordnance Survey / Groundsure.

2.2 Historical tanks

Records within 500m	**6**

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

Features are displayed on the Past land use - un-grouped map on **page 19 >**

ID	Location	Land Use	Date	Group ID
F	277m SW	Gasometer	1893	77975
K	340m SE	Unspecified Tank	1911	79666
K	371m SE	Unspecified Tank	1893	96766
K	371m SE	Unspecified Tank	1911	96766
7	450m W	Unspecified Tank	1983	79778
8	475m S	Unspecified Tank	1971	79782

This data is sourced from Ordnance Survey / Groundsure.

2.3 Historical energy features

Records within 500m	6

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 19 >**

ID	Location	Land Use	Date	Group ID
1	66m W	Electricity Substation	1974	44169
3	172m SW	Electricity Substation	1974	44170
F	277m SW	Gasometer	1893	46027
4	306m W	Electricity Substation	1983	44167
5	390m S	Electricity Substation	1987	44171
6	430m SE	Electricity Substation	1994	44130

This data is sourced from Ordnance Survey / Groundsure.

2.4 Historical petrol stations

Records within 500m	0

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

This data is sourced from Ordnance Survey / Groundsure.

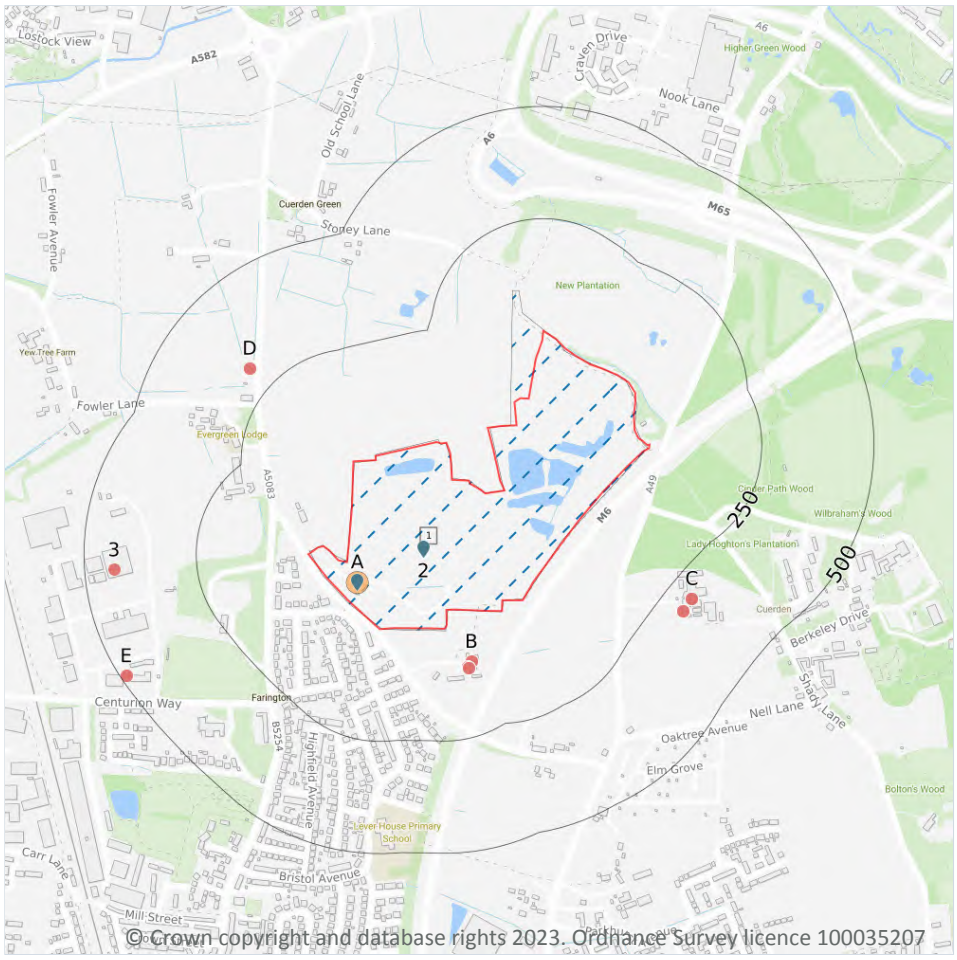
2.5 Historical garages

Records within 500m	0

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

This data is sourced from Ordnance Survey / Groundsure.

3 Waste and landfill



Site Outline

Search buffers in metres (m)

Active or recent landfill

Historical waste sites

Licensed waste sites

Waste exemptions

3.1 Active or recent landfill

Records within 500m	1

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

Features are displayed on the Waste and landfill map on **page 24 >**

ID	Location	Details	
1	**On site**	**Operator: J A Jackson Contractors (Leyland) Limited** **Site Address: Lydiate Lane Quarry, Lydiate Lane, Leyland, Lancashire, PR25 4UB**	**WML Number: 104817** **EPR Reference: WAS172** **Landfill type: L05: Inert LF** **Status: Modified** **IPPC Reference: -** **EPR Number: EA/EPR/LB3834AE/V004**

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	1

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

Features are displayed on the Waste and landfill map on **page 24 >**

ID	Location	Address	Further Details	Date
A	**On site**	**Site Address: Lydiate Quarry, Lydiate Lane, Leyland, Lancashire, PR25 4UB, N.WEST**	**Type of Site: Inert Waste Processing** **Planning application reference: LCC/2022/0039** **Description: Scheme comprises construction of temporary inert waste processing and washing plant with a concrete base and export of recycled materials off-site.** **Data source: Historic Planning Application** **Data Type: Point**	**04/08/2022**

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

3.6 Licensed waste sites

Records within 500m	2

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

Features are displayed on the Waste and landfill map on **page 24 >**

ID	Location	Details		
2	**On site**	**Site Name: Lydiate Lane Quarry** **Site Address: J A Jackson Contractors (Leyland) Limited, Lydiate Lane Quarry, Lydiate Lane, Leyland, Lancashire, PR25 4UB** **Correspondence Address: -**	**Type of Site: Inert LF** **Size: >= 75000 tonnes** **Environmental Permitting Regulations (Waste) Licence Number: 639450** **EPR reference: EA/EPR/LB3834AE** **Operator: J A Jackson Contractors (Leyland) Limited** **Waste Management licence No: 104817** **Annual Tonnage: 199999**	**Issue Date: 18/07/2013** **Effective Date: 18/07/2013** **Modified: 18/07/2013** **Surrendered Date: -** **Expiry Date: -** **Cancelled Date: 18/07/2013** **Status: Issued**
A	**On site**	**Site Name: Lydiate Lane Quarry** **Site Address: Lydiate Lane Quarry, Lydiate Lane, Leyland, Lancashire, PR25 4UB** **Correspondence Address: -**	**Type of Site: Inert LF** **Size: >= 75000 tonnes** **Environmental Permitting Regulations (Waste) Licence Number: WAS172** **EPR reference: EA/EPR/LB3834AE/V003** **Operator: J A Jackson Contractors (Leyland) Limited** **Waste Management licence No: 104817** **Annual Tonnage: 199999**	**Issue Date: 18/07/2013** **Effective Date: -** **Modified: 08/01/2015** **Surrendered Date: -** **Expiry Date: -** **Cancelled Date: -** **Status: Modified**

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

3.7 Waste exemptions

Records within 500m	63

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 24 >**

ID	Location	Site	Reference	Category	Sub-Category	Description
B	95m S	BOTTOMS FARM, LYDIATE LANE, LEYLAND, PR25 4UB	WEX031896	Disposing of waste exemption	On a farm	Deposit of waste from dredging of inland waters

ID	Location	Site	Reference	Category	Sub-Category	Description
B	95m S	BOTTOMS FARM, LYDIATE LANE, LEYLAND, PR25 4UB	WEX031896	Disposing of waste exemption	On a farm	Burning waste in the open
B	95m S	BOTTOMS FARM, LYDIATE LANE, LEYLAND, PR25 4UB	WEX031896	Storing waste exemption	On a farm	Storage of waste in secure containers
B	95m S	BOTTOMS FARM, LYDIATE LANE, LEYLAND, PR25 4UB	WEX031896	Storing waste exemption	On a farm	Storage of waste in a secure place
B	95m S	BOTTOMS FARM, LYDIATE LANE, LEYLAND, PR25 4UB	WEX031896	Treating waste exemption	On a farm	Treatment of waste wood and waste plant matter by chipping, shredding, cutting or pulverising
B	95m S	BOTTOMS FARM, LYDIATE LANE, LEYLAND, PR25 4UB	WEX031896	Using waste exemption	On a farm	Use of waste in construction
B	95m S	BOTTOMS FARM, LYDIATE LANE, LEYLAND, PR25 4UB	WEX031896	Using waste exemption	On a farm	Use of waste for a specified purpose
B	101m S	BOTTOMS FARM, LYDIATE LANE, LEYLAND, PR25 4UB	WEX191526	Storing waste exemption	On a Farm	Storage of waste in a secure place
B	101m S	BOTTOMS FARM, LYDIATE LANE, LEYLAND, PR25 4UB	WEX191526	Using waste exemption	On a Farm	Use of waste in construction
B	101m S	BOTTOMS FARM, LYDIATE LANE, LEYLAND, PR25 4UB	WEX191526	Using waste exemption	On a Farm	Use of waste for a specified purpose
B	101m S	BOTTOMS FARM, LYDIATE LANE, LEYLAND, PR25 4UB	WEX191526	Treating waste exemption	On a Farm	Treatment of waste wood and waste plant matter by chipping, shredding, cutting or pulverising
B	101m S	BOTTOMS FARM, LYDIATE LANE, LEYLAND, PR25 4UB	WEX191526	Disposing of waste exemption	On a Farm	Deposit of waste from dredging of inland waters
B	101m S	BOTTOMS FARM, LYDIATE LANE, LEYLAND, PR25 4UB	WEX191526	Disposing of waste exemption	On a Farm	Burning waste in the open
B	101m S	BOTTOMS FARM, LYDIATE LANE, LEYLAND, PR25 4UB	WEX191526	Storing waste exemption	On a Farm	Storage of waste in secure containers
B	103m S	Bottoms Farm Lydiate Lane LEYLAND PR25 4UB	EPR/XE5283MN/A001	Disposing of waste exemption	Agricultural Waste Only	Deposit of waste from dredging of inland waters
B	103m S	Bottoms Farm Lydiate Lane LEYLAND PR25 4UB	EPR/XE5283MN/A001	Disposing of waste exemption	Agricultural Waste Only	Burning waste in the open

ID	Location	Site	Reference	Category	Sub-Category	Description
B	103m S	Bottoms Farm Lydiate Lane LEYLAND PR25 4UB	EPR/XE5283MN/A001	Storing waste exemption	Agricultural Waste Only	Storage of waste in secure containers
B	103m S	Bottoms Farm Lydiate Lane LEYLAND PR25 4UB	EPR/XE5283MN/A001	Storing waste exemption	Agricultural Waste Only	Storage of waste in a secure place
B	103m S	Bottoms Farm Lydiate Lane LEYLAND PR25 4UB	EPR/XE5283MN/A001	Treating waste exemption	Agricultural Waste Only	Treatment of waste wood and waste plant matter by chipping, shredding, cutting or pulverising
B	103m S	Bottoms Farm Lydiate Lane LEYLAND PR25 4UB	EPR/XE5283MN/A001	Using waste exemption	Agricultural Waste Only	Use of waste in construction
B	103m S	Bottoms Farm Lydiate Lane LEYLAND PR25 4UB	EPR/XE5283MN/A001	Using waste exemption	Agricultural Waste Only	Use of waste for a specified purpose
C	306m SE	Clock House Farm Wigan Road PRESTON PR5 6AT	EPR/KH0170QY/A001	Disposing of waste exemption	Agricultural Waste Only	Deposit of waste from dredging of inland waters
C	306m SE	Clock House Farm Wigan Road PRESTON PR5 6AT	EPR/KH0170QY/A001	Disposing of waste exemption	Agricultural Waste Only	Burning waste in the open
C	306m SE	Clock House Farm Wigan Road PRESTON PR5 6AT	EPR/KH0170QY/A001	Storing waste exemption	Agricultural Waste Only	Storage of waste in a secure place
C	306m SE	Clock House Farm Wigan Road PRESTON PR5 6AT	EPR/KH0170QY/A001	Treating waste exemption	Agricultural Waste Only	Treatment of waste wood and waste plant matter by chipping, shredding, cutting or pulverising
C	306m SE	Clock House Farm Wigan Road PRESTON PR5 6AT	EPR/KH0170QY/A001	Treating waste exemption	Agricultural Waste Only	Recovery of scrap metal
C	306m SE	Clock House Farm Wigan Road PRESTON PR5 6AT	EPR/KH0170QY/A001	Using waste exemption	Agricultural Waste Only	Use of waste in construction
C	306m SE	Clock House Farm Wigan Road PRESTON PR5 6AT	EPR/KH0170QY/A001	Using waste exemption	Agricultural Waste Only	Spreading waste on agricultural land to confer benefit
C	306m SE	Clock House Farm Wigan Road PRESTON PR5 6AT	EPR/KH0170QY/A001	Using waste exemption	Agricultural Waste Only	Use of mulch

ID	Location	Site	Reference	Category	Sub-Category	Description
C	306m SE	Clock House Farm Wigan Road PRESTON PR5 6AT	EPR/KH0170QY/A001	Using waste exemption	Agricultural Waste Only	Spreading of plant matter to confer benefit
C	306m SE	Clock House Farm Wigan Road PRESTON PR5 6AT	EPR/KH0170QY/A001	Using waste exemption	Agricultural Waste Only	Use of waste for a specified purpose
C	308m SE	CLOCK HOUSE FARM, WIGAN ROAD, BAMBER BRIDGE, PRESTON, PR5 6AT	WEX193997	Using waste exemption	On a Farm	Use of waste in construction
C	308m SE	CLOCK HOUSE FARM, WIGAN ROAD, BAMBER BRIDGE, PRESTON, PR5 6AT	WEX193997	Using waste exemption	On a Farm	Use of waste for a specified purpose
C	308m SE	CLOCK HOUSE FARM, WIGAN ROAD, BAMBER BRIDGE, PRESTON, PR5 6AT	WEX193997	Using waste exemption	On a Farm	Spreading waste on agricultural land to confer benefit
C	308m SE	CLOCK HOUSE FARM, WIGAN ROAD, BAMBER BRIDGE, PRESTON, PR5 6AT	WEX193997	Using waste exemption	On a Farm	Spreading of plant matter to confer benefit
C	308m SE	CLOCK HOUSE FARM, WIGAN ROAD, BAMBER BRIDGE, PRESTON, PR5 6AT	WEX193997	Disposing of waste exemption	On a Farm	Deposit of waste from dredging of inland waters
C	308m SE	CLOCK HOUSE FARM, WIGAN ROAD, BAMBER BRIDGE, PRESTON, PR5 6AT	WEX193997	Disposing of waste exemption	On a Farm	Burning waste in the open
C	308m SE	CLOCK HOUSE FARM, WIGAN ROAD, BAMBER BRIDGE, PRESTON, PR5 6AT	WEX193997	Storing waste exemption	On a Farm	Storage of waste in a secure place
C	308m SE	CLOCK HOUSE FARM, WIGAN ROAD, BAMBER BRIDGE, PRESTON, PR5 6AT	WEX110331	Using waste exemption	On a farm	Use of waste for a specified purpose
C	308m SE	CLOCK HOUSE FARM, WIGAN ROAD, BAMBER BRIDGE, PRESTON, PR5 6AT	WEX038906	Disposing of waste exemption	On a farm	Deposit of waste from dredging of inland waters
C	308m SE	CLOCK HOUSE FARM, WIGAN ROAD, BAMBER BRIDGE, PRESTON, PR5 6AT	WEX038906	Disposing of waste exemption	On a farm	Burning waste in the open
C	308m SE	CLOCK HOUSE FARM, WIGAN ROAD, BAMBER BRIDGE, PRESTON, PR5 6AT	WEX038906	Storing waste exemption	On a farm	Storage of waste in a secure place

ID	Location	Site	Reference	Category	Sub-Category	Description
C	308m SE	CLOCK HOUSE FARM, WIGAN ROAD, BAMBER BRIDGE, PRESTON, PR5 6AT	WEX038906	Treating waste exemption	On a farm	Treatment of waste wood and waste plant matter by chipping, shredding, cutting or pulverising
C	308m SE	CLOCK HOUSE FARM, WIGAN ROAD, BAMBER BRIDGE, PRESTON, PR5 6AT	WEX038906	Treating waste exemption	On a farm	Recovery of scrap metal
C	308m SE	CLOCK HOUSE FARM, WIGAN ROAD, BAMBER BRIDGE, PRESTON, PR5 6AT	WEX038906	Using waste exemption	On a farm	Use of waste in construction
C	308m SE	CLOCK HOUSE FARM, WIGAN ROAD, BAMBER BRIDGE, PRESTON, PR5 6AT	WEX038906	Using waste exemption	On a farm	Spreading waste on agricultural land to confer benefit
C	308m SE	CLOCK HOUSE FARM, WIGAN ROAD, BAMBER BRIDGE, PRESTON, PR5 6AT	WEX038906	Using waste exemption	On a farm	Use of mulch
C	308m SE	CLOCK HOUSE FARM, WIGAN ROAD, BAMBER BRIDGE, PRESTON, PR5 6AT	WEX038906	Using waste exemption	On a farm	Spreading of plant matter to confer benefit
C	308m SE	CLOCK HOUSE FARM, WIGAN ROAD, BAMBER BRIDGE, PRESTON, PR5 6AT	WEX038906	Using waste exemption	On a farm	Use of depolluted end-of-life vehicles for vehicle parts
C	308m SE	CLOCK HOUSE FARM, WIGAN ROAD, BAMBER BRIDGE, PRESTON, PR5 6AT	WEX038906	Using waste exemption	On a farm	Use of waste for a specified purpose
C	308m SE	CLOCK HOUSE FARM, WIGAN ROAD, BAMBER BRIDGE, PRESTON, PR5 6AT	WEX322807	Using waste exemption	On a farm	Use of waste in construction
C	308m SE	CLOCK HOUSE FARM, WIGAN ROAD, BAMBER BRIDGE, PRESTON, PR5 6AT	WEX322807	Using waste exemption	On a farm	Use of waste for a specified purpose
C	308m SE	CLOCK HOUSE FARM, WIGAN ROAD, BAMBER BRIDGE, PRESTON, PR5 6AT	WEX322807	Using waste exemption	On a farm	Spreading waste on agricultural land to confer benefit
C	308m SE	CLOCK HOUSE FARM, WIGAN ROAD, BAMBER BRIDGE, PRESTON, PR5 6AT	WEX322807	Using waste exemption	On a farm	Spreading of plant matter to confer benefit
C	308m SE	CLOCK HOUSE FARM, WIGAN ROAD, BAMBER BRIDGE, PRESTON, PR5 6AT	WEX322807	Disposing of waste exemption	On a farm	Deposit of waste from dredging of inland waters

ID	Location	Site	Reference	Category	Sub-Category	Description
C	308m SE	CLOCK HOUSE FARM, WIGAN ROAD, BAMBER BRIDGE, PRESTON, PR5 6AT	WEX322807	Disposing of waste exemption	On a farm	Burning waste in the open
C	308m SE	CLOCK HOUSE FARM, WIGAN ROAD, BAMBER BRIDGE, PRESTON, PR5 6AT	WEX322807	Storing waste exemption	On a farm	Storage of waste in a secure place
C	308m SE	CLOCK HOUSE FARM, WIGAN ROAD, BAMBER BRIDGE, PRESTON, PR5 6AT	WEX253722	Using waste exemption	On a farm	Use of waste for a specified purpose
D	310m NW	-	WEX278361	Using waste exemption	Not on a farm	Use of waste in construction
D	310m NW	-	WEX278361	Storing waste exemption	Not on a farm	Storage of waste in a secure place
3	435m W	Aptus Utilities, UNIT 3G LEYLAND BUS PARK, CENTURION WAY, Leyland, PR25 3GR	WEX335666	Storing waste exemption	Not on a farm	Storage of waste in a secure place
E	489m SW	Aptus Utilities, UNIT 3G LEYLAND BUS PARK, CENTURION WAY, Leyland, PR25 3GR	WEX210911	Storing waste exemption	Not on a farm	Storage of waste in a secure place
E	489m SW	Aptus Utilities, UNIT 3G LEYLAND BUS PARK, CENTURION WAY, Leyland, PR25 3GR	WEX063968	Storing waste exemption	Not on a farm	Storage of waste in a secure place

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

4 Current industrial land use

Site Outline

Search buffers in metres (m)

Recent industrial land uses

Licensed Discharges to controlled waters

Pollution Incidents (EA/NRW)

4.1 Recent industrial land uses

Records within 250m	6

Current potentially contaminative industrial sites.

Features are displayed on the Current industrial land use map on **page 32 >**

ID	Location	Company	Address	Activity	Category
1	**On site**	**J A Jackson Contractors Leyland Ltd**	**Lydiate Quarry, Lydiate Lane, Farington, Lancashire, PR25 4UB**	**Unspecified Quarries Or Mines**	**Extractive Industries**
2	**On site**	**Sand Pit**	**Lancashire, PR25**	**Sand, Gravel and Clay Extraction and Merchants**	**Extractive Industries**

ID	Location	Company	Address	Activity	Category
3	28m E	Gantry	Lancashire, PR5	Travelling Cranes and Gantries	Industrial Features
5	70m W	Electricity Sub Station	Lancashire, PR25	Electrical Features	Infrastructure and Facilities
6	177m SW	Electricity Sub Station	Lancashire, PR25	Electrical Features	Infrastructure and Facilities
7	240m W	Oakfield Saddlery	Oakfield Equestrian Centre, Stanifield Lane, Farington, Lancashire, PR25 4UA	Hobby, Sports and Pastime Products	Consumer Products

This data is sourced from Ordnance Survey.

4.2 Current or recent petrol stations

Records within 500m	0

Open, closed, under development and obsolete petrol stations.

This data is sourced from Experian.

4.3 Electricity cables

Records within 500m	0

High voltage underground electricity transmission cables.

This data is sourced from National Grid.

4.4 Gas pipelines

Records within 500m	0

High pressure underground gas transmission pipelines.

This data is sourced from National Grid.

4.5 Sites determined as Contaminated Land

Records within 500m	0

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

This data is sourced from Local Authority records.

4.6 Control of Major Accident Hazards (COMAH)

Records within 500m	0

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

This data is sourced from the Health and Safety Executive.

4.7 Regulated explosive sites

Records within 500m	0

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

This data is sourced from the Health and Safety Executive.

4.8 Hazardous substance storage/usage

Records within 500m	0

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

This data is sourced from Local Authority records.

4.9 Historical licensed industrial activities (IPC)

Records within 500m	0

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

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

4.10 Licensed industrial activities (Part A(1))

Records within 500m	0

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

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

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

Records within 500m	0

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

This data is sourced from Local Authority records.

4.12 Radioactive Substance Authorisations

Records within 500m	0

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

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

4.13 Licensed Discharges to controlled waters

Records within 500m	7

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

Features are displayed on the Current industrial land use map on **page 32 >**

ID	Location	Address	Details	
4	58m NE	CUERDEN HALL PS, BAMBER BRIDGE, CHORLEY, LANCASHIRE	Effluent Type: MISCELLANEOUS DISCHARGES - EMERGENCY DISCHARGES Permit Number: 017190417 Permit Version: 1 Receiving Water: TRIB RIVER LOSTOCK	Status: LAPSED UNDER SCHEDULE 23 ENVIRONMENT ACT 1995 Issue date: - Effective Date: 12/10/1992 Revocation Date: 01/10/1996
8	280m S	3 LYDIATE LANE, LEYLAND, PRESTON, LANCASHIRE, PR5 2SA	Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - NOT WATER COMPANY Permit Number: 011816 Permit Version: 1 Receiving Water: BOUNDARY BROOK	Status: REVOKED - UNSPECIFIED Issue date: 27/10/1971 Effective Date: 27/10/1971 Revocation Date: 01/02/1991
10	288m S	7 LYDIATE LANE, LEYLAND, PRESTON, LANCASHIRE, PR5 2SA	Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - NOT WATER COMPANY Permit Number: 011943 Permit Version: 1 Receiving Water: BOUNDARY BROOK	Status: PRE NRA LEGISLATION WHERE ISSUE DATE 01-SEP-89 (HISTORIC ONLY) Issue date: 25/06/1973 Effective Date: 25/06/1973 Revocation Date: -

ID	Location	Address	Details	
12	325m SE	SWISS COTTAGE STP, WIGAN ROAD, CUERDEN, LANCASHIRE	Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - NOT WATER COMPANY Permit Number: 011717 Permit Version: 1 Receiving Water: TRIB RIVER LOSTOCK	Status: REVOKED - UNSPECIFIED Issue date: - Effective Date: 21/08/1992 Revocation Date: 21/08/1992
14	369m SE	LYDIATE HEAD COTTAGE, WIGAN ROAD, LEYLAND, PRESTON, LANCASHIRE, PR5 2SB	Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - NOT WATER COMPANY Permit Number: 01890 Permit Version: 1 Receiving Water: TRIB OF LOSTOCK	Status: PRE NRA LEGISLATION WHERE ISSUE DATE 01-SEP-89 (HISTORIC ONLY) Issue date: 21/03/1960 Effective Date: 21/03/1960 Revocation Date: -
B	489m SE	ENGINEERS COTTAGE, SHADY LANE, BAMBER BRIDGE, PRESTON, LANCASHIRE, PR5 6AU	Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - NOT WATER COMPANY Permit Number: 01835 Permit Version: 1 Receiving Water: TRIB OF LOSTOCK	Status: PRE NRA LEGISLATION WHERE ISSUE DATE 01-SEP-89 (HISTORIC ONLY) Issue date: 28/10/1959 Effective Date: 28/10/1959 Revocation Date: -
B	491m SE	ROSE COTTAGE, SHADY LANE, BAMBER BRIDGE, PRESTON, LANCASHIRE, PR5 6AU	Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - NOT WATER COMPANY Permit Number: 011637 Permit Version: 1 Receiving Water: TRIB OF RIVER LOSTOCK	Status: PRE NRA LEGISLATION WHERE ISSUE DATE 01-SEP-89 (HISTORIC ONLY) Issue date: 17/12/1968 Effective Date: 17/12/1968 Revocation Date: -

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

4.14 Pollutant release to surface waters (Red List)

Records within 500m	0

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

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

4.15 Pollutant release to public sewer

Records within 500m	0

Discharges of Special Category Effluents to the public sewer.

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

4.16 List 1 Dangerous Substances

Records within 500m	0

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

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

4.17 List 2 Dangerous Substances

Records within 500m	0

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

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

4.18 Pollution Incidents (EA/NRW)

Records within 500m	7

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

Features are displayed on the Current industrial land use map on **page 32 >**

ID	Location	Details	
A	180m SW	Incident Date: 07/04/2011 Incident Identification: 873362 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Other Atmospheric Pollutant or Effect	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 2 (Significant)
A	180m SW	Incident Date: 04/03/2011 Incident Identification: 863715 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Other Atmospheric Pollutant or Effect	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 2 (Significant)
9	280m SW	Incident Date: 08/07/2003 Incident Identification: 171771 Pollutant: Inert Materials and Wastes Pollutant Description: Construction and Demolition Materials and Wastes	Water Impact: Category 4 (No Impact) Land Impact: Category 3 (Minor) Air Impact: Category 4 (No Impact)
11	295m NW	Incident Date: 02/04/2003 Incident Identification: 148098 Pollutant: Specific Waste Materials Pollutant Description: Containers	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)

ID	Location	Details	
13	354m SW	Incident Date: 17/03/2011 Incident Identification: 866617 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Other Atmospheric Pollutant or Effect	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 2 (Significant)
15	377m N	Incident Date: 07/03/2003 Incident Identification: 141636 Pollutant: Specific Waste Materials Pollutant Description: Vehicles and Vehicle Parts	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
16	394m N	Incident Date: 07/03/2003 Incident Identification: 141607 Pollutant: Specific Waste Materials Pollutant Description: Vehicles and Vehicle Parts	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)

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

4.19 Pollution inventory substances

Records within 500m	0

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

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

4.20 Pollution inventory waste transfers

Records within 500m	0

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

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

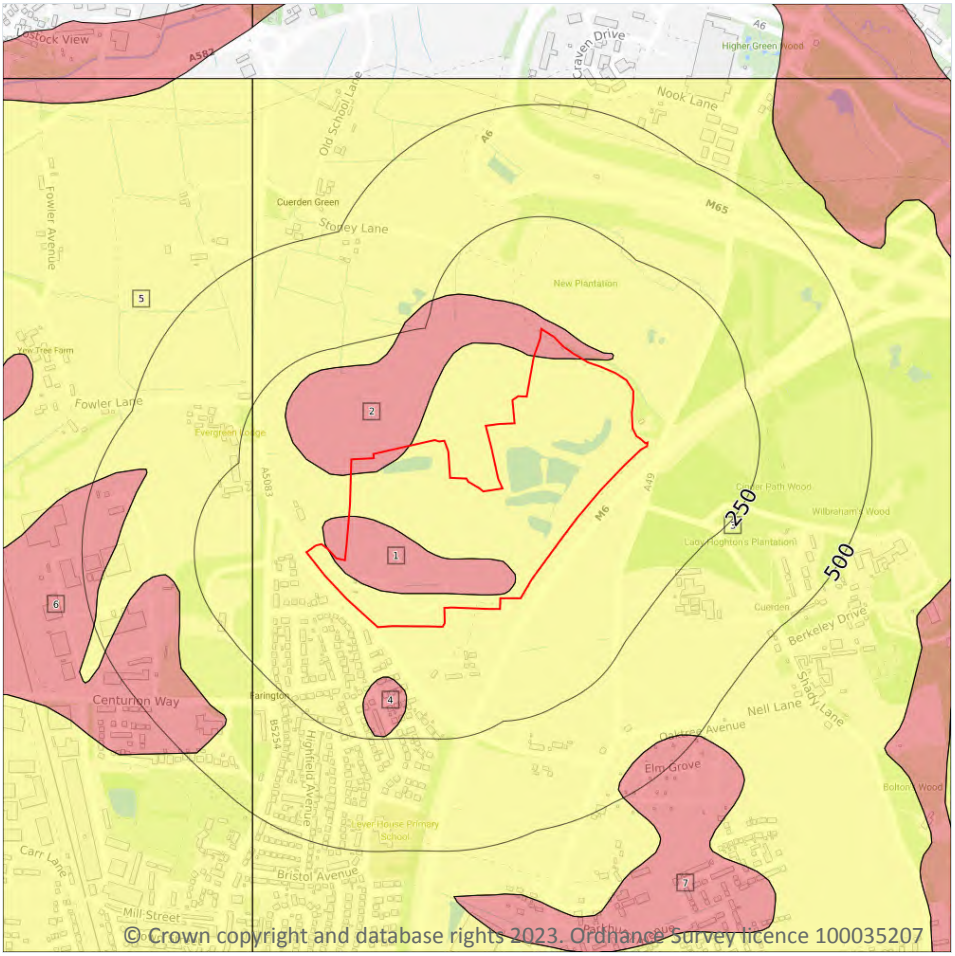
4.21 Pollution inventory radioactive waste

Records within 500m	0

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

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

5 Hydrogeology - Superficial aquifer



5.1 Superficial aquifer

Records within 500m	7

Aquifer status of groundwater held within superficial geology.

