

georisk

MANAGEMENT



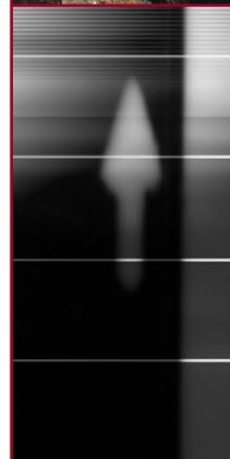
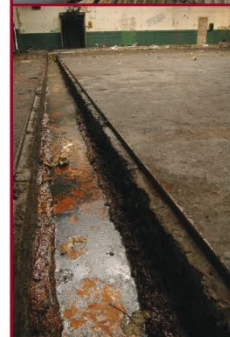
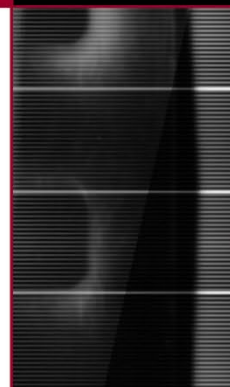
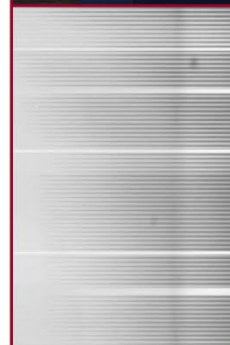
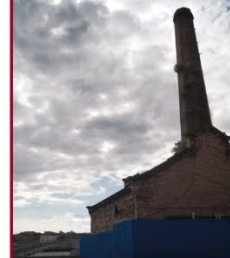
GROUND INVESTIGATION

LAND SOUTH OF CHAPEL LANE
WITHERLEY, ATHERSTONE
CV9 3LP

Report No: 24091/1
Date: June 2024

Prepared for

A R CARTWRIGHT LIMITED



Innovative Land Development Solutions

**PROJECT QUALITY ASSURANCE
INFORMATION SHEET**

GROUND INVESTIGATION

**LAND SOUTH OF CHAPEL LANE
WITHERLEY, ATHERSTONE
CV9 3LP**

Report Status:	Final
Report No:	24091/1
Issue Date:	June 2024
Prepared For:	A R Cartwright Limited Vicarage Street NUNEATON Warwickshire CV11 4AZ
Prepared By:	Georisk Management Limited Varney House 91 Spon Lane WEST BROMWICH B70 6AB Telephone: 0121 553 4044
	
Written by:	Jack Fiddian
Title:	Assistant Geoenvironmental Engineer
Contact:	jack.fiddian@georisk-uk.com
	
Reviewed by:	Ashley Copestake
Title:	Senior Geoenvironmental Engineer
Contact:	ashley.copestake@georisk-uk.com
	
Approved by:	Mark Gill
Title:	Director
Contact:	mark.gill@georisk-uk.com

TABLE OF CONTENTS

EXECUTIVE SUMMARY

FOREWORD

1. INTRODUCTION	1
2. INFORMATION SOURCES	1
3. REFERENCE SOURCES.....	2
4. THE SITE	2
5. SITE HISTORY	3
6. GEOENVIRONMENTAL SETTING.....	3
6.1 GEOLOGY AND MINING	3
6.2 MINING	4
6.3 HYDROLOGY	4
6.4 HYDROGEOLOGY.....	4
6.5 WASTE MANAGEMENT	4
6.6 POLLUTION.....	4
6.7 RADON	5
7. INITIAL CONCEPTUAL SITE MODEL.....	5
7.1 ENVIRONMENTAL SETTING	5
7.2 INITIAL CONCEPTUAL SITE MODEL AND PRELIMINARY RISK ASSESSMENT	6
7.3 INVESTIGATION STRATEGY	9
8. FIELDWORK, MONITORING AND LABORATORY TESTING	9
8.1 FIELDWORK	9
8.2 SOIL-GAS AND GROUNDWATER MONITORING	10
8.3 CHEMICAL TESTING.....	10
8.4 GEOTECHNICAL TESTING	10
9. GROUND AND GROUNDWATER CONDITIONS.....	10
9.1 TOPSOIL AND MADE GROUND.....	10
9.2 LACUSTRINE DEPOSITS.....	11
9.3 GUNTHORPE MEMBER	11
9.4 EVIDENCE OF POTENTIAL CONTAMINATION.....	12
9.5 GROUNDWATER	12
9.6 DEVELOPMENT OF INITIAL CONCEPTUAL SITE MODEL	12
10. SOIL-GAS RISK ASSESSMENT	12
10.1 RISK ASSESSMENT PROTOCOL	12
10.2 CONCEPTUAL MODEL – POTENTIAL SOURCES OF GROUND GAS	13
10.3 MONITORING RESULTS	13
10.4 BOREHOLE HAZARDOUS GAS FLOW RATES (Q_{HG})	14
10.5 DERIVATION OF GAS SCREENING VALUE (GSV)	14
10.6 DETERMINATION OF CHARACTERISTIC SITUATION (CS).....	15
11. HUMAN HEALTH RISK ASSESSMENT	15
11.1 GENERAL	15
11.2 HUMAN HEALTH RISK ASSESSMENT DESIGN	16
11.3 GENERIC QUANTITATIVE HUMAN HEALTH RISK ASSESSMENT	17
12. INITIAL RISK EVALUATION AND OUTLINE REMEDIAL ACTION PLAN	18
12.1 INITIAL RISK EVALUATION.....	18
12.2 SOIL CONTAMINATION – HUMAN HEALTH.....	19
12.3 SOIL CONTAMINATION – GENERAL CONSIDERATIONS	19
12.4 WATER SUPPLY PIPES	20

13. ENGINEERING CONSIDERATIONS.....	20
13.1 FOUNDATION DESIGN.....	20
13.2 FLOOR SLABS	21
13.3 BURIED CONCRETE REQUIREMENTS.....	21
13.4 ROAD/PAVEMENT DESIGN	21
13.5 EXCAVATIONS	21
13.6 SOAKAWAYS	22

TABLES

Table No.	Table Title
1	Summary of Historical Land Usage
2	Risk Matrix
3	Pollutant Linkages
4	Investigation Strategy
5	Summary of SPT 'N' Values in the Gunthorpe Member
6	Summary of Atterberg Limit Tests on the Gunthorpe Member
7	Summary of Groundwater Level Monitoring Results
8	Summary of Soil-Gas Monitoring Results
9	Summary of Hazardous Gas Flow Rates
10	Human Health Risk Assessment Criteria
11	Summary of Chemical Test Results
12	Remaining Pollutant Linkages

APPENDICES

APPENDIX A DRAWING

Drawing No.	Drawing Title
24091/1	Exploratory Hole Location Plan

APPENDIX B	HISTORICAL MAP EXTRACTS
APPENDIX C	EXPLORATORY HOLE RECORDS
APPENDIX D	INFILTRATION TEST RESULTS
APPENDIX E	SOIL-GAS AND GROUNDWATER MONITORING RESULTS
APPENDIX F	CHEMICAL TEST RESULTS
APPENDIX G	GEOTECHNICAL TEST RESULTS
APPENDIX H	ENVIROCHECK SUPPORTING INFORMATION

EXECUTIVE SUMMARY

GROUND INVESTIGATION

LAND SOUTH OF CHAPEL LANE WITHERLEY, ATHERSTONE CV9 3LP

Georisk Management Limited has been commissioned to carry out a ground investigation for the proposed residential development at the above site.

Phase I	Comments
The Site	The site is situated to the south of Chapel Lane in Witherley, near Atherstone, Warwickshire and can be located approximately by National Grid Reference 432950, 297550. It covers an area of approximately 0.5 ha and comprises a derelict former stables complex and part of an adjacent field. The former stables complex includes an open-sided barn, small stable block and is surfaced with gravel hardstanding. The adjacent field generally comprises open grassland but is noted to be overgrown and densely vegetated around the former stables. The northern, eastern and western site boundaries are formed by wire fencing and overgrown trees and hedgerows. The southern site boundary is currently undefined and has no clear separation from the adjacent field to the south. No evidence of potential significant contamination was noted during the site walkover.
Site History	Historical mapping indicates that the site was undeveloped land until between 1978 and 1989 when Chapel Fields Livery Stables were established in the north of the site. Surrounding land use has largely been farmland or housing.
Geology	The geology of the site is anticipated to comprise nominal Made Ground and Lacustrine Deposits in the south-west of the site overlying the Gunthorpe Member of the Sidmouth Mudstone Formation of the Mercia Mudstone Group of Triassic age.
Coal Mining	The site lies outside a 'Coal Mining Reporting Area' and; therefore, no further assessment is required in respect of this development constraint.
Hydrology	The nearest watercourse (rivers/streams) is an unnamed stream approximately 64 m to the south-west of the site and flows in a north-westerly direction. The EA has no records of any licensed surface water abstractions within 250 m of the site. The EA has records of 1 No. licensed discharge consents within 250 m of the site: Mrs Sclater is permitted to discharge treated sewage into a watercourse at a location approximately 43 m to the south of the site.
Flood Risk	Based on current information provided by the EA, included within the Landmark Envirocheck Report, the site is not mapped in an area likely to be at risk of river flooding.
Hydrogeology	The Lacustrine Deposits are classified by the EA as a 'Secondary Undifferentiated' aquifer. The Gunthorpe Member is classified by the EA as a 'Secondary B' aquifer. The EA has no records of any licensed groundwater abstractions within 250 m of the site. The site is not mapped by the EA within a groundwater Source Protection Zone.
Landfills	The EA has no records of any active landfills within 250 m of the site. The EA has no records of any historic landfills within 250 m of the site.
Pollution	The EA has no records of any significant or major pollution incidents to controlled waters within 250 m of the site. The Envirocheck report includes no records of any sites within 250 m of the study area that are potential pollution hazards or potential sources of industrial pollution and regulated under the EC Integrated Pollution Prevention and Control Directive (IPPC).
Radon	Information provided by the BGS and contained in the Envirocheck Report indicates that radon protection measures are not required for the proposed development at the site.

Phase II	Comments
Ground Conditions	Topsoil was encountered in WS3, WS4, WS6 and TP1 to TP5 from ground level to depths of between 0.25 and 0.4 m begl and comprised dark brown slightly sandy to sandy slightly gravelly clay. Made Ground was encountered in WS1, WS2 and WS5 put down in the former stables complex in the north of the site from ground level to depths of between 0.1 and 0.5 m begl and generally comprised of dark brown very clayey sandy gravel or very sandy slightly gravelly to gravelly clay with gravel of brick, roadstone, clinker and quartzite. Lacustrine Deposits were encountered beneath the topsoil/Made Ground in TP1, WS1, WS2 and WS6 to depths of between 0.45 and 1.45 m begl. These deposits typically comprised firm to stiff reddish brown variably gravelly variably sandy clay and silty sand. The Gunthorpe Member was encountered at depths of between 0.25 and 1.45 m begl and was proved to a maximum penetrated depth of 3.0 m begl. It generally comprised firm to stiff reddish brown variably sandy clay to depths of between 1.3 and 1.5 m begl grading to bedrock at depths of between 0.9 and 1.5 m begl that comprised extremely to moderately weak reddish brown weathered to completely weathered mudstone.
Contamination	No visual/olfactory evidence of potential significant contamination was recorded during the fieldwork.
Groundwater	During the fieldwork, groundwater was encountered at depths of between 0.1 and 2.2 m begl. Subsequent monitoring of standpipes installed in WS2 and WS4 recorded standing groundwater levels of between 0.4 and 1.3 m begl, but typically between 1.0 and 1.3 m begl during the latter stages of the monitoring programme.
Soil-Gas	No methane has been recorded during the monitoring programme. Steady state carbon dioxide levels ranged from 0.4 to 3.1 % by volume (v/v). A maximum positive gas flow rate of 0.2 l/hr was recorded during the monitoring programme. Ambient atmospheric pressures ranged from 989 to 1010 mb during the monitoring programme.
Environmental Assessment	Comments
Soil Contamination	The majority of the test results for the contaminants of concern are below the relevant assessment criteria (S4UL/C4SL/SSV); however, the following results exceed the relevant assessment criteria in Made Ground: WS1 at 0.2 m begl: benzo(a)anthracene (15 mg/kg), benzo(a)pyrene (16 mg/kg), benzo(b)fluoranthene (18 mg/kg), and dibenz(ah)anthracene (2.2 mg/kg). All samples tested were also screened for the presence of asbestos; asbestos was not identified in any of the samples analysed.
Risk Evaluation: Human Health	Future site users should be considered as receptors through by physical contact, ingestion and dust inhalation associated with any Made Ground beneath gardens. For housing with private gardens, root uptake by vegetation of any contamination present in the near-surface soils also needs to be considered. The Made Ground is limited to the former stables complex in the north of the site where Plots 1 and 2 are to be constructed. To address the remaining pollutant linkages to future site users of Plots 1 and 2 from elevated concentrations of PAH in the Made Ground, it is recommended that one of the following options is carried out: - provision of a blinding layer of clean imported soil in garden areas to act as a physical barrier between site users and the Made Ground, or; - removal of all Made Ground from garden areas and provide a nominal thickness of topsoil. The composition and thickness of any cover layer would need to be agreed with the relevant regulators in advance of any works starting on site; however, we would suggest allowing for the following minimum thicknesses: - private rear garden areas: 600 mm (nominally 150 mm topsoil; 450 mm subsoil); - front gardens: 300 mm (typically 150 mm topsoil; 150 mm subsoil). The remediation will require independent validation and verification to satisfy the regulatory authorities and these requirements should be set out in a detailed Remediation Method Statement (RMS) for the site, which shall also include the preferred remedial option from the two choices set out above.

Environmental Assessment	Comments
Risk Evaluation: Soil-Gas	Gas protection not considered necessary for the proposed development.
Statutory Consultation	If required to satisfy planning and/or land quality conditions, this report should be submitted to the Local Authority and/or warranty provider for approval in advance of any development works starting on site.
Geotechnical Assessment	Comments
Foundations	This investigation has identified topsoil and Made Ground to depths of between 0.1 and 0.5 m begl overlying Lacustrine Deposits in the west of the site that generally comprise firm to stiff reddish brown variably gravelly variably sandy clay and silty sand to depths of between 0.5 and 1.45 m. Beneath this, the Gunthorpe Member is present, which comprised firm to stiff reddish brown clay grading to mudstone rock at depths of between 1.3 and 1.5 m begl. Groundwater seepage was encountered at depths between 0.1 and 2.2 m begl during the ground investigation and subsequent groundwater level monitoring has recorded standing water levels of between 0.4 and 1.3 m begl. On this basis, it is considered that the use of traditional spread footings should be viable for the proposed development extending into competent Lacustrine Deposits or the Gunthorpe Member; however, due consideration needs to be given to the volume change potential of the near surface soils and presence of trees and hedgerows. Geotechnical testing of the near surface soil indicates that it should be classified as a shrinkable soil of medium volume change potential and therefore, a minimum founding depth of 0.9 m would need to be adopted in accordance with NHBC Standards, ensuring at least 300 mm penetration into competent undisturbed natural strata is achieved. Foundations near trees and hedgerows may need to be deepened and heave protection measures adopted in accordance with NHBC Standards Chapter 4.2 'Building Near Trees'. These aspects should be considered further at a detailed design stage. Where foundation depths exceed 2.5 m due to tree influence, the NHBC require a design by an Engineer to demonstrate that potential heave uplift forces can be resisted by the foundation and this usually entails the use of a piled foundation. Further ground investigation may be required for pile design purposes. For strip/trench fill foundations placed in competent firm to stiff clay of the Lacustrine Deposits or the Gunthorpe Member, an allowable bearing capacity of 120 kN/m² is considered appropriate for foundation design purposes with total settlements not anticipated to exceed to 25 mm. Care should be taken to limit the exposure of any excavation prepared to receive concrete, which may cause deterioration and a reduction in bearing capacity. Foundation excavations should be inspected by qualified personnel and if any soft or loose materials are encountered at formation level, foundations would need to be deepened and infilled with lean mix concrete.
Floor Slabs	Based on the ground conditions encountered it is recommended that a suspended floor slab design is adopted for the proposed development.
Buried Concrete Design	A Design Sulphate Class of DS-1 and an AEC class of AC-1 apply at the site.
Pavement Design	Final road and pavement levels are not known at this stage; however, for preliminary design purposes, the following long-term equilibrium CBR values could be assumed for the near-surface soils at the site: - Made Ground: 2 %; - Gunthorpe Member: 3-4 %. The proposed formation should be proof rolled and caution must be exercised to ensure that any soft/loose areas identified within the formation are excavated and filled with suitably compacted granular fill. Once road alignments and levels have been finalised, <i>in situ</i> CBR tests should be undertaken to allow detailed design of road formations to be made.
Dewatering	The findings of this investigation indicate that water ingress may occur in temporary excavations; however, any localised ingress should be controllable by sump pumping.

Geotechnical Assessment	Comments
Excavations	Conventional mechanical excavation should be readily achievable in the near-surface Made Ground, Lacustrine Deposits and weathered Gunthorpe Member; however, heavier plant and/or hydraulic breaking equipment may be required to excavate deeper into bedrock. Shallow excavations should remain stable in the short-term; however, instability may occur in excavations left open for extended periods of time. Support should be provided in any excavations requiring man entry. Care should be taken to limit the exposure of any excavation prepared to receive concrete, which may cause deterioration and a reduction in bearing capacity. Foundation excavations should be inspected by qualified personnel and if any soft or very loose materials are encountered at formation level, foundations would have to be deepened and infilled with lean mix concrete.
Soakaways	Infiltration testing was attempted in TP1 and TP2 in accordance with BRE:365 (2016) to assess the potential use of soakaway drainage at the site and no significant infiltration was recorded over a timed period of approximately 4 hours. On the basis of these test results and as the near-surface ground conditions comprise clay soil grading to mudstone with depth, it is considered that surface water from the proposed development would not be effectively discharged by soakaway drainage and an alternative drainage solution will need to be adopted
Additional Work	Comments
Various	If required to satisfy planning and/or land quality conditions, this report should be submitted to the Local Authority and/or warranty provider for approval in advance of any development works starting on site. Preparation of Remediation Method Statement (RMS) detailing requirements for remediation - this will require independent validation and verification.

The above summary is intended for reference purposes only and specific details should be obtained by reading the entire report.

FOREWORD

This report has been prepared for the sole internal use and reliance of the Client(s) named on the Project Quality Assurance Information Sheet. This report shall not be relied upon or transferred to any other parties without the express written authorisation of Georisk Management Ltd (Georisk). If an unauthorised third party comes into possession of this report they rely on it at their peril and the authors owe them no duty of care and skill.

The report should be read in its entirety, including all associated drawings and appendices. Georisk cannot be held responsible for any misinterpretations arising from the use of extracts that are taken out of context.

The findings and opinions conveyed in this report are based on information obtained from a variety of sources as detailed within this report and which Georisk believes is reliable. All reasonable care and skill has been applied in examining the information obtained, nevertheless, Georisk cannot and does not guarantee the authenticity or reliability of the information it has relied upon.

The report represents the findings and opinions of experienced geoenvironmental consultants. Georisk does not provide legal advice and the advice of lawyers may also be required.

Any recommendations made or opinions expressed in the Report are based on the exploratory hole records, an examination of samples and the results of the site and laboratory tests. No liability can be accepted for conditions not revealed by the exploratory holes particularly between positions. Whilst every effort is made to ensure accuracy of data supplied any opinion expressed as to the possible configuration of strata between or below investigation locations is for guidance only and no responsibility is accepted as to its accuracy.

Unless otherwise specifically stated, this report assumes that ground levels will not change significantly from those existing at present and that the proposed development will be of two to three storey construction. If this is not to be the case, some modifications to this report may be required.

The groundwater conditions entered on the borehole records and from any monitoring programme are those observed at the time of the investigation. Groundwater levels are susceptible to seasonal fluctuations and may be higher during wetter periods than those encountered during this investigation.

Where the report refers to the potential presence of invasive plant species, such as Japanese Knotweed, or the presence of possible asbestos containing materials, it should be noted that the observations are for information purposes only and should be verified by a suitably qualified expert.

Georisk reserves the right to amend the conclusions and recommendations made in this report in the light of any further or more detailed information that may become available.

GROUND INVESTIGATION

LAND SOUTH OF CHAPEL LANE WITHERLEY, ATHERSTONE CV9 3LP

1. INTRODUCTION

- 1.1 Georisk Management Limited (Georisk) has been instructed by A R Cartwright Limited to carry out a ground investigation for the proposed development of the land south of Chapel Lane in Witherley, near Atherstone, Warwickshire. The work was carried out in accordance with Georisk's offer letter reference 24091/LO.001/AMG dated 4 April 2024, which was accepted by email of 10 May 2024.
- 1.2 The proposed development is for housing and; therefore, the principal aims of this investigation are as follows:
- to carry out Phase I hazard identification and assessment (desk study) including determination of an initial conceptual site model based on '*source-pathway-receptor*' principles;
 - to determine the prevalent ground and groundwater conditions at the site;
 - to provide an assessment of the concentrations of a range of potential contaminants of concern within the near-surface soils, including Phase II evaluation of risk to human health and environmental receptors;
 - to identify any potential geoenvironmental constraints associated with the development of the site for the proposed end use;
 - to provide general geotechnical design recommendations for the proposed development scheme.
- 1.3 This report presents the factual data obtained from the programme of fieldwork, monitoring and laboratory testing implemented by Georisk, together with an assessment of the contamination status of the near-surface soils and general engineering considerations for the proposed development scheme.

2. INFORMATION SOURCES

- 2.1 The information sources used in the production of this report were as follows:
- site walkover to appraise current layout and conditions;
 - review of British Geological Survey (BGS) maps and publications;
 - review of information contained within environmental databases maintained by the Environment Agency (EA) and other regulatory bodies provided in an Envirocheck report by Landmark Information Group dated March 2024 – supporting information is presented in Appendix H;
 - information gained with respect to the ground and groundwater conditions established in the programme of fieldwork and monitoring carried out by Georisk;
 - appraisal of laboratory data resulting from chemical and geotechnical testing scheduled by Georisk;
 - drawing entitled '*Proposed Site Layout*' by Hayward Architects, reference 22-124 P02 dated March 2023.

3. REFERENCE SOURCES

3.1 This report has been prepared regarding the following sources of reference and guidance, supplemented with experience of similar sites:

- *Investigation of Potentially Contaminated Sites – Code of Practice. British Standards Institute BS10175 (2011+A2:2017);*
- *Code of Practice for Site Investigations. BS5930 (2015+A1:2020);*
- *Human health toxicological assessment of contaminants in soil. Science Report SC050021/SR2 EA (2009);*
- *The LQM/CIEH S4ULs for Human Health Risk Assessment. LQM 2015;*
- *Updated technical background to the CLEA Model. Science Report SC050021/SR3 EA (2009);*
- *Development of Category 4 Screening Levels for Assessment of Land Affected by Contamination – Policy Companion Document. SP1010 DEFRA/CL:AIRE (2014);*
- *Land Contamination Risk Management. EA (2020);*
- *Guidance on Comparing Soil Contamination Data with a Critical Concentration. CIEH and CL:AIRE (2008);*
- *Abandoned Mine Workings Manual. CIRIA C758 (2019);*
- *Guidance for the Safe Development of Housing on Land Affected by Contamination. R & D Publication 66, NHBC, Environment Agency and CIEH (2008);*
- *Concrete in Aggressive Ground. BRE Special Digest 1: Part 1 Assessing the aggressive chemical environment. Building Research Establishment (2005);*
- *Radon: guidance on protective measures for new dwellings. BRE Report BR211 (2015);*
- *Code of practice for design of protective measures for methane and carbon dioxide ground gases for new buildings. BS8485 (2015+A1:2019);*
- *Hazardous Ground Gas – an essential guide for housebuilders. NHBC Foundation (2023);*
- *Guidance on Evaluation of Development Proposals on sites where Methane and Carbon Dioxide are Present. NHBC Report Edition No. 4 (2007);*
- *Assessing Risks Posed by Hazardous Ground Gases to Buildings. CIRIA Report C665 (2006);*
- *Passive venting of soil gases beneath buildings. DETR/ARUP Environmental PIT Research Report (1997);*
- *Protective measures for housing on gas-contaminated land. BRE/EA Report BR414 (2001);*
- *Site preparation and resistance to moisture. The Building Regulations 2000 Approved Document C (2004 edition);*
- *Specification for Topsoil and Requirements for Use. BS3882 (2015);*
- *BRE 365 Soakaway Design (2016);*
- *NHBC Standards (2021).*

4. THE SITE

- 4.1 The site is situated to the south of Chapel Lane in Witherley, near Atherstone, Warwickshire and can be located approximately by National Grid Reference 432950, 297550. The general site layout is shown on Drawing No. 24091/1, entitled ‘*Exploratory Hole Location Plan*’, included in Appendix A.
- 4.2 The site covers an area of approximately 0.5 ha and comprises a derelict former stables complex and part of an adjacent field. The former stables complex includes an open-sided barn, small stable block and is surfaced with gravel hardstanding. The adjacent field generally comprises open grassland but is noted to be overgrown and densely vegetated around the former stables.
- 4.3 The northern, eastern and western site boundaries are formed by wire fencing and overgrown trees and hedgerows. The southern site boundary is currently undefined and has no clear separation from the adjacent field to the south.

4.4 The site is bordered by a house to the east, Witherley Parish Hall to the west and open fields to the north and south.

4.5 No evidence of potential significant contamination was noted during the site walkover.

5. SITE HISTORY

5.1 The history of the site and the surrounding area has been assessed by reviewing available historical County Series and Ordnance Survey maps. The maps studied are included in Appendix B of this report and a summary is presented in Table 1.

Year	Site	Surrounding Area
1889	The site is undeveloped agricultural land.	The surrounding area generally comprises agricultural fields in all directions, a chapel is mapped adjacent to the north-western boundary of the site. Witherley village is mapped approximately 100 m to the west. The site is bound to the north by Chapel Lane.
1903	No significant changes are mapped.	No significant changes are mapped.
1924	No significant changes are mapped.	No significant changes are mapped.
1945	A small field boundary is mapped across the southern boundary of the site.	No significant changes are mapped.
1955	No significant changes are mapped.	No significant changes are mapped.
1959	No significant changes are mapped.	A house has been built adjacent to the eastern boundary.
1965	No significant changes are mapped.	No significant changes are mapped.
1971	No significant changes are mapped.	Housing has been built adjacent to the western boundary of the site.
1978	No significant changes are mapped.	No significant changes are mapped.
1989	Chapel Fields Livery Stables has been established in the north of the site.	Further residential development has taken place to the west of the site.
1991	No significant changes are mapped.	No significant changes are mapped.
1994	No significant changes are mapped.	No significant changes are mapped.
1999	No significant changes are mapped.	No significant changes are mapped.
2006	No significant changes are mapped.	No significant changes are mapped.
2024	No significant changes are mapped.	No significant changes are mapped.

Table 1: Summary of Historical Land Usage

6. GEOENVIRONMENTAL SETTING

6.1 Geology and Mining

Geology

6.1.1 The geology of the site has been appraised from 1:50,000 digital mapping information published by the BGS and is shown to comprise Lacustrine Deposits in the south-west of the site overlying the Gunthorpe Member of the Sidmouth Mudstone Formation of the Mercia Mudstone Group of Triassic age.

6.1.2 The presence of nominal Made Ground associated with the existing built development in the north of the site should also be anticipated.

6.2 Mining

- 6.2.1 The 'Interactive Map Viewer' on the Coal Authority website indicates that the site lies outside a 'Coal Mining Reporting Area' and; therefore, no further assessment is required in respect of this potential development constraint.

6.3 Hydrology

- 6.3.1 The nearest watercourse (rivers/streams) is an unnamed stream approximately 64 m to the south-west of the site and flows in a north-westerly direction.
- 6.3.2 The EA has no records of any licensed surface water abstractions within 250 m of the site.
- 6.3.3 The EA has records of 1 No. licensed discharge consent within 250 m of the site:
- Mrs Sclater is permitted to discharge treated sewage into a watercourse at a location approximately 43 m to the south of the site.
- 6.3.4 Based on current information provided by the EA, included within the Landmark Envirocheck Report, the site is not mapped in an area likely to be at risk of river flooding.

6.4 Hydrogeology

- 6.4.1 The Lacustrine Deposits are classified by the EA as a 'Secondary Undifferentiated' aquifer, which is assigned in cases 'where it has not been possible to attribute either category A or B to a rock type. In most cases this means that the layer in question has previously been designated as both minor and non-aquifer in different locations due to the variable characteristics of the rock type'.
- 6.4.2 The Gunthorpe Member is classified by the EA as a 'Secondary B' aquifer, which are defined as 'predominantly lower permeability layers which may store and yield limited amounts of groundwater due to localised features such as fissures, thin permeable horizons and weathering. These are generally the water-bearing parts of the former non-aquifers'.
- 6.4.3 The EA has no records of any licensed groundwater abstractions within 250 m of the site.
- 6.4.4 The site is not mapped by the EA within a groundwater Source Protection Zone.

6.5 Waste Management

- 6.5.1 The EA has no records of any active landfills within 250 m of the site.
- 6.5.2 The EA has no records of any historic landfills within 250 m of the site.

6.6 Pollution

- 6.6.1 The EA has no records of any significant or major pollution incidents to controlled waters within 250 m of the site.
- 6.6.2 The Envirocheck report includes no records of any sites within 250 m of the study area that are potential pollution hazards or potential sources of industrial pollution and regulated under the EC Integrated Pollution Prevention and Control Directive (IPPC).

6.7 Radon

- 6.7.1 Information provided by the BGS and contained in the Envirocheck Report indicates that radon protection measures are not required for the proposed development at the site.

7. INITIAL CONCEPTUAL SITE MODEL

7.1 Environmental Setting

- 7.1.1 Based on the findings of the Phase I Desk Study presented in Sections 4 to 6 of this report, the environmental setting of the site can be summarised as follows:

- the site is situated to the south of Chapel Lane in Witherley, near Atherstone, Warwickshire and can be located approximately by National Grid Reference 432950, 297550;
- the site covers an area of approximately 0.5 ha and comprises a derelict former stables complex and part of an adjacent field. The former stables complex includes an open-sided barn, small stable block and is surfaced with gravel hardstanding. The adjacent field generally comprises open grassland but is noted to be overgrown and densely vegetated around the former stables;
- the northern, eastern and western site boundaries are formed by wire fencing and overgrown trees and hedgerows. The southern site boundary is currently undefined and has no clear separation from the adjacent field to the south;
- no evidence of potential significant contamination was noted during the site walkover;
- historical mapping indicates that the site was undeveloped land until between 1978 and 1989 when Chapel Fields Livery Stables were established in the north of the site;
- surrounding land use has largely been farmland or housing;
- the geology of the site is anticipated to comprise nominal Made Ground and Lacustrine Deposits in the south-west of the site overlying the Gunthorpe Member of the Sidmouth Mudstone Formation of the Mercia Mudstone Group of Triassic age;
- the site lies outside a 'Coal Mining Reporting Area' and; therefore, no further assessment is required in respect of this development constraint;
- the nearest watercourse (rivers/streams) is an unnamed stream approximately 64 m to the south-west of the site and flows in a north-westerly direction;
- the EA has no records of any licensed surface water abstractions within 250 m of the site;
- the EA has records of 1 No. licensed discharge consents within 250 m of the site: Mrs Sclater is permitted to discharge treated sewage into a watercourse at a location approximately 43 m to the south of the site;
- based on current information provided by the EA, included within the Landmark Envirocheck Report, the site is not mapped in an area likely to be at risk of river flooding;
- the Lacustrine Deposits are classified by the EA as a 'Secondary Undifferentiated' aquifer;
- the Gunthorpe Member is classified by the EA as a 'Secondary B' aquifer;
- the EA has no records of any licensed groundwater abstractions within 250 m of the site;
- the site is not mapped by the EA within a groundwater Source Protection Zone;
- the EA has no records of any active landfills within 250 m of the site;
- the EA has no records of any historic landfills within 250 m of the site;
- the EA has no records of any significant or major pollution incidents to controlled waters within 250 m of the site;
- the Envirocheck report includes no records of any sites within 250 m of the study area that are potential pollution hazards or potential sources of industrial pollution and regulated under the EC Integrated Pollution Prevention and Control Directive (IPPC);
- information provided by the BGS and contained in the Envirocheck Report indicates that radon protection measures are not required for the proposed development at the site.

7.2 Initial Conceptual Site Model and Preliminary Risk Assessment

General

7.2.1 The initial conceptual model and preliminary risk assessment are based on information derived from the desk study to provide a qualitative assessment of risk posed to human health and environmental receptors from potential on and off-site sources of contamination as defined within Part IIA of the Environmental Protection Act (1990). For a significant risk to exist, it must be established that contamination has the potential to cause harm to susceptible targets. This is known as 'pollutant linkage' and requires three criteria to be identified at a significant level:

- the presence of substances that may cause harm (SOURCE);
- the presence of a receptor which may be harmed (RECEPTOR);
- the existence of a plausible pollutant linkage between the source and the receptor (PATHWAY).

7.2.2 EA R&D66 (2008) includes a risk classification system based on classification of consequence and probability. Table 2 shows a risk matrix, in which the likelihood or probability of each pollutant linkage being realised is ranked against the severity of the consequences. The result is the risk classification, based upon which risk management actions can be implemented. The individual sources, pathways and receptors identified are assessed against this risk matrix; potential pollutant linkages and associated risks are recorded.

		Severity of Consequence			
		Severe	Medium	Mild	Minor
Probability of pollutant linkage	High Likelihood	Very high risk	High risk	Moderate risk	Moderate / low risk
	Likely	High risk	Moderate risk	Moderate / low risk	Low risk
	Low Likelihood	Moderate risk	Moderate / low risk	Low risk	Very low risk
	Unlikely	Moderate / low risk	Low risk	Very low risk	Very low risk

Table 2: Risk Matrix

7.2.3 Definitions of risk terminology are as follows.

7.2.4 **Very high risk:** there is a probability that severe harm could arise to a designated receptor from an identified source, or there is evidence that severe harm to a designated receptor is currently occurring.

7.2.5 **High risk:** harm is likely to arise to a designated receptor from an identified source.

7.2.6 **Moderate risk:** it is possible that harm could arise to a designated receptor from an identified source. However, it is relatively unlikely that any such harm would be severe, or if any harm were to occur it is more likely that the harm would be relatively mild.

7.2.7 **Low risk:** it is possible that harm could arise to a designated receptor from an identified source, but it is likely that this harm, if realised, would at worst normally be mild.

7.2.8 **Very low risk:** there is a low possibility that harm could arise to the receptor. In the event of such harm being realised it is not likely to be severe.

- 7.2.9 Professional judgement and experience has been used to estimate the combination of probability and consequence of the harm posed by the pollutant linkages identified. This allows the risk to be evaluated on a qualitative basis. The risk category is used to prioritise/target the site investigation. Using this matrix and the available screening limits it has been possible to carry out a semi-quantitative risk assessment for the sources, pathways and receptors which have been identified at the site.
- 7.2.10 The initial conceptual model also illustrates the contaminants of concern identified from the contamination assessment and demonstrates the potential pathways and receptors which are considered likely to exist at the site.
- 7.2.11 Risk is based on a consideration of both:
- the likelihood of an event (probability); and
 - the severity of the potential consequences.
- 7.2.12 A pollutant linkage must be established before tests for probability and consequence are applied. If there is no pollutant linkage then there is no potential risk and there is no need to apply tests for probability and consequence. The risk assessment needs to include a logical and transparent system to define categories of severity of consequence and probability of occurrence. The initial conceptual model and preliminary risk assessment are discussed below.

Proposed Development

- 7.2.13 The proposed development is to comprise housing with private gardens together with hardstanding for access and private parking.

Potential On-Site Sources of Contamination

- 7.2.14 Based on information derived from the Phase I Desk Study, the following potential significant on-site sources of contamination have been identified that could affect the proposed development of the site:
- nominal Made Ground associated with the stables complex in the north of the site;
 - hazardous soil-gases derived from any on-site Made Ground.

Potential Off-Site Sources of Contamination

- 7.2.15 Based on information derived from the Phase I Desk Study, no potential significant off-site sources of contamination have been identified that could affect the proposed development.

Receptors

- 7.2.16 The following site-specific receptors are potentially feasible:
- site workers – construction personnel involved in development works;
 - long term site users – house occupants (children and adults);
 - building fabric and foundations;
 - controlled waters – unnamed stream 64 m south-west of the site.

Pathways

7.2.17 The potential pathways that are considered relevant to this site are as follows:

- direct contact with and/or incidental ingestion of any contaminated soils or dusts derived from contaminated soil;
- inhalation of dust derived from any contaminated soil;
- migration of hazardous soil-gases via permeable strata or via ducts/drains into confined spaces;
- direct contact between contaminated soils and building substructures;
- vertical/lateral migration of mobile contaminants into controlled water receptors.

