



Redrow Homes Limited

Land at Stakehill, Rochdale

Minerals Assessment:

322974-R03 (00)

RSK GENERAL NOTES

Project No.: 322974-R03 (00)

Title: Minerals Assessment: Land at Stakehill, Rochdale

Client: Redrow Homes Limited

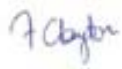
Date: February 2023

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Status: Rev 00

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Revision control sheet				
Revision ref.	Date	Reason for revision	Amended by:	Approved by:
Rev 00	01/02/2023	First issue	n/a	see above

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Where field investigations have been carried out, these have been restricted to a level of detail required to achieve the stated objectives of the work.

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1 INTRODUCTION

1.1 Commissioning

RSK Environment Limited (RSK) was commissioned by Redrow Homes Limited to complete a Minerals Assessment of the land at Stakehill, off Manchester Road, near Rochdale. The project was carried out to an agreed brief as set out in RSK's proposal (reference 322974-TL02(00), dated 24 January 2023).

This report is subject to the RSK service constraints given in Appendix A and limitations that may be described through this document.

1.2 Proposed development

This Minerals Assessment has been prepared to support a planning application for a residential development on approximately 89 hectares of land to the south of the M62 motorway, south of Rochdale.

The planned layout of the site is shown in the masterplan provided in Appendix B.

1.3 Limitations

This report has been completed as a desk-based assessment and information provided in datasets has been assumed to be correct.

1.4 Assessment preparation

This Minerals Assessment has been prepared in order to determine whether this proposed development will impact on any mineral resources (or related infrastructure) within the site boundary.

This report has been completed by reviewing information from the BGS, the local authority and other information in the public domain, along with site-specific information from the Envirocheck report and other reports already prepared for the site.

1.5 Existing site-specific reports

A preliminary risk assessment (PRA) and coal mining risk assessment (CMRA) have been prepared for the site, and these provide an overview of the geology present. These reports should be consulted for additional information:

- Preliminary Risk Assessment, Land at Stakehill, RSK report reference 322974-R01(00), dated September 2022
- Coal Mining Risk Assessment, Land at Stakehill, RSK report reference 322974-R02(00), dated September 2022.

2 PLANNING POLICY AND GUIDANCE

2.1 National policy and guidance

National planning policies and guidance that are relevant for this development are listed below:

- Environmental Protection Act, 1990
- Contaminated Land Regulations (England), 2006 (amended 2012)
- The Environmental Permitting Regulations (England & Wales) 2016 (last revised March 2020)
- National Planning Policy Framework (NPPF), 2021
- Planning Practice Guidance relating to the natural environment and land affected by contamination
- Part IIA of the Environmental Protection Act, 2012
- Remedial Targets Methodology: Hydrogeological Risk Assessment for Land Contamination.

The Mineral Products Association (MPA) and the Planning Officers' Society (POS) produced a guidance document in 2019, which has also been referred to in the completion of this Minerals Assessment (Minerals Safeguarding Practice Guidance, version 1.4). This document provides an outline for ensuring that the planning process avoids unnecessary sterilisation of minerals and unreasonable constraint on minerals infrastructure or on active or proposed extraction sites. Section 4 is relevant in understanding how the safeguarding process overseen by local planning authorities can be operated when evaluating non-minerals developments.

The legislation and policy section of the Minerals UK dataset has also been reviewed. Information provided in the Mineral Resource and Planning section includes the following points:

- the planning system requires access to details on location, extent and quality of mineral resources and their relationship to national planning designations, to ensure that constraints to extraction of minerals can be fully understood and managed
- this information is important for both protection of minerals from sterilisation and for identifying areas of future workings
- to assist in this, the BGS-produced mineral resource maps should be utilised when assessing mineral resources as part of the assessment works for a proposed development.

The Minerals UK information on Minerals Safeguarding includes the following notes:

- mineral safeguarding assessments should be included in the planning process in order to minimise sterilisation of mineral resources by providing a mechanism for considering mineral resources alongside other concerns as part of the decision-making process.

There is also a guidance document produced by the BGS which will be consulted by planning authorities when dealing with sites with the potential to affect mineral resource sites:

- BGS open report Mineral Safeguarding in England: good practice advice, 2011 (OR/11/046).

2.2 Local policy and guidance

Local planning policy is set by Rochdale Borough Council and information relating to minerals is incorporated in the Greater Manchester Joint Minerals Development Plan and Rochdale Borough Unitary Development Plan and Policies, which can be accessed on the online (see Section 6).