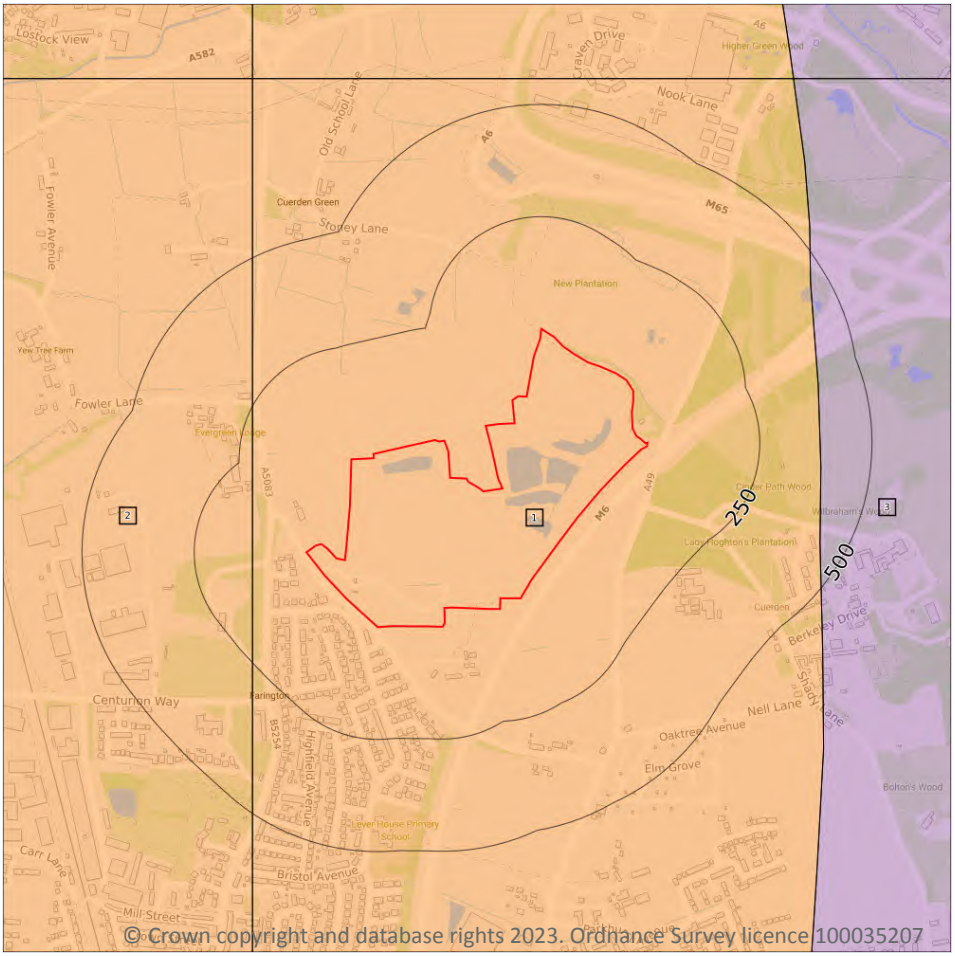
Features are displayed on the Hydrogeology map on **page 40 >**

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

ID	Location	Designation	Description
3	**On site**	**Secondary Undifferentiated**	**Assigned where it is not possible to attribute either category A or B to a rock type. In general these layers have previously been designated as both minor and non-aquifer in different locations due to the variable characteristics of the rock type**
4	112m SW	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers
5	120m W	Secondary Undifferentiated	Assigned where it is not possible to attribute either category A or B to a rock type. In general these layers have previously been designated as both minor and non-aquifer in different locations due to the variable characteristics of the rock type
6	296m W	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers
7	439m SE	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers

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

Bedrock aquifer



Site Outline

Search buffers in metres (m)

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

5.2 Bedrock aquifer

Records within 500m	3

Aquifer status of groundwater held within bedrock geology.

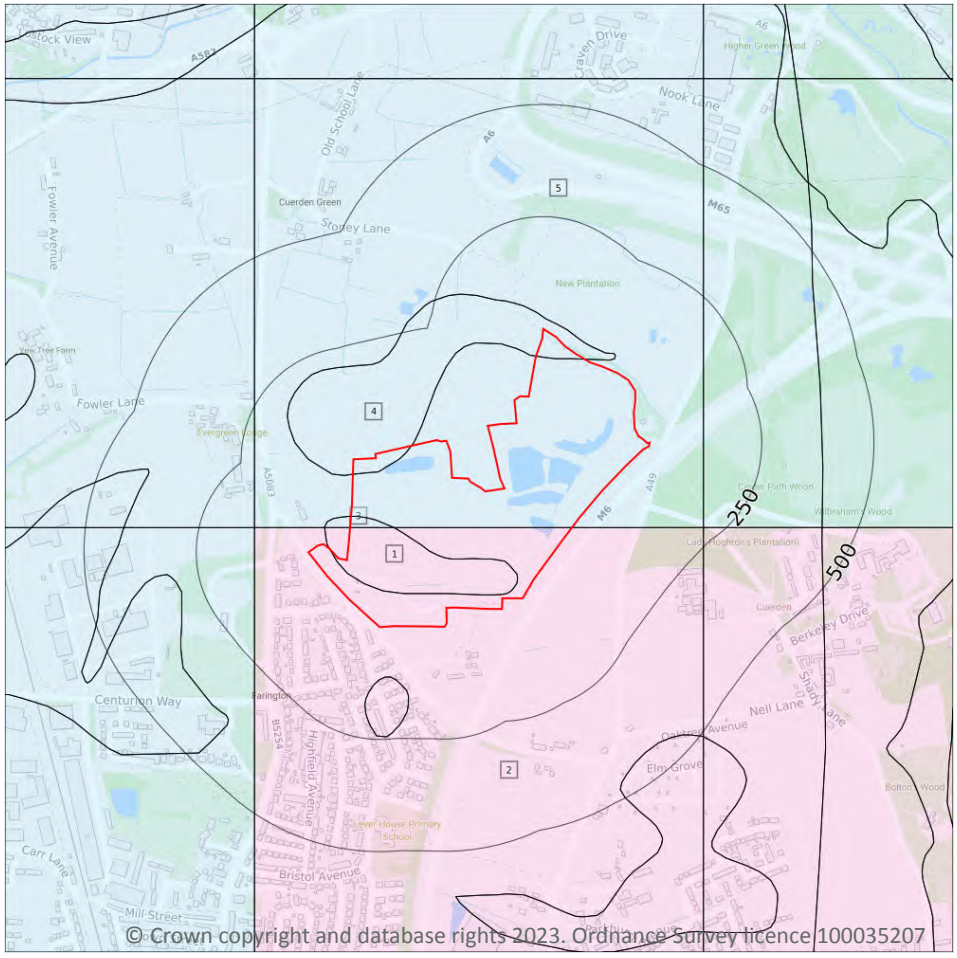
Features are displayed on the Bedrock aquifer map on **page 42 >**

ID	Location	Designation	Description
1	**On site**	**Secondary B**	**Predominantly lower permeability layers which may store/yield limited amounts of groundwater due to localised features such as fissures, thin permeablehorizons and weathering. These are generally the water-bearing parts of the former non-aquifers**
2	120m W	Secondary B	Predominantly lower permeability layers which may store/yield limited amounts of groundwater due to localised features such as fissures, thin permeablehorizons and weathering. These are generally the water-bearing parts of the former non-aquifers

ID	Location	Designation	Description
3	384m E	Principal	Geology of high intergranular and/or fracture permeability, usually providing a high level of water storage and may support water supply/river base flow on a strategic scale. Generally principal aquifers were previously major aquifers

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

Groundwater vulnerability



5.3 Groundwater vulnerability

Records within 50m	5

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

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

Features are displayed on the Groundwater vulnerability map on **page 44 >**

ID	Location	Summary	Soil / surface	Superficial geology	Bedrock geology
1	On site	Summary Classification: Secondary superficial aquifer - Medium Vulnerability Combined classification: Productive Bedrock Aquifer, Productive Superficial Aquifer	Leaching class: High Infiltration value: <40% Dilution value: 300-550mm/year	Vulnerability: Medium Aquifer type: Secondary Thickness: >10m Patchiness value: >90% Recharge potential: Low	Vulnerability: Low Aquifer type: Secondary Flow mechanism: Well connected fractures
2	On site	Summary Classification: Secondary superficial aquifer - Medium Vulnerability Combined classification: Productive Bedrock Aquifer, Productive Superficial Aquifer	Leaching class: High Infiltration value: <40% Dilution value: 300-550mm/year	Vulnerability: Medium Aquifer type: Secondary Thickness: >10m Patchiness value: >90% Recharge potential: Low	Vulnerability: Low Aquifer type: Secondary Flow mechanism: Well connected fractures
3	On site	Summary Classification: Secondary superficial aquifer - Low Vulnerability Combined classification: Productive Bedrock Aquifer, Productive Superficial Aquifer	Leaching class: Low Infiltration value: <40% Dilution value: >550mm/year	Vulnerability: Low Aquifer type: Secondary Thickness: >10m Patchiness value: >90% Recharge potential: Low	Vulnerability: Low Aquifer type: Secondary Flow mechanism: Well connected fractures
4	On site	Summary Classification: Secondary superficial aquifer - Low Vulnerability Combined classification: Productive Bedrock Aquifer, Productive Superficial Aquifer	Leaching class: Low Infiltration value: <40% Dilution value: >550mm/year	Vulnerability: Low Aquifer type: Secondary Thickness: >10m Patchiness value: >90% Recharge potential: Low	Vulnerability: Low Aquifer type: Secondary Flow mechanism: Well connected fractures
5	On site	Summary Classification: Secondary superficial aquifer - Low Vulnerability Combined classification: Productive Bedrock Aquifer, Productive Superficial Aquifer	Leaching class: Low Infiltration value: <40% Dilution value: >550mm/year	Vulnerability: Low Aquifer type: Secondary Thickness: >10m Patchiness value: >90% Recharge potential: Low	Vulnerability: Low Aquifer type: Secondary Flow mechanism: Well connected fractures

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

5.4 Groundwater vulnerability- soluble rock risk

Records on site	0

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

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

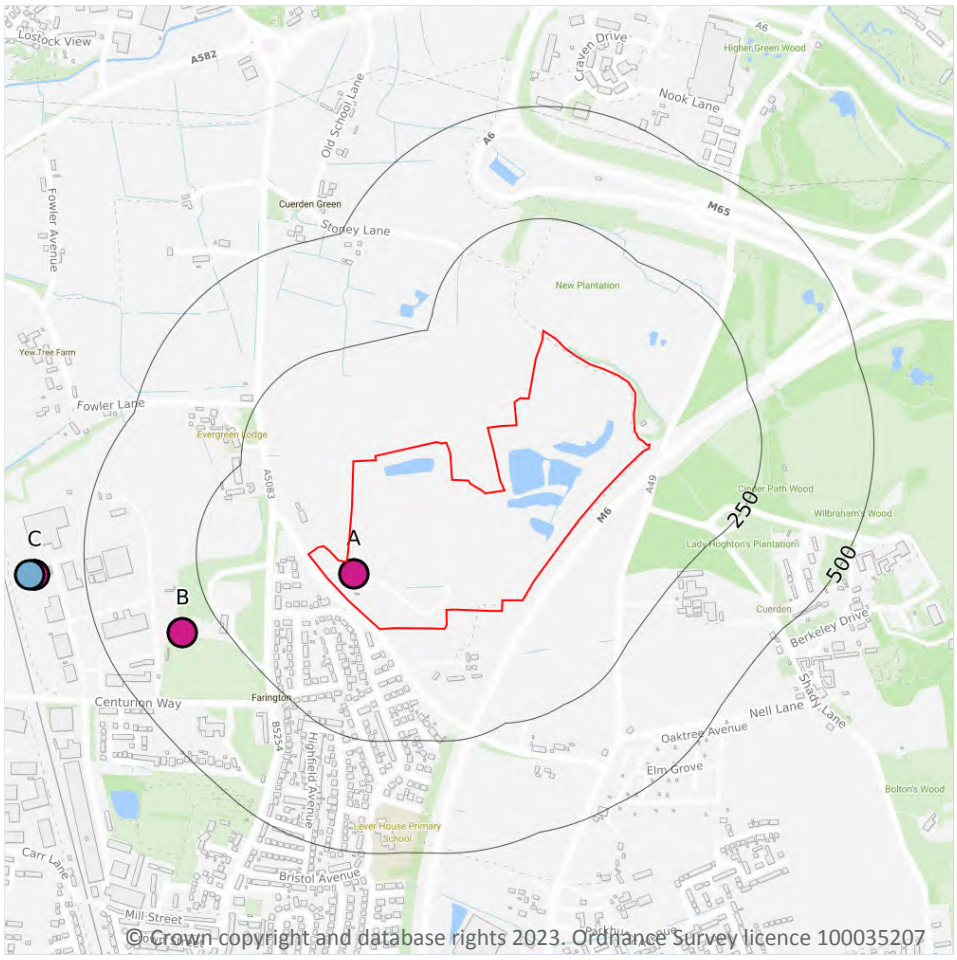
5.5 Groundwater vulnerability- local information

Records on site	0

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

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

Abstractions and Source Protection Zones



Site Outline

Search buffers in metres (m)

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

5.6 Groundwater abstractions

Records within 2000m	21

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 47 >**

ID	Location	Details	
A	**On site**	**Status: Historical** **Licence No: 2670212022** **Details: Mineral Washing** **Direct Source: Ground Water - North West Region** **Point: BOREHOLE IN FARINGTON, LEYLAND** **Data Type: Point** **Name: Wheale Environmental Limited** **Easting: 355221** **Northing: 423902**	**Annual Volume (m^3): 80000** **Max Daily Volume (m^3): 500** **Original Application No: -** **Original Start Date: 05/02/2009** **Expiry Date: 31/03/2016** **Issue No: 2** **Version Start Date: 26/11/2009** **Version End Date: -**
A	**On site**	**Status: Historical** **Licence No: NW/070/0212/001** **Details: Mineral Washing** **Direct Source: Ground Water - North West Region** **Point: BOREHOLE IN FARINGTON, LEYLAND** **Data Type: Point** **Name: J A Jackson Contractors (Leyland) Ltd** **Easting: 355221** **Northing: 423902**	**Annual Volume (m^3): 80000** **Max Daily Volume (m^3): 500** **Original Application No: NPS/WR/013493** **Original Start Date: 16/09/2011** **Expiry Date: 31/03/2023** **Issue No: 2** **Version Start Date: 26/11/2018** **Version End Date: -**
B	330m SW	Status: Historical Licence No: 2670212007 Details: Boiler Feed Direct Source: Ground Water - North West Region Point: BOREHOLE AT FARINGTON HOUSE Data Type: Point Name: DUNLOP ENERKA BELTING LTD Easting: 354840 Northing: 423770	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 18/03/1966 Expiry Date: - Issue No: 100 Version Start Date: 17/07/1998 Version End Date: -
B	330m SW	Status: Historical Licence No: 2670212007 Details: General Cooling (Existing Licences Only) (Low Loss) Direct Source: Ground Water - North West Region Point: BOREHOLE AT FARINGTON HOUSE Data Type: Point Name: DUNLOP ENERKA BELTING LTD Easting: 354840 Northing: 423770	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 18/03/1966 Expiry Date: - Issue No: 100 Version Start Date: 17/07/1998 Version End Date: -
C	611m W	Status: Historical Licence No: 2670212007 Details: Boiler Feed Direct Source: Ground Water - North West Region Point: RESERVOIR AT CENTURION WAY FED BY TWO BOREHOLES INTO U/GRO Data Type: Point Name: DUNLOP ENERKA BELTING LTD Easting: 354510 Northing: 423900	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 18/03/1966 Expiry Date: - Issue No: 100 Version Start Date: 17/07/1998 Version End Date: -

ID	Location	Details	
C	611m W	Status: Historical Licence No: 2670212007 Details: General Cooling (Existing Licences Only) (Low Loss) Direct Source: Ground Water - North West Region Point: "BOREHOLE AT CENTURION WAY, FARINGTON" Data Type: Point Name: HIFLEX FLUID HANDLING GROUP LIMITED Easting: 354510 Northing: 423900	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 18/03/1966 Expiry Date: - Issue No: 102 Version Start Date: 11/04/2002 Version End Date: -
C	611m W	Status: Historical Licence No: 2670212007 Details: General Cooling (Existing Licences Only) (Low Loss) Direct Source: Ground Water - North West Region Point: RESERVOIR AT CENTURION WAY FED BY TWO BOREHOLES INTO U/GRO Data Type: Point Name: HIFLEX FLUID HANDLING GROUP LIMITED Easting: 354510 Northing: 423900	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 18/03/1966 Expiry Date: - Issue No: 102 Version Start Date: 11/04/2002 Version End Date: -
C	611m W	Status: Historical Licence No: 2670212007 Details: General Cooling (Existing Licences Only) (Low Loss) Direct Source: Ground Water - North West Region Point: BOREHOLE AT CENTURION WAY, FARINGTON Data Type: Point Name: HIFLEX FLUID HANDLING GROUP LIMITED Easting: 354510 Northing: 423900	Annual Volume (m^3): 219026 Max Daily Volume (m^3): 600.07 Original Application No: - Original Start Date: 18/03/1966 Expiry Date: - Issue No: 102 Version Start Date: 11/04/2002 Version End Date: -
C	611m W	Status: Historical Licence No: 2670212007 Details: General Cooling (Existing Licences Only) (Low Loss) Direct Source: Ground Water - North West Region Point: RESERVOIR AT CENTURION WAY FED BY 2 BOREHOLES Data Type: Point Name: HIFLEX FLUID HANDLING GROUP LIMITED Easting: 354510 Northing: 423900	Annual Volume (m^3): 219026 Max Daily Volume (m^3): 600.07 Original Application No: - Original Start Date: 18/03/1966 Expiry Date: - Issue No: 102 Version Start Date: 11/04/2002 Version End Date: -

ID	Location	Details	
-	911m W	Status: Historical Licence No: 2670212007 Details: Boiler Feed Direct Source: Ground Water - North West Region Point: BOREHOLE AT CENTURION WAY,FARINGTON Data Type: Point Name: DUNLOP ENERKA BELTING LTD Easting: 354210 Northing: 423900	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 18/03/1966 Expiry Date: - Issue No: 100 Version Start Date: 17/07/1998 Version End Date: -
-	911m W	Status: Historical Licence No: 2670212007 Details: General Cooling (Existing Licences Only) (Low Loss) Direct Source: Ground Water - North West Region Point: BOREHOLE AT CENTURION WAY,FARINGTON Data Type: Point Name: DUNLOP ENERKA BELTING LTD Easting: 354210 Northing: 423900	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 18/03/1966 Expiry Date: - Issue No: 100 Version Start Date: 17/07/1998 Version End Date: -
-	1189m E	Status: Historical Licence No: 2670212021 Details: Process Water Direct Source: Ground Water - North West Region Point: BOREHOLE AT BAMBER BRIDGE, PRESTON Data Type: Point Name: DUNBIA (PRESTON) Easting: 357000 Northing: 424600	Annual Volume (m^3): 156000 Max Daily Volume (m^3): 450 Original Application No: - Original Start Date: 25/02/2004 Expiry Date: 31/03/2016 Issue No: 2 Version Start Date: 01/04/2007 Version End Date: -
-	1192m E	Status: Active Licence No: 2670212021/R01 Details: Process Water Direct Source: Ground Water - North West Region Point: BOREHOLE AT BAMBER BRIDGE, PRESTON Data Type: Point Name: DUNBIA (PRESTON) LTD Easting: 357009 Northing: 424577	Annual Volume (m^3): 312000 Max Daily Volume (m^3): 900 Original Application No: NPS/WR/019242 Original Start Date: 01/04/2016 Expiry Date: 31/03/2028 Issue No: 1 Version Start Date: 01/04/2019 Version End Date: -
-	1192m E	Status: Historical Licence No: 2670212021 Details: Process Water Direct Source: Ground Water - North West Region Point: BOREHOLE AT BAMBER BRIDGE, PRESTON Data Type: Point Name: DUNBIA (PRESTON) Easting: 357009 Northing: 424577	Annual Volume (m^3): 312000 Max Daily Volume (m^3): 900 Original Application No: - Original Start Date: 25/02/2004 Expiry Date: 31/03/2016 Issue No: 3 Version Start Date: 27/05/2014 Version End Date: -

ID	Location	Details	
-	1521m SW	Status: Historical Licence No: 2670212006 Details: General Cooling (Existing Licences Only) (Low Loss) Direct Source: Ground Water - North West Region Point: B/HOLE FEEDING RES(2) & CATCHPIT@ GOLDEN LN LEYLAND279 Data Type: Point Name: LEYLAND & BIRMINGHAM LTD Easting: 354100 Northing: 422800	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 25/03/1966 Expiry Date: - Issue No: 100 Version Start Date: 17/07/1998 Version End Date: -
-	1521m SW	Status: Historical Licence No: 2670212006 Details: General use relating to Secondary Category (Medium Loss) Direct Source: Ground Water - North West Region Point: B/HOLE FEEDING RES(2) & CATCHPIT@ GOLDEN LN LEYLAND279 Data Type: Point Name: LEYLAND & BIRMINGHAM LTD Easting: 354100 Northing: 422800	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 25/03/1966 Expiry Date: - Issue No: 100 Version Start Date: 17/07/1998 Version End Date: -
-	1527m W	Status: Active Licence No: 2670212001 Details: Process Water Direct Source: Ground Water - North West Region Point: WELL IN UNDERGROUND STRATA AT FARINGTON NEAR LOSTOCK HALL Data Type: Point Name: LANCASHIRE COUNTY ENTERPRISES (INDUSTRIAL DEVELOPMENT) LTD Easting: 353620 Northing: 424230	Annual Volume (m^3): 309128 Max Daily Volume (m^3): 1031.94 Original Application No: 3132 Original Start Date: 21/01/1966 Expiry Date: - Issue No: 101 Version Start Date: 05/07/2002 Version End Date: -
-	1527m W	Status: Historical Licence No: 2670212001 Details: Process water Direct Source: Ground Water - North West Region Point: "WELL IN UNDERGROUND STRATA AT FARINGTON,NR LOSTOCK HAL" Data Type: Point Name: LANCASHIRE COUNTY ENTERPRISES (INDUSTRIAL DEVELOPMENT) LTD Easting: 353620 Northing: 424230	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 21/01/1966 Expiry Date: - Issue No: 101 Version Start Date: 05/07/2002 Version End Date: -

ID	Location	Details	
-	1527m W	Status: Historical Licence No: 2670212001 Details: Process water Direct Source: Ground Water - North West Region Point: WELL IN UNDERGROUND STRATA AT FARINGTON,NR LOSTOCK HAL Data Type: Point Name: LANCASHIRE COUNTY ENTERPRISES (INDUSTRIAL DEVELOPMENT) LTD Easting: 353620 Northing: 424230	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 21/01/1966 Expiry Date: - Issue No: 101 Version Start Date: 05/07/2002 Version End Date: -
-	1591m SW	Status: Historical Licence No: 2670212006 Details: General Cooling (Existing Licences Only) (Low Loss) Direct Source: Ground Water - North West Region Point: B/HOLE FEEDING RES (2) & CATCHPIT AT GOLDEN HILL LN LEYLAND Data Type: Point Name: LEYLAND & BIRMINGHAM LTD Easting: 354100 Northing: 422700	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 25/03/1966 Expiry Date: - Issue No: 100 Version Start Date: 17/07/1998 Version End Date: -
-	1591m SW	Status: Historical Licence No: 2670212006 Details: General use relating to Secondary Category (Medium Loss) Direct Source: Ground Water - North West Region Point: B/HOLE FEEDING RES (2) & CATCHPIT AT GOLDEN HILL LN LEYLAND Data Type: Point Name: LEYLAND & BIRMINGHAM LTD Easting: 354100 Northing: 422700	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 25/03/1966 Expiry Date: - Issue No: 100 Version Start Date: 17/07/1998 Version End Date: -

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

5.7 Surface water abstractions

Records within 2000m	**8**

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 47 >**

ID	Location	Details	
C	621m W	Status: Historical Licence No: 2670212018 Details: General Cooling (Existing Licences Only) (Low Loss) Direct Source: "Surface, Non-Tidal - North West Region" Point: "HOT WELL ADJ TO STORAGE RES@ CENTURION WAY,FARINGTON,LEYLAND" Data Type: Point Name: HIFLEX FLUID HANDLING GROUP LIMITED Easting: 354500 Northing: 423900	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 27/11/1974 Expiry Date: - Issue No: 102 Version Start Date: 22/11/2001 Version End Date: -
C	621m W	Status: Historical Licence No: 2670212018 Details: General Cooling (Existing Licences Only) (Low Loss) Direct Source: Surface, Non-Tidal - North West Region Point: HOT WELL ADJ TO STORAGE RES@ CENTURION WAY,FARINGTON,LEYLAND Data Type: Point Name: LANCASHIRE PROPERTY MANAGEMENT LTD Easting: 354500 Northing: 423900	Annual Volume (m^3): 5000600 Max Daily Volume (m^3): 16365.6 Original Application No: - Original Start Date: 27/11/1974 Expiry Date: - Issue No: 103 Version Start Date: 23/12/2003 Version End Date: -
-	933m SW	Status: Historical Licence No: 2670212017 Details: General Cooling (Existing Licences Only) (Low Loss) Direct Source: Surface, Non-Tidal - North West Region Point: HIGH ASH RESERVOIR AT LEYLAND Data Type: Point Name: LANCASHIRE COUNTY ENTERPRISES (INDUSTRIAL DEVELOPMENT) LTD Easting: 354300 Northing: 423500	Annual Volume (m^3): 181840 Max Daily Volume (m^3): 1145.59 Original Application No: 4924 Original Start Date: 10/04/1974 Expiry Date: - Issue No: 101 Version Start Date: 05/07/2002 Version End Date: -
-	1621m W	Status: Historical Licence No: 2670212016 Details: General use relating to Secondary Category (Medium Loss) Direct Source: "Surface, Non-Tidal - North West Region" Point: "R LOSTOCK AT SPURRIER WORKS,LEYLAND" Data Type: Point Name: LANCASHIRE COUNTY ENTERPRISES (INDUSTRIAL DEVELOPMENT) LTD Easting: 353500 Northing: 424000	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 04/07/1969 Expiry Date: - Issue No: 101 Version Start Date: 05/07/2002 Version End Date: -

ID	Location	Details	
-	1621m W	Status: Historical Licence No: 2670212016 Details: General Cooling (Existing Licences Only) (Low Loss) Direct Source: "Surface, Non-Tidal - North West Region" Point: "R LOSTOCK AT SPURRIER WORKS,LEYLAND" Data Type: Point Name: LANCASHIRE COUNTY ENTERPRISES (INDUSTRIAL DEVELOPMENT) LTD Easting: 353500 Northing: 424000	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 04/07/1969 Expiry Date: - Issue No: 101 Version Start Date: 05/07/2002 Version End Date: -
-	1621m W	Status: Historical Licence No: 2670212016 Details: General Use Relating To Secondary Category (Medium Loss) Direct Source: Surface, Non-Tidal - North West Region Point: R LOSTOCK AT SPURRIER WORKS,LEYLAND Data Type: Point Name: LANCASHIRE COUNTY ENTERPRISES (INDUSTRIAL DEVELOPMENT) LTD Easting: 353500 Northing: 424000	Annual Volume (m^3): 363680 Max Daily Volume (m^3): 1136.5 Original Application No: - Original Start Date: 04/07/1969 Expiry Date: - Issue No: 101 Version Start Date: 05/07/2002 Version End Date: -
-	1621m W	Status: Historical Licence No: 2670212016 Details: General Cooling (Existing Licences Only) (Low Loss) Direct Source: Surface, Non-Tidal - North West Region Point: R LOSTOCK AT SPURRIER WORKS,LEYLAND Data Type: Point Name: LANCASHIRE COUNTY ENTERPRISES (INDUSTRIAL DEVELOPMENT) LTD Easting: 353500 Northing: 424000	Annual Volume (m^3): 363680 Max Daily Volume (m^3): 1336.50 Original Application No: 4741 Original Start Date: 04/07/1969 Expiry Date: - Issue No: 101 Version Start Date: 01/04/2019 Version End Date: -
-	1621m W	Status: Historical Licence No: 2670212016 Details: Process Water Direct Source: Surface, Non-Tidal - North West Region Point: R LOSTOCK AT SPURRIER WORKS,LEYLAND Data Type: Point Name: LANCASHIRE COUNTY ENTERPRISES (INDUSTRIAL DEVELOPMENT) LTD Easting: 353500 Northing: 424000	Annual Volume (m^3): 363680 Max Daily Volume (m^3): 1336.50 Original Application No: 4741 Original Start Date: 04/07/1969 Expiry Date: - Issue No: 101 Version Start Date: 01/04/2019 Version End Date: -

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

5.8 Potable abstractions

Records within 2000m	0

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

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

5.9 Source Protection Zones

Records within 500m	0

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

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

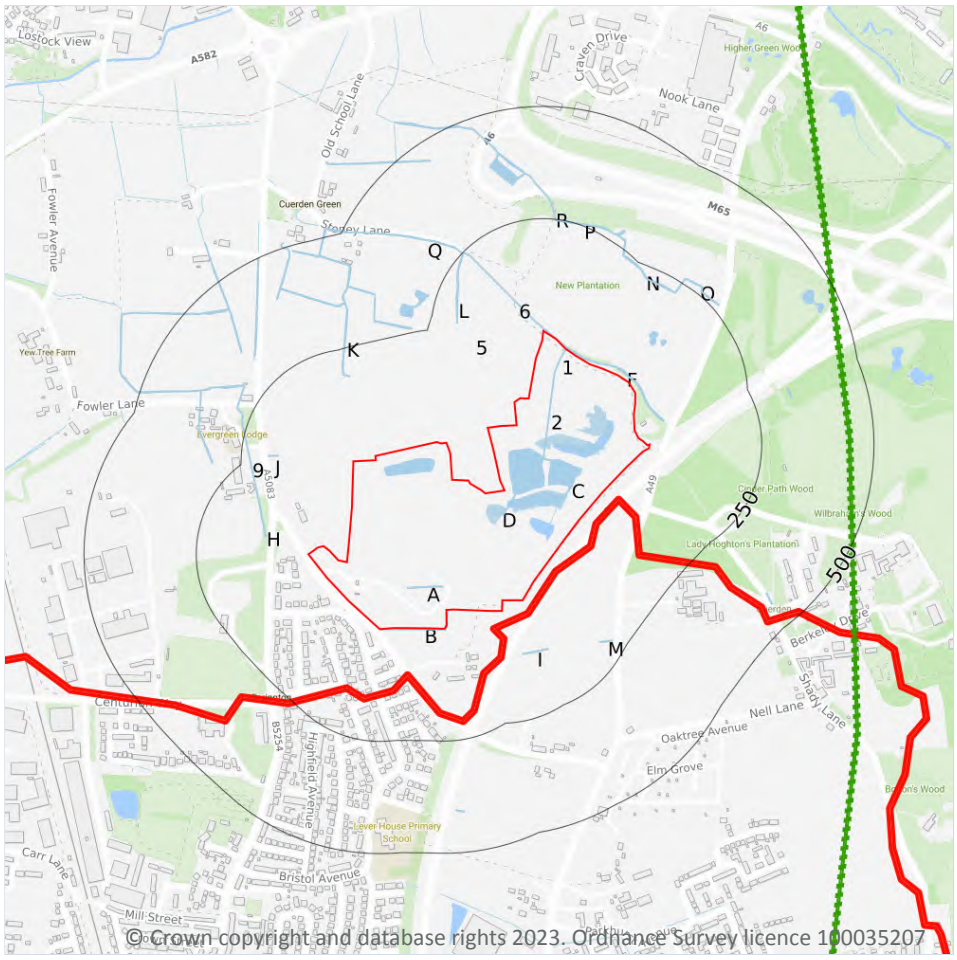
5.10 Source Protection Zones (confined aquifer)

Records within 500m	0

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

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

6 Hydrology



Site Outline

Search buffers in metres (m)

Water Network (OS MasterMap)

Surface water features (wider than 5m)

Surface water features (narrower than 5m)

WFD River, canal and surface water transfer water bodies

WFD Lake water bodies

WFD Transitional and coastal water bodies

WFD Surface water body catchments boundaries

WFD Groundwater body boundaries

6.1 Water Network (OS MasterMap)

Records within 250m	26

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

Features are displayed on the Hydrology map on **page 56 >**

ID	Location	Type of water feature	Ground level	Permanence	Name
1	**On site**	**Inland river not influenced by normal tidal action.**	**Not provided**	**Watercourse contains water year round (in normal circumstances)**	-

ID	Location	Type of water feature	Ground level	Permanence	Name
2	**On site**	**Inland river not influenced by normal tidal action.**	**On ground surface**	**Watercourse contains water year round (in normal circumstances)**	**-**
A	**On site**	**Inland river not influenced by normal tidal action.**	**On ground surface**	**Watercourse contains water year round (in normal circumstances)**	**-**
B	**On site**	**Inland river not influenced by normal tidal action.**	**On ground surface**	**Watercourse contains water year round (in normal circumstances)**	**-**
C	**On site**	**Lake, loch or reservoir.**	**On ground surface**	**Watercourse contains water year round (in normal circumstances)**	**-**
C	**On site**	**Lake, loch or reservoir.**	**On ground surface**	**Watercourse contains water year round (in normal circumstances)**	**-**
D	**On site**	**Lake, loch or reservoir.**	**On ground surface**	**Watercourse contains water year round (in normal circumstances)**	**-**
D	**On site**	**Inland river not influenced by normal tidal action.**	**On ground surface**	**Watercourse contains water year round (in normal circumstances)**	**-**
6	**On site**	**Inland river not influenced by normal tidal action.**	**Not provided**	**Watercourse contains water year round (in normal circumstances)**	**-**
F	3m NE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
H	101m W	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
I	106m S	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
H	118m W	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
H	128m W	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-

ID	Location	Type of water feature	Ground level	Permanence	Name
9	160m W	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
J	167m W	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
K	186m NW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
L	191m N	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
M	193m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
L	217m N	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
N	222m NE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
O	224m NE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
L	234m N	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
P	247m N	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
Q	248m N	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
R	248m N	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-

This data is sourced from the Ordnance Survey.