Pollutant Linkages

7.2.18 Based on the 'source-pathway-receptor' information presented above, the following potential pollutant linkages have been identified at the site:

Source	Pathway	Receptor	Consequence	Probability	Risk
Made Ground and hazardous soil-gases within near-surface soils	Dermal contact	Site user: female child 0-6 years	Medium	Unlikely	Low
		Site construction worker	Minor	Unlikely	Very low
	Ingestion	Site user: female child 0-6 years	Medium	Unlikely	Low
		Site construction worker	Minor	Unlikely	Very low
	Consumption of home-grown vegetables	Site user: female child 0-6 years	Medium	Unlikely	Low
	Ingestion of soil attached to home-grown vegetables	Site user: female child 0-6 years	Medium	Unlikely	Low
	Dermal contact with dust derived from contaminated soil	Site user: female child 0-6 years	Medium	Unlikely	Low
		Site construction worker	Minor	Unlikely	Very low
	Ingestion of dust derived from contaminated soil	Site user: female child 0-6 years	Medium	Unlikely	Low
		Site construction worker	Minor	Unlikely	Very low
	Inhalation of dust derived from contaminated soil	Site user: female child 0-6 years	Medium	Unlikely	Low
		Site construction worker	Minor	Unlikely	Very low
	Indoor inhalation of soil-gases	Site user: female child 0-6 years	Medium	Unlikely	Low
	Migration via shallow groundwater	Controlled waters	Minor	Unlikely	Very low
	Direct contact	Buildings	Minor	Unlikely	Very low
	Direct contact	Water supply pipework	Minor	Unlikely	Very low

Table 3: Pollutant Linkages

7.2.19 Based on the known previous land usage of the site and surrounding area, the identified pollutant linkages, geological setting, absence of sensitive groundwater abstractions and absence of a designated groundwater source protection zone, it is considered that the site represents a **very low** risk to controlled waters. No further assessment of risk to controlled waters is considered necessary unless significant contamination is identified at the site.

7.2.20 Based on the proposed end use of the site, the site is considered to represent a **very low to low** risk to human health, which should be assessed through a programme of routine chemical testing, soil-gas monitoring and risk assessment in accordance with current guidance (CLEA).

Contaminants of Concern

7.2.21 Based on the findings of the Phase I Desk Study, the following potential contaminants are considered appropriate for the assessment of this site:

- selected toxic and phytotoxic metals (arsenic, cadmium, chromium, copper, lead, mercury, nickel, selenium and zinc);
- speciated polycyclic aromatic hydrocarbons (PAH);
- pH;
- cyanide;
- phenol;
- sulphate;
- asbestos.

7.3 Investigation Strategy

7.3.1 Based on the information presented above, the strategy for the proposed ground investigation is shown in Table 4.

Exploratory Holes	Purpose
All exploratory holes: dynamic percussive boreholes: WS1 to WS6 and trial pits: TP1 to TP5	To determine prevalent ground and groundwater conditions across site, including: • nature and extent of any Made Ground; • nature and extent of any soil contamination; • suitability of the ground for foundations and pavement design.
Selected trial pits: TP1 and TP2	Undertake infiltration testing in general accordance with BRE:365 to assess the potential use of soakaway drainage at the site.
All dynamic percussive boreholes	Undertake <i>in situ</i> Standard Penetration Tests (SPT) to determine a geotechnical strength profile.
Selected dynamic percussive boreholes: WS2 and WS4	Construction of soil-gas and groundwater monitoring installations to facilitate assessment of risk posed by any hazardous soil-gases and establish standing groundwater levels.

Table 4: Investigation Strategy

8. FIELDWORK, MONITORING AND LABORATORY TESTING

8.1 Fieldwork

8.1.1 The fieldwork was carried out between 22 and 23 May 2024 and comprised the following elements:

- 6 No. dynamic percussive boreholes, designated WS1 to WS6, drilled to a maximum depth of 3.0 m below ground level (bgl);
- *in situ* Standard Penetration Tests (SPT) at 1 metre intervals in WS1 to WS6;
- construction of 50 mm diameter combined soil-gas and groundwater monitoring wells in WS2 and WS4;
- 5 No. trial pits, designated TP1 to TP5, excavated by a JCB 3CX to a maximum depth of 3.0 m bgl;
- infiltration testing carried out in accordance with BRE:365 (2016) in TP1 and TP2.

8.1.2 The positions of the exploratory holes were set out by Georisk and the locations are shown on the Exploratory Hole Location Plan included as Drawing No. 24091/1 in Appendix A.

8.1.3 The fieldwork was supervised by Georisk. All soil description and sample logging was carried out in general accordance with BS 5930 (2015+A1:2020) and the exploratory hole records are presented in Appendix C.

- 8.1.4 Disturbed samples were recovered from the exploratory holes as necessary to facilitate sample description and for subsequent laboratory testing.
- 8.1.5 Observations of groundwater encountered during the fieldwork are included on the relevant exploratory hole records included in Appendix C.
- 8.1.6 Infiltration testing was carried out in TP1 and TP2 in general accordance with BRE:365 (2016) to assess the potential use of soakaway drainage at the site. The test results are presented in Appendix D and discussed in Section 13 of this report.

8.2 Soil-Gas and Groundwater Monitoring

- 8.2.1 Combined soil-gas and groundwater monitoring installations were constructed in WS2 and WS4 as shown on the exploratory hole records included in Appendix C. Monitoring has been carried out on four occasions between 30 May and 24 June 2024 with the following measurements taken in sequence:
 - atmospheric pressure (mb);
 - relative pressure (mb);
 - flow monitoring (l/hr);
 - measurement of CO₂, CH₄ and O₂ gas concentrations (% by volume; % v/v);
 - groundwater level (m begl).
- 8.2.2 The results of the soil-gas and groundwater monitoring are presented in Appendix E.

8.3 Chemical Testing

- 8.3.1 A programme of chemical testing was scheduled by Georisk on selected soil samples retrieved from the exploratory holes. The testing was carried out at an independent UKAS accredited laboratory for the contaminants of concern as indicated in Section 7. The chemical test results are presented in Appendix F.

8.4 Geotechnical Testing

- 8.4.1 Routine geotechnical testing comprising moisture content and Atterberg Limits was carried out on selected samples. The testing was carried out in accordance with BS1377 (1990) at an independent UKAS accredited laboratory and the results are presented in Appendix G.

9. GROUND AND GROUNDWATER CONDITIONS

Full details of the ground conditions encountered by Georisk are presented on the exploratory hole records included in Appendix C and a summary is presented below.

9.1 Topsoil and Made Ground

- 9.1.1 Topsoil was encountered in WS3, WS4, WS6 and TP1 to TP5 from ground level to depths of between 0.25 and 0.4 m begl and comprised dark brown slightly sandy to sandy slightly gravelly clay.

- 9.1.2 Made Ground was encountered in WS1, WS2 and WS5 put down in the former stables complex in the north of the site from ground level to depths of between 0.1 and 0.5 m begl and generally comprised of dark brown very clayey sandy gravel or very sandy slightly gravelly to gravelly clay with gravel of brick, roadstone, clinker and quartzite.

9.2 Lacustrine Deposits

- 9.2.1 Lacustrine Deposits were encountered beneath the topsoil/Made Ground in TP1, WS1, WS2 and WS6 to depths of between 0.45 and 1.45 m begl.
- 9.2.2 These deposits typically comprised firm to stiff reddish brown variably gravelly variably sandy clay and silty sand.
- 9.2.3 The result of 1 No. Standard Penetration Test (SPT) carried out in the Lacustrine Deposit at a depth of 1.0 m begl returned an 'N' value of 11, which is indicative of a firm clay or medium dense sand soil.

9.3 Gunthorpe Member

- 9.3.1 The topsoil/Made Ground and Lacustrine Deposits to overlie the Gunthorpe Member, which was encountered at depths of between 0.25 and 1.45 m begl and was proved to a maximum penetrated depth of 3.0 m begl.
- 9.3.2 It generally comprised firm to stiff reddish brown variably sandy clay to depths of between 1.3 and 1.5 m begl grading to bedrock at depths of between 0.9 and 1.5 m begl that comprised extremely to moderately weak reddish brown weathered to completely weathered mudstone.
- 9.3.3 The results of 13 No. SPT carried out in the Gunthorpe Member at depths of between 1.0 and 3.0 m begl returned 'N' values of between 10 and 50 which are summarised in Table 5.

Depth (m begl)	Minimum SPT 'N' value	Maximum SPT 'N' value	Material Description
1.0	10	21	Firm to stiff CLAY and very weak completely weathered MUDSTONE
2.0	17	50	Extremely weak and very weak weathered, highly weathered and completely weathered MUDSTONE
3.0	50	-	Extremely weak and very weak highly weathered and completely weathered MUDSTONE

Table 5: Summary of SPT 'N' Values in the Gunthorpe Member

- 9.3.4 Selected samples of the Gunthorpe Member were scheduled for Atterberg Limit determinations and natural moisture content testing. The test results are included in Appendix G and summarised in Table 6.

Test	Minimum (%)	Maximum (%)
Liquid Limit	19	46
Plastic Limit	Non-Plastic	24
Plasticity Index	Non-Plastic	22
Modified Plasticity Index	Non-Plastic	22
Moisture Content	14	26
Plasticity	Non-Plastic	Medium
Volume Change Potential	Non-Shrinkable	Medium

Table 6: Summary of Atterberg Limit Tests on the Gunthorpe Member

9.4 Evidence of Potential Contamination

9.4.1 No visual/olfactory evidence of potential significant contamination was recorded during the fieldwork.

9.5 Groundwater

9.5.1 During the fieldwork, groundwater was encountered at depths of between 0.1 and 2.2 m begl.

9.5.2 Groundwater monitoring standpipes were installed in WS2 and WS4 as shown on the borehole records in Appendix C which have been monitored on four occasions between 30 May and 24 June 2024. The results of the groundwater monitoring are included in Appendix E and summarised in Table 7.

Exploratory Hole	Standing Groundwater Level (m begl)	
	Shallowest	Deepest
WS2	0.6	1.3
WS4	0.4	1.0

Table 7: Summary of Groundwater Level Monitoring Results

9.6 Development of Initial Conceptual Site Model

9.6.1 Based on the ground and groundwater conditions revealed by the ground investigation carried out and detailed above, the preliminary conceptual model described in Section 7 is considered to be representative of the actual site conditions in relation to the proposed development.

10. SOIL-GAS RISK ASSESSMENT

10.1 Risk Assessment Protocol

10.1.1 The soil-gas monitoring programme completed by Georisk has been designed to comply with the recommendations contained within CIRIA Report C665 '*Assessing Risks Posed by Hazardous Ground Gases to Buildings*' (2007) and BS8576 (2013) '*Guidance on Investigations for ground gas – Permanent gases and Volatile Organic Compounds (VOCs)*'.

10.1.2 The primary guidance for the assessment of soil-gas risk to new built development is BS8485 (2015+A1:2019) '*Code of practice for the design of protective measures for methane and carbon dioxide ground gases for new buildings*'. Reference has also been made to NHBC Foundation NF94 (2023) '*Hazardous Ground Gas – an essential guide for housebuilders*'.

10.1.3 BS8485 sets out a procedure for using a Gas Screening Value (GSV) derived from an assessment of gas monitoring data to determine the gas regime and associated risk. The general approach is as follows:

- borehole hazardous gas flow rates (Q_{hg}) are calculated for each borehole standpipe for each monitoring event (with decisions made as to whether to use peak gas flow rates or steady state rates in each calculation);
- the reliability of measured gas flow rates and concentrations takes borehole construction into account and decisions are made about how to deal with any temporal or spatial shortages in the data; and
- professional judgements are made regarding the site characteristic GSV in the assignment of the Characteristic Situation and for design purposes, taking all relevant information/lines of evidence and the conceptual site model into account.

10.2 Conceptual Model – Potential Sources of Ground Gas

10.2.1 In the same manner as contaminated land is assessed, the process of assessing risks from ground gas is based on ‘*source-pathway-receptor*’ principles in order to establish the potential presence of ‘*pollutant linkage*’.

10.2.2 As set out in the Phase I Desk Study and further refined based on the findings of the Phase II Ground Investigation, the potential sources of ground gas are further reviewed as follows:

- **Landfill Sites:** there are no active or historical landfills within 250 m of the site;
- **Made Ground:** ground investigation has recorded Made Ground up to a depth of 0.5 m bgl that generally consisted of clayey sandy gravel/sandy gravelly clay with variable quantities of brick, clinker and roadstone but does not contain significant degradable and deleterious matter and such material is unlikely to be a significant source of soil-gas (NHBC 2023);
- **Natural Gas Plant:** natural gas pipework is not present on site;
- **Other Anthropogenic Sources:** there are no anthropogenic sources of ground gas that could affect the proposed development;
- **Natural Sources of Methane: Bacteriogenic Processes:** methane can be produced by the microbial decay of organic material under anaerobic conditions. The main sources of such methane are from peat, bogs and other waterlogged vegetation and no such features have been identified on the site;
- **Natural Sources of Methane: Thermogenic Processes:** the site is not in an area of past coal mining;
- **Radon:** the site does not lie within a radon risk area.

10.2.3 In summary, the following potential viable sources of ground gases have been identified and require further consideration:

- Made Ground – unlikely to be a source of significant ground gas and classified as very low risk;

10.2.4 Referring to NF94, Made Ground can cause elevated gas concentrations in monitoring wells but cannot generate gas at a significant rate and; therefore, does not necessarily pose a hazard to above ground development.

10.3 Monitoring Results

10.3.1 Soil-gas monitoring installations were constructed in WS2 and WS04, as shown on the borehole records included in Appendix C and monitoring has been carried out on four occasions between 30 May and 24 June 2024.

10.3.2 The results of the soil-gas monitoring are summarised in Table 8 (in terms of maximum gas concentrations for methane, maximum steady-state concentrations for carbon dioxide and maximum positive flow rates).

Well	Response Zone	Methane (% v/v)	Carbon Dioxide (% v/v)	Positive Flow Rate (l/hr)
WS2	NATURAL	0.0	0.4 – 0.6	0.2
WS4	NATURAL	0.0	0.9 – 3.1	0.0

Table 8: Summary of Soil-Gas Monitoring Results

10.3.3 No methane has been recorded during the monitoring programme.

10.3.4 Steady state carbon dioxide levels ranged from 0.4 to 3.1 % by volume (v/v).

10.3.5 A maximum positive gas flow rate of 0.2 l/hr was recorded during the monitoring programme.

10.3.6 Ambient atmospheric pressures ranged from 989 to 1010 mb during the monitoring programme.

10.4 Borehole Hazardous Gas Flow Rates (Q_{hg})

10.4.1 The monitoring data presented in Table 8 has been used to calculate borehole hazardous gas flow rates for both methane and carbon dioxide. The Q_{hg} has been calculated by multiplying the maximum gas concentration and the maximum borehole flow rate recorded in a particular borehole.

10.4.2 The calculated Q_{hg} for methane and carbon dioxide in each monitoring well is presented in Table 9.

Well	Response Zone	Q_{hg} Methane (l/hr)	Q_{hg} Carbon Dioxide (l/hr)
WS2	NATURAL	n/a	0.0012
WS4	NATURAL	n/a	0.0062

Table 9: Summary of Hazardous Gas Flow Rates

10.4.3 In the absence of any recorded methane, Q_{hg} have not been calculated for methane.

10.4.4 The Q_{hg} for carbon dioxide are very low due to low rates of positive gas flow, which is consistent for a source that is not generating a large volume of ground gas.

10.5 Derivation of Gas Screening Value (GSV)

10.5.1 The appropriate selection of the GSV must use a multiple lines of evidence approach and consider the conceptual site model. A summary of the main points is provided below:

- **Desk Study:** the site has had a history of previous use as a stables. Nominal Made Ground was to be expected with low gas generation potential but warranted further assessment – the Made Ground would be expected to be in excess of 30 years old;
- **Soil Descriptions:** the Made Ground is predominantly clay/gravel with variable quantities of brick, clinker and roadstone but does not contain significant degradable and deleterious matter;
- **Gas Monitoring Data:** worst case hazardous gas flow rates are: 0.2 l/hr, associated with Made Ground and a source that is not generating a large volume of ground gas. The monitoring data is indicative of very low rates of gas generation from Made Ground and will not pose a high risk of hazardous surface gas emissions;
- **Foundation Solution:** it is likely that standard spread foundations will be adopted (see Section 13) taken down through the Made Ground into the underlying natural strata and this does not constitute an additional preferential pathway for gas to reach the surface.

10.5.2 Based on the findings of this investigation, it is considered that the data set is comprehensive, representative and consistent with the established conceptual site model. In this instance the site characteristic Gas Screening Value (GSV) may be set as the maximum Q_{hg} values. The GSV has therefore been set as 0.0062 l/hr.

10.5.3 Given that suitable monitoring data is available from the Georisk investigation and the Conceptual Model has been well established in terms of potential gas risk, we would consider that a 'worst-case' assessment in accordance with BS8485 is not warranted in this instance.

10.6 Determination of Characteristic Situation (CS)

- 10.6.1 Based on the site characteristic GSV for methane and carbon dioxide, the Characteristic Situation (CS) is determined for the site. The GSV is <0.07 l/hr and the 'Typical Maximum Concentrations' for methane (1 % v/v) and carbon dioxide (5 % v/v) have not been exceeded and; therefore, a CS1 very low hazard potential is applicable site wide.
- 10.6.2 Gas protection measures are not required for a CS1 classification.

11. HUMAN HEALTH RISK ASSESSMENT

11.1 General

- 11.1.1 The UK approach to the assessment of contaminated land is based upon the principles of risk assessment, which is founded on the use of '*source-pathway-receptor*' principles to establish the potential presence of '*pollutant linkage*'. The main legislative driver for dealing with historical land affected by contamination is Part 2A of the Environmental Protection Act 1990. Under Part 2A, land is contaminated if it is determined that there is a '*Significant Possibility of Significant Harm*' (SPOSH) to human health.
- 11.1.2 Georisk adopts a tiered approach to risk assessment in accordance with current UK guidance and good practice. The initial step of this process, known as Tier 1, is the comparison of site-derived data with relevant guideline levels.
- 11.1.3 Should the adopted criteria be exceeded then two courses of action are available. The first is to break the pollutant linkage by undertaking remedial works such as removing or treating the contaminated soil. Alternatively, a more detailed risk assessment can be carried out to determine whether a contamination risk exists.
- 11.1.4 The UK approach to the assessment of human health risk from contaminated land is set out in the CLEA (Contaminated Land Exposure Assessment) framework, which was first published in 2002 by the Department for Environment, Food and Rural Affairs (DEFRA) and the EA. The original guidance was withdrawn and revised guidance issued in 2009, which is set out in the following documents published by the EA:
- *Human health toxicological assessment of contaminants in soil*. Science Report SC050021/SR2;
 - *Updated technical background to the CLEA Model*. Science Report SC050021/SR3.
- 11.1.5 The CLEA model uses generic assumptions about the fate and transport of chemicals in the environment and a generic conceptual model for site conditions together with human behaviour to estimate long term human exposure to soil contaminants.
- 11.1.6 Soil Guideline Values (SGV) were derived using the CLEA Model by comparing estimated exposure with 'Health Criteria Values' (HCV) that represent a tolerable risk to health from chronic exposure. SGVs are scientifically based 'generic assessment criteria' that can be used to simplify the assessment of risk to human health from chronic exposure to contaminants in soil. SGVs are a screening tool for the 'generic quantitative risk assessment' of land contamination.

11.1.7 Since revised SGVs were developed in 2009, revised Part 2A statutory guidance was then published in 2012. The revised Part 2A statutory guidance introduces a four-category system for classifying land under Part 2A for cases of SPOSH to human health. Category 4 applies to land where the level of risk posed is acceptably low. DEFRA appointed CL:AIRE to develop 'Category 4 Screening Levels' (C4SL), which would provide a simple test for deciding when land is suitable for use and definitely not contaminated. In March 2014, C4SLs were published for a limited number of contaminants.

11.1.8 Further to this, Suitable for Use Levels (S4UL) published by the Chartered Institute of Environmental Health (CIEH) and Land Quality Management (LQM) were issued in January 2015. These provide a comprehensive update of previous GAC published by CIEH. The S4UL are derived from the CLEA software produced by the EA and are based upon the concept of either 'tolerable' risk (where the relevant health criteria value is a tolerable daily intake), or 'minimal' risk (where the health criteria is an index dose).

11.1.9 The following hierarchy has been adopted by Georisk for determining which assessment criteria to be followed:

- Suitable 4 Use Levels (S4UL) developed by LQM/CIEH (2015);
- C4SL (in the absence of other assessment criteria);
- Soil Screening Values developed by Atkins ATRISKsoil (in the absence of other assessment criteria).

11.2 Human Health Risk Assessment Design

Proposed Development

11.2.1 The proposed development is to comprise housing with private gardens together with hardstanding for access and private parking.

Assessment Criteria

11.2.2 The assessment criteria used for the screening of contaminants is summarised in Table 10.

Contaminant Group	Determinands	Assessment Criteria Selected
ORGANIC CONTAMINANTS		
Non-halogenated hydrocarbons	Phenol	LQM/CIEH S4UL
Polyaromatic Hydrocarbons (PAH)	USEPA 16 priority compounds	LQM/CIEH S4UL
INORGANIC CONTAMINANTS		
Metals	Lead	C4SL
	Arsenic, Cadmium, Chromium, Copper, Mercury, Nickel, Selenium, Zinc	LQM/CIEH S4UL
Non-metals	Cyanide	Atkins AtRisk Soil Screening Value (SSV)

Table 10: Human Health Risk Assessment Criteria

11.2.3 It should be noted that there is no S4UL for lead and that the SGV for lead has been withdrawn. As such, the only available authoritative published criteria for lead is the DEFRA C4SL. The C4SL for lead is considerably more conservative than the former SGV and is therefore considered appropriate for use.

End Use

- 11.2.4 In view of the proposed development, a 'residential – with homegrown produce' with 1 % organic matter content end use conceptual model is considered appropriate for the site.

Statistical Analysis

- 11.2.5 In view of the relatively small data set and previous use of the site, it is considered appropriate to assess contaminant levels by comparing test results with the relevant S4UL, C4SL or SSV rather than carrying out statistical analysis.

Contaminants of Concern

- 11.2.6 The potential contaminants of concern are detailed in Section 7 and these contaminants have subsequently been targeted for chemical analysis.

11.3 Generic Quantitative Human Health Risk Assessment

- 11.3.1 The results of the chemical testing are presented in Appendix F and summarised in Table 11.

Contaminant of Concern	Measured Concentration*		Critical Concentration (S4UL/C4SL/SSV*)	Number of test results above S4UL/C4SL/SSV
	Min	Max		
Arsenic	7.6	32	37	0 (4)
Cadmium	<0.2	1	11	0 (4)
Chromium	24	40	910	0 (4)
Copper	20	62	2400	0 (4)
Cyanide	<1	-	34	0 (4)
Lead	41	75	200	0 (4)
Mercury	<0.3	-	40	0 (4)
Nickel	21	32	130	0 (4)
Phenol	<1	-	120	0 (4)
Selenium	<1	-	250	0 (4)
Zinc	83	160	3700	0 (4)
PAH Compounds				
Acenaphthene	<0.05	3	210	0 (4)
Acenaphthylene	<0.05	0.58	170	0 (4)
Anthracene	<0.05	7.4	2400	0 (4)
Benzo(a)anthracene	<0.05	15	7.2	1 (4)
Benzo(a)pyrene	<0.05	16	2.2	1 (4)
Benzo(b)fluoranthene	<0.05	18	2.6	1 (4)
Benzo(ghi)perylene	<0.05	11	320	0 (4)
Benzo(k)fluoranthene	<0.05	6	77	0 (4)
Chrysene	<0.05	14	15	0 (4)
Dibenz(ah)anthracene	<0.05	2.2	0.24	1 (4)
Fluoranthene	<0.05	35	280	0 (4)
Fluorene	<0.05	2.6	170	0 (4)
Indeno(123-cd)pyrene	<0.05	9.2	27	0 (4)
Naphthalene	<0.05	0.89	2.3	0 (4)
Phenanthrene	<0.05	28	95	0 (4)
Pyrene	<0.05	31	620	0 (4)
* Concentration expressed in mg/kg except where stated. Assumption of 1 % soil organic matter.				

Table 11: Summary of Chemical Test Results

11.3.2 The majority of the test results for the contaminants of concern are below the relevant assessment criteria (S4UL/C4SL/SSV); however, the following results exceed the relevant assessment criteria in Made Ground:

- WS1 at 0.2 m begl: benzo(a)anthracene (15 mg/kg), benzo(a)pyrene (16 mg/kg), benzo(b)fluoranthene (18 mg/kg), and dibenz(ah)anthracene (2.2 mg/kg).

11.3.3 All samples tested were also screened for the presence of asbestos; asbestos was not identified in any of the samples analysed.

11.3.4 Concentrations of phytotoxic metals are present at levels below those considered to present a risk to plant growth.

12. INITIAL RISK EVALUATION AND OUTLINE REMEDIAL ACTION PLAN

12.1 Initial Risk Evaluation

12.1.1 Following risk assessment utilising data from this ground investigation, Table 12 identifies the remaining pollutant linkages as being of concern in terms of the proposed redevelopment of the site:

Source	Pathway	Target
Presence of PAH compounds in near-surface Made Ground.	Dermal contact	Site user: female child 0-6 years
		Site construction worker
	Ingestion	Site user: female child 0-6 years
		Site construction worker
	Consumption of home-grown vegetables	Site user: female child 0-6 years
	Ingestion of soil attached to home-grown vegetables	Site user: female child 0-6 years
	Dermal contact with dust derived from Made Ground	Site user: female child 0-6 years
		Site construction worker
	Ingestion of dust derived from Made Ground	Site user: female child 0-6 years
		Site construction worker
	Inhalation of dust derived from Made Ground	Site user: female child 0-6 years
		Site construction worker
	Direct contact	Water supply pipework

Table 12: Remaining Pollutant Linkages

12.1.2 This investigation has not identified any widespread or gross contamination that would either preclude development or incur onerous costs; however, based on the identified pollutant linkages, some form of remediation will be required to facilitate redevelopment and provide a platform that is 'suitable for use'.

12.1.3 A stand-alone and robust remediation method statement (RMS) should be prepared detailing all remediation and validation requirements etc. The RMS would then be presented to and agreed with the Local Authority and other involved regulators prior to any irrevocable development works starting at the site.

12.1.4 As a guide and based on the available information, it is anticipated that the following outline remedial works will be required.

12.2 Soil Contamination – Human Health

- 12.2.1 Future site users should be considered as receptors through by physical contact, ingestion and dust inhalation associated with any Made Ground beneath gardens. For housing with private gardens, root uptake by vegetation of any contamination present in the near-surface soils also needs to be considered.
- 12.2.2 The Made Ground is limited to the former stables complex in the north of the site where Plots 1 and 2 are to be constructed.
- 12.2.3 To address the remaining pollutant linkages to future site users of Plots 1 and 2 from elevated concentrations of PAH in the Made Ground, it is recommended that one of the following options is carried out:
- provision of a blinding layer of clean imported soil in garden areas to act as a physical barrier between site users and the Made Ground, or;
 - removal of all Made Ground from garden areas and provide a nominal thickness of topsoil.
- 12.2.4 The composition and thickness of any cover layer would need to be agreed with the relevant regulators in advance of any works starting on site; however, we would suggest allowing for the following minimum thicknesses:
- private rear garden areas: 600 mm (nominally 150 mm topsoil; 450 mm subsoil);
 - front gardens: 300 mm (typically 150 mm topsoil; 150 mm subsoil).
- 12.2.5 The clean cover proposals are based on professional experience of similar sites but have also been based on guidance and design methods given in the BRE document '*Cover Systems for Land Regeneration*' (2004) which is considered appropriate for this site. Clean cover in back gardens is set at 600 mm to take account of possible double digging.
- 12.2.6 The remediation will require independent validation and verification to satisfy the regulatory authorities and these requirements should be set out in a detailed Remediation Method Statement (RMS) for the site, which shall also include the preferred remedial option from the two choices set out above.

12.3 Soil Contamination – General Considerations

- 12.3.1 The Made Ground represents no plausible pollutant linkage beneath plots or hardstanding.
- 12.3.2 Any Made Ground that is taken off site would need to be taken to a suitably licensed facility under duty of care documentation.
- 12.3.3 During the redevelopment of the site, construction workers are likely to be in direct contact with the near-surface soils and appropriate Health and Safety measures will need to be implemented based on the findings of this investigation.
- 12.3.4 Neighbouring site users may be potentially exposed to residual contamination through generation of dust through site redevelopment activities. This is an acute exposure risk and is manageable by implementing an appropriate construction management plan; for example, dust suppression removes the potential pollutant linkage.

- 12.3.5 Should any areas of previously unidentified potentially contaminated soil be encountered during future site construction works, we would recommend consultation with Georisk to ensure that our recommendations continue to apply. Any potentially contaminated soils would need to be left in situ pending further assessment.
- 12.3.6 If required to satisfy planning and/or land quality conditions, this report should be submitted to the Local Authority and/or warranty provider for approval in advance of any development works starting on site.

12.4 Water Supply Pipes

- 12.4.1 Based on the findings of this investigation, it is considered that standard PE/PVC pipe laid in trenches with clean gravel surround should be suitable for use at the site; however, it is recommended that a copy of this report is supplied to utility companies and that their recommendations relating to appropriate supply pipes are adhered to.

13. ENGINEERING CONSIDERATIONS

13.1 Foundation Design

- 13.1.1 This investigation has identified topsoil and Made Ground to depths of between 0.1 and 0.5 m begl overlying the Lacustrine Deposits in the west of the site that generally comprise firm to stiff reddish brown variably gravelly variably sandy clay and silty sand to depths of between 0.5 and 1.45 m. Beneath this, the Gunthorpe Member is present, which comprised firm to stiff reddish brown clay grading to mudstone rock at depths of between 1.3 and 1.5 m begl.
- 13.1.2 Groundwater seepage was encountered at depths between 0.1 and 2.2 m begl during the ground investigation and subsequent groundwater level monitoring has recorded standing water levels of between 0.4 and 1.3 m begl.
- 13.1.3 On this basis, it is considered that the use of traditional spread footings should be viable for the proposed development extending into competent Lacustrine Deposits or the Gunthorpe Member; however, due consideration needs to be given to the volume change potential of the near surface soils and presence of trees and hedgerows.
- 13.1.4 Geotechnical testing of the near surface soil indicates that it should be classified as a shrinkable soil of medium volume change potential and therefore, a minimum founding depth of 0.9 m would need to be adopted in accordance with NHBC Standards, ensuring at least 300 mm penetration into competent undisturbed natural strata is achieved. Foundations near trees and hedgerows may need to be deepened and heave protection measures adopted in accordance with NHBC Standards Chapter 4.2 'Building Near Trees'. These aspects should be considered further at a detailed design stage. Where foundation depths exceed 2.5 m due to tree influence, the NHBC require a design by an Engineer to demonstrate that potential heave uplift forces can be resisted by the foundation and this usually entails the use of a piled foundation. Further ground investigation may be required for pile design purposes.
- 13.1.5 For strip/trench fill foundations placed in competent firm to stiff clay of the Lacustrine Deposits or the Gunthorpe Member, an allowable bearing capacity of 120 kN/m² is considered appropriate for foundation design purposes with total settlements not anticipated to exceed to 25 mm.

- 13.1.6 Care should be taken to limit the exposure of any excavation prepared to receive concrete, which may cause deterioration and a reduction in bearing capacity. Foundation excavations should be inspected by qualified personnel and if any soft or loose materials are encountered at formation level, foundations would need to be deepened and infilled with lean mix concrete.

13.2 Floor Slabs

- 13.2.1 Based on the ground conditions encountered it is recommended that a suspended floor slab design is adopted for the proposed development.

13.3 Buried Concrete Requirements

- 13.3.1 For near surface soils, water soluble sulphate testing results (expressed as SO₄ in a 2:1 water:soil extract) range from 0.008 to 0.113 g/l with pH values of 6.7 to 9.1. Following the guidance given in the BRE Special Digest (2005) and assuming 'mobile' groundwater conditions for a 'brownfield' site, the Aggressive Chemical Environment (ACEC) classification has been determined. These indicate a Design Sulphate Class of DS-1 and an ACEC class of AC-1 apply at the site.

13.4 Road/Pavement Design

- 13.4.1 Final road and pavement levels are not known at this stage; however, for preliminary design purposes, the following long-term equilibrium CBR values could be assumed for the near-surface soils at the site:

- Made Ground: 2 %;
- Gunthorpe Member: 3-4 %.

- 13.4.2 The proposed formation should be proof rolled and caution must be exercised to ensure that any soft/loose areas identified within the formation are excavated and filled with suitably compacted granular fill. Once road alignments and levels have been finalised, *in situ* CBR tests should be undertaken to allow detailed design of road formations to be made.

13.5 Excavations

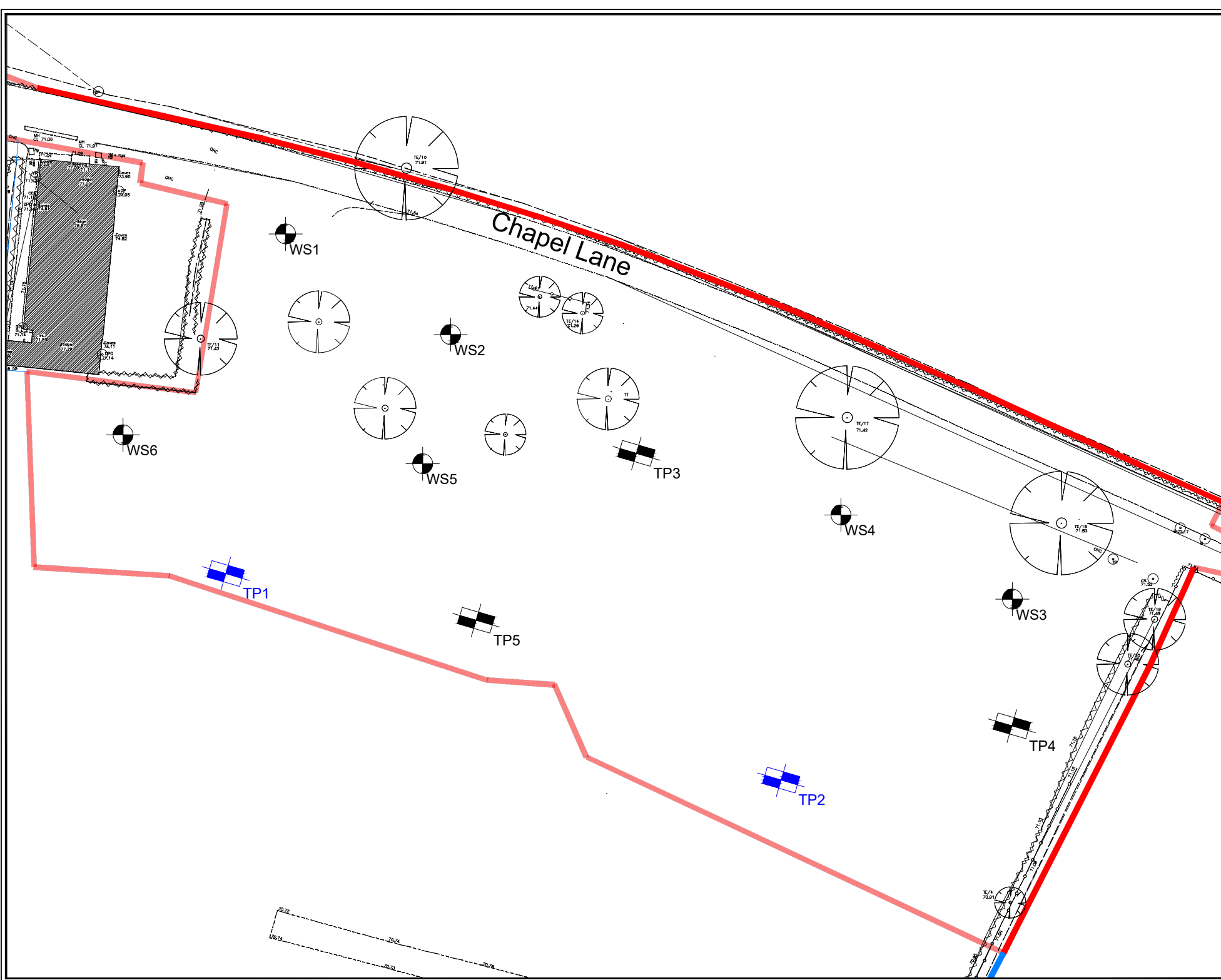
- 13.5.1 Conventional mechanical excavation should be readily achievable in the near-surface Made Ground, Lacustrine Deposits and weathered Gunthorpe Member; however, heavier plant and/or hydraulic breaking equipment may be required to excavate deeper into bedrock.
- 13.5.2 Shallow excavations should remain stable in the short-term; however, instability may occur in excavations left open for extended periods of time. Support should be provided in any excavations requiring man entry.
- 13.5.3 Care should be taken to limit the exposure of any excavation prepared to receive concrete, which may cause deterioration and a reduction in bearing capacity. Foundation excavations should be inspected by qualified personnel and if any soft or very loose materials are encountered at formation level, foundations would have to be deepened and infilled with lean mix concrete.
- 13.5.4 The findings of this investigation indicate that water ingress may occur in temporary excavations; however, any localised ingress should be controllable by sump pumping.

13.6 Soakaways

- 13.6.1 Infiltration testing was attempted in TP1 and TP2 in accordance with BRE:365 (2016) to assess the potential use of soakaway drainage at the site. The test results are included in Appendix D and show that no significant infiltration was recorded over a timed period of approximately 4 hours.
- 13.6.2 On the basis of these test results and as the near-surface ground conditions comprise clay soil grading to mudstone with depth, it is considered that surface water from the proposed development would not be effectively discharged by soakaway drainage and an alternative drainage solution will need to be adopted.

**APPENDIX A
DRAWING**

Drawing No.	Drawing Title
24091/1	Exploratory Hole Location Plan



Notes

This drawing is the copyright of georisk management ltd and may not be reproduced, copied or used without express written permission.

This drawing is to be read in conjunction with all development drawings, and designers risk assessments.

This drawing must not be scaled. Work to figured dimensions only.

