



e3p

Phase I Geoenvironmental Site Assessment
Land South of Lickers Lane, Whiston

Reference: 15-065-R1-1
Date: November 2021



PHASE I GEOENVIRONMENTAL SITE ASSESSMENT

Land south of Lickers Lane
Whiston
Prescot
L35 3JE

Prepared for:



Report Ref: 15-065-R1-1
Date Issued: November 2021

Land south of Lickers Lane

Phase I Geoenvironmental Site Assessment

November 2021

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EXECUTIVE SUMMARY

Site Address	Land south of Lickers Lane, Whiston, Prescott, L35 3JE	
Grid Reference	E 347490, N 390400.	
Site Area	2.55 Ha.	
Proposed Development	At the time of this letter being prepared E3P understands that Vistry Partnerships considering the proposed acquisition and future redevelopment of a parcel of land to the south of Lickers Lane, Whiston for low rise residential housing with associated adopted estate roads and utility infrastructure.	
Current Site Use	The site is roughly rectangular in shape and is located to the south of Lickers Lane, Prescott. Two connected bodies of water border the site on the northern boundary. The general topography of the site is uniform with a gradual slope to the south of the site. There are frequent ruts and ditches caused by off-road vehicles across the site. Access is most effectively gained from the northern entrance of the site off Lickers Lane. Upton entering site, the northern third of the site is overgrown with a mix of mature and semi mature trees and shrubbery. The areas south of the mature and semi-mature trees consist of waist-high vegetation. Historical mapping does not indicate the presence of any building or structures having been erected on the site. The site is currently open to the public, during the site walkover people were seen using the site for dog walking and other recreational activities.	
Site History	A review of the pertinent Ordnance Survey mapping dating from circa 1850 to the present day confirmed the site has remained undeveloped agricultural land. Mapping indicates that Pre 1937 the site has several trees with a field boundary traversing from north-west to southeast. 1975 mapping illustrates the field boundary has been removed and replaced with another boundary running from east to west within the northern central sector of the site. The site also forms part of the Halsnead Park.	
Environmental Setting	Drift Geology	Glacial Till – SAND, CLAY, GRAVEL to a depth of 2-3m
	Bedrock Geology	Kinnerton Sandstone Formation – SANDSTONE Pennine Middle Coal Measures Formation – MUDSTONE, SILTSTONE, SANDSTONE
	Faults	The Ecclestone fault runs through the west of the site trending N-S.
	Hydrogeology	Secondary Undifferentiated aquifer (drift) overlying a Principle and secondary A aquifer (solid). Two groundwater abstractions have been identified within a 1 km radius.
	Hydrology	Unnamed water features 7 m to the North East of the site.
	Flood Risk	The site is primarily located in an area that has limited potential for groundwater flooding to occur. The South West corner of the site is regarded as having potential for groundwater flooding of properties located below ground level.



Utility Locations	A full ground penetrating radar (GPR) survey has not been undertaken for the site. However, service plans have been obtained showing a, 11Kv overhead electric cable travelling along the Western Boundary of the site.
Landfill Sites and Ground Gases	The Enviro Check report has not identified any landfills, historic or present within 250 m of the site. The closest recorded Landfill is located 794 m to the North West of the site.
Radon	Unaffected – no special precautions required.
Coal Mining	The site is located in a coal mining reporting, with the western sector of the site falling into the development high-risk area. The 1:10,000 geological mapping for the area indicated that the Eccleston Fault (trending N/S) bisects the western sector of the site, with the Higher and Lower Bug Coal Seams (now known as Higher and Lower Florida) outcropping on site. The Cheshire Mine Coal is present roughly 50 m to the north of site and the Coal With Cannel is present roughly 200 m to the south. All four coal seams shown outcropping on or in close proximity to the site are shown to be dipping in a south-westerly direction. The direction of dip indicated that the Higher and Lower Bug Coal may be present beneath the south-western tip of the site. Wardell Armstrong have completed a Coal Mining Risk Assessment (ref: GM11893-001/FINAL – dated July 2021).
Hazardous Installations	No hazardous installations that could potentially prejudice the proposed construction of highly sensitive residential dwellings have been identified within influencing distance of the subject site.
Initial Conceptual Site Model	Contaminant Sources: ✳ Made Ground (infilled field boundaries) – Polycyclic Aromatic Hydrocarbons (PAHs), heavy metals, Asbestos Containing Material (ACM), gases Pathways: ✳ Direct contact and ingestion ✳ Volatilisation/indoor explosion ✳ Vapour inhalation ✳ Dust inhalation Receptors ✳ Future site users (proposed residential end-users and construction workers) ✳ Buildings (proposed residential units) ✳ Unnamed watercourse and Underlying aquifer (Secondary A bedrock aquifer)
Conclusion	As the site and the surrounding area has experienced limited historical development significant source of Made Ground and contamination are not



	anticipated onsite.
Recommendations	A detailed Phase II intrusive Geo-Environmental Ground Investigation should be undertaken in order to confirm the findings of the initial conceptual site model and value engineer a development solution. The site investigation should include: ✦ An assessment of the general ground conditions; ✦ Sampling of natural and Made Ground strata's; ✦ Installation of dual gas and groundwater monitoring wells; and ✦ A series of rotary boreholes to investigate the presence of coal working in the south-western tip of the site.



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DRAWING LIST

15-065-001 - Site Location Plan
15-065-003 - Historical Features Plan
15-065-004 - Site Features Plan



1. INTRODUCTION

1.1. BACKGROUND

E3P Ltd has been commissioned by Vistry Partnerships (the client) to undertake a Phase I Geoenvironmental Site Assessment at land to the south of Lickers Lane, L35 3JE.

This report is required to determine potential contaminated land liabilities and geotechnical constraints as part of a proposed site redevelopment,

1.2. PROPOSED DEVELOPMENT

At the time of this report being prepared E3P understands that Vistry Partnerships considering the proposed acquisition and future redevelopment of a parcel of land to the south of Lickers Lane, Whiston for low rise residential housing with associated adopted estate roads and utility infrastructure.

1.3. OBJECTIVES

- ✧ The objectives of the geoenvironmental investigation are as follows:
- ✧ Review historical plans, geology, hydrogeology, site sensitivity, floodplain issues, mining records and any local authority information available in order to complete a desk study in line with Environment Agency (EA) document Land Contamination: Risk Management (LC:RM) (2019)
- ✧ Assess the implications of any potential environmental risks, liabilities and development constraints associated with the site in relation to the future use of the site and in relation to off-site receptors.
- ✧ Assess the desk-study information and, where possible, provide preliminary recommendations in relation to foundations, pavement construction and floor slabs.
- ✧ Provide recommendations regarding future works required and undertake a preliminary pre-construction cost appraisal.

1.4. SOURCES OF INFORMATION

Background information was sought from the following sources:



- ✳ Envirocheck Search;
- ✳ Historical mapping dated 1850 – 2021. A selection of historical maps are reproduced in Appendix V;
- ✳ On-line planning records held by Knowsley Metropolitan Borough Council;
- ✳ Consultations with representatives of Knowsley Metropolitan Borough Council;
- ✳ Magic Map Groundwater Vulnerability Map;
- ✳ Radon: Guidance on protective measures for new buildings (BRE Document BR 211, 2007);
- ✳ British Geological Survey Map;
- ✳ Groundsure IO database;
- ✳ <https://zeticauxo.com/downloads-and-resources/risk-maps/>; and,
- ✳ <https://flood-map-for-planning.service.gov.uk>.

1.5. LIMITATIONS

The limitations of this report are presented in Appendix I.

1.6. CONFIDENTIALITY

E3P has prepared this report solely for the use of the client and those parties with whom a warranty agreement has been executed, or with whom an assignment has been agreed. Should any third party wish to use or rely upon the contents of the report, written approval must be sought from E3P; a charge may be levied against such approval.

1.7. RISK CLASSIFICATION

E3P has utilised the available data to classify the site on the basis of its likely contaminated land liability and potential for geotechnical constraints in relation to the site development. The risk classification definitions are summarised in Table 1.1.

TABLE 1.1 RISK CLASSIFICATION

RISK	DEFINITION
Low	There are unlikely to be significantly contaminated land liabilities/geotechnical constraints associated with the property.
Low Moderate	There are unlikely to be significantly contaminated land liabilities/geotechnical constraints associated with the property with regard to the proposed use. However, minor issues may require further consideration in the event of future redevelopment of the site.
Moderate	Some potential contaminated land liabilities/geotechnical constraints are likely to affect the property as a result of historical and/or current activities. The risks identified are unlikely to pose an immediate significant issue but the purchaser/developer may wish to make further enquiries of the vendor or



	undertake further environmental improvements. Redevelopment of the site will likely require further site investigation.
Moderate High	Some potentially significant contaminated land liabilities/geotechnical constraints have been identified at the property that requires further assessment, including intrusive ground investigations.
High	Significant potential contaminated land liabilities/geotechnical constraints have been identified at the property. Further assessment including intrusive ground investigation will be required to determine to level of risk and associated liability.



2. SITE SETTING

2.1. SITE DETAILS

Site Address	Land south of Lickers Lane, Whiston, Prescott, L35 3JE
National Grid Reference	E 347490, N 390400.
Site Area	2.55 Ha.

All acronyms used within this report are defined in the Glossary presented in Appendix II.

A site location map is presented in Appendix III as Drawing 15-065-001.

2.2. CURRENT SITE USE

E3P has undertaken a site walkover of the entire site and a description of the key findings is summarised in Table 2.1.

TABLE 2.1 SITE DESCRIPTION

Occupancy/Use	The site is roughly rectangular in shape and is located to the south of Lickers Lane, Prescott. Two connected bodies of water border the site on the northern boundary. The general topography of the site is uniform with a gradual slope to the south of the site. There are frequent ruts and ditches caused by off-road vehicles across the site. Access is most effectively gained from the northern entrance of the site off Lickers Lane. Upon entering site, the northern third of the site is overgrown with a mix of mature and semi-mature trees and shrubbery. The areas south of the mature and semi-mature trees consist of waist-high vegetation. Historical mapping does not indicate the presence of any building or structures having been erected on the site. The site is currently open to the public, during the site walkover people were seen using the site for dog walking and other recreational activities.	
Surface Cover (%)	Buildings	0%
	Hardstand	0%
	Soft Cover	100%
Structures	There are no structures identified on the site.	
Access	Pedestrian access can be gained via the footpath off Lickers Lane in the northwest of the site. There is an unmade track also on the north boundary of the site off Lickers Lane, that could be used for vehicular access.	
Slope	The site is approximately 50m above sea level and slopes gently downwards from northeast to southwest.	
Retaining Structures	There have been no retaining structures identified on the site.	



Vegetation/Ecology	Overgrown vegetation is present across the site including bracken and nettles. The northwest section of the site just south of Lickers Lane comprises of dense mature trees. More sporadic trees are present throughout the rest of the site while very few trees are present in the grass field in the south of the site. A habitat survey will be required to support the planning application.
Hazardous Material Storage	No above-ground storage tanks (ASTs) or underground storage tanks (USTs) were observed at the site during the preliminary site walkover. Due to the previously undeveloped nature of the site, it is unlikely that hazardous materials storage will have occurred on the site.
Asbestos-Containing Material (ACM)	No evidence of ACM was noted across the site during the site walkover. Due to the lack of any structures on the site, it is unlikely there will be any asbestos present on the site.
Polychlorinated Biphenyls (PCBs)	There is no equipment identified that may contain PCBs within the site boundary.
Waste Storage	Potentially hazardous waste streams are unlikely to be generated at the site and none were observed during the preliminary site inspection.
Drainage	A formal drainage survey has not been completed for the site.

2.3. SURROUNDING AREA

The surrounding area land uses are summarised in Table 2.2.

TABLE 2.2 SURROUNDING LAND USES

DIRECTION	LAND USE
North	Residential units, St Leo's Park, Knowsley Seventh Day Adventist Church
East	Agricultural land
South	Agricultural land
West	Agricultural land



3. SITE HISTORY

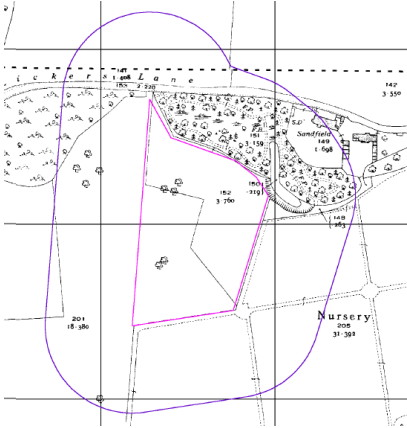
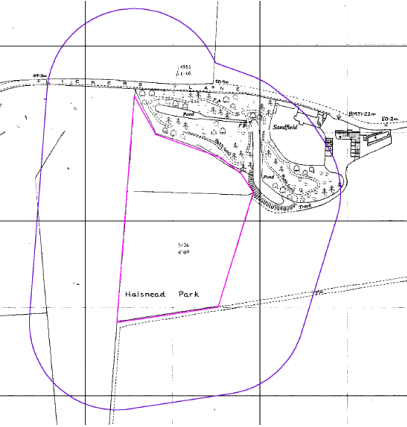
3.1. ON-SITE HISTORICAL DEVELOPMENT

A review of historical mapping and historical aerial imagery pertinent to the site is summarised in Table 3.1. In addition, historical site features are presented in Drawing No 15-065-003 in Appendix III.

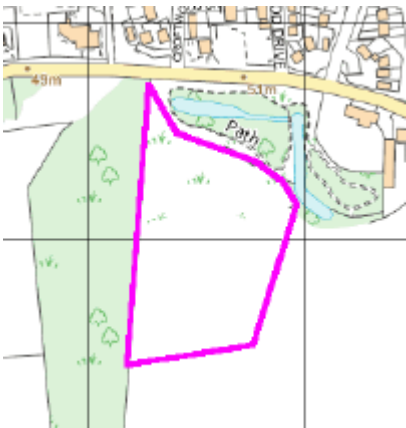
TABLE 3.1 HISTORICAL DEVELOPMENT

MAP EDITION	HISTORICAL LAND USE	HISTORICAL MAP EXCERPT
1850 1:10,000	The site is open greenfield land forming part of a larger parcel of land. There is a large collection of trees in the centre of the site and mature trees flank the northern boundary of the site.	
1892 1:2,500	Serval additional trees have been mapped in the east of the site. There are no other significant changes to the site.	
1907 1:2,500	A field boundary has been erected in the eastern tip of the site. There are no other significant changes to the site.	



1937 1:2,500	The field boundary at the eastern tip of the site has been removed. The site has been segregated into two paddocks with a saw-toothed shaped field boundary through the centre of the site, forming a north-western and a south-eastern paddock. Serval of the trees in the centre and the east of the site are no longer mapped. There are no other significant changes to the site.	 This map shows the site boundary in 1937. A saw-toothed field boundary runs through the center, dividing the site into two paddocks. The eastern tip of the site is marked with a dashed line, indicating a removed boundary. A 'Nursery' is labeled on the right side of the site. The map includes various contour lines and spot heights.
1959 1:2,500	The saw-toothed field boundary has been removed, with a new field boundary being created in the northern sector of the site. The field boundary bisects the site east to west forming a larger paddock in the southern sector of the site. There are no other significant changes to the site.	 This map shows the site boundary in 1959. The saw-toothed field boundary has been removed, and a new field boundary has been created in the northern sector. The new boundary bisects the site east to west, forming a larger paddock in the southern sector. The map includes various contour lines and spot heights.
1985 1:2,500	The southern tip of the site is now mapped as Halsnead Park. The trees across the site are no longer mapped. There are no other significant changes to the site.	 This map shows the site boundary in 1985. The southern tip of the site is now mapped as Halsnead Park. The map includes various contour lines and spot heights.



1999 1:10,00	The field boundary in the northern sector of the site is no longer mapped. There are no other significant changes to the site.	 The map shows Halsnead Park to the south of Lickers Lane. A pink boundary outlines the site. A track runs east-west through the park. A distance of 51m is marked between Lickers Lane and the track. The area is labeled 'Sand' and 'Track'.
2006 1:10,000	A path is mapped in the northern sector of the site bisecting the site from east to west. There are no other significant changes to the site.	 The map shows Halsnead Park to the south of Lickers Lane. A pink boundary outlines the site. A path is mapped bisecting the site from east to west. A distance of 51m is marked between Lickers Lane and the path. The area is labeled 'Track'.
2021 1:10,000	The path in the northern sector of the site is no longer mapped, with this sector of the site now being denoted as rough grassland. The wider site is no longer mapped as Halsnead Park. There are no other significant changes to the site.	 The map shows Halsnead Park to the south of Lickers Lane. A pink boundary outlines the site. A path is mapped bisecting the site from east to west. A distance of 49m is marked between Lickers Lane and the path. The area is labeled 'Path'.

3.2. OFF-SITE HISTORICAL DEVELOPMENT

A review of potentially contaminative uses identified on historical Ordnance Survey maps within a 250 m radius of the site is summarised in Table 3.2.

TABLE 3.2 SURROUNDING HISTORICAL DEVELOPMENT

SURROUNDING FEATURE	DISTANCE	DATES	DIRECTION
Pond Then: Infilled	180 m	Pre 1850–Pre 1985 Pre 1985–Present	South
Sandstone Quarry Then: Infilled	200 m	Pre 1850–Pre 1959 Pre 1959–Present	Northwest

3.3. PLANNING HISTORY

E3P has undertaken a review of online planning records held by Knowsley Metropolitan Borough Council and no environmentally pertinent information has been obtained for the site.

3.4. ANECDOTAL INFORMATION

No anecdotal information is available for this site.

3.5. PREVIOUS REPORTS

The following previous coal mining risk assessment has been provided to E3P for review:

Wardell Armstrong: Coal Mining Risk Assessment (ref: GM11893-001/FINAL – dated July 2021).

The key findings of the coal mining risk assessment are summarised below and where necessary data is used to support the E3P geoenvironmental site assessment.



- ✚ There are no recorded mine entries recorded to be present on the site, however, the coal authority reports the presence of possible unrecorded mine entries.
- ✚ Unrecorded mine entries may be treated or untreated.
- ✚ Requires further assessment or investigation within south
- ✚ Should unrecorded shafts be located the shafts should be treated.
- ✚ The absence of unrecorded mine shafts being encountered is not definitive proof that any entries do not exist on site.
- ✚ The area is considered to represent a high risk in terms of coal mining legacy issues.
- ✚ Geological and mining settings should be confirmed by site investigation prior to confirming the layout of the development.
- ✚ Mining remedial works are likely to be required in parts of the site to ensure the future stability and safety of the proposed development.



4. ENVIRONMENTAL SETTING

4.1. GEOLOGY AND HYDROGEOLOGY

The British Geological Survey (BGS) map (Sheet 107SE) for the site, (1:50,000, Solid and Drift editions) and online records indicate the site is underlain by the geological sequence presented in Table 4.1.

TABLE 4.1 SUMMARY OF UNDERLYING GEOLOGY

GEOLOGICAL UNIT	CLASSIFICATION	DESCRIPTION	AQUIFER CLASSIFICATION
Drift	Glacial Till	SAND, CLAY and GRAVEL	Secondary undifferentiated
Solid	1. Kinnerton Sandstone Formation 2. Pennine Middle Coal Measures Formation	1. SANDSTONE 2. MUDSTONE, SILTSTONE, SANDSTONE	1. Principal aquifer 2. Secondary A aquifer

TABLE 4.2 SUMMARY OF BGS BOREHOLE RECORDS

LOCATION	DEPTH	MADE GROUND	DRIFT	SOLID
600 m South	3.42 m	0.00-1.20 m	Red gravelly fine to medium sand 1.20-2.00 m	Sandstone >2.0 m bgl

TABLE 4.3 FAULTING

LOCATION	DESCRIPTION
Eccleston Fault	Observed fault trending N-S in the west area of the site.

The Envirocheck report indicates that the site is located within groundwater source protection zone III (total catchment). There are two groundwater/potable abstractions within 1 km of the site associated with Blundells Hill Golf Club Ltd and United Utilities Water Plc respectively.