6.2 Surface water features

Records within 250m	15

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

Features are displayed on the Hydrology map on **page 56 >**

This data is sourced from the Ordnance Survey.

6.3 WFD Surface water body catchments

Records on site	1

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

Features are displayed on the Hydrology map on **page 56 >**

ID	Location	Type	Water body catchment	Water body ID	Operational catchment	Management catchment
5	**On site**	**River**	**Lostock US Farington Weir**	**GB112070064911**	**Yarrow and Lostock**	**Douglas**

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

6.4 WFD Surface water bodies

Records identified	1

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

Features are displayed on the Hydrology map on **page 56 >**

ID	Location	Type	Name	Water body ID	Overall rating	Chemical rating	Ecological rating	Year
-	857m NE	River	Lostock US Farington Weir	GB112070064911 ↗	Moderate	Fail	Moderate	2019

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

6.5 WFD Groundwater bodies

Records on site	1

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

Features are displayed on the Hydrology map on **page 56 >**

ID	Location	Name	Water body ID	Overall rating	Chemical rating	Quantitative	Year
E	**On site**	**West Lancashire Quaternary Sand and Gravel Aquifers**	**GB41202G912700** ↗	**Good**	**Good**	**Good**	**2019**

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

7 River and coastal flooding

7.1 Risk of flooding from rivers and the sea

Records within 50m	0

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

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

7.2 Historical Flood Events

Records within 250m	0

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

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

7.3 Flood Defences

Records within 250m	0

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

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

7.4 Areas Benefiting from Flood Defences

Records within 250m	0

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

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

7.5 Flood Storage Areas

Records within 250m	0

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

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

River and coastal flooding - Flood Zones

7.6 Flood Zone 2

Records within 50m	0

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

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

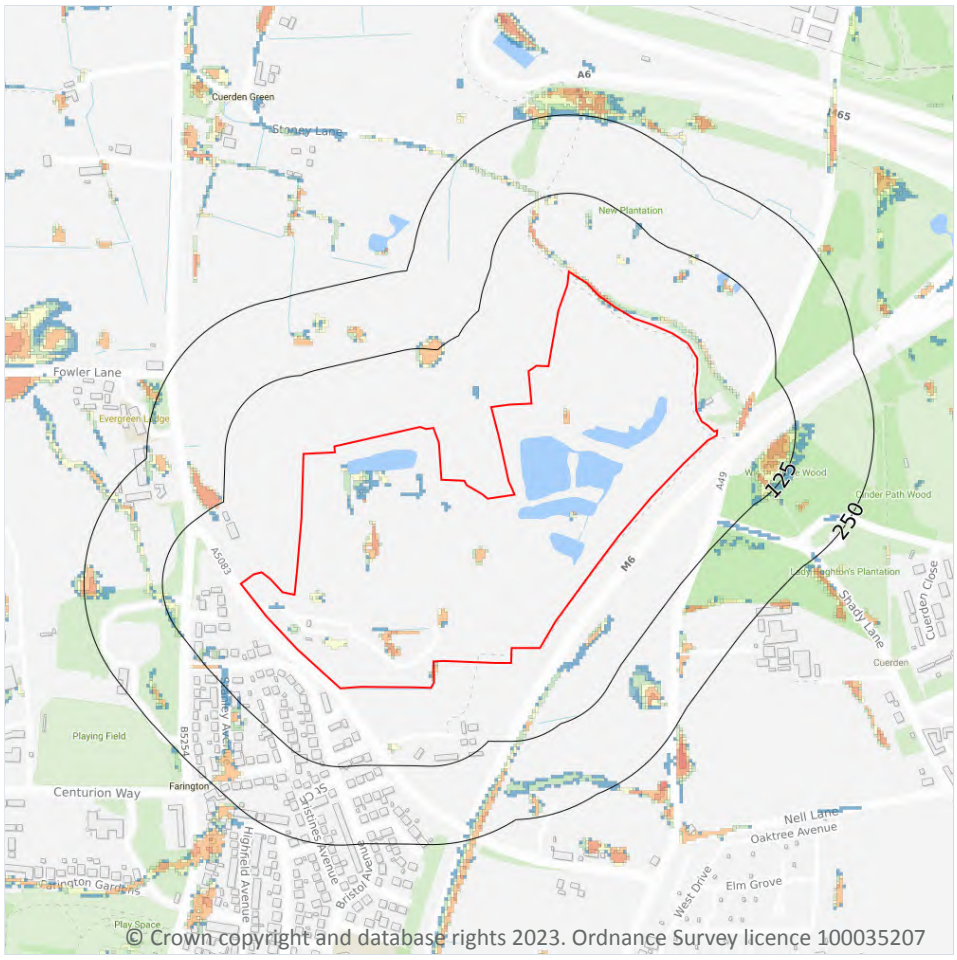
7.7 Flood Zone 3

Records within 50m	0

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

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

8 Surface water flooding



Site Outline

Search buffers in metres (m)

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

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

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

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

8.1 Surface water flooding

Highest risk on site	**1 in 30 year, 0.3m - 1.0m**
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 64 >**

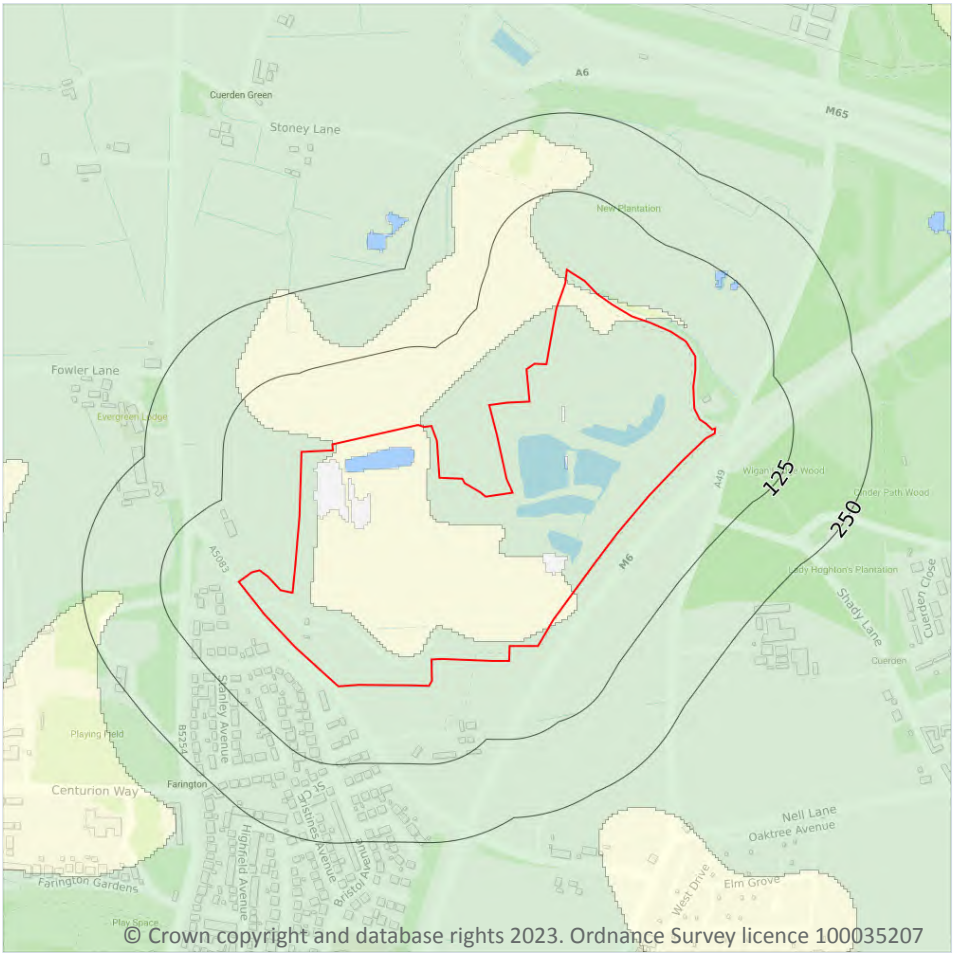
The data shown on the map and in the table above shows the highest likelihood of flood events happening at the site. Lower likelihood events may have greater flood depths and hence a greater potential impact on a site.

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	Greater than 1.0m
1 in 250 year	Between 0.3m and 1.0m
1 in 100 year	Between 0.3m and 1.0m
1 in 30 year	Between 0.3m and 1.0m

This data is sourced from Ambiental Risk Analytics.

9 Groundwater flooding



Site Outline

Search buffers in metres (m)

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

9.1 Groundwater flooding

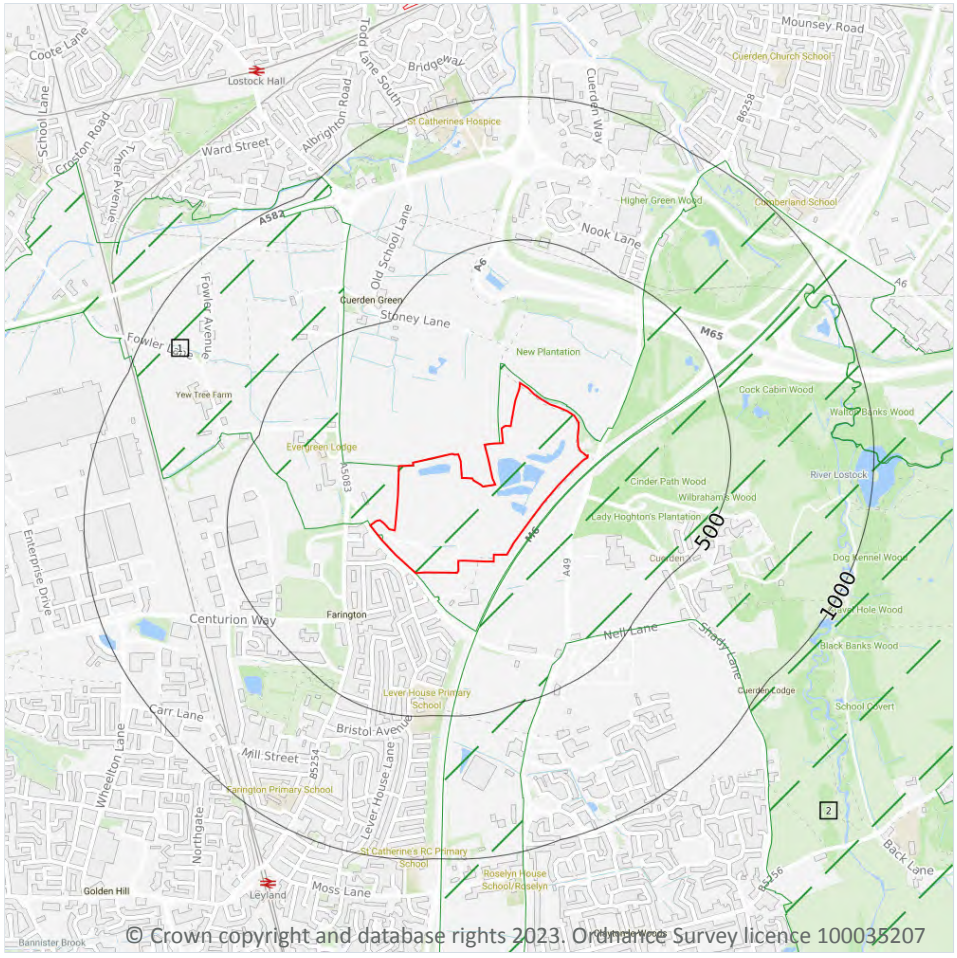
Highest risk on site	**Moderate**
Highest risk within 50m	**Moderate**

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

Features are displayed on the Groundwater flooding map on **page 66 >**

This data is sourced from Ambiental Risk Analytics.

10 Environmental designations



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	3

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.

Features are displayed on the Environmental designations map on **page 67 >**

ID	Location	Name	Data source
3	1365m N	Preston Junction	Natural England
-	1503m N	Preston Junction	Natural England
-	1964m N	Preston Junction	Natural England

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

10.7 Designated Ancient Woodland

Records within 2000m	0

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

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

10.8 Biosphere Reserves

Records within 2000m	0

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

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

10.9 Forest Parks

Records within 2000m	0

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

This data is sourced from the Forestry Commission.

10.10 Marine Conservation Zones

Records within 2000m	0

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

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

10.11 Green Belt

Records within 2000m	3

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

Features are displayed on the Environmental designations map on **page 67 >**

ID	Location	Name	Local Authority name
1	**On site**	**Merseyside and Greater Manchester**	**South Ribble**
2	33m SE	Merseyside and Greater Manchester	Chorley
-	1652m S	Merseyside and Greater Manchester	South Ribble

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

10.12 Proposed Ramsar sites

Records within 2000m	0

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

This data is sourced from Natural England.

10.13 Possible Special Areas of Conservation (pSAC)

Records within 2000m	0

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

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

10.14 Potential Special Protection Areas (pSPA)

Records within 2000m	0

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

This data is sourced from Natural England.

10.15 Nitrate Sensitive Areas

Records within 2000m	0

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

This data is sourced from Natural England.

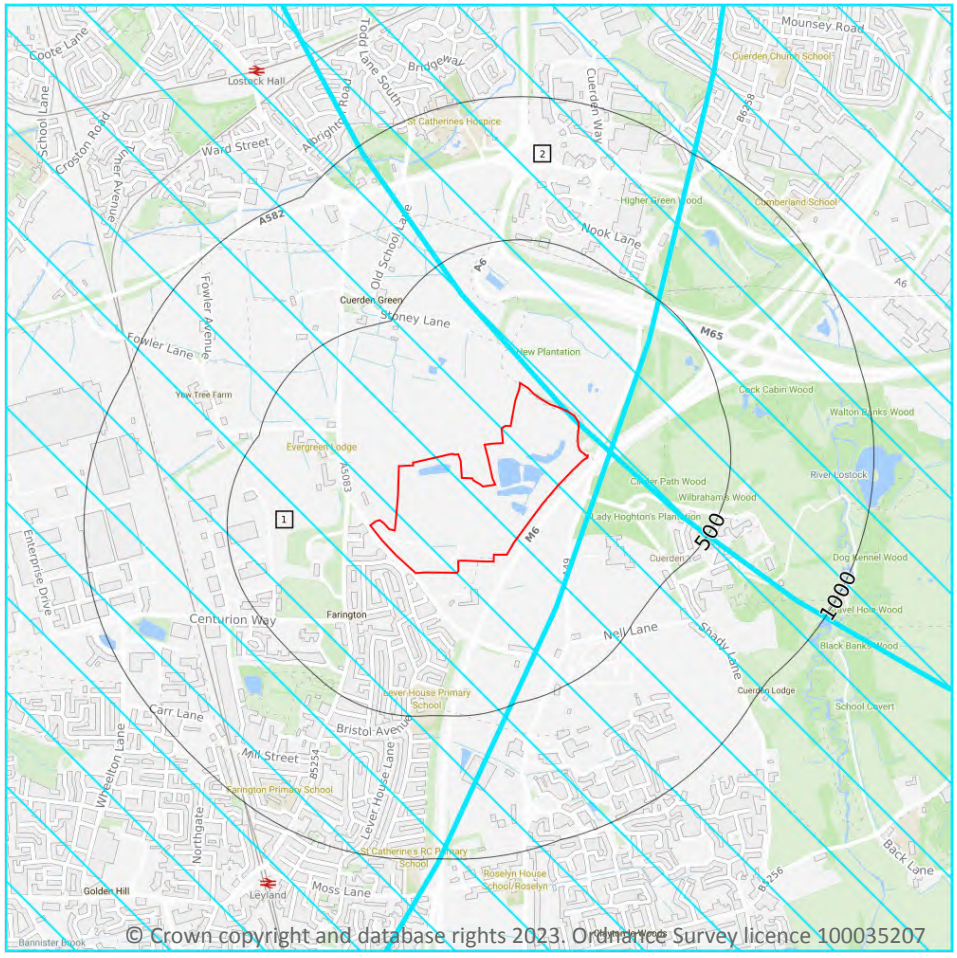
10.16 Nitrate Vulnerable Zones

Records within 2000m	0

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

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

SSSI Impact Zones and Units



Site Outline

Search buffers in metres (m)

SSSI Impact Risk Zones

SSSI Units

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

10.17 SSSI Impact Risk Zones

Records on site	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 72 >**

ID	Location	Type of developments requiring consultation
1	On site	**Infrastructure - Airports, helipads and other aviation proposals. Wind and Solar - Solar schemes with footprint > 0.5ha, all wind turbines Air pollution - Livestock & poultry units with floorspace > 500m², slurry lagoons & digestate stores > 4000m². Combustion - General combustion processes >50MW energy input. Incl: energy from waste incineration, other incineration, landfill gas generation plant, pyrolysis/gasification, anaerobic digestion, sewage treatment works, other incineration/ combustion Waste - Landfill. Incl: inert landfill, non-hazardous landfill, hazardous landfill. 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**
2	On site	**Infrastructure - Airports, helipads and other aviation proposals. Wind and Solar - Solar schemes with footprint > 0.5ha, all wind turbines Air pollution - Livestock & poultry units with floorspace > 500m², slurry lagoons & digestate stores > 750m², manure stores > 3500t. Combustion - General combustion processes >50MW energy input. Incl: energy from waste incineration, other incineration, landfill gas generation plant, pyrolysis/gasification, anaerobic digestion, sewage treatment works, other incineration/ combustion Waste - Landfill. Incl: inert landfill, non-hazardous landfill, hazardous landfill. 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**

This data is sourced from Natural England.

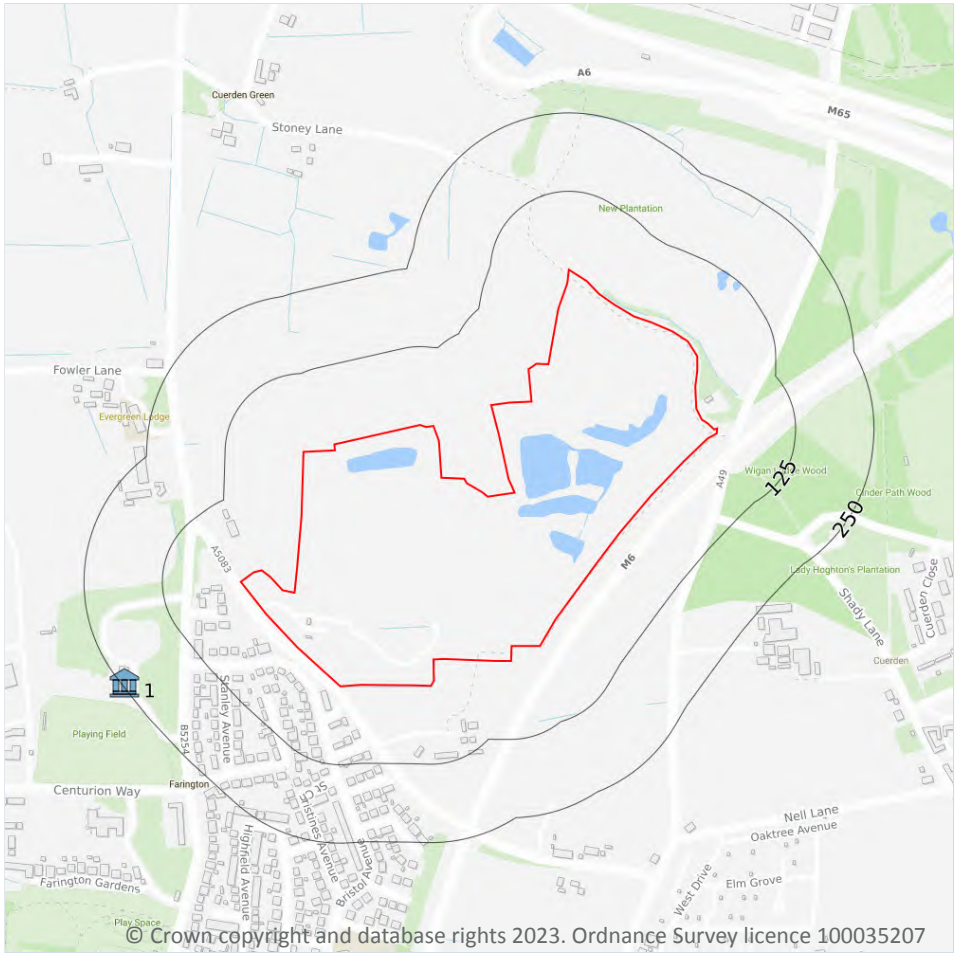
10.18 SSSI Units

Records within 2000m	0

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

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

11 Visual and cultural designations



Site Outline

Search buffers in metres (m)

- Listed buildings
- Conservation areas
- Conservation areas - no data
- National Parks
- Areas of Outstanding Natural Beauty
- Registered parks and gardens
- Scheduled Monuments
- World Heritage Sites

11.1 World Heritage Sites

Records within 250m	0

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

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

11.2 Area of Outstanding Natural Beauty

Records within 250m	0

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

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

11.3 National Parks

Records within 250m	0

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

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

11.4 Listed Buildings

Records within 250m	1

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 74 >**

ID	Location	Name	Grade	Reference Number	Listed date
1	245m SW	Farington House	II	1073034	27/02/1984

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

11.5 Conservation Areas

Records within 250m	0

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

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

11.6 Scheduled Ancient Monuments

Records within 250m	0

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

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

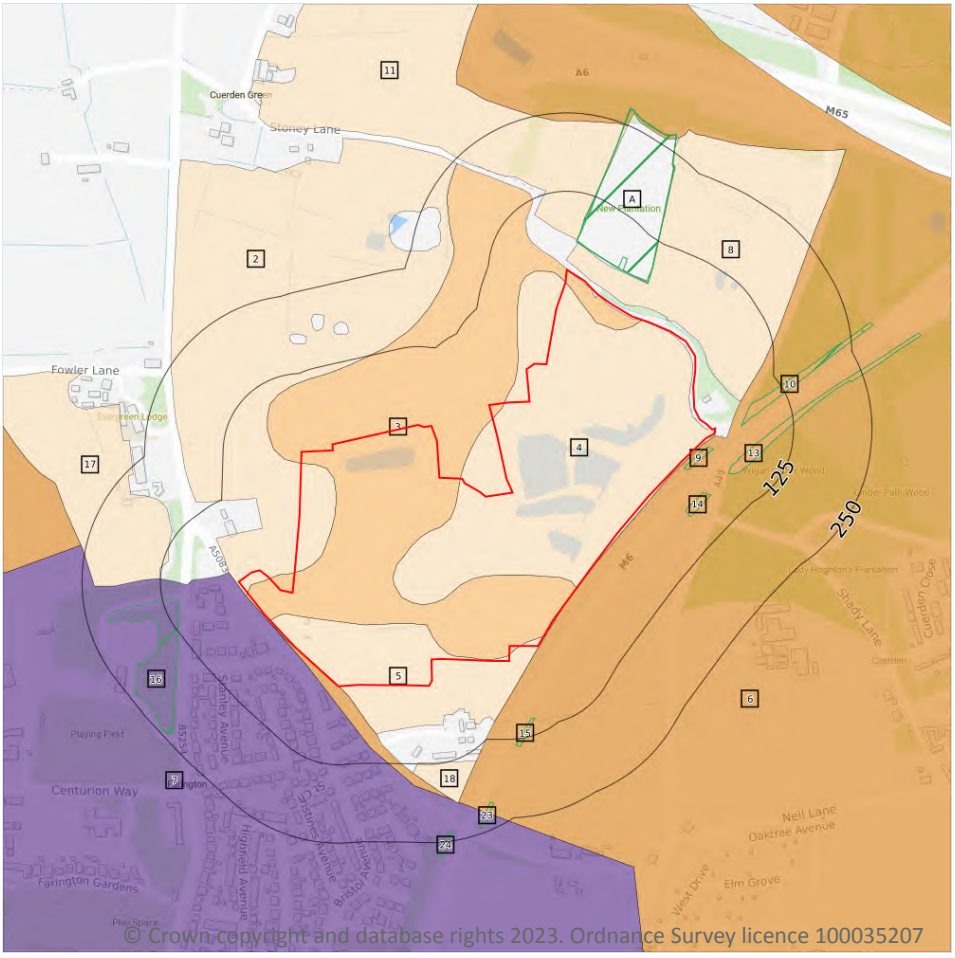
11.7 Registered Parks and Gardens

Records within 250m	0

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

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

12 Agricultural designations



Site Outline

Search buffers in metres (m)

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

12.1 Agricultural Land Classification

Records within 250m	10

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 77 >**

ID	Location	Classification	Description
2	**On site**	**Grade 3b**	**Moderate quality agricultural land. Land capable of producing moderate yields of a narrow range of crops, principally cereals and grass or lower yields of a wider range of crops or high yields of grass which can be grazed or harvested over most of the year.**

ID	Location	Classification	Description
3	**On site**	**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.**
4	**On site**	**Grade 3b**	**Moderate quality agricultural land. Land capable of producing moderate yields of a narrow range of crops, principally cereals and grass or lower yields of a wider range of crops or high yields of grass which can be grazed or harvested over most of the year.**
5	**On site**	**Grade 3b**	**Moderate quality agricultural land. Land capable of producing moderate yields of a narrow range of crops, principally cereals and grass or lower yields of a wider range of crops or high yields of grass which can be grazed or harvested over most of the year.**
6	**On site**	**Grade 3**	**Good to moderate quality agricultural land. Land with moderate limitations which affect the choice of crops, timing and type of cultivation, harvesting or the level of yield. Where more demanding crops are grown yields are generally lower or more variable than on land in Grades 1 and 2.**
7	2m SW	Urban	-
8	7m NE	Grade 3b	Moderate quality agricultural land. Land capable of producing moderate yields of a narrow range of crops, principally cereals and grass or lower yields of a wider range of crops or high yields of grass which can be grazed or harvested over most of the year.
11	50m N	Grade 3b	Moderate quality agricultural land. Land capable of producing moderate yields of a narrow range of crops, principally cereals and grass or lower yields of a wider range of crops or high yields of grass which can be grazed or harvested over most of the year.
17	117m W	Grade 3b	Moderate quality agricultural land. Land capable of producing moderate yields of a narrow range of crops, principally cereals and grass or lower yields of a wider range of crops or high yields of grass which can be grazed or harvested over most of the year.
18	122m S	Grade 3b	Moderate quality agricultural land. Land capable of producing moderate yields of a narrow range of crops, principally cereals and grass or lower yields of a wider range of crops or high yields of grass which can be grazed or harvested over most of the year.

This data is sourced from Natural England.

12.2 Open Access Land

Records within 250m	**0**

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

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

12.3 Tree Felling Licences

Records within 250m	11

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

Features are displayed on the Agricultural designations map on **page 77 >**

ID	Location	Description	Reference	Application date
9	10m E	Selective Fell/Thin (Unconditional)	018/366/15-16	-
10	42m E	Selective Fell/Thin (Unconditional)	018/366/15-16	-
A	46m N	Selective Fell/Thin (Unconditional)	010/3/03-04	10/06/2003
A	46m NE	Selective Fell/Thin (Unconditional)	010/262/10-11	19/04/2011
A	46m NE	Selective Fell/Thin (Unconditional)	010/8/00-01	21/11/2000
13	55m E	Selective Fell/Thin (Unconditional)	018/366/15-16	-
14	58m E	Selective Fell/Thin (Unconditional)	018/366/15-16	-
15	98m S	Selective Fell/Thin (Unconditional)	018/366/15-16	-
16	100m W	Selective Fell/Thin (Unconditional)	010/38/00-01	21/11/2000
23	210m S	Selective Fell/Thin (Unconditional)	018/366/15-16	-
24	235m S	Selective Fell/Thin (Unconditional)	018/366/15-16	-

This data is sourced from the Forestry Commission.