KEY

 Dynamic Percussive Sampling Borehole Location

 Trial Pit Location

 Infiltration Test Location

Rev	Date	Description	Initials

Client

A R CARTWRIGHT LIMITED

georisk
MANAGEMENT

Varney House, 91 Spoon Lane, West Bromwich B70 6AB
t: 0121 655 4044, f: 0121 655 1112
www.georisk-uk.com, email: enquiries@georisk-uk.com

Contract

CHAPEL LANE
WITHERLEY

Drawing Title

EXPLORATORY HOLE
LOCATION PLAN

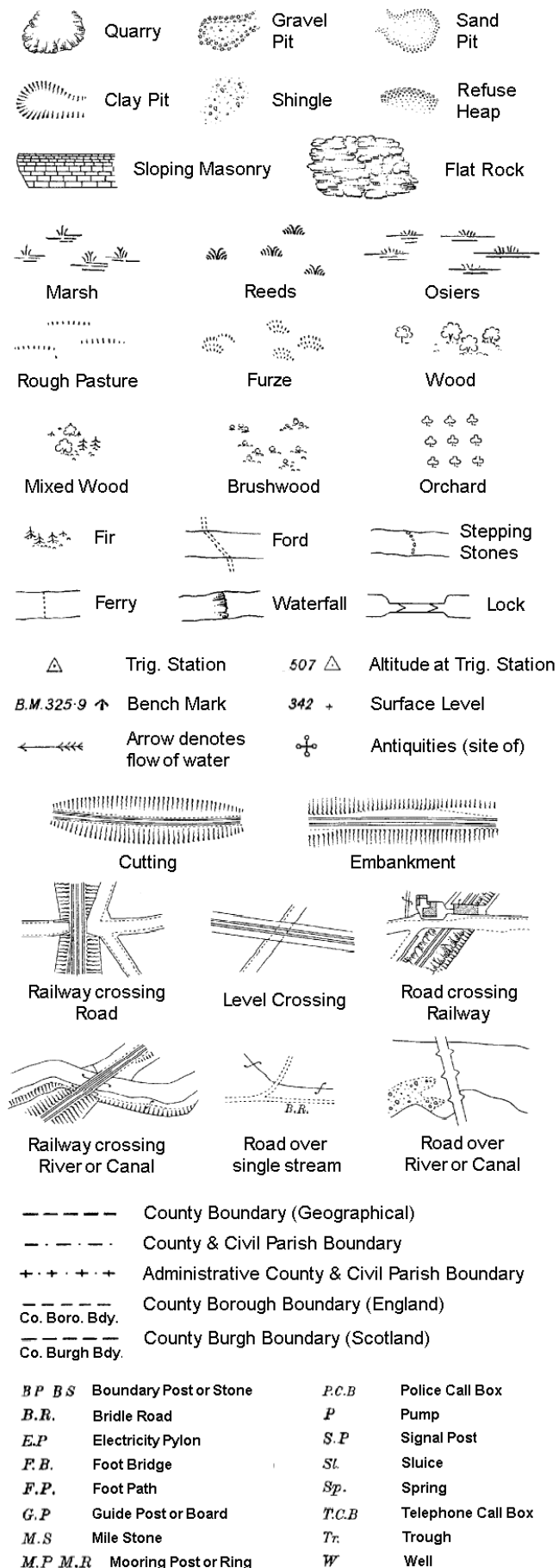
Drawing Status	
Drawn By	WB
Checked/Approved	AMG
Scale	NTS

Date	Drawing Number
30/05/24	24091/1

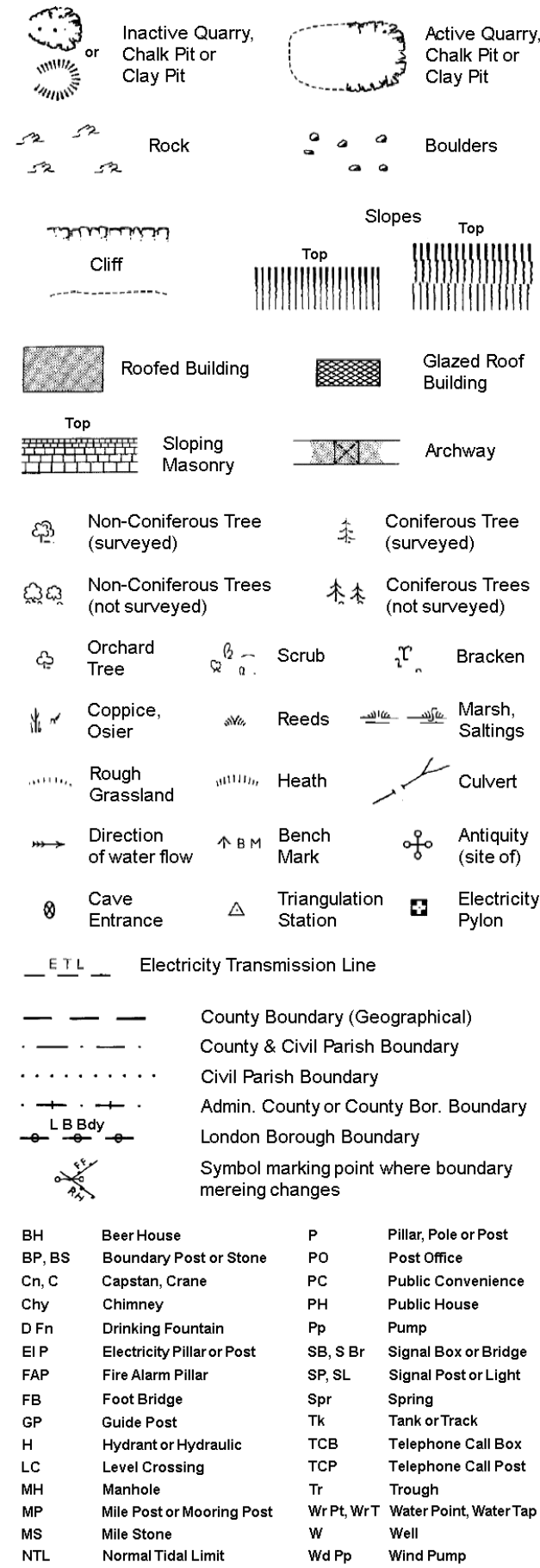
APPENDIX B
HISTORICAL MAP EXTRACTS

Historical Mapping Legends

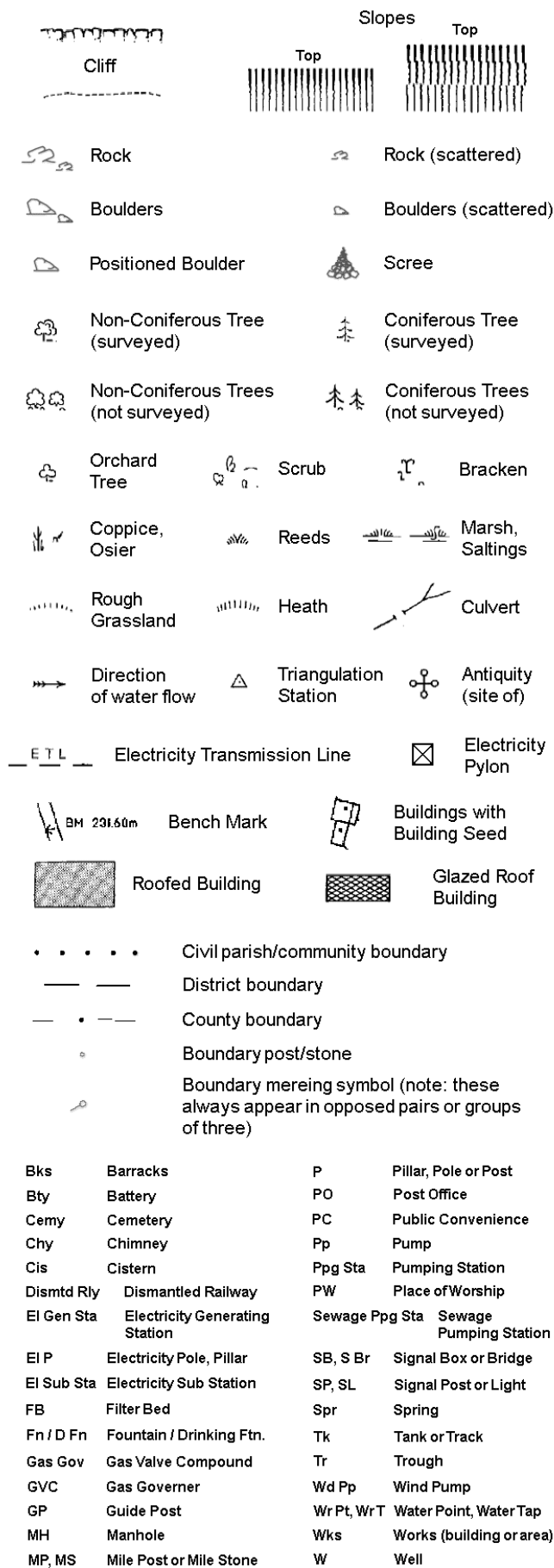
Ordnance Survey County Series and Ordnance Survey Plan 1:2,500



Ordnance Survey Plan, Additional SIMs and Supply of Unpublished Survey Information 1:2,500 and 1:1,250



Large-Scale National Grid Data 1:2,500 and 1:1,250



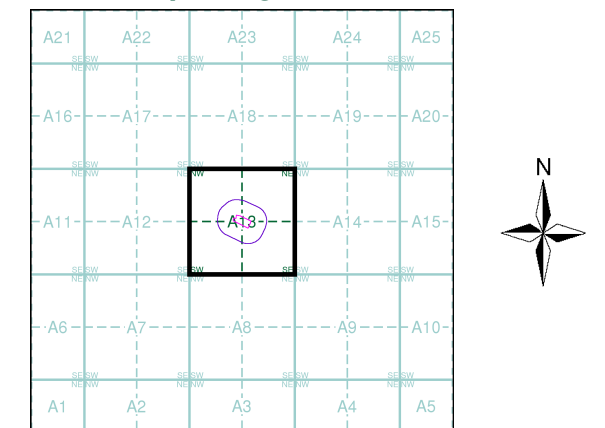
Envirocheck®

LANDMARK INFORMATION GROUP®

Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Leicestershire	1:2,500	1889	2
Leicestershire	1:2,500	1903	3
Leicestershire	1:2,500	1924	4
Leicestershire	1:2,500	1945	5
Ordnance Survey Plan	1:2,500	1959	6
Ordnance Survey Plan	1:2,500	1971	7
Additional SIMs	1:2,500	1978	8
Ordnance Survey Plan	1:2,500	1989	9
Additional SIMs	1:2,500	1991	10
Large-Scale National Grid Data	1:2,500	1994	11
Historical Aerial Photography	1:2,500	1999	12

Historical Map - Segment A13



Order Details

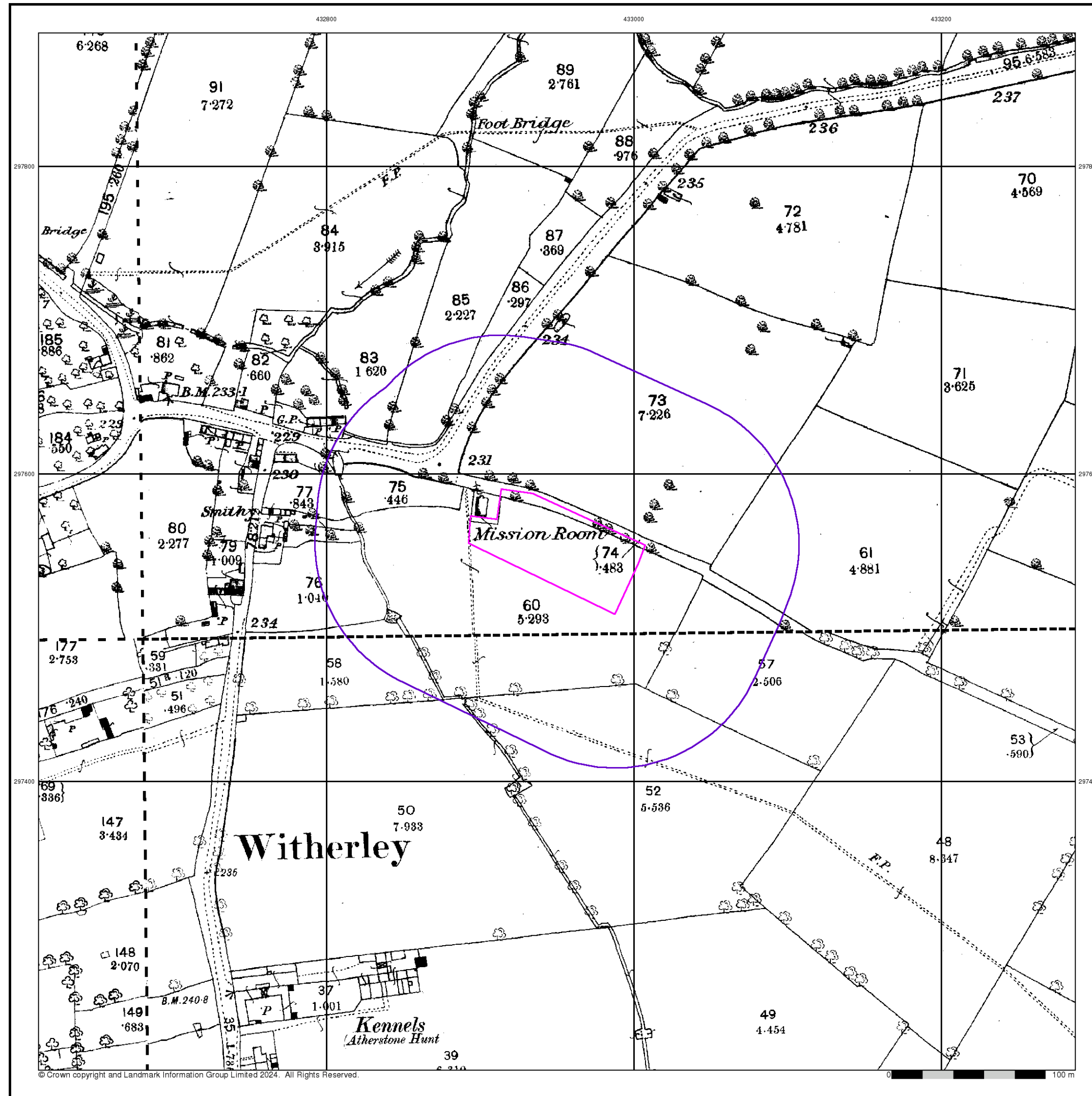
Order Number: 347180884_1_1
Customer Ref: 24091
National Grid Reference: 432950, 297550
Slice: A
Site Area (Ha): 0.49
Search Buffer (m): 100

Site Details

Chapel Lane, WITHERLEY, CV9 3LR

Landmark®
INFORMATION GROUP

Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www.envirocheck.co.uk



© Crown copyright and Landmark Information Group Limited 2024. All Rights Reserved.

Envirocheck®

LANDMARK INFORMATION GROUP®

Leicestershire

Published 1889

Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)

034_11 1889 1:2,500	034_12 1889 1:2,500
034_15 1889 1:2,500	034_16 1889 1:2,500

Historical Map - Segment A13

A21	A22	A23	A24	A25
A16	A17	A18	A19	A20
A11	A12	A13	A14	A15
A6	A7	A8	A9	A10
A1	A2	A3	A4	A5



Order Details

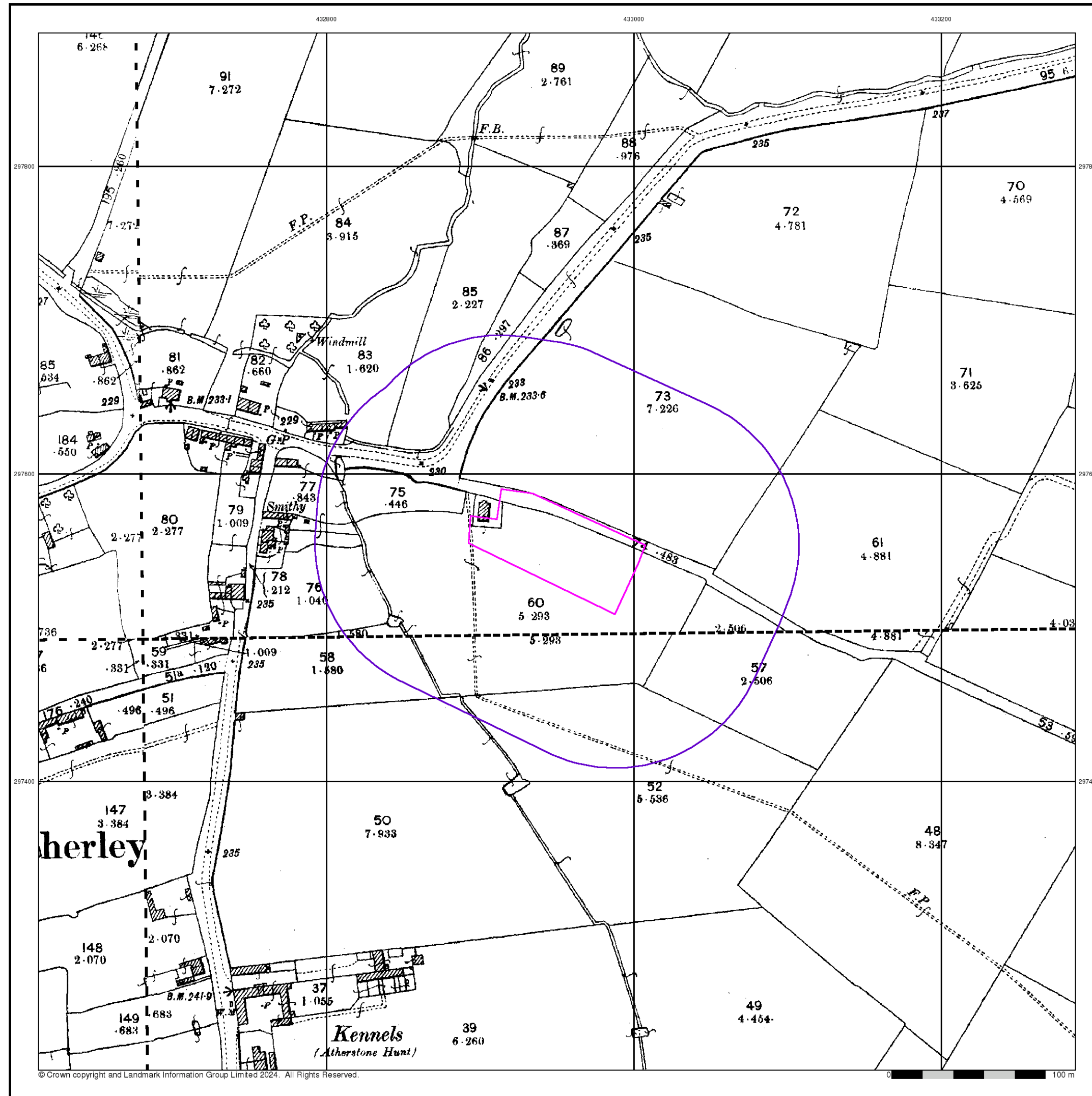
Order Number: 347180884_1_1
Customer Ref: 24091
National Grid Reference: 432950, 297550
Slice: A
Site Area (Ha): 0.49
Search Buffer (m): 100

Site Details

Chapel Lane, WITHERLEY, CV9 3LR

Landmark®
INFORMATION GROUP

Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www.envirocheck.co.uk



© Crown copyright and Landmark Information Group Limited 2024. All Rights Reserved.

Envirocheck®

LANDMARK INFORMATION GROUP®

Leicestershire

Published 1903

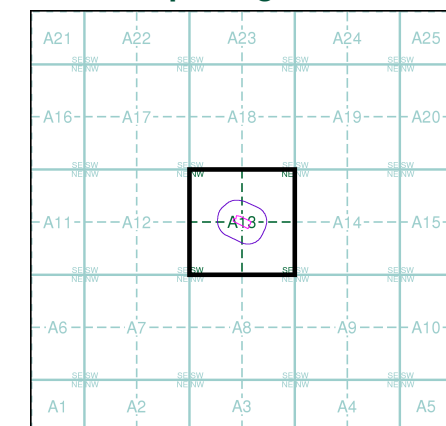
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)

034_11 1903 1:2,500	034_12 1903 1:2,500
034_15 1903 1:2,500	034_16 1903 1:2,500

Historical Map - Segment A13



Order Details

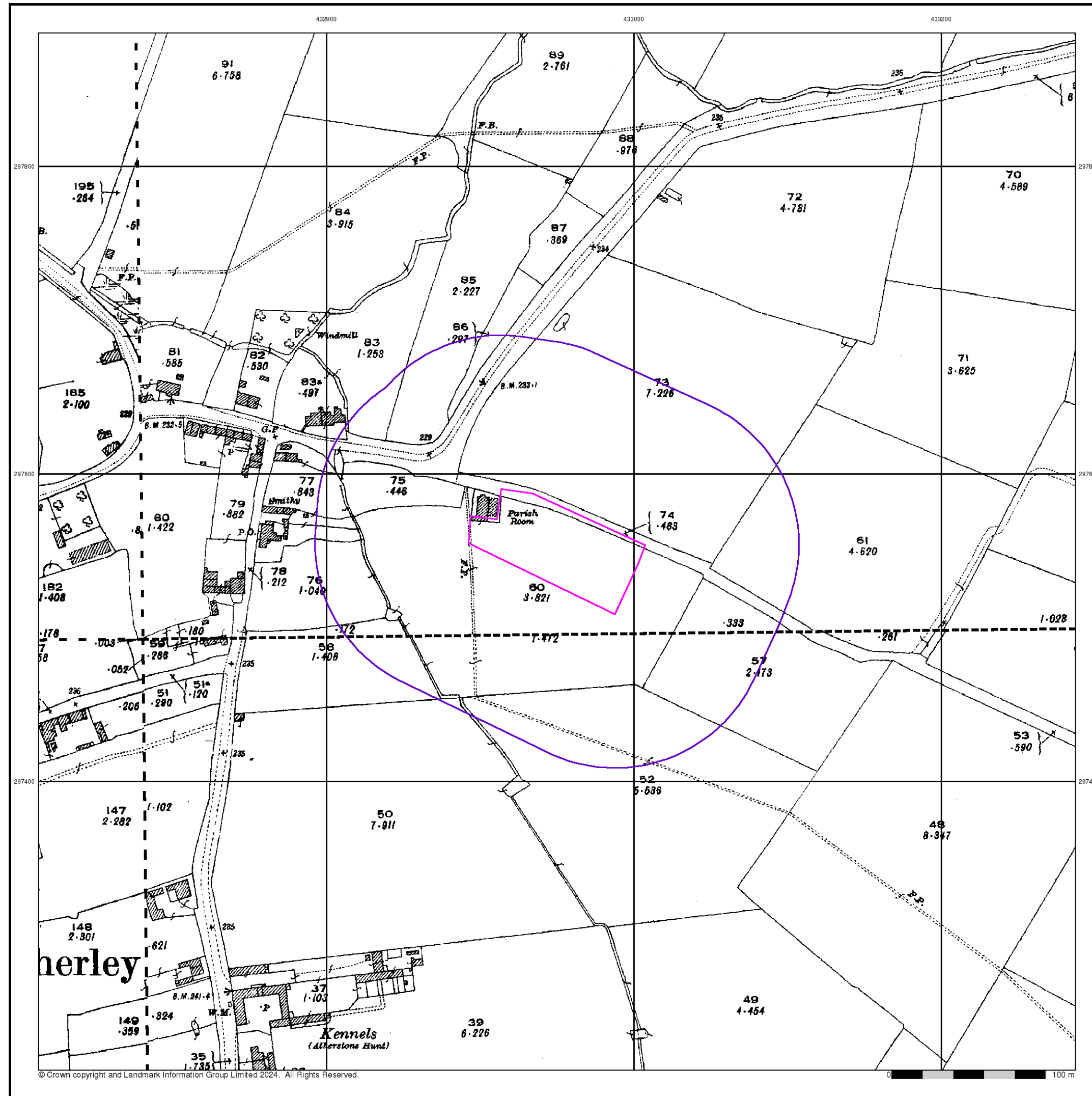
Order Number: 347180884_1_1
Customer Ref: 24091
National Grid Reference: 432950, 297550
Slice: A
Site Area (Ha): 0.49
Search Buffer (m): 100

Site Details

Chapel Lane, WITHERLEY, CV9 3LR

Landmark®
INFORMATION GROUP

Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www.envirocheck.co.uk



© Crown copyright and Landmark Information Group Limited 2024. All Rights Reserved.

Envirocheck®

LANDMARK INFORMATION GROUP®

Leicestershire

Published 1924

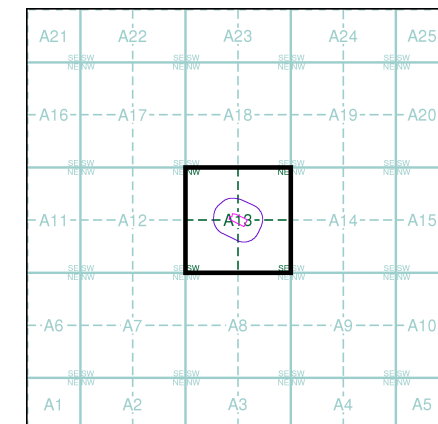
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)

034_11 1924 1:2,500	034_12 1924 1:2,500
034_15 1924 1:2,500	034_16 1924 1:2,500

Historical Map - Segment A13



Order Details

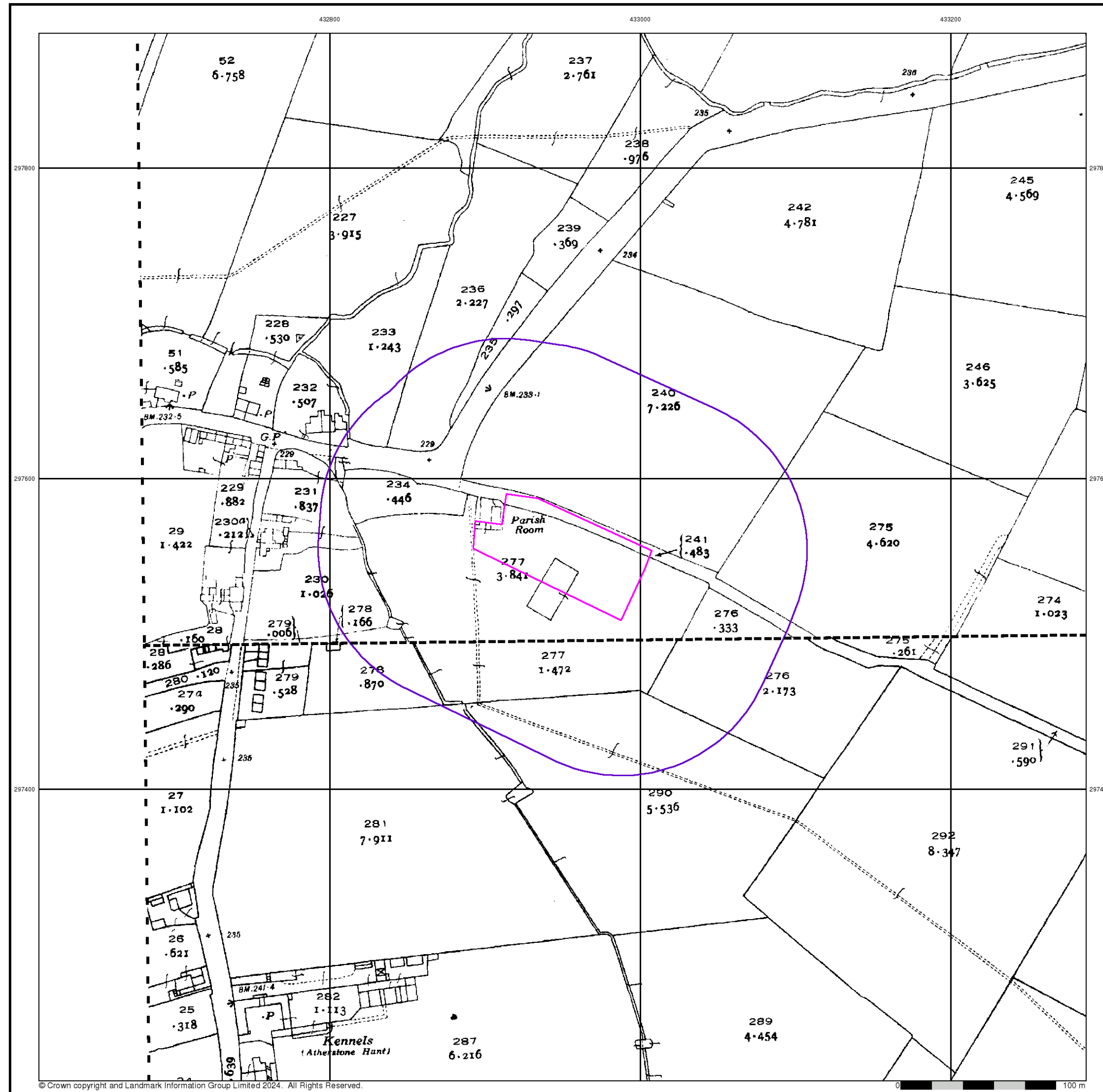
Order Number: 347180884_1_1
Customer Ref: 24091
National Grid Reference: 432950, 297550
Slice: A
Site Area (Ha): 0.49
Search Buffer (m): 100

Site Details

Chapel Lane, WITHERLEY, CV9 3LR

Landmark®
INFORMATION GROUP

Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www.envirocheck.co.uk



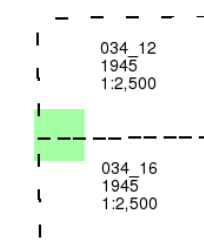
Leicestershire

Published 1945

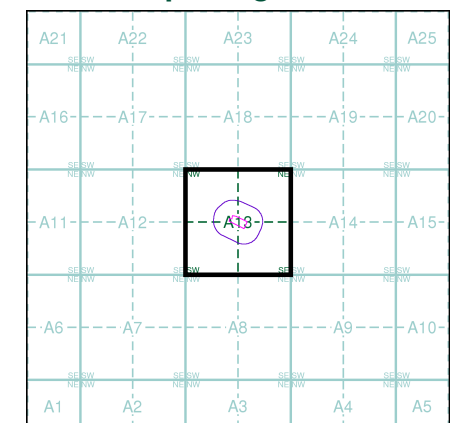
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)



Historical Map - Segment A13

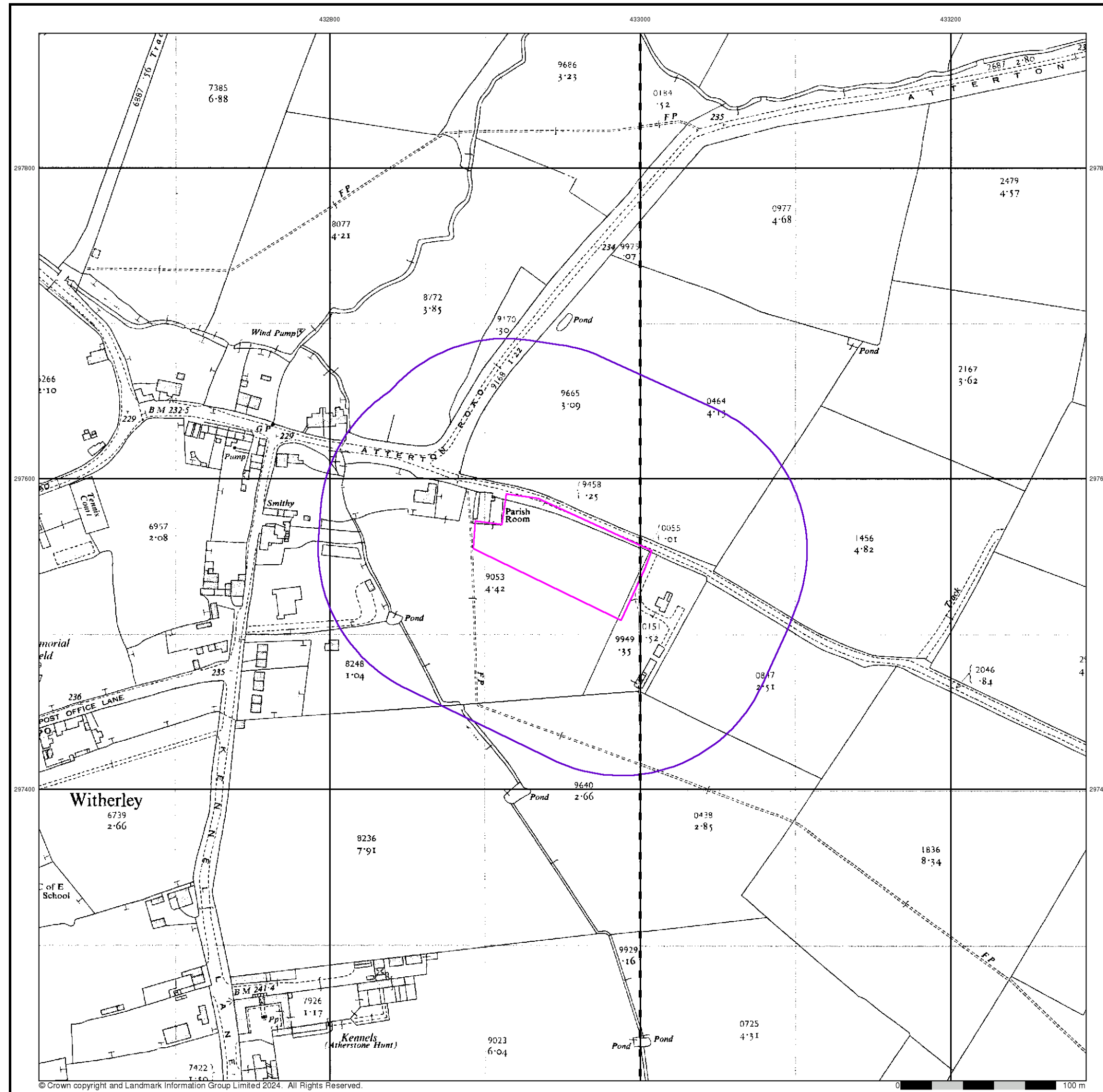


Order Details

Order Number: 347180884_1_1
Customer Ref: 24091
National Grid Reference: 432950, 297550
Slice: A
Site Area (Ha): 0.49
Search Buffer (m): 100

Site Details

Chapel Lane, WITHERLEY, CV9 3LR



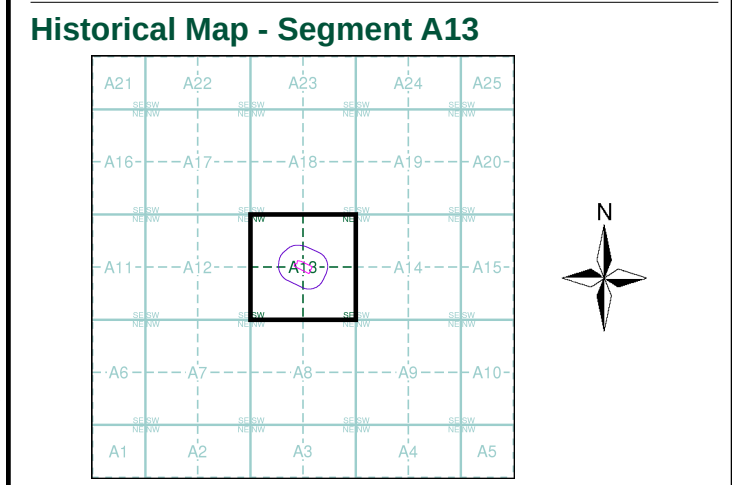
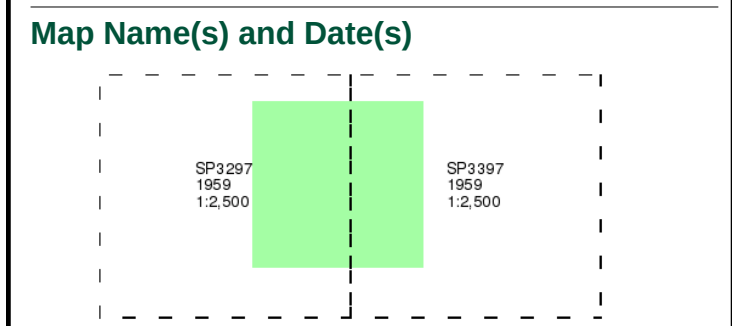
© Crown copyright and Landmark Information Group Limited 2024. All Rights Reserved.