In preparation of this Minerals Assessment, the Greater Manchester Adopted Joint Minerals Development Plan has been consulted (April 2013). One of the key aims of the Minerals Development Plan is to safeguard mineral resources with potential for future extraction.

The Minerals Development Plan objectives require that a steady supply of minerals can be provided to meet requirements. A high standard of restoration and aftercare following on from mineral extraction is also required. The main aim of the plan is to avoid sterilisation of mineral assets and protect existing minerals infrastructure.

The plan comments on the fact that extraction of minerals will not be appropriate in all cases (paragraph 4.7), indicating that consideration should be given to the following issues in determining the viability of prior extraction of minerals as part of a development opportunity:

- quality of value of minerals present
- the nature of the development and the practicality of extraction
- viability of the primary development
- environmental considerations
- geology of the site
- stability of the site.

Paragraph 4.8 deals with exemptions from the requirements of the Minerals Safeguarding Policy (Policy 8) based on the practicality of working minerals. Policy 8 states that:

‘Proposals for non-mineral development within the Mineral Safeguarding Areas that do not allow for the prior extraction of minerals will only be permitted where:

1. the need for the development outweighs the need to extract the mineral, or
2. it can be clearly demonstrated that it is not environmentally acceptable or economically viable to extract the mineral prior to non-mineral development taking place, or
3. it can be clearly demonstrated that the mineral is either not present or of no economic value or too deep to extract in relation to the proposed development, or

4. the development is limited or temporary and would not prevent minerals extraction taking place in the future’.

In addition to the minerals policies, the Greater Manchester Places for Everyone (2021) document has also been considered. This incorporates the site area as a site which is proposed for future development as part of the vision for the Greater Manchester area, as further discussed in Section 5.3

2.3 Minerals consultation and safeguarding areas

Mineral Planning Authorities will define Minerals Consultation Areas and Minerals Safeguarding Areas (MCAs and MSAs). The consultation areas will be based around the safeguarding areas, but potentially with an additional buffer. The presence of the MCA or MSA should trigger a consultation between the local planning authority and the local mineral planning authority regarding planning applications. The consultation should incorporate a review of :

- the potential for the development to sterilise the mineral resources
- the potential for the development to constrain operation of the mineral supply infrastructure, and
- whether the non-mineral development proposal allows consistency with the minerals policies.

This report provides the information required for a Minerals Resource Assessment, with the structure broadly following that presented in Annex 1 of the Minerals Safeguarding Guidance Document (2019), see Appendix E. The Minerals Resource Assessment should demonstrate compliance with safeguarding policy.

3 MINERALS SAFEGUARDING ASSESSMENT

3.1 Site location, boundaries and area

Site location details are presented in Table 1 and a site location plan is provided as Figure 1.

Table 1 Site location details

Site name	Land at Stakehill
Full site address and postcode	Rochdale, M24 2SB
National Grid reference (centre of site)	389096, 409377

The site boundary and current site layout are shown on Figure 2. The site covers an area of c. 89 hectares. It is currently occupied by several farms and a garden centre.

The site is approximately rectangular in shape with the long axis aligned north-south and comprises almost entirely agricultural land. It is crossed by Thornham Lane in its southern part and by numerous farm tracks and footpaths.

The site generally slopes down from a high point (182m) located just northwest of Thornfields Farm, close to the site eastern boundary, with the lowest point (132m) being the extreme southwest corner of the site.

St John's Church is located in the southwestern corner of the site, with Thornham Primary School also located on Thornham Lane in the south of the site. Newhay and Thornfields Farms are located in the central western and eastern parts of the site, respectively.

3.1.1 Surrounding land uses

The site is located between Slattocks and Rochdale, immediately east of the village of Trub and southwest of Junction 20 of the M62 motorway, within a predominantly rural setting. Agricultural land is present off-site to the east and south. Residential and commercial properties are located to the west and in the north is Thornham New Road and the motorway.

3.2 Site geology

Made ground is expected to be present in some locations across the site, particularly where pits or ponds have been backfilled. The BGS GeoIndex (accessed online, February 2023) shows a large area of artificial ground in the north eastern corner of the site.

Fluvioglacial deposits, comprising mainly sand and gravel with some clay, cover the majority of the site with glacial till, comprising sandy clay with pebbles, cobbles and boulders, mainly present in the south western area.

The bedrock units beneath the entire site are from the Pennine Lower Coal Measures Formation, which is made up of layers of siltstone, sandstone, seatearth, marine bands, ironstone and coal seams.

Information from sources including the BGS and the Envirocheck report, shows that sand and gravel extraction has occurred across the site.