12.4 Environmental Stewardship Schemes

Records within 250m	0

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

This data is sourced from Natural England.

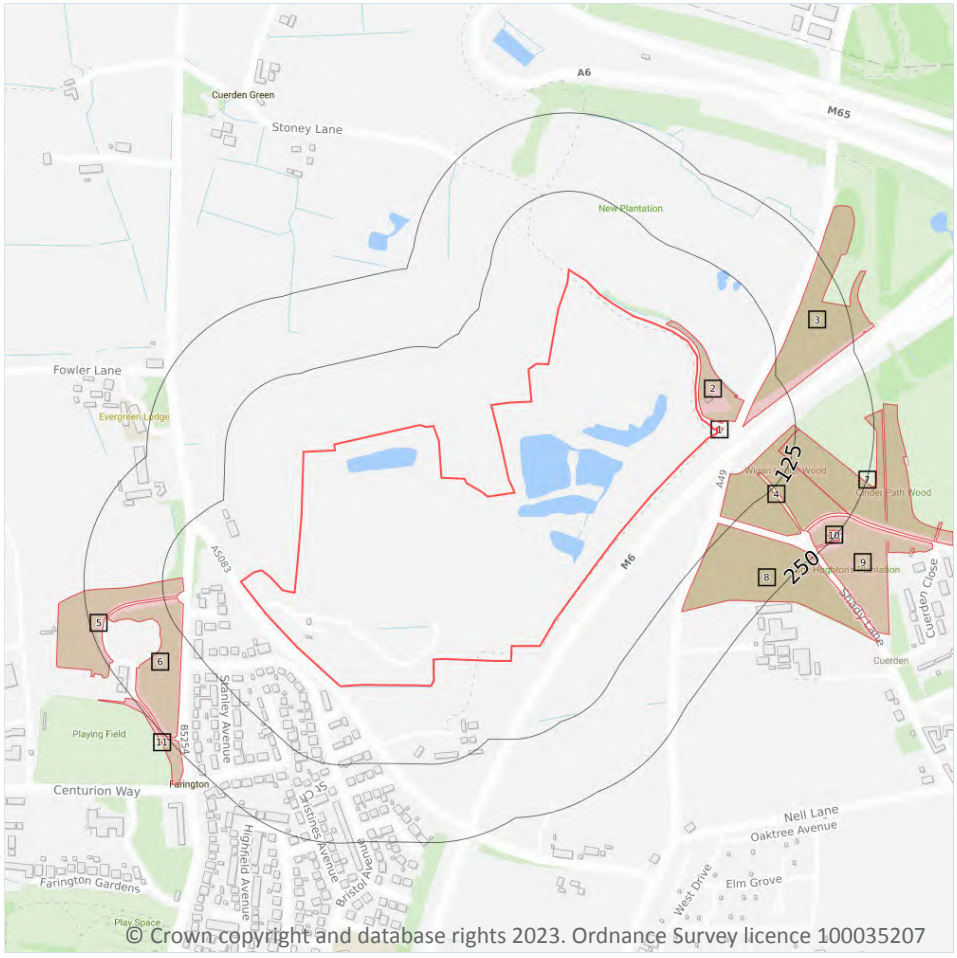
12.5 Countryside Stewardship Schemes

Records within 250m	0

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

This data is sourced from Natural England.

13 Habitat designations



Site Outline

Search buffers in metres (m)

Priority Habitat Inventory
Open Mosaic Habitat
Limestone Pavement Orders

Habitat Networks

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

13.1 Priority Habitat Inventory

Records within 250m	11

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

Features are displayed on the Habitat designations map on **page 81 >**

ID	Location	Main Habitat	Other habitats
1	**On site**	**Deciduous woodland**	**Main habitat: DWOOD (INV > 50%)**
2	4m NE	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
3	41m E	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
4	65m E	Deciduous woodland	Main habitat: DWOOD (INV > 50%)

ID	Location	Main Habitat	Other habitats
5	92m W	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
6	98m W	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
7	103m E	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
8	108m E	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
9	212m E	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
10	237m E	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
11	240m SW	Deciduous woodland	Main habitat: DWOOD (INV > 50%)

This data is sourced from Natural England.

13.2 Habitat Networks

Records within 250m	0

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

This data is sourced from Natural England.

13.3 Open Mosaic Habitat

Records within 250m	0

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

This data is sourced from Natural England.

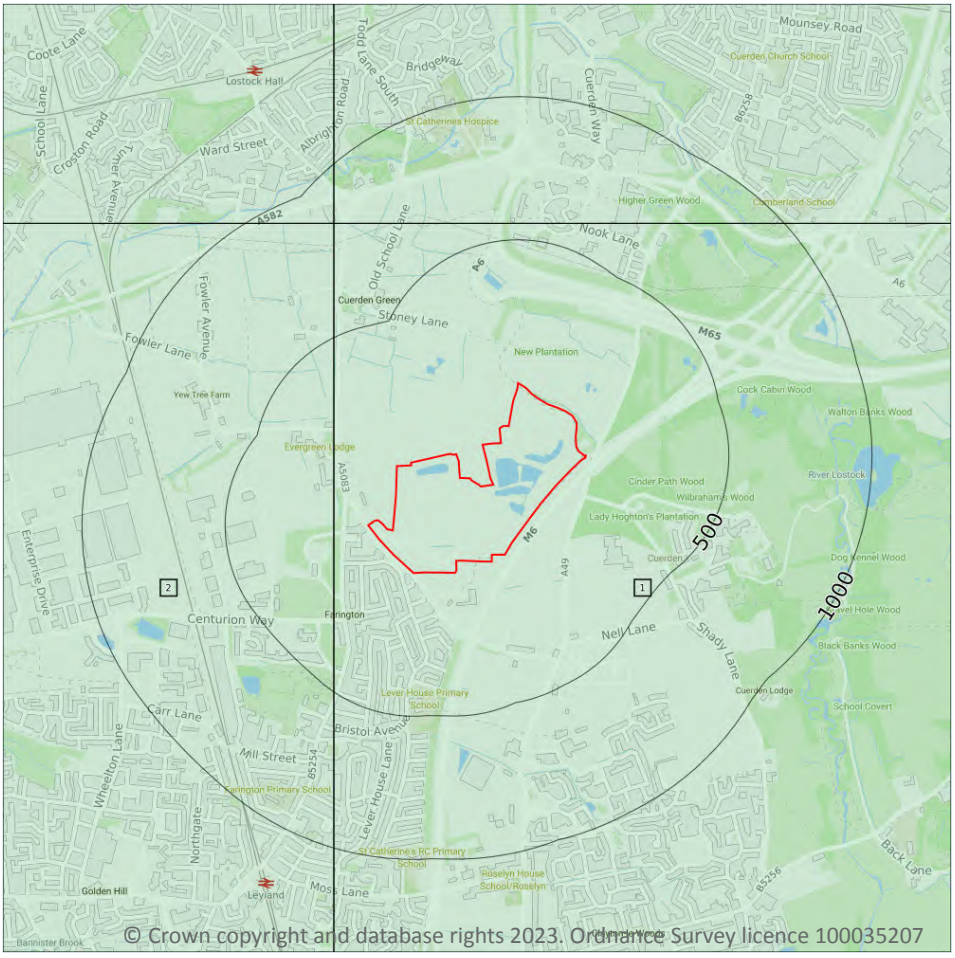
13.4 Limestone Pavement Orders

Records within 250m	0

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

This data is sourced from Natural England.

14 Geology 1:10,000 scale - Availability



Site Outline

Search buffers in metres (m)

- Full coverage
- Partial coverage
- No coverage

14.1 10k Availability

Records within 500m	2

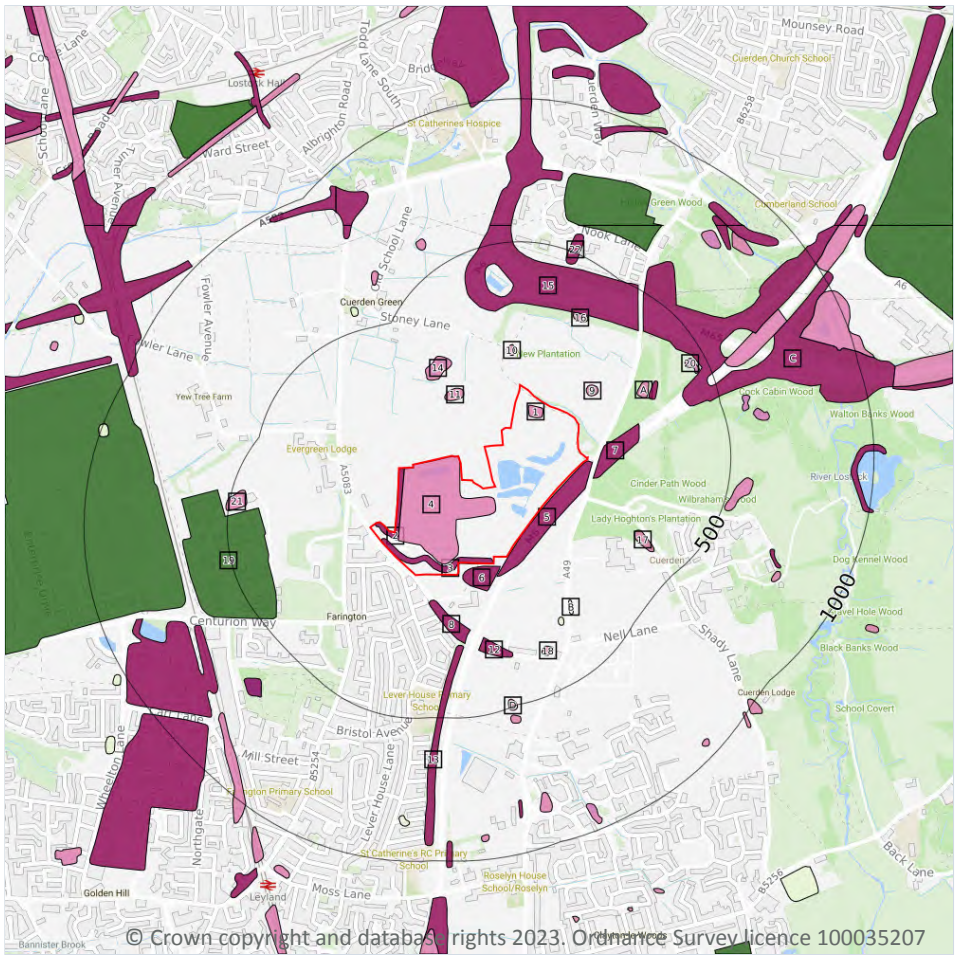
An indication on the coverage of 1:10,000 scale geology data for the site, the most detailed dataset provided by the British Geological Survey. Either 'Full', 'Partial' or 'No coverage' for each geological theme.

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

ID	Location	Artificial	Superficial	Bedrock	Mass movement	Sheet No.
1	**On site**	**Full**	**Full**	**Full**	**Full**	**SD52SE**
2	120m W	Full	Full	Full	No coverage	SD52SW

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	28

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.

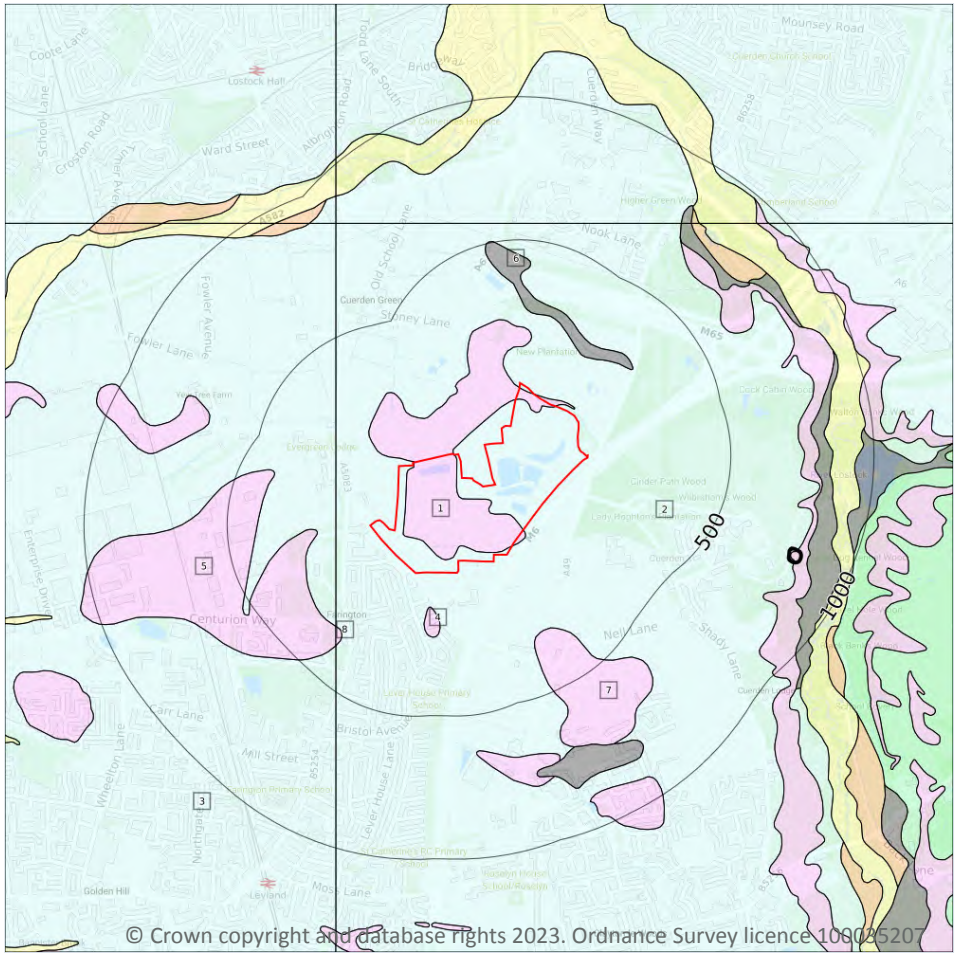
Features are displayed on the Geology 1:10,000 scale - Artificial and made ground map on **page 85 >**

ID	Location	LEX Code	Description	Rock description
1	On site	WGR-VOID	Worked Ground (Undivided)	Void
2	On site	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
3	On site	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
4	On site	WGR-VOID	Worked Ground (Undivided)	Void

ID	Location	LEX Code	Description	Rock description
5	2m SE	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
6	9m S	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
7	38m E	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
8	89m SW	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
9	93m NE	WGR-VOID	Worked Ground (Undivided)	Void
10	107m N	WGR-VOID	Worked Ground (Undivided)	Void
11	179m N	WGR-VOID	Worked Ground (Undivided)	Void
A	230m NE	WGR-VOID	Worked Ground (Undivided)	Void
12	238m S	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
13	246m S	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
14	250m N	WGR-VOID	Worked Ground (Undivided)	Void
A	265m NE	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
B	265m SE	WMGR-ARTDP	Infilled Ground	Artificial Deposit
15	271m N	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
B	281m SE	WMGR-ARTDP	Infilled Ground	Artificial Deposit
16	297m NE	WGR-VOID	Worked Ground (Undivided)	Void
17	301m E	WGR-VOID	Worked Ground (Undivided)	Void
18	340m S	WGR-VOID	Worked Ground (Undivided)	Void
19	366m W	LSGR-UKNOWN	Landscaped Ground (Undivided)	Unknown/unclassified Entry
C	376m NE	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
20	427m NE	WGR-VOID	Worked Ground (Undivided)	Void
21	440m W	WGR-VOID	Worked Ground (Undivided)	Void
22	456m N	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
D	473m S	WGR-VOID	Worked Ground (Undivided)	Void

This data is sourced from the British Geological Survey.

Geology 1:10,000 scale - Superficial



Site Outline

Search buffers in metres (m)

Landslip (10k)

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

14.3 Superficial geology (10k)

Records within 500m **8**

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

Features are displayed on the Geology 1:10,000 scale - Superficial map on **page 87 >**

ID	Location	LEX Code	Description	Rock description
1	**On site**	**GFDUD-XSVZ**	**Glaciofluvial Deposits, Devensian - Sand, Gravel And Silt**	**Sand, Gravel And Silt**
2	**On site**	**TILLD-CSVZ**	**Till, Devensian - Clay, Sandy, Gravelly, Silty (unlithified Deposits Coding Scheme)**	**Clay, Sandy, Gravelly, Silty**

ID	Location	LEX Code	Description	Rock description
3	120m W	TILLD-CSVZ	Till, Devensian - Clay, Sandy, Gravelly, Silty (unlithified Deposits Coding Scheme)	Clay, Sandy, Gravelly, Silty
4	121m SW	GFDUD-XSVZ	Glaciofluvial Deposits, Devensian - Sand, Gravel And Silt	Sand, Gravel And Silt
5	186m W	GFDUD-XSVZ	Glaciofluvial Deposits, Devensian - Sand, Gravel And Silt	Sand, Gravel And Silt
6	198m NE	HEAD-CVZS	Head - Gravelly Silty Sandy Clay	Clay, Gravelly, Silty, Sandy
7	294m SE	GFDUD-XSVZ	Glaciofluvial Deposits, Devensian - Sand, Gravel And Silt	Sand, Gravel And Silt
8	323m SW	GFDUD-XSVZ	Glaciofluvial Deposits, Devensian - Sand, Gravel And Silt	Sand, Gravel And Silt

This data is sourced from the British Geological Survey.

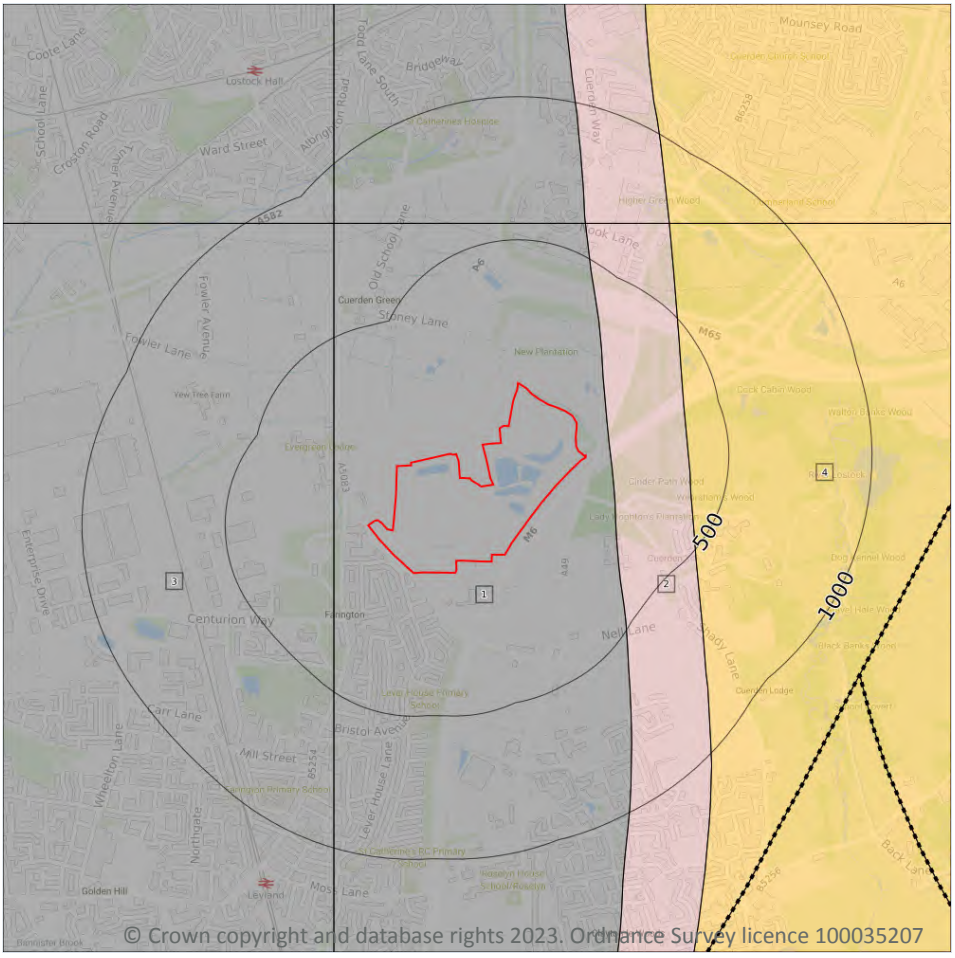
14.4 Landslip (10k)

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	4

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 89 >**

ID	Location	LEX Code	Description	Rock age
1	**On site**	**SIM-MDHA**	**Sidmouth Mudstone Formation - Mudstone And Halite-stone**	**Carnian Age - Olenekian Age**
2	86m E	TPSF-SISD	Tarporley Siltstone Formation - Siltstone And Sandstone	Anisian Age - Olenekian Age
3	120m W	SIM-MDHA	Sidmouth Mudstone Formation - Mudstone And Halite-stone	Carnian Age - Olenekian Age

ID	Location	LEX Code	Description	Rock age
4	357m E	SSG-SDST	Sherwood Sandstone Group - Sandstone	Ladinian Age - Late Permian Epoch [Obsolete name]

This data is sourced from the British Geological Survey.

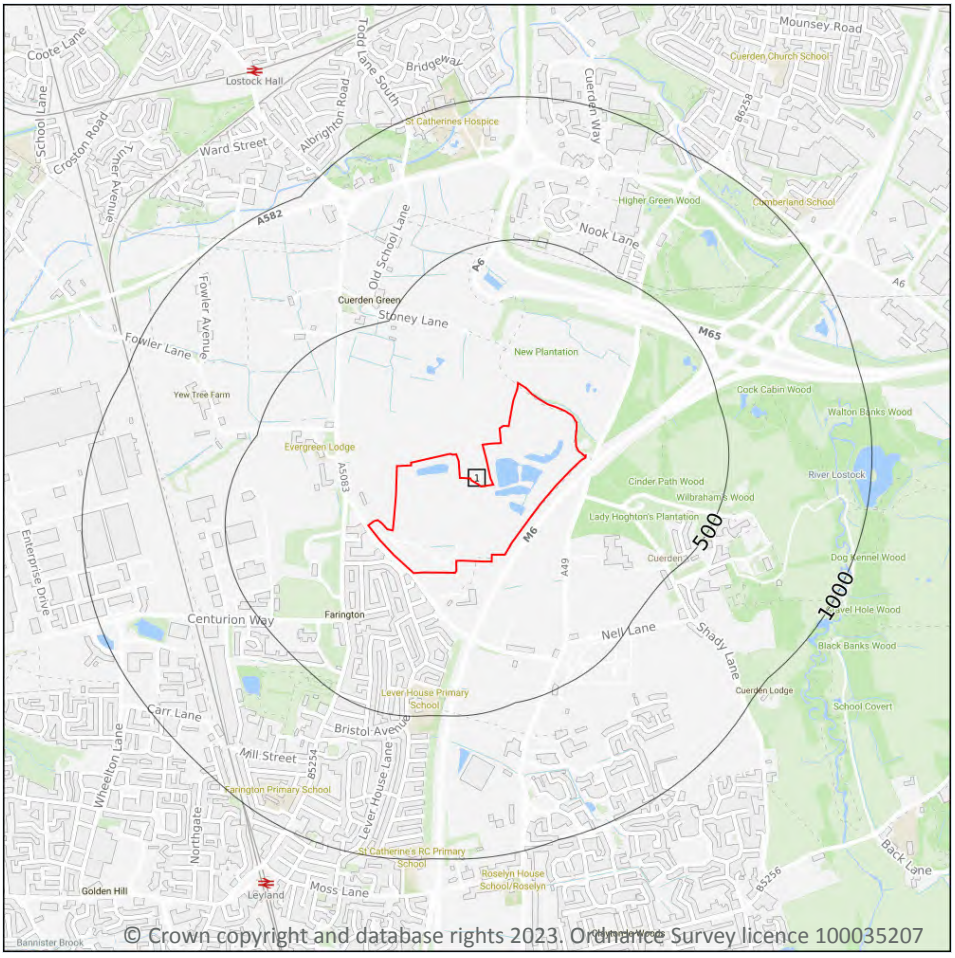
14.6 Bedrock faults and other linear features (10k)

Records within 500m	0

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

This data is sourced from the British Geological Survey.

15 Geology 1:50,000 scale - Availability



Site Outline

Search buffers in metres (m)

Geological map tile

15.1 50k Availability

Records within 500m	1

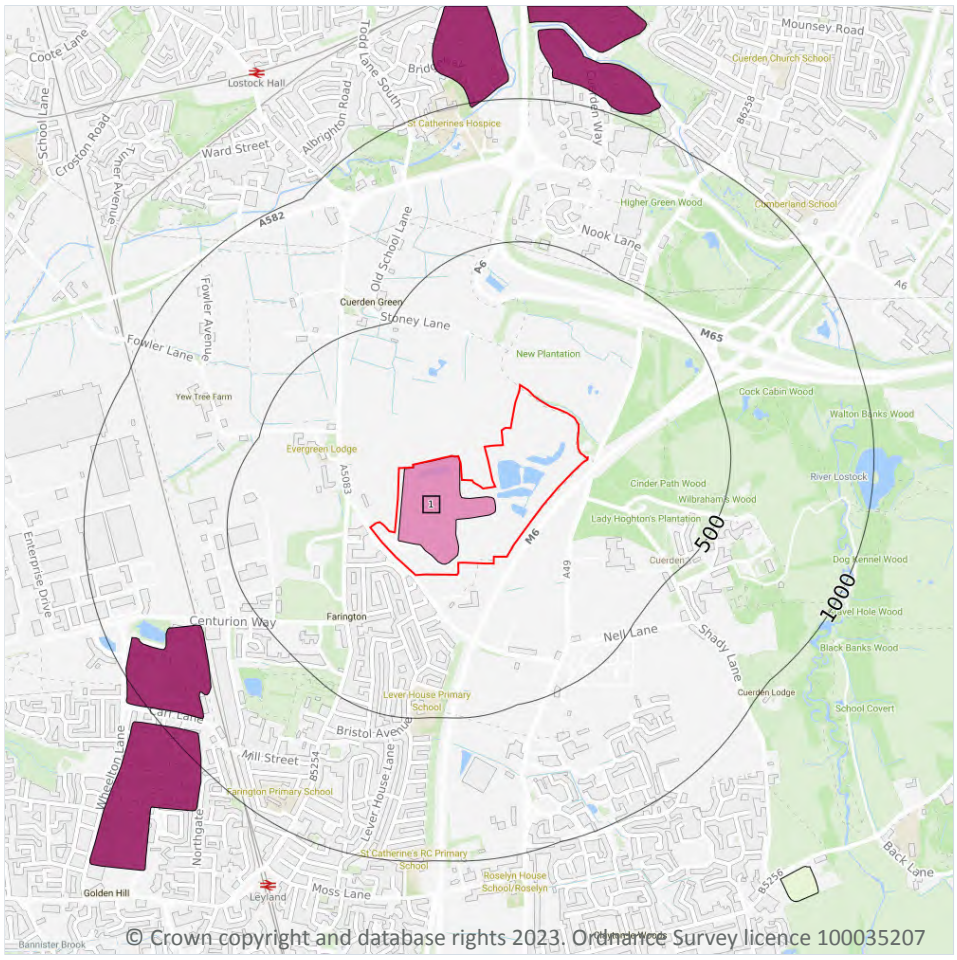
An indication on the coverage of 1:50,000 scale geology data for the site. Either 'Full' or 'No coverage' for each geological theme.

Features are displayed on the Geology 1:50,000 scale - Availability map on **page 91 >**

ID	Location	Artificial	Superficial	Bedrock	Mass movement	Sheet No.
1	**On site**	**No coverage**	**Full**	**Full**	**Full**	**EW075_preston_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	1

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

Features are displayed on the Geology 1:50,000 scale - Artificial and made ground map on **page 92 >**

ID	Location	LEX Code	Description	Rock description
1	**On site**	**WGR-VOID**	**WORKED GROUND (UNDIVIDED)**	**VOID**

This data is sourced from the British Geological Survey.

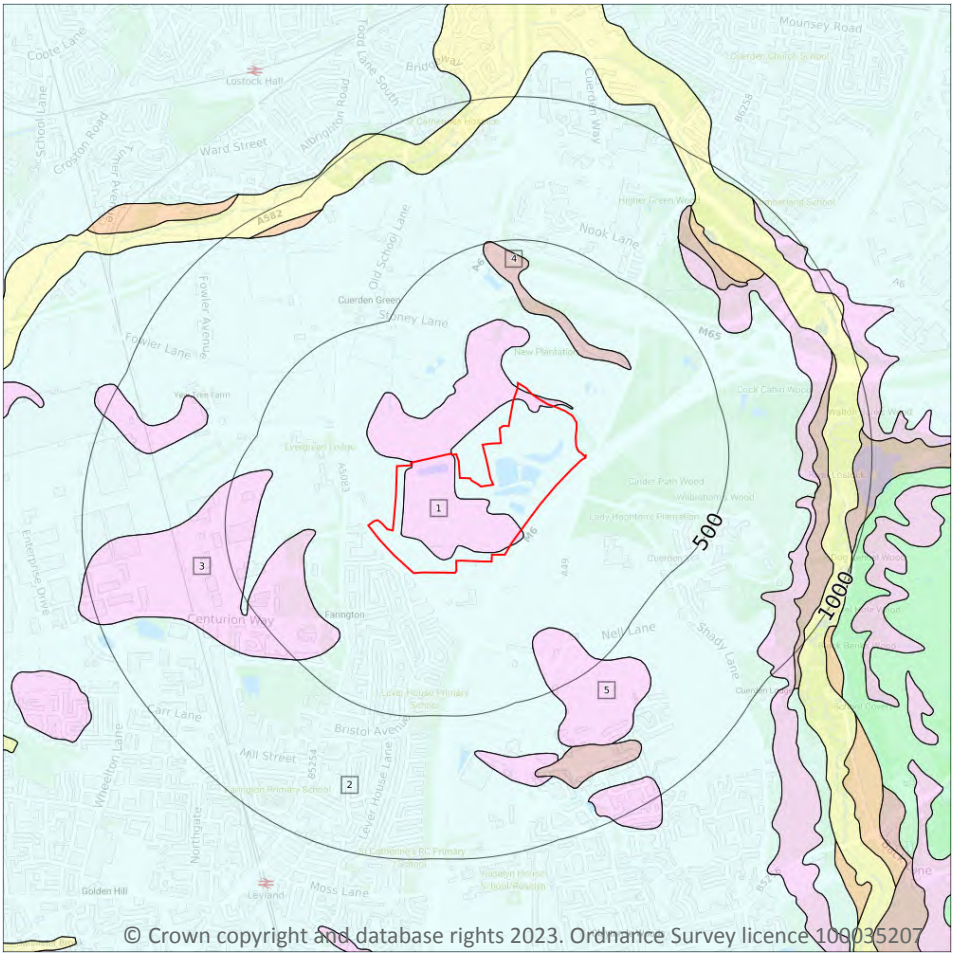
15.3 Artificial ground permeability (50k)

Records within 50m	0

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

This data is sourced from the British Geological Survey.