Ordnance Survey Plan

Published 1959

Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

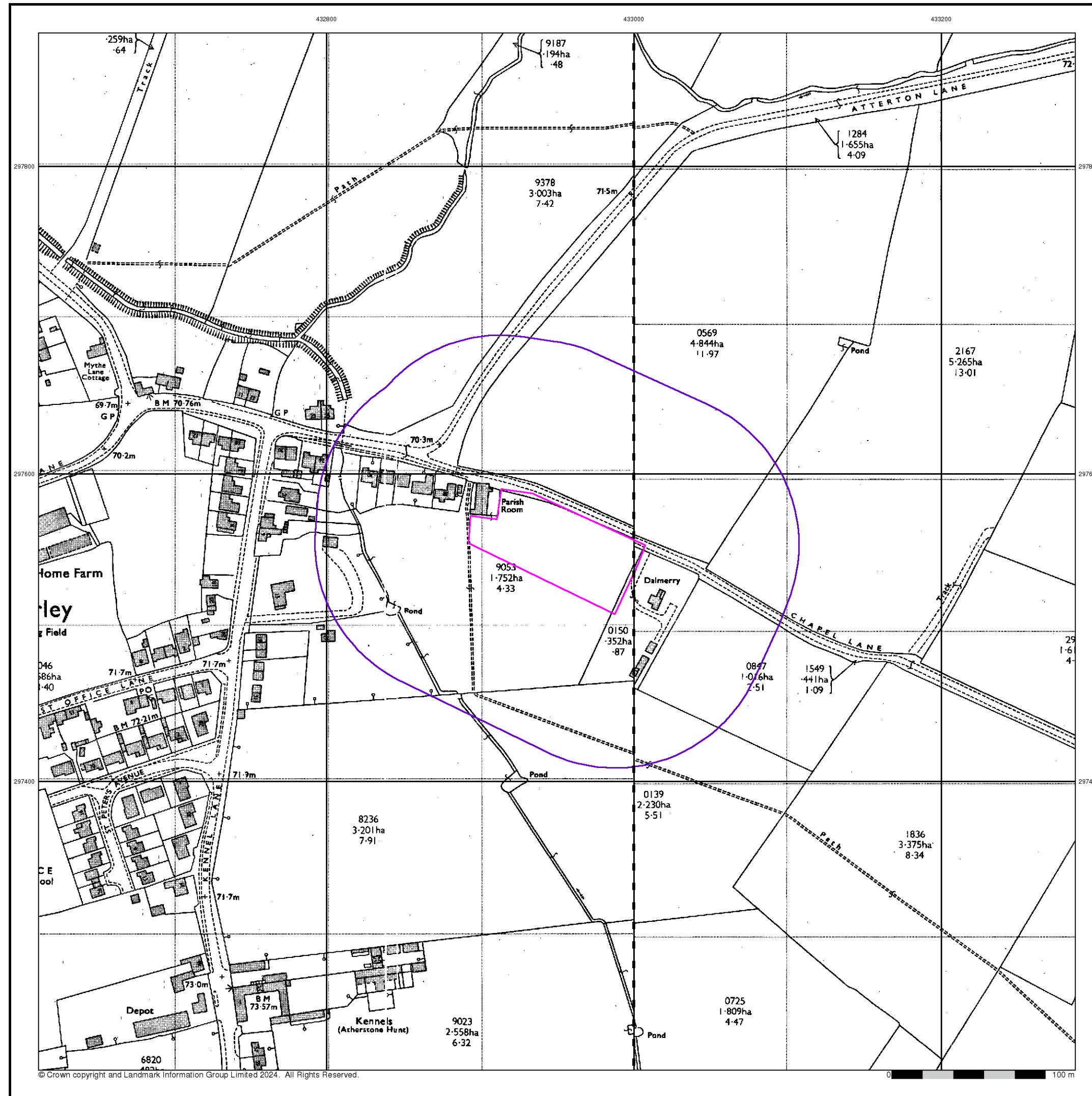


Order Details

Order Number:	347180884_1_1
Customer Ref:	24091
National Grid Reference:	432950, 297550
Slice:	A
Site Area (Ha):	0.49
Search Buffer (m):	100

Site Details

Chapel Lane, WITHERLEY, CV9 3LR



© Crown copyright and Landmark Information Group Limited 2024. All Rights Reserved.

Envirocheck®

LANDMARK INFORMATION GROUP®

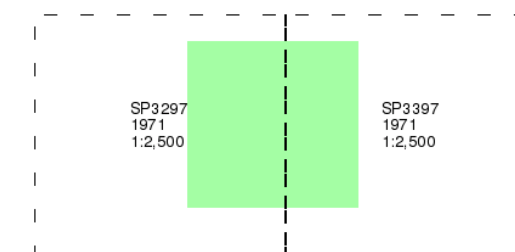
Ordnance Survey Plan

Published 1971

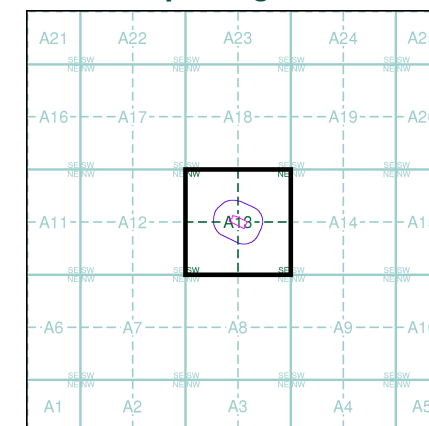
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)



Historical Map - Segment A13



Order Details

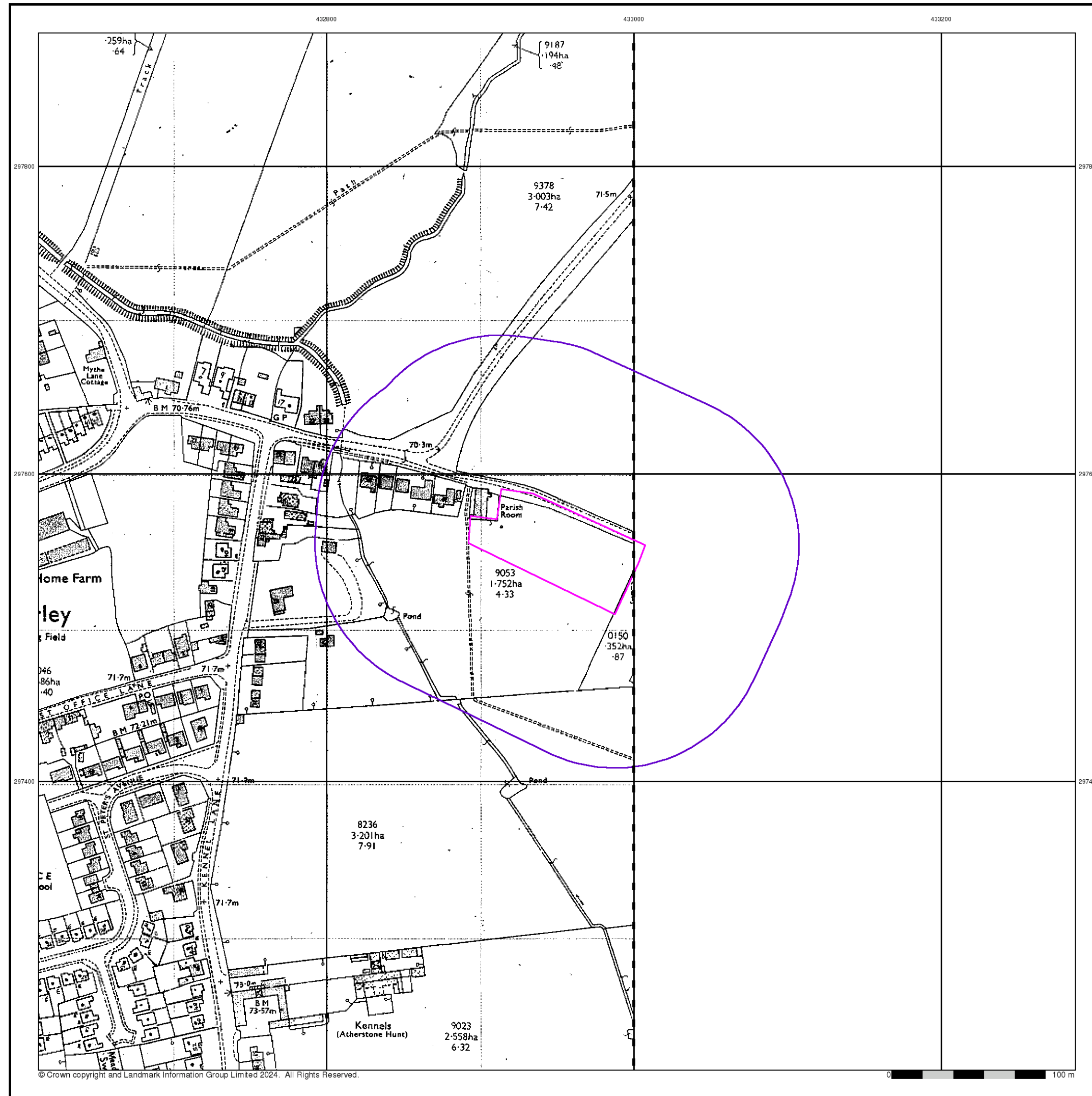
Order Number: 347180884_1_1
Customer Ref: 24091
National Grid Reference: 432950, 297550
Slice: A
Site Area (Ha): 0.49
Search Buffer (m): 100

Site Details

Chapel Lane, WITHERLEY, CV9 3LR

Landmark®
INFORMATION GROUP

Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www.envirocheck.co.uk



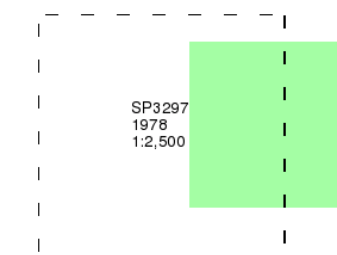
Additional SIMs

Published 1978

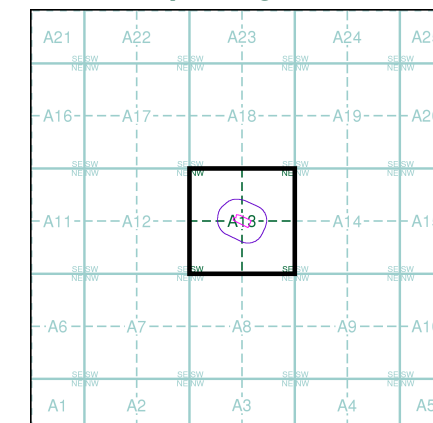
Source map scale - 1:2,500

The SIM cards (Ordnance Survey's 'Survey of Information on Microfilm') are further, minor editions of mapping which were produced and published in between the main editions as an area was updated. They date from 1947 to 1994, and contain detailed information on buildings, roads and land-use. These maps were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)



Historical Map - Segment A13

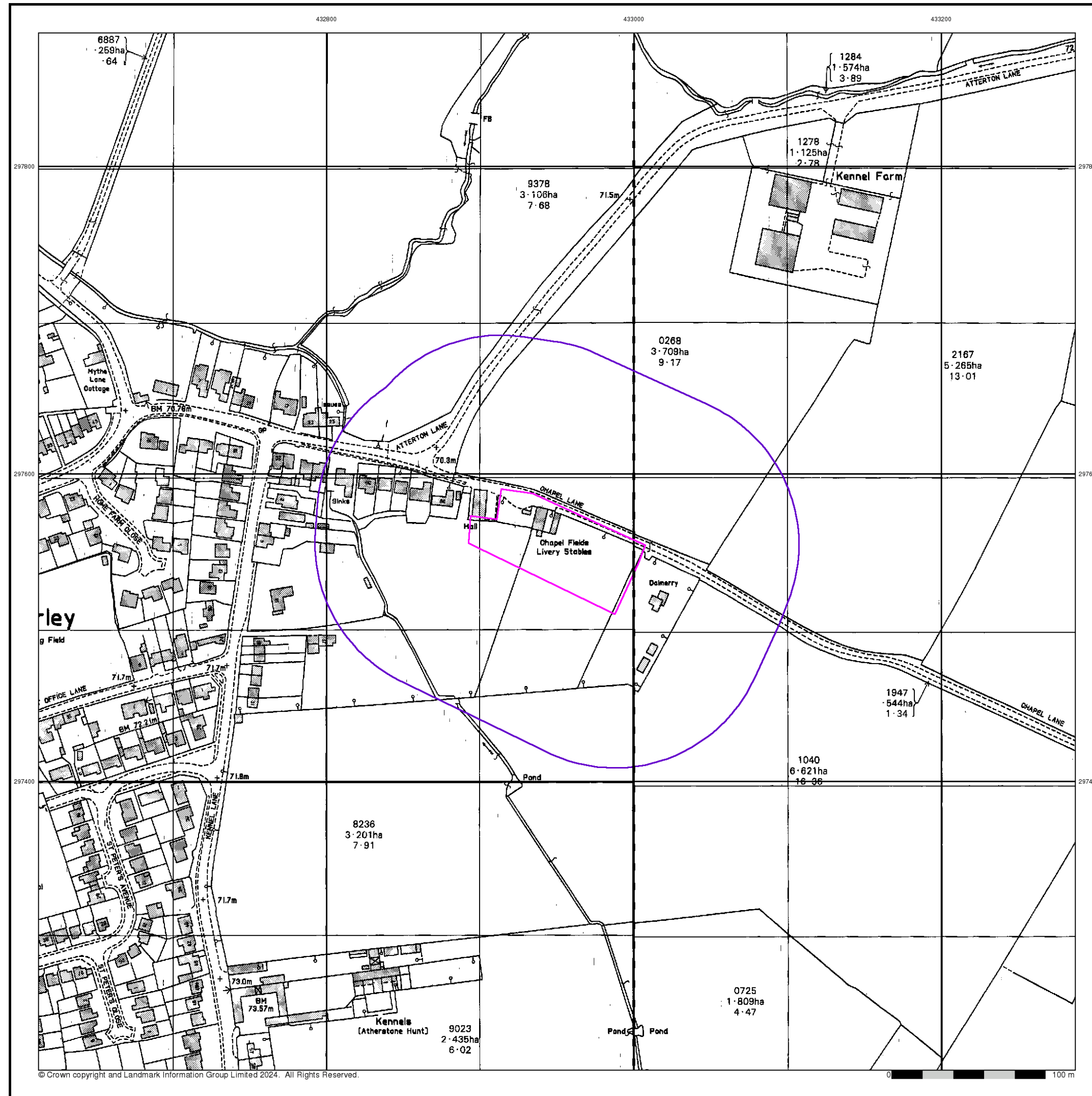


Order Details

Order Number: 347180884_1_1
Customer Ref: 24091
National Grid Reference: 432950, 297550
Slice: A
Site Area (Ha): 0.49
Search Buffer (m): 100

Site Details

Chapel Lane, WITHERLEY, CV9 3LR



© Crown copyright and Landmark Information Group Limited 2024. All Rights Reserved.

Envirocheck®

LANDMARK INFORMATION GROUP®

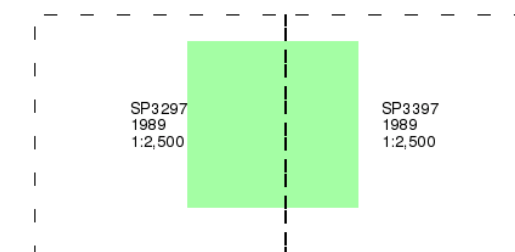
Ordnance Survey Plan

Published 1989

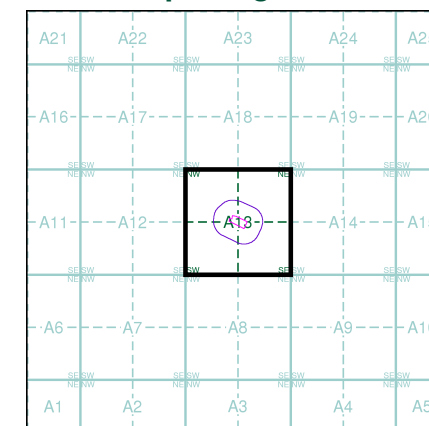
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)



Historical Map - Segment A13



Order Details

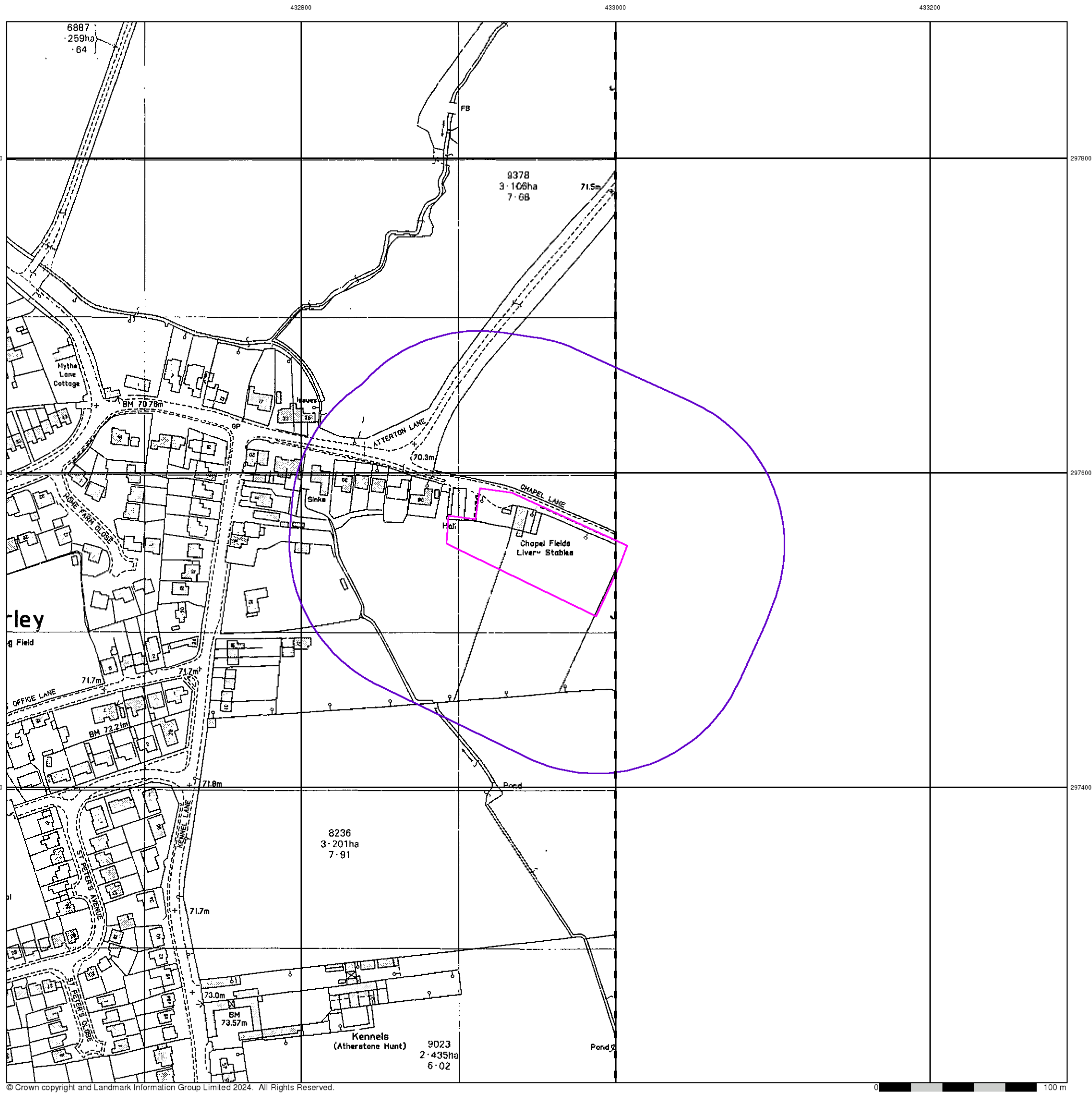
Order Number: 347180884_1_1
Customer Ref: 24091
National Grid Reference: 432950, 297550
Slice: A
Site Area (Ha): 0.49
Search Buffer (m): 100

Site Details

Chapel Lane, WITHERLEY, CV9 3LR

Landmark®
INFORMATION GROUP

Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www.envirocheck.co.uk



Envirocheck®

LANDMARK INFORMATION GROUP®

Additional SIMs

Published 1991

Source map scale - 1:2,500

The SIM cards (Ordnance Survey's 'Survey of Information on Microfilm') are further, minor editions of mapping which were produced and published in between the main editions as an area was updated. They date from 1947 to 1994, and contain detailed information on buildings, roads and land-use. These maps were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)

SP3297
1991
1:2,500

Historical Map - Segment A13

A21	A22	A23	A24	A25
A16	A17	A18	A19	A20
A11	A12	A13	A14	A15
A6	A7	A8	A9	A10
A1	A2	A3	A4	A5

Order Details

Order Number:	347180884_1_1
Customer Ref:	24091
National Grid Reference:	432950, 297550
Slice:	A
Site Area (Ha):	0.49
Search Buffer (m):	100

Site Details

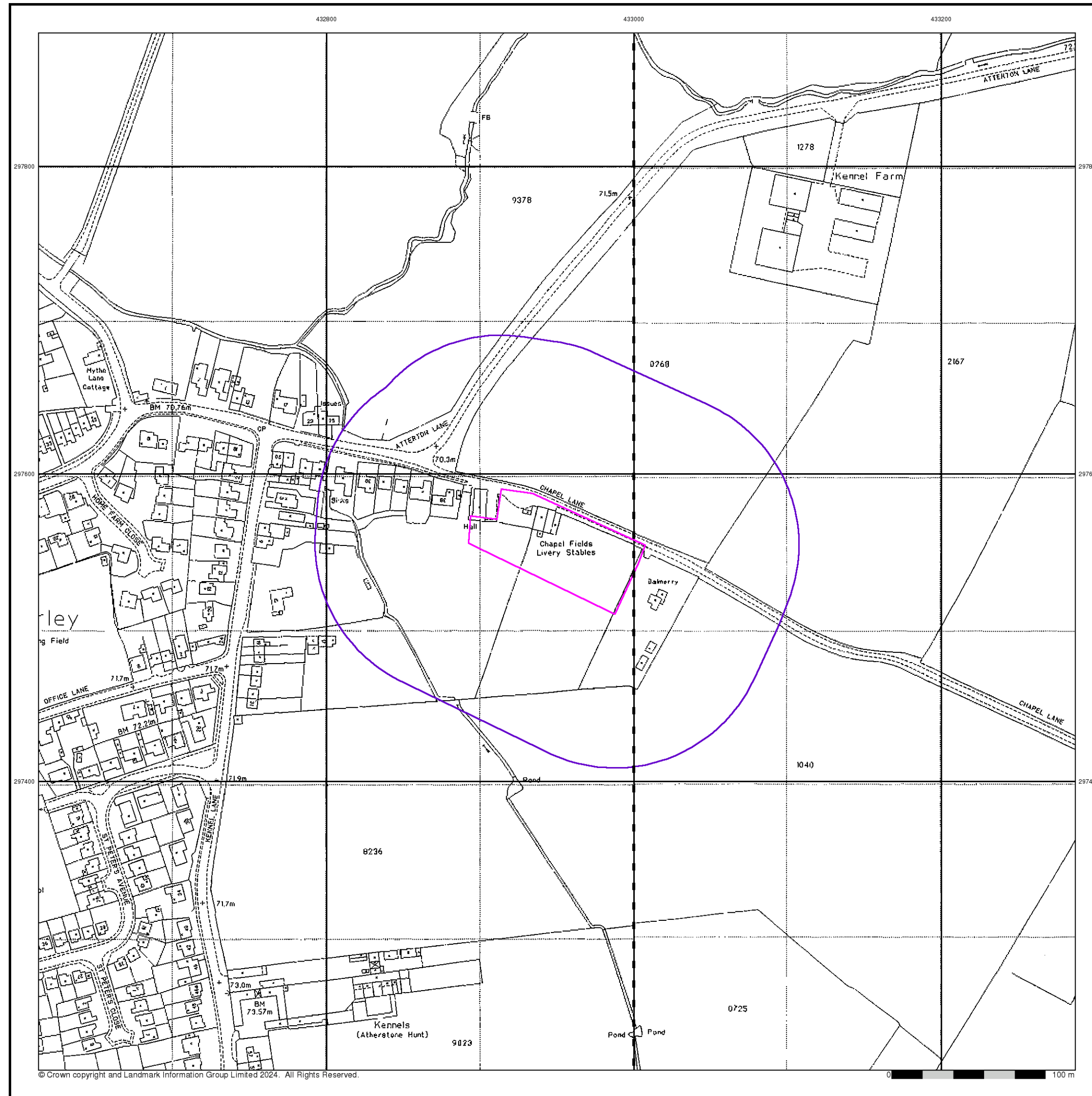
Chapel Lane, WITHERLEY, CV9 3LR

Landmark®

INFORMATION GROUP

Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www.envirocheck.co.uk

A Landmark Information Group Service v50.0 17-May-2024 Page 10 of 12



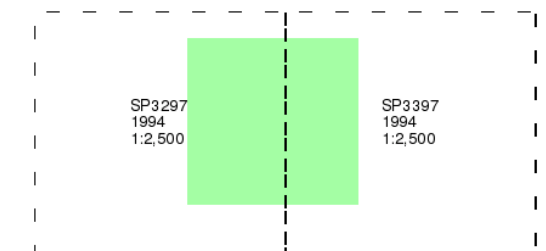
Large-Scale National Grid Data

Published 1994

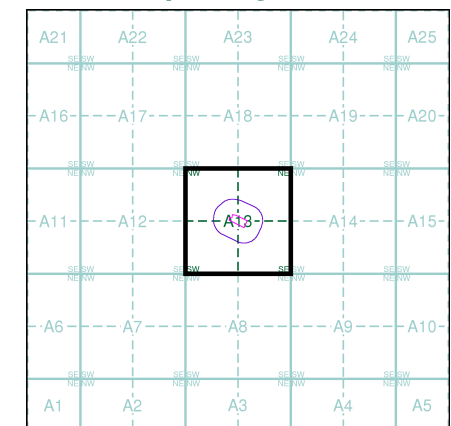
Source map scale - 1:2,500

'Large Scale National Grid Data' superseded SIM cards (Ordnance Survey's 'Survey of Information on Microfilm') in 1992, and continued to be produced until 1999. These maps were the fore-runners of digital mapping and so provide detailed information on houses and roads, but tend to show less topographic features such as vegetation. These maps were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)



Historical Map - Segment A13



Order Details

Order Number: 347180884_1_1
Customer Ref: 24091
National Grid Reference: 432950, 297550
Slice: A
Site Area (Ha): 0.49
Search Buffer (m): 100

Site Details

Chapel Lane, WITHERLEY, CV9 3LR

Historical Mapping Legends

Ordnance Survey County Series 1:10,560

	Gravel Pit		Sand Pit		Other Pits
	Quarry		Shingle		Orchard
	Osiers		Reeds		Marsh
	Mixed Wood		Deciduous		Brushwood
	Fir		Furze		Rough Pasture
	Arrow denotes flow of water		Trigonometrical Station		
	Site of Antiquities		Bench Mark		
	Pump, Guide Post, Signal Post		Well, Spring, Boundary Post		
	•285 Surface Level				
	Sketched Contour		Instrumental Contour		
	Main Roads		Minor Roads		
	Sunken Road		Raised Road		
	Road over Railway		Railway over River		
	Railway over Road		Level Crossing		
	Road over River or Canal		Road over Stream		
	Road over Stream				
	County Boundary (Geographical)				
	County & Civil Parish Boundary				
	Administrative County & Civil Parish Boundary				
	County Borough Boundary (England)				
	County Burgh Boundary (Scotland)				
	Rural District Boundary				
	Civil Parish Boundary				

Ordnance Survey Plan 1:10,000

	Chalk Pit, Clay Pit or Quarry		Gravel Pit
	Sand Pit		Disused Pit or Quarry
	Refuse or Slag Heap		Lake, Loch or Pond
	Dunes		Boulders
	Coniferous Trees		Non-Coniferous Trees
	Orchard		Scrub
	Bracken		Heath
	Marsh		Reeds
	Building		Glasshouse
	Sloping Masonry		Pylon
	Cutting		Embankment
	Road Under		Road Over
	Level Crossing		Foot Bridge
	Standard Gauge Multiple Track		Standard Gauge Single Track
	Siding, Tramway or Mineral Line		Narrow Gauge
	Geographical County		Administrative County, County Borough or County of City
	Municipal Borough, Urban or Rural District, Burgh or District Council		Borough, Burgh or County Constituency
	Civil Parish		
	BP, BS Boundary Post or Stone		Police Station
	Church		Post Office
	Club House		Public Convenience
	Fire Engine Station		Public House
	Foot Bridge		Signal Box
	Fountain		Spring
	Guide Post		Telephone Call Box
	Mile Post		Telephone Call Post
	Mile Stone		Well

1:10,000 Raster Mapping

	Gravel Pit		Refuse tip or slag heap
	Rock		Rock (scattered)
	Boulders		Boulders (scattered)
	Shingle		Mud
	Sand		Sand Pit
	Slopes		Top of cliff
	General detail		Underground detail
	Overhead detail		Narrow gauge railway
	Multi-track railway		Single track railway
	County boundary (England only)		Civil, parish or community boundary
	District, Unitary, Metropolitan, London Borough boundary		Constituency boundary
	Area of wooded vegetation		Non-coniferous trees
	Non-coniferous trees (scattered)		Coniferous trees
	Coniferous trees (scattered)		Positioned tree
	Orchard		Coppice or Osiers
	Rough Grassland		Heath
	Scrub		Marsh, Salt Marsh or Reeds
	Water feature		Flow arrows
	Mean high water (springs)		Mean low water (springs)
	Telephone line (where shown)		Electricity transmission line (with poles)
	Bench mark (where shown)		Triangulation station
	Point feature (e.g. Guide Post or Mile Stone)		Pylon, flare stack or lighting tower
	Site of (antiquity)		Glasshouse
	General Building		Important Building

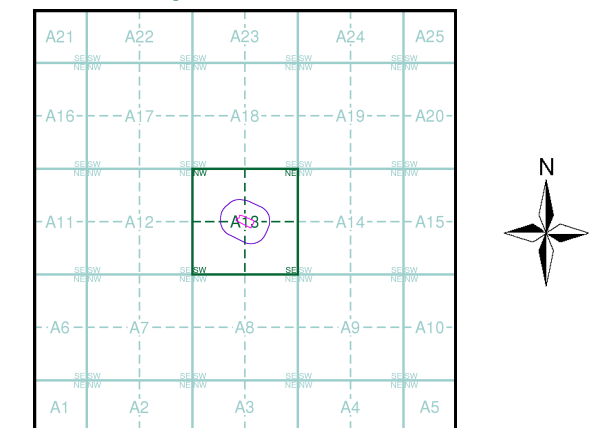
Envirocheck®

LANDMARK INFORMATION GROUP®

Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Warwickshire	1:10,560	1888	2
Leicestershire	1:10,560	1904	3
Leicestershire	1:10,560	1925	4
Historical Aerial Photography	1:10,560	1950	5
Ordnance Survey Plan	1:10,000	1955	6
Ordnance Survey Plan	1:10,000	1965	7
Ordnance Survey Plan	1:10,000	1974	8
Ordnance Survey Plan	1:10,000	1992	9
10K Raster Mapping	1:10,000	1999	10
10K Raster Mapping	1:10,000	2006	11
VectorMap Local	1:10,000	2024	12

Historical Map - Slice A



Order Details

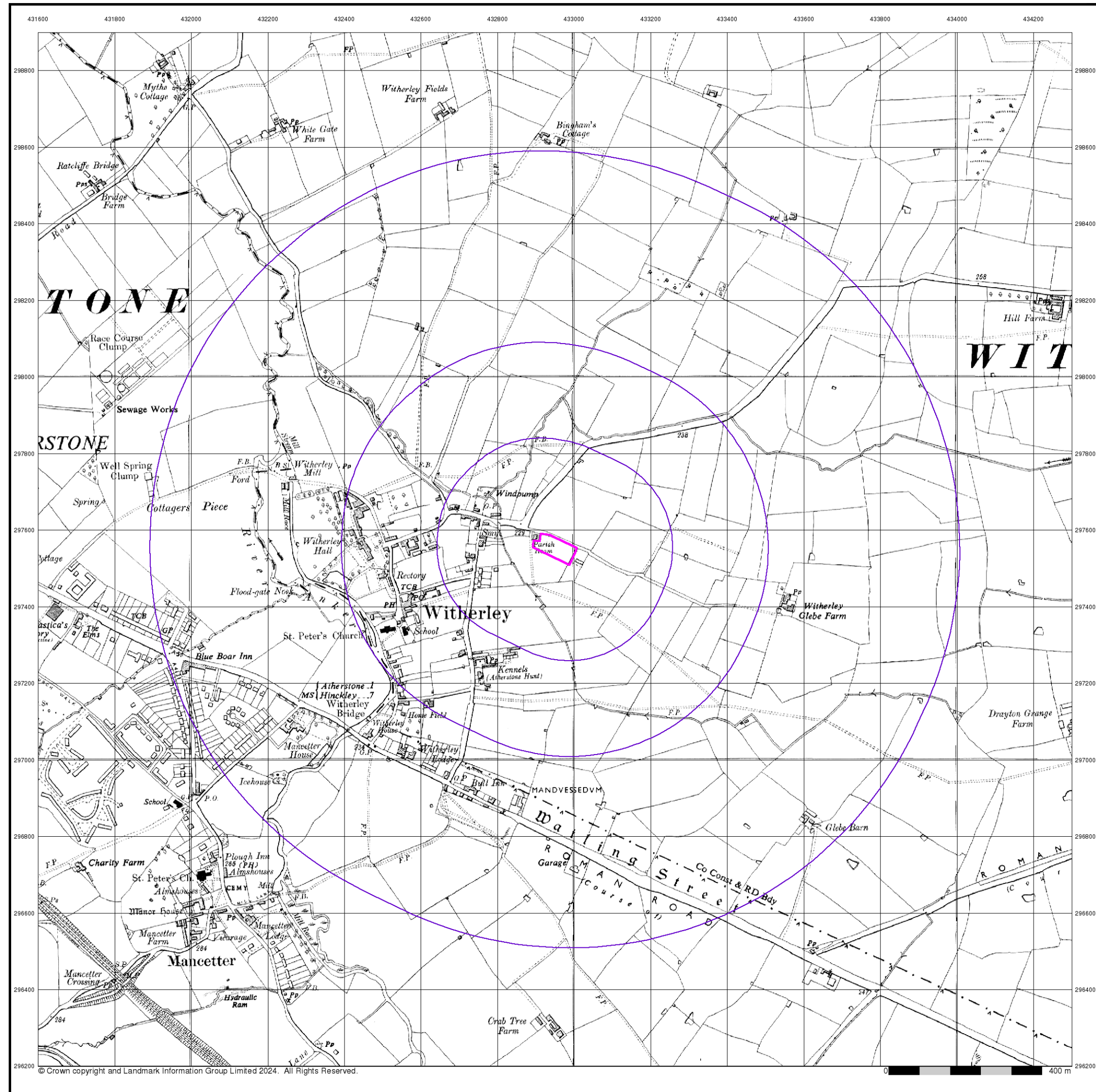
Order Number: 347180884_1_1
Customer Ref: 24091
National Grid Reference: 432950, 297550
Slice: A
Site Area (Ha): 0.49
Search Buffer (m): 1000

Site Details

Chapel Lane, WITHERLEY, CV9 3LR

Landmark®
INFORMATION GROUP

Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www.envirocheck.co.uk



Envirocheck®

LANDMARK INFORMATION GROUP®

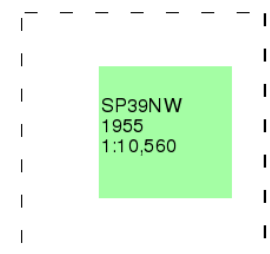
Ordnance Survey Plan

Published 1955

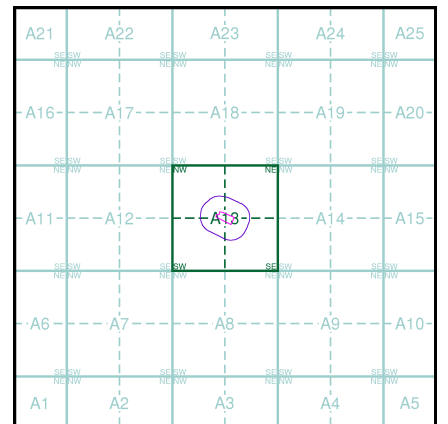
Source map scale - 1:10,000

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940's, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)



Historical Map - Slice A



Order Details

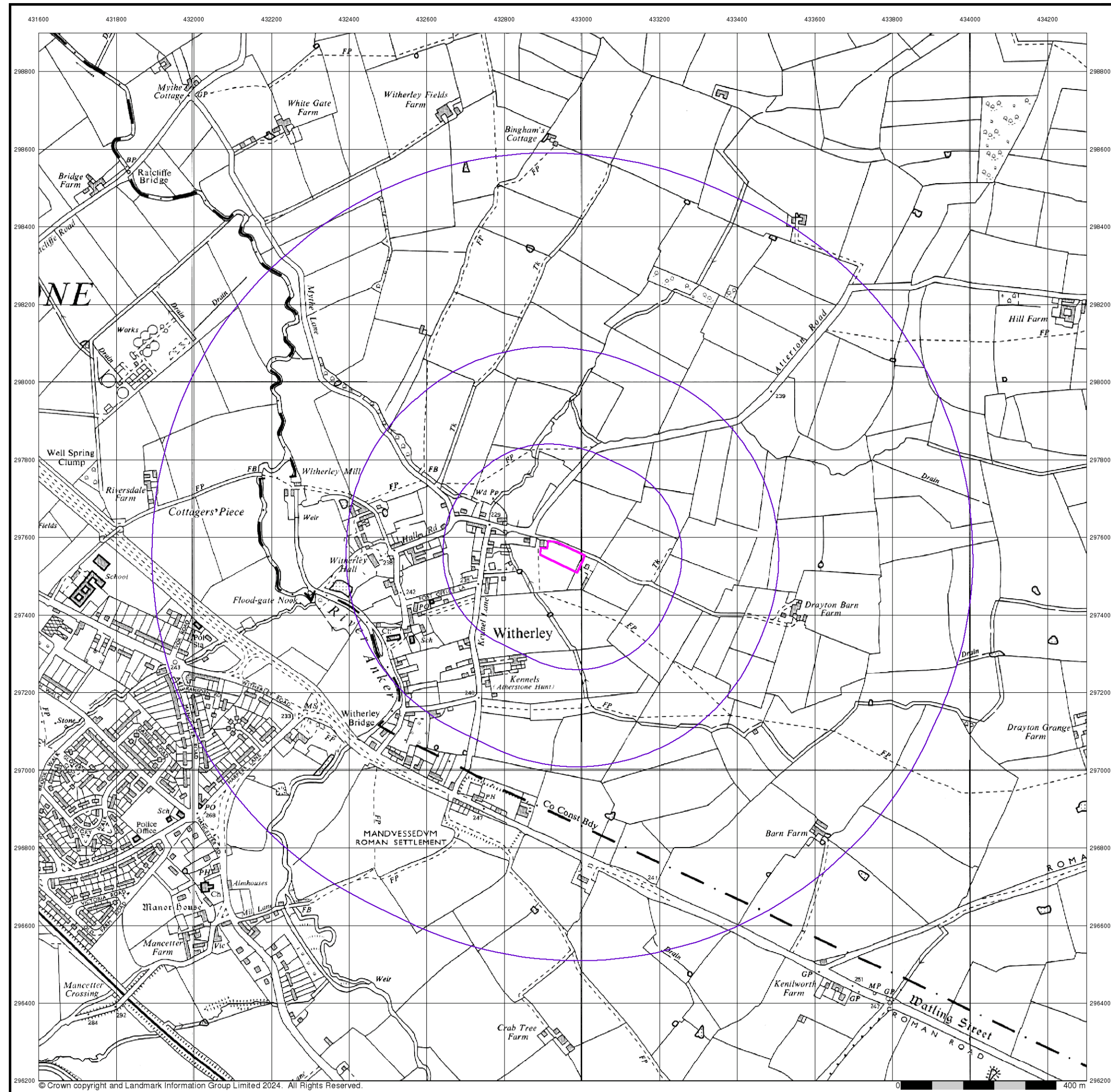
Order Number: 347180884_1_1
Customer Ref: 24091
National Grid Reference: 432950, 297550
Slice: A
Site Area (Ha): 0.49
Search Buffer (m): 1000