Based on the local topography, the location of surface watercourses, it is considered likely that shallow groundwater, if present, will flow in a south-westerly direction, following the topographical gradient.

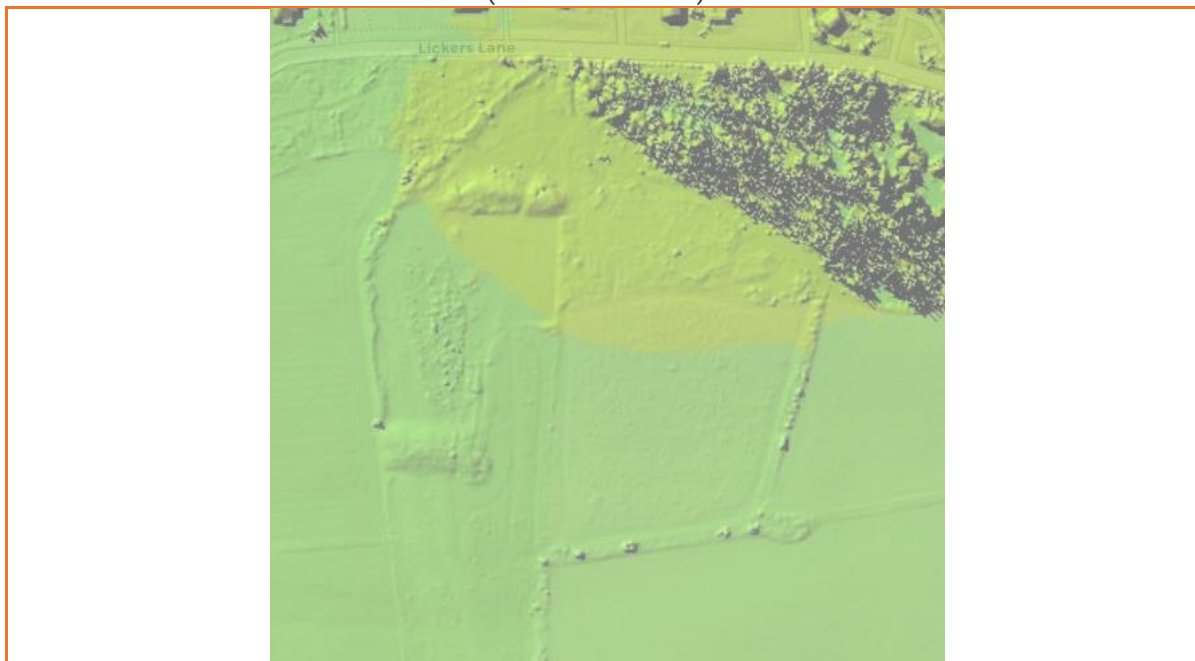
4.2. NATURAL LANDFORM AND GEOMORPHOLOGY

Based on the initial geological assessment, a review of available topographic data and pertinent mapping, E3P has undertaken a preliminary geomorphological assessment of the landform and its possible mechanism for formation.

The lidar image in figure 4.2 indicates that the north of the site is raised slightly when compared to the southern sector. This sector of the site also has denser scrub vegetation and due to the result of the lidar image this may contribute to the illusion of a slightly elevated level. Along the eastern and western boundaries, there is a low ridge. This may have been constructed to segregate the adjacent agricultural land, which may have been built up slightly over time. The site has not been subject to significant anthropogenic changes with the current site topography broadly representing the natural landform.



FIGURE 4.2 SURFACE LIDAR DATA (GROUNDSURE IO)



<https://groundsurre.io/>

4.3. GEOTECHNICAL DATA

Geotechnical data presented within a commercially available environmental database is summarised in Table 4.4.

TABLE 4.4 SUMMARY OF GEOTECHNICAL DATA

HAZARD	DESIGNATION
Shrink-Swell Clay	Very low risk
Landslides	Very low risk
Ground Dissolution	No hazard
Compressible Ground	No hazard
Collapseable Deposits	Very low risk
Running Sand	Very low risk

4.4. COAL MINING

The Envirocheck report states the site is in an area that may be affected by coal mining.

A CA mining report was obtained (Ref: 51002685519001) dated 4th October 2021

The CA operates a risk-based approach to the assessment of potential instability issues associated with the future development of land located within the predefined CA consultation areas. This risk-based approach subdivides the potential risk into “low” and “high” risk categories.

The risk categories can be defined as:



Low-Risk Sites – Deemed to be land where coal mining has taken place, however, it was at such depth not to pose a risk to new development and it, therefore, contains no known recorded risks and as such no further assessment is required.

For low-risk sites, the CA categorically states:

If your proposed development is within the Development Low Risk Area there is no need for you to submit any coal mining information with your planning application and The Coal Authority will not be consulted by the LPA. The LPA will include our Standing Advice as an informative note within the decision notice.

High-Risk Sites – Deemed to be landholdings located within an area known to contain legacy risks that include:

- ✳ Mine entries (shaft or adit);
- ✳ Shallow coal workings (recorded and probable);
- ✳ Workable coal seam outcrops;
- ✳ Mine gas sites and areas;
- ✳ Recorded coal-mining-related hazards;
- ✳ Geological features (fissures and break lines); and
- ✳ Former surface mining sites (sometimes using historic opencast extraction methods).

4.5. COAL MINING INFORMATION

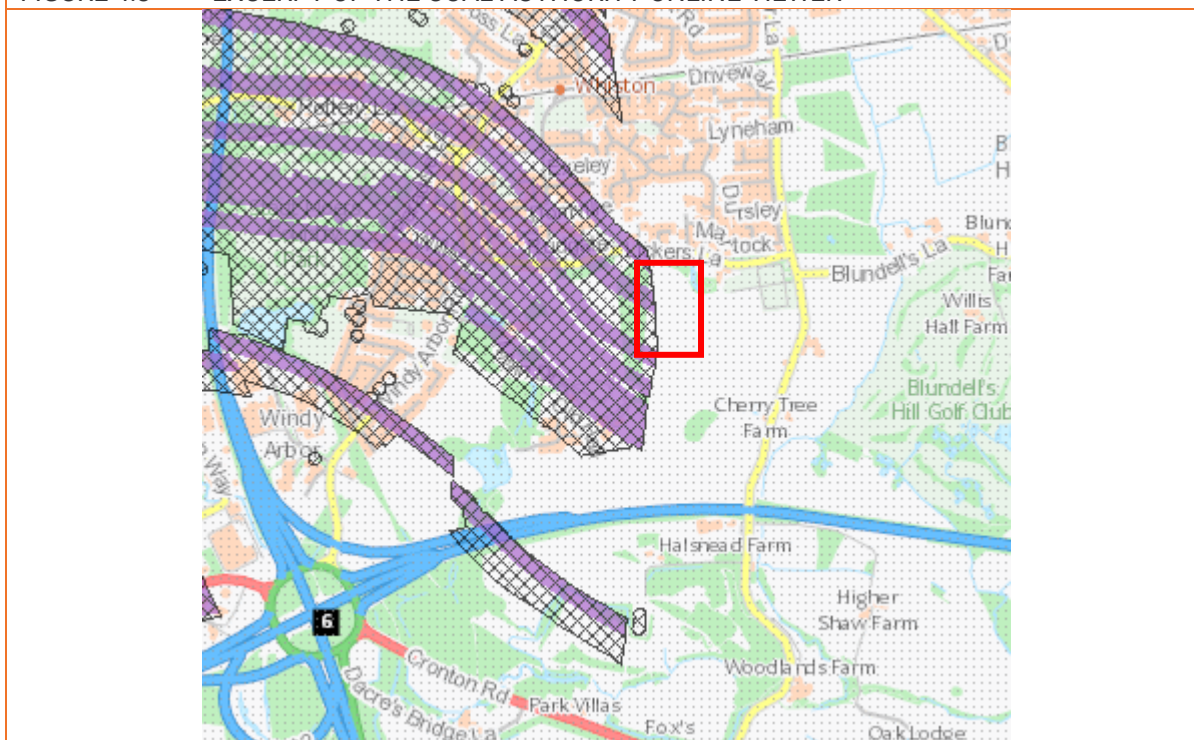
Prior to the enactment of the Coal Mines Regulation Act (1872), which came into force on the 1st January 1883, there was no statutory requirement to record the extent of abandoned mine workings and as such the CA has no knowledge of extensive workings throughout the UK Coal Fields where shallow workings are present at a depth that could result in a subsidence event in the future (through successive cavitation) associated with a failure of the subsurface support mechanism.

To determine if a site may have unrecorded or recorded coal mine workings requires the consideration of a wide range of information and E3P has completed a review of relevant information in relation to potential coal mining activities.

In the first instance, E3P has reviewed the Coal Authority Online Viewer and an excerpt of this is presented in Figure 4.3. This map shows that the west area of the site lies within a development high risk area. Furthermore, there are coal seams that appear to dip below the site. The map also indicates that there is the potential for shallow workings beneath the site.



FIGURE 4.3 EXCERPT OF THE COAL AUTHORITY ONLINE VIEWER



As the site is within an area affected by Coal Mining E3P have consulted with the Coal Authority who have provided a Consultant Coal Mining Report for the site (ref: 51002685519001).

Table 4.5 provides a summary of pertinent coal mining information with this report.

TABLE 4.5 COAL MINING INFORMATION

SOURCES OF INFORMATION	SUMMARY
Known Past Underground Mining	Details of all recorded underground mining relative to the enquiry boundary. Only past underground workings where the enquiry boundary is within 0.7 times the depth of the workings (zone of likely physical influence) allowing for seam inclination, are included. Seam – dip (degrees) – extraction thickness (cm) – depth (m) – year Wigan Four Feet – 11.2 – 160 – 151 – 1902 Rushy Park – 13.4 – 130 – 339 – 1896 Rushy Park – 9.4 – 130 – 370 – 1890 Rushy Park – 9.5 – 130 – 427 – 1886
Probable Unrecorded shallow workings	YES
Spine Roadways at Shallow Depth	No spine roadway recorded at shallow depth
Mine Entries within 100m of the site	No mine entries were recorded within 100m of the subject site



SOURCES OF INFORMATION	SUMMARY
Mine Abandonment plans	No
Known outcrops	Seam Name – Workable: Yes/ No Higher Florida – Yes Higher Pigeon House (Pigeon House) – Yes Lower Florida – Yes
Faults / Fissures	Eccleston fault trending N-S runs through the western sector of the site.
Opencast mines	None recorded within 500m of the subject site.
Coal Authority Managed Tips	None recorded within 500m of the subject site.
Remediated Sites	None recorded within 500m of the subject site.
Coal Mining Subsidence	The Coal Authority has not received a damage notice or claim for the subject property, or any property within 50 metres of the enquiry boundary, since 31 October 1994. There is no current Stop Notice delaying the start of remedial works or repairs to the property. The Coal Authority is not aware of any request having been made to carry out preventive works before coal is worked under section 33 of the Coal Mining Subsidence Act 1991.
Mine Gas	None recorded within 500m of the subject site.
Mine Water	None recorded within 500m of the subject site.
Future Underground Mining	None recorded
Coal Authority Development Advice	‘The site is within an area of historical coal mining activity. Should you require advice and/or support on understanding the mining legacy, its risks to your development or what next steps you need to take, please contact us.’
British Geological Survey Mapping	The 1:10,000 geological mapping for the area indicated that the Eccleston Fault (trending N/S) bisects the western sector of the site. The western tip of the site falls with the Coal Measures with the Higher and Lower Bug Coal Seams (now known as Higher and Lower Florida) outcropping on site. The Cheshire Mine Coal is present roughly 50 m to the north of the site and the Coal With Cannel is present roughly 200 m to the south. All four coal seams shown outcropping on or in close proximity to the site are shown to be dipping in a south-westerly direction. The direction of dip indicated that the Higher and Lower Bug Coal may be present beneath the south-western tip of the site. In addition to the coal seam, there is a historic coal pit mapped roughly 500m to the west of the subject site.
Review of Coal Authority Archive	No CA archives/mine abandonment plans are made available.



Historical Ordnance Survey Mapping

A review of the 1:10,000 Ordnance Survey mapping from circa 1850, which has records of mine workings that predate the Mining & Regulation Act of 1872, identified the following features indicative of historical mine workings in proximity to the application site:

 Coal pit – 500 m west.

In consideration of the historical mining features in proximity to the site and potential for coal close to the surface it is considered possible that coal extraction has occurred, underlying the site at relatively shallow depths; a further investigation would be required to determine the extent and depth of any worked seams.

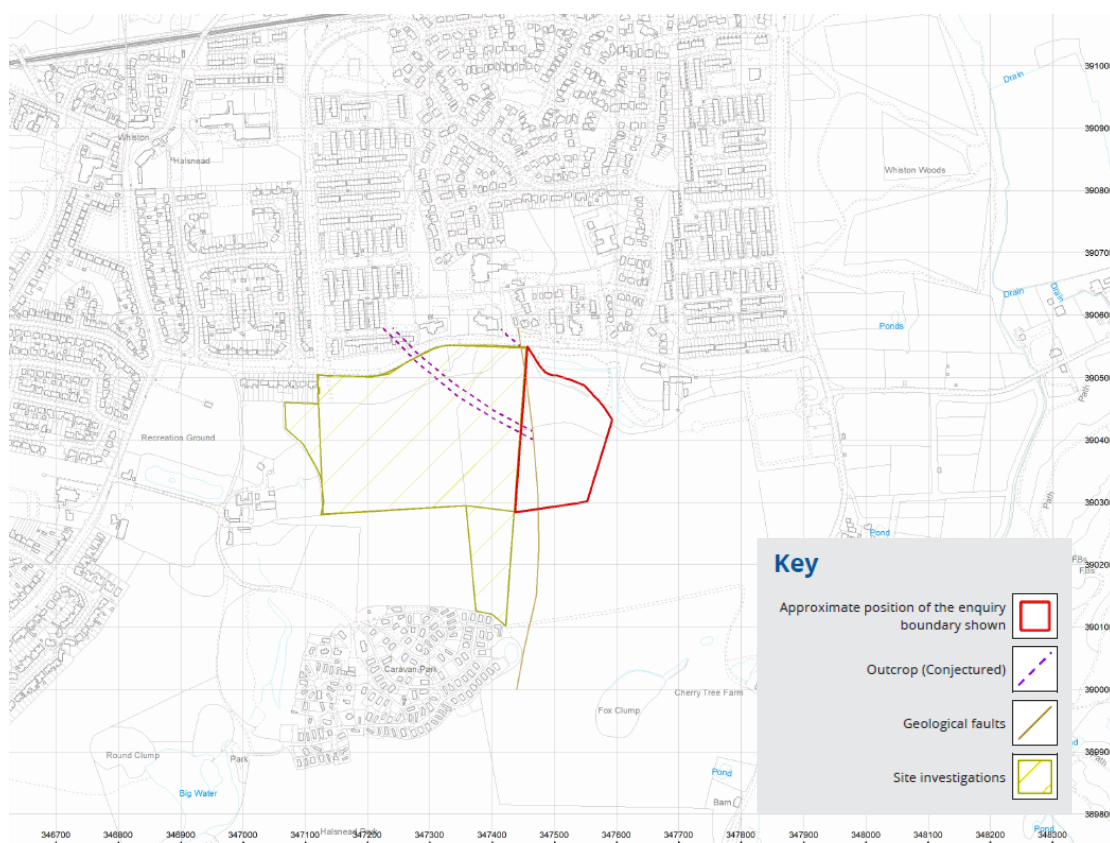
Historical Site Investigations

The site is within an area of previous interest. It is close to where the Coal Authority has received information relating to past site investigations. The site requires further investigation and may influence how you approach your risk assessment.

4.5.1. COAL AUTHORITY PLAN

The Coal Authority plan referenced: MR-LARGE-PLOT-51002685519001-1633351632984 shows the coal seams beneath the site along within the fault through the site.

FIGURE 4.1 COAL AUTHORITY PLAN FOR THE SITE

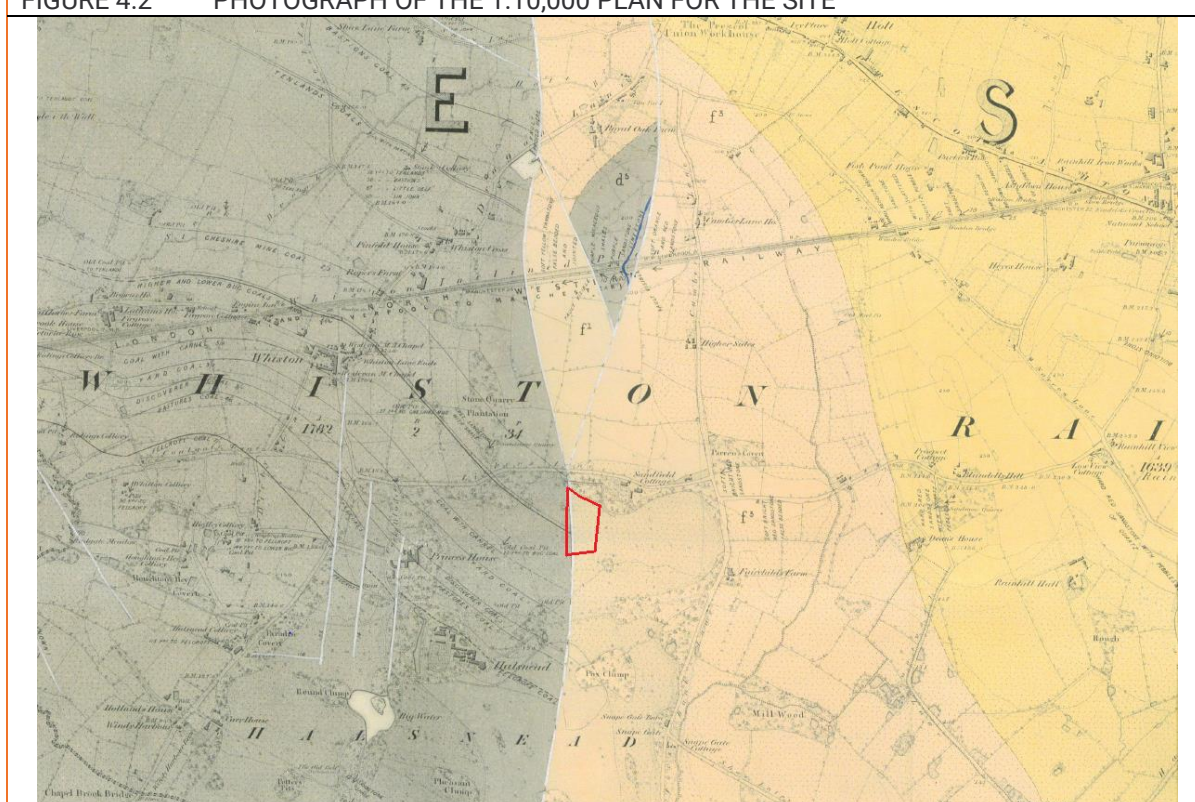


4.5.2. COAL MINING GEOLOGY

Figure 4.2 is a photograph of the 1:10,000 plan for the site which shows the Higher and Lower Bug Coal Seams (now known as Higher and Lower Florida) in the western sector of the site. The Cheshire Mine Coal is present roughly 50 m to the north of the site and the Coal With Cannel is present roughly 200 m to the south.

The Eccleston Fault trends north south through the western sector of the site.

FIGURE 4.2 PHOTOGRAPH OF THE 1:10,000 PLAN FOR THE SITE



4.6. COAL MINING RISK ASSESSMENT

This risk assessment comprises a desk-based review of all available information on coal mining issues that are relevant to the application site deemed to be located within a high-risk area. This includes:

- ✳ Interpretation of information to identify and assess the risks to the proposed development from coal mining legacy, including the cumulative impact of issues;
- ✳ Setting out appropriate mitigation measures to address the coal mining legacy issues affecting the site, including any necessary remedial works and/or demonstrate how coal mining issues have influenced the proposed development; and
- ✳ Demonstrating to the local planning authority that the application site is, or can be made, safe and stable to meet the requirements of national planning policy with regard to development on unstable land.