Geology 1:50,000 scale - Superficial



Site Outline

Search buffers in metres (m)

Landslip (50k)

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

15.4 Superficial geology (50k)

Records within 500m **5**

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

Features are displayed on the Geology 1:50,000 scale - Superficial map on **page 94 >**

ID	Location	LEX Code	Description	Rock description
1	**On site**	**GFDUD-XSV**	**GLACIOFLUVIAL DEPOSITS, DEVENSIAN**	**SAND AND GRAVEL**
2	**On site**	**TILLD-DMTN**	**TILL, DEVENSIAN**	**DIAMICTON**
3	186m W	GFDUD-XSV	GLACIOFLUVIAL DEPOSITS, DEVENSIAN	SAND AND GRAVEL

ID	Location	LEX Code	Description	Rock description
4	198m NE	HEAD-XCZSV	HEAD	CLAY, SILT, SAND AND GRAVEL
5	294m SE	GFDUD-XSV	GLACIOFLUVIAL DEPOSITS, DEVENSIAN	SAND AND GRAVEL

This data is sourced from the British Geological Survey.

15.5 Superficial permeability (50k)

Records within 50m	**2**

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

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

This data is sourced from the British Geological Survey.

15.6 Landslip (50k)

Records within 500m	**0**

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

This data is sourced from the British Geological Survey.

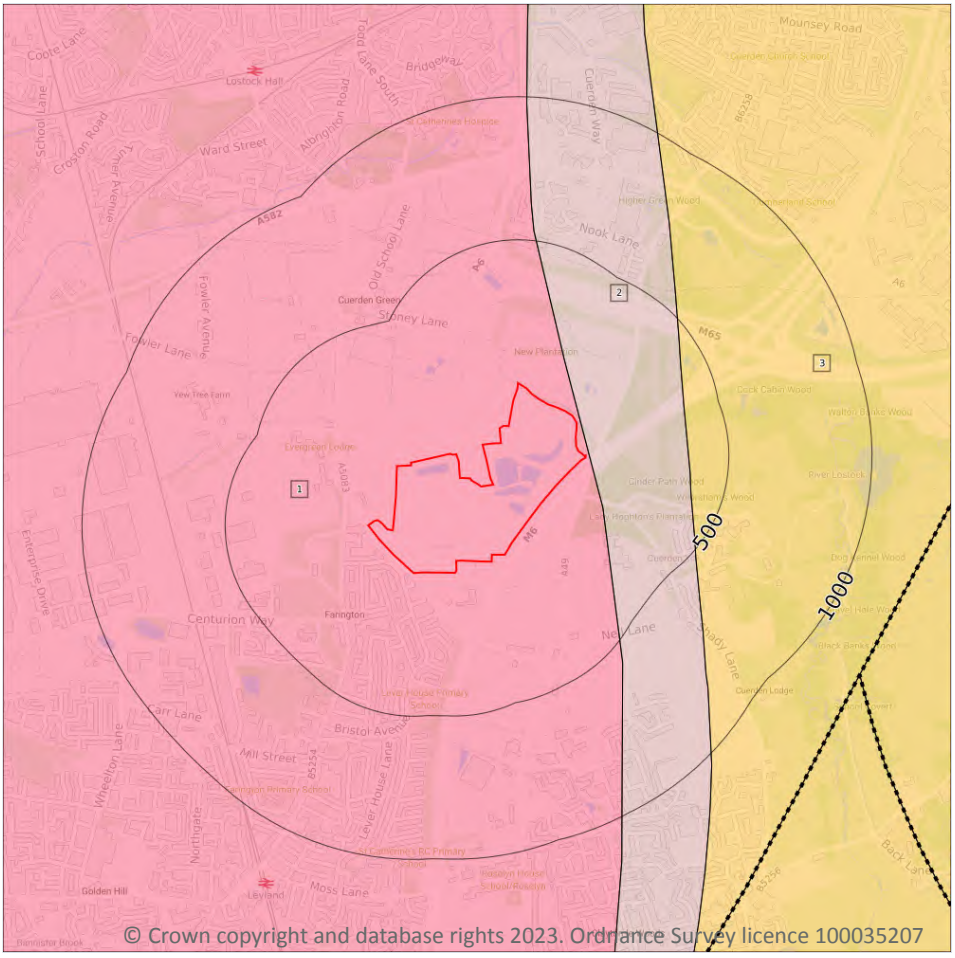
15.7 Landslip permeability (50k)

Records within 50m	**0**

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

This data is sourced from the British Geological Survey.

Geology 1:50,000 scale - Bedrock



Site Outline

Search buffers in metres (m)

Bedrock faults and other linear features (50k)

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

15.8 Bedrock geology (50k)

Records within 500m	3

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

Features are displayed on the Geology 1:50,000 scale - Bedrock map on **page 96 >**

ID	Location	LEX Code	Description	Rock age
1	**On site**	**SNM-MDST**	**SINGLETON MUDSTONE MEMBER - MUDSTONE**	**-**
2	12m E	TPSF-MDSS	TARPORLEY SILTSTONE FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	OLENEKIAN
3	358m E	SSG-SDST	SHERWOOD SANDSTONE GROUP - SANDSTONE	-

This data is sourced from the British Geological Survey.

15.9 Bedrock permeability (50k)

Records within 50m	2

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

Location	Flow type	Maximum permeability	Minimum permeability
On site	**Fracture**	**Low**	**Low**
12m E	Fracture	Moderate	Low

This data is sourced from the British Geological Survey.

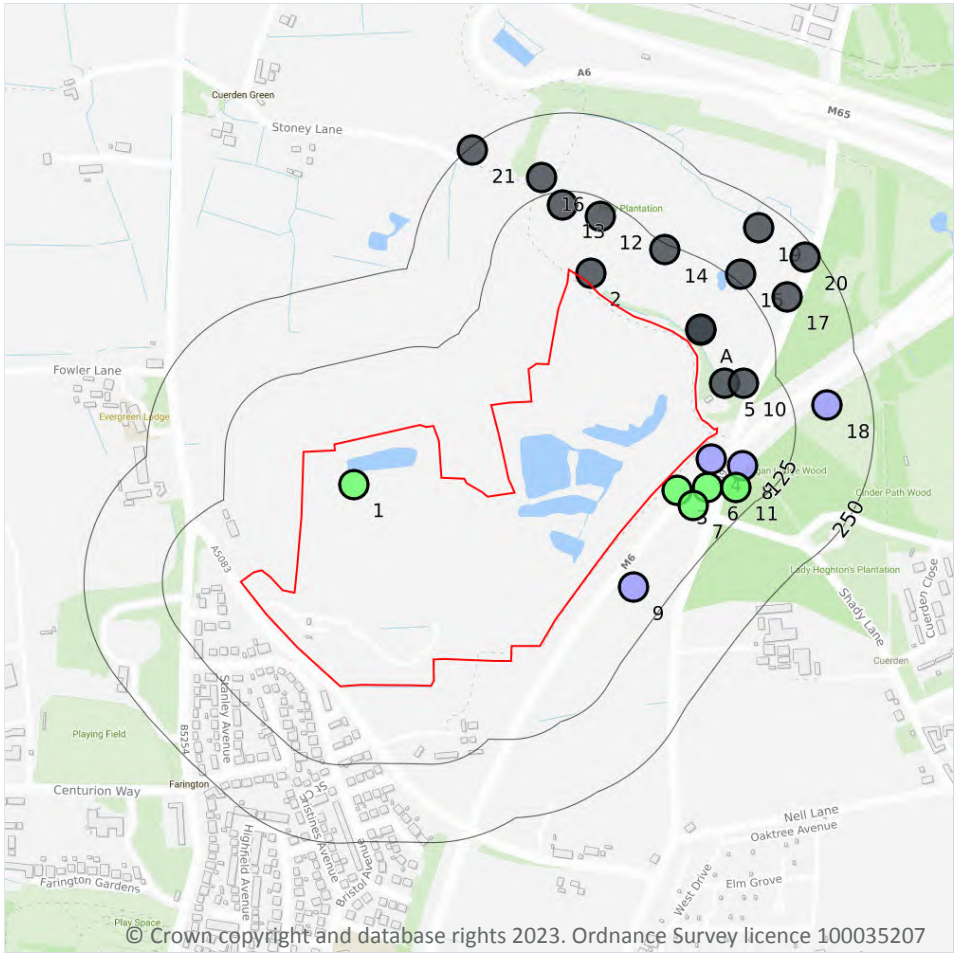
15.10 Bedrock faults and other linear features (50k)

Records within 500m	0

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

This data is sourced from the British Geological Survey.

16 Boreholes



16.1 BGS Boreholes

Records within 250m	23

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

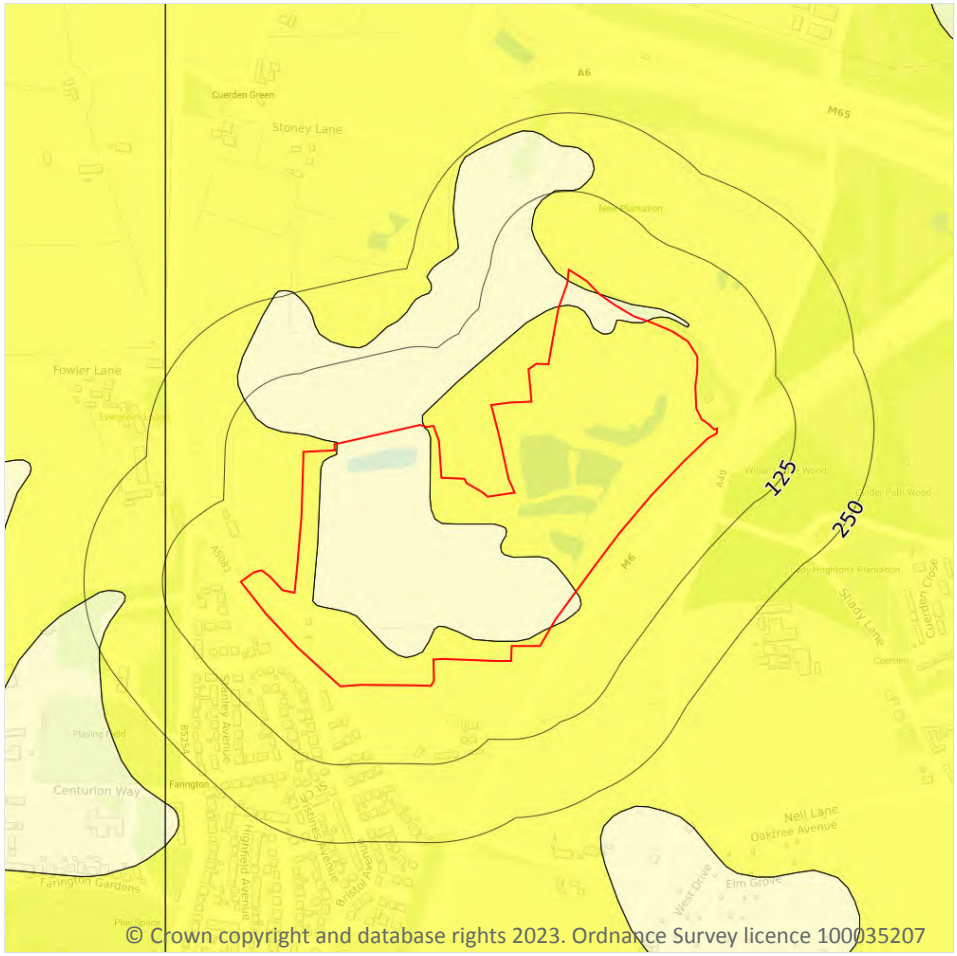
Features are displayed on the Boreholes map on **page 98 >**

ID	Location	Grid reference	Name	Length	Confidential	Web link
1	**On site**	**355300 424100**	**LYDIATES LANE, LEYLAND**	**29.0**	**N**	**18147026**
2	14m NE	355678 424437	ZONE 2 CUERDEN BAMBER BRIDGE TP26	-	Y	N/A

ID	Location	Grid reference	Name	Length	Confidential	Web link
3	25m E	355816 424090	BLACKBURN STH BYPASS SG18	15.0	N	11045 ↗
A	27m NE	355854 424346	ZONE 2 CUERDEN BAMBER BRIDGE TP31	-	Y	N/A
4	28m E	355870 424140	M6 JUNCTION 28-29 TP 18	0.0	N	11116 ↗
A	29m NE	355854 424348	ZONE 2 CUERDEN BAMBER BRIDGE TP30	-	Y	N/A
5	46m NE	355892 424262	ZONE 2 CUERDEN BAMBER BRIDGE TP32	-	Y	N/A
6	56m E	355865 424096	BLACKBURN STH BYPASS Y302	25.0	N	10974 ↗
7	59m E	355841 424066	BLACKBURN STH BYPASS SG17	15.0	N	11044 ↗
8	66m E	355920 424130	M6 JUNCTION 28-29 BH20	10.0	N	11122 ↗
9	69m SE	355746 423937	BLACKBURN STH BYPASS TP.X333	3.0	N	10937 ↗
10	76m NE	355922 424262	ZONE 2 CUERDEN BAMBER BRIDGE TP33	-	Y	N/A
11	87m E	355909 424095	BLACKBURN STH BYPASS Y304	20.0	N	10975 ↗
12	98m N	355693 424527	ZONE 2 CUERDEN BAMBER BRIDGE F	-	Y	N/A
13	104m N	355633 424546	ZONE 2 CUERDEN BAMBER BRIDGE WS25	-	Y	N/A
14	116m NE	355797 424474	ZONE 2 CUERDEN BAMBER BRIDGE G	-	Y	N/A
15	137m NE	355918 424436	ZONE 2 CUERDEN BAMBER BRIDGE WS40	-	Y	N/A
16	153m N	355600 424589	ZONE 2 CUERDEN BAMBER BRIDGE TP24	-	Y	N/A
17	171m NE	355991 424399	ZONE 2 CUERDEN BAMBER BRIDGE TP34	-	Y	N/A
18	179m E	356055 424227	BLACKBURN STH BYPASS TP.X334	3.0	N	10938 ↗
19	213m NE	355946 424509	ZONE 2 CUERDEN BAMBER BRIDGE TP35	-	Y	N/A
20	230m NE	356020 424463	ZONE 2 CUERDEN BAMBER BRIDGE H	-	Y	N/A
21	245m N	355490 424633	ZONE 2 CUERDEN BAMBER BRIDGE E	-	Y	N/A

This data is sourced from the British Geological Survey.

17 Natural ground subsidence - Shrink swell clays



17.1 Shrink swell clays

Records within 50m	2

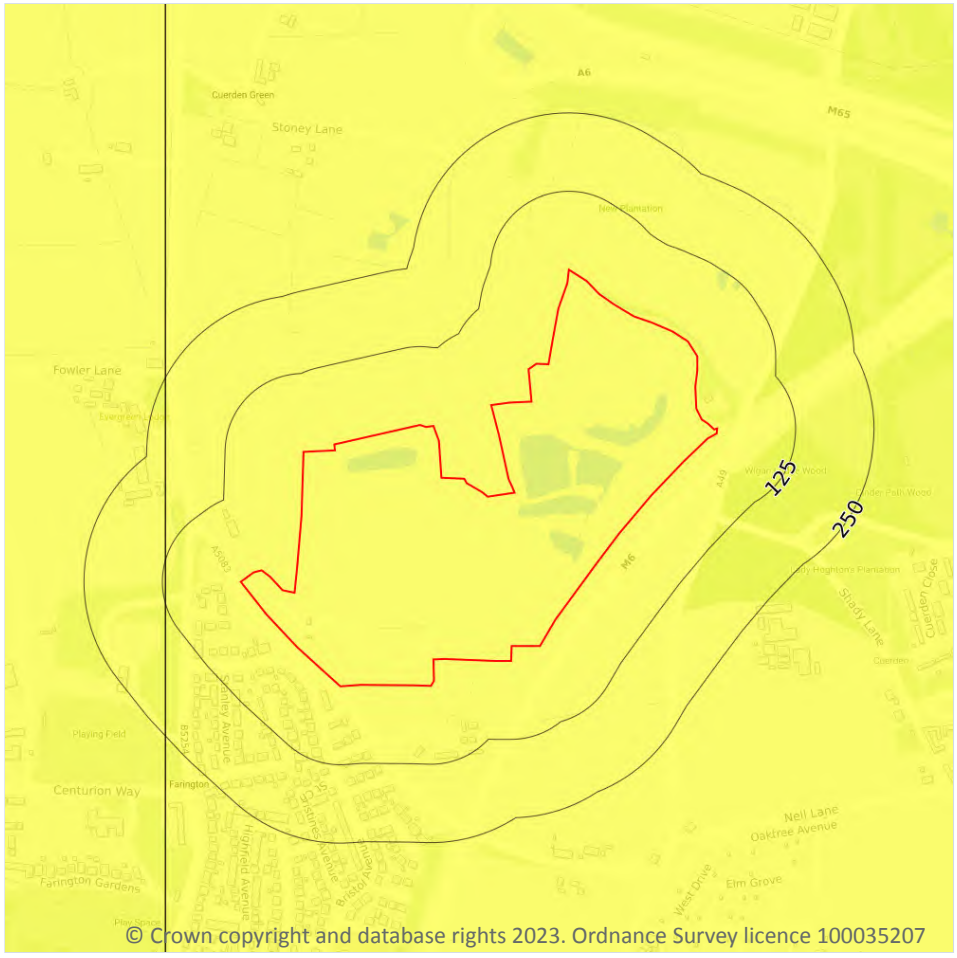
The potential hazard presented by soils that absorb water when wet (making them swell), and lose water as they dry (making them shrink). This shrink-swell behaviour is controlled by the type and amount of clay in the soil, and by seasonal changes in the soil moisture content (related to rainfall and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

Features are displayed on the Natural ground subsidence - Shrink swell clays map on **page 100 >**

Location	Hazard rating	Details
On site	**Negligible**	**Ground conditions predominantly non-plastic.**
On site	**Very low**	**Ground conditions predominantly low plasticity.**

This data is sourced from the British Geological Survey.

Natural ground subsidence - Running sands



17.2 Running sands

Records within 50m	1

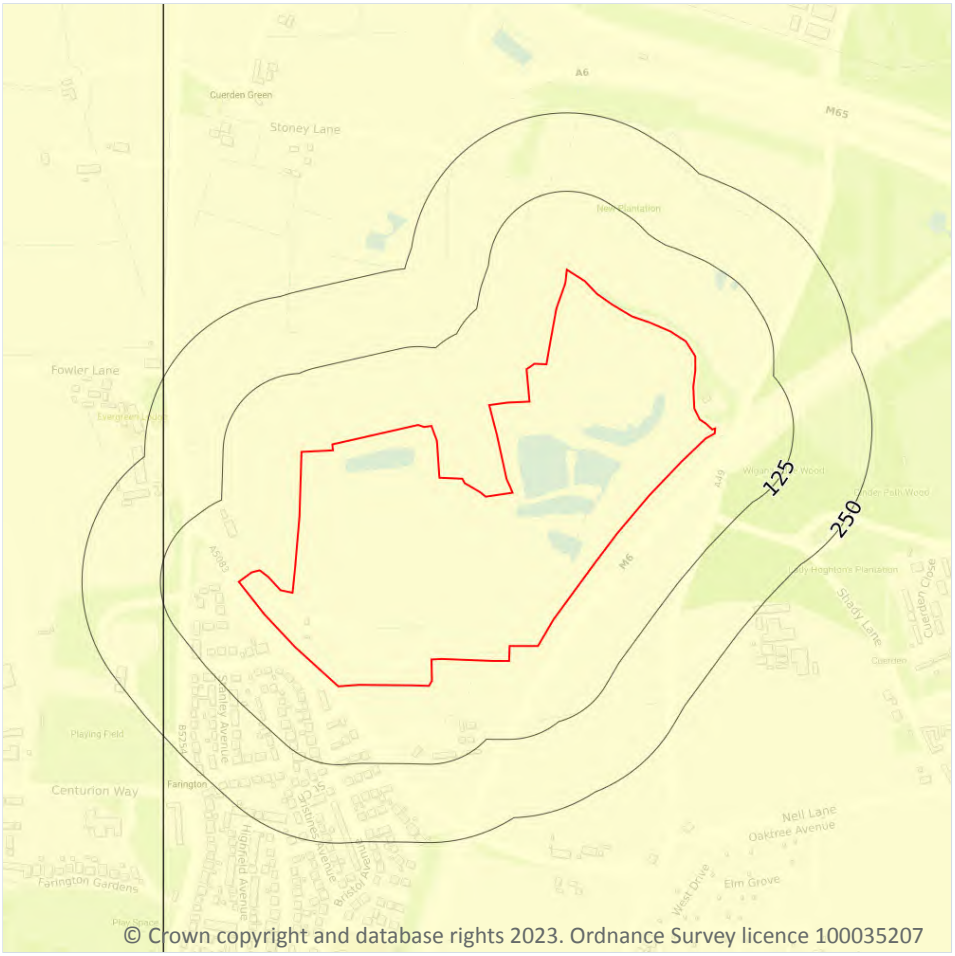
The potential hazard presented by rocks that can contain loosely-packed sandy layers that can become fluidised by water flowing through them. Such sands can 'run', removing support from overlying buildings and causing potential damage.

Features are displayed on the Natural ground subsidence - Running sands map on **page 101 >**

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



17.3 Compressible deposits

Records within 50m	1

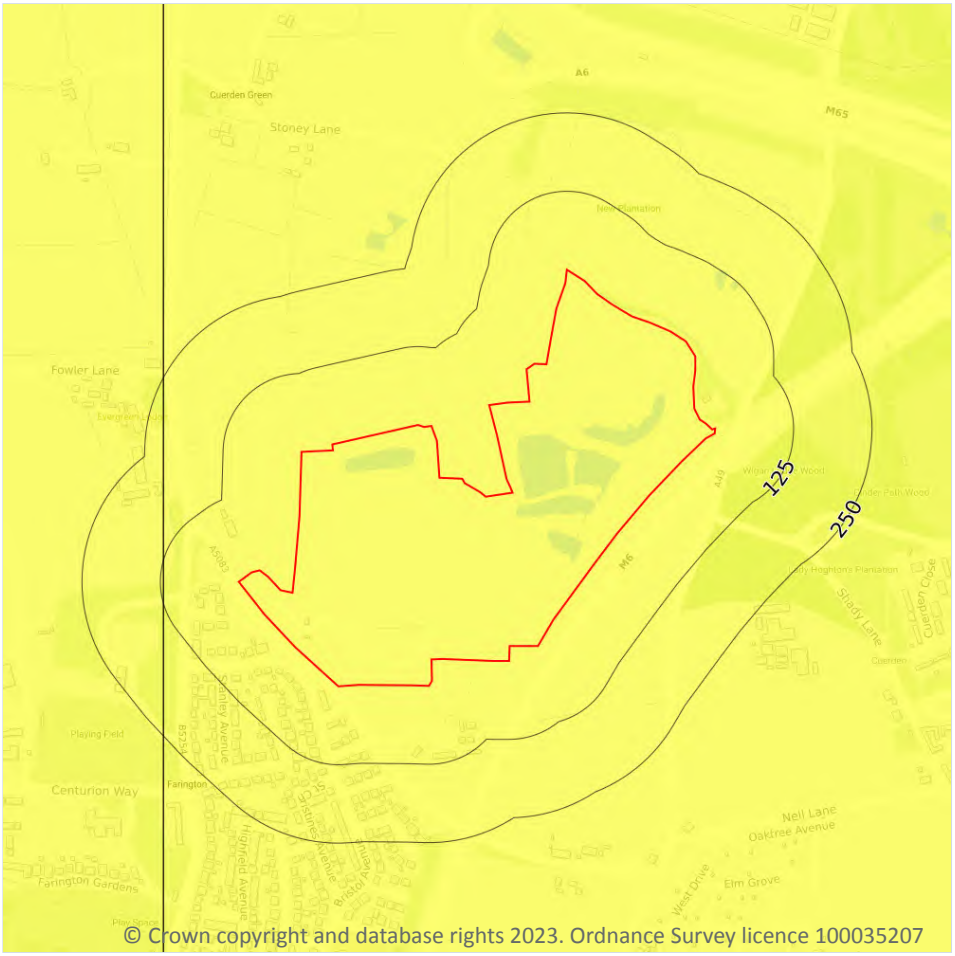
The potential hazard presented by types of ground that may contain layers of very soft materials like clay or peat and may compress if loaded by overlying structures, or if the groundwater level changes, potentially resulting in depression of the ground and disturbance of foundations.

Features are displayed on the Natural ground subsidence - Compressible deposits map on **page 102 >**

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

This data is sourced from the British Geological Survey.

Natural ground subsidence - Collapsible deposits



17.4 Collapsible deposits

Records within 50m	1

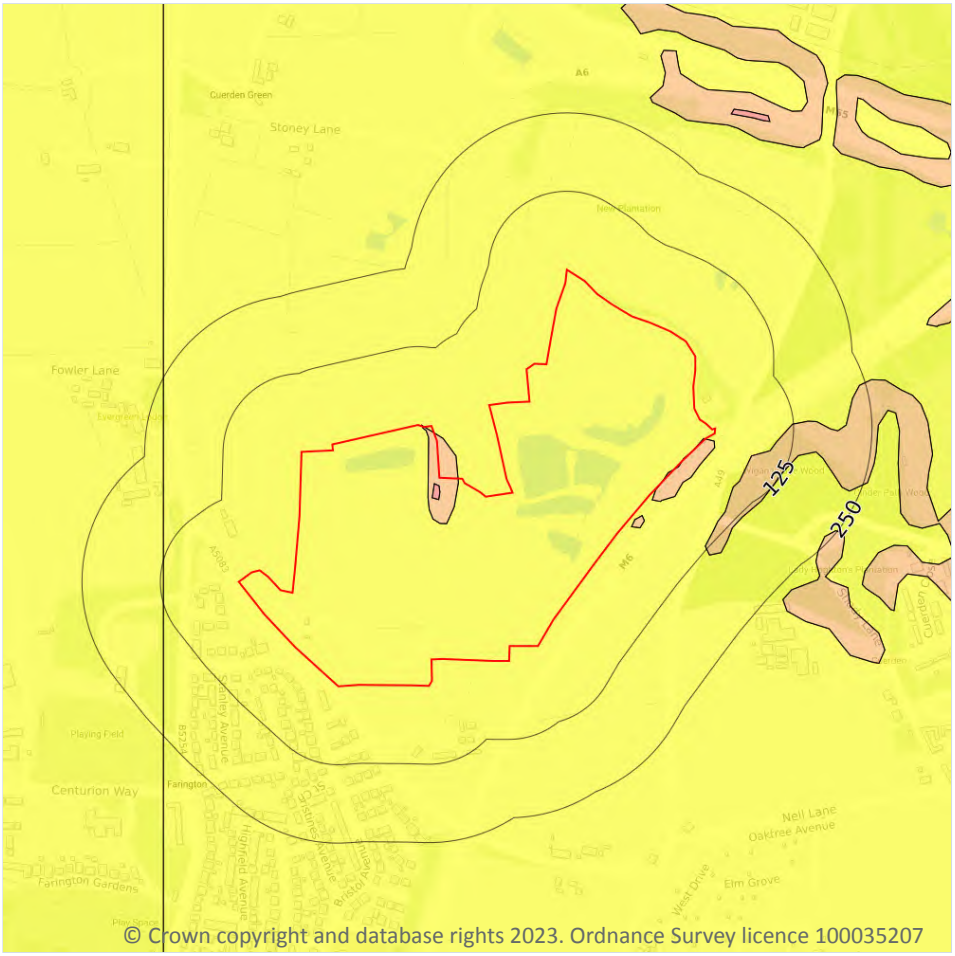
The potential hazard presented by natural deposits that could collapse when a load (such as a building) is placed on them or they become saturated with water.

Features are displayed on the Natural ground subsidence - Collapsible deposits map on **page 103 >**

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



17.5 Landslides

Records within 50m	4

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.

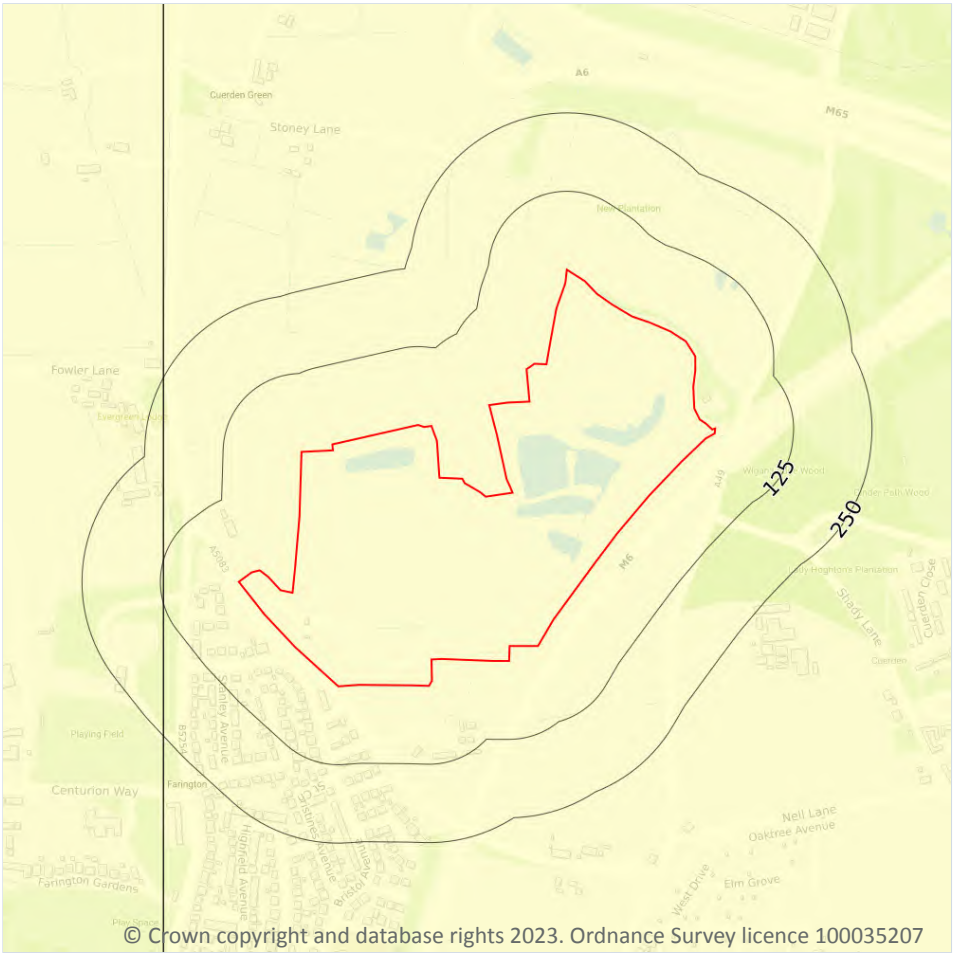
Features are displayed on the Natural ground subsidence - Landslides map on **page 104 >**

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

Location	Hazard rating	Details
On site	**Low**	**Slope instability problems may be present or anticipated. Site investigation should consider specifically the slope stability of the site.**
On site	**Moderate**	**Slope instability problems are probably present or have occurred in the past. Land use should consider specifically the stability of the site.**
7m E	Low	Slope instability problems may be present or anticipated. Site investigation should consider specifically the slope stability of the site.