Site Details

Chapel Lane, WITHERLEY, CV9 3LR

Landmark®
INFORMATION GROUP

Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www.envirocheck.co.uk



Envirocheck[®]

LANDMARK INFORMATION GROUP[®]

Ordnance Survey Plan

Published 1965

Source map scale - 1:10,000

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940's, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)

SP39NW
1965
1:10,560

Historical Map - Slice A

Order Details

Order Number:	347180884_1_1
Customer Ref:	24091
National Grid Reference:	432950, 297550
Slice:	A
Site Area (Ha):	0.49
Search Buffer (m):	1000

Site Details

Chapel Lane, WITHERLEY, CV9 3LR

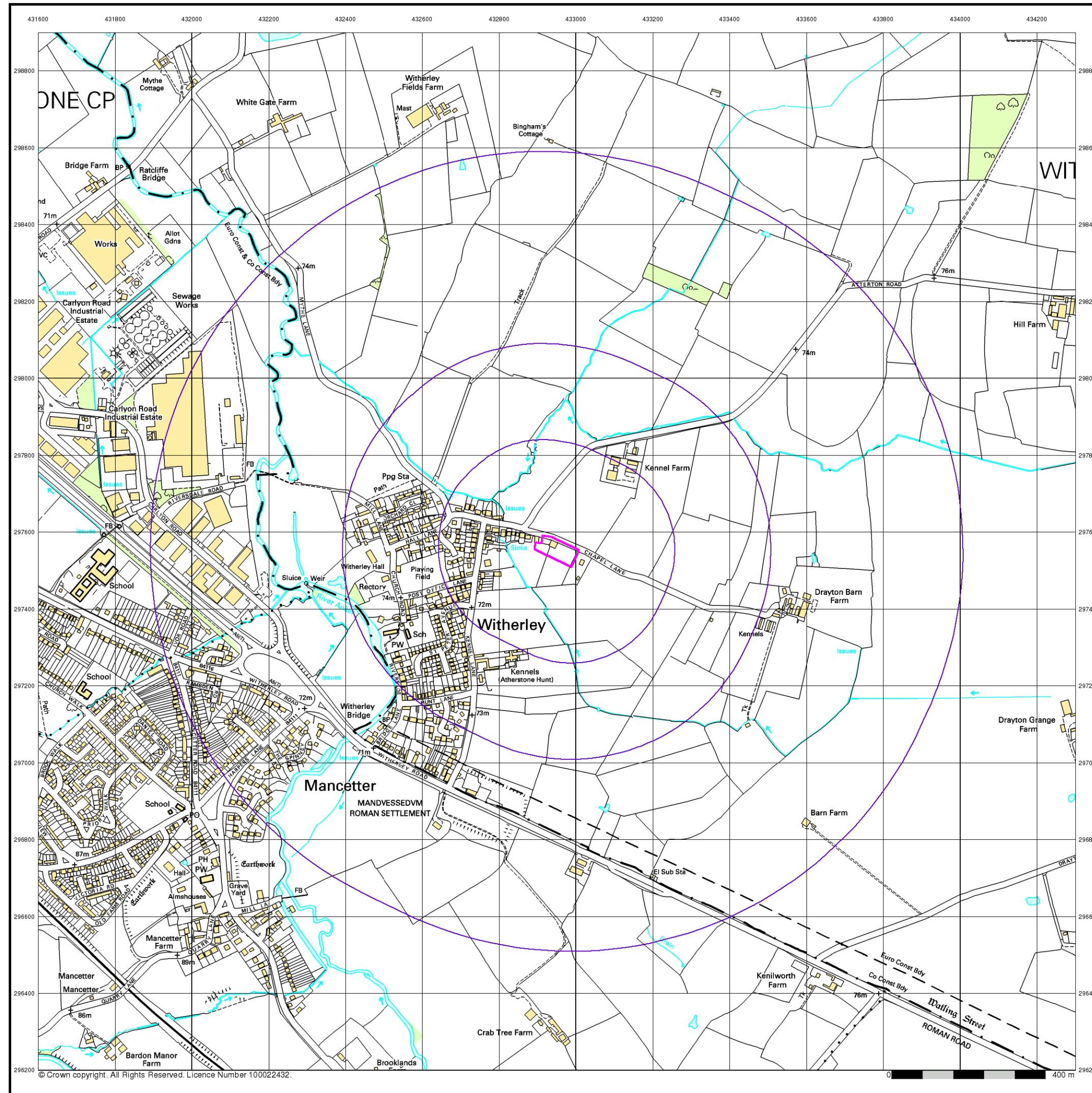
Landmark[®]

INFORMATION GROUP

Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www.envirocheck.co.uk

© Crown copyright and Landmark Information Group Limited 2024. All Rights Reserved.

A Landmark Information Group Service v50.0 17-May-2024 Page 7 of 12



10k Raster Mapping

Published 1999

Source map scale - 1:10,000

The historical maps shown were produced from the Ordnance Survey's 1:10,000 colour raster mapping. These maps are derived from Landplan which replaced the old 1:10,000 maps originally published in 1970. The data is highly detailed showing buildings, fences and field boundaries as well as all roads, tracks and paths. Road names are also included together with the relevant road number and classification. Boundary information depiction includes county, unitary authority, district, civil parish and constituency.

Map Name(s) and Date(s)

SP39NW

1999

1:10,000

Historical Map - Slice A

A21	A22	A23	A24	A25
A16	A17	A18	A19	A20
A11	A12	A13	A14	A15
A6	A7	A8	A9	A10
A1	A2	A3	A4	A5

N

Order Details

Order Number:

347180884_1_1

Customer Ref:

24091

National Grid Reference:

432950, 297550

Slice:

A

Site Area (Ha):

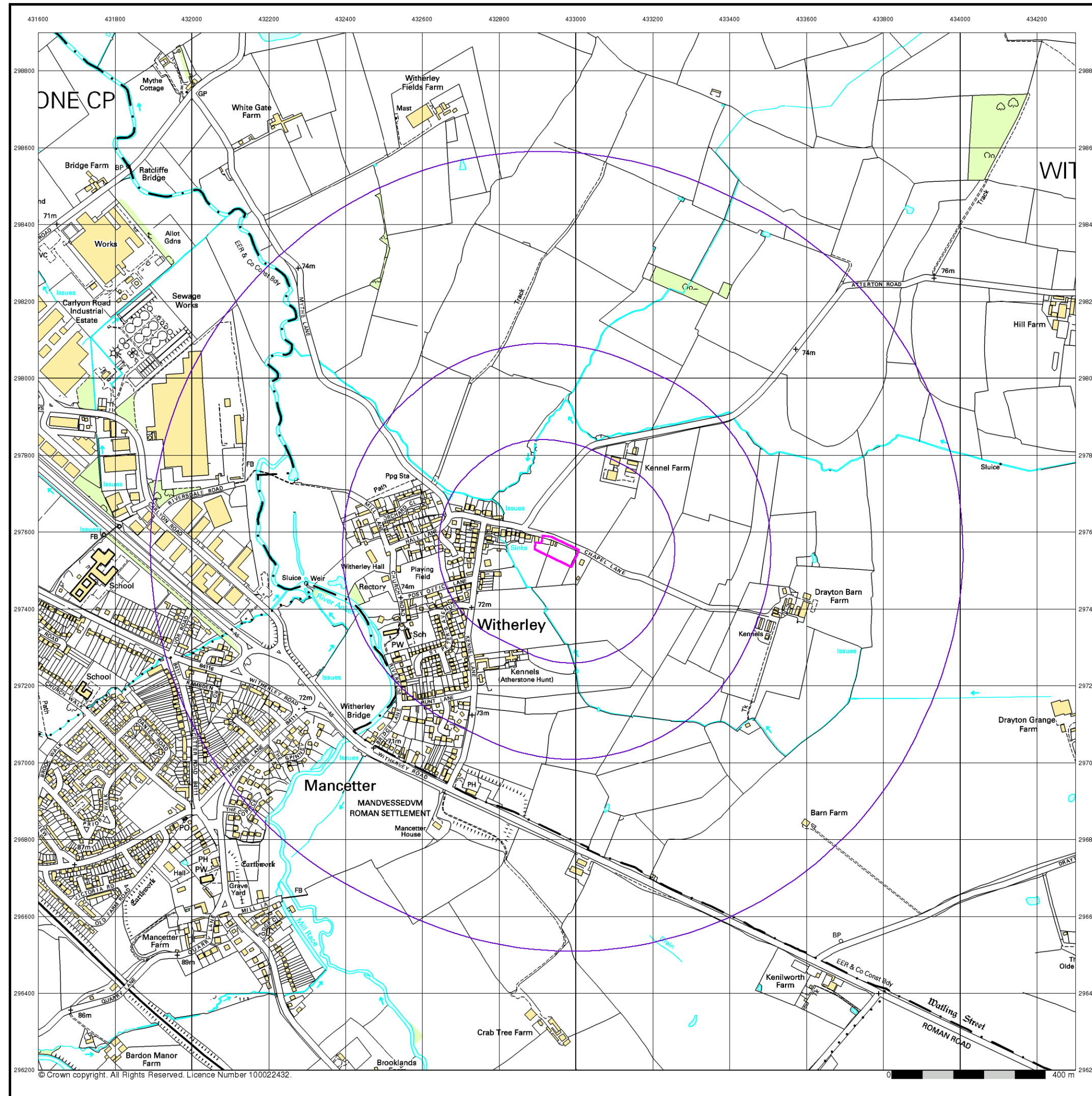
0.49

Search Buffer (m):

1000

Site Details

Chapel Lane, WITHERLEY, CV9 3LR



© Crown copyright. All Rights Reserved. Licence Number 100022432.

Envirocheck®

LANDMARK INFORMATION GROUP®

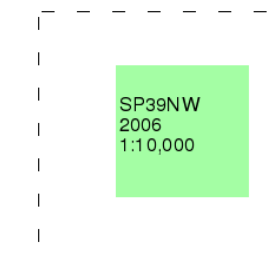
10k Raster Mapping

Published 2006

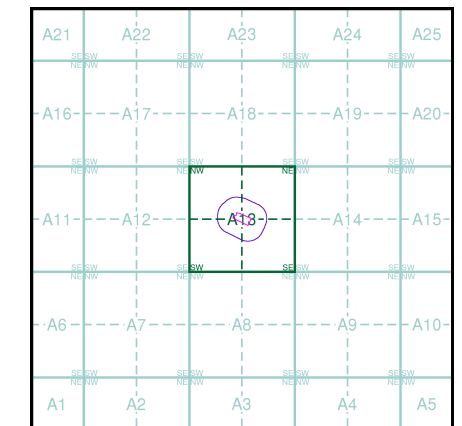
Source map scale - 1:10,000

The historical maps shown were produced from the Ordnance Survey's 1:10,000 colour raster mapping. These maps are derived from Landplan which replaced the old 1:10,000 maps originally published in 1970. The data is highly detailed showing buildings, fences and field boundaries as well as all roads, tracks and paths. Road names are also included together with the relevant road number and classification. Boundary information depiction includes county, unitary authority, district, civil parish and constituency.

Map Name(s) and Date(s)



Historical Map - Slice A



Order Details

Order Number: 347180884_1_1
Customer Ref: 24091
National Grid Reference: 432950, 297550
Slice: A
Site Area (Ha): 0.49
Search Buffer (m): 1000

Site Details

Chapel Lane, WITHERLEY, CV9 3LR

Landmark®
LANDMARK INFORMATION GROUP

Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www.envirocheck.co.uk



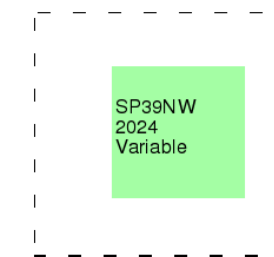
VectorMap Local

Published 2024

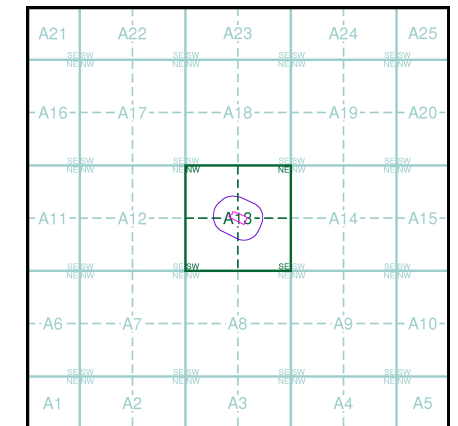
Source map scale - 1:10,000

VectorMap Local (Raster) is Ordnance Survey's highest detailed 'backdrop' mapping product. These maps are produced from OS's VectorMap Local, a simple vector dataset at a nominal scale of 1:10,000, covering the whole of Great Britain, that has been designed for creating graphical mapping. OS VectorMap Local is derived from large-scale information surveyed at 1:1250 scale (covering major towns and cities), 1:2500 scale (smaller towns, villages and developed rural areas), and 1:10 000 scale (mountain, moorland and river estuary areas).

Map Name(s) and Date(s)



Historical Map - Slice A



Order Details

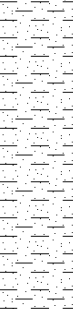
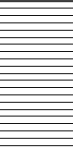
Order Number: 347180884_1_1
Customer Ref: 24091
National Grid Reference: 432950, 297550
Slice: A
Site Area (Ha): 0.49
Search Buffer (m): 1000

Site Details

Chapel Lane, WITHERLEY, CV9 3LR

APPENDIX C
EXPLORATORY HOLE RECORDS

georisk MANAGEMENT				Georisk Management Ltd. Tel: 0121 553 4044 email: enquiries@georisk-uk.com www.georisk-uk.com				Trial Pit No. TP1 Sheet 1 of 1	
Project Name Chapel Lane, Witherley				Project No. 24091		Co-ords: 432913.00 E 297549.00 N Level: -		Date 22/05/2024	
Equipment: JCB 3CX						Dimensions: 1.50 m		Scale 1:25	
Client: A R Cartwright Limited						Depth: 1.75 m		0.70 m	
Water Strikes		Samples & In Situ Testing			Depth (m)	Level (m AOD)	Legend	Stratum Description	
Depth (m)		Type	Results						
1.50		D1			0.30			Grass over dark brown slightly sandy slightly gravelly clay. (TOPSOIL)	
					1.30			Firm to stiff reddish brown slightly gravelly sandy CLAY. Gravel is subrounded fine to coarse quartzite. (LACUSTRINE DEPOSITS)	
					1.75			Very weak reddish brown completely weathered MUDSTONE recovered as very stiff friable CLAY. (GUNTHORPE MEMBER)	
▼								End of Trial Pit at 1.75 m	
		Type	Results						
Remarks: Groundwater seepage encountered at 1.75 m begl during excavation. Infiltration test carried out on completion; See separate sheet.									
Stability: Pit sides stable.									

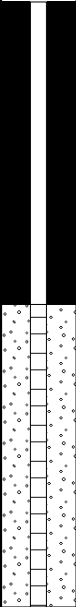
georisk MANAGEMENT				Georisk Management Ltd. Tel: 0121 553 4044 email: enquiries@georisk-uk.com www.georisk-uk.com				Trial Pit No. TP2 Sheet 1 of 1	
Project Name Chapel Lane, Witherley				Project No. 24091		Co-ords: 432967.00 E 297541.00 N Level: -		Date 22/05/2024	
Equipment: JCB 3CX						Dimensions: 1.50 m		Scale 1:25	
Client: A R Cartwright Limited						Depth: 1.80 m 0.70 m		Logged By WB	
Water Strikes	Samples & In Situ Testing			Depth (m)	Level (m AOD)	Legend	Stratum Description		
	Depth (m)	Type	Results						
▼	1.00	D2		0.25			Grass over dark brown slightly sandy slightly gravelly clay with rootlets. (TOPSOIL)		
				1.30			Firm to stiff reddish brown slightly sandy CLAY with pockets of fissured slightly clay (weathered mudstone) with mudstone lithorelicts. (GUNTHORPE MEMBER)		
	1.50	D3		1.80			Very weak reddish brown completely weathered MUDSTONE recovered as very stiff friable clay. (GUNTHORPE MEMBER)		
							End of Trial Pit at 1.80 m		
Remarks: Groundwater seepage encountered at 1.8 m begl during excavation. Infiltration test carried out on completion; See separate sheet.									
Stability: Pit sides stable.									

georisk MANAGEMENT				Georisk Management Ltd. Tel: 0121 553 4044 email: enquiries@georisk-uk.com www.georisk-uk.com				Trial Pit No. TP3 Sheet 1 of 1	
Project Name Chapel Lane, Witherley			Project No. 24091		Co-ords: 432991.00 E 297541.00 N Level: -		Date 22/05/2024		
Equipment: JCB 3CX					Dimensions: 1.70 m		Scale 1:25		
Client: A R Cartwright Limited					Depth: 2.90 m		0.70 m		
Water Strikes		Samples & In Situ Testing			Depth (m)	Level (m AOD)	Legend	Stratum Description	
Depth (m)		Type	Results						
0.15		D4			0.30		Vegetation over dark brown slightly sandy slightly gravelly clay. (TOPSOIL)		
1.10		D5					Firm to stiff reddish brown CLAY with frequent mudstone lithorelicts below 1.0 m. (GUNTHORPE MEMBER)		
1.40		D6			1.50		Very weak reddish brown completely weathered MUDSTONE recovered as very stiff friable clay. (GUNTHORPE MEMBER)		
2.10		D7			2.20		Very weak reddish brown highly weathered MUDSTONE. (GUNTHORPE MEMBER)		
2.80		D8			2.90		End of Trial Pit at 2.90 m		
		Type	Results						
Remarks: Groundwater seepage encountered at 0.3, 1.0 and 2.2 m begl during excavation. Backfilled with arisings on completion.									
Stability: Pit sides stable.									

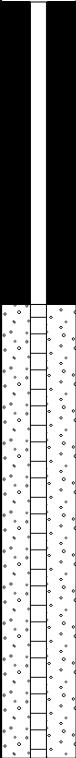
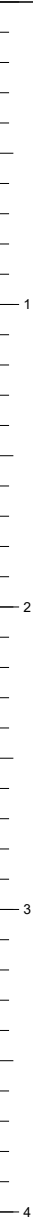
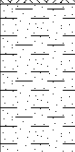
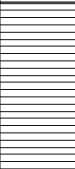
georiskMANAGEMENT Georisk Management Ltd. Tel: 0121 553 4044 email: enquiries@georisk-uk.com www.georisk-uk.com				Trial Pit No. TP4 Sheet 1 of 1				
Project Name Chapel Lane, Witherley		Project No. 24091	Co-ords: 432958.00 E 297562.00 N Level: -		Date 22/05/2024			
Equipment: JCB 3CX			Dimensions: 1.70 m		Scale 1:25			
Client: A R Cartwright Limited			Depth: 3.00 m 0.70 m		Logged By WB			
Water Strikes	Samples & In Situ Testing			Depth (m)	Level (m AOD)	Legend	Stratum Description	
	Depth (m)	Type	Results					
▼	0.30	D9		0.40			Grass over dark brown sandy clay. (TOPSOIL)	
							Firm to stiff reddish brown CLAY becoming friable below 0.8 m. (GUNTHORPE MEMBER)	
	1.20	D10		1.10			Very week reddish brown completely weathered MUDSTONE recovered as very stiff friable clay. (GUNTHORPE MEMBER)	1
	1.60	D11						2
	2.50	D12		3.00				3
							End of Trial Pit at 3.00 m	4
Remarks: Groundwater seepage encountered at 0.1 m begl during excavation. Backfilled with arisings on completion. Stability: Pit sides stable.								

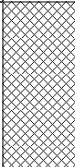
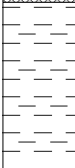
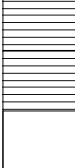
georiskMANAGEMENT		Georisk Management Ltd. Tel: 0121 553 4044 email: enquiries@georisk-uk.com www.georisk-uk.com			Trial Pit No. TP5 Sheet 1 of 1				
Project Name Chapel Lane, Witherley		Project No. 24091	Co-ords: 432940.00 E 297547.00 N Level: -		Date 22/05/2024				
Equipment: JCB 3CX			Dimensions: 1.75 m		Scale 1:25				
Client: A R Cartwright Limited			Depth: 2.75 m 0.70 m		Logged By WB				
Water Strikes	Samples & In Situ Testing			Depth (m)	Level (m AOD)	Legend	Stratum Description		
	Depth (m)	Type	Results						
▼	0.20	D13		0.40			Grass over dark brown slightly gravelly clay. Gravel is fine to coarse subrounded quartzite. (TOPSOIL)		
							Firm to stiff reddish brown CLAY with frequent friable clay pockets. (GUNTHORPE MEMBER)		
	1.55	D14		1.50			Very weak reddish brown completely weathered MUDSTONE recovered as very stiff friable clay. (GUNTHORPE MEMBER)	1	
				2.00			Moderately weak reddish brown highly weathered MUDSTONE. (GUNTHORPE MEMBER)		2
				2.70 2.75			Weak greyish brown and reddish brown MUDSTONE. (GUNTHORPE MEMBER)		3
						End of Trial Pit at 2.75 m	4		
Remarks: Groundwater seepage encountered at 0.8 m begl during excavation. Backfilled with arisings on completion. Stability: Pit sides stable.									

Remarks: Groundwater seepage encountered at 1.0 m begl during drilling. Backfilled with arisings on completion.

georiskMANAGEMENT		Georisk Management Ltd. Tel: 0121 553 4044 email: enquiries@georisk-uk.com www.georisk-uk.com				Borehole No. WS2 Sheet 1 of 1			
Project Name Chapel Lane, Witherley			Project No. 24091		Co-ords: 432940.00 E 297577.00 N		Hole Type WLS		
Equipment: Dynamic Percussive Sampling Rig					Level: -		Scale 1:25		
Client: A R Cartwright Limited					Dates: 23-05-2024		Logged By WB		
Well	Water Strikes	Samples & In Situ Testing			Depth (m)	Level (m AOD)	Legend	Stratum Description	
		Depth (m)	Type	Results					
		0.15	D19		0.10			MADE GROUND: Concrete.	1
					0.30			MADE GROUND: Brown very sandy slightly gravelly CLAY. Gravel is fine to coarse subangular to subrounded quartzite.	
		1.00	D20	N=10 (2,2/2,3,2,3)	1.30			Extremely weak reddish brown completely weathered MUDSTONE recovered as very stiff friable clay. (GUNTHORPE MEMBER)	2
		1.00	SPT						
		1.40	D21						
		1.70	D22	50 (3,4/50 for 220mm)	2.00			Extremely weak reddish brown highly weathered MUDSTONE. (GUNTHORPE MEMBER)	3
		1.90	D23						
		2.00	SPT						
									End of Borehole at 2.00 m
Remarks: Groundwater seepage encountered at 1.4 m begl during drilling. Combined soil-gas monitoring well installed on completion.									

Remarks: Groundwater seepage encountered at 1.0 m bgl during drilling. Backfilled with arisings on completion.

georiskMANAGEMENT Georisk Management Ltd. Tel: 0121 553 4044 email: enquiries@georisk-uk.com www.georisk-uk.com					Borehole No. WS4 Sheet 1 of 1				
Project Name Chapel Lane, Witherley			Project No. 24091		Co-ords: 432973.00 E 297553.00 N		Hole Type WLS		
Equipment: Dynamic Percussive Sampling Rig					Level: -		Scale 1:25		
Client: A R Cartwright Limited					Dates: 23-05-2024		Logged By WB		
Well	Water Strikes	Samples & In Situ Testing			Depth (m)	Level (m AOD)	Legend	Stratum Description	
		Depth (m)	Type	Results					
		0.30	D27	N=18 (2,2/3,5,5,5)	0.40			Grass over dark brown sandy slightly gravelly clay. Gravel is fine to coarse subrounded quartzite. (TOPSOIL)	
					0.90		Firm to stiff reddish brown slightly sandy CLAY. (GUNTHORPE MEMBER)		
	1.00 1.00	D28 SPT			1.30		Very weak reddish brown completely weathered MUDSTONE recovered as very stiff friable clay. (GUNTHORPE MEMBER)		
	1.50	D29					Very weak reddish brown extremely weathered MUDSTONE. (GUNTHORPE MEMBER)		
	1.90 2.00	D30 SPT	N=23 (3,3/3,5,7,8)						
		2.45 2.50	D31 SPT	N=50 (10,10/50 for 265mm)	2.50			End of Borehole at 2.50 m	
		Type	Results						
Remarks: Groundwater not encountered during drilling. Combined soil-gas monitoring well installed on completion.									

georisk MANAGEMENT		Georisk Management Ltd. Tel: 0121 553 4044 email: enquiries@georisk-uk.com www.georisk-uk.com					Borehole No. WS5 Sheet 1 of 1		
Project Name Chapel Lane, Witherley			Project No. 24091		Co-ords: 432931.00 E 297562.00 N			Hole Type WLS	
Equipment: Dynamic Percussive Sampling Rig					Level: -			Scale 1:25	
Client: A R Cartwright Limited					Dates: 23-05-2024			Logged By WB	
Well	Water Strikes	Samples & In Situ Testing			Depth (m)	Level (m AOD)	Legend	Stratum Description	
		Depth (m)	Type	Results					
		0.40	D32	N=10 (2,2/2,2,3,3)	0.55			MADE GROUND: Dark brown very sandy very gravelly clay. Gravel is fine to coarse angular to subangular of mixed lithologies with brick, roadstone and clinker.	1
								Firm to stiff reddish brown CLAY with rootlets. (GUNTHORPE MEMBER)	
		1.00	SPT		1.10			Very weak reddish brown completely weathered MUDSTONE recovered as very stiff friable clay. (GUNTHORPE MEMBER)	
		1.30	D33	1.80			Extremely weak reddish brown highly weathered MUDSTONE. (GUNTHORPE MEMBER)		
		1.90	D34	2.00					
		2.00	SPT	50 (6,19/50 for 40mm)	2.00		End of Borehole at 2.00 m		2
									3
									4
Remarks: Groundwater not encountered during drilling. Backfilled with arisings on completion.									

Remarks: Groundwater seepage encountered at 1.0 m bgl during drilling. Backfilled with arisings on completion.

APPENDIX D
INFILTRATION TEST RESULTS

SOIL INFILTRATION RATE IN ACCORDANCE WITH BRE DIGEST 365: 2016

Client: A R Cartwright
Job Name: Chapel Lane, Witherley
Job No.: 24091

Trial Pit No.	TP1
Test No.	1

Date: 22/05/2024

Time	Elapsed Time	Depth to water from ground level	
	(min)	(m)	(mm)
	0	0.63	630
	1	0.63	625
	3	0.63	625
	17	0.62	620
	30	0.62	620
	89	0.61	610
	134	0.61	610
	197	0.62	620
	242	0.62	620

Soakaway Dimensions		(m)	(mm)
Length	=	1.50	1500
Width	=	0.70	700
Depth	=	1.64	1640

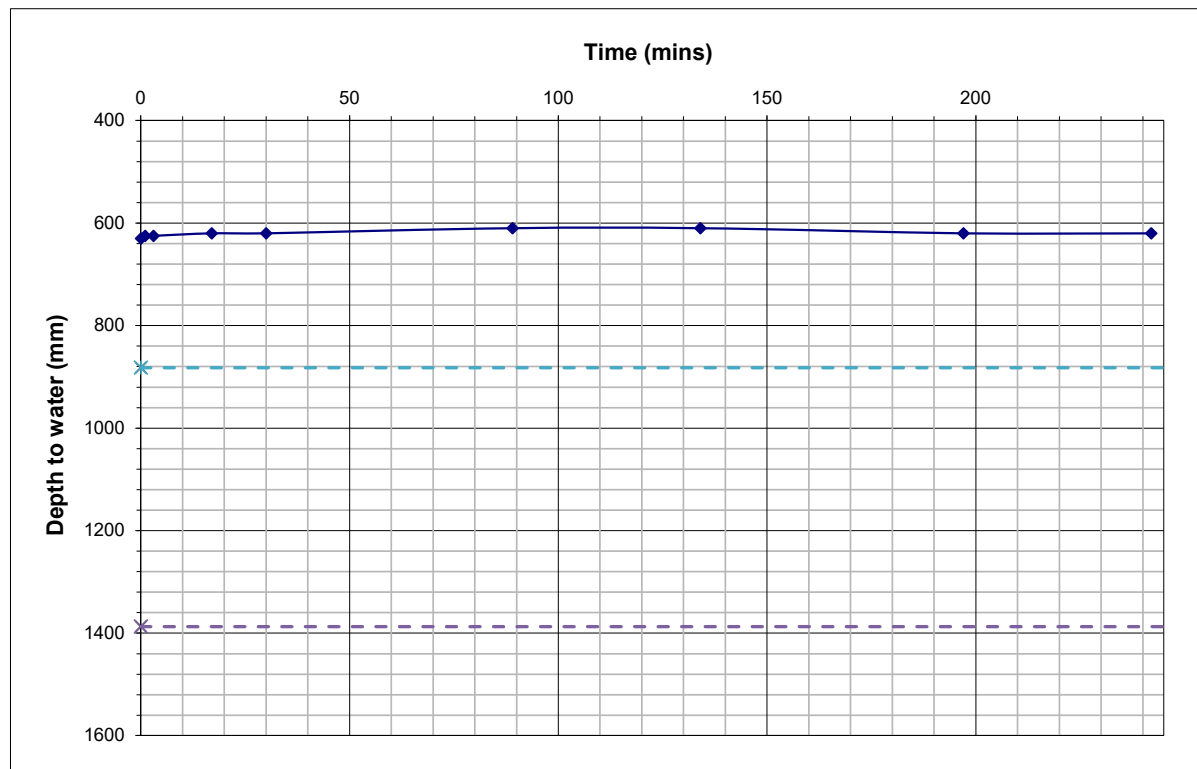
Effective depth (empty)		mm	m
75%	=	1387.5	1.39
50%	=	1135.0	1.14
25%	=	882.5	0.88

Depth at start of test (mm)	=	630
Depth at end of test (mm)	=	630

Base area of pit	=	1.05
a_{p50} - 50% internal surface area inc. base	=	3.272
V_{p75-25} - Volume 75 - 25%	=	0.53025

Read from the graph:		
t_{p75} (min)	=	-
t_{p25} (min)	=	-

Key	-----	75% Effective Depth
	-----	25% Effective Depth



Soil infiltration rate, f , (m/s) = Insufficient infiltration to calculate permeability

SOIL INFILTRATION RATE IN ACCORDANCE WITH BRE DIGEST 365: 2016

Client: A R Cartwright
Job Name: Chapel Lane, Witherley
Job No.: 24091

Trial Pit No.	TP2
Test No.	1

Date: 22/05/2024

Time	Elapsed Time (min)	Depth to water from ground level	
		(m)	(mm)
	0	0.70	700
	2	0.69	690
	3	0.69	690
	6	0.69	690
	25	0.67	670
	55	0.66	660
	89	0.66	660
	115	0.66	660
	165	0.64	640
	229	0.60	600
	275	0.59	590

Soakaway Dimensions		(m)	(mm)
Length	=	1.50	1500
Width	=	0.70	700
Depth	=	1.75	1750

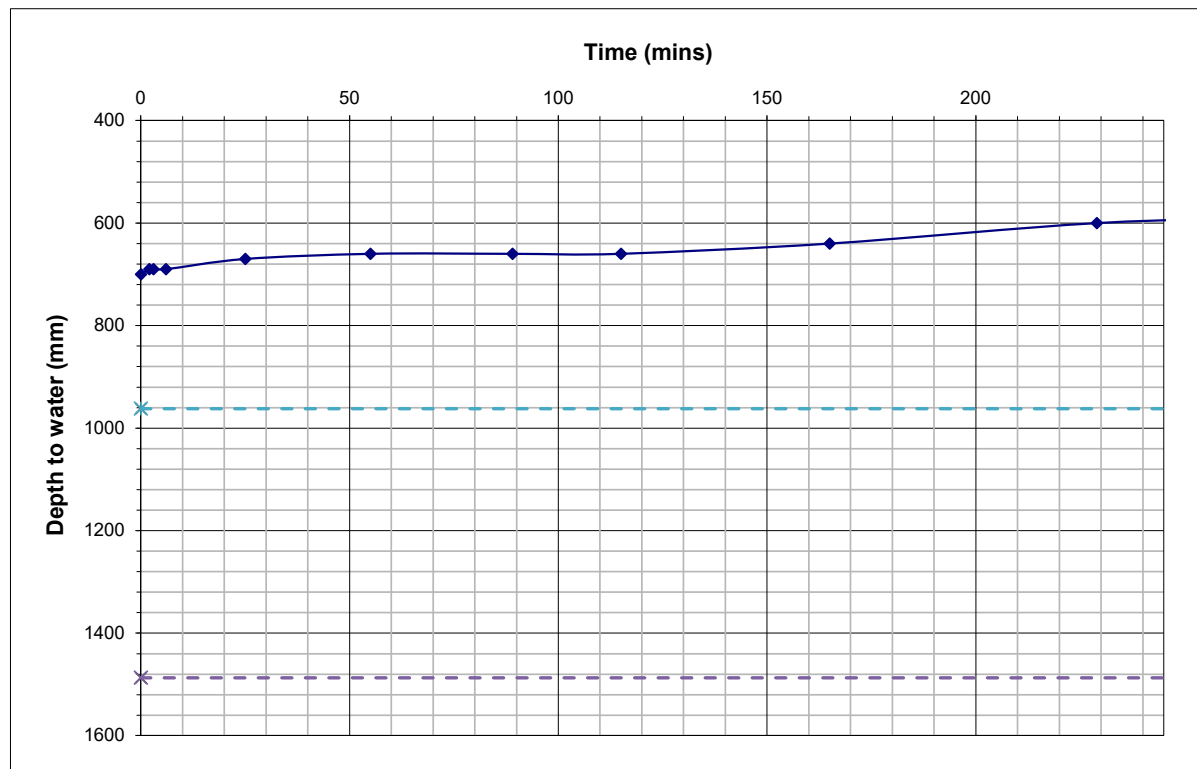
Effective depth (empty)		mm	m
75%	=	1487.5	1.49
50%	=	1225.0	1.23
25%	=	962.5	0.96

Depth at start of test (mm)	=	700
Depth at end of test (mm)	=	700

Base area of pit	=	1.05
a_{p50} - 50% internal surface area inc. base	=	3.360
V_{p75-25} - Volume 75 - 25%	=	0.55125

Read from the graph:		
t_{p75} (min)	=	-
t_{p25} (min)	=	-

Key	-----	75% Effective Depth
	-----	25% Effective Depth



Soil infiltration rate, f , (m/s) = Insufficient infiltration to calculate permeability

APPENDIX E
SOIL-GAS AND GROUNDWATER MONITORING RESULTS

Soil-Gas and Groundwater Monitoring Results

Monitoring Visit No. 1		Date 30/05/2024				Barometric Pressure (mb) - 999 to 1000								
Weather Conditions:		Cloudy				Equipment Used -								
Surface Ground Conditions:		Dry				GA5000 and In-Situ dip meter								
Ambient Concentration (% Volume):		Bal:	78.7	CH₄:		0.0	CO₂:		0.1	O₂:		21.0		
Monitoring Point		Gas Concentration										Gas Flow		
		Highest					Steady					(Lowest)	Gas Flow Rate	Relative Pressure
Ref:	GWL	CH₄		CO₂	CO	H₂S	CH₄		CO₂	CO	H₂S	O₂		
	(m) bgl	% lel	% v/v	(%)	ppm	ppm	% lel	% v/v	(%)	ppm	ppm	(%)	litre/hr	mb
WS2	0.96	-	0.0	0.6	-	-	-	0.0	0.6	-	-	6.9	0.2	41.88
WS4	0.48	-	0.0	0.9	-	-	-	0.0	0.9	-	-	19.6	0.0	19.67

Monitoring Visit No. 2		Date 05/05/2024				Barometric Pressure (mb) - 1003 to 1004								
Weather Conditions:		Cloudy and sunny				Equipment Used -								
Surface Ground Conditions:		Dry				GA5000 and In-Situ dip meter								
Ambient Concentration (% Volume):		Bal: 78.7		CH ₄ : 0.0		CO ₂ : 0.1			O ₂ : 21.2					
Monitoring Point		Gas Concentration										Gas Flow		
		Highest					Steady					(Lowest)	Gas Flow Rate	Relative Pressure
Ref:	GWL	CH ₄		CO ₂	CO	H ₂ S	CH ₄		CO ₂	CO	H ₂ S	O ₂		
	(m) bgl	% lel	% v/v	(%)	ppm	ppm	% lel	% v/v	(%)	ppm	ppm	(%)	litre/hr	mb
WS2	0.55	-	0.0	0.5	-	-	-	0.0	0.5	-	-	14.2	0.0	7.45
WS4	0.44	-	0.0	1.0	-	-	-	0.0	1.0	-	-	20.0	-0.2	-0.84

Monitoring Visit No. 3		Date 14/06/2024				Barometric Pressure (mb) - 989								
Weather Conditions:		Cloudy				Equipment Used -								
Surface Ground Conditions:		Dry				GA5000 and In-Situ dip meter								
Ambient Concentration (% Volume):		Bal: 78.7		CH ₄ : 0.0		CO ₂ : 0.1			O ₂ : 21.0					
Monitoring Point		Gas Concentration										Gas Flow		
		Highest					Steady				(Lowest)	Gas Flow Rate	Relative Pressure	
Ref:	GWL	CH ₄		CO ₂	CO	H ₂ S	CH ₄		CO ₂	CO	H ₂ S	O ₂		
	(m) bgl	% lel	% v/v	(%)	ppm	ppm	% lel	% v/v	(%)	ppm	ppm	(%)	litre/hr	mb
WS2	1.00	-	0.0	0.4	-	-	-	0.1	0.4	-	-	16.7	-0.1	-18.97
WS4	0.82	-	0.0	3.1	-	-	-	0.0	3.1	-	-	18.6	0.0	-0.02

Monitoring Visit No. 4		Date 24/06/2024				Barometric Pressure (mb) - 1010								
Weather Conditions:		Cloudy and Sunny				Equipment Used - GA5000 and In-Situ dip meter								
Surface Ground Conditions:		Dry												
Ambient Concentration (% Volume):		Bal: 79.2		CH ₄ : 0.0		CO ₂ : 0.0			O ₂ : 20.7					
Monitoring Point		Gas Concentration										Gas Flow		
		Highest					Steady				(Lowest)	Gas Flow Rate	Relative Pressure	
Ref:	GWL	CH ₄		CO ₂	CO	H ₂ S	CH ₄		CO ₂	CO	H ₂ S	O ₂		
	(m) bgl	% lel	% v/v	(%)	ppm	ppm	% lel	% v/v	(%)	ppm	ppm	(%)	litre/hr	mb
WS2	1.30	-	0.0	0.6	-	-	-	0.0	0.6	-	-	16.8	0.0	-0.03
WS4	1.03	-	0.0	2.4	-	-	-	0.0	2.4	-	-	18.8	0.0	0.07

Notes:

(m) bgl - metres below ground level GWL - groundwater level



Job Title:

Chapel Lane, Witherley

Job No:

24091

Client:

A R Cartwright Limited

Table Number:

1

APPENDIX F
CHEMICAL TEST RESULTS

Georisk Management Limited
Varney House
91 Spon Lane
West Bromwich
B70 6AB

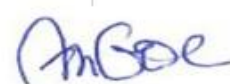
i2 Analytical Ltd.
7 Woodshots Meadow,
Croxley Green
Business Park,
Watford,
Herts,
WD18 8YS

e: will.bonner@georisk-uk.com

t: 01923 225404
f: 01923 237404
e: reception@i2analytical.com

Analytical Report Number : 24-022129

Project / Site name:	Chapel Lane, Witherley	Samples received on:	29/05/2024
Your job number:	24091	Samples instructed on/ Analysis started on:	29/05/2024
Your order number:	24091	Analysis completed by:	06/06/2024
Report Issue Number:	1	Report issued on:	07/06/2024
Samples Analysed:	7 soil samples		



Signed: _____

Anna Goc
PL Head of Reporting Team
For & on behalf of i2 Analytical Ltd.