The coal mining risk assessment is summarised in Table 4.6.



TABLE 4.6 SUMMARY OF COAL MINING RISK ASSESSMENT

COAL MINING RISK ASSESSMENT	YES/NO	RISK ASSESSMENT
Recorded Underground Coal Mining at Shallow Depth (< 30 m)	No	Low
Recorded Underground Coal Mining at Shallow Depth (> 30 m)	Yes	Moderate
Evidence of Unrecorded Surface Extraction of Coal Outcrop	Yes - > 250 m from site	Low
Probable unrecorded Underground Coal Mining at Shallow Depth (< 30 m)	Yes	High
Mine Entries (Shaft/Adits)	No	Low
Coal Mining Geology – Fractures/Fissures	Yes	High
Recorded Gas Emissions	No	Low
Recorded Mining Surface Hazard	No	Low
Surface Mining (Opencast)	No	Very Low/Low

Based on the above, a high risk of unrecorded coal mining at shallow depth and at a moderate risk as it is known that the Higher and Lower Florida seam was worked between 151-427 m. The CA, as a statutory consultee, will require a series of rotary open holes across the south-western tip of the site to determine the presence of any coal on site and to understand the nature of any coal workings.

4.7. RADON RISK POTENTIAL

The Envirocheck report indicates the site is situated in an area where less than 1% of homes are above the “Action Level” and that the BGS reports that full radon protective measures are not necessary in the construction of new dwellings or extensions.



4.8. PRELIMINARY GEOTECHNICAL ASSESSMENT

Based on the desk-study information, the following geotechnical assessment has been made:

- ✳ Given the predominantly undeveloped nature of the site, it is likely there will be limited Made Ground fill deposits and obstructions.
- ✳ Infilled field boundaries present onsite may be potential sources of Made Ground. An investigation will be required in order to assess these and undertake in-situ geotechnical testing to determine the likely foundation solution for plots in these areas.
- ✳ Any historically infilled ponds and reservoirs present within the site boundary may be potential sources of alluvial deposits, silts and possible organic peat deposits in addition to potential depths of Made Ground. An investigation will be required to assess these and undertake in-situ geotechnical testing to determine the likely foundation solution for plots in these areas.
- ✳ The site has a gentle slope downwards in a southwest direction. This may require a potential development platform however development a currently unknown.
- ✳ The presence of coal workings in the south-western sector of the site requires investigation.

4.9. HYDROLOGY

Surface water features within 250 m of the subject site are summarised in Table 4.8.

TABLE 4.8 SURFACE WATER FEATURES

SURFACE WATER FEATURE	QUALITY	DISTANCE (m)	DIRECTION
Pond	Unknown	7 m	Northeast
Pond	Unknown	10 m	North
Pond	Unknown	240 m	South

The site is predominantly located within a currently defined “Flood Risk Zone 1”; defined as land assessed as having less than 1 in 1,000 annual probability of river or sea flooding (< 0.1%), and as such is considered to be unaffected by river flooding. In addition, the Envirocheck report states there is a potential for groundwater flooding of property situated below ground level. The Environment Agency (EA) Flood Risk Map for the site is presented in Figure 4.1.



FIGURE 4.1 EA FLOOD RISK MAP



Source - <https://flood-map-for-planning.service.gov.uk/>

4.10. INDUSTRIAL LAND USES

The site is located within a predominantly residential and rural area with one entry into the trade directory for industrial land use within 250 m of the site and is currently listed as active:

- 📍 Greeting card publisher (167 m northeast).

There are further two active industrial land uses within 500 m, including a jewellery manufacturer and a door manufacturer.

There are no fuel station entries within 1 km of the site boundary.

4.11. SENSITIVE LAND USES

The closest residential properties are located north of Lickers Lane that is adjacent to the north boundary of the site with a primary school located roughly 220 m to the north. No other environmentally sensitive land uses have been identified within close proximity to the site.

4.12. SITE SENSITIVITY ASSESSMENT

The site is assessed to be located within a “Moderate/High” sensitivity setting as discussed within Table 4.9.



TABLE 4.9 SITE SENSITIVITY ASSESSMENT

SENSITIVITY PROFILE	DISCUSSION	RATING
Groundwater Source Protection Zone or Drinking Water Safeguard Zone	The Envirocheck report indicates that the site is located within groundwater source protection zone III (total catchment). The site is not located within a Drinking Water Safeguard Zone.	High
Distance to the Closest Groundwater Abstraction Point	The closest groundwater abstraction point is 963m away associated with Blundells Hill golf club and is used for drinking, cooking sanitary and washing.	Low
Aquifer Classification in Superficial Drift Deposits	Secondary (undifferentiated).	Moderate
Aquifer Classification in Bedrock	Kinnerton Sandstone: Principal aquifer. Pennine Middle Coal Measures: Secondary A aquifer.	High
Is the Site Underlain by Low-Permeability Drift to Depths in Excess of 10 m?	The underlying superficial deposits are likely to comprise clayey gravelly sands interbedded with low-permeability clay soils to depths of 2 to 3m.	High
Is the Site Located Within 50 m of a Surface Watercourse?	The risk to surface water is negligible given the absence of a viable receptor within influencing distance of the site.	Low
Sensitive Land Uses	No sensitive land uses within 250m of the site	Low
OVERALL SITE ENVIRONMENTAL SENSITIVITY		Moderate/High



5. CONSULTATIONS

5.1. LANDFILL SITES AND WASTE TREATMENT SITES

There are no recorded/historical landfill sites or waste treatment sites within 250m of the site boundary.

5.2. REGULATORY DATABASE

The information summarised in Table 5.1 has been obtained from a commercially available environmental database. The summary table only includes records from within 250 m of the subject site and not otherwise detailed in the report.

TABLE 5.1 SUMMARY OF ENVIRONMENTAL DATA

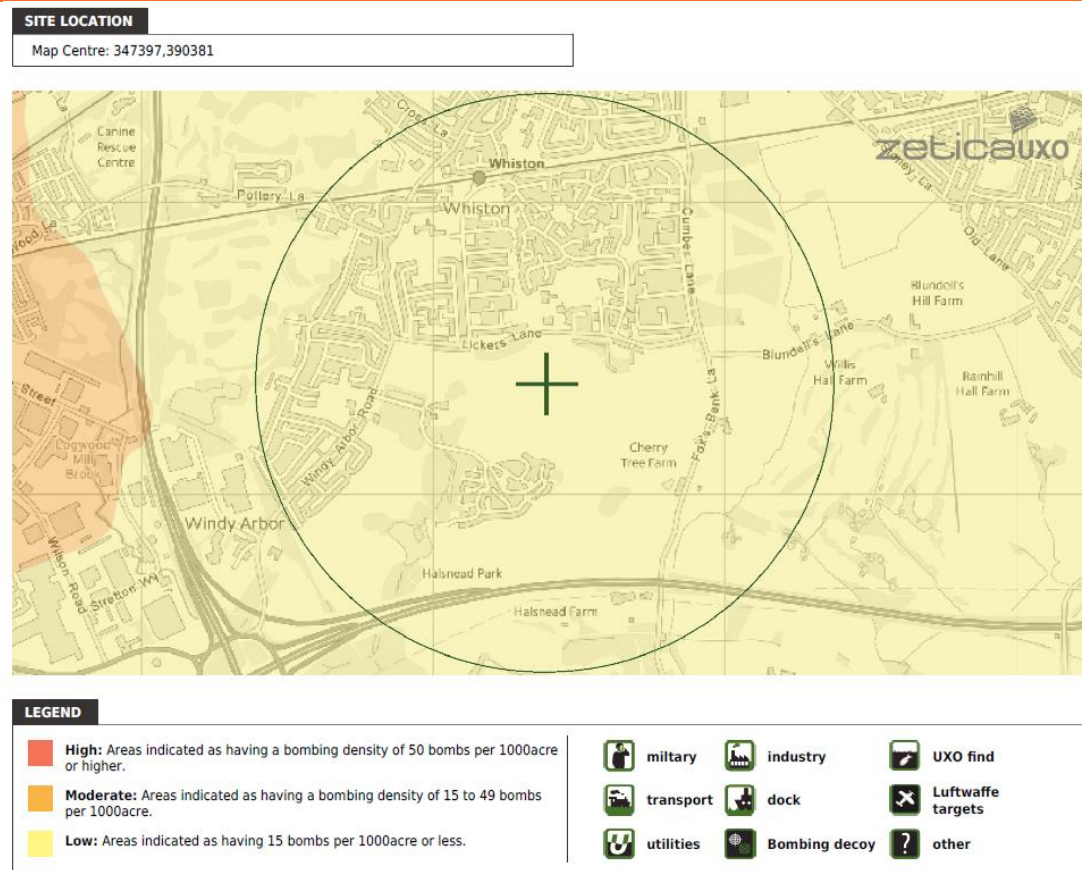
RECORD	ENTRIES WITHIN 250 m	DETAILS
Contaminated Land Register Entries and Notices	0	None Identified
Authorised Industrial Processes (IPC/IPPC/LAPPC)	0	None Identified
Fuel Stations Entries	0	None Identified
Licensed Radioactive Substances	0	None Identified
Enforcements, Prohibitions or Prosecutions	0	None Identified
Discharge Consents	0	None identified
Pollution Incidents	0	None Identified
Consents Issued Under the Planning (Hazardous Substances) Act 1990	0	None Identified
Control of Major Accident Hazard (COMAH) Sites	0	None Identified

5.1. UNEXPLODED ORDNANCE

The regional unexploded bomb risk map from Zetica (2014) indicates that the site is in an area at low risk from possible unexploded ordnance (UXO) resulting from the Second World War. The Zetia UXO Risk Map is presented in Figure 5.1.



FIGURE 5.1 ZETICA UXO RISK MAP



Source - <https://zeticauxo.com/downloads-and-resources/risk-maps/>



5.2. INITIAL CONCEPTUAL SITE MODEL

In accordance with EA LCRM (2019) and BSI 10175 (Code of Practice for Investigation of Potentially Contaminated Land), E3P has developed an initial conceptual site model (CSM) to identify potential contamination sources, migration pathways and receptors within the study area. This is summarised within Table 5.2.

ON-SITE SOURCES OF CONTAMINATION

The following potential on-site sources of contamination have been identified:

-  Infilled field boundaries.

OFF-SITE SOURCES OF CONTAMINATION

The following potential off-site source of contamination have been identified:

-  Infilled Ponds to the south;
-  Infilled quarry to the northwest; and
-  Local and historical land use.



5.3. CONCEPTUAL SITE MODEL

Following the completion of the intrusive site investigation, chemical analysis and risk assessment, the conceptual model shown in Table 5.2 has been prepared for the site.

TABLE 5.2 CONCEPTUAL MODEL

POLLUTANT LINKAGE	CONTAMINANT (SOURCE)	PATHWAY	RECEPTOR	PROBABILITY	CURRENT RISK	RESIDUAL RISK AFTER MITIGATION
PL1 PL2	Heavy Metals, non-volatile PAH, TPHs (Made Ground – infilled field boundaries)	Dermal contact. Dermal contact and ingestion.	Future site users. Off-site receptors.	Low likelihood	Low	LOW
Discussion: Potential for the presence of heavy metals, non-volatile PAHs and TPHs within made ground deposits associated with historic infilled field boundaries. This may pose a short-term risk to construction workers, who may come into contact with impacted soils during earthworks. Recommendation: Intrusive ground investigation works and chemical analysis of the material used to infill the field boundaries. If the material is to be retained on site, a cover system to garden and landscaped areas will prevent exposure to future site users. Construction works completed with PPE and provision of welfare.						
PL3	ACM in Made Ground	Inhalation of dust.	Future site users. Buildings. Off-site land users.	Unlikely	Low	LOW
Assessment: The historical maps showed that no structures or buildings have been present on the site and therefore it is unlikely that any asbestos or ACMs are present. Recommendation: Any asbestos impacted soils must be managed with placement in areas of low future sensitivity or alternatively the impacted soils will require removal from the site by a licenced waste handler. Cover system to garden and landscaped areas will prevent exposure to future site users. Construction works completed with PPE and provision of welfare.						



POLLUTANT LINKAGE	CONTAMINANT (SOURCE)	PATHWAY	RECEPTOR	PROBABILITY	CURRENT RISK	RESIDUAL RISK AFTER MITIGATION
PL4	Volatile contaminants such as hydrocarbons (Made Ground)	Inhalation of vapours. Migration through permeable strata and preferential pathways.	Future site users. Off-site receptors.	Unlikely	Low	LOW
Assessment: Volatile compounds are unlikely to be present onsite due to the undeveloped nature of the land and the lack of machinery / plant that will have been used on the site. Isolated spillages may be present associated with off road vehicles using the site, however, this is considered to be low. Recommendation: An intrusive investigation is required to confirm the conceptual site model. Construction works completed with PPE and provision of welfare.						
PL4	Methane, carbon dioxide (peat, coal measures and potentially infilled features on and within 250 m of the site)	Inhalation of gas. Migration through permeable strata and preferential pathways. Explosion in confined spaces.	Future site users. Buildings. Off-site land users.	Likely	Moderate	LOW
Assessment: The anticipated presence of limited Made Ground is considered to be a potential source of carbon dioxide and methane. The presence of probable coal working in the south western sector of the site is a potential source of ground gas. The historically infilled field boundaries located within 250m of the site are also potential sources of ground gas that may migrate beneath the site boundary. Carbon dioxide and methane have associated asphyxiation and explosive risks. Recommendation: Intrusive ground investigation with ground gas monitoring. Should a ground gas risk be identified to end users, the risks can be mitigated through the						



POLLUTANT LINKAGE	CONTAMINANT (SOURCE)	PATHWAY	RECEPTOR	PROBABILITY	CURRENT RISK	RESIDUAL RISK AFTER MITIGATION
adoption of suitable control measures within the building construction using guidance presented within CIRIA 665 (Assessing Risk Posed by Hazardous Ground Gases to Buildings) and BS8485 (Code of Practice for the Characterisation and Remediation from Ground Gas in Affected Developments).						
PL5	Mobile contaminants such as metals, PAHs, hydrocarbons, volatile compounds	Surface runoff. Migration through permeable strata and preferential pathways. Perched waters migration.	Groundwater (Principal aquifer). Surface water (unnamed watercourse – Pond)	Low likelihood	Low	LOW
Assessment: The anticipated presence of limited Made Ground associated with infilled field boundaries presents a risk of mobile contaminants metals, PAHs and hydrocarbons to be present, although unlikely. Glacial till across the site may reduce downward migration into the underlying bedrock aquifer. Recommendation: Sampling of groundwater and surface water required. Intrusive investigation is required to confirm the conceptual site model.						
PL6	Sulphate (potential ash within Made Ground)	Sulphate attack on concrete.	Building structure.	Unlikely	Low	LOW
Assessment: Significant depths of Made Ground are not anticipated onsite. The presence of pH and sulphate within Made Ground deposits may result in corrosion of buried concrete within the proposed development. Assessment must be undertaken to confirm the levels of pH and sulphate within the underlying strata and in particular any Made Ground deposits so that a concrete classification can be determined. Recommendation: Intrusive investigation of made ground deposits used to infill pond in order to confirm low sulphate levels.						



POLLUTANT LINKAGE	CONTAMINANT (SOURCE)	PATHWAY	RECEPTOR	PROBABILITY	CURRENT RISK	RESIDUAL RISK AFTER MITIGATION
PL7	Organic contaminants such as hydrocarbons, solvents (Made Ground)	Ingestion of tainted water supply.	Future site users. Water pipes.	Unlikely	Low	LOW
Assessment: Low likelihood probability as significant contamination not anticipated at pipeline depth across the site (0.75–1.35 m).						
Recommendation: An intrusive investigation is required to confirm the conceptual site model.						
PL8	Phytotoxic contaminants (Made Ground)	Direct Contact (plant uptake).	Flora.	Unlikely	Low	LOW
Assessment: Low likelihood as contamination considered possible, but not probable, which may be taken up by flora in soft landscaping/gardens.						
Recommendation: Investigation work as part of PL1.						

Main exposure pathways:

PL1 = soil ingestion, PL2 = dermal contact and ingestion, PL3 = dust inhalation; PL4 = Vapour/Gas Inhalation; PL5 = Vertical / Lateral Migration; PL6 = Corrosion of concrete; PL7=Tainting of water supply; PL8 = Uptake by plants;



6. CONCLUSIONS AND RECOMMENDATIONS

6.1. SITE SUMMARY

Current Site Use	The site is roughly rectangular in shape and is located to the south of Lickers Lane, Prescot. Two connected bodies of water border the site on the northern boundary. The general topography of the site is uniform with a gradual slope to the south of the site. There are frequent ruts and ditches caused by off-road vehicles across the site. Access is most effectively gained from the northern entrance of the site off Lickers Lane. Upon entering site, the northern third of the site is overgrown with a mix of mature and semi-mature trees and shrubbery. The areas south of the mature and semi-mature trees consist of waist-high vegetation. Historical mapping does not indicate the presence of any building or structures having been erected on the site. The site is currently open to the public, during the site walkover people were seen using the site for dog walking and other recreational activities.
Historical Site Use	A review of the pertinent Ordnance Survey mapping dating from circa 1850 to the present day confirmed the site has remained undeveloped agricultural land. Mapping indicates that Pre 1937 the site has a number of trees with a field boundary traversing from north-west to southeast. 1975 mapping illustrates the field boundary has been removed and replaced with another boundary running from east to west within the northern central sector of the site. The site also forms part of the Halsnead Park.

6.2. CONTAMINATED LAND ASSESSMENT

Human Health	Due to the largely undeveloped nature of the site, there are limited potential sources of contamination identified. However, localised areas have been identified as being potentially impacted by heavy metals, PAHs and ground gas, such as localised areas of Made Ground that may be present on the position of infilled former field boundaries.
Controlled Waters	The site is predominantly underlain by a principal bedrock aquifer (Kinnerton Sandstone Formation) and in the west underlain by a secondary A aquifer (Pennine Middle Coal Measures Formation). These may be afforded protection by the overlying low permeability glacial till deposits, however, BGS borehole records surrounding the site only show glacial till to a depth of 2-3m.
Ground Gas	The presence of Made Ground in isolated pockets of the site and probable coal workings in the western sector of the site gives rise to a risk of ground gas. The installation of wells and the monitoring over a 3 month period will enable the risk to be assessed.
Potable Water	Off-site infilled ponds are only considered to be a low-potential source of ground gas due to the likely presence of low-permeability drift deposits.



6.3. COAL MINING

Coal Mining	The site is located in a coal mining reporting, with the western sector of the site falling into the development high-risk area. The 1:10,000 geological mapping for the area indicated that the Eccleston Fault (trending N/S) bisects the western sector of the site, with the Higher and Lower Bug Coal Seams (now known as Higher and Lower Florida) outcropping on site. The Cheshire Mine Coal is present roughly 50 m to the north of the site and the Coal With Cannel is present roughly 200 m to the south. All four coal seams shown outcropping on or in close proximity to the site are shown to be dipping in a south-westerly direction. The direction of dip indicated that the Higher and Lower Bug Coal may be present beneath the south-western tip of the site. Wardell Armstrong have completed a Coal Mining Risk Assessment (ref: GM11893-001/FINAL – dated July 2021).
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6.4. GEOTECHNICAL ASSESSMENT

Geological	A limited thickness of glacial till drift deposits (sand, clay, gravel) are anticipated. Underlain by Kinnerton Sandstone Formation in the majority of the site and the Pennine Middle Coal Measures Formation in the west of the site.
Civil and Structural	No buildings are located on site. No relict foundations are expected on site. The site slopes gently downwards towards the southwest.
Abnormal Foundations	An abnormal engineering solution may be required where if a significant thickness of made ground is identified. This is unlikely due to the ground coverage.