This data is sourced from the British Geological Survey.

Natural ground subsidence - Ground dissolution of soluble rocks



17.6 Ground dissolution of soluble rocks

Records within 50m	1

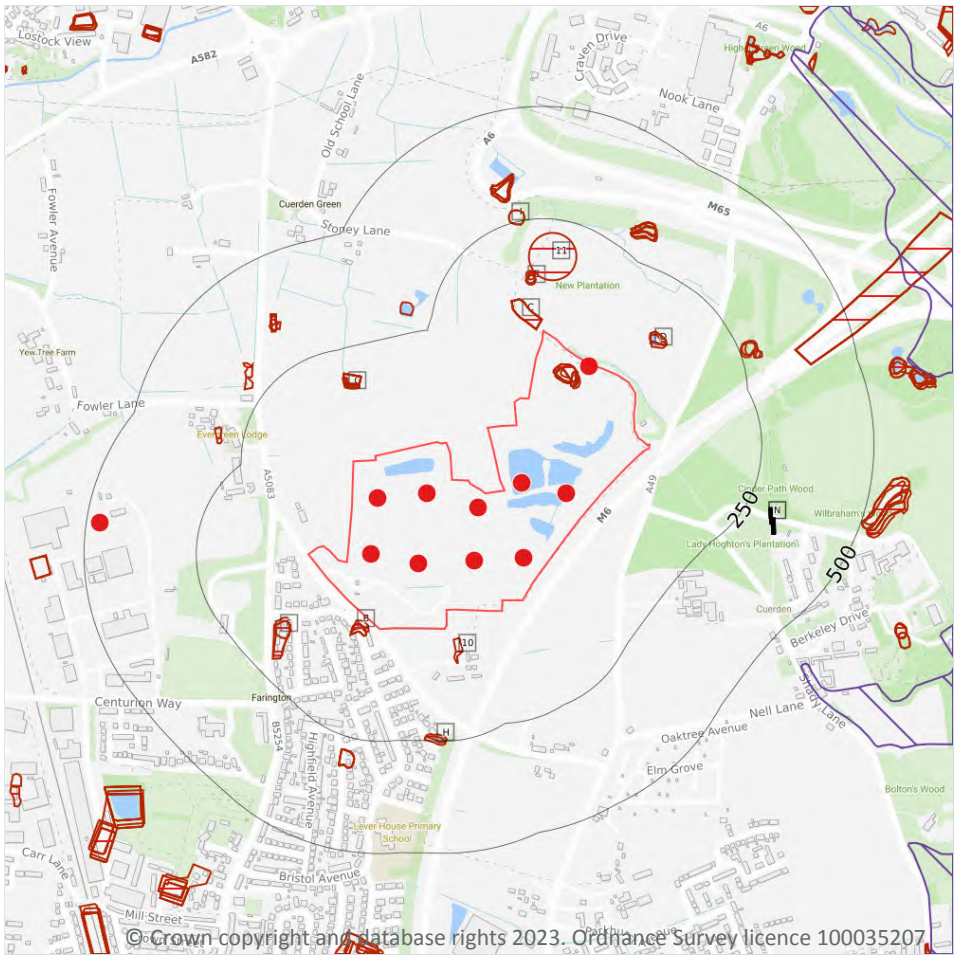
The potential hazard presented by ground dissolution, which occurs when water passing through soluble rocks produces underground cavities and cave systems. These cavities reduce support to the ground above and can cause localised collapse of the overlying rocks and deposits.

Features are displayed on the Natural ground subsidence - Ground dissolution of soluble rocks map on **page 106 >**

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

This data is sourced from the British Geological Survey.

18 Mining and ground workings



Site Outline

Search buffers in metres (m)

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

Non Coal Mining

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

18.1 BritPits

Records within 500m	11

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

Features are displayed on the Mining and ground workings map on **page 108 >**

ID	Location	Details	Description
1	On site	Name: Lydiate Lane Quarry Address: Cuerden, Leyland, PRESTON, Lancashire Commodity: Sand & Gravel Status: Inactive	Type: A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site Status description: Site which, at date of entry, is not extracting minerals, but which still has a valid planning permission to do so, and can restart at any time. May be considered Mothballed by operator.May be considered to have Active or Dormant planning permission
2	On site	Name: Lydiate Lane Quarry Address: Cuerden, Leyland, PRESTON, Lancashire Commodity: Sand & Gravel Status: Inactive	Type: A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site Status description: Site which, at date of entry, is not extracting minerals, but which still has a valid planning permission to do so, and can restart at any time. May be considered Mothballed by operator.May be considered to have Active or Dormant planning permission
3	On site	Name: Lydiate Lane Quarry Address: Cuerden, Leyland, PRESTON, Lancashire Commodity: Sand & Gravel Status: Inactive	Type: A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site Status description: Site which, at date of entry, is not extracting minerals, but which still has a valid planning permission to do so, and can restart at any time. May be considered Mothballed by operator.May be considered to have Active or Dormant planning permission
4	On site	Name: Lydiate Lane Quarry Address: Cuerden, Leyland, PRESTON, Lancashire Commodity: Sand & Gravel Status: Inactive	Type: A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site Status description: Site which, at date of entry, is not extracting minerals, but which still has a valid planning permission to do so, and can restart at any time. May be considered Mothballed by operator.May be considered to have Active or Dormant planning permission
5	On site	Name: Lydiate Lane Quarry Address: Cuerden, Leyland, PRESTON, Lancashire Commodity: Sand & Gravel Status: Inactive	Type: A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site Status description: Site which, at date of entry, is not extracting minerals, but which still has a valid planning permission to do so, and can restart at any time. May be considered Mothballed by operator.May be considered to have Active or Dormant planning permission

ID	Location	Details	Description
6	**On site**	**Name: Lydiate Lane Quarry** **Address: Cuerden, Leyland, PRESTON, Lancashire** **Commodity: Sand & Gravel** **Status: Inactive**	**Type: A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site** **Status description: Site which, at date of entry, is not extracting minerals, but which still has a valid planning permission to do so, and can restart at any time. May be considered Mothballed by operator.May be considered to have Active or Dormant planning permission**
7	**On site**	**Name: Lydiate Lane Quarry** **Address: Cuerden, Leyland, PRESTON, Lancashire** **Commodity: Sand & Gravel** **Status: Inactive**	**Type: A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site** **Status description: Site which, at date of entry, is not extracting minerals, but which still has a valid planning permission to do so, and can restart at any time. May be considered Mothballed by operator.May be considered to have Active or Dormant planning permission**
8	**On site**	**Name: Lydiate Lane Quarry** **Address: Cuerden, Leyland, PRESTON, Lancashire** **Commodity: Sand & Gravel** **Status: Inactive**	**Type: A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site** **Status description: Site which, at date of entry, is not extracting minerals, but which still has a valid planning permission to do so, and can restart at any time. May be considered Mothballed by operator.May be considered to have Active or Dormant planning permission**
9	**On site**	**Name: Lydiate Lane Quarry** **Address: Cuerden, Leyland, PRESTON, Lancashire** **Commodity: Sand & Gravel** **Status: Active**	**Type: A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site** **Status description: Site which is actively extracting mineral products, or in the case of wharfs and rail depots, is actively handing minerals**
A	**On site**	**Name: Cuerden Hall Sand Pit** **Address: Farington, LEYLAND, Lancashire** **Commodity: Sand** **Status: Ceased**	**Type: A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site** **Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority**
15	470m W	Name: Farington House Address: Farington, LEYLAND, Lancashire Commodity: Sand Status: Ceased	Type: A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority

This data is sourced from the British Geological Survey.

18.2 Surface ground workings

Records within 250m	50

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

Features are displayed on the Mining and ground workings map on **page 108 >**

ID	Location	Land Use	Year of mapping	Mapping scale
A	**On site**	**Old Sand Pit**	**1892**	**1:10560**
A	**On site**	**Old Sand Pit**	**1909**	**1:10560**
A	**On site**	**Unspecified Pit**	**1892**	**1:10560**
A	**On site**	**Unspecified Pit**	**1938**	**1:10560**
A	**On site**	**Unspecified Pit**	**1929**	**1:10560**
A	**On site**	**Unspecified Pit**	**1909**	**1:10560**
A	**On site**	**Unspecified Pit**	**1967**	**1:10560**
A	**On site**	**Unspecified Pit**	**1973**	**1:10000**
A	**On site**	**Unspecified Pit**	**1983**	**1:10000**
A	**On site**	**Unspecified Pit**	**1990**	**1:10000**
A	**On site**	**Unspecified Pit**	**1938**	**1:10560**
A	**On site**	**Unspecified Pit**	**1929**	**1:10560**
A	**On site**	**Unspecified Ground Workings**	**1938**	**1:10560**
A	**On site**	**Unspecified Ground Workings**	**1938**	**1:10560**
A	**On site**	**Unspecified Pit**	**1955**	**1:10560**
B	11m SW	Pond	1893	1:10560
C	16m N	Cuttings	1967	1:10560
C	16m N	Cuttings	1973	1:10000
C	16m N	Cuttings	1983	1:10000
C	16m N	Cuttings	1990	1:10000
B	20m SW	Pond	1938	1:10560
B	20m SW	Pond	1928	1:10560
B	20m SW	Pond	1909	1:10560

ID	Location	Land Use	Year of mapping	Mapping scale
10	31m S	Pond	1893	1:10560
D	95m NE	Ponds	1892	1:10560
D	100m NE	Ponds	1967	1:10560
D	100m NE	Ponds	1973	1:10000
D	100m NE	Ponds	1983	1:10000
E	107m N	Unspecified Pit	1938	1:10560
E	107m N	Unspecified Pit	1929	1:10560
E	107m N	Unspecified Pit	1909	1:10560
E	109m N	Unspecified Pit	1938	1:10560
11	114m N	Old Sand Pit	1892	1:10560
E	118m N	Unspecified Pit	1955	1:10560
F	125m SW	Ponds	1893	1:10560
F	130m SW	Pond	1928	1:10560
F	131m SW	Ponds	1909	1:10560
G	156m NW	Unspecified Ground Workings	1938	1:10560
G	156m NW	Unspecified Ground Workings	1929	1:10560
G	156m NW	Unspecified Ground Workings	1909	1:10560
G	158m NW	Unspecified Ground Workings	1938	1:10560
G	163m NW	Unspecified Pit	1967	1:10560
G	163m NW	Unspecified Pit	1973	1:10000
G	163m NW	Unspecified Pit	1983	1:10000
G	163m NW	Unspecified Pit	1990	1:10000
G	163m NW	Unspecified Pit	1955	1:10560
H	235m S	Pond	1893	1:10560
H	240m S	Pond	1909	1:10560
I	242m N	Unspecified Pit	1983	1:10000
I	242m N	Unspecified Pit	1990	1:10000

This is data is sourced from Ordnance Survey/Groundsure.

18.3 Underground workings

Records within 1000m	8

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

Features are displayed on the Mining and ground workings map on **page 108 >**

ID	Location	Land Use	Year of mapping	Mapping scale
N	300m E	Tunnel	1967	1:10560
N	300m E	Tunnel	1973	1:10000
N	300m E	Tunnel	1983	1:10000
N	300m E	Tunnel	1990	1:10000
N	300m E	Tunnel	1951	1:10560
N	315m E	Tunnel	1931	1:10560
N	315m E	Tunnel	1909	1:10560
N	317m E	Tunnel	1893	1:10560

This is data is sourced from Ordnance Survey/Groundsure.

18.4 Underground mining extents

Records within 500m	0

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

This data is sourced from Groundsure.

18.5 Historical Mineral Planning Areas

Records within 500m	0

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

This data is sourced from the British Geological Survey.

18.6 Non-coal mining

Records within 1000m	0

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

This data is sourced from the British Geological Survey.

18.7 JPB mining areas

Records on site	1

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

Location	Details
On site	**Whilst outside of an area where The Coal Authority have information on coal mining activities, Johnson Poole & Bloomer (JPB) may have information such as mining plans and maps held within their archive that have occurred within 1km of this property. Please note, the plans held by JPB may also relate to non-mining records. Further details and a quote for services (if appropriate) can be obtained by emailing this report to enquiries.gs@jpb.co.uk ↗.**

This data is sourced from Johnson Poole and Bloomer.

18.8 The Coal Authority non-coal mining

Records within 500m	0

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

This data is sourced from The Coal Authority.

18.9 Researched mining

Records within 500m	16

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

risk have been captured.

Location	Mineral type
On site	**Stone**
On site	**Stone**
On site	**Stone**
On site	**Stone**
On site	**Stone**
On site	**Stone**
57m NE	Stone
94m NE	Stone
95m NE	Stone
96m NE	Stone
99m NE	Stone
105m NE	Stone
235m NE	Stone
252m N	Stone
292m NE	Stone
299m NE	Stone

This data is sourced from Groundsure.

18.10 Mining record office plans

Records within 500m	**0**

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

This data is sourced from Groundsure.

18.11 BGS mine plans

Records within 500m	0

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

This data is sourced from Groundsure.

18.12 Coal mining

Records on site	0

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

This data is sourced from the Coal Authority.

18.13 Brine areas

Records on site	0

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

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

18.14 Gypsum areas

Records on site	0

Generalised areas that may be affected by gypsum extraction.

This data is sourced from British Gypsum.

18.15 Tin mining

Records on site	0

Generalised areas that may be affected by historical tin mining.

This data is sourced from Groundsure.

18.16 Clay mining

Records on site	0

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

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

19 Ground cavities and sinkholes

19.1 Natural cavities

Records within 500m	0

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

This data is sourced from Stantec UK Ltd.

19.2 Mining cavities

Records within 1000m	0

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

This data is sourced from Stantec UK Ltd.

19.3 Reported recent incidents

Records within 500m	0

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

This data is sourced from Groundsure.

19.4 Historical incidents

Records within 500m	0

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

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

This data is sourced from Groundsure.

19.5 National karst database

Records within 500m	0

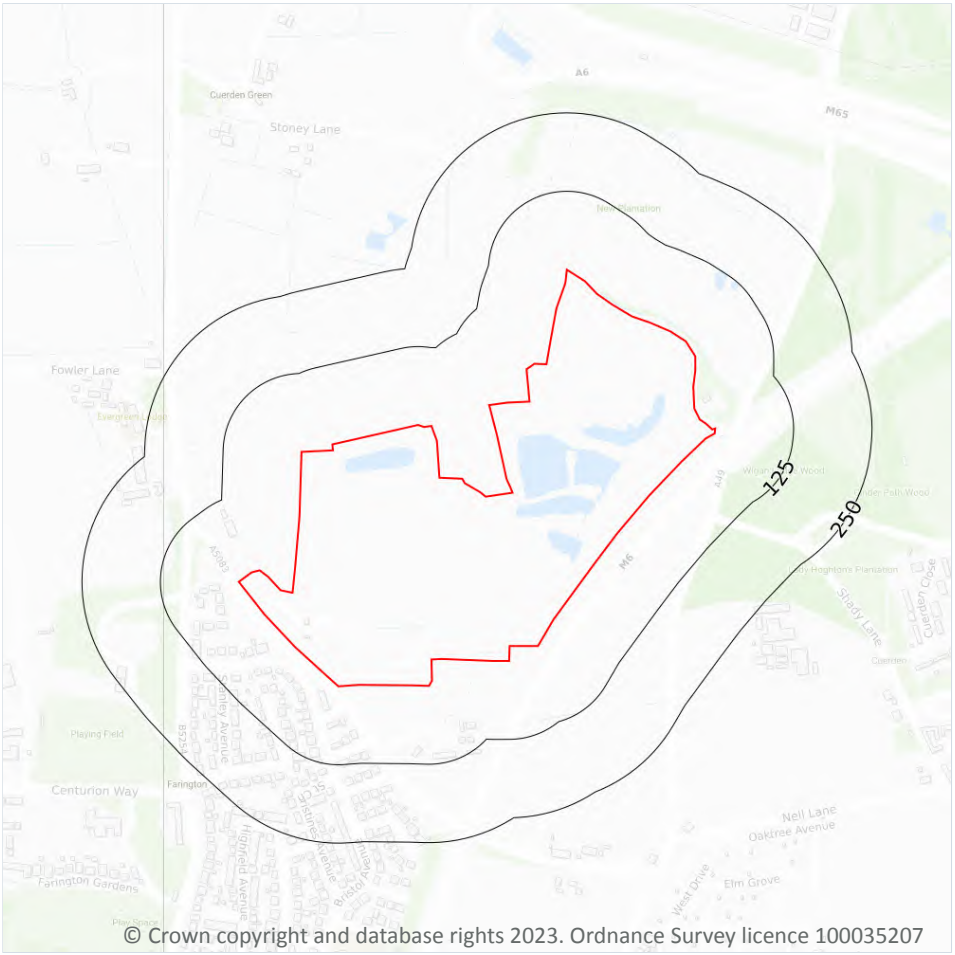
This is a comprehensive database of national karst information gathered from a wide range of sources. BGS have collected data on five main types of karst feature: Sinkholes, stream links, caves, springs, and incidences of associated damage to buildings, roads, bridges and other engineered works.

Since the database was set up in 2002 data covering most of the evaporite karst areas of the UK have now been added, along with data covering about 60% of the Chalk, and 35% of the Carboniferous Limestone outcrops. Many of the classic upland karst areas have yet to be included. Recorded so far are: Over 800 caves, 1300 stream sinks, 5600 springs, 10,000 sinkholes.

The database is not yet complete, and not all records have been verified. The absence of data does not mean that karst features are not present at a site. A reliability rating is included with each record.

This data is sourced from the British Geological Survey.

20 Radon



20.1 Radon

Records on site	1

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

Features are displayed on the Radon map on **page 120 >**

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

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

21 Soil chemistry

21.1 BGS Estimated Background Soil Chemistry

Records within 50m	**14**

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

Location	Arsenic	Bioaccessible Arsenic	Lead	Bioaccessible Lead	Cadmium	Chromium	Nickel
On site	**15 mg/kg**	**No data**	**100 mg/kg**	**60 mg/kg**	**1.8 mg/kg**	**90 - 120 mg/kg**	**15 - 30 mg/kg**
On site	**15 mg/kg**	**No data**	**100 mg/kg**	**60 mg/kg**	**1.8 mg/kg**	**90 - 120 mg/kg**	**15 - 30 mg/kg**
On site	**15 mg/kg**	**No data**	**100 mg/kg**	**60 mg/kg**	**1.8 mg/kg**	**90 - 120 mg/kg**	**15 - 30 mg/kg**
On site	**15 mg/kg**	**No data**	**100 mg/kg**	**60 mg/kg**	**1.8 mg/kg**	**90 - 120 mg/kg**	**15 - 30 mg/kg**
On site	**15 mg/kg**	**No data**	**100 mg/kg**	**60 mg/kg**	**1.8 mg/kg**	**90 - 120 mg/kg**	**15 - 30 mg/kg**
On site	**15 mg/kg**	**No data**	**100 mg/kg**	**60 mg/kg**	**1.8 mg/kg**	**90 - 120 mg/kg**	**15 - 30 mg/kg**
On site	**15 mg/kg**	**No data**	**100 mg/kg**	**60 mg/kg**	**1.8 mg/kg**	**90 - 120 mg/kg**	**15 - 30 mg/kg**
On site	**15 mg/kg**	**No data**	**100 mg/kg**	**60 mg/kg**	**1.8 mg/kg**	**90 - 120 mg/kg**	**15 - 30 mg/kg**
On site	**15 mg/kg**	**No data**	**100 mg/kg**	**60 mg/kg**	**1.8 mg/kg**	**90 - 120 mg/kg**	**15 - 30 mg/kg**
On site	**15 mg/kg**	**No data**	**100 mg/kg**	**60 mg/kg**	**1.8 mg/kg**	**90 - 120 mg/kg**	**15 - 30 mg/kg**
On site	**15 mg/kg**	**No data**	**100 mg/kg**	**60 mg/kg**	**1.8 mg/kg**	**90 - 120 mg/kg**	**15 - 30 mg/kg**
On site	**15 mg/kg**	**No data**	**100 mg/kg**	**60 mg/kg**	**1.8 mg/kg**	**90 - 120 mg/kg**	**15 - 30 mg/kg**
On site	**15 mg/kg**	**No data**	**100 mg/kg**	**60 mg/kg**	**1.8 mg/kg**	**90 - 120 mg/kg**	**15 - 30 mg/kg**
37m W	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	90 - 120 mg/kg	15 - 30 mg/kg

This data is sourced from the British Geological Survey.

21.2 BGS Estimated Urban Soil Chemistry

Records within 50m	0

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

This data is sourced from the British Geological Survey.

21.3 BGS Measured Urban Soil Chemistry

Records within 50m	0

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

This data is sourced from the British Geological Survey.

22 Railway infrastructure and projects

22.1 Underground railways (London)

Records within 250m	0

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

This data is sourced from publicly available information by Groundsure.

22.2 Underground railways (Non-London)

Records within 250m	0

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

This data is sourced from publicly available information by Groundsure.

22.3 Railway tunnels

Records within 250m	0

Railway tunnels taken from contemporary Ordnance Survey mapping.

This data is sourced from the Ordnance Survey.

22.4 Historical railway and tunnel features

Records within 250m	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.

22.5 Royal Mail tunnels

Records within 250m	0

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

This data is sourced from Groundsure/the Postal Museum.

22.6 Historical railways

Records within 250m	0

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

This data is sourced from OpenStreetMap.

22.7 Railways

Records within 250m	0

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

This data is sourced from Ordnance Survey and OpenStreetMap.

22.8 Crossrail 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.

22.9 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.

22.10 HS2

Records within 500m	0

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

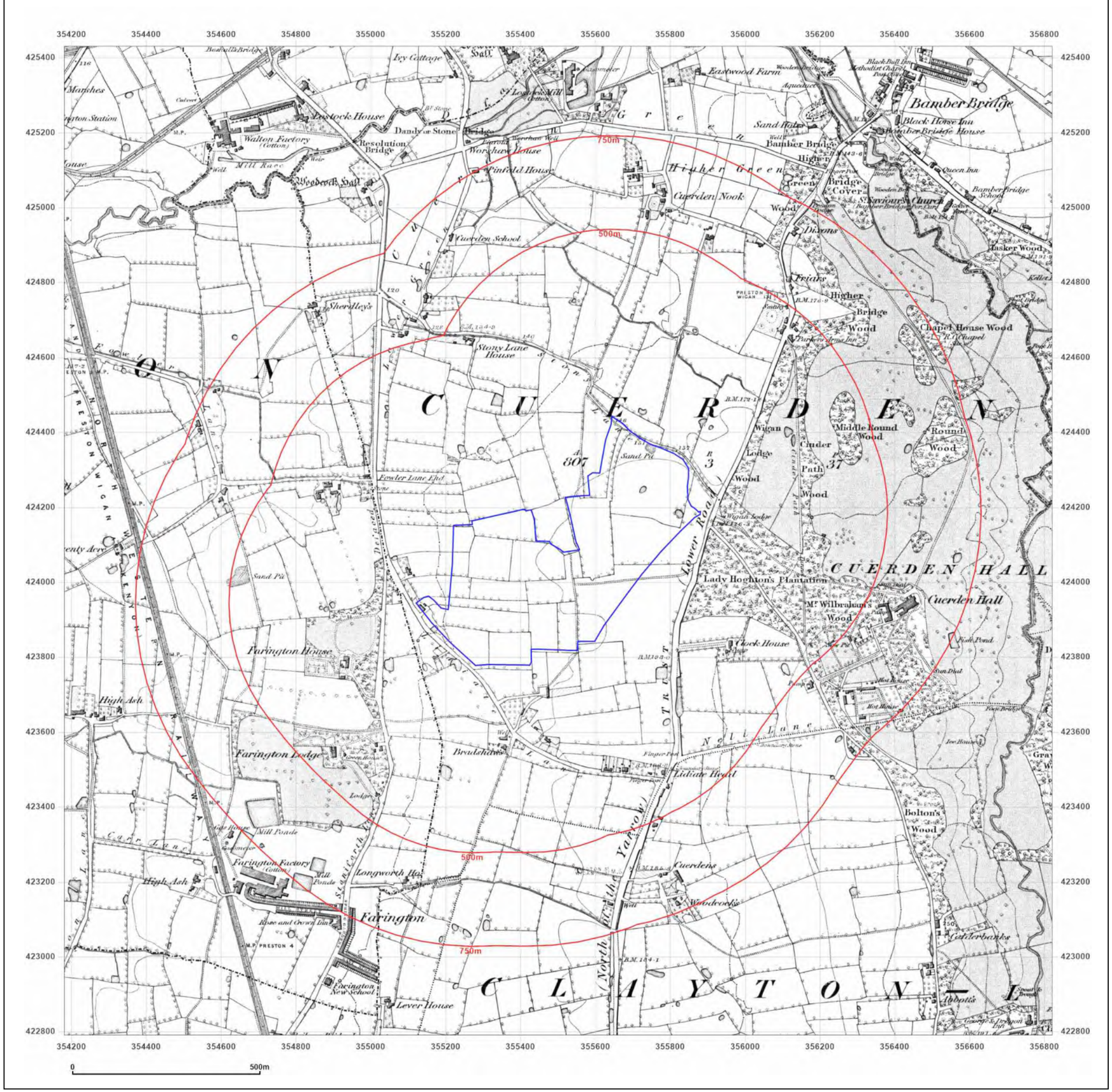
This data is sourced from HS2 ltd.

Data providers

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

Terms and conditions

Groundsure's Terms and Conditions can be accessed at this link: https://www.groundsure.com/terms-and-conditions-april-2023/ ↗.



Groundsure
INSIGHTS

Site Details:

355376 , 423956

Client Ref:	K0217_Lydiate_Lane_LF_PO142760
Report Ref:	GS-V8T-IDQ-EDT-I9G
Grid Ref:	355500, 424110

Map Name:	County Series
Map date:	**1848**
Scale:	1:10,560
Printed at:	1:10,560

N
W E
S

Surveyed 1846
Revised N/A
Edition 1848
Copyright N/A
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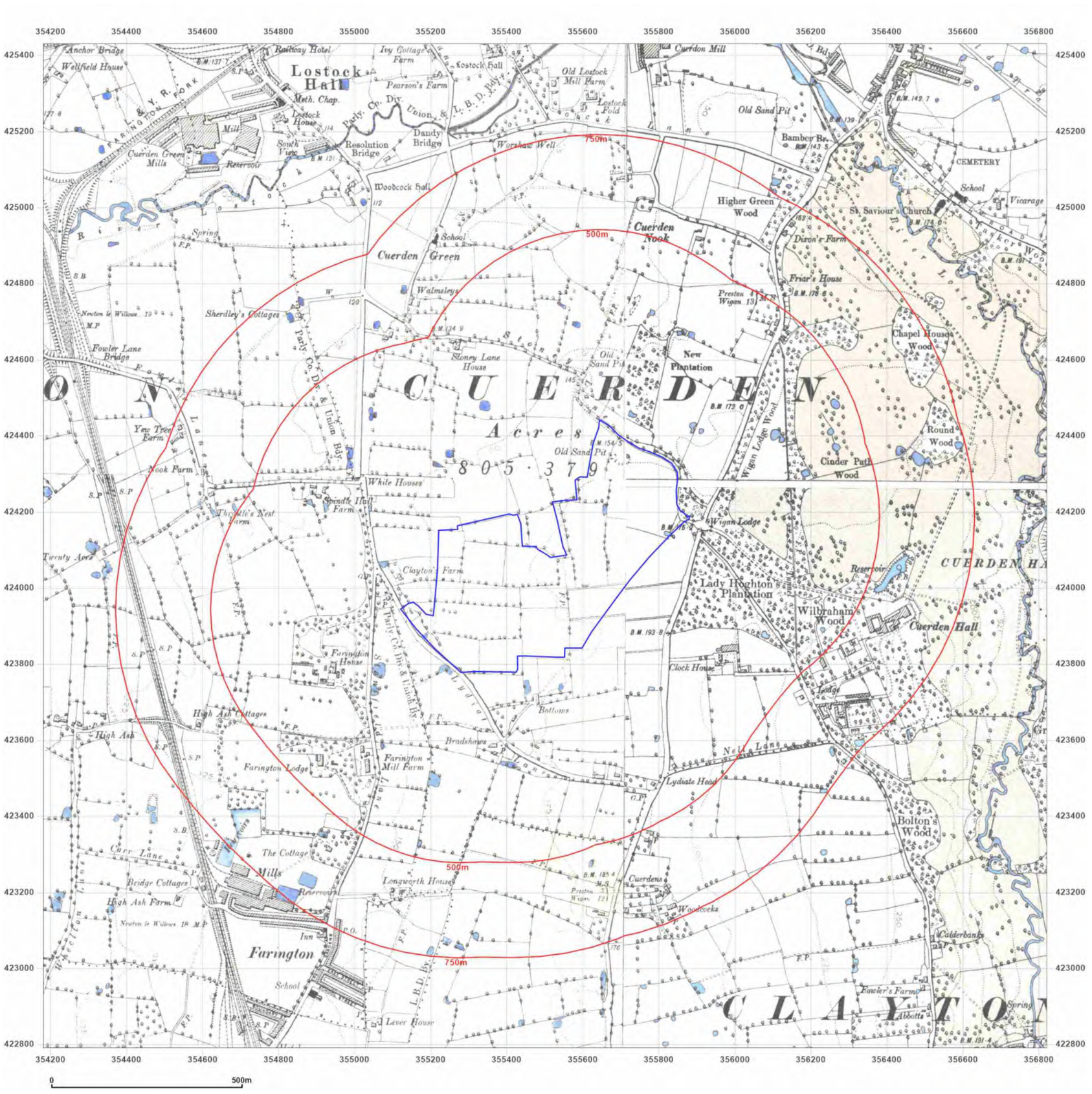
Production date: 14 September 2023

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



Groundsure INSIGHTS

Site Details:

355376 , 423956

Client Ref: K0217_Lydiate_Lane_LF_PO142760
Report Ref: GS-V8T-IDQ-EDT-I9G
Grid Ref: 355500, 424110