The CMRA concludes that there is no risk to the site from historical deep or shallow coal workings and there are no records of any opencast coal extraction at the site. There are no mine shafts on-site or within 1km of the site boundary. The CMRA concluded that there were no risks to the proposed development due to the presence of worked coal seams. However, this assessment considers whether there is the potential for the proposed development to negatively impact on coal reserves beneath the site.

3.3 Site history

Information was included in the PRA detailing locations of historical mineral extraction across the site, based on a review of historical map editions. The locations of sand and gravel pits or areas of excavations are summarised below:

- sand pit located in south-east of site (maps 1893-1955)
- possible material deposition in the area now occupied by the garden centre (1939/1975), which could correlate to an earlier phase of mineral extraction
- material deposition (1954-present day) in an area 200m south of Newhay Farm
- evidence of large area of sand and gravel extraction (1922-1984) across the northern area of the site
- there is one area of potentially infilled land on-site, as identified by the Envirocheck database report (grid reference 389284, 409830)
- location of a historical landfill site (grid reference 388809 409174).

Extracts from the historical map reports are provided in Appendix C showing these features, and a full set of historical maps can be viewed as an appendix to the PRA report.

A constraints plan shows the locations of all these features on one map (see Figure 3).

3.4 The mineral resource

Based on the known geology of the site, the potential mineral resources include sand, gravel and coal.

The borehole records data on the BGS GeoIndex shows that there are no borehole records directly within the site boundary. However, there are a number around the boundary (mainly to the north-west), with some deeper boreholes. The geological sequence is shown to be as indicated by geological mapping, with superficial deposits of clay, sand and gravel overlying deeper Coal Measures deposits. A map showing the locations of BGS boreholes is provided in Appendix D.

The subsections below provide details relating to the sand, gravel and coal resources within the site area, based on a number of information sources that have been reviewed.

3.4.1 Review of Greater Manchester joint development plan maps

The maps provided in the Joint Development Plan provide an indication of where there are potential mineral resources within the site area. Relevant maps are reproduced in Appendix F.

- map 2 shows that two areas of search for sand are partially within the site boundary (on the eastern and south-eastern sections of the site)
- map 4 shows that most of the site is within an area of Mineral Safeguarding for Glaciofluvial sand and gravel
- map 7 shows that the majority of the site is within a Minerals Safeguarding Area for coal.

3.4.2 Minerals UK data

As part of the dataset held by Minerals UK (accessible on the BGS portal), the Industrial Mineral Assessment Unit (IMAU) have prepared a set of maps and reports relating to mineral resources. Reference to this dataset shows that the Stakehill land is not within an area covered by any of the maps or reports (<https://www2.bgs.ac.uk/mineralsuk/mines/IMAU.html>).

The Minerals UK dataset also includes the Directory of Mines and Quarries, the most recent of which is for 2019 to 2020. This directory does not include any current sites within the Greater Manchester area for extraction of sand and gravel or coal.

The BritPits dataset (providing data on historical mines and quarries) shows the locations of a number of sand and gravel pits within the northern section of the site and one close to the southern boundary (see plan in Appendix D). These are point-features, so do not provide the boundaries of the pits. However, all the pits are shown as sites where operation has ceased.

3.4.3 Greater Manchester mineral resources map, scale 1:100,000

The following documents (comprising a map and report) has been prepared for the Greater Manchester area:

Mineral Resource Information in Support of National, Regional and Local Planning, comprising the Cities of Manchester and Salford and the Metropolitan Boroughs of Bolton, Bury, Oldham, Rochdale, Stockport, Tameside, Trafford and Wigan. Published by the BGS and the Office of the Deputy Prime Minister, 2006.

Review of the map shows that the site is within an area of glaciofluvial deposit and the existing sand extraction facility of Castleton Sand and Gravel Pit is located in the north eastern corner of the site. At the date of publication (2006), the planning application for that site was either current or expired. Figure 4 within the report that accompanies the map shows the Castleton Sand and Gravel Pit as having surface planning permission (as of 2006), but there are no other areas within the site boundary that had planning permission. A copy of the map is reproduced in Appendix G, with an excerpt showing the site area also included.

3.4.4 RSK coal mining risk assessment, land at Stakehill

The CMRA September 2022, completed an assessment of all issues relating to coal mining, including deep and shallow mining, opencast mining and the presence of mine shafts or adits. The report concluded that no mining hazards were present on or around the site.

The coal reserves present beneath the site were shown to be at depth (greater than 120m bgl).