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41-711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils	- 4 weeks from reporting
leachates	- 2 weeks from reporting
waters	- 2 weeks from reporting
asbestos	- 6 months from reporting

Excel copies of reports are only valid when accompanied by this PDF certificate.

Any assessments of compliance with specifications are based on actual analytical results with no contribution from uncertainty of measurement.
Application of uncertainty of measurement would provide a range within which the true result lies.
An estimate of measurement uncertainty can be provided on request.

Analytical Report Number: 24-022129
 Project / Site name: Chapel Lane, Witherley
 Your Order No: 24091

Lab Sample Number				212529	212530	212531	212532	212533
Sample Reference				TP4	TP5	WS1	WS5	TP3
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.30	0.20	0.20	0.40	1.40
Date Sampled				22/05/2024	22/05/2024	23/05/2024	23/05/2024	22/05/2024
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)				Units	Limit of detection	Accreditation Status		

Stone Content	%	0.1	NONE	< 0.1	< 0.1	43.6	31.3	< 0.1
Moisture Content	%	0.01	NONE	21	21	6.4	11	20
Total mass of sample received	kg	0.1	NONE	0.8	0.9	0.8	0.9	0.5

Asbestos

Asbestos in Soil Detected/Not Detected	Type	N/A	ISO 17025	Not-detected	Not-detected	Not-detected	Not-detected	-
Asbestos Analyst ID	N/A	N/A	N/A	WEM	WEM	WEM	WEM	-

General Inorganics

pH (L099)	pH Units	N/A	MCERTS	6.8	6.7	9.1	7.7	8.4
Total Cyanide	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	-
Water Soluble Sulphate as SO ₄ 16hr extraction (2:1)	mg/kg	2.5	MCERTS	32	17	230	37	21
Water Soluble SO ₄ 16hr extraction (2:1)	mg/l	1.25	MCERTS	15.9	8.24	113	18.5	10.7

Total Phenols

Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	-
----------------------------	-------	---	--------	-------	-------	-------	-------	---

Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	0.89	0.11	-
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	0.58	< 0.05	-
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	3	0.09	-
Fluorene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	2.6	0.1	-
Phenanthrene	mg/kg	0.05	MCERTS	< 0.05	0.12	28	0.4	-
Anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	7.4	0.09	-
Fluoranthene	mg/kg	0.05	MCERTS	< 0.05	0.23	35	0.77	-
Pyrene	mg/kg	0.05	MCERTS	< 0.05	0.21	31	0.8	-
Benzo(a)anthracene	mg/kg	0.05	MCERTS	< 0.05	0.08	15	0.45	-
Chrysene	mg/kg	0.05	MCERTS	< 0.05	0.17	14	0.47	-
Benzo(b)fluoranthene	mg/kg	0.05	ISO 17025	< 0.05	0.17	18	0.64	-
Benzo(k)fluoranthene	mg/kg	0.05	ISO 17025	< 0.05	0.07	6	0.24	-
Benzo(a)pyrene	mg/kg	0.05	MCERTS	< 0.05	0.13	16	< 0.05	-
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	< 0.05	0.08	9.2	0.3	-
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	2.2	0.06	-
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05	0.09	11	0.34	-

Total PAH

Speciated Total EPA-16 PAHs	mg/kg	0.8	ISO 17025	< 0.80	1.35	200	4.87	-
-----------------------------	-------	-----	-----------	--------	------	-----	------	---



Analytical Report Number: 24-022129
 Project / Site name: Chapel Lane, Witherley
 Your Order No: 24091

Lab Sample Number				212529	212530	212531	212532	212533
Sample Reference				TP4	TP5	WS1	WS5	TP3
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.30	0.20	0.20	0.40	1.40
Date Sampled				22/05/2024	22/05/2024	23/05/2024	23/05/2024	22/05/2024
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)				Units	Limit of detection	Accreditation Status		

Heavy Metals / Metalloids

Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	8.1	7.6	32	12	-
Boron (water soluble)	mg/kg	0.2	MCERTS	1.3	0.7	1.1	0.8	-
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	0.4	< 0.2	< 0.2	1	-
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	30	31	40	24	-
Copper (aqua regia extractable)	mg/kg	1	MCERTS	20	21	62	40	-
Lead (aqua regia extractable)	mg/kg	1	MCERTS	41	52	75	66	-
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	-
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	29	28	32	21	-
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	-
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	83	88	160	150	-

U/S = Unsuitable Sample I/S = Insufficient Sample ND = Not detected

Analytical Report Number: 24-022129
Project / Site name: Chapel Lane, Witherley
Your Order No: 24091

Lab Sample Number				212534	212535
Sample Reference				WS1	WS6
Sample Number				None Supplied	None Supplied
Depth (m)				1.70	0.70
Date Sampled				23/05/2024	23/05/2024
Time Taken				None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status		

Stone Content	%	0.1	NONE	< 0.1	< 0.1
Moisture Content	%	0.01	NONE	17	15
Total mass of sample received	kg	0.1	NONE	0.4	0.5

Asbestos

Asbestos in Soil Detected/Not Detected	Type	N/A	ISO 17025	-	-
Asbestos Analyst ID	N/A	N/A	N/A	-	-

General Inorganics

pH (L099)	pH Units	N/A	MCERTS	8.5	8.6
Total Cyanide	mg/kg	1	MCERTS	-	-
Water Soluble Sulphate as SO ₄ 16hr extraction (2:1)	mg/kg	2.5	MCERTS	150	27
Water Soluble SO ₄ 16hr extraction (2:1)	mg/l	1.25	MCERTS	74.8	13.7

Total Phenols

Total Phenols (monohydric)	mg/kg	1	MCERTS	-	-
----------------------------	-------	---	--------	---	---

Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	-	-
Acenaphthylene	mg/kg	0.05	MCERTS	-	-
Acenaphthene	mg/kg	0.05	MCERTS	-	-
Fluorene	mg/kg	0.05	MCERTS	-	-
Phenanthrene	mg/kg	0.05	MCERTS	-	-
Anthracene	mg/kg	0.05	MCERTS	-	-
Fluoranthene	mg/kg	0.05	MCERTS	-	-
Pyrene	mg/kg	0.05	MCERTS	-	-
Benzo(a)anthracene	mg/kg	0.05	MCERTS	-	-
Chrysene	mg/kg	0.05	MCERTS	-	-
Benzo(b)fluoranthene	mg/kg	0.05	ISO 17025	-	-
Benzo(k)fluoranthene	mg/kg	0.05	ISO 17025	-	-
Benzo(a)pyrene	mg/kg	0.05	MCERTS	-	-
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	-	-
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	-	-
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	-	-

Total PAH

Speciated Total EPA-16 PAHs	mg/kg	0.8	ISO 17025	-	-
-----------------------------	-------	-----	-----------	---	---

Analytical Report Number: 24-022129
 Project / Site name: Chapel Lane, Witherley
 Your Order No: 24091

Lab Sample Number				212534	212535
Sample Reference				WS1	WS6
Sample Number				None Supplied	None Supplied
Depth (m)				1.70	0.70
Date Sampled				23/05/2024	23/05/2024
Time Taken				None Supplied	None Supplied
Analytical Parameter (Soil Analysis)				Units	Limit of detection
				Accreditation Status	

Heavy Metals / Metalloids

Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	-	-
Boron (water soluble)	mg/kg	0.2	MCERTS	-	-
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	-	-
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	-	-
Copper (aqua regia extractable)	mg/kg	1	MCERTS	-	-
Lead (aqua regia extractable)	mg/kg	1	MCERTS	-	-
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	-	-
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	-	-
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	-	-
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	-	-

U/S = Unsuitable Sample I/S = Insufficient Sample ND = Not detected

Analytical Report Number : 24-022129

Project / Site name: Chapel Lane, Witherley

* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and loam (MCERTS) soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
212529	TP4	None Supplied	0.3	Brown clay and loam with gravel and vegetation
212530	TP5	None Supplied	0.2	Brown loam and clay with gravel and vegetation
212531	WS1	None Supplied	0.2	Brown loam and sand with tar and brick
212532	WS5	None Supplied	0.4	Brown loam and clay with vegetation and stones
212533	TP3	None Supplied	1.4	Brown clay and sand
212534	WS1	None Supplied	1.7	Brown clay and sand
212535	WS6	None Supplied	0.7	Brown clay and loam with vegetation

Analytical Report Number : 24-022129

Project / Site name: Chapel Lane, Witherley

Water matrix abbreviations:

Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters (PrW) Final Sewage Effluent (FSE) Landfill Leachate (LL)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Asbestos identification in Soil	Asbestos Identification with the use of polarised light microscopy in conjunction with dispersion staining techniques	In-house method based on HSG 248, 2021	A001B	D	ISO 17025
Moisture Content	Moisture content, determined gravimetrically (up to 30°C)	In-house method	L019B	W	NONE
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight	In-house method based on British Standard Methods and MCERTS requirements.	L019B	D	NONE
Metals in soil by ICP-OES	Determination of metals in soil by aqua-regia digestion followed by ICP-OES	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil	L038B	D	MCERTS
Boron, water soluble, in soil	Determination of water soluble boron in soil by hot water extract followed by ICP-OES	In-house method based on Second Site Properties version 3	L038B	D	MCERTS
Sulphate, water soluble, in soil (16hr extraction)	Sulphate, water soluble, in soil (16hr extraction)	In-house method	L038B	D	MCERTS
Speciated PAHs and/or Semi-volatile organic compounds in soil	Determination of semi-volatile organic compounds (including PAH) in soil by extraction in dichloromethane and hexane followed by GC-MS	In-house method based on USEPA 8270	L064B	D	MCERTS
Monohydric phenols in soil	Determination of phenols in soil by extraction with sodium hydroxide followed by distillation followed by colorimetry	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L080	W	MCERTS
Total cyanide in soil	Determination of total cyanide by distillation followed by colorimetry	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L080	W	MCERTS
pH in soil (automated)	Determination of pH in soil by addition of water followed by automated electrometric measurement	In-house method	L099	D	MCERTS

For method numbers ending in 'UK' or 'A' analysis have been carried out in our laboratory in the United Kingdom (Watford).

For method numbers ending in 'F' analysis have been carried out in our laboratory in the United Kingdom (East Kilbride).

For method numbers ending in 'PL' or 'B' analysis have been carried out in our laboratory in Poland.

Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30°C.

Unless otherwise indicated, site information, order number, project number, sampling date, time, sample reference and depth are provided by the client. The instructed on date indicates the date on which this information was provided to the laboratory.

APPENDIX G
GEOTECHNICAL TEST RESULTS



TEST CERTIFICATE

DETERMINATION OF LIQUID AND PLASTIC LIMITS

Tested in Accordance with: BS EN ISO 17892-12:2018+A2:2022,
cl 5.3 and 5.5, Fall Cone Method, 4 Pt Test, BS 1377-2:2022,
cl 5.2 and 6

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB



Environmental Science

4041

Client: Georisk Management Limited
Client Address: Varney House, 91 Spon Lane,
West Bromwich, B70 6AB

Contact: Will Bonner
Site Address: Chapel Lane, Witherley

Testing carried out at i2 Analytical Limited, ul. Pionierow, 41-711 Ruda Slaska, Poland

Client Reference: 24091
Job Number: 24-022360-1
Date Sampled: 23/05/2024
Date Received: 29/05/2024
Date Tested: 04/06/2024
Sampled By: Not Given

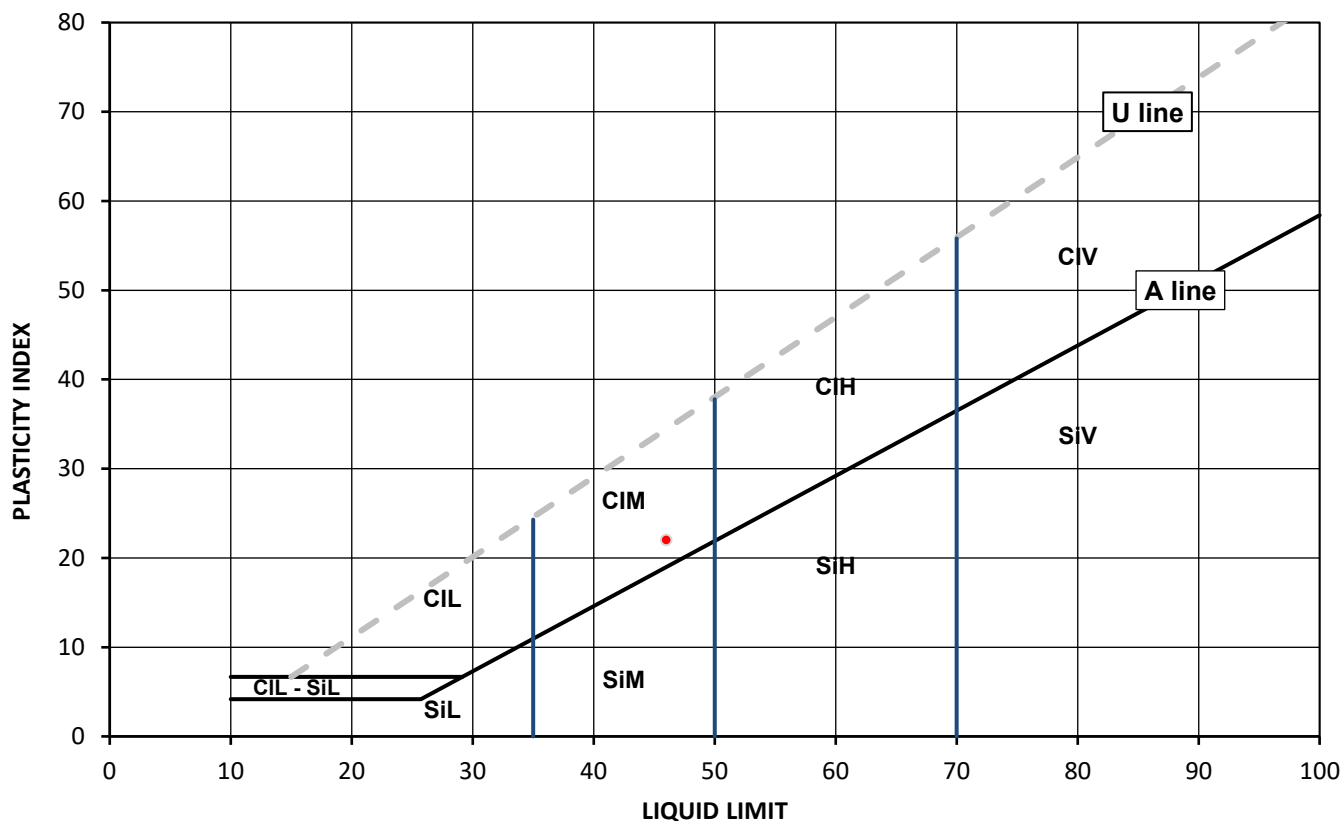
Test Results:

Laboratory Reference: 213675
Hole No.: WS2
Sample Reference: Not Given
Sample Description: Orangish brown slightly gravelly slightly sandy CLAY

Depth Top [m]: 1.40
Depth Base [m]: Not Given
Sample Type: D

Sample Preparation: Tested after >0.425mm removed by hand; The water content in the sample was increased
Cone Type: 80g/30deg

As Received Water Content [W] %	Liquid Limit [WL] %	Plastic Limit [Wp] %	Plasticity Index [Ip] %	Liquidity Index [IL] % #	Consistency Index [IC] % #	% Passing 425µm BS Test Sieve
26.0	46	24	22	0.09	0.91	99



Legend, based on BS EN ISO 14688 2:2018 Geotechnical investigation and testing – Identification and classification of soil

	Plasticity	Liquid Limit
Cl	Clay	below 35
Si	Silt	35 to 50
	L	Low
	M	Medium
	H	High
	V	Very high
	O	Organic
		append to classification for organic material (eg ClHO)

Note: Water Content by BS EN 17892-1: 2014; # Non accredited

Remarks:

Signed:

Monika Siewior

Monika Siewior
Reporting Specialist
for and on behalf of i2 Analytical Ltd

Opinions and interpretations expressed herein are outside of the scope of the UKAS Accreditation. This report may not be reproduced other than in full without the prior written approval of the issuing laboratory. The results included within the report relate only to the sample(s) submitted for testing.



TEST CERTIFICATE

DETERMINATION OF LIQUID AND PLASTIC LIMITS

Tested in Accordance with: BS EN ISO 17892-12:2018+A2:2022,
cl 5.3 and 5.5, Fall Cone Method, 4 Pt Test, BS 1377-2:2022,
cl 5.2 and 6

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB



Environmental Science

4041

Client: Georisk Management Limited

Client Address: Varney House, 91 Spon Lane,
West Bromwich, B70 6AB

Contact: Will Bonner

Site Address: Chapel Lane, Witherley

Testing carried out at i2 Analytical Limited, ul. Pionierow, 41-711 Ruda Slaska, Poland

Client Reference: 24091

Job Number: 24-022360-1

Date Sampled: 23/05/2024

Date Received: 29/05/2024

Date Tested: 04/06/2024

Sampled By: Not Given

Test Results:

Laboratory Reference: 213676

Hole No.: WS3

Sample Reference: Not Given

Sample Description: Orangish brown sandy slightly silty CLAY

Depth Top [m]: 1.00

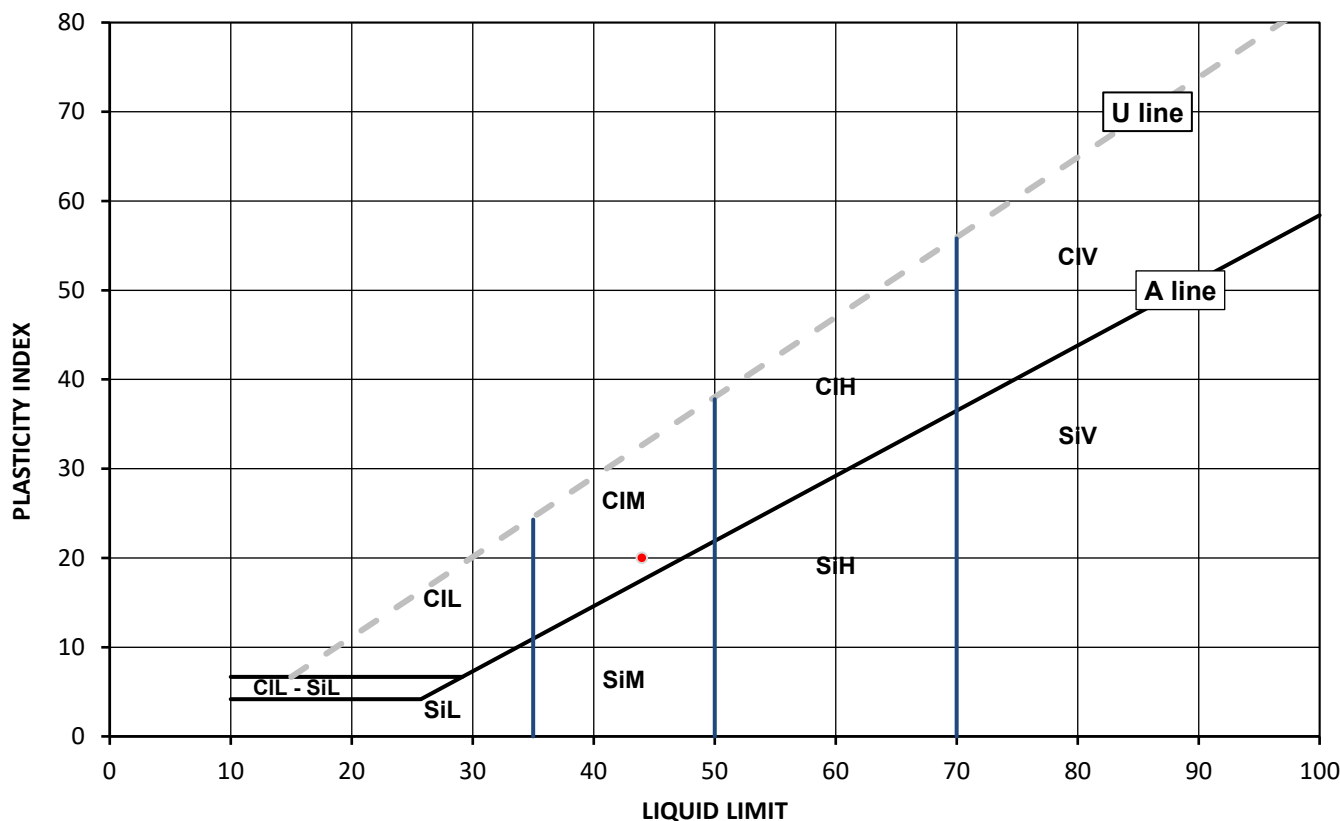
Depth Base [m]: Not Given

Sample Type: D

Sample Preparation: Tested in natural condition; The water content in the sample was increased

Cone Type: 80g/30deg

As Received Water Content [W] %	Liquid Limit [WL] %	Plastic Limit [Wp] %	Plasticity Index [Ip] %	Liquidity Index [IL] % #	Consistency Index [IC] % #	% Passing 425µm BS Test Sieve
23.5	44	24	20	0.00	1.00	100



Legend, based on BS EN ISO 14688 2:2018 Geotechnical investigation and testing – Identification and classification of soil

	Plasticity	Liquid Limit
Cl	Clay	below 35
Si	Silt	35 to 50
		50 to 70
		exceeding 70
		append to classification for organic material (eg CIHO)

Note: Water Content by BS EN 17892-1: 2014; # Non accredited

Remarks:

Signed:

Monika Siewior

Monika Siewior
Reporting Specialist
for and on behalf of i2 Analytical Ltd

Opinions and interpretations expressed herein are outside of the scope of the UKAS Accreditation. This report may not be reproduced other than in full without the prior written approval of the issuing laboratory. The results included within the report relate only to the sample(s) submitted for testing.



TEST CERTIFICATE

DETERMINATION OF LIQUID AND PLASTIC LIMITS

Tested in Accordance with: BS EN ISO 17892-12:2018+A2:2022,
cl 5.3 and 5.5, Fall Cone Method, 4 Pt Test, BS 1377-2:2022,
cl 5.2 and 6

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB



Environmental Science

4041

Client: Georisk Management Limited

Client Address: Varney House, 91 Spon Lane,
West Bromwich, B70 6AB

Contact: Will Bonner

Site Address: Chapel Lane, Witherley

Testing carried out at i2 Analytical Limited, ul. Pionierow, 41-711 Ruda Slaska, Poland

Client Reference: 24091

Job Number: 24-022360-1

Date Sampled: 23/05/2024

Date Received: 29/05/2024

Date Tested: 04/06/2024

Sampled By: Not Given

Test Results:

Laboratory Reference: 213677

Hole No.: WS4

Sample Reference: Not Given

Sample Description: Orangish brown slightly gravelly SAND

Depth Top [m]: 1.30

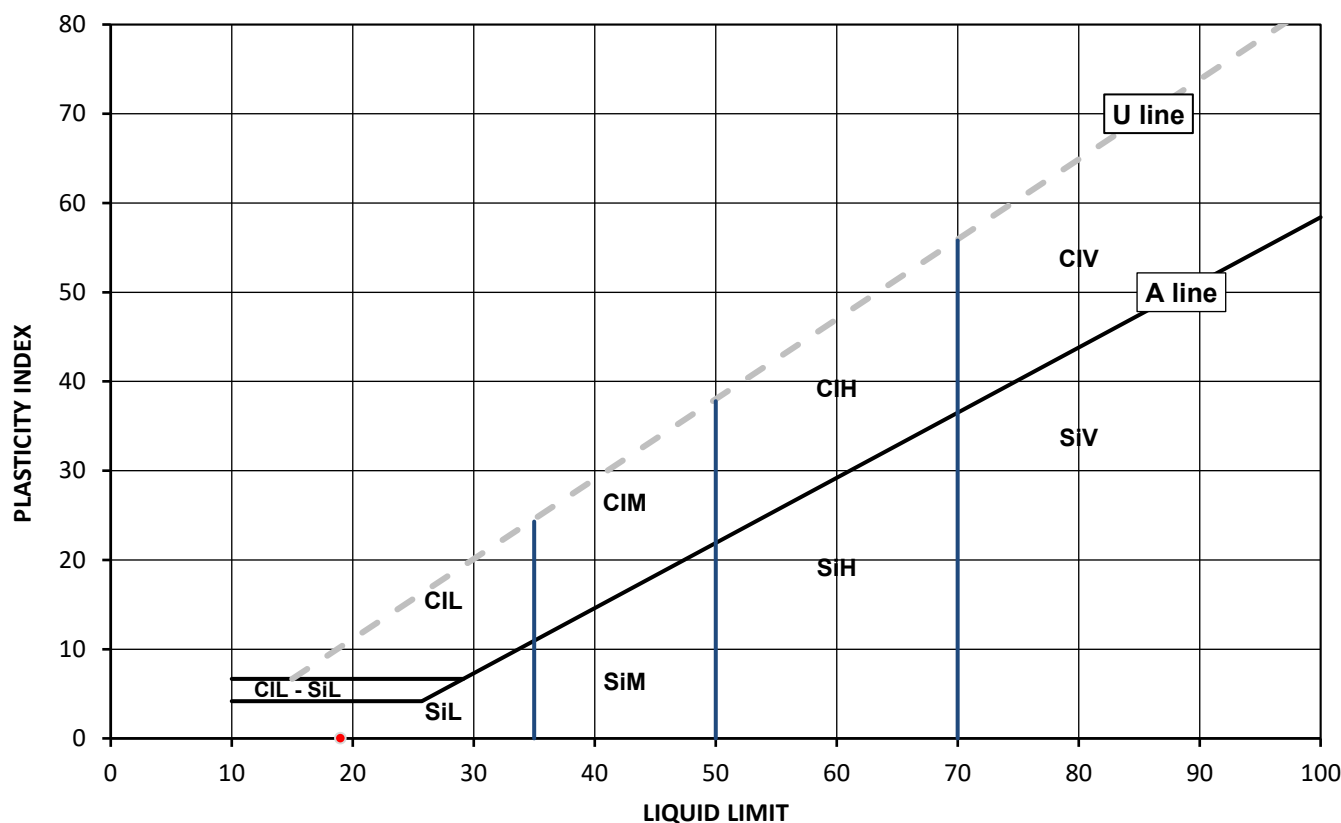
Depth Base [m]: Not Given

Sample Type: D

Sample Preparation: Tested after >0.425mm removed by hand; The water content in the sample was increased

Cone Type: 80g/30deg

As Received Water Content [W] %	Liquid Limit [WL] %	Plastic Limit [Wp] %	Plasticity Index [Ip] %	Liquidity Index [IL] % #	Consistency Index [IC] % #	% Passing 425µm BS Test Sieve
14.3	19	NP	NP.	N/A	N/A	98



Legend, based on BS EN ISO 14688 2:2018 Geotechnical investigation and testing – Identification and classification of soil

	Plasticity	Liquid Limit
Cl	Clay	below 35
Si	Silt	35 to 50
	L	Low
	M	Medium
	H	High
	V	Very high
	O	Organic
		append to classification for organic material (eg ClHO)

Note: Water Content by BS EN 17892-1: 2014; # Non accredited

Remarks: NP - non plastic.

Signed:

Monika Siewior

Monika Siewior
Reporting Specialist
for and on behalf of i2 Analytical Ltd

Opinions and interpretations expressed herein are outside of the scope of the UKAS Accreditation. This report may not be reproduced other than in full without the prior written approval of the issuing laboratory. The results included within the report relate only to the sample(s) submitted for testing.



SUMMARY REPORT

SUMMARY OF CLASSIFICATION TEST RESULTS

Tested in Accordance with:

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB



Environmental Science

4041

Client: Georisk Management Limited

BS EN ISO 17892-12:2018+A2:2022 cl 5.3 and 5.5, Fall Cone Method, 4 Pt
Test, BS 1377-2:2022, cl 5.2 and 6. W by BS EN 17892-1:2014.

Client Reference: 24091

Client Address: Varney House, 91 Spon Lane,
West Bromwich, B70 6AB

Job Number: 24-022360-1

Contact: Will Bonner

Date Sampled: 23/05/2024

Site Address: Chapel Lane, Witherley

Date Received: 29/05/2024

Date Tested: 04/06/2024

Sampled By: Not Given

Testing carried out at i2 Analytical Limited, ul. Pionierow, 41-711 Ruda Slaska, Poland

Test results

Laboratory Reference	Hole No.	Sample				Description	Remarks	W	Liquid & Plastic Limit								Density		
		Reference	Depth Top	Depth Base	Type				% Passing 425um	WL*	Correlation Factor	Wp	Ip	Cone type	Sample Preparation	bulk	dry	PD	
			m	m															Mg/m3
213675	WS2	Not Given	1.40	Not Given	D	Orangish brown slightly gravelly slightly sandy CLAY	Atterberg 4 Point	26.0	99	46	-	24	22	80g/30 deg	R / I				
213676	WS3	Not Given	1.00	Not Given	D	Orangish brown sandy slightly silty CLAY	Atterberg 4 Point	23.5	100	44	-	24	20	80g/30 deg	N / I				
213677	WS4	Not Given	1.30	Not Given	D	Orangish brown slightly gravelly SAND	Atterberg 4 Point	14.3	98	19	-	NP	NP	80g/30 deg	R / I				

Note: # Non accredited; NP - Non plastic; N - Tested in natural condition, R - Tested after >0,425mm removed by hand, W - Tested after washing to remove >425mm; I - The water content in the sample was increased ,
D - The water content in the sample was decreased; * - One point liquid limit corrected as per the report Correlation Factor by Clayton C.R.I and Jukes A.W (1978)

Comments:

Opinions and interpretations expressed herein are outside of the scope of the UKAS Accreditation. This report may not be reproduced other than in full without the prior written approval of the issuing laboratory. The results included within the report relate only to the sample(s) submitted for testing.

Signed:

Monika Siewior

Monika Siewior
Reporting Specialist
for and on behalf of i2 Analytical Ltd

APPENDIX H
ENVIROCHECK SUPPORTING INFORMATION

Envirocheck[®] Report:

Datasheet

Order Details:

Order Number:

347180884_1_1

Customer Reference:

24091

National Grid Reference:

432950, 297550

Slice:

A

Site Area (Ha):

0.49

Search Buffer (m):

1000

Site Details:

Chapel Lane

WITHERLEY

CV9 3LR

Client Details:

Mr M Gill

Georisk Management Limited

Varney House

91 Spon Lane

West Bromwich

B70 6AB

Report Section	Page Number
Summary	-
Agency & Hydrological	1
Waste	21
Hazardous Substances	-
Geological	22
Industrial Land Use	26
Sensitive Land Use	31
Data Currency	32
Data Suppliers	38
Useful Contacts	39

Introduction

The Environment Act 1995 has made site sensitivity a key issue, as the legislation pays as much attention to the pathways by which contamination could spread, and to the vulnerable targets of contamination, as it does the potential sources of contamination. For this reason, Landmark's Site Sensitivity maps and Datasheet(s) place great emphasis on statutory data provided by the Environment Agency/Natural Resources Wales and the Scottish Environment Protection Agency; it also incorporates data from Natural England (and the Scottish and Welsh equivalents) and Local Authorities; and highlights hydrogeological features required by environmental and geotechnical consultants. It does not include any information concerning past uses of land. The datasheet is produced by querying the Landmark database to a distance defined by the client from a site boundary provided by the client. In this datasheet the National Grid References (NGRs) are rounded to the nearest 10m in accordance with Landmark's agreements with a number of Data Suppliers.

Copyright Notice

© Landmark Information Group Limited 2024. The Copyright on the information and data and its format as contained in this Envirocheck® Report ("Report") is the property of Landmark Information Group Limited ("Landmark") and several other Data Providers, including (but not limited to) Ordnance Survey, British Geological Survey, the Environment Agency/Natural Resources Wales and Natural England, and must not be reproduced in whole or in part by photocopying or any other method. The Report is supplied under Landmark's Terms and Conditions accepted by the Customer. A copy of Landmark's Terms and Conditions can be found with the Index Map for this report. Additional copies of the Report may be obtained from Landmark, subject to Landmark's charges in force from time to time. The Copyright, design rights and any other intellectual rights shall remain the exclusive property of Landmark and /or other Data providers, whose Copyright material has been included in this Report. © Environment Agency & United Kingdom Research and Innovation 2024. © Natural Resources Wales & United Kingdom Research and Innovation 2024.

Natural England Copyright Notice

Site of Special Scientific Interest, National Nature Reserve, Ramsar, Special Protection Area, Special Conservation Area, Marine Nature Reserve data (derived from Ordnance Survey 1:10000 raster) is provided by, and used with the permission of, Natural England who retain the copyright and Intellectual Property Rights for the data.

Scottish Natural Heritage Copyright

Contains SNH information licensed under the Open Government Licence v3.0.

Ove Arup Copyright Notice

The Mining Instability data was obtained on licence from Ove Arup & Partners Limited (for further information, contact mining.review@arup.com). No reproduction or further use of such Data is to be made without the prior written consent of Ove Arup & Partners Limited. The supplied Mining Instability data is derived from publicly available records and other third party sources and neither Ove Arup & Partners nor Landmark warrant the accuracy or completeness of such information or data.

Stantec Copyright Notice

The cavity data presented has been extracted from the PBA (now Stantec UK Ltd) enhanced version of the original DEFRA national cavity databases. Stantec UK Ltd retain the copyright & intellectual property rights in the data. Whilst all reasonable efforts are made to check that the information contained in the cavity databases is accurate we do not warrant that the data is complete or error free. The information is based upon our own researches and those collated from a number of external sources and is continually being augmented and updated by Stantec UK Ltd. In no event shall Stantec UK Ltd or Landmark be liable for any loss or damage including, without limitation, indirect or consequential loss or damage arising from the use of this data.