Map Name: County Series

Map date: **1892-1893**

Scale: 1:10,560

Printed at: 1:10,560

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

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

Surveyed 1893
Revised 1893
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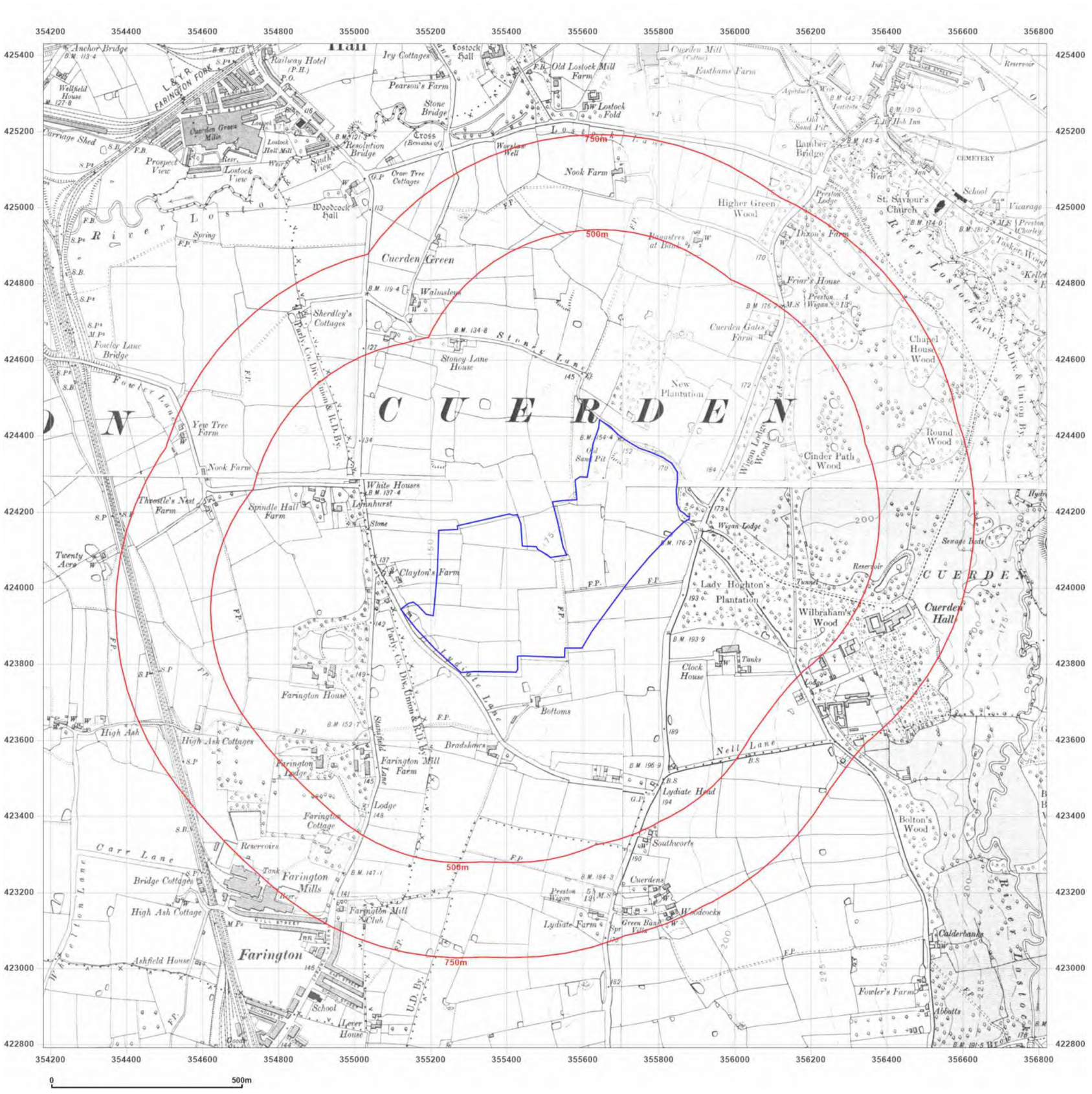

Groundsure INSIGHTS

Site Details:

355376 , 423956

Client Ref: K0217_Lydiate_Lane_LF_PO142760
Report Ref: GS-V8T-IDQ-EDT-I9G
Grid Ref: 355500, 424110

Map Name: County Series

Map date: **1909**

Scale: 1:10,560

Printed at: 1:10,560

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Surveyed 1847
Revised 1909
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1844
Revised 1909
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1844
Revised 1909
Edition N/A
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Levelled N/A

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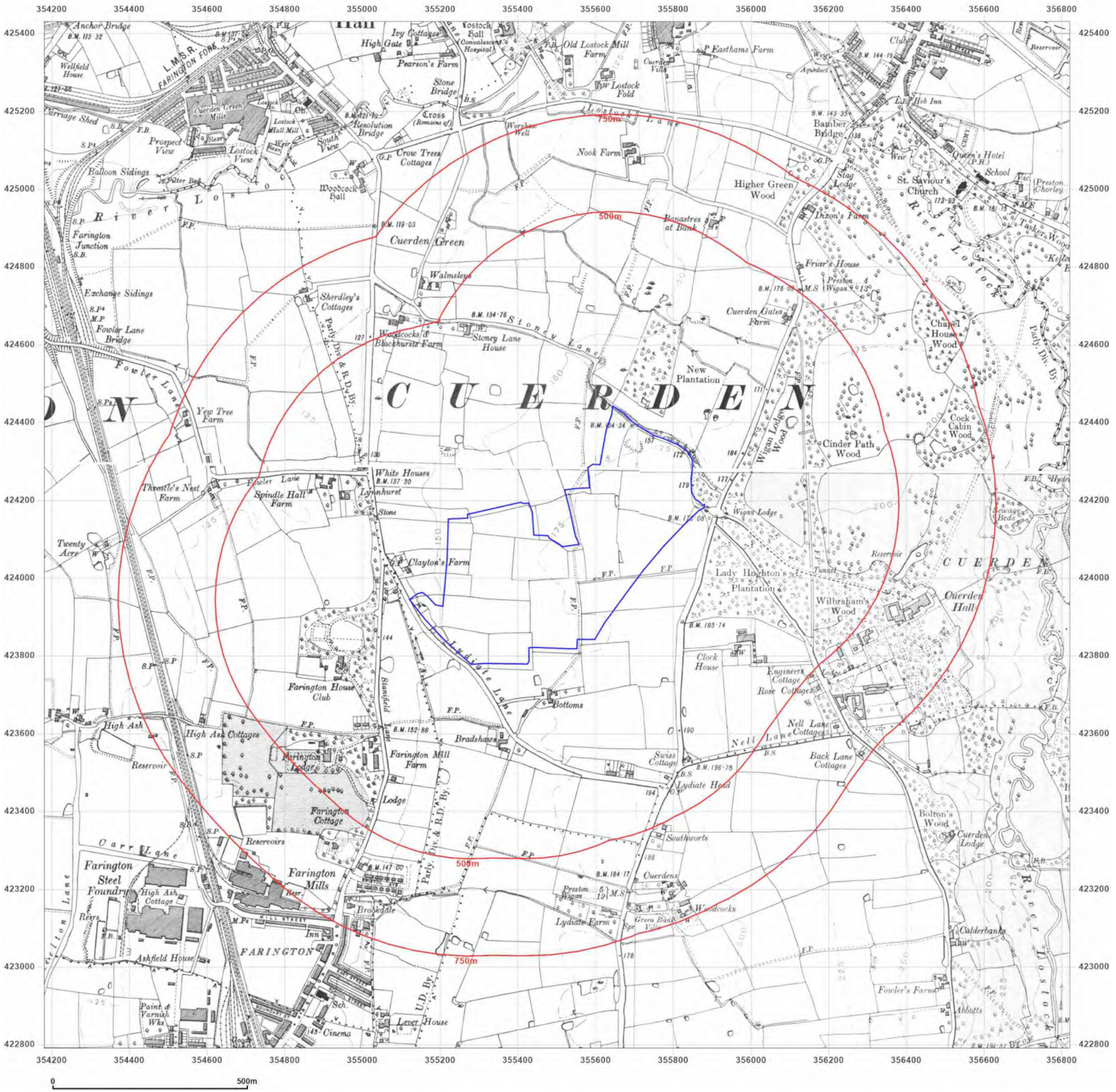

Groundsure INSIGHTS

Site Details:

355376 , 423956

Client Ref: K0217_Lydiate_Lane_LF_PO142760
Report Ref: GS-V8T-IDQ-EDT-I9G
Grid Ref: 355500, 424110

Map Name: County Series

Map date: **1928-1931**

Scale: 1:10,560

Printed at: 1:10,560

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Surveyed 1847
Revised 1929
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1844
Revised 1929
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1844
Revised 1928
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1844
Revised 1931
Edition N/A
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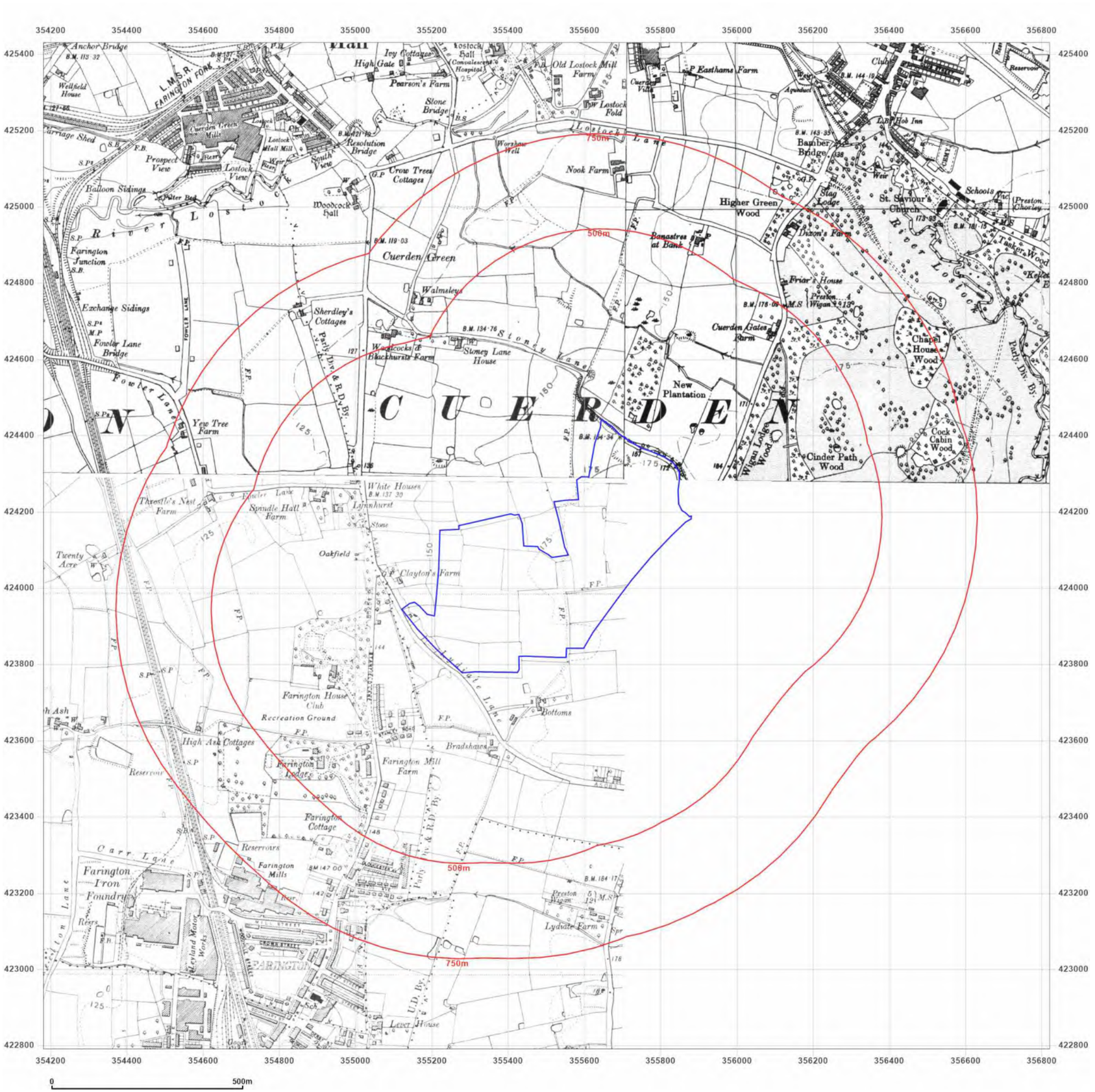
Production date: 14 September 2023

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



Groundsure INSIGHTS

Site Details:

355376 , 423956

Client Ref: K0217_Lydiate_Lane_LF_PO142760
Report Ref: GS-V8T-IDQ-EDT-I9G
Grid Ref: 355500, 424110

Map Name: County Series

Map date: **1938**

Scale: 1:10,560

Printed at: 1:10,560

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Surveyed 1847
Revised 1938
Edition N/A
Copyright N/A
Levelled 1927

Surveyed 1844
Revised 1938
Edition N/A
Copyright N/A
Levelled 1927

Surveyed 1844
Revised 1938
Edition N/A
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Production date: 14 September 2023

Map legend available at:
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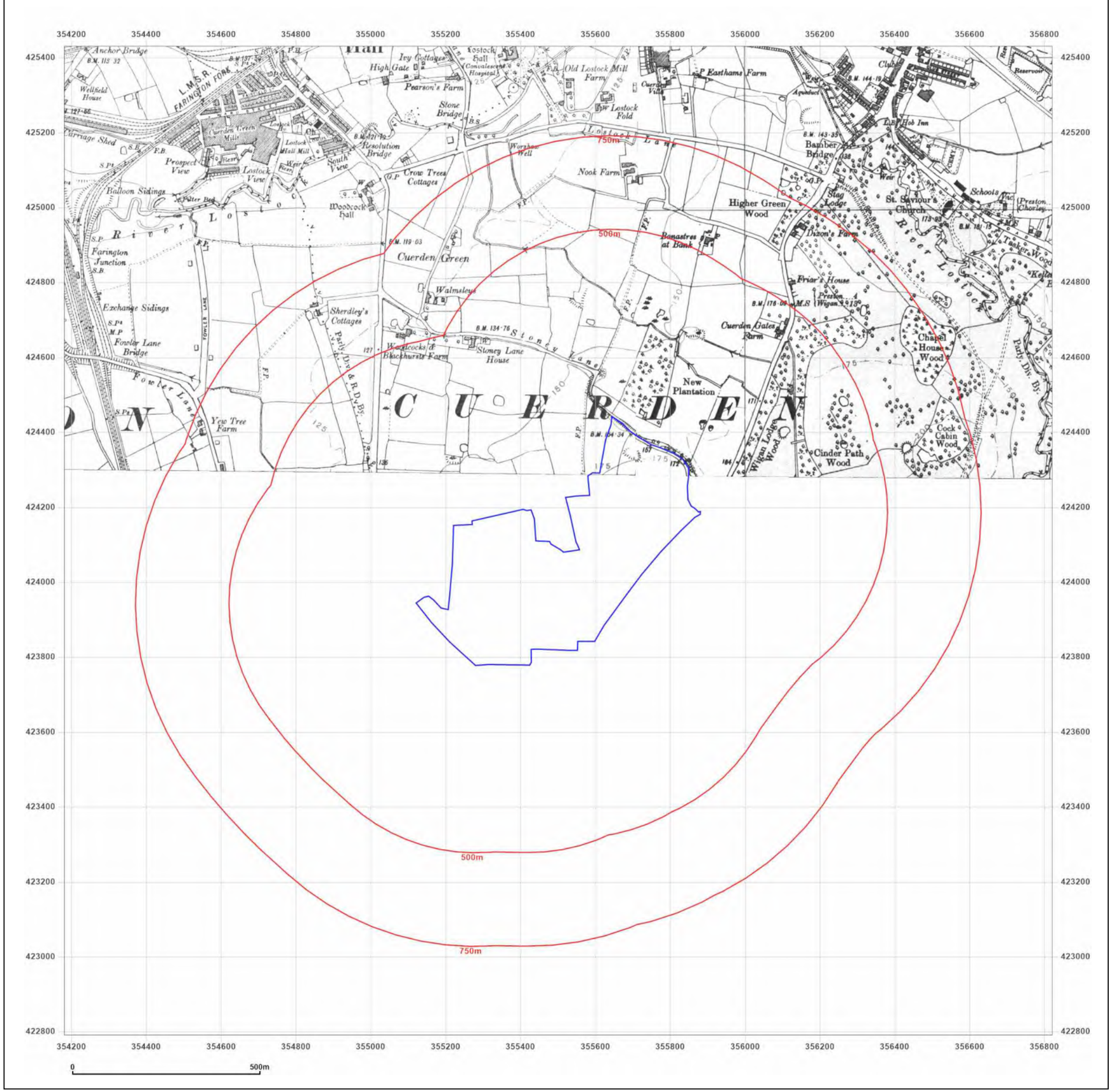

Groundsure INSIGHTS

Site Details:

355376 , 423956

Client Ref: K0217_Lydiate_Lane_LF_PO142760
Report Ref: GS-V8T-IDQ-EDT-I9G
Grid Ref: 355500, 424110

Map Name: County Series

Map date: **1938**

Scale: 1:10,560

Printed at: 1:10,560

N
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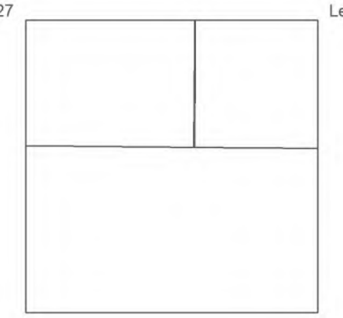
Surveyed 1847
Revised 1938
Edition N/A
Copyright N/A
Levelled 1927

Surveyed 1844
Revised 1938
Edition N/A
Copyright N/A
Levelled 1927



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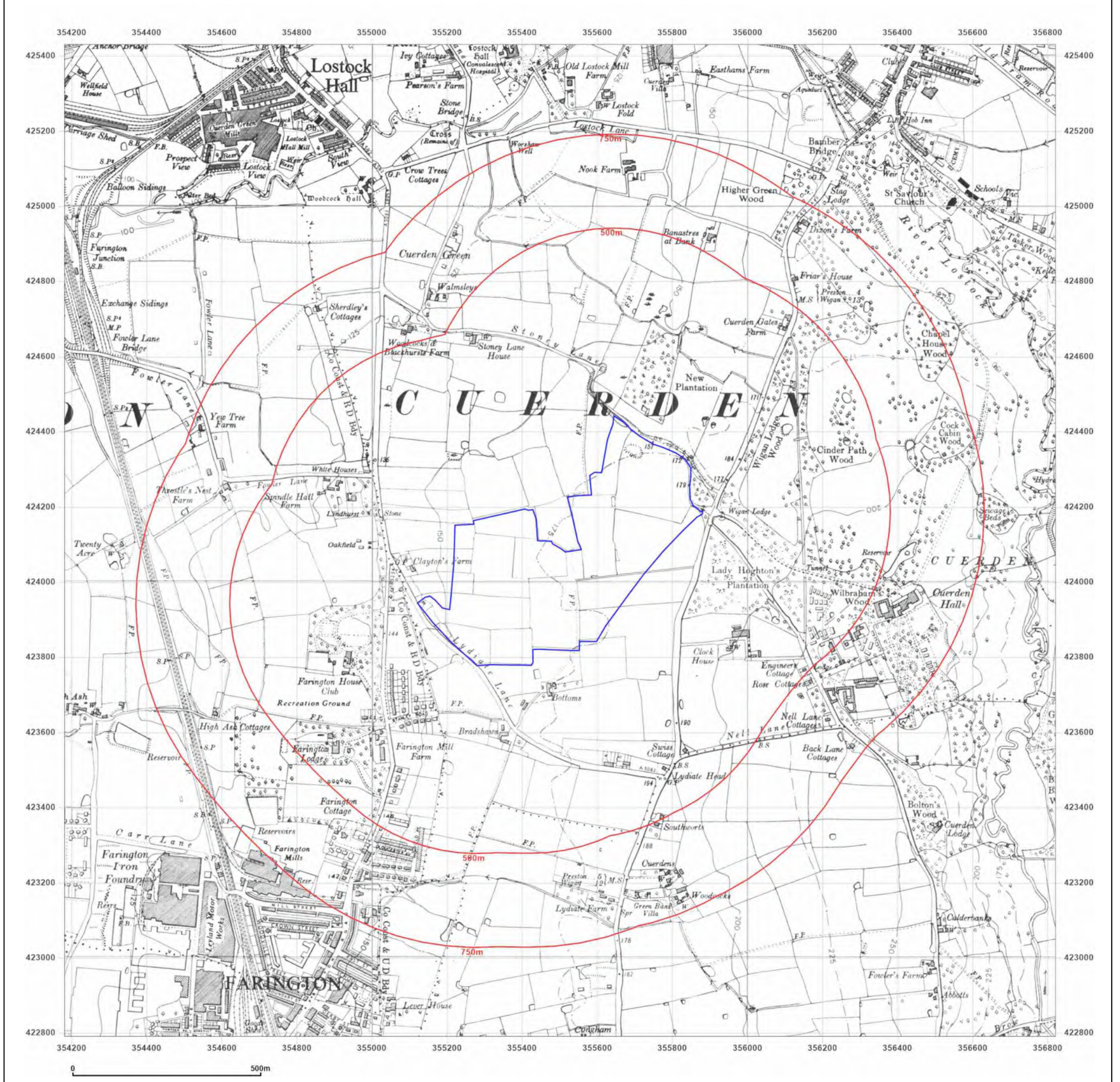

Groundsure INSIGHTS

Site Details:

355376 , 423956

Client Ref: K0217_Lydiate_Lane_LF_PO142760
Report Ref: GS-V8T-IDQ-EDT-I9G
Grid Ref: 355500, 424110

Map Name: Provisional
Map date: **1955-1956**
Scale: 1:10,560
Printed at: 1:10,560

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Surveyed 1951
Revised 1955
Edition N/A
Copyright N/A
Levelled N/A

Surveyed N/A
Revised 1955
Edition N/A
Copyright 1956
Levelled N/A

Surveyed 1951
Revised 1955
Edition N/A
Copyright N/A
Levelled N/A

Surveyed N/A
Revised 1955
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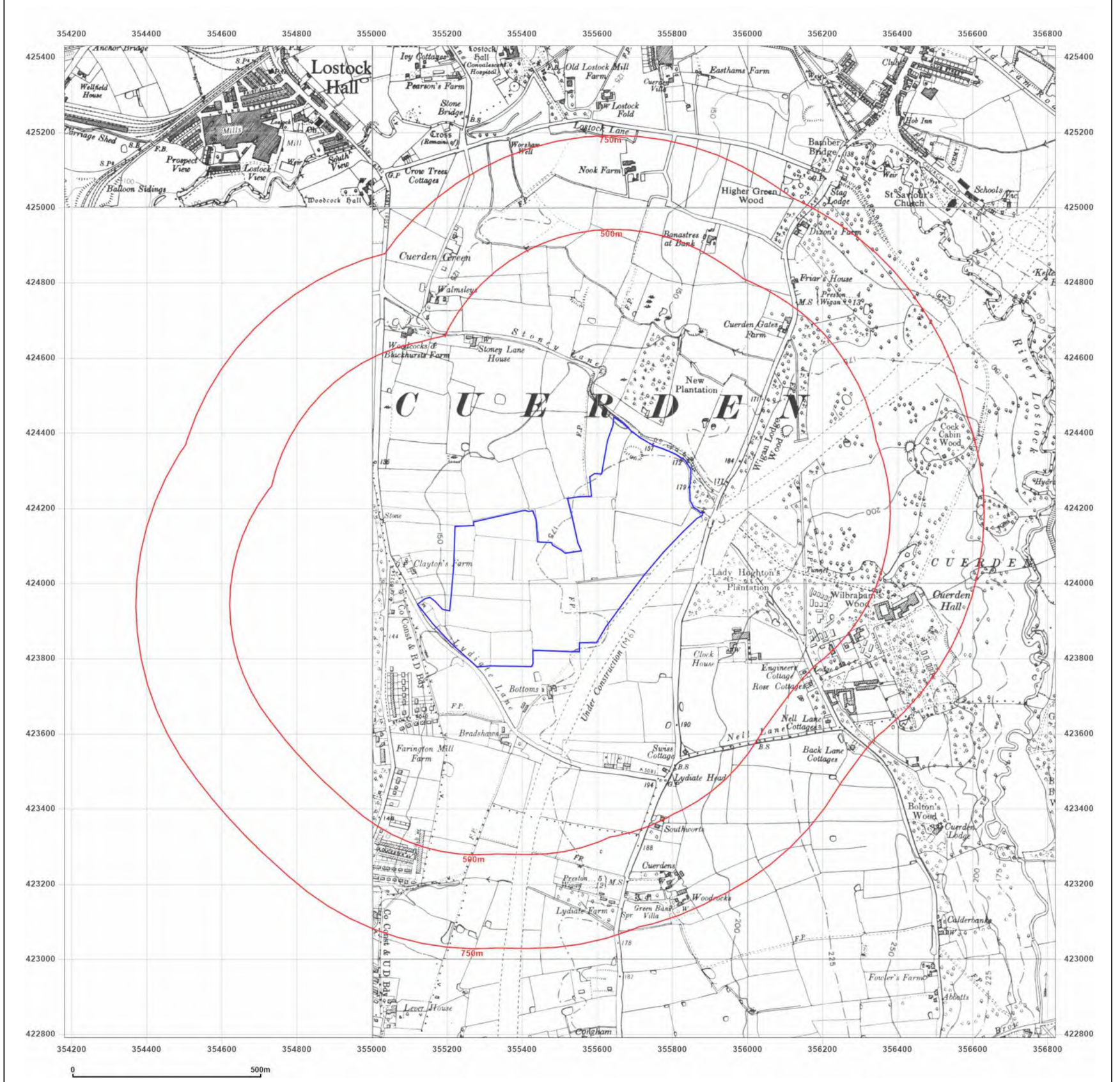

Groundsure INSIGHTS

Site Details:

355376 , 423956

Client Ref: K0217_Lydiate_Lane_LF_PO142760
Report Ref: GS-V8T-IDQ-EDT-I9G
Grid Ref: 355500, 424110

Map Name: Provisional
Map date: **1958-1962**
Scale: 1:10,560
Printed at: 1:10,560

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Surveyed 1951
Revised 1958
Edition N/A
Copyright 1955
Levelled N/A

Surveyed N/A
Revised 1962
Edition N/A
Copyright 1956
Levelled N/A

Surveyed N/A
Revised 1962
Edition 1955
Copyright N/A
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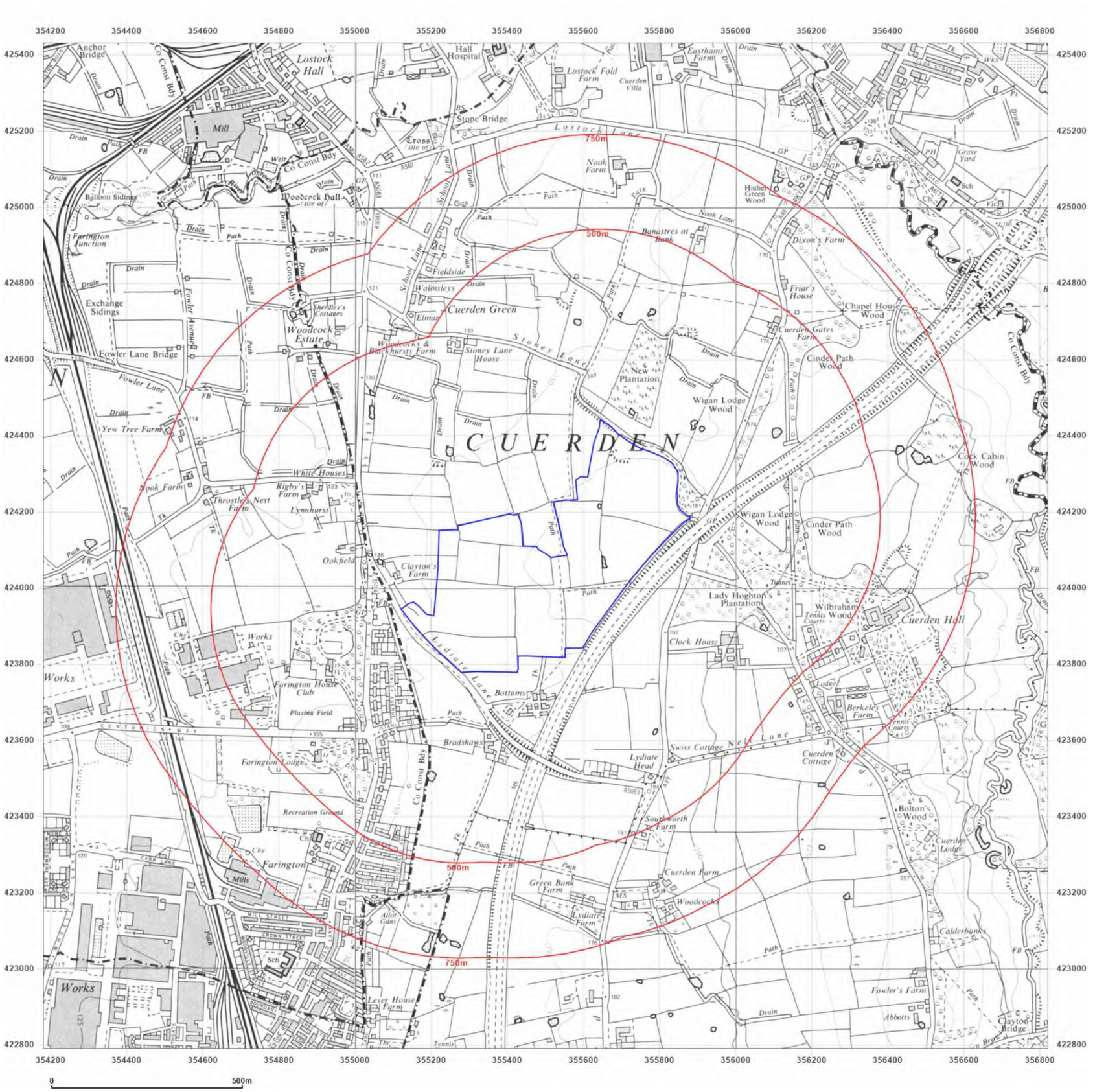

Groundsure INSIGHTS

Site Details:

355376 , 423956

Client Ref: K0217_Lydiate_Lane_LF_PO142760
Report Ref: GS-V8T-IDQ-EDT-I9G
Grid Ref: 355500, 424110

Map Name: Provisional
Map date: **1967-1968**
Scale: 1:10,560
Printed at: 1:10,560