END OF REPORT



APPENDIX I

LIMITATIONS

1. This report and its findings should be considered in relation to the terms of reference and objectives agreed between E3P and the client as indicated in Section 1.3.
2. For the work, reliance has been placed on publicly available data obtained from the sources identified. The information is not necessarily exhaustive and further information relevant to the site may be available from other sources. When using the information it has been assumed it is correct. No attempt has been made to verify the information.
3. This report has been produced in accordance with current UK policy and legislative requirements for land and groundwater contamination which are enforced by the local authority and the Environment Agency. Liabilities associated with land contamination are complex and requires advice from legal professionals.
4. During the site walkover, reasonable effort has been made to obtain an overview of the site conditions. However, during the site walkover, no attempt has been made to enter areas of the site that are unsafe or present a risk to health and safety, are locked, barricaded, overgrown, or the location of the area has not been made known or accessible.
5. Access considerations, the presence of services and the activities being carried out on the site limited the locations where sampling locations could be installed and the techniques that could be used.
6. Site sensitivity assessments have been made based on available information at the time of writing and are ultimately for the decision of the regulatory authorities.
7. Where mention has been made to the identification of Japanese Knotweed and other invasive plant species and asbestos or asbestos-containing materials, this is for indicative purposes only and do not constitute or replace full and proper surveys.
8. The executive summary, conclusions and recommendations sections of the report provide an overview and guidance only and should not be specifically relied upon without considering the context of the report in full.
9. E3P cannot be held responsible for any use of the report or its contents for any purpose other than that for which it was prepared. The copyright in this report and other plans and documents prepared by E3P is owned by them and no such plans or documents may be reproduced, published or adapted without written consent. Complete copies of this may, however, be made and distributed by the client as is expected in dealing with matters related to its commission. Should the client pass copies of the report to other parties for information, the whole report should be copied, but no professional liability or warranties shall be extended to other parties by E3P in this connection without their explicit written agreement there to by E3P.
10. New information, revised practices or changes in legislation may necessitate the re-interpretation of the report, in whole or in part.



APPENDIX II

GLOSSARY

TERMS

ACM	Asbestos-containing material	MMP	Materials management plan
ADS	Acoustic design statement	ND	Not detected
AST	Above-ground storage tank	NDP	Nuclear density probe
BGS	British Geological Survey	NMP	Noise management plan
BSI	British Standards Institute	NPSE	Noise policy statement for England
BTEX	Benzene, toluene, ethylbenzene, xylenes	NR	Not recorded
CA	Coal Authority	PAH	Polycyclic aromatic hydrocarbon
CBR	California bearing ratio	PCB	Polychlorinated biphenyl
CIEH	Chartered Institute of Environmental Health	PI	Plasticity index
CIRIA	Construction Industry Research Association	PID	Photo ionisation detector
CLEA	Contaminated land exposure assessment	POS	Public open space
CML	Council of Mortgage Lenders	PPE	Personnel protective equipment
CoC	Contaminants of concern	ProPG	Professional practice guidance
CSM	Conceptual site model	QA	Quality assurance
DNAPL	Dense non-aqueous phase liquid (chlorinated solvents, PCB)	SGV	Soil guideline value
DWS	Drinking water standard	SPH	Separate-phase hydrocarbon
EA	Environment Agency	SPT	Standard penetration test
EQS	Environmental quality standard	SVOC	Semi-volatile organic compound
FFL	Finished floor level	TPH	Total and speciated petroleum hydrocarbon
GAC	General assessment criteria	TPH CWG	Total Petroleum Hydrocarbon (Criteria Working Group)
GL	Ground level	UKWIR	United Kingdom Water Infrastructure Risk
GSV	Gas screening value	UST	Underground storage tank
HCV	Health criteria value	VCC	Vibro-concrete column
ICSM	Initial conceptual site model	VOC	Volatile organic compound
LEL	Lower explosive limit	VRSC	Vibro-replacement stone columns
LMRL	Lower method reporting limit	VSC	Vibro-stone columns
LNAPL	Light non-aqueous phase liquid (petrol, diesel, kerosene)	WHO	World Health Organisation
MCV	Moisture condition value	WRAP	Waste and Resources Action



Land south of Lickers Lane

Phase I Geoenvironmental Site Assessment

November 2021

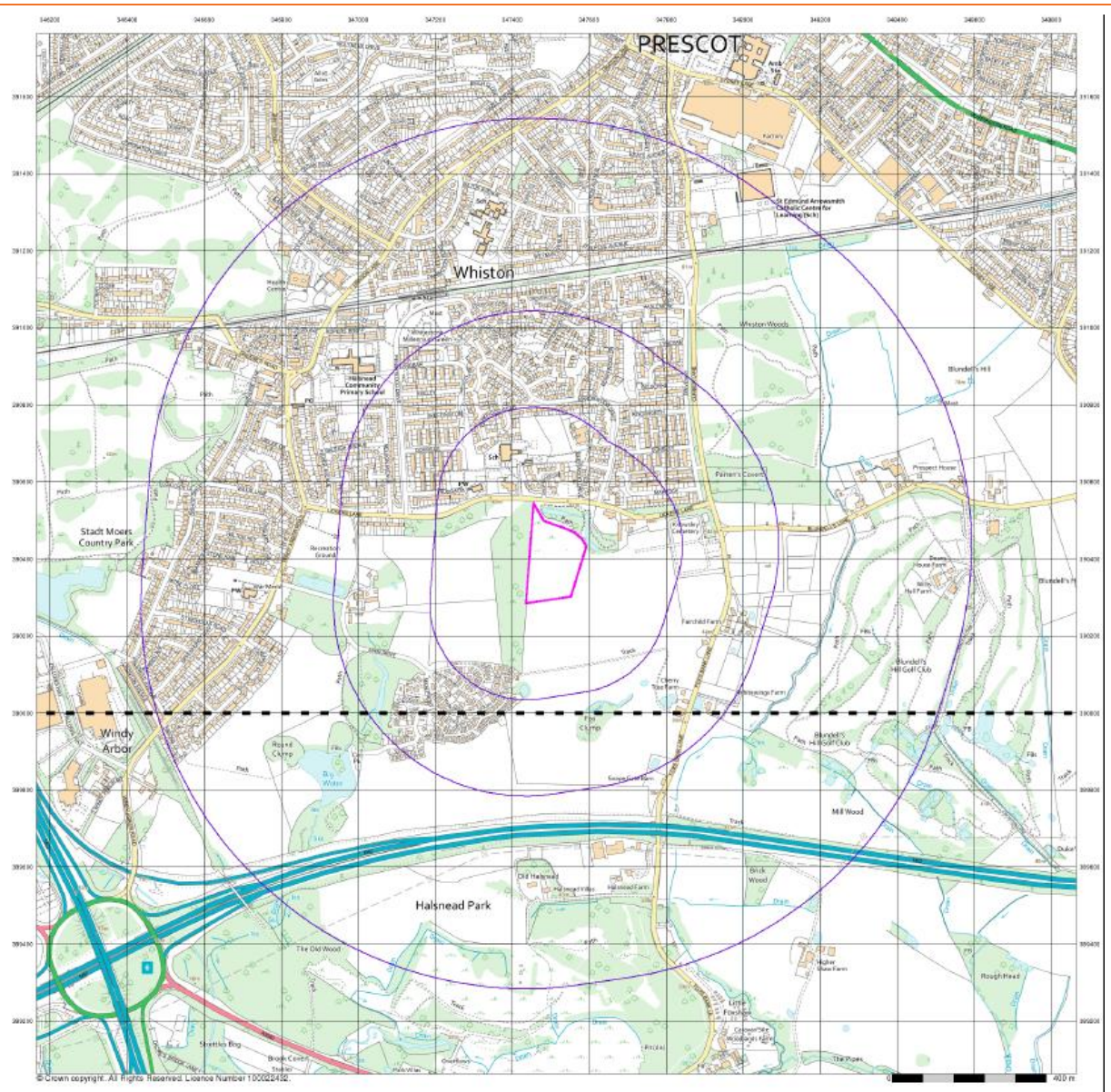
			Programme
MIBK	Methyl isobutyl ketone	WTE	Water table elevation
m	Metres	ppm	Parts per million
km	Kilometres	mg/m³	Milligram per metre cubed
% v/v	Percent volume in air	m bgl bgl	Metres below ground level
mb	Millibars (atmospheric pressure)	m bcl	Metre below cover level
l/hr	Litres per hour	mAOD	Metres above ordnance datum (sea level)
µg/l	Micrograms per litre (parts per billion)	kN/m²	Kilonewtons per metre squared
ppb	Parts per billion	µm	Micrometre
mg/kg	Milligrams per kilogram (parts per million)	SSRT	Site Specific Remediation Target
PSD	Particle Size Distribution	DD	Dry Density
CL:AIRE	Contaminated Land: Applications in Real Environments	Mc	Moisture Content
ρ	Bulk Density	GPR	Ground Penetrating Radar
NDP	Nuclear Density Probe	FFL	Finished Floor Level
LEL	Lower Explosive Limit	UKWIR	UK Water Industry Research
CIRIA	Construction Industry Research and Information Association	LOD	Limit of Detection



APPENDIX III

DRAWINGS

DRAWING 15-065-001 – SITE LOCATION PLAN



APPENDIX IV PHOTOGRAPHS

PLATE 1 WESTERN BOUNDARY FACING SOUTH



PLATE 2 CENTRAL SECTOR OF SITE



PLATE 3 NORTHERN SECTOR – ACCESS VIA LICKERS LANE



PLATE 4 OVERGROWN NORTHERN SECTOR OF SITE

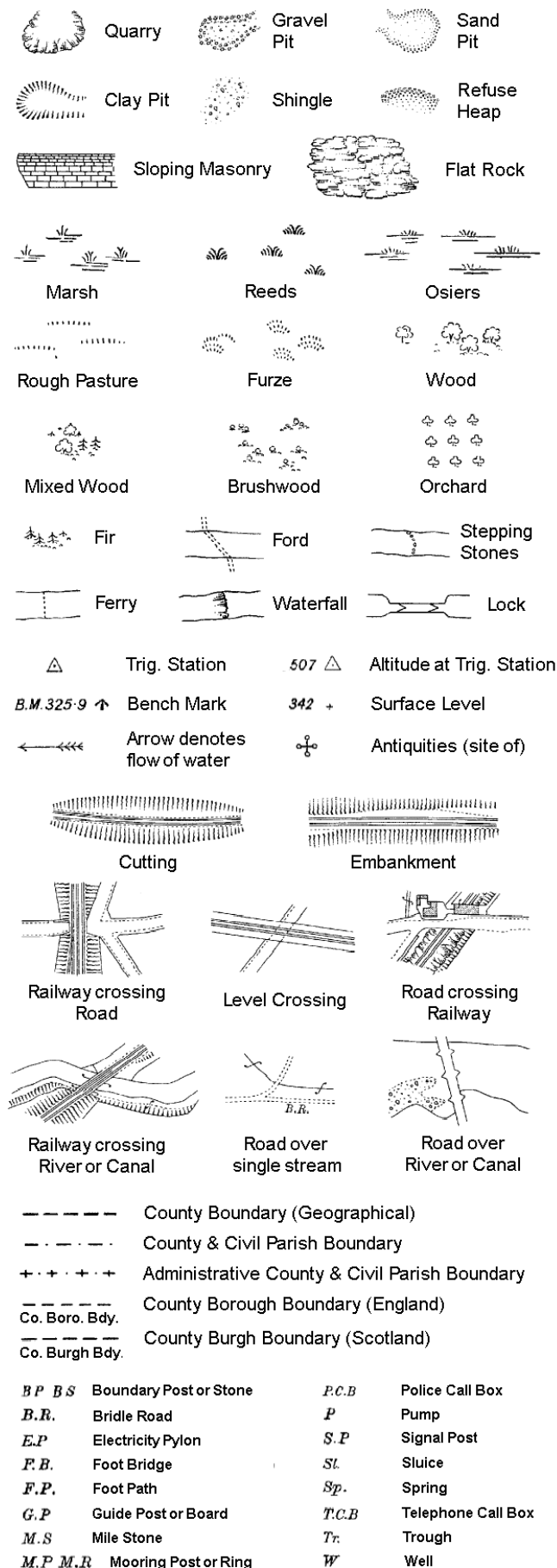


APPENDIX V

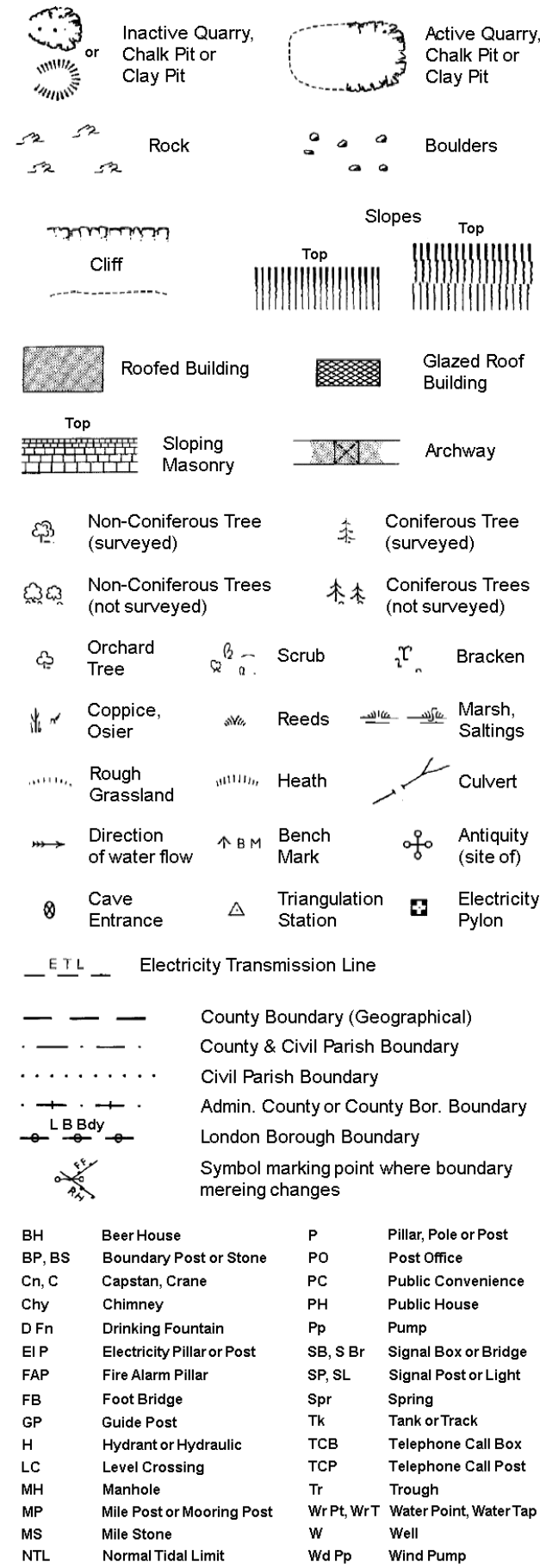
HISTORICAL MAPS

Historical Mapping Legends

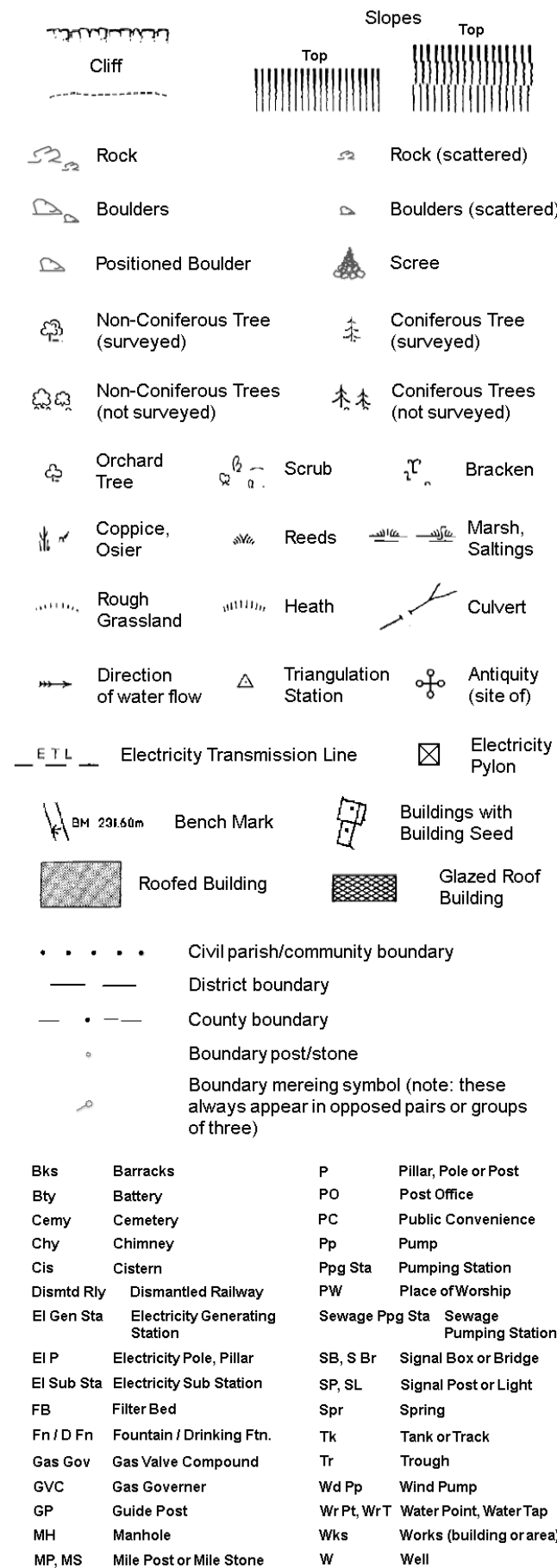
Ordnance Survey County Series and Ordnance Survey Plan 1:2,500



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



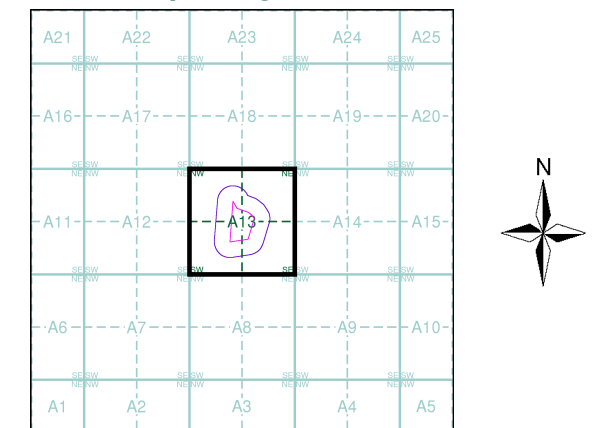
Large-Scale National Grid Data 1:2,500 and 1:1,250



Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Lancashire And Furness	1:2,500	1892	2
Lancashire And Furness	1:2,500	1907	3
Lancashire And Furness	1:2,500	1927	4
Lancashire And Furness	1:2,500	1937	5
Ordnance Survey Plan	1:2,500	1959	6
Ordnance Survey Plan	1:1,250	1974 - 1976	7
Supply of Unpublished Survey Information	1:2,500	1975	8
Additional SIMs	1:2,500	1985	9
Additional SIMs	1:2,500	1986	10
Large-Scale National Grid Data	1:1,250	1993	11
Large-Scale National Grid Data	1:1,250	1994 - 1995	12
Large-Scale National Grid Data	1:1,250	1994	13
Large-Scale National Grid Data	1:1,250	1995	14
Large-Scale National Grid Data	1:1,250	1995	15
Large-Scale National Grid Data	1:1,250	1996	16
Large-Scale National Grid Data	1:1,250	1996	17
Large-Scale National Grid Data	1:1,250	1996	18
Historical Aerial Photography	1:2,500	2000	19