Radon Potential dataset Copyright Notice

Information supplied from a joint dataset compiled by The British Geological Survey and Public Health England.

Natural Resources Wales Copyright Notice

Contains Natural Resources Wales information © Natural Resources Wales and Database Right. All rights Reserved. Contains Ordnance Survey Data. Ordnance Survey Licence number 100019741. Crown Copyright and Database Right. Contains Natural Resources Wales information © Natural Resources Wales and Database Right. All rights Reserved. Some features of this information are based on digital spatial data licensed from the Centre for Ecology & Hydrology © NERC (CEH). Defra, Met Office and DARD Rivers Agency © Crown copyright. © Cranfield University. © James Hutton Institute. Contains OS data © Crown copyright and database right 2024. Land & Property Services © Crown copyright and database right.

Report Version v53.0

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Agency & Hydrological					
BGS Groundwater Flooding Susceptibility	pg 1		Yes	Yes	n/a
Contaminated Land Register Entries and Notices					
Discharge Consents	pg 1		1	4	5
Prosecutions Relating to Controlled Waters			n/a	n/a	n/a
Enforcement and Prohibition Notices					
Integrated Pollution Controls					
Integrated Pollution Prevention And Control					
Local Authority Integrated Pollution Prevention And Control					
Local Authority Pollution Prevention and Controls	pg 4				3
Local Authority Pollution Prevention and Control Enforcements					
Nearest Surface Water Feature	pg 4		Yes		
Pollution Incidents to Controlled Waters	pg 4			2	19
Prosecutions Relating to Authorised Processes					
Registered Radioactive Substances					
River Quality	pg 8			1	1
River Quality Biology Sampling Points					
River Quality Chemistry Sampling Points					
Substantiated Pollution Incident Register					
Water Abstractions	pg 8				3 (*12)
Water Industry Act Referrals					
Groundwater Vulnerability Map	pg 12	Yes	n/a	n/a	n/a
Groundwater Vulnerability - Soluble Rock Risk			n/a	n/a	n/a
Groundwater Vulnerability - Local Information			n/a	n/a	n/a
Bedrock Aquifer Designations	pg 12	Yes	n/a	n/a	n/a
Superficial Aquifer Designations	pg 12	Yes	n/a	n/a	n/a
Source Protection Zones					
Extreme Flooding from Rivers or Sea without Defences	pg 12		Yes	n/a	n/a
Flooding from Rivers or Sea without Defences	pg 12		Yes	n/a	n/a
Areas Benefiting from Flood Defences				n/a	n/a
Flood Water Storage Areas				n/a	n/a
Flood Defences				n/a	n/a
OS Water Network Lines	pg 13		11	23	37

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Waste					
BGS Recorded Landfill Sites					
Historical Landfill Sites					
Integrated Pollution Control Registered Waste Sites					
Licensed Waste Management Facilities (Landfill Boundaries)					
Licensed Waste Management Facilities (Locations)	pg 21				1
Local Authority Landfill Coverage		2	n/a	n/a	n/a
Local Authority Recorded Landfill Sites					
Potentially Infilled Land (Non-Water)					
Potentially Infilled Land (Water)	pg 21				2
Registered Landfill Sites					
Registered Waste Transfer Sites					
Registered Waste Treatment or Disposal Sites					
Hazardous Substances					
Control of Major Accident Hazards Sites (COMAH)					
Explosive Sites					
Notification of Installations Handling Hazardous Substances (NIHHS)					
Planning Hazardous Substance Consents					
Planning Hazardous Substance Enforcements					

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Geological					
BGS 1:625,000 Solid Geology	pg 22	Yes	n/a	n/a	n/a
BGS Estimated Soil Chemistry	pg 22	Yes	Yes	Yes	Yes
BGS Recorded Mineral Sites					
BGS Urban Soil Chemistry					
BGS Urban Soil Chemistry Averages					
CBSCB Compensation District			n/a	n/a	n/a
Coal Mining Affected Areas			n/a	n/a	n/a
Mining Instability			n/a	n/a	n/a
Man-Made Mining Cavities					
Natural Cavities					
Non Coal Mining Areas of Great Britain	pg 24	Yes		n/a	n/a
Potential for Collapsible Ground Stability Hazards	pg 24	Yes		n/a	n/a
Potential for Compressible Ground Stability Hazards	pg 24	Yes		n/a	n/a
Potential for Ground Dissolution Stability Hazards				n/a	n/a
Potential for Landslide Ground Stability Hazards	pg 24	Yes		n/a	n/a
Potential for Running Sand Ground Stability Hazards	pg 24	Yes	Yes	n/a	n/a
Potential for Shrinking or Swelling Clay Ground Stability Hazards	pg 25	Yes		n/a	n/a
Radon Potential - Radon Affected Areas			n/a	n/a	n/a
Radon Potential - Radon Protection Measures			n/a	n/a	n/a
Industrial Land Use					
Contemporary Trade Directory Entries	pg 26			4	20
Fuel Station Entries	pg 28				1
Points of Interest - Commercial Services	pg 28			1	6
Points of Interest - Education and Health					
Points of Interest - Manufacturing and Production	pg 28			2	4
Points of Interest - Public Infrastructure	pg 29			2	6
Points of Interest - Recreational and Environmental	pg 30			2	
Gas Pipelines					
Underground Electrical Cables					

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Sensitive Land Use					
Ancient Woodland					
Areas of Adopted Green Belt					
Areas of Unadopted Green Belt					
Areas of Outstanding Natural Beauty					
Environmentally Sensitive Areas					
Forest Parks					
Local Nature Reserves					
Marine Nature Reserves					
National Nature Reserves					
National Parks					
Nitrate Sensitive Areas					
Nitrate Vulnerable Zones	pg 31	1			
Ramsar Sites					
Sites of Special Scientific Interest					
Special Areas of Conservation					
Special Protection Areas					
World Heritage Sites					

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A13NW (W)	43	1	432850 297551
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13SW (W)	201	1	432700 297500
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13SW (SW)	270	1	432800 297300
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A12NE (W)	293	1	432600 297551
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A12NE (W)	345	1	432550 297600
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A8NW (S)	385	1	432850 297150
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A12NE (W)	402	1	432500 297650
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A12SE (W)	407	1	432500 297450
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A12NE (W)	443	1	432450 297551
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A18SE (N)	478	1	433050 298050
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A18SW (N)	489	1	432750 298050
1	Discharge Consents Operator: Mrs Sclater Property Type: DOMESTIC PROPERTY (SINGLE) (INCL FARM HOUSE) Location: Chapelfield House Chapel Lane, Witherley, Atherstone, Warwickshire Authority: Environment Agency, Midlands Region Catchment Area: Upper Anker Catchment To Confluence With Sence Reference: T/19/35653/S Permit Version: 1 Effective Date: 23rd January 2002 Issued Date: 23rd January 2002 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge Environment: Freshwater Stream/River Receiving Water: Trib River Anker &/Or Land Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 10m	A13SE (S)	43	2	432970 297470
2	Discharge Consents Operator: Mr Hunt Property Type: Sewage Disposal Works Location: Kennel Farm, Atterton Lane, Witherley, Atherstone, Warwickshire Authority: Environment Agency, Midlands Region Catchment Area: Upper Anker Catchment To Confluence With Sence Reference: CT/19/35128/S/1 Permit Version: Not Supplied Effective Date: Not Supplied Issued Date: 11th April 1997 Revocation Date: Not Supplied Discharge Type: Sewage Treatment Works - Final Effluent Discharge Environment: Freshwater Stream/River Receiving Water: Atterton Brook Status: Not Supplied Positional Accuracy: Located by supplier to within 100m	A13NE (NE)	334	2	433170 297845

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
2	Discharge Consents Operator: Mr Hunt Property Type: WWTW (NOT WATER CO) (NOT STP AT A PRIVATE PREMISES) Location: Kennel Farm Atterton Lane, Witherley, Atherstone, Warwickshire Authority: Environment Agency, Midlands Region Catchment Area: Upper Anker Catchment To Confluence With Sence Reference: T/19/35128/S Permit Version: 1 Effective Date: 11th April 1997 Issued Date: 11th April 1997 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: Trib Of Atterton Brook Status: Post National Rivers Authority Legislation where issue date > 31/08/1989 Positional Accuracy: Located by supplier to within 100m	A13NE (NE)	338	2	433170 297850
3	Discharge Consents Operator: Severn Trent Water Limited Property Type: PUMPING STATION ON SEWERAGE NETWORK (WATER COMPANY) Location: Witherley Sewage Pumping Station, Witherley, Leicestershire Authority: Environment Agency, Midlands Region Catchment Area: Upper Anker Catchment To Confluence With Sence Reference: T/19/12382/O Permit Version: 1 Effective Date: 8th July 1986 Issued Date: 8th July 1986 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Pumping Station - Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: Atterton Brook Status: Pre National Rivers Authority Legislation where issue date < 01/09/1989 Positional Accuracy: Located by supplier to within 100m	A12NE (NW)	339	2	432600 297740
4	Discharge Consents Operator: The Rt Hon Lord Oneill Property Type: Not Given Location: Kennel Farm, New Farmhouse, Atterton Lane, WITHERLEY Authority: Environment Agency, Midlands Region Catchment Area: Not Given Reference: T/19/20027/S/1 Permit Version: Not Supplied Effective Date: Not Supplied Issued Date: 28th November 1989 Revocation Date: Not Supplied Discharge Type: Sewage Effluent Discharge-Treated Effluent Discharge: Freshwater Stream/River Environment: Receiving Water: Atterton Brook Status: Not Supplied Positional Accuracy: Located by supplier to within 100m	A18SE (NE)	388	2	433200 297890
5	Discharge Consents Operator: The Process Ink Co Ltd Property Type: Undefined Or Other Location: The Process Ink Co.Ltd, 18 Carlyon Road, Atherstone Authority: Environment Agency, Midlands Region Catchment Area: Upper Trent Catchment Reference: S81158010 Permit Version: 1 Effective Date: 1st June 1987 Issued Date: Not Supplied Revocation Date: Not Supplied Discharge Type: Unknown Discharge: Not Supplied Environment: Receiving Water: Not Supplied Status: Pre National Rivers Authority Legislation where issue date < 01/09/1989 Positional Accuracy: Manually corrected supplier location	A12SE (W)	602	2	432300 297450

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
6	Discharge Consents Operator: Severn Trent Water Limited Property Type: Not Given Location: Witherley Sewage PS, MANCETTER Authority: Environment Agency, Midlands Region Catchment Area: Not Given Reference: T/19/21756/O/1 Permit Version: Not Supplied Effective Date: Not Supplied Issued Date: 27th July 1992 Revocation Date: Not Supplied Discharge Type: Storm sewage overflow discharge Discharge: Freshwater Stream/River Environment: Receiving Water: River Anker Status: Not Supplied Positional Accuracy: Located by supplier to within 100m	A7NE (SW)	706	2	432400 297050
7	Discharge Consents Operator: Dhl Supply Chain Limited Property Type: Undefined Or Other Location: Premises At Atherstone Ind Estate, Riversdale Road, Atherstone, Warwickshire, Cv9 1lp Authority: Environment Agency, Midlands Region Catchment Area: Upper Anker Catchment To Confluence With Sence Reference: T/19/03792/T Permit Version: 1 Effective Date: 4th November 1974 Issued Date: 4th November 1974 Revocation Date: 20th May 2021 Discharge Type: Trade Effluent Discharge-Site Drainage Discharge: Freshwater Stream/River Environment: Receiving Water: River Anker Status: Surrendered under EPR 2010 Positional Accuracy: Located by supplier to within 100m	A12NW (W)	730	2	432200 297800
8	Discharge Consents Operator: Severn Trent Water Limited Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: New Industrial Estate, Atherstone, Warwickshire Authority: Environment Agency, Midlands Region Catchment Area: Upper Anker Catchment To Confluence With Sence Reference: T/19/03421/O Permit Version: 1 Effective Date: 14th November 1972 Issued Date: 14th November 1972 Revocation Date: 27th March 2000 Discharge Type: Public Sewage: Storm Sewage Overflow Discharge: Freshwater Stream/River Environment: Receiving Water: River Anker Status: Revoked (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 100m	A12NW (W)	765	2	432150 297750
9	Discharge Consents Operator: Dhl Supply Chain Limited Property Type: Undefined Or Other Location: Premises At Atherstone Ind Estate, Riversdale Road, Atherstone, Warwickshire, Cv9 1lp Authority: Environment Agency, Midlands Region Catchment Area: Upper Anker Catchment To Confluence With Sence Reference: T/19/03792/T Permit Version: 1 Effective Date: 4th November 1974 Issued Date: 4th November 1974 Revocation Date: 20th May 2021 Discharge Type: Trade Effluent Discharge-Site Drainage Discharge: Freshwater Stream/River Environment: Receiving Water: River Anker Status: Surrendered under EPR 2010 Positional Accuracy: Located by supplier to within 100m	A17SW (NW)	768	2	432200 297900

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
10	Local Authority Pollution Prevention and Controls Name: Watling Service Station (Elf) Location: Watling Street, Witherley, ATHERSTONE, Warwickshire, CV9 1RE Authority: North Warwickshire Borough Council, Environmental Health Department Permit Reference: Nwbc/Apa/8/99 Dated: Not Supplied Process Type: Local Authority Air Pollution Control Description: PG1/14 Petrol filling station Status: Authorisation revoked Positional Accuracy: Automatically positioned to the address	A8SE (S)	768	3	433008 296741
11	Local Authority Pollution Prevention and Controls Name: Avondale Coachcraft Location: Carlyon Road, ATHERSTONE, Warwickshire, CV9 1JE Authority: North Warwickshire Borough Council, Environmental Health Department Permit Reference: NWBC/APA/3/92 Dated: 27th August 1992 Process Type: Local Authority Air Pollution Control Description: PG6/32 Adhesive coating Status: Authorisation revoked Positional Accuracy: Automatically positioned to the address	A12NW (W)	916	3	431980 297642
11	Local Authority Pollution Prevention and Controls Name: Avondale Coachcraft Location: Carlyon Road, ATHERSTONE, Warwickshire, CV9 1JE Authority: North Warwickshire Borough Council, Environmental Health Department Permit Reference: NWBC/B-29/05 Dated: 27th August 1992 Process Type: Local Authority Pollution Prevention and Control Description: PG6/2 Manufacture of timber and wood-based products Status: Permitted Positional Accuracy: Automatically positioned to the address	A12NW (W)	916	3	431980 297642
	Nearest Surface Water Feature	A13SW (SW)	64	-	432851 297498
12	Pollution Incidents to Controlled Waters Property Type: Schools/Universities Location: Witherly Primary School, Church Rd, ATHERSTONE Authority: Environment Agency, Midlands Region Pollutant: Oils - Gas Oil Note: Anker; 4 Litres Of Oil Onto Land May Enter Drain Incident Date: 13th April 1999 Incident Reference: 2705658 Catchment Area: Trent Catchment : Upper Anker To Confluence With Sence Receiving Water: Groundwater Cause of Incident: Vandalism Incident Severity: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 10m	A12SE (SW)	468	2	432500 297300
13	Pollution Incidents to Controlled Waters Property Type: Miscellaneous Premises: Unknown Location: Riverside, WITHERLEY Authority: Environment Agency, Midlands Region Pollutant: Organic Wastes: Animal Carcasses Note: Amenity Affected; Anker; Dead Sheep In River Incident Date: 10th May 1997 Incident Reference: 2001885 Catchment Area: Trent Catchment : Upper Anker To Confluence With Sence Receiving Water: Watercourse Cause of Incident: Other Incident/Unknown Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A7NE (SW)	494	2	432550 297200
14	Pollution Incidents to Controlled Waters Property Type: Water Company Sewage: Surface Water Outfall Location: Rear Of Bhs, ATHERSTONE Authority: Environment Agency, Midlands Region Pollutant: Oils - Unknown Note: Anker; Diesel Oil Entering River Via Drain; No Adverse Effect Incident Date: 25th November 1995 Incident Reference: 1700755 Catchment Area: Trent Catchment : Upper Anker To Confluence With Sence Receiving Water: Watercourse Cause of Incident: Other Incident/Unknown Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A12NE (W)	595	2	432300 297600

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
15	Pollution Incidents to Controlled Waters Property Type: Water Company Sewage: Sewage Treatment Works Location: Witherley Hall, ATHERSTONE Authority: Environment Agency, Midlands Region Pollutant: Miscellaneous - Colour Note: Anker; Running Red; No Adverse Effects Incident Date: 16th September 1997 Incident Reference: 2702575 Catchment Area: Trent Catchment : Upper Anker To Confluence With Sence Receiving Water: Watercourse Cause of Incident: Deliberate Disposal To Drain Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A12SE (W)	602	2	432300 297450
16	Pollution Incidents to Controlled Waters Property Type: Road (Road Traffic Accident) Location: Carlyon Industrial Estate, ATHERSTONE Authority: Environment Agency, Midlands Region Pollutant: Oils - Diesel (Including Agricultural) Note: Anker; Oil On River; Amenity Effected Incident Date: 3rd March 1998 Incident Reference: 2703997 Catchment Area: Trent Catchment : Lower Anker Receiving Water: Watercourse Cause of Incident: Accidental Spillage/Leakage Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A12NE (W)	608	2	432300 297700
16	Pollution Incidents to Controlled Waters Property Type: Miscellaneous Premises: Unknown Location: Carlton Ind Est, Culvert, ATHERSTONE Authority: Environment Agency, Midlands Region Pollutant: Oils - Diesel (Including Agricultural) Note: None Affected; Diesel In River Incident Date: 19th June 1998 Incident Reference: 2704475 Catchment Area: Trent Catchment : Upper Anker To Confluence With Sence Receiving Water: Watercourse Cause of Incident: Other Incident/Unknown Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A12NW (W)	656	2	432250 297695
16	Pollution Incidents to Controlled Waters Property Type: Miscellaneous Premises: Unknown Location: Carlyon Industrial Estate, ATHERSTONE Authority: Environment Agency, Midlands Region Pollutant: Oils - Unknown Note: Unknown Surface Water Sewer; Dirty Water In Surface Water Sewer; No Adverse Effects Incident Date: 11th May 1998 Incident Reference: 2704464 Catchment Area: Trent Catchment : River Sence Receiving Water: Watercourse Cause of Incident: Other Incident/Unknown Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A12NW (W)	657	2	432250 297700
16	Pollution Incidents to Controlled Waters Property Type: Water Company Sewage: Surface Water Outfall Location: Industrial Estate, Riversdale Road, ATHERSTONE, Warwickshire Authority: Environment Agency, Midlands Region Pollutant: Oils - Unknown Note: None Affected; Diesel Incident Date: 31st October 1998 Incident Reference: 2003174 Catchment Area: Trent Catchment : Upper Anker To Confluence With Sence Receiving Water: Watercourse Cause of Incident: Other Incident/Unknown Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A12NW (W)	661	2	432250 297720
17	Pollution Incidents to Controlled Waters Property Type: Road (Road Traffic Accident) Location: A5 Road, MANCETTER Authority: Environment Agency, Midlands Region Pollutant: Miscellaneous - Other Note: No Adverse Effects; Road Traffic Accident Diesel Spillage Incident Date: 19th July 1996 Incident Reference: 2001014 Catchment Area: Trent Catchment : Lower Anker Receiving Water: Not Given Cause of Incident: Miscellaneous/Other Pollution Type Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A12SE (SW)	667	2	432300 297250

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
18	Pollution Incidents to Controlled Waters Property Type: Road (Road Traffic Accident) Location: Bhs, Industrial Estate, WITHERLEY Authority: Environment Agency, Midlands Region Pollutant: Oils - Unknown Note: Anker; Oil Coming Down River; Amenity Effected Incident Date: 15th August 1997 Incident Reference: 2702951 Catchment Area: Trent Catchment : Upper Anker To Confluence With Sence Receiving Water: Watercourse Cause of Incident: Poor/Inadequate Maintenance Incident Severity: Category 3 - Minor Incident Positional Accuracy: Unknown	A12NW (W)	729	2	432200 297795
18	Pollution Incidents to Controlled Waters Property Type: Industrial: Other Location: Rear Of Exel, Carlyon Industrial Estate, Downstream Of Bridge Authority: Environment Agency, Midlands Region Pollutant: Miscellaneous - Foam Note: Anker; Foam From Outlet; Amenity Affected Incident Date: 21st February 1996 Incident Reference: 2700890 Catchment Area: Trent Catchment : Upper Anker To Confluence With Sence Receiving Water: Watercourse Cause of Incident: Other Incident/Unknown Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A12NW (W)	748	2	432170 297760
18	Pollution Incidents to Controlled Waters Property Type: Engineering Location: Sewage Works, ATHERSTONE Authority: Environment Agency, Midlands Region Pollutant: Oils - Unknown Note: None Affected; Oil On River Incident Date: 15th September 1998 Incident Reference: 2704863 Catchment Area: Trent Catchment : Upper Anker To Confluence With Sence Receiving Water: Watercourse Cause of Incident: Poor Operational Practice Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A12NW (W)	752	2	432170 297775
18	Pollution Incidents to Controlled Waters Property Type: Water Company Sewage: Surface Water Outfall Location: Riverside Road, WITHERLEY Authority: Environment Agency, Midlands Region Pollutant: Oils - Unknown Note: None Affected; Rainbow Effect Discharging From Pipe Incident Date: 11th September 1998 Incident Reference: 2704935 Catchment Area: Trent Catchment : Upper Anker To Confluence With Sence Receiving Water: Watercourse Cause of Incident: Other Incident/Unknown Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A12NW (W)	753	2	432170 297780
19	Pollution Incidents to Controlled Waters Property Type: Industrial: Other Location: Carlyon Industrial Estate, ATHERSTONE Authority: Environment Agency, Midlands Region Pollutant: Oils - Diesel (Including Agricultural) Note: Anker; Oil; No Adverse Effects Incident Date: 8th November 1997 Incident Reference: 2001953 Catchment Area: Trent Catchment : Upper Anker To Confluence With Sence Receiving Water: Watercourse Cause of Incident: Accidental Spillage/Leakage Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A17SW (NW)	765	2	432200 297895
20	Pollution Incidents to Controlled Waters Property Type: Private Sewage (Non-PLC): Pumping Station Location: Carlyon Road Industrial Estate, ATHERSTONE Authority: Environment Agency, Midlands Region Pollutant: Crude Sewage Note: No Adverse Effects; Anker; Power Failure Incident Date: 23rd August 1996 Incident Reference: 2701150 Catchment Area: Trent Catchment : Upper Anker To Confluence With Sence Receiving Water: Watercourse Cause of Incident: Mechanical Failure Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A12SW (W)	766	2	432150 297370

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
21	Pollution Incidents to Controlled Waters Property Type: Road (Road Traffic Accident) Location: A5, MANCETTER Authority: Environment Agency, Midlands Region Pollutant: Chemicals - Other Inorganic Note: Hydrogen Peroxide Container Dropped From Lorry; No Adverse Effect Incident Date: 2nd March 1996 Incident Reference: 2700607 Catchment Area: Trent Catchment : Upper Anker To Confluence With Sence Receiving Water: Watercourse Cause of Incident: Accidental Spillage/Leakage Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A7NW (SW)	767	2	432230 297170
22	Pollution Incidents to Controlled Waters Property Type: Road (Road Traffic Accident) Location: Blue Boar P/House, Watling Street, MANCETTER Authority: Environment Agency, Midlands Region Pollutant: Oils - Diesel (Including Agricultural) Note: Road Traffic Accident. 30 Gallons Of Diesel Spilt; No Adverse Effects Incident Date: 24th September 1997 Incident Reference: 2702607 Catchment Area: Trent Catchment : Upper Anker To Confluence With Sence Receiving Water: Watercourse Cause of Incident: Accidental Spillage/Leakage Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A12SW (W)	820	2	432120 297280
23	Pollution Incidents to Controlled Waters Property Type: Industrial: Other Location: Exel Logistics , Carlyon Industrial Estate, ATHERSTONE Authority: Environment Agency, Midlands Region Pollutant: Oils - Unknown Note: Oil Coming From Site Drainage; No Adverse Effects Incident Date: 12th May 1998 Incident Reference: 2704335 Catchment Area: Trent Catchment : Upper Anker To Confluence With Sence Receiving Water: Watercourse Cause of Incident: Accidental Spillage/Leakage Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A17SW (NW)	843	2	432200 298050
24	Pollution Incidents to Controlled Waters Property Type: Industrial: Other Location: Rear Of 3M's/Bhs, ATHERSTONE Authority: Environment Agency, Midlands Region Pollutant: Oils - Diesel (Including Agricultural) Note: Anker; Diesel Oil On River; No Adverse Effects Incident Date: 13th August 1997 Incident Reference: 2001930 Catchment Area: Trent Catchment : Upper Anker To Confluence With Sence Receiving Water: Watercourse Cause of Incident: Poor/Inadequate Maintenance Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A12NW (W)	868	2	432055 297795
24	Pollution Incidents to Controlled Waters Property Type: Industrial: Other Location: B4116 Road, ATHERSTONE Authority: Environment Agency, Midlands Region Pollutant: Oils - Diesel (Including Agricultural) Note: Anker; Oil On River; No Adverse Effects Incident Date: 15th August 1997 Incident Reference: 2001932 Catchment Area: Trent Catchment : Upper Anker To Confluence With Sence Receiving Water: Watercourse Cause of Incident: Poor/Inadequate Maintenance Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A12NW (W)	873	2	432050 297795
24	Pollution Incidents to Controlled Waters Property Type: Industrial: Other Location: Rear Of 3m's/bhs, ATHERSTONE Authority: Environment Agency, Midlands Region Pollutant: Oils - Diesel (Including Agricultural) Note: Anker; Oil On River; No Adverse Effects Incident Date: 13th August 1997 Incident Reference: 2001931 Catchment Area: Trent Catchment : Upper Anker To Confluence With Sence Receiving Water: Watercourse Cause of Incident: Poor/Inadequate Maintenance Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A12NW (W)	874	2	432050 297800

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	River Quality Name: Anker R GQA Grade: River Quality C Reach: Witherley To Conf. R. Sence Estimated Distance (km): 2 Flow Rate: Flow less than 1.25 cumecs Flow Type: River Year: 2000	A12SE (SW)	466	2	432535 297255
	River Quality Name: Anker R GQA Grade: River Quality C Reach: Nuneaton Stw To Mancett Br. Witherley Estimated Distance (km): 2 Flow Rate: Flow less than 1.25 cumecs Flow Type: River Year: 2000	A7NE (SW)	791	2	432395 296940
25	Water Abstractions Operator: Rw & Her Trivett Licence Number: 03/28/19/0009 Permit Version: 100 Location: Drayton Barn Farm - Borehole Authority: Environment Agency, Midlands Region Abstraction: General Farming And Domestic Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Drayton Barn Farm Authorised Start: 01 April Authorised End: 31 March Permit Start Date: 26th March 1970 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A14SW (E)	516	2	433500 297400
26	Water Abstractions Operator: D & V Garland Licence Number: 03/28/19/0072 Permit Version: 101 Location: Witherley, Warks - River Anker Authority: Environment Agency, Midlands Region Abstraction: General Agriculture: Spray Irrigation - Direct Abstraction Type: Water may be abstracted from a single point Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Land At Witherley, Warks - River Anker Authorised Start: 01 April Authorised End: 31 October Permit Start Date: 9th October 2006 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A17SW (NW)	814	2	432250 298070
26	Water Abstractions Operator: Mythe Farm Ltd Licence Number: 03/28/19/0072 Permit Version: 100 Location: Witherley, Warks - River Anker Authority: Environment Agency, Midlands Region Abstraction: General Agriculture: Spray Irrigation - Direct Abstraction Type: Water may be abstracted from a single point Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Land At Witherley, Warks - River Anker Authorised Start: 01 April Authorised End: 31 October Permit Start Date: 6th October 1988 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A17SW (NW)	814	2	432250 298070

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Water Abstractions Operator: P Simpson & Partners Licence Number: 03/28/19/0007 Permit Version: 100 Location: Drayton Grange Farm - Borehole Authority: Environment Agency, Midlands Region Abstraction: General Farming And Domestic Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Drayton Grange Farm, Fenny Drayton Authorised Start: 01 April Authorised End: 31 March Permit Start Date: 17th August 1983 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A10NE (E)	1341	2	434300 297200
	Water Abstractions Operator: P Simpson & Partners Licence Number: 03/28/19/0007 Permit Version: 100 Location: Drayton Grange Farm - Borehole Authority: Environment Agency, Midlands Region Abstraction: General Agriculture: Spray Irrigation - Direct Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Drayton Grange Farm, Fenny Drayton Authorised Start: 01 May Authorised End: 31 August Permit Start Date: 17th August 1983 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A10NE (E)	1341	2	434300 297200
	Water Abstractions Operator: P O Simpson Licence Number: Md/028/0019/006 Permit Version: 1 Location: Drayton Grange Farm - Borehole Authority: Environment Agency, Midlands Region Abstraction: General Agriculture: Spray Irrigation - Storage Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Land At Drayton Grange Farm, Fenny Drayton, Nuneaton Authorised Start: 01 April Authorised End: 31 October Permit Start Date: 1st April 2014 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A10NE (E)	1371	2	434320 297160
	Water Abstractions Operator: P Simpson & Partners Licence Number: 03/28/19/0089/1 Permit Version: 1 Location: Drayton Grange Farm - Borehole Authority: Environment Agency, Midlands Region Abstraction: General Agriculture: Spray Irrigation - Storage Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Land At Drayton Grange Farm, Fenny Drayton, Nuneaton Authorised Start: 01 April Authorised End: 31 October Permit Start Date: 20th March 2007 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A10NE (E)	1371	2	434320 297160

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Water Abstractions Operator: P Simpson & Partners Licence Number: 03/28/19/0089 Permit Version: 100 Location: Drayton Grange Farm - Borehole Authority: Environment Agency, Midlands Region Abstraction: General Agriculture: Spray Irrigation - Storage Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Land At Drayton Grange Farm, Fenny Drayton, Nuneaton Authorised Start: 01 April Authorised End: 31 October Permit Start Date: 31st July 1998 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A10NE (E)	1371	2	434320 297160
	Water Abstractions Operator: Dobbies Garden Centres Plc Licence Number: 03/28/19/0067 Permit Version: 101 Location: Mancetter, Atherstone - R Anker Authority: Environment Agency, Midlands Region Abstraction: General Agriculture: Spray Irrigation - Direct Abstraction Type: Water may be abstracted from a single point Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Land Nr Mancetter, Atherstone - R Anker Authorised Start: 01 April Authorised End: 30 September Permit Start Date: 27th September 2001 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A3SE (S)	1409	2	433000 296100
	Water Abstractions Operator: J B Dawson Licence Number: 03/28/19/0067 Permit Version: 100 Location: Mancetter, Atherstone - R Anker Authority: Environment Agency, Midlands Region Abstraction: General Agriculture: Spray Irrigation - Direct Abstraction Type: Water may be abstracted from a single point Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Land Nr Mancetter, Atherstone - R Anker Authorised Start: 01 April Authorised End: 30 September Permit Start Date: 7th April 1995 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A3SE (S)	1409	2	433000 296100
	Water Abstractions Operator: Rw & Her Trivett Licence Number: 03/28/19/0079 Permit Version: 100 Location: Drayton Barn Farm, Atherstone - Borehole Authority: Environment Agency, Midlands Region Abstraction: Amenity: Make-Up Or Top Up Water Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Drayton Barn Farm, Atherstone - Borehole Authorised Start: 01 April Authorised End: 31 March Permit Start Date: 1st April 2008 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A22NW (NW)	1560	2	432150 298950

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Water Abstractions Operator: Rw & Her Trivett Licence Number: 03/28/19/0079 Permit Version: 100 Location: Drayton Barn Farm, Atherstone - Borehole Authority: Environment Agency, Midlands Region Abstraction: Private Water Undertaking: General Use (Medium Loss) Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Drayton Barn Farm, Atherstone - Borehole Authorised Start: 01 April Authorised End: 31 March Permit Start Date: 1st April 2008 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A22NW (NW)	1560	2	432150 298950
	Water Abstractions Operator: Dobbies Garden Centres Plc Licence Number: 03/28/19/0066 Permit Version: 101 Location: Mancetter, Atherstone - Lagoon Authority: Environment Agency, Midlands Region Abstraction: General Agriculture: Spray Irrigation - Direct Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Land Nr Mancetter, Atherstone - Lagoon Authorised Start: 01 March Authorised End: 31 October Permit Start Date: 27th September 2001 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A3SW (S)	1612	2	432900 295900
	Water Abstractions Operator: J B Dawson Licence Number: 03/28/19/0066 Permit Version: 100 Location: Mancetter, Atherstone - Lagoon Authority: Environment Agency, Midlands Region Abstraction: General Agriculture: Spray Irrigation - Direct Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Land Nr Mancetter, Atherstone - Lagoon Authorised Start: 01 March Authorised End: 31 October Permit Start Date: 7th April 1995 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A3SW (S)	1612	2	432900 295900
	Water Abstractions Operator: Canal And River Trust Licence Number: Md/028/0019/011 Permit Version: 1 Location: Mancetter Feeder Authority: Environment Agency, Midlands Region Abstraction: Navigation: Supply to a Canal for Throughflow Abstraction Type: Water may be abstracted from a single point Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Not Supplied Authorised Start: 01 April Authorised End: 31 March Permit Start Date: 29th November 2022 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A1SW (SW)	1960	2	431535 296142

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Groundwater Vulnerability Map Combined Classification: Secondary Superficial Aquifer - High Vulnerability Combined Vulnerability: High Combined Aquifer: Productive Bedrock Aquifer, Productive Superficial Aquifer Pollutant Speed: High Bedrock Flow: Well Connected Fractures Dilution: <300 mm/year Baseflow Index: >70% Superficial Patchiness: <90% Superficial Thickness: <3m Superficial Recharge: No Data	A13NE (W)	0	4	432950 297551
	Groundwater Vulnerability Map Combined Classification: Secondary Bedrock Aquifer - High Vulnerability Combined Vulnerability: High Combined Aquifer: Productive Bedrock Aquifer, No Superficial Aquifer Pollutant Speed: High Bedrock Flow: Well Connected Fractures Dilution: <300 mm/year Baseflow Index: >70% Superficial Patchiness: <90% Superficial Thickness: <3m Superficial Recharge: No Data	A13NE (NE)	0	4	432962 297560
	Groundwater Vulnerability Map Combined Classification: Secondary Bedrock Aquifer - High Vulnerability Combined Vulnerability: High Combined Aquifer: Productive Bedrock Aquifer, No Superficial Aquifer Pollutant Speed: Intermediate Bedrock Flow: Well Connected Fractures Dilution: <300 mm/year Baseflow Index: <40% Superficial Patchiness: <90% Superficial Thickness: <3m Superficial Recharge: High	A13NE (E)	0	4	433000 297551
	Groundwater Vulnerability - Soluble Rock Risk None				
	Bedrock Aquifer Designations Aquifer Designation: Secondary Aquifer - B	A13NE (W)	0	4	432950 297551
	Superficial Aquifer Designations Aquifer Designation: Secondary Aquifer - Undifferentiated	A13NE (W)	0	4	432950 297551
	Extreme Flooding from Rivers or Sea without Defences Type: Extent of Extreme Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models Boundary Accuracy: As Supplied	A13NW (NW)	6	2	432909 297590
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models Boundary Accuracy: As Supplied	A13NW (NW)	6	2	432909 297590
	Areas Benefiting from Flood Defences None				
	Flood Water Storage Areas None				
	Flood Defences None				

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
27	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 136.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Trent Primacy: 1	A13SW (SW)	65	5	432851 297498
28	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 30.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Trent Primacy: 1	A13NW (W)	75	5	432819 297568
29	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 58.0 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Trent Primacy: 1	A13NW (W)	93	5	432803 297589
30	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 9.4 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Trent Primacy: 1	A13SW (SW)	94	5	432884 297455
31	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 53.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Trent Primacy: 1	A13SW (SW)	100	5	432888 297447
32	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 51.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Trent Primacy: 1	A13NW (NW)	111	5	432812 297646
33	OS Water Network Lines Watercourse Form: Lake Watercourse Length: 15.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Trent Primacy: 1	A13SW (S)	123	5	432921 297404
34	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 107.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Trent Primacy: 1	A13SW (S)	137	5	432918 297391
35	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 343.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Trent Primacy: 1	A13NW (NW)	155	5	432845 297729

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
36	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 700.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Trent Primacy: 1	A13NW (NW)	160	5	432781 297686
37	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 70.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Trent Primacy: 1	A13SE (S)	203	5	432981 297307
38	OS Water Network Lines Watercourse Form: Lake Watercourse Length: 5.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Trent Primacy: 1	A13SE (S)	270	5	433004 297240
39	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 46.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Trent Primacy: 1	A13SE (S)	275	5	433003 297235
40	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 166.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Trent Primacy: 1	A13NE (N)	277	5	433055 297836
41	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 4.4 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Trent Primacy: 1	A13NE (NE)	294	5	433079 297843
42	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 140.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Trent Primacy: 1	A13NE (NE)	295	5	433083 297843
43	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 3.3 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Trent Primacy: 1	A8NE (S)	320	5	433007 297190
44	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 34.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Trent Primacy: 1	A8NE (S)	323	5	433008 297187

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
45	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 5.9 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Trent Primacy: 1	A8NE (S)	352	5	433025 297159
46	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 13.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Trent Primacy: 1	A18SE (N)	356	5	432972 297941
47	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 29.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Trent Primacy: 1	A8NE (S)	357	5	433029 297155
48	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 9.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Trent Primacy: 1	A18SE (N)	369	5	432977 297954
49	OS Water Network Lines Watercourse Form: Lake Watercourse Length: 10.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Trent Primacy: 1	A8NE (S)	374	5	433055 297141
50	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 3.5 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Trent Primacy: 1	A18SE (N)	376	5	432984 297959
51	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 395.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Trent Primacy: 1	A18SE (N)	378	5	432987 297961
52	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 5.1 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Trent Primacy: 1	A13NE (NE)	379	5	433218 297868
53	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 83.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Trent Primacy: 1	A8NE (S)	380	5	433064 297137