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Surveyed 1968
Revised 1968
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1968
Revised 1968
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1967
Revised 1967
Edition N/A
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Surveyed 1967
Revised 1967
Edition N/A
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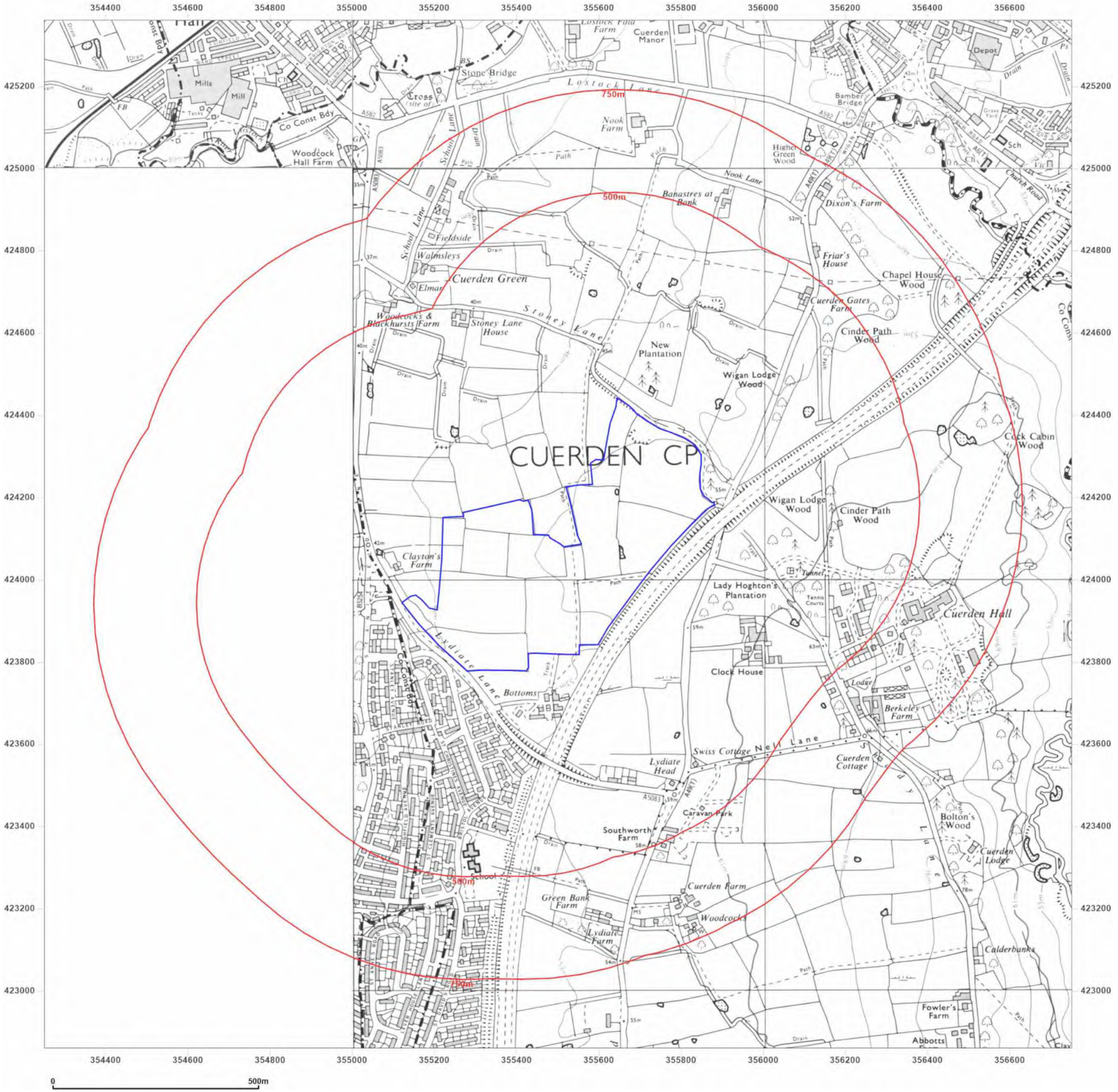

Groundsure INSIGHTS

Site Details:

355376 , 423956

Client Ref: K0217_Lydiate_Lane_LF_PO142760
Report Ref: GS-V8T-IDQ-EDT-I9G
Grid Ref: 355500, 424110

Map Name: National Grid
Map date: **1973-1974**
Scale: 1:10,000
Printed at: 1:10,000

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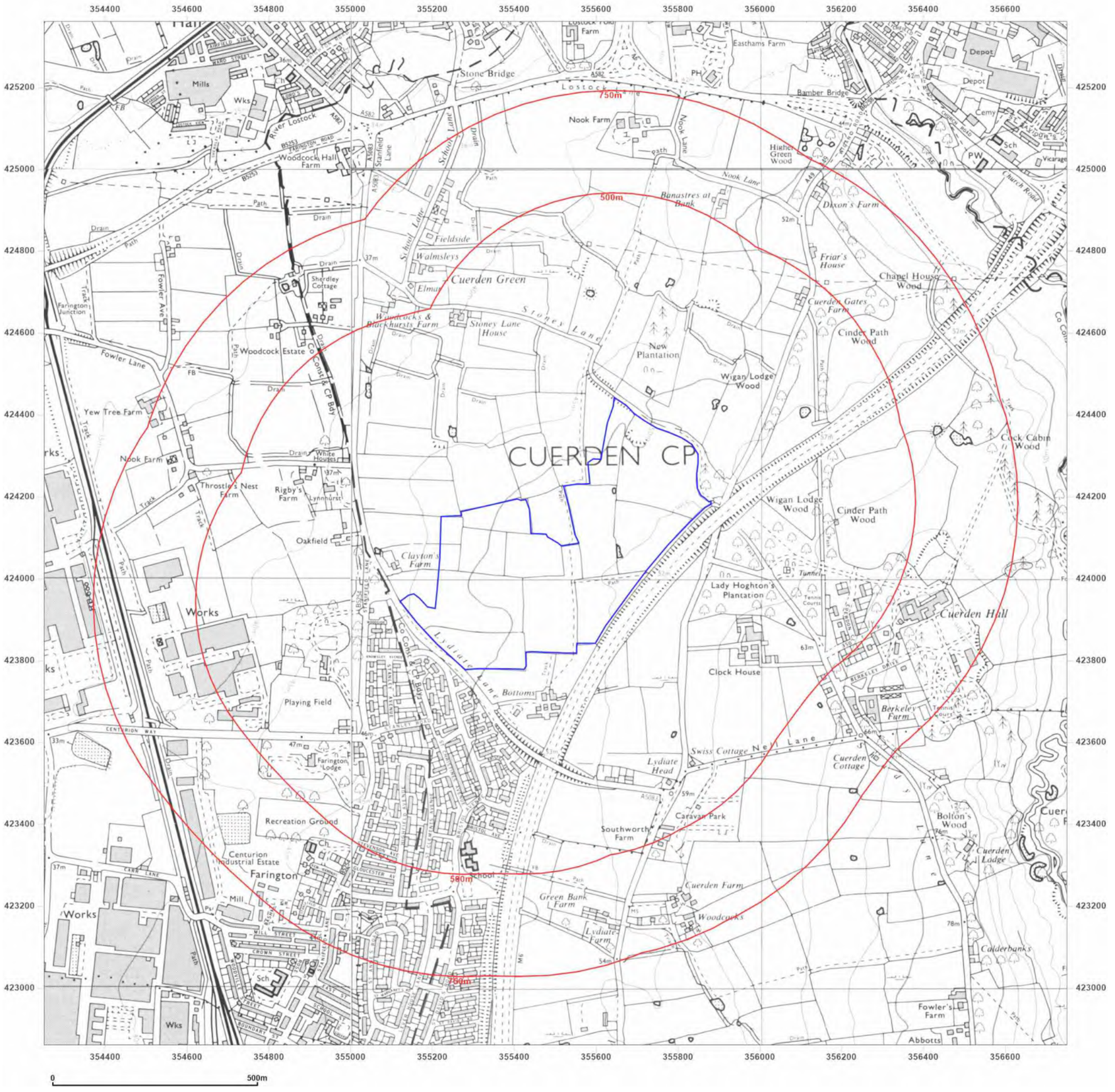

Groundsure INSIGHTS

Site Details:

355376 , 423956

Client Ref: K0217_Lydiate_Lane_LF_PO142760
Report Ref: GS-V8T-IDQ-EDT-I9G
Grid Ref: 355500, 424110

Map Name: National Grid

Map date: **1982-1987**

Scale: 1:10,000

Printed at: 1:10,000

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Surveyed 1981
Revised 1982
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1983
Revised 1987
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1982
Revised 1982
Edition N/A
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Levelled N/A

Surveyed 1982
Revised 1983
Edition N/A
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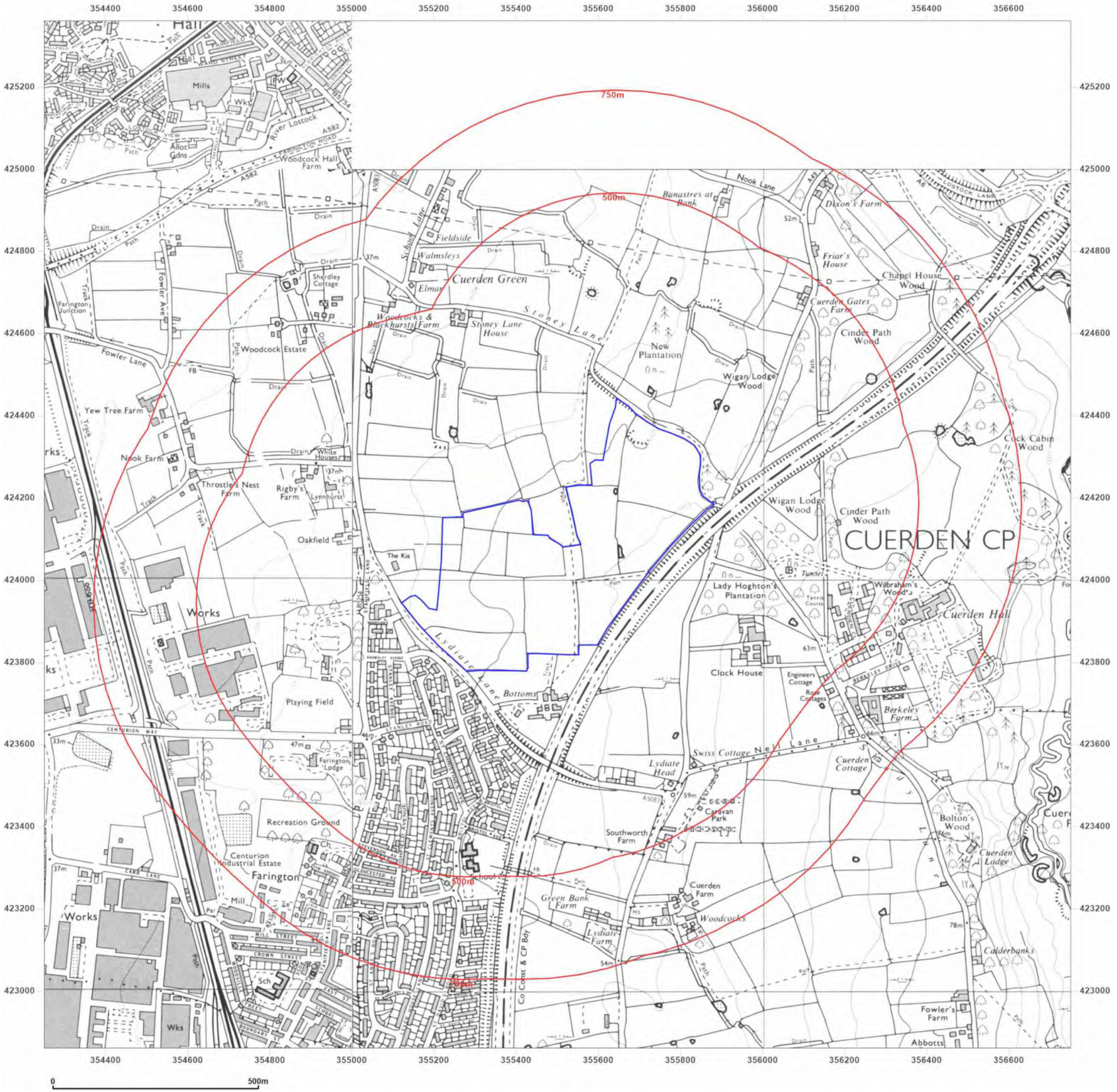

Groundsure INSIGHTS

Site Details:

355376 , 423956

Client Ref: K0217_Lydiate_Lane_LF_PO142760
Report Ref: GS-V8T-IDQ-EDT-I9G
Grid Ref: 355500, 424110

Map Name: National Grid

Map date: **1988-1990**

Scale: 1:10,000

Printed at: 1:10,000

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Surveyed 1989
Revised 1990
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1982
Revised 1988
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1990
Revised 1990
Edition N/A
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Production date: 14 September 2023

Map legend available at:
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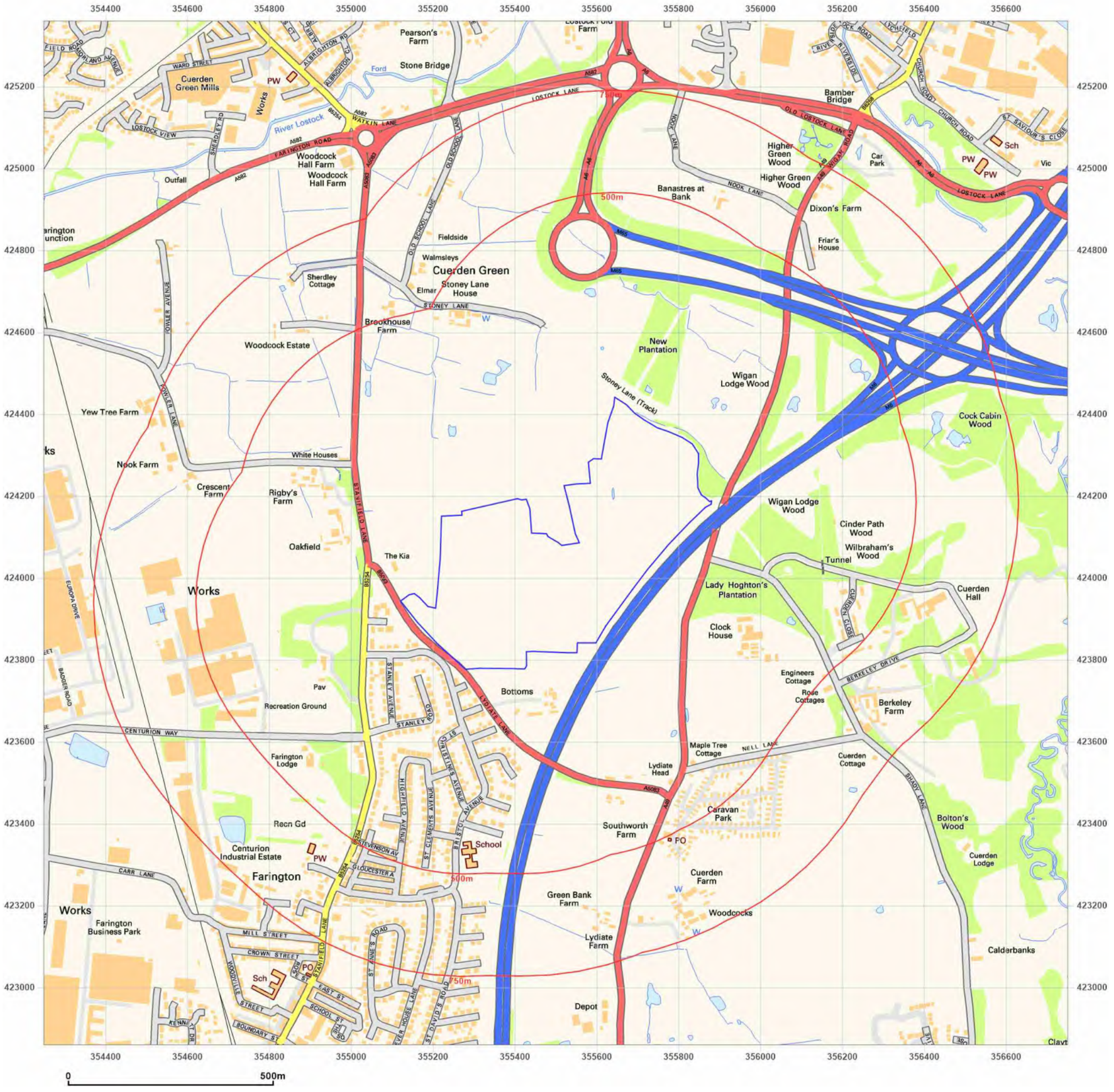

Groundsure INSIGHTS

Site Details:

355376 , 423956

Client Ref: K0217_Lydiate_Lane_LF_PO142760
Report Ref: GS-V8T-IDQ-EDT-I9G
Grid Ref: 355500, 424110

Map Name: National Grid

Map date: **2001**

Scale: 1:10,000

Printed at: 1:10,000

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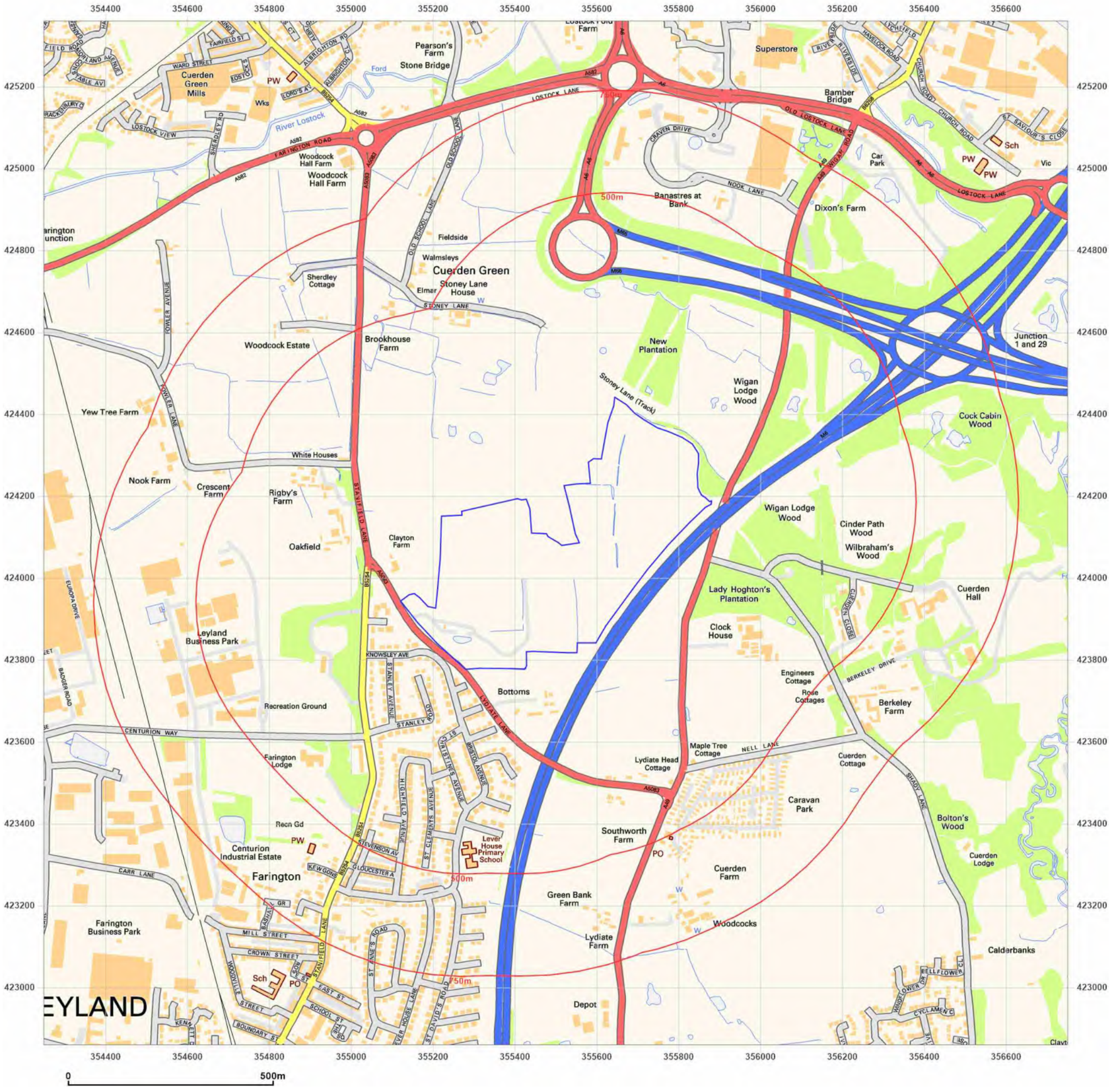

Groundsure INSIGHTS

Site Details:

355376 , 423956

Client Ref: K0217_Lydiate_Lane_LF_PO142760
Report Ref: GS-V8T-IDQ-EDT-I9G
Grid Ref: 355500, 424110

Map Name: National Grid

Map date: **2010**

Scale: 1:10,000

Printed at: 1:10,000

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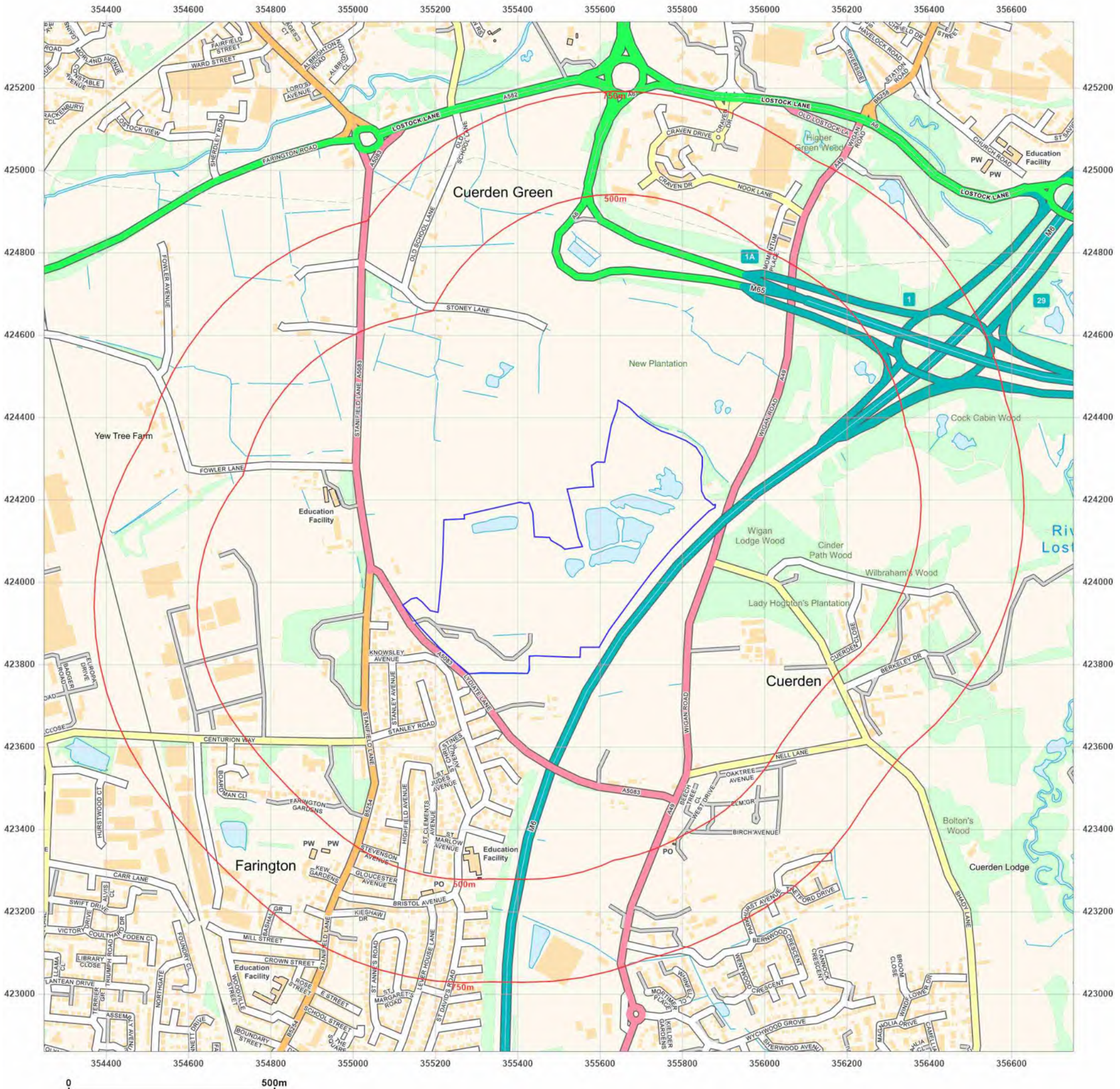

Groundsure INSIGHTS

Site Details:

355376 , 423956

Client Ref: K0217_Lydiate_Lane_LF_PO142760
Report Ref: GS-V8T-IDQ-EDT-I9G
Grid Ref: 355500, 424110

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

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Production date: 14 September 2023

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

Appendix C – Filter Press WAC Data

WASTE ACCEPTANCE CRITERIA TESTING
BSEN 12457/2

Client	ByrneLooby	
Site	Bradleys Sandpit	
Project	22050746	
Sample No	Sample Description	Issue Date
22050746-001	Filter Press	27/05/2022

Leaching Data	
Weight of Sample (kg)	0.121
Moisture content @ 105°C (% Wet Weight)	25.4
Equivalent weight based on drying @ 105°C (kg)	0.090
Volume of Water required for 10:1 stage (ltres)	0.869
Fraction of sample above 4mm %	100
Fraction of non-crushable material %	0

Note: The >4mm fraction is crushed using a disc mill

Accreditation	Method Code	Solid Waste Analysis (Dry Basis)	Concentration in Solid (Dry Weight Basis)	Landfill Waste Acceptance Criteria Limit Values		
				Inert Waste Landfill	Stable Non-Reactive Hazardous Waste in Non-Hazardous Landfill	Hazardous Waste Landfill
U	WSLM59	Total Organic Carbon (% M/M)	3.08	3	5	6
N	LOI450	Loss on Ignition (%)	6.6			10
UM	BTEXHSA	Sum of BTEX (mg/kg)	<0.075	6		
UM	PCBUSECD	Sum of 7 Congener PCBs (mg/kg)	<0.044	1		
U	TPHFIDUS	>C10-C40 Aliphatic (mg/kg) EH_1D_AL	282	500		
N	PAHMSUS	Sum of 17 PAHs (mg/kg)	94.0	100		
UM	PHSOIL	pH (pH Units)	7.8		>6	
	ANC	Acid Neutralisation Capacity (mol/kg)			To be evaluated	To be evaluated

Accreditation	Method Code	Leachate Analysis	10:1 Single Stage Leachate	Cumulative Amount Leached at 10:1	Landfill Waste Acceptance Criteria Limit Values		
			mg/l except **	mg/kg (dry wt)	Inert Waste Landfill	Stable Non-Reactive Hazardous Waste in Non-Hazardous Landfill	Hazardous Waste Landfill
U	WSLM3**	pH (pH Units)	8.1				
U	WSLM2**	Conductivity (µS/cm)	899				
U	ICPMSW	Arsenic	0.003	0.03	0.5	2	25
U	ICPWATVAR	Barium	0.05	0.5	20	100	300
U	ICPMSW	Cadmium	0.00011	0.0011	0.04	1	5
U	ICPMSW	Chromium	<0.001	<0.01	0.5	10	70
U	ICPMSW	Copper	0.007	0.07	2	50	100
U	ICPMSW	Mercury	<0.00003	<0.0003	0.01	0.2	2
U	ICPMSW	Molybdenum	0.023	0.23	0.5	10	30
U	ICPMSW	Nickel	0.003	0.03	0.4	10	40
U	ICPMSW	Lead	<0.001	<0.01	0.5	10	50
U	ICPMSW	Antimony	0.006	0.06	0.06	0.7	5
U	ICPMSW	Selenium	<0.001	<0.01	0.1	0.5	7
U	ICPMSW	Zinc	0.003	0.03	4	50	200
U	KONENS	Chloride	11	109	800	15000	25000
U	ISEF	Fluoride	0.4	4	10	150	500
U	ICPWATVAR	Sulphate as SO4	445	4410	1000	20000	50000
N	WSLM27	Total Dissolved Solids	611	6050	4000	60000	100000
U	SFAPI	Phenol Index	<0.05	<0.5	1		
U	WSLM13	Dissolved Organic Carbon	6.7	66.4	500	800	1000

Tests where the accreditation is set to U are UKAS accredited, those where the accreditation is set to N are not UKAS accredited.
Calculated data is not UKAS accredited
Landfill Waste Acceptance Criteria limit values correct as of 11th March 2009.

WASTE ACCEPTANCE CRITERIA TESTING
BSEN 12457/2

Client	ByrneLooby	
Site	Suite 104	
Project	23030727	
Sample No	Sample Description	Issue Date
23030727-001	Filter Press Clay	22/03/2023

Leaching Data	
Weight of Sample (kg)	0.114
Moisture content @ 105°C (% Wet Weight)	20.9
Equivalent weight based on drying @ 105°C (kg)	0.090
Volume of Water required for 10:1 stage (ltres)	0.876
Fraction of sample above 4mm %	0
Fraction of non-crushable material %	0

Note: The >4mm fraction is crushed using a disc mill

Accreditation	Method Code	Solid Waste Analysis (Dry Basis)	Concentration in Solid (Dry Weight Basis)	Landfill Waste Acceptance Criteria Limit Values		
				Inert Waste Landfill	Stable Non-Reactive Hazardous Waste in Non-Hazardous Landfill	Hazardous Waste Landfill
U	WSLM59	Total Organic Carbon (% M/M)	3.87	3	5	6
N	LOI450	Loss on Ignition (%)	8.8			10
UM	BTEXHSA	Sum of BTEX (mg/kg)	<0.076	6		
UM	PCBUSECD	Sum of 7 Congener PCBs (mg/kg)	<0.044	1		
U	TPHFIDUS	>C10-C40 Aliphatic (mg/kg) EH_1D_AL	330	500		
N	PAHMSUS	Sum of 17 PAHs (mg/kg)	50.6	100		
UM	PHSOIL	pH (pH Units)	8.7		>6	
	ANC	Acid Neutralisation Capacity (mol/kg)			To be evaluated	To be evaluated

Accreditation	Method Code	Leachate Analysis	10:1 Single Stage Leachate	Cumulative Amount Leached at 10:1	Landfill Waste Acceptance Criteria Limit Values		
			mg/l except **	mg/kg (dry wt)	Inert Waste Landfill	Stable Non-Reactive Hazardous Waste in Non-Hazardous Landfill	Hazardous Waste Landfill
N	WSLM3**	pH (pH Units)	9.0				
N	WSLM2**	Conductivity (µS/cm)	2330				
U	ICPMSW	Arsenic	0.007	0.07	0.5	2	25
U	ICPWATVAR	Barium	0.09	0.9	20	100	300
U	ICPMSW	Cadmium	<0.00002	<0.0002	0.04	1	5
U	ICPMSW	Chromium	0.002	0.02	0.5	10	70
U	ICPMSW	Copper	0.014	0.14	2	50	100
U	ICPMSW	Mercury	<0.00003	<0.0003	0.01	0.2	2
U	ICPMSW	Molybdenum	0.020	0.20	0.5	10	30
U	ICPMSW	Nickel	0.006	0.06	0.4	10	40
U	ICPMSW	Lead	<0.001	<0.01	0.5	10	50
U	ICPMSW	Antimony	0.014	0.14	0.06	0.7	5
U	ICPMSW	Selenium	0.003	0.03	0.1	0.5	7
U	ICPMSW	Zinc	0.006	0.06	4	50	200
U	KONENS	Chloride	12	119	800	15000	25000
U	ISEF	Fluoride	0.4	4	10	150	500
U	ICPWATVAR	Sulphate as SO4	1660	16500	1000	20000	50000
N	WSLM27	Total Dissolved Solids	1580	15700	4000	60000	100000
U	SFAPI	Phenol Index	<0.05	<0.5	1		
U	WSLM13	Dissolved Organic Carbon	14.1	140	500	800	1000

Tests where the accreditation is set to U are UKAS accredited, those where the accreditation is set to N are not UKAS accredited.
Calculated data is not UKAS accredited
Landfill Waste Acceptance Criteria limit values correct as of 11th March 2009.

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