Historical Map - Segment A13



Order Details

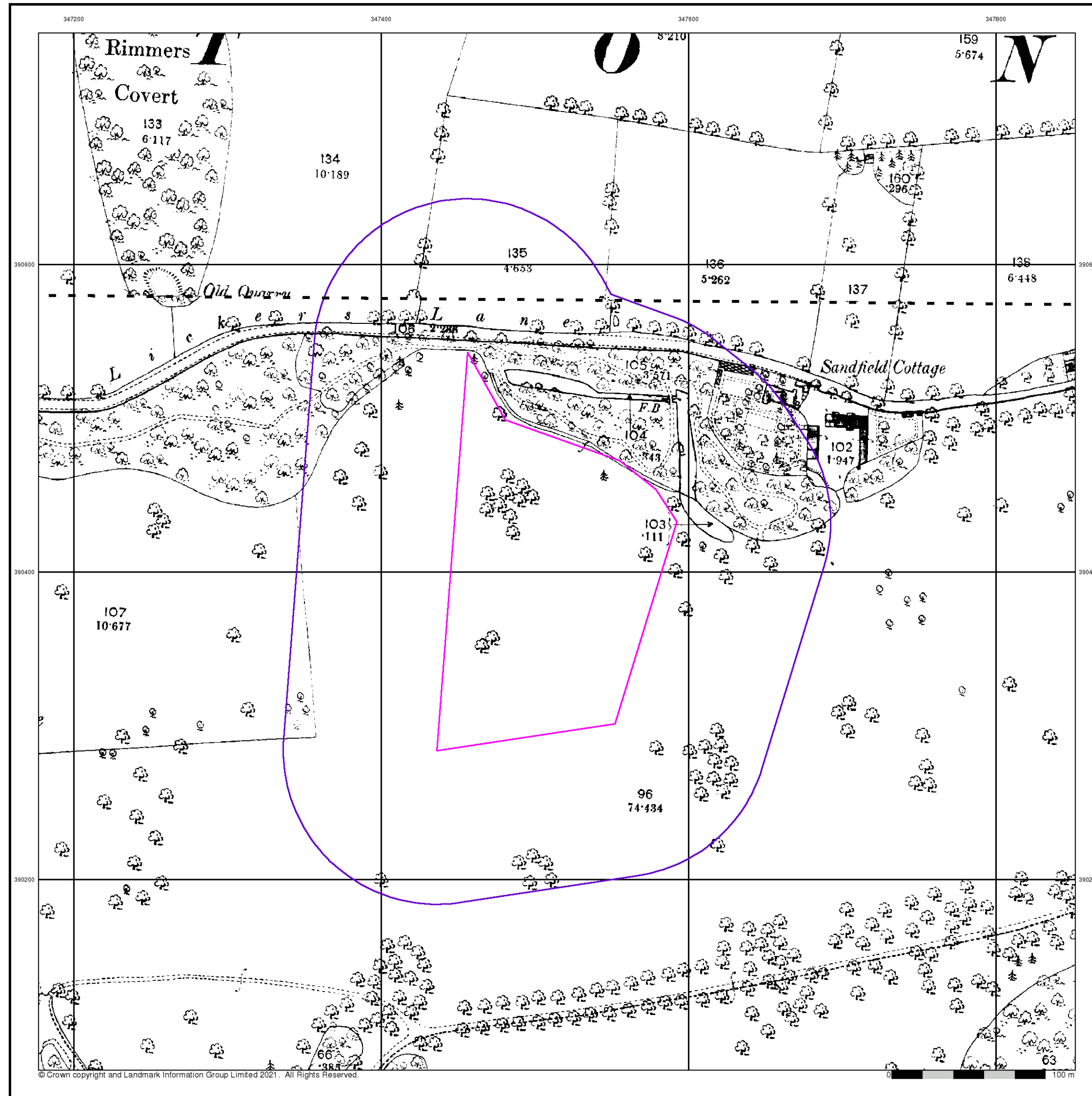
Order Number: 285280369_1_1
Customer Ref: 15-065-RH-A
National Grid Reference: 347490, 390400
Slice: A
Site Area (Ha): 2.55
Search Buffer (m): 100

Site Details

Pats Shop, 32, Croftwood Grove, Whiston, PRESCOT, L35 3UT



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



Lancashire And Furness

Published 1892

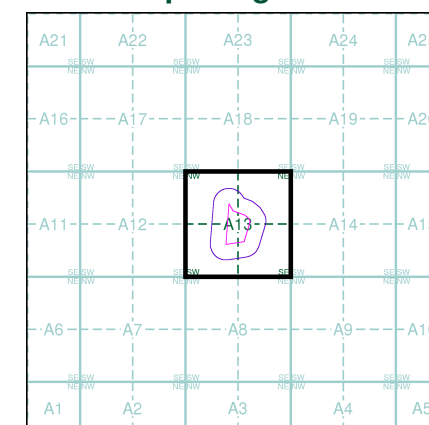
Source map scale - 1:2,500

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)

107_11
1892
1:2,500
107_15
1892
1:2,500

Historical Map - Segment A13



Order Details

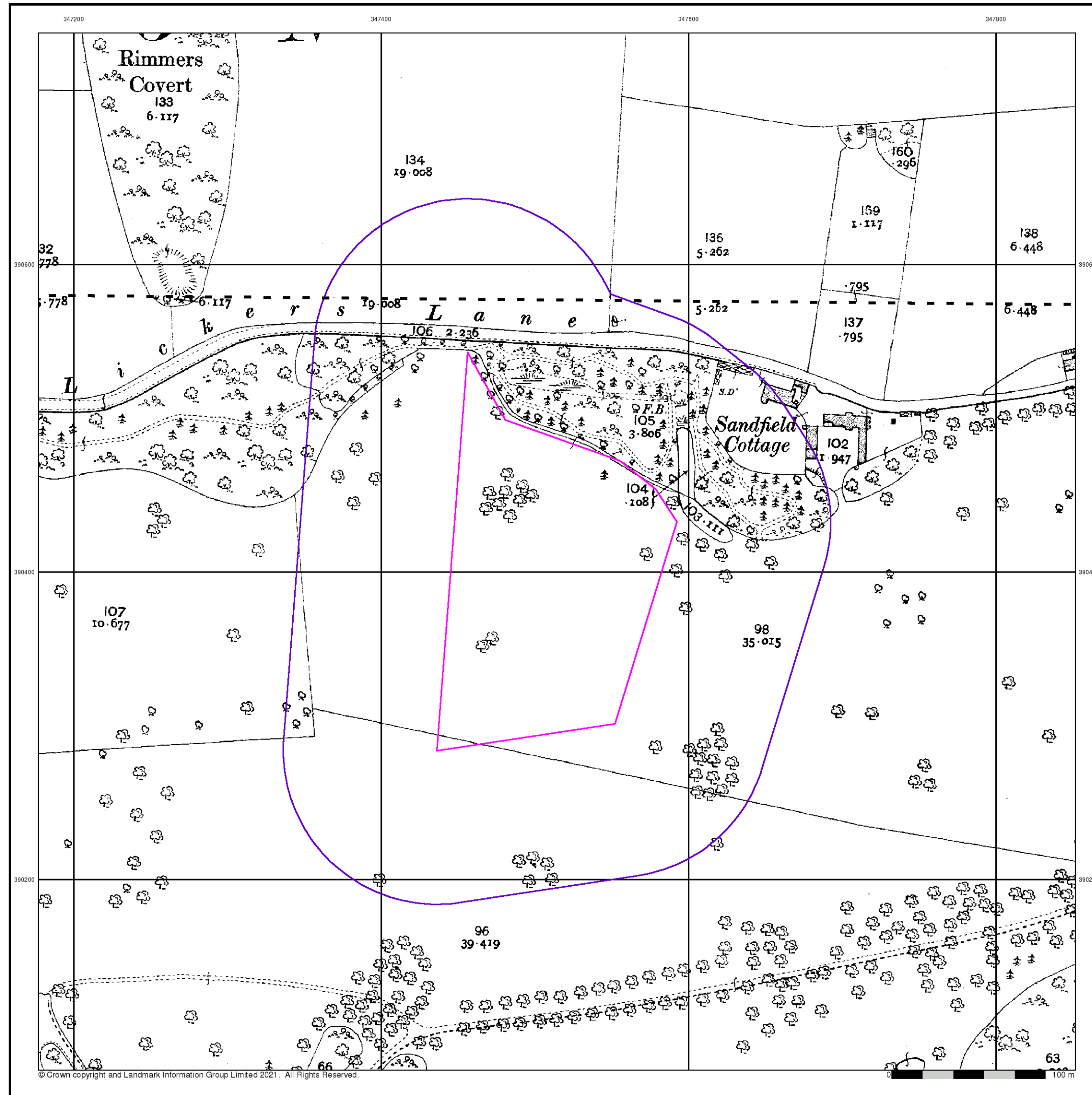
Order Number: 285280369_1_1
Customer Ref: 15-065-RH-A
National Grid Reference: 347490, 390400
Slice: A
Site Area (Ha): 2.55
Search Buffer (m): 100

Site Details

Pats Shop, 32, Croftwood Grove, Whiston, PRESCOT, L35 3UT

Landmark
INFORMATION GROUP

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Lancashire And Furness

Published 1907

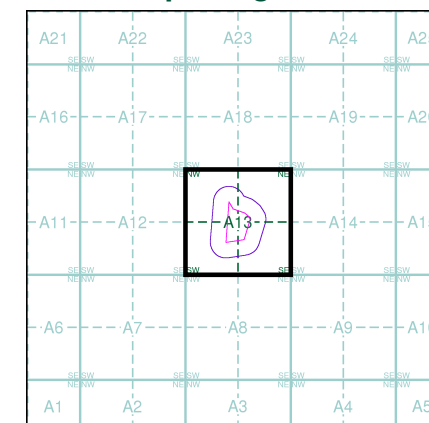
Source map scale - 1:2,500

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)

107_11
1907
1:2,500
107_15
1907
1:2,500

Historical Map - Segment A13



Order Details

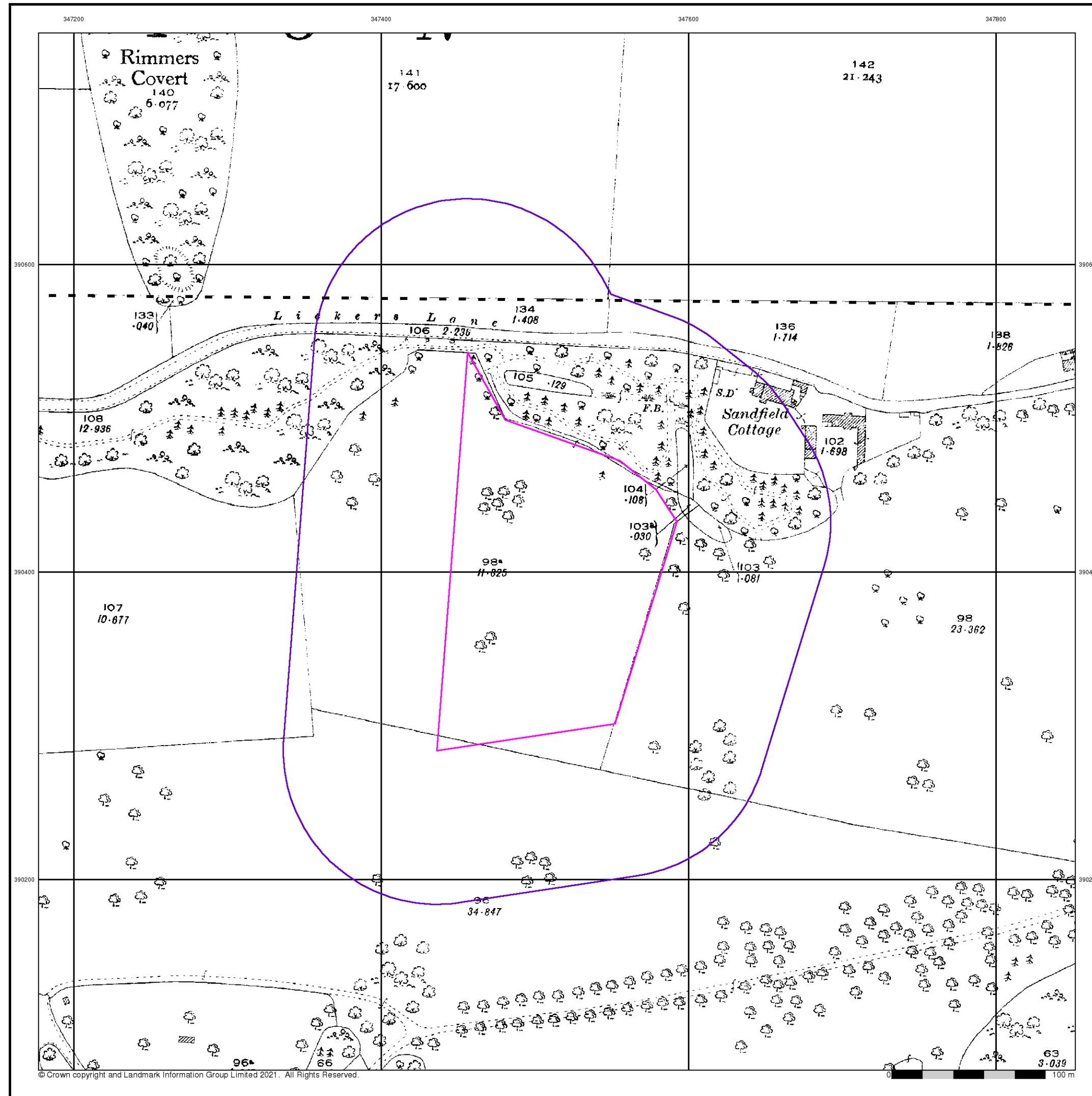
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Customer Ref: 15-065-RH-A
National Grid Reference: 347490, 390400
Slice: A
Site Area (Ha): 2.55
Search Buffer (m): 100

Site Details

Pats Shop, 32, Croftwood Grove, Whiston, PRESCOT, L35 3UT

Landmark
INFORMATION GROUP

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Lancashire And Furness

Published 1927

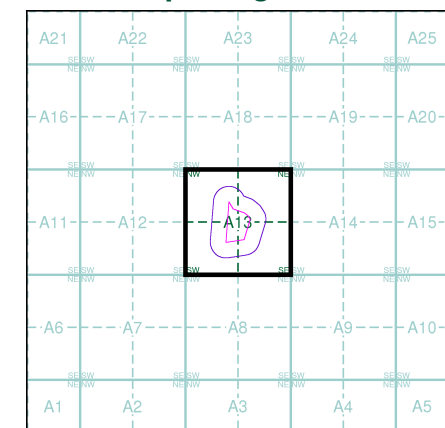
Source map scale - 1:2,500

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)

107_11
1927
1:2,500
107_15
1927
1:2,500

Historical Map - Segment A13



Order Details

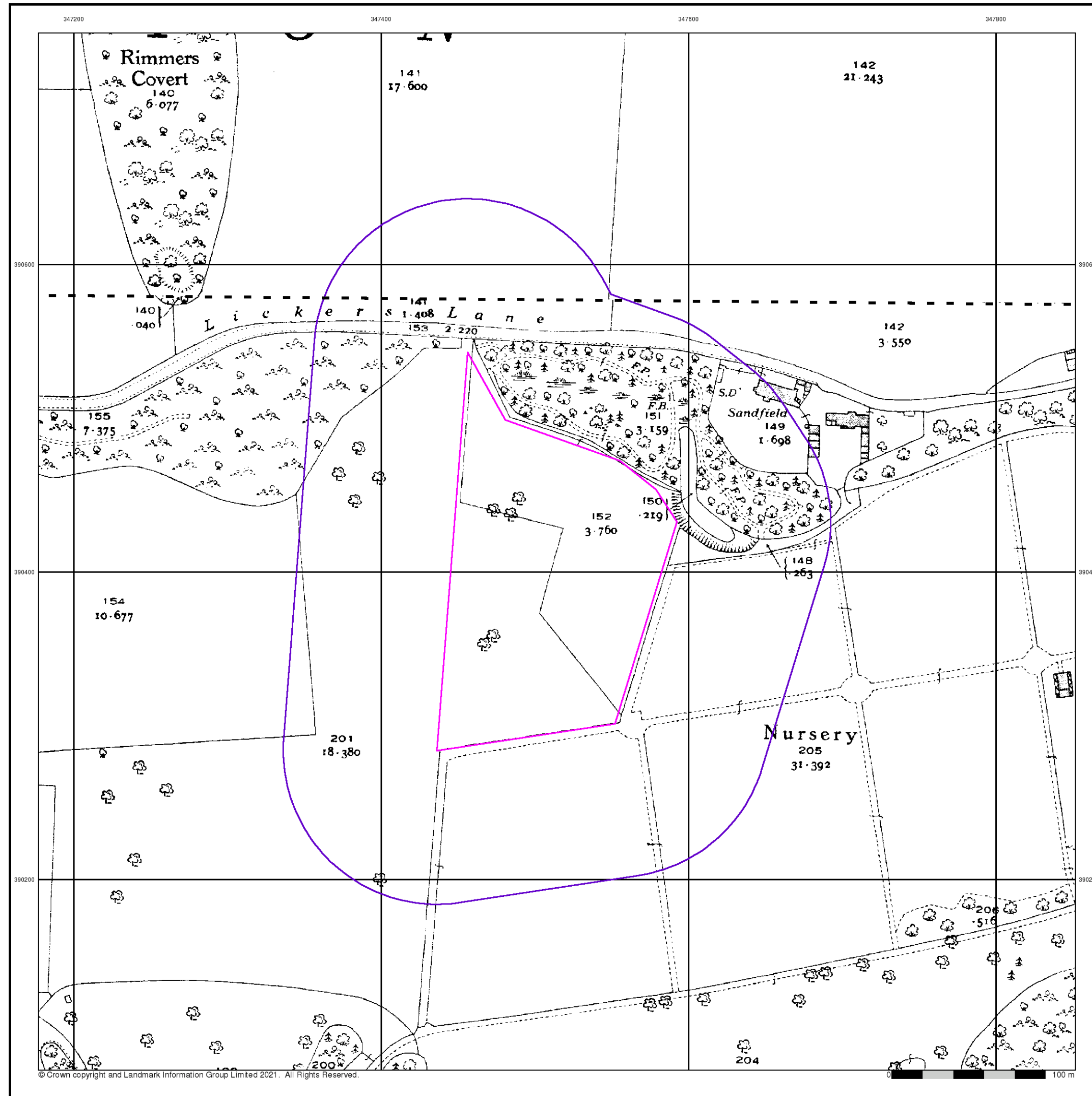
Order Number: 285280369_1_1
Customer Ref: 15-065-RH-A
National Grid Reference: 347490, 390400
Slice: A
Site Area (Ha): 2.55
Search Buffer (m): 100

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Lancashire And Furness

Published 1937

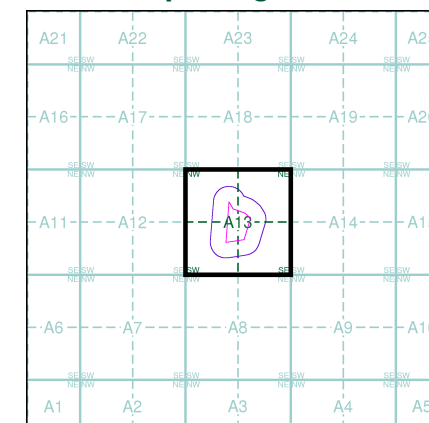
Source map scale - 1:2,500

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)