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
54	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 1101.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Trent Primacy: 1	A13NE (NE)	383	5	433223 297869
55	OS Water Network Lines Watercourse Form: Lake Watercourse Length: 6.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Trent Primacy: 1	A8NE (SE)	421	5	433145 297119
56	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 210.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Trent Primacy: 1	A8NE (SE)	424	5	433151 297118
57	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 102.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: River Anker Catchment Name: Trent Primacy: 2	A12SE (SW)	463	5	432484 297340
58	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 171.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: River Anker Catchment Name: Trent Primacy: 1	A12SE (W)	476	5	432453 297374
59	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 100.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: River Anker Catchment Name: Trent Primacy: 1	A12SE (W)	476	5	432453 297374
60	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 735.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: River Anker Catchment Name: Trent Primacy: 1	A12SE (SW)	483	5	432494 297283
61	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 139.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Trent Primacy: 1	A12SE (W)	531	5	432405 297346
62	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 108.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Trent Primacy: 1	A12SE (W)	531	5	432406 297344

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
63	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 4.8 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Trent Primacy: 1	A9NW (SE)	549	5	433357 297103
64	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 41.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Trent Primacy: 1	A9NW (SE)	551	5	433361 297104
65	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 4.2 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Trent Primacy: 1	A9NW (SE)	582	5	433400 297098
66	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 60.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Trent Primacy: 1	A9NW (SE)	586	5	433403 297096
67	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 27.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: River Anker Catchment Name: Trent Primacy: 2	A12SE (W)	591	5	432310 297458
68	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 25.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Trent Primacy: 1	A12SE (W)	591	5	432310 297458
69	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 60.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: River Anker Catchment Name: Trent Primacy: 1	A12SE (W)	591	5	432310 297458
70	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 72.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Trent Primacy: 1	A12SE (W)	593	5	432313 297433
71	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 6.2 Watercourse Level: Underground Permanent: True Watercourse Name: River Anker Catchment Name: Trent Primacy: 2	A12SE (W)	603	5	432294 297481

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
72	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 166.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: River Anker Catchment Name: Trent Primacy: 2	A12SE (W)	607	5	432290 297486
73	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 5.1 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Trent Primacy: 1	A9NW (SE)	613	5	433451 297107
74	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 347.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Trent Primacy: 1	A9NW (SE)	615	5	433455 297109
75	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 5.4 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Trent Primacy: 1	A12SE (SW)	624	5	432347 297254
76	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 25.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Trent Primacy: 1	A12SE (SW)	629	5	432344 297249
77	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 3.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: River Anker Catchment Name: Trent Primacy: 2	A12NW (W)	631	5	432267 297648
78	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 83.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: River Anker Catchment Name: Trent Primacy: 2	A12NW (W)	632	5	432267 297652
79	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 464.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: River Anker Catchment Name: Trent Primacy: 1	A12SW (W)	651	5	432250 297450
80	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 70.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Trent Primacy: 1	A12SW (W)	651	5	432250 297450

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
81	OS Water Network Lines Watercourse Form: Lake Watercourse Length: 23.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: River Anker Catchment Name: Trent Primacy: 2	A12NW (W)	652	5	432263 297735
82	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 47.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: River Anker Catchment Name: Trent Primacy: 2	A12NW (W)	656	5	432265 297757
83	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 353.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: River Anker Catchment Name: Trent Primacy: 1	A12NW (W)	683	5	432251 297802
84	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 343.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Trent Primacy: 1	A7NE (SW)	701	5	432446 297016
85	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 14.1 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Trent Primacy: 1	A12SW (W)	705	5	432206 297396
86	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 416.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Trent Primacy: 1	A12SW (W)	717	5	432196 297386
87	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 165.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Trent Primacy: 1	A18NE (NE)	719	5	433250 298232
88	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 131.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Trent Primacy: 1	A14SE (E)	779	5	433742 297296
89	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 19.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Trent Primacy: 1	A9NE (SE)	803	5	433714 297167

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
90	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 1.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Trent Primacy: 1	A9NE (SE)	803	5	433716 297171
91	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 28.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Trent Primacy: 1	A9NE (SE)	805	5	433717 297169
92	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 503.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: River Anker Catchment Name: Trent Primacy: 1	A17SW (NW)	812	5	432260 298080
93	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 120.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Trent Primacy: 1	A9NE (SE)	831	5	433745 297169
94	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 4.8 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Trent Primacy: 1	A19NW (NE)	851	5	433347 298333
95	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 188.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Trent Primacy: 1	A19NW (NE)	856	5	433350 298337
96	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 10.7 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Trent Primacy: 1	A9NE (SE)	940	5	433866 297171
97	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 203.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Trent Primacy: 1	A9NE (E)	950	5	433876 297171

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
98	Licensed Waste Management Facilities (Locations) Licence Number: 401899 Location: Mornmet Alloys, 19 Carlyon Road, Atherstone, Warwickshire, CV9 1LQ Operator Name: Mornmet (Alloys) Limited Operator Location: Not Supplied Authority: Environment Agency - Midlands Region, Central Area Site Category: Metal recycling site Licence Status: Surrendered Issued: 28th October 2014 Last Modified: Not Supplied Expires: Not Supplied Suspended: Not Supplied Revoked: Not Supplied Surrendered: 17th February 2021 IPPC Reference: Not Supplied Positional Accuracy: Located by supplier to within 10m	A12SW (W)	821	2	432078 297452
	Local Authority Landfill Coverage Name: Leicestershire County Council - Has supplied landfill data		0	7	432950 297551
	Local Authority Landfill Coverage Name: Hinckley And Bosworth Borough Council - Has no landfill data to supply		0	6	432950 297551
	Local Authority Landfill Coverage Name: North Warwickshire Borough Council - Has supplied landfill data		476	3	432455 297368
	Local Authority Landfill Coverage Name: Warwickshire County Council - Had landfill data but passed it to the relevant environment agency		476	8	432453 297373
99	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1955	A14SW (E)	552	-	433534 297387
100	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1955	A9SW (SE)	942	-	433622 296812

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS 1:625,000 Solid Geology Description: Triassic Rocks (Undifferentiated)	A13NE (W)	0	1	432950 297551
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 15 - 30 mg/kg	A13NE (W)	0	1	432950 297551
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 30 - 45 mg/kg	A13NE (NE)	0	1	432965 297562
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 40 - 60 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 15 - 30 mg/kg	A13NW (W)	77	1	432816 297556
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 30 - 45 mg/kg	A13NW (NW)	173	1	432813 297730
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 40 - 60 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 15 - 30 mg/kg	A13NW (NW)	217	1	432800 297775
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 30 - 45 mg/kg	A12SE (W)	319	1	432595 297441

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 40 - 60 mg/kg Concentration: Lead Concentration: <100 mg/kg Nickel 15 - 30 mg/kg Concentration:	A18SW (NW)	485	1	432691 298021
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 40 - 60 mg/kg Concentration: Lead Concentration: <100 mg/kg Nickel 15 - 30 mg/kg Concentration:	A12SE (SW)	589	1	432398 297235
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <100 mg/kg Nickel 30 - 45 mg/kg Concentration:	A7NW (SW)	767	1	432262 297119
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 40 - 60 mg/kg Concentration: Lead Concentration: <100 mg/kg Nickel 15 - 30 mg/kg Concentration:	A17SE (NW)	784	1	432406 298187
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 40 - 60 mg/kg Concentration: Lead Concentration: <100 mg/kg Nickel 15 - 30 mg/kg Concentration:	A7NW (SW)	934	1	432093 297073
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <100 mg/kg Nickel 30 - 45 mg/kg Concentration:	A12SW (W)	940	1	431972 297365

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <100 mg/kg Nickel 15 - 30 mg/kg Concentration:	A12SW (W)	952	1	431966 297338
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 40 - 60 mg/kg Concentration: Lead Concentration: 100 - 200 mg/kg Nickel 15 - 30 mg/kg Concentration:	A17SW (NW)	991	1	432000 298000
	BGS Measured Urban Soil Chemistry No data available				
	BGS Urban Soil Chemistry Averages No data available				
	Coal Mining Affected Areas In an area that might not be affected by coal mining				
	Non Coal Mining Areas of Great Britain Risk: Rare Source: British Geological Survey, National Geoscience Information Service	A13NE (W)	0	1	432950 297551
	Potential for Collapsible Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NE (W)	0	1	432950 297551
	Potential for Collapsible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NW (NW)	8	1	432892 297580
	Potential for Compressible Ground Stability Hazards Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	A13NE (W)	0	1	432950 297551
	Potential for Compressible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NE (NE)	0	1	432962 297560
	Potential for Compressible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NW (NW)	165	1	432830 297732
	Potential for Ground Dissolution Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NE (W)	0	1	432950 297551
	Potential for Landslide Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NE (W)	0	1	432950 297551
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A13NE (W)	0	1	432950 297551
	Potential for Running Sand Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NE (NE)	0	1	432962 297560
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13SW (W)	80	1	432815 297535
	Potential for Running Sand Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NW (NW)	165	1	432830 297732

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NW (NW)	195	1	432808 297753
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NE (NE)	0	1	432962 297560
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A13NE (W)	0	1	432950 297551
	Radon Potential - Radon Affected Areas Affected Area: The property is in a Lower probability radon area (less than 1% of homes are estimated to be at or above the Action Level). Source: British Geological Survey, National Geoscience Information Service	A13NE (W)	0	1	432950 297551
	Radon Potential - Radon Protection Measures Protection Measure: No radon protective measures are necessary in the construction of new dwellings or extensions Source: British Geological Survey, National Geoscience Information Service	A13NE (W)	0	1	432950 297551

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
101	Contemporary Trade Directory Entries Name: Swift Styleprint Location: 28, St. Peters Avenue, Witherley, Atherstone, Warwickshire, CV9 3LN Classification: Printers Status: Inactive Positional Accuracy: Automatically positioned to the address	A13SW (SW)	338	-	432660 297311
102	Contemporary Trade Directory Entries Name: M S Transport Location: 6, Church Road, Witherley, Atherstone, CV9 3NA Classification: Road Haulage Services Status: Inactive Positional Accuracy: Automatically positioned to the address	A12SE (SW)	371	-	432562 297388
103	Contemporary Trade Directory Entries Name: Recycling & Consultants Location: 19, Hunt Lane, Witherley, Atherstone, Warwickshire, CV9 3LH Classification: Waste Disposal Services Status: Inactive Positional Accuracy: Automatically positioned to the address	A8NW (SW)	428	-	432667 297192
104	Contemporary Trade Directory Entries Name: Atherstone Plant Hire Ltd Location: Mill La, Witherley, Atherstone, Warwickshire, CV9 3LU Classification: Crane Hire, Sales & Service Status: Inactive Positional Accuracy: Manually positioned to the road within the address or location	A12NE (W)	430	-	432472 297656
105	Contemporary Trade Directory Entries Name: Total Location: Watling Street, Witherley, Atherstone, Warwickshire, CV9 1RE Classification: Petrol Filling Stations Status: Inactive Positional Accuracy: Automatically positioned to the address	A8SE (S)	768	-	433008 296741
105	Contemporary Trade Directory Entries Name: T C B Motors Location: Watling St, Witherley, Atherstone, Warwickshire, CV9 1RE Classification: Car Body Repairs Status: Inactive Positional Accuracy: Manually positioned to the address or location	A8SE (S)	783	-	432995 296726
105	Contemporary Trade Directory Entries Name: Rock Caravans Location: Watling Street, Witherley, Atherstone, Warwickshire, CV9 1RE Classification: Caravan Dealers & Manufacturers Status: Inactive Positional Accuracy: Automatically positioned to the address	A8SE (S)	795	-	433008 296714
106	Contemporary Trade Directory Entries Name: C T Electrical Engineers Location: 46, Harpers Lane, Atherstone, Warwickshire, CV9 1NG Classification: Electrical Engineers Status: Active Positional Accuracy: Automatically positioned to the address	A7NW (SW)	832	-	432199 297097
107	Contemporary Trade Directory Entries Name: Profab Access Location: Unit C-d, Riversdale House, Riversdale Road, ATHERSTONE, Warwickshire, CV9 1FA Classification: Sheet Metal Work Status: Inactive Positional Accuracy: Automatically positioned to the address	A12NW (W)	841	-	432057 297651
108	Contemporary Trade Directory Entries Name: W A Engineering (Nuneaton) Ltd Location: Unit 1, Carlyon Road, Atherstone, Warwickshire, CV9 1LQ Classification: Precision Engineers Status: Inactive Positional Accuracy: Automatically positioned to the address	A12SW (W)	842	-	432059 297439
108	Contemporary Trade Directory Entries Name: Mormet Alloys Location: Unit 19, Carlyon Road, Atherstone, CV9 1LQ Classification: Scrap Metal Merchants Status: Inactive Positional Accuracy: Automatically positioned to the address	A12SW (W)	843	-	432058 297438

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
109	Contemporary Trade Directory Entries Name: Greencore Location: Unit 6 Carlyon Road, Atherstone, CV9 1LQ Classification: Food Products - Manufacturers Status: Active Positional Accuracy: Manually positioned to the road within the address or location	A12SW (W)	861	-	432032 297542
110	Contemporary Trade Directory Entries Name: Raymond James Caravans Ltd Location: Witherley House, Carlyon Road, Atherstone, Warwickshire, CV9 1JE Classification: Caravan Dealers & Manufacturers Status: Inactive Positional Accuracy: Automatically positioned to the address	A12NW (W)	872	-	432023 297612
111	Contemporary Trade Directory Entries Name: Avondale Coachcraft Ltd Location: Carlyon Road, Atherstone, Warwickshire, CV9 1JE Classification: Caravan Dealers & Manufacturers Status: Inactive Positional Accuracy: Automatically positioned to the address	A12NW (W)	916	-	431980 297642
111	Contemporary Trade Directory Entries Name: Redgate Precision Engineering Co Location: Unit 4C, Carlyon Road, Atherstone, Warwickshire, CV9 1JE Classification: Precision Engineers Status: Inactive Positional Accuracy: Automatically positioned to the address	A12NW (W)	916	-	431980 297642
111	Contemporary Trade Directory Entries Name: Green & Filmer Ltd Location: Unit 8, Carlyon Road, Atherstone, Warwickshire, CV9 1JE Classification: Clothing & Fabrics - Manufacturers Status: Inactive Positional Accuracy: Automatically positioned to the address	A12NW (W)	916	-	431980 297642
111	Contemporary Trade Directory Entries Name: B C H Technology Ltd Location: Communications Ho, Carlyon Rd, Atherstone, Warwickshire, CV9 1JE Classification: Telecommunications Equipment & Systems Status: Inactive Positional Accuracy: Manually positioned to the road within the address or location	A12NW (W)	936	-	431958 297606
112	Contemporary Trade Directory Entries Name: Euro Enterprises Location: 21, The Coppice, ATHERSTONE, Warwickshire, CV9 1RT Classification: Car Dealers Status: Inactive Positional Accuracy: Automatically positioned to the address	A7NW (SW)	937	-	432200 296925
113	Contemporary Trade Directory Entries Name: U V International Ltd Location: Communications Ho, Carlyon Rd, Atherstone, Warwickshire, CV9 1JE Classification: Adhesives, Glues & Sealants Status: Inactive Positional Accuracy: Manually positioned to the road within the address or location	A12NW (W)	953	-	431942 297620
113	Contemporary Trade Directory Entries Name: Pressmark Pressings Location: Unit 18, Carlyon Road, Atherstone, Warwickshire, CV9 1LQ Classification: Metal Spinners Status: Active Positional Accuracy: Automatically positioned to the address	A11NE (W)	991	-	431903 297607
113	Contemporary Trade Directory Entries Name: C M T Ltd Location: Unit 18, Carlyon Road, Atherstone, Warwickshire, CV9 1LQ Classification: Engineers - General Status: Inactive Positional Accuracy: Automatically positioned to the address	A11NE (W)	991	-	431903 297607
113	Contemporary Trade Directory Entries Name: Samuel Smith Location: Unit 18, Carlyon Road, Atherstone, Warwickshire, CV9 1LQ Classification: Brewers Status: Inactive Positional Accuracy: Automatically positioned to the address	A11NE (W)	991	-	431903 297607

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
114	Contemporary Trade Directory Entries Name: Hartshorne Location: Riversdale Road, The Carylton Road Industrial Estat, Atherstone, Warwickshire, CV9 1LP Classification: Commercial Vehicle Servicing, Repairs, Parts & Accessories Status: Active Positional Accuracy: Manually positioned within the geographical locality	A12NW (W)	971	-	431975 297884
115	Contemporary Trade Directory Entries Name: Haywood Stoves Ltd Location: 27, Mancetter Road, Atherstone, Warwickshire, CV9 1NZ Classification: Woodburning Stoves Status: Inactive Positional Accuracy: Automatically positioned to the address	A7NW (SW)	989	-	432023 297086
116	Fuel Station Entries Name: Watling Service Station Location: Watling Street, Mancetter, Atherstone, Warwickshire, CV9 1RE Brand: Obsolete Premises Type: Not Applicable Status: Obsolete Positional Accuracy: Automatically positioned to the address	A8SE (S)	768	-	433008 296741
117	Points of Interest - Commercial Services Name: M S Transport Location: 6 Church Road, Witherley, Atherstone, CV9 3NA Category: Transport, Storage and Delivery Class Code: Distribution and Haulage Positional Accuracy: Positioned to address or location	A12SE (SW)	372	9	432561 297388
118	Points of Interest - Commercial Services Name: T C B Motors Location: Watling Street, Witherley, Atherstone, CV9 1RE Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A8SE (S)	783	9	432995 296726
119	Points of Interest - Commercial Services Name: Hartshorne Location: Unit 1a Carlyon Road Industrial Estate, Riversdale Road, Atherstone, CV9 1LP Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A12NW (W)	824	9	432123 297862
120	Points of Interest - Commercial Services Name: Profab Access Location: Unit C D Riversdale House Carlyon Road Industrial Estate, Riversdale Road, Atherstone, CV9 1FA Category: Construction Services Class Code: Metalworkers Including Blacksmiths Positional Accuracy: Positioned to address or location	A12NW (W)	842	9	432056 297651
121	Points of Interest - Commercial Services Name: Mormet Alloys Location: Unit 19 Carlyon Road Industrial Estate, Carlyon Road, Atherstone, CV9 1LQ Category: Recycling Services Class Code: Scrap Metal Merchants Positional Accuracy: Positioned to address or location	A12SW (W)	843	9	432058 297438
122	Points of Interest - Commercial Services Name: Atherstone Accident Repair Centre Ltd Location: Unit 8, Carlyon Road, Atherstone, CV9 1LQ Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A12NW (W)	971	9	431975 297884
122	Points of Interest - Commercial Services Name: Autopoint MOT Centre Location: Unit 8, Carlyon Road, Atherstone, CV9 1LQ Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A12NW (W)	971	9	431975 297884
123	Points of Interest - Manufacturing and Production Name: W J Hunt & Sons Location: Kennel Farm, Atterton Lane, Witherley, Atherstone, CV9 3LP Category: Farming Class Code: Livestock Farming Positional Accuracy: Positioned to address or location	A13NE (NE)	267	9	433149 297779

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
123	Points of Interest - Manufacturing and Production Name: W J Hunt & Sons Location: Kennel Farm, Atterton Lane, Witherley, Atherstone, CV9 3LP Category: Farming Class Code: Livestock Farming Positional Accuracy: Positioned to address or location	A13NE (NE)	267	9	433149 297779
124	Points of Interest - Manufacturing and Production Name: Tank Location: CV9 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A12NW (W)	871	9	432027 297649
124	Points of Interest - Manufacturing and Production Name: Tank Location: CV9 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A12NW (W)	901	9	431993 297606
124	Points of Interest - Manufacturing and Production Name: Tank Location: CV9 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A12NW (W)	915	9	431986 297681
125	Points of Interest - Manufacturing and Production Name: Carlyon Road Industrial Estate Location: CV9 Category: Industrial Features Class Code: Business Parks and Industrial Estates Positional Accuracy: Positioned to an adjacent address or location	A17SW (NW)	939	9	432081 298043
126	Points of Interest - Public Infrastructure Name: Waste Oil & Fat Co Location: 19 Hunt Lane, Witherley, Atherstone, CV9 3LH Category: Infrastructure and Facilities Class Code: Waste Storage, Processing and Disposal Positional Accuracy: Positioned to address or location	A8NW (SW)	428	9	432667 297192
126	Points of Interest - Public Infrastructure Name: Recycling & Consultants Location: 19 Hunt Lane, Witherley, Atherstone, CV9 3LH Category: Infrastructure and Facilities Class Code: Waste Storage, Processing and Disposal Positional Accuracy: Positioned to address or location	A8NW (SW)	429	9	432666 297191
127	Points of Interest - Public Infrastructure Name: Weir Location: CV9 Category: Water Class Code: Weirs, Sluices and Dams Positional Accuracy: Positioned to an adjacent address or location	A12SE (W)	596	9	432306 297451
127	Points of Interest - Public Infrastructure Name: Weir Location: CV9 Category: Water Class Code: Weirs, Sluices and Dams Positional Accuracy: Positioned to an adjacent address or location	A12SE (W)	596	9	432306 297450
127	Points of Interest - Public Infrastructure Name: Sluice Location: CV9 Category: Water Class Code: Weirs, Sluices and Dams Positional Accuracy: Positioned to an adjacent address or location	A12SE (W)	606	9	432294 297466
127	Points of Interest - Public Infrastructure Name: Sluice Location: CV9 Category: Water Class Code: Weirs, Sluices and Dams Positional Accuracy: Positioned to an adjacent address or location	A12SE (W)	613	9	432286 297468
128	Points of Interest - Public Infrastructure Name: Sewage Pumping Station Location: CV9 Category: Infrastructure and Facilities Class Code: Waste Storage, Processing and Disposal Positional Accuracy: Positioned to an adjacent address or location	A7NE (SW)	730	9	432356 297061

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
129	Points of Interest - Public Infrastructure Name: Sewage Pumping Station Location: CV9 Category: Infrastructure and Facilities Class Code: Waste Storage, Processing and Disposal Positional Accuracy: Positioned to an adjacent address or location	A12SW (W)	783	9	432136 297356
130	Points of Interest - Recreational and Environmental Name: Play Area Location: Post Office Lane, CV9 Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	A12SE (W)	342	9	432565 297457
130	Points of Interest - Recreational and Environmental Name: Play Area Location: Not Supplied Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	A12SE (W)	343	9	432565 297456

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
131	Nitrate Vulnerable Zones Name: River Trent (Source To Confluence With Derwent) Nvz Description: Surface Water Source: Environment Agency, Head Office	A13NE (W)	0	4	432950 297551

Agency & Hydrological	Version	Update Cycle
Contaminated Land Register Entries and Notices Environment Agency - Head Office Hinckley And Bosworth Borough Council - Environmental Health Department North Warwickshire Borough Council - Environmental Health Department Nuneaton And Bedworth Borough Council - Environmental Health Department	November 2023 September 2017 September 2017 September 2017	Annually Annual Rolling Update Annual Rolling Update Annual Rolling Update
Discharge Consents Environment Agency - Midlands Region	April 2024	Quarterly
Enforcement and Prohibition Notices Environment Agency - Midlands Region	March 2013	
Integrated Pollution Controls Environment Agency - Midlands Region	January 2009	
Integrated Pollution Prevention And Control Environment Agency - Midlands Region	October 2023	Quarterly
Local Authority Integrated Pollution Prevention And Control Hinckley And Bosworth Borough Council - Environmental Health Department North Warwickshire Borough Council - Environmental Health Department Nuneaton And Bedworth Borough Council - Environmental Health Department	December 2020 December 2020 December 2020	Variable Variable Variable
Local Authority Pollution Prevention and Controls Hinckley And Bosworth Borough Council - Environmental Health Department North Warwickshire Borough Council - Environmental Health Department Nuneaton And Bedworth Borough Council - Environmental Health Department	December 2020 December 2020 December 2020	Annual Rolling Update Annual Rolling Update Annual Rolling Update
Local Authority Pollution Prevention and Control Enforcements Nuneaton And Bedworth Borough Council - Environmental Health Department Hinckley And Bosworth Borough Council - Environmental Health Department North Warwickshire Borough Council - Environmental Health Department	August 2014 June 2014 September 2014	Variable Variable Variable
Nearest Surface Water Feature Ordnance Survey	March 2024	
Pollution Incidents to Controlled Waters Environment Agency - Midlands Region	December 1999	
Prosecutions Relating to Authorised Processes Environment Agency - Midlands Region	July 2015	
Prosecutions Relating to Controlled Waters Environment Agency - Midlands Region	March 2013	
Registered Radioactive Substances Environment Agency - Midlands Region Environment Agency - Head Office	June 2016 May 2023	As notified Quarterly
River Quality Environment Agency - Head Office	November 2001	Not Applicable
River Quality Biology Sampling Points Environment Agency - Head Office	April 2012	
River Quality Chemistry Sampling Points Environment Agency - Head Office	April 2012	
Substantiated Pollution Incident Register Environment Agency - Midlands Region - Central Area Environment Agency - Midlands Region - East Area Environment Agency - Midlands Region - Lower Trent Area Environment Agency - Midlands Region - Upper Trent Area	April 2024 April 2024 April 2024 April 2024	Quarterly Quarterly Quarterly Quarterly
Water Abstractions Environment Agency - Midlands Region	April 2024	Quarterly
Water Industry Act Referrals Environment Agency - Midlands Region	October 2017	

Agency & Hydrological	Version	Update Cycle
Groundwater Vulnerability Map Environment Agency - Head Office	June 2018	As notified
Bedrock Aquifer Designations Environment Agency - Head Office	January 2018	As notified
Superficial Aquifer Designations Environment Agency - Head Office	January 2018	As notified
Source Protection Zones Environment Agency - Head Office	September 2022	Bi-Annually
Extreme Flooding from Rivers or Sea without Defences Environment Agency - Head Office	December 2023	Quarterly
Flooding from Rivers or Sea without Defences Environment Agency - Head Office	December 2023	Quarterly
Areas Benefiting from Flood Defences Environment Agency - Head Office	February 2023	Quarterly
Flood Water Storage Areas Environment Agency - Head Office	January 2024	Quarterly
Flood Defences Environment Agency - Head Office	August 2022	Quarterly
OS Water Network Lines Ordnance Survey	April 2024	Quarterly
Surface Water 1 in 30 year Flood Extent Environment Agency - Head Office	May 2018	Annually
Surface Water 1 in 100 year Flood Extent Environment Agency - Head Office	May 2018	Annually
Surface Water 1 in 1000 year Flood Extent Environment Agency - Head Office	May 2018	Annually
Surface Water Suitability Environment Agency - Head Office	February 2016	Annually
BGS Groundwater Flooding Susceptibility British Geological Survey - National Geoscience Information Service	May 2013	As notified

Waste	Version	Update Cycle
BGS Recorded Landfill Sites British Geological Survey - National Geoscience Information Service	November 2002	As notified
Historical Landfill Sites Environment Agency - Head Office	May 2024	Quarterly
Integrated Pollution Control Registered Waste Sites Environment Agency - Midlands Region	January 2009	Not Applicable
Licensed Waste Management Facilities (Landfill Boundaries) Environment Agency - Midlands Region - Central Area Environment Agency - Midlands Region - East Area Environment Agency - Midlands Region - Lower Trent Area Environment Agency - Midlands Region - Upper Trent Area	May 2024 May 2024 May 2024 May 2024	Quarterly Quarterly Quarterly Quarterly
Licensed Waste Management Facilities (Locations) Environment Agency - Midlands Region - Central Area Environment Agency - Midlands Region - East Area Environment Agency - Midlands Region - Lower Trent Area Environment Agency - Midlands Region - Upper Trent Area	January 2023 January 2023 January 2023 January 2023	Quarterly Quarterly Quarterly Quarterly
Local Authority Landfill Coverage Hinckley And Bosworth Borough Council - Environmental Health Department Leicestershire County Council North Warwickshire Borough Council - Environmental Health Department Nuneaton And Bedworth Borough Council - Planning Department Warwickshire County Council	February 2003 February 2003 February 2003 February 2003 February 2003	Not Applicable Not Applicable Not Applicable Not Applicable Not Applicable
Local Authority Recorded Landfill Sites Hinckley And Bosworth Borough Council - Environmental Health Department Leicestershire County Council North Warwickshire Borough Council - Environmental Health Department Nuneaton And Bedworth Borough Council - Planning Department Warwickshire County Council	October 2018 October 2018 October 2018 October 2018 October 2018	
Potentially Infilled Land (Non-Water) Landmark Information Group Limited	December 1999	
Potentially Infilled Land (Water) Landmark Information Group Limited	December 1999	
Registered Landfill Sites Environment Agency - Midlands Region - Central Area Environment Agency - Midlands Region - East Area Environment Agency - Midlands Region - Lower Trent Area Environment Agency - Midlands Region - Upper Trent Area	March 2006 March 2006 March 2006 March 2006	Not Applicable Not Applicable Not Applicable Not Applicable
Registered Waste Transfer Sites Environment Agency - Midlands Region - Central Area Environment Agency - Midlands Region - East Area Environment Agency - Midlands Region - Lower Trent Area Environment Agency - Midlands Region - Upper Trent Area	April 2018 April 2018 April 2018 April 2018	
Registered Waste Treatment or Disposal Sites Environment Agency - Midlands Region - Central Area Environment Agency - Midlands Region - East Area Environment Agency - Midlands Region - Lower Trent Area Environment Agency - Midlands Region - Upper Trent Area	June 2015 June 2015 June 2015 June 2015	

Hazardous Substances	Version	Update Cycle
Control of Major Accident Hazards Sites (COMAH) Health and Safety Executive	January 2024	Bi-Annually
Explosive Sites Health and Safety Executive	March 2017	
Notification of Installations Handling Hazardous Substances (NIHHS) Health and Safety Executive	August 2001	
Planning Hazardous Substance Enforcements Hinckley And Bosworth Borough Council Warwickshire County Council Leicestershire County Council North Warwickshire Borough Council - Planning Administration Nuneaton And Bedworth Borough Council - Planning Department	February 2016 July 2007 July 2023 May 2023 May 2023	Variable Annual Rolling Update Variable Variable Variable
Planning Hazardous Substance Consents Hinckley And Bosworth Borough Council Leicestershire County Council Nuneaton And Bedworth Borough Council - Planning Department North Warwickshire Borough Council - Planning Administration Warwickshire County Council	February 2016 February 2016 February 2016 January 2016 July 2007	Variable Variable Variable Variable Annual Rolling Update
Geological	Version	Update Cycle
BGS 1:625,000 Solid Geology British Geological Survey - National Geoscience Information Service	January 2009	As notified
BGS Estimated Soil Chemistry British Geological Survey - National Geoscience Information Service	December 2015	As notified
BGS Recorded Mineral Sites British Geological Survey - National Geoscience Information Service	January 2024	Bi-Annually
CBSCB Compensation District Cheshire Brine Subsidence Compensation Board (CBSCB) Cheshire Brine Subsidence Compensation Board (CBSCB)	August 2011 November 2020	As notified
Coal Mining Affected Areas The Coal Authority - Property Searches	February 2023	Annual Rolling Update
Mining Instability Ove Arup & Partners	June 1998	Not Applicable
Non Coal Mining Areas of Great Britain British Geological Survey - National Geoscience Information Service	May 2015	Not Applicable
Potential for Collapsible Ground Stability Hazards British Geological Survey - National Geoscience Information Service	April 2020	As notified
Potential for Compressible Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	As notified
Potential for Ground Dissolution Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	As notified
Potential for Landslide Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	As notified
Potential for Running Sand Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	As notified
Potential for Shrinking or Swelling Clay Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	As notified
Radon Potential - Radon Affected Areas British Geological Survey - National Geoscience Information Service	October 2023	Annually
Radon Potential - Radon Protection Measures British Geological Survey - National Geoscience Information Service	October 2023	Annually

Industrial Land Use	Version	Update Cycle
Contemporary Trade Directory Entries Thomson Directories	April 2024	Quarterly
Fuel Station Entries Catalist Ltd - Experian	February 2024	Quarterly
Gas Pipelines National Grid	October 2021	Bi-Annually
Points of Interest - Commercial Services PointX	March 2024	Quarterly
Points of Interest - Education and Health PointX	March 2024	Quarterly
Points of Interest - Manufacturing and Production PointX	March 2024	Quarterly
Points of Interest - Public Infrastructure PointX	March 2024	Quarterly
Points of Interest - Recreational and Environmental PointX	March 2024	Quarterly
Underground Electrical Cables National Grid	January 2024	Bi-Annually

Sensitive Land Use	Version	Update Cycle
Ancient Woodland Natural England	April 2024	Bi-Annually
Areas of Adopted Green Belt Hinckley And Bosworth Borough Council North Warwickshire Borough Council - Planning Administration Nuneaton And Bedworth Borough Council - Planning Department	February 2024 February 2024 February 2024	Quarterly Quarterly Quarterly
Areas of Unadopted Green Belt Hinckley And Bosworth Borough Council North Warwickshire Borough Council - Planning Administration Nuneaton And Bedworth Borough Council - Planning Department	February 2024 February 2024 February 2024	Quarterly Quarterly Quarterly
Areas of Outstanding Natural Beauty Natural England	May 2024	Bi-Annually
Environmentally Sensitive Areas Natural England	August 2023	
Forest Parks Forestry Commission	May 2023	Not Applicable
Local Nature Reserves Natural England	February 2024	Bi-Annually
Marine Nature Reserves Natural England	February 2024	Bi-Annually
National Nature Reserves Natural England	February 2024	Bi-Annually
National Parks Natural England	February 2018	Bi-Annually
Nitrate Sensitive Areas Natural England	April 2023	Not Applicable
Nitrate Vulnerable Zones Department for Environment, Food and Rural Affairs (DEFRA - formerly FRCA) Environment Agency - Head Office	April 2016 April 2024	Bi-Annually
Ramsar Sites Natural England	February 2024	Bi-Annually
Sites of Special Scientific Interest Natural England	April 2024	Bi-Annually
Special Areas of Conservation Natural England	April 2024	Bi-Annually
Special Protection Areas Natural England	April 2024	Bi-Annually

A selection of organisations who provide data within this report

Data Supplier	Data Supplier Logo
Ordnance Survey	
Environment Agency	
Scottish Environment Protection Agency	
The Coal Authority	
British Geological Survey	 British Geological Survey NATURAL ENVIRONMENT RESEARCH COUNCIL
Centre for Ecology and Hydrology	 Centre for Ecology & Hydrology NATURAL ENVIRONMENT RESEARCH COUNCIL
Natural Resources Wales	
Scottish Natural Heritage	
Natural England	
Public Health England	
Ove Arup	
Stantec UK Ltd	

Contact	Name and Address	Contact Details
1	British Geological Survey - Enquiry Service British Geological Survey, Environmental Science Centre, Keyworth, Nottingham, Nottinghamshire, NG12 5GG	Telephone: 0115 936 3143 Fax: 0115 936 3276 Email: enquiries@bgs.ac.uk Website: www.bgs.ac.uk
2	Environment Agency - National Customer Contact Centre (NCCC) PO Box 544, Templeborough, Rotherham, S60 1BY	Telephone: 03708 506 506 Email: enquiries@environment-agency.gov.uk
3	North Warwickshire Borough Council - Environmental Health Department P O Box 6, Old Bank House, 129 Long Street, Atherstone, North Warwickshire, CV9 1BG	Telephone: 01827 715341 Fax: 01827 719399 Website: www.northwarks.gov.uk
4	Environment Agency - Head Office Rio House, Waterside Drive, Aztec West, Almondsbury, Bristol, Avon, BS32 4UD	Telephone: 01454 624400 Fax: 01454 624409
5	Ordnance Survey Adanac Drive, Southampton, Hampshire, SO16 0AS	Telephone: 03456 05 05 05 Email: customerservices@ordnancesurvey.co.uk Website: www.ordnancesurvey.gov.uk
6	Hinckley And Bosworth Borough Council - Environmental Health Department First Floor, Florence House, St Marys Road, Hinckley, Leicestershire, LE10 1EQ	Telephone: 01455 238141 Fax: 01455 890228 Website: www.hinckley-bosworth.gov.uk
7	Leicestershire County Council County Hall, Glenfield, Leicestershire, LE3 8RH	Website: www.leics.gov.uk
8	Warwickshire County Council PO Box 43, Shire Hall, Warwick, Warwickshire, CV34 4SX	Telephone: 01926 410410 Website: www.warwickshire.gov.uk
9	PointX 7 Abbey Court, Eagle Way, Sowton, Exeter, Devon, EX2 7HY	Website: www.pointx.co.uk
10	Natural England County Hall, Spetchley Road, Worcester, WR5 2NP	Telephone: 0300 060 3900 Email: enquiries@naturalengland.org.uk Website: www.naturalengland.org.uk
-	Public Health England - Radon Survey, Centre for Radiation, Chemical and Environmental Hazards Chilton, Didcot, Oxfordshire, OX11 0RQ	Telephone: 01235 822622 Fax: 01235 833891 Email: radon@phe.gov.uk Website: www.ukradon.org
-	Landmark Information Group Limited Imperium, Imperial Way, Reading, Berkshire, RG2 0TD	Telephone: 0844 844 9952 Fax: 0844 844 9951 Email: customerservices@landmarkinfo.co.uk Website: www.landmarkinfo.co.uk

Please note that the Environment Agency / Natural Resources Wales / SEPA have a charging policy in place for enquiries.