107_11
1937
1:2,500
107_15
1937
1:2,500

Historical Map - Segment A13



Order Details

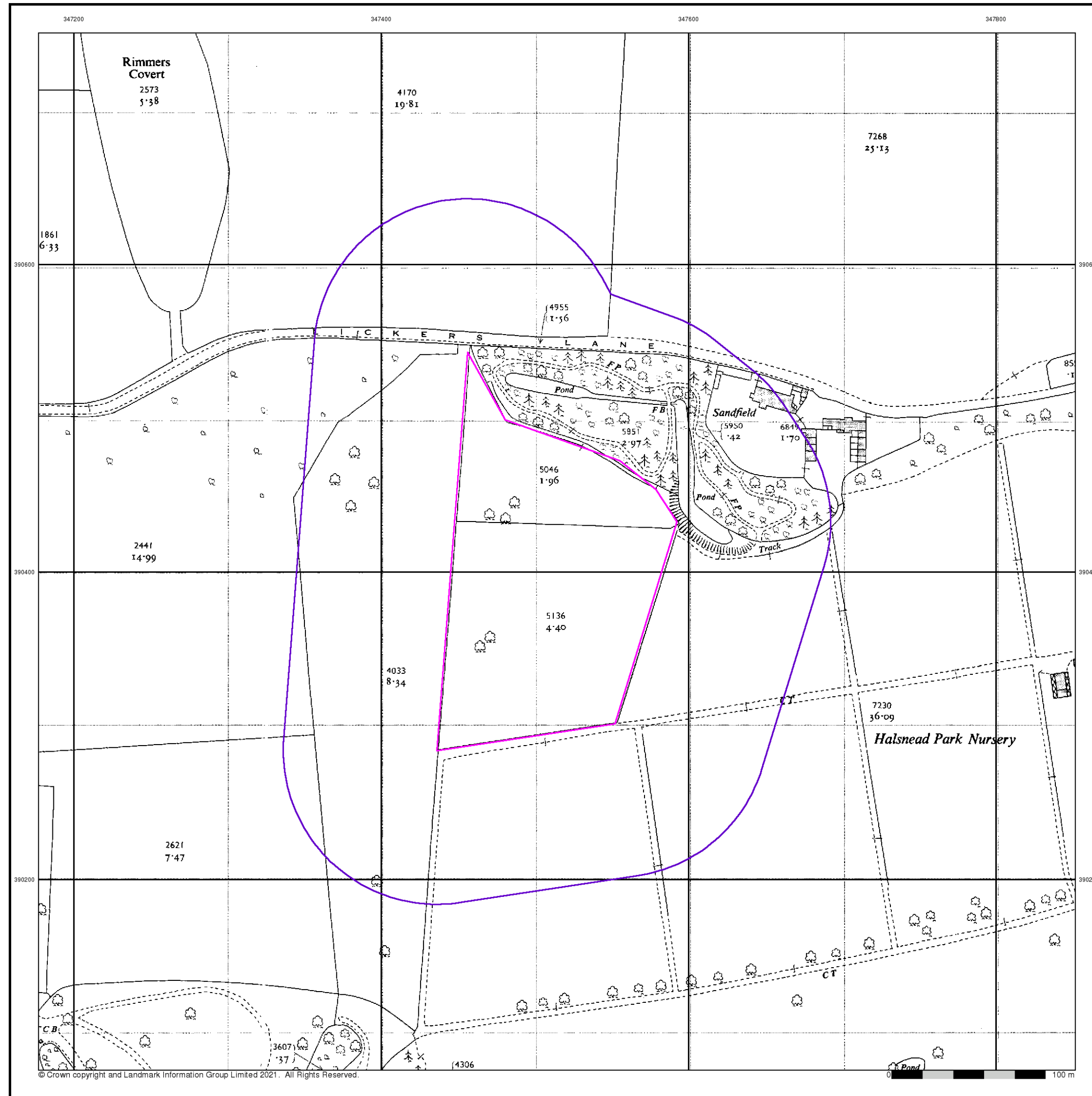
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Customer Ref: 15-065-RH-A
National Grid Reference: 347490, 390400
Slice: A
Site Area (Ha): 2.55
Search Buffer (m): 100

Site Details

Pats Shop, 32, Croftwood Grove, Whiston, PRESCOT, L35 3UT

Landmark
INFORMATION GROUP

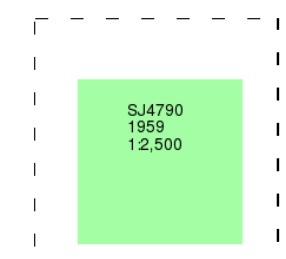
Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www.envirocheck.co.uk



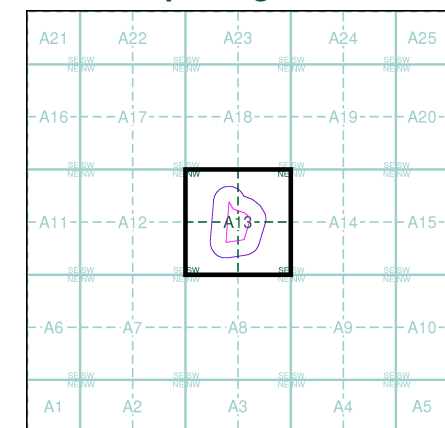
Ordnance Survey Plan
Published 1959
Source map scale - 1:2,500

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.

Map Name(s) and Date(s)



Historical Map - Segment A13



Order Details
Order Number: 285280369_1_1
Customer Ref: 15-065-RH-A
National Grid Reference: 347490, 390400
Slice: A
Site Area (Ha): 2.55
Search Buffer (m): 100

Site Details
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0 100 m



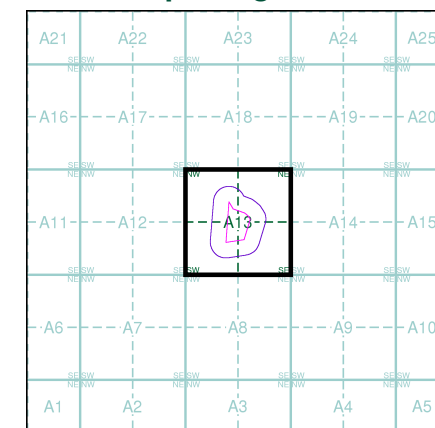
Ordnance Survey Plan
Published 1974 - 1976
Source map scale - 1:1,250

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)

SJ4790NW 1974 1:1,250	SJ4790NE 1976 1:1,250
-----------------------------	-----------------------------

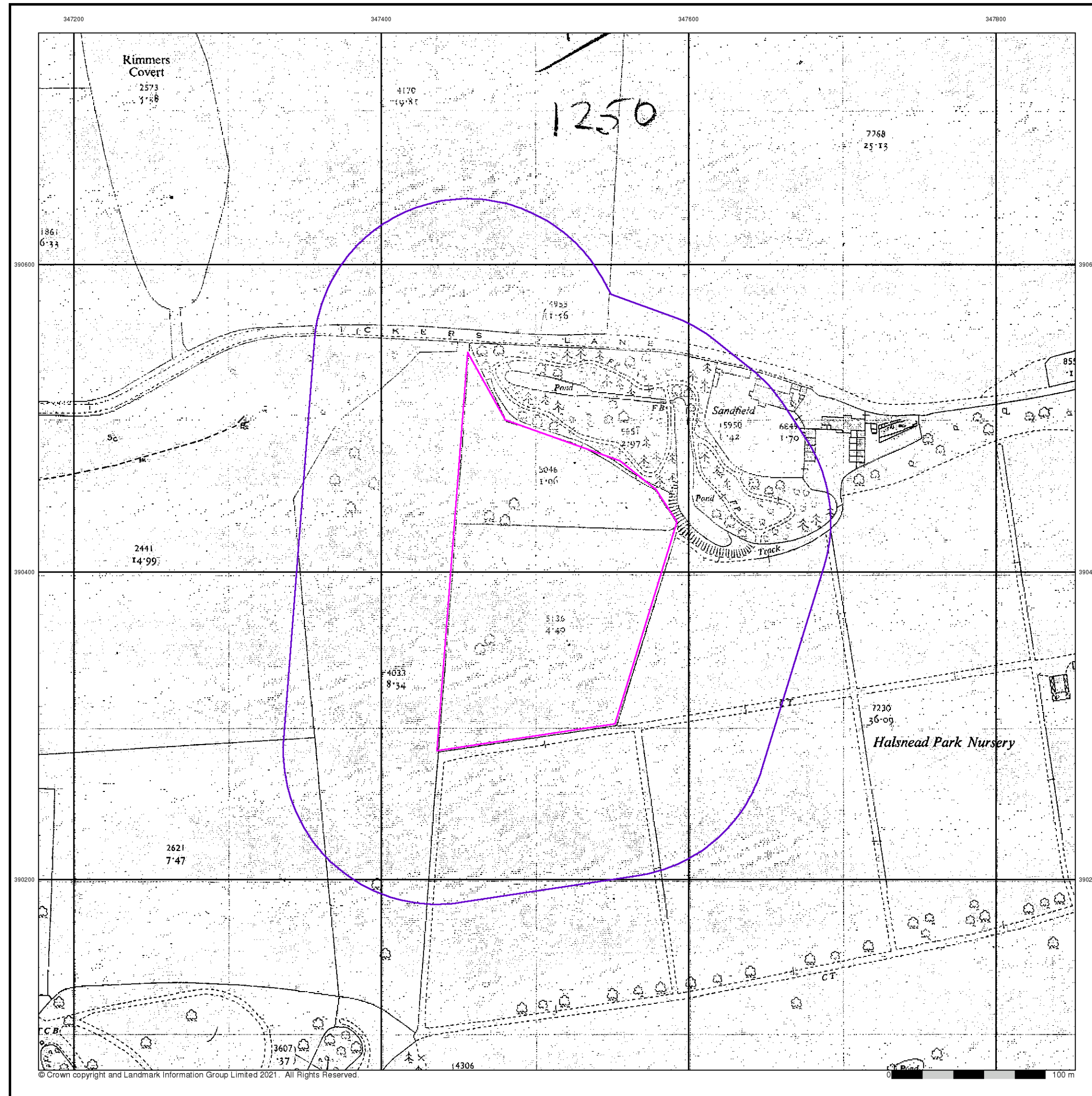
Historical Map - Segment A13



Order Details
Order Number: 285280369_1_1
Customer Ref: 15-065-RH-A
National Grid Reference: 347490, 390400
Slice: A
Site Area (Ha): 2.55
Search Buffer (m): 100

Site Details
Pats Shop, 32, Croftwood Grove, Whiston, PRESCOT, L35 3UT

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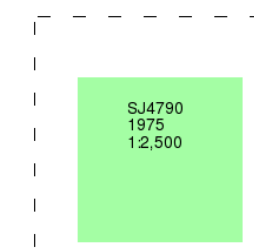
Supply of Unpublished Survey Information

Published 1975

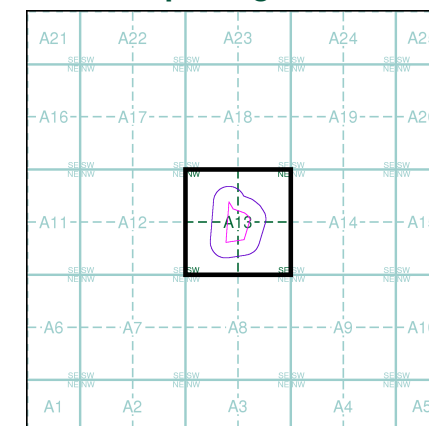
Source map scale - 1:2,500

SUSI maps (Supply of Unpublished Survey Information) were produced between 1972 and 1977, mainly for internal use at Ordnance Survey. These were more of a 'work-in-progress' plan as they showed updates of individual areas on a map. These maps were unpublished, and they do not represent a single moment in time. They 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: 285280369_1_1
Customer Ref: 15-065-RH-A
National Grid Reference: 347490, 390400
Slice: A
Site Area (Ha): 2.55
Search Buffer (m): 100

Site Details

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Landmark
INFORMATION GROUP

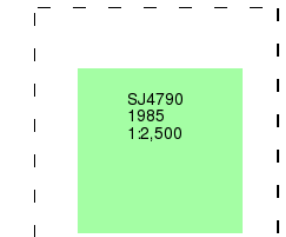
Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www.envirocheck.co.uk



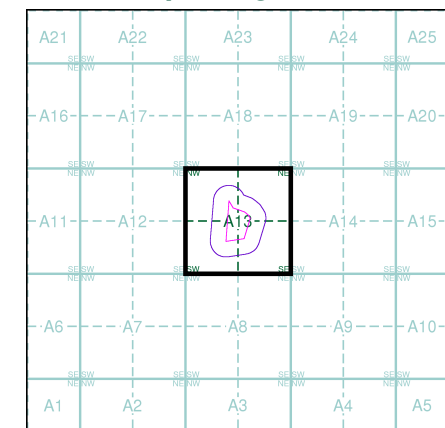
Additional SIMs
Published 1985
Source map scale - 1:2,500

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)

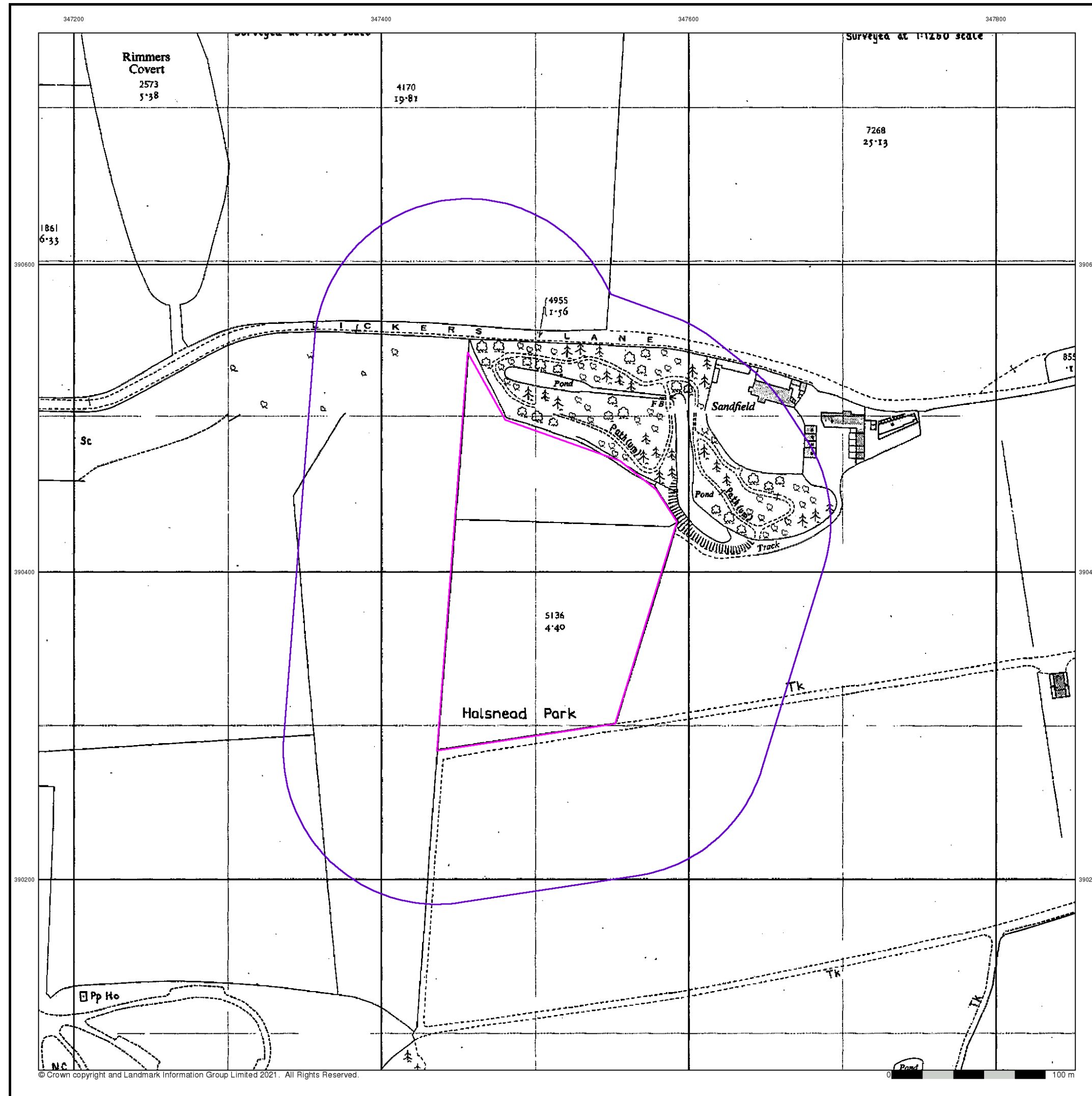


Historical Map - Segment A13



Order Details
Order Number: 285280369_1_1
Customer Ref: 15-065-RH-A
National Grid Reference: 347490, 390400
Slice: A
Site Area (Ha): 2.55
Search Buffer (m): 100

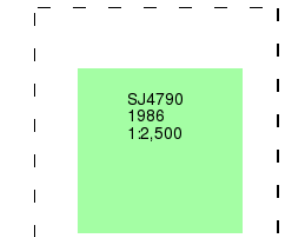
Site Details
Pats Shop, 32, Croftwood Grove, Whiston, PRESCOT, L35 3UT



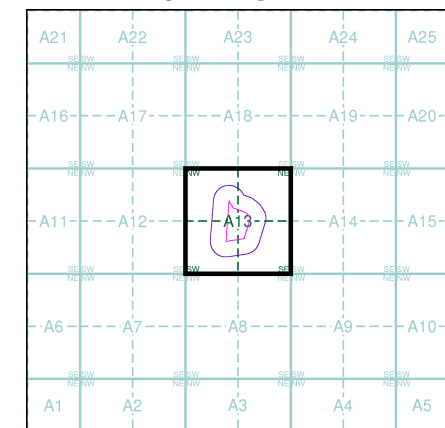
Additional SIMs
Published 1986
Source map scale - 1:2,500

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)

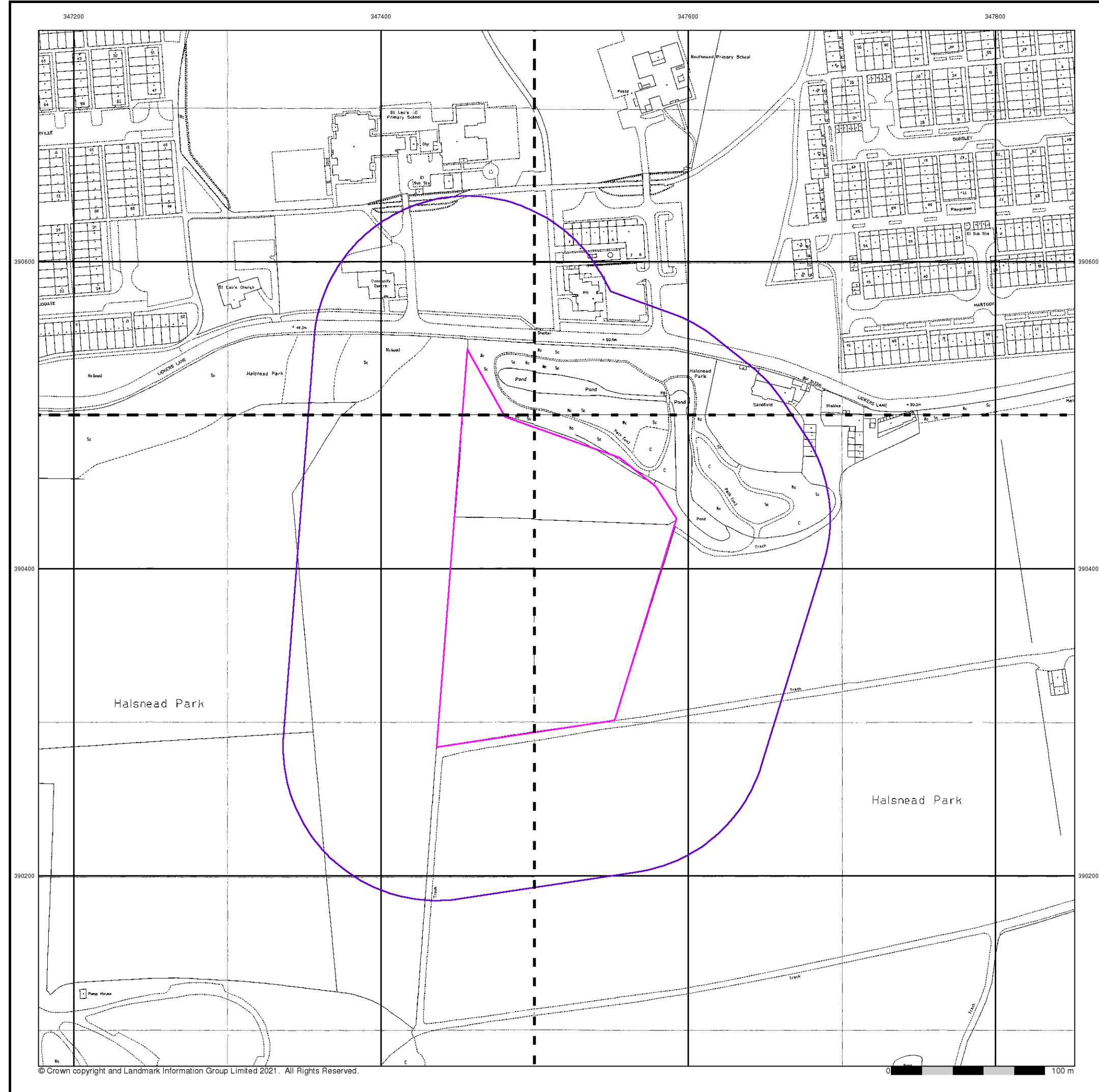


Historical Map - Segment A13



Order Details
Order Number: 285280369_1_1
Customer Ref: 15-065-RH-A
National Grid Reference: 347490, 390400
Slice: A
Site Area (Ha): 2.55
Search Buffer (m): 100

Site Details
Pats Shop, 32, Croftwood Grove, Whiston, PRESCOT, L35 3UT





Large-Scale National Grid Data

Published 1993

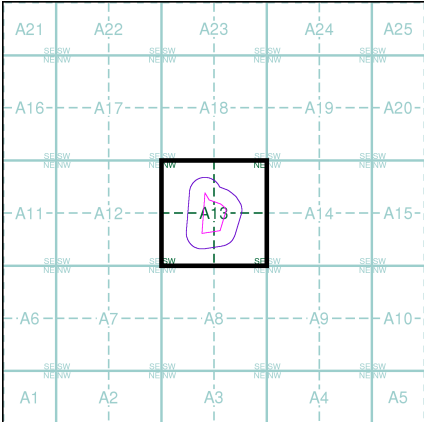
Source map scale - 1:1,250

'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)

SJ4790NW 1993 1:1,250	SJ4790NE 1993 1:1,250
SJ4790SW 1993 1:1,250	SJ4790SE 1993 1:1,250

Historical Map - Segment A13



Order Details

Order Number: 285280369_1_1
Customer Ref: 15-065-RH-A
National Grid Reference: 347490, 390400
Slice: A
Site Area (Ha): 2.55
Search Buffer (m): 100

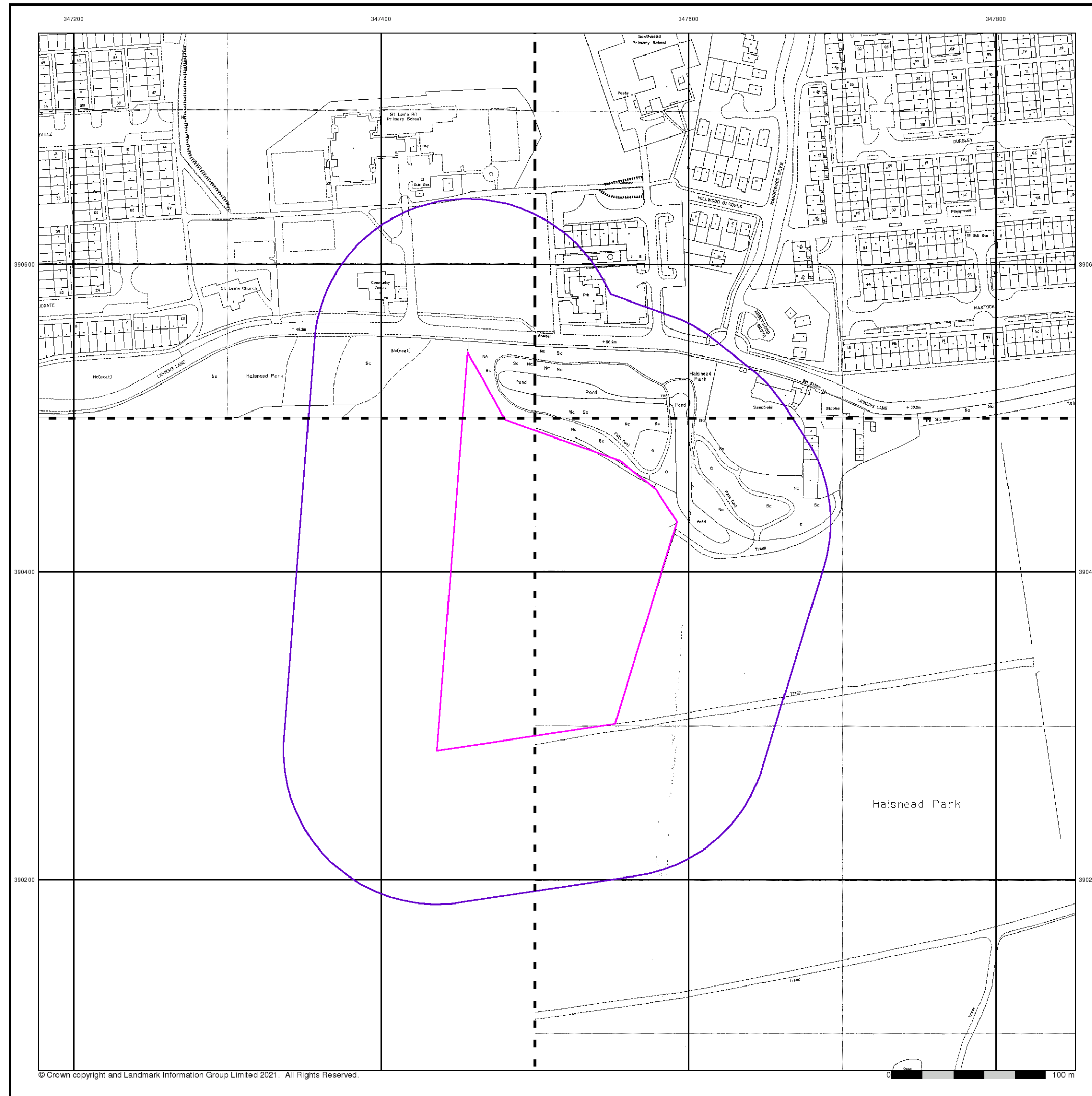
Site Details

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A Landmark Information Group Service v50.0 22-Sep-2021 Page 11 of 19



Large-Scale National Grid Data

Published 1994 - 1995

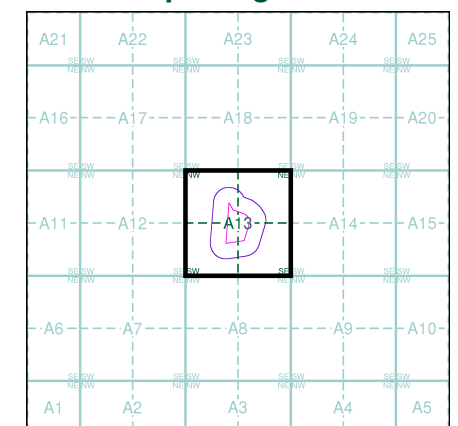
Source map scale - 1:1,250

'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)

SJ4790NW 1995 1:1,250	SJ4790NE 1994 1:1,250
SJ4790SE 1994 1:1,250	

Historical Map - Segment A13



Order Details

Order Number: 285280369_1_1
Customer Ref: 15-065-RH-A
National Grid Reference: 347490, 390400
Slice: A
Site Area (Ha): 2.55
Search Buffer (m): 100

Site Details

Pats Shop, 32, Croftwood Grove, Whiston, PRESCOT, L35 3UT



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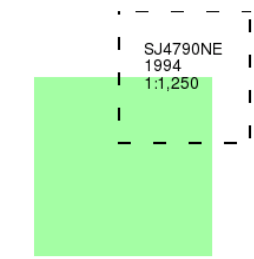
Large-Scale National Grid Data

Published 1994

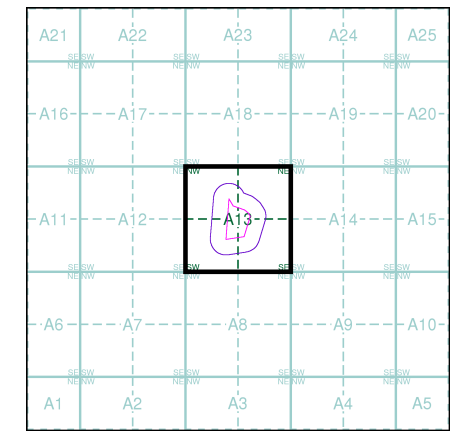
Source map scale - 1:1,250

'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: 285280369_1_1
Customer Ref: 15-065-RH-A
National Grid Reference: 347490, 390400
Slice: A
Site Area (Ha): 2.55
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Site Details

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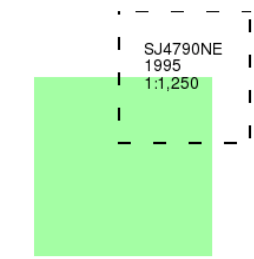
Large-Scale National Grid Data

Published 1995

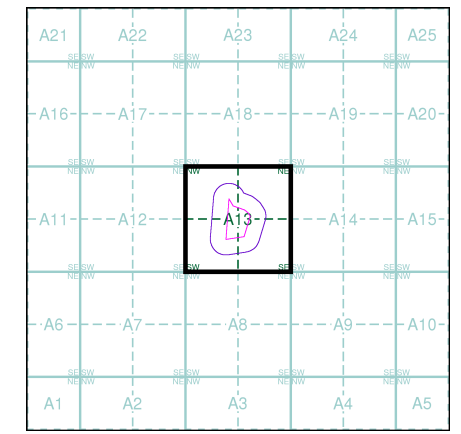
Source map scale - 1:1,250

'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: 285280369_1_1
Customer Ref: 15-065-RH-A
National Grid Reference: 347490, 390400
Slice: A
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Site Details

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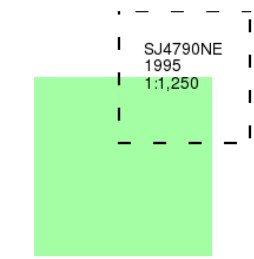
Large-Scale National Grid Data

Published 1995

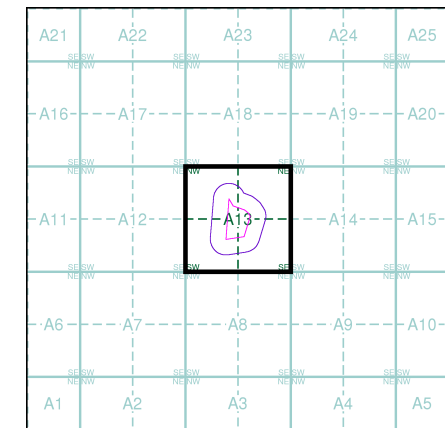
Source map scale - 1:1,250

'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

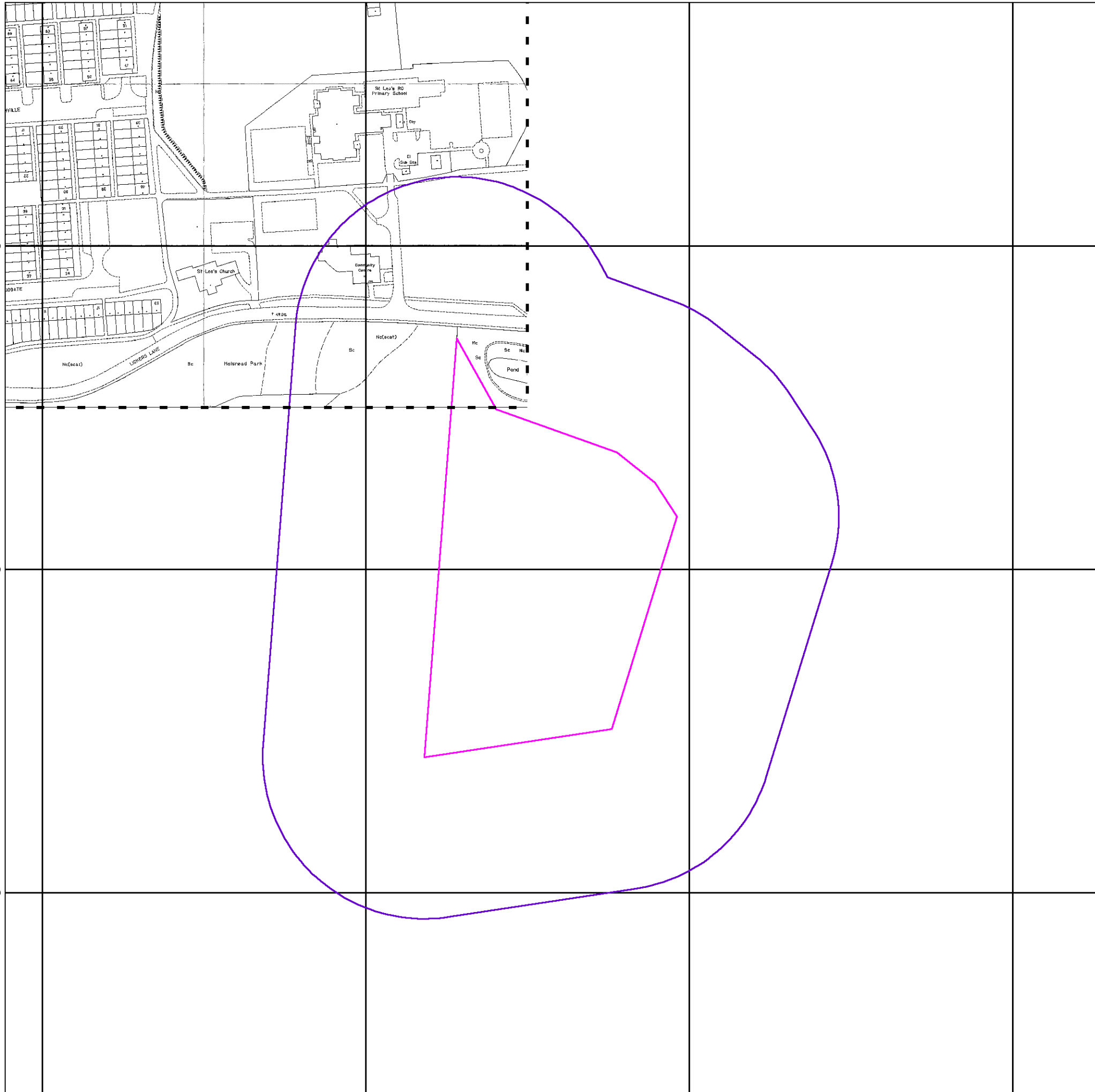
Order Number: 285280369_1_1
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National Grid Reference: 347490, 390400
Slice: A
Site Area (Ha): 2.55
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Site Details

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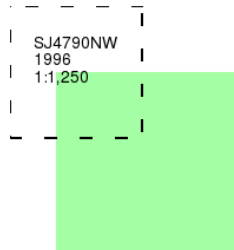
Large-Scale National Grid Data

Published 1996

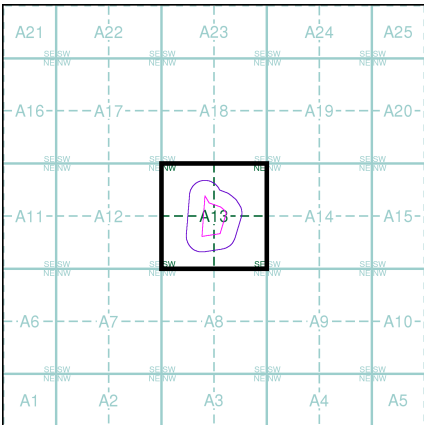
Source map scale - 1:1,250

'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: 285280369_1_1
Customer Ref: 15-065-RH-A
National Grid Reference: 347490, 390400
Slice: A
Site Area (Ha): 2.55
Search Buffer (m): 100

Site Details

Pats Shop, 32, Croftwood Grove, Whiston, PRESCOT, L35 3UT

Landmark
INFORMATION GROUP

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Web: www.envirocheck.co.uk



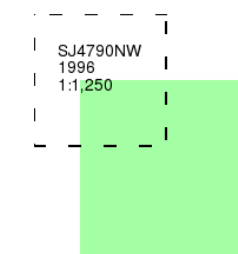
Large-Scale National Grid Data

Published 1996

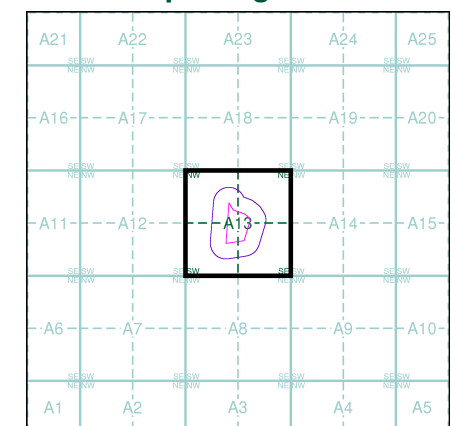
Source map scale - 1:1,250

'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

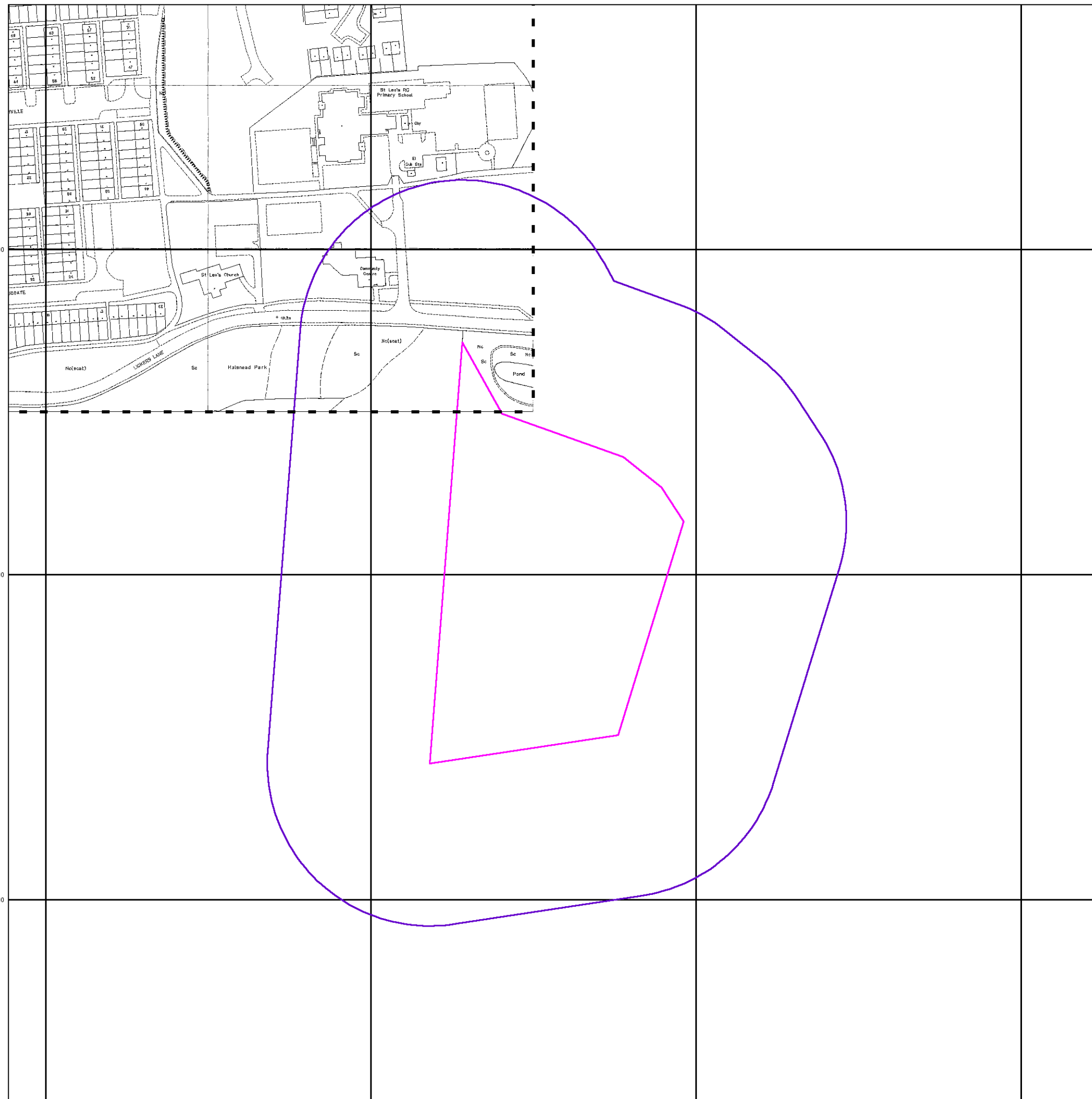
Order Number: 285280369_1_1
Customer Ref: 15-065-RH-A
National Grid Reference: 347490, 390400
Slice: A
Site Area (Ha): 2.55
Search Buffer (m): 100

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Landmark
INFORMATION GROUP

Tel: 0844 844 9952
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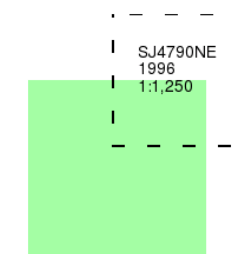
Large-Scale National Grid Data

Published 1996

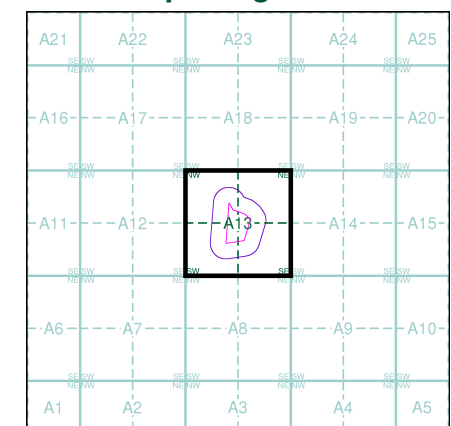
Source map scale - 1:1,250

'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

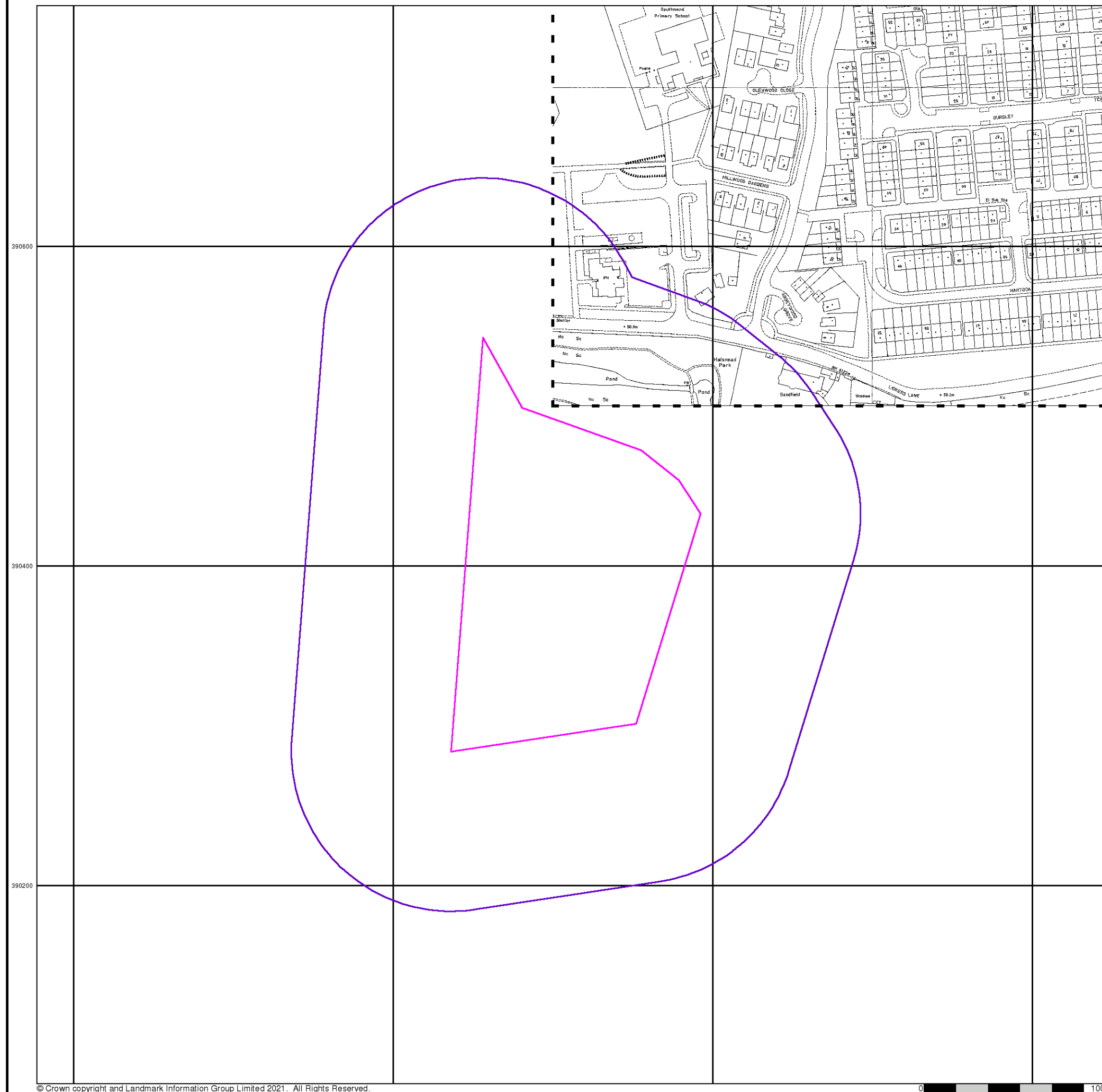
Order Number: 285280369_1_1
Customer Ref: 15-065-RH-A
National Grid Reference: 347490, 390400
Slice: A
Site Area (Ha): 2.55
Search Buffer (m): 100

Site Details

Pats Shop, 32, Croftwood Grove, Whiston, PRESCOT, L35 3UT

Landmark
INFORMATION GROUP

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



347200

347400

347600

347800

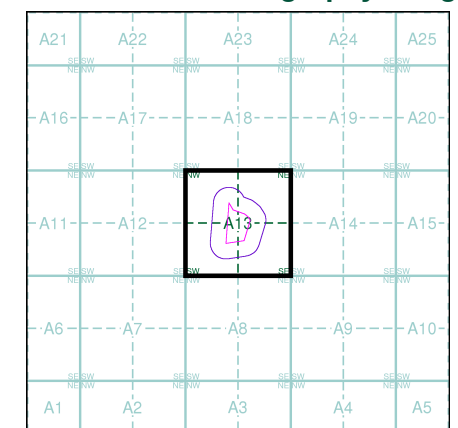


Historical Aerial Photography

Published 2000

This aerial photography was produced by Getmapping, these vertical aerial photographs provide a seamless, full colour survey of the whole of Great Britain

Historical Aerial Photography - Segment A13



Order Details

Order Number: 285280369_1_1
 Customer Ref: 15-065-RH-A
 National Grid Reference: 347490, 390400
 Slice: A
 Site Area (Ha): 2.55
 Search Buffer (m): 100

Site Details

Pats Shop, 32, Croftwood Grove, Whiston, PRESCOT, L35 3UT

Landmark
 INFORMATION GROUP

Tel: 0844 844 9952
 Fax: 0844 844 9951
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APPENDIX VI

COAL AUTHORITY REPORT

PLANS



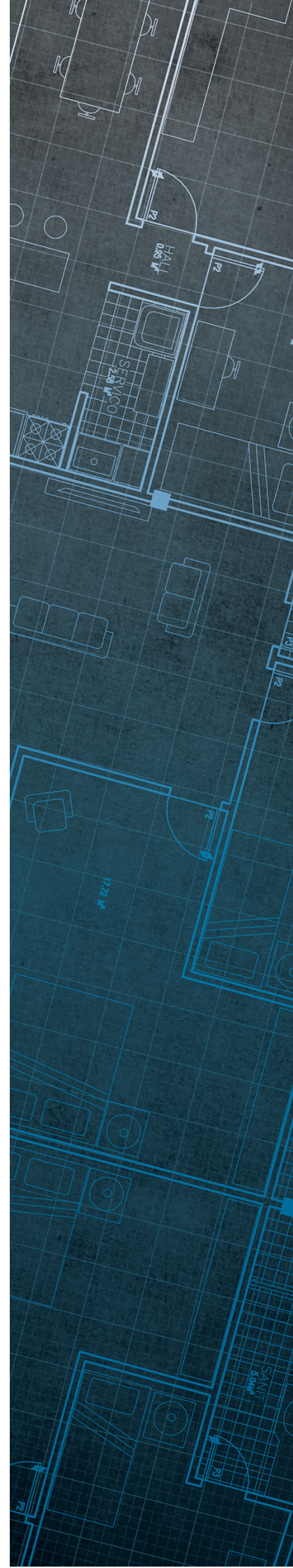
The Coal
Authority

Consultants Coal Mining Report

Croftwood Grove
Whiston
Knowsley
L35 3UT

Date of enquiry:	4 October 2021
Date enquiry received:	4 October 2021
Issue date:	4 October 2021

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Consultants

Coal Mining Report

This report is based on and limited to the records held by the Coal Authority at the time the report was produced.

Client name

E3P

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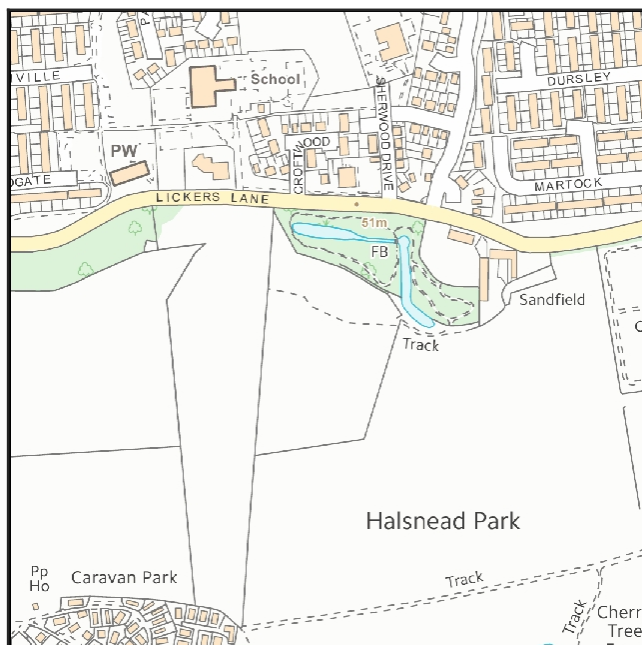
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Approximate position of property



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Section 1 – Mining activity and geology

Past underground mining

Colliery	Seam	Mineral	Coal Authority reference	Depth (m)	Direction to working	Dipping rate of seam worked (degrees)	Dipped direction of seam worked	Extraction thickness (cm)	Year last mined
unnamed	WIGAN FOUR FEET	Coal	3040	151	West	11.2	South	160	1902
unnamed	RUSHY PARK	Coal	304L	339	Beneath Property	13.4	South-West	130	1896
unnamed	RUSHY PARK	Coal	300F	370	North-West	9.4	South	130	1890
unnamed	RUSHY PARK	Coal	304I	427	West	9.5	South	130	1886

Probable unrecorded shallow workings

Yes.

Spine roadways at shallow depth

No spine roadway recorded at shallow depth.

Mine entries

None recorded within 100 metres of the enquiry boundary.

Abandoned mine plan catalogue numbers

The following abandoned mine plan catalogue numbers intersect with some, or all, of the enquiry boundary:

3671	NW638	4441
NW822	16820	PO0

Please contact us on 0345 762 6848 to determine the exact abandoned mine plans you require based on your needs.

Outcrops

Seam name	Mineral	Seam workable	Distance to outcrop (m)	Direction to outcrop	Bearing of outcrop
HIGHER FLORIDA	Coal	Yes	Within	N/A	118
HIGHER PIGEON HOUSE (PIGEON HOUSE)	Coal	Yes	10.8	West	129
LOWER FLORIDA	Coal	Yes	Within	N/A	117

Geological faults, fissures and breaklines

Please refer to the 'Summary of findings' map (on separate sheet) for details of any geological faults, fissures or breaklines either within or intersecting the enquiry boundary.

Fault under or close to the property recorded.

Opencast mines

None recorded within 500 metres of the enquiry boundary.

Coal Authority managed tips

None recorded within 500 metres of the enquiry boundary.

Section 2 – Investigative or remedial activity

Please refer to the 'Summary of findings' map (on separate sheet) for details of any activity within the area of the site boundary.

Site investigations

Distance to site investigation (m)	Direction
1.1	West
0.8	West

See Section 4 for further information.

Remediated sites

None recorded within 50 metres of the enquiry boundary.

Coal mining subsidence

The Coal Authority has not received a damage notice or claim for the subject property, or any property within 50 metres of the enquiry boundary, since 31 October 1994.

There is no current Stop Notice delaying the start of remedial works or repairs to the property.

The Coal Authority is not aware of any request having been made to carry out preventive works before coal is worked under section 33 of the Coal Mining Subsidence Act 1991.

Mine gas

None recorded within 500 metres of the enquiry boundary.

Mine water treatment schemes

None recorded within 500 metres of the enquiry boundary.

Section 3 – Licensing and future mining activity

Future underground mining

None recorded.

Coal mining licensing

None recorded within 200 metres of the enquiry boundary.

Court orders

None recorded.

Section 46 notices

No notices have been given, under section 46 of the Coal Mining Subsidence Act 1991, stating that the land is at risk of subsidence.

Withdrawal of support notices

The property is in an area where a notice to withdraw support was given in 1979.

The property is not in an area where a notice has been given under section 41 of the Coal Industry Act 1994, cancelling the entitlement to withdraw support.

Payments to owners of former copyhold land

The property is not in an area where a relevant notice has been published under the Coal Industry Act 1975/Coal Industry Act 1994.

Section 4 – Further information

The following potential risks have been identified and as part of your risk assessment should be investigated further.

Development advice

The site is within an area of historical coal mining activity. Should you require advice and/or support on understanding the mining legacy, its risks to your development or what next steps you need to take, please contact us.

Site investigations

The site is within an area of previous interest. It is close to where the Coal Authority has received information relating to past site investigations.

The site requires further investigation and may influence how you approach your risk assessment.

For further information on specific site or ground investigations in relation to any issues raised in Section 4, please call us on 0345 762 6848 or email us at groundstability@coal.gov.uk.

Section 5 – Data definitions

The datasets used in this report have limitations and assumptions within their results. For more guidance on the data and the results specific to the enquiry boundary, please **call us on 0345 762 6848** or **email us at groundstability@coal.gov.uk**.

Past underground coal mining

Details of all recorded underground mining relative to the enquiry boundary. Only past underground workings where the enquiry boundary is within 0.7 times the depth of the workings (zone of likely physical influence) allowing for seam inclination, will be included.

Probable unrecorded shallow workings

Areas where the Coal Authority believes there to be unrecorded coal workings that exist at or close to the surface (less than 30 metres deep).

Spine roadways at shallow depth

Connecting roadways either, working to working, or, surface to working, both in-seam and cross measures that exist at or close to the surface (less than 30 metres deep), either within or within 10 metres of the enquiry boundary.

Mine entries

Details of any shaft or adit either within, or within 100 metres of the enquiry boundary including approximate location, brief treatment details where known, the mineral worked from the mine entry and conveyance details where the mine entry has previously been sold by the Authority or its predecessors British Coal or the National Coal Board.

Abandoned mine plan catalogue numbers

Plan numbers extracted from the abandoned mines catalogue containing details of coal and other mineral abandonment plans deposited via the Mines Inspectorate in accordance with the Coal Mines Regulation Act and Metalliferous Mines Regulation Act 1872. A maximum of 9 plan extents that intersect with the enquiry boundary will be included. This does not infer that the workings and/or mine entries shown on the abandonment plan will be relevant to the site/property boundary.

Outcrops

Details of seam outcrops will be included where the enquiry boundary intersects with a conjectured or actual seam outcrop location (derived by either the British Geological Survey or the Coal Authority) or intersects with a defined 50 metres buffer on the coal (dip) side of the outcrop. An indication of whether the Coal Authority believes the seam to be of sufficient thickness and/or quality to have been worked will also be included.

Geological faults, fissures and breaklines

Geological disturbances or fractures in the bedrock. Surface fault lines (British Geological Survey derived data) and fissures and breaklines (Coal Authority derived data) intersecting with the enquiry boundary will be included. In some circumstances faults, fissures or breaklines have been known to contribute to surface subsidence damage as a consequence of underground coal mining.

Opencast mines

Opencast coal sites from which coal has been removed in the past by opencast (surface) methods and where the enquiry boundary is within 500 metres of either the licence area, site boundary, excavation area (high wall) or coaling area.

Coal Authority managed tips

Locations of disused colliery tip sites owned and managed by the Coal Authority, located within 500 metres of the enquiry boundary.

Site investigations

Details of site investigations within 50 metres of the enquiry boundary where the Coal Authority has received information relating to coal mining risk investigation and/or remediation by third parties.

Remediated sites

Sites where the Coal Authority has undertaken remedial works either within or within 50 metres of the enquiry boundary following report of a hazard relating to coal mining under the Coal Authority's Emergency Surface Hazard Call Out procedures.

Coal mining subsidence

Details of alleged coal mining subsidence claims made since 31 October 1994 either within or within 50 metres of the enquiry boundary. Where the claim relates to the enquiry boundary confirmation of whether the claim was accepted, rejected or whether liability is still being determined will be given. Where the claim has been discharged, whether this was by repair, payment of compensation or a combination of both, the value of the claim, where known, will also be given.

Details of any current 'Stop Notice' deferring remedial works or repairs affecting the property/site, and if so the date of the notice.

Details of any request made to execute preventative works before coal is worked under section 33 of the Coal Mining Subsidence Act 1991. If yes, whether any person withheld consent or failed to comply with any request to execute preventative works.

Mine gas

Reports of alleged mine gas emissions received by the Coal Authority, either within or within 500 metres of the enquiry boundary that subsequently required investigation and action by the Coal Authority to mitigate the effects of the mine gas emission.

Mine water treatment schemes

Locations where the Coal Authority has constructed or operates assets that remove pollutants from mine water prior to the treated mine water being discharged into the receiving water body.

These schemes are part of the UK's strategy to meet the requirements of the Water Framework Directive. Schemes fall into 2 basic categories: Remedial – mitigating the impact of existing pollution or Preventative – preventing a future pollution incident.

Mine water treatment schemes generally consist of one or more primary settlement lagoons and one or more reed beds for secondary treatment. A small number are more specialised process treatment plants.

Future underground mining

Details of all planned underground mining relative to the enquiry boundary. Only those future workings where the enquiry boundary is within 0.7 times the depth of the workings (zone of likely physical influence) allowing for seam inclination will be included.

Coal mining licensing

Details of all licenses issued by the Coal Authority either within or within 200 metres of the enquiry boundary in relation to the under taking of surface coal mining, underground coal mining or underground coal gasification.

Court orders

Orders in respect of the working of coal under the Mines (Working Facilities and Support) Acts of 1923 and 1966 or any statutory modification or amendment thereof.

Section 46 notices

Notice of proposals relating to underground coal mining operations that have been given under section 46 of the Coal Mining Subsidence Act 1991.

Withdrawal of support notices

Published notices of entitlement to withdraw support and the date of the notice. Details of any revocation notice withdrawing the entitlement to withdraw support given under Section 41 of the Coal Industry Act 1994.

Payment to owners of former copyhold land

Relevant notices which may affect the property and any subsequent notice of retained interests in coal and coal mines, acceptance or rejection notices and whether any compensation has been paid to a claimant.

The map highlights any specific surface or subsurface features within or near to the boundary of the site.

Key

- Approximate position of the enquiry boundary shown 
- Outcrop (Conjectured) 
- Geological faults 
- Site investigations 

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