3.5 Sand and gravel

The combination of information from the geological mapping and the historical mapping indicates that extraction of sand and gravel across the northern area of the site has been undertaken during working of the Castleton Sand and Gravel pit from the 1920s to 1980s. On this basis, there is no longer a viable sand and gravel mineral resource that could be extracted in this area of the site.

Comparison of the worked areas against the BGS mapping showing the extent of the sand and gravel deposits indicates that the northern areas are consistently underlain by the glaciofluvial sand and gravel deposits. However, across the remainder of the site, there is a more variable nature to the superficial deposits, with both glaciofluvial units and Devensian till being present across the central and southern areas of the site. It is therefore notable that the most consistent area of sand and gravel presence has already been utilised, and the southerly section of the site is less likely to provide a consistent source of sand and gravel.

Geological mapping also indicates the presence of a buried channel within the central section of the site. This is likely to have resulted in further variability in the superficial geology.

3.6 Coal

The CMRA for the site has demonstrated the absence of coal-bearing strata within the near-surface deposits. There are no shallow coal seams (within the upper 30m bgl), based on information within the geological assessment. The shallowest coal seam which could potentially be viably extracted is at a depth of greater than 120m bgl. The seam thickness is reported to be 1.8m to 1.9m thick (based on information from surrounding BGS borehole records, copies of which are provided in the CMRA).

If extraction of this deep coal resource is considered viable in the future, due to the significant depth of the seam, it would potentially be possible to undertake this regardless of surface developments, as access to the seams could be via deep shafts which could be located at some distance from the resource. However, given the depth and the fact that there is only a single coal seam of significant thickness, this is unlikely to be considered economically viable to extract.

The conclusion of this Mineral Assessment with respect to coal is therefore that development of the site will not impact the deep coal reserves, which may be accessed in future, if economically viable.

3.7 Potential constraints on mineral extraction at location

3.7.1 Sand and gravel

As noted above, there has been significant extraction of sand and gravel resources within the northern section of the site. Some smaller pits and quarries are also indicated on historical mapping across the central and southern areas of the site, showing that limited extraction of sand and gravel has also been undertaken in these areas.

It is important to note that the site area south of Thornham Lane and north of Slattocks Link Road is intended to be preserved as a green area, with no properties constructed here, to act as a buffer between Rochdale and Middleton. As such, this area of site would not be sterilised in terms of the potential for future access of mineral resources.

It should be noted that the Mineral Safeguarding Area for sand and gravel within Greater Manchester is extensive, and that the unworked section of this site that is proposed for development is of minor significance compared with the remaining safeguarded area. Figure 5 shows the Mineral Safeguarding Area for sand and gravel within the site boundary and the figures provided in Appendices F and G should be consulted for the wider context of sand and gravel extent within the Rochdale and wider Greater Manchester area.

3.7.2 Coal

As noted in the preceding sections, the proposed development will not have a negative impact on the existing coal resources within the site boundary. If deemed economically viable in the future, the Arley coal seam could be reached at depth and extracted from off-site facilities.

Despite the site being within a Minerals Safeguarding Area for coal, it has been conclusively demonstrated that the coal resources within the site will not be affected by construction of the proposed development.

4 MINERALS INFRASTRUCTURE ASSESSMENT

The site assessment has identified a lack of current mineral extraction sites within or close to the site boundary, and it is therefore not considered necessary to undertake a separate assessment of minerals infrastructure in association with this Minerals Assessment.

5 CONCLUSIONS

5.1 Amount of mineral at risk of sterilisation

This Minerals Assessment has shown that a significant proportion of available sand and gravel resource within the site has already been extracted (as shown on Figure 3). The remaining sand and gravel resource within central and south-eastern areas of the site is a small proportion of the Mineral Safeguarding Area for sand and gravel, which covers significant areas of land within the Rochdale and wider Greater Manchester area.

With respect to coal, there are no surface or shallow coal reserves present within the site boundary. Although deep coal is present (greater than 120m depth), if economically viable in the future, access to this resource would still be possible by deep mining from off-site even if the proposed development proceeds.

5.2 Current and future importance of mineral resources

Given the historical extraction of sand and gravel that has already been undertaken at the site, and the fact that underlying coal seams are at such significant depth beneath the site, it is not considered mineral resources beneath the site are of significant future importance. This conclusion has also been made based on the extensive nature of the Mineral Safeguarding Area for sand and gravel in the locality around the site.

5.3 Importance of proposed non-minerals development

The proposed development is an important residential opportunity, providing much-needed residential properties within the Rochdale area. The masterplan design shows the provision of a residential area in line with the requirements of the Greater Manchester Places for Everyone document (August 2021). The site is specifically included as a development area as part of policy JP Allocation 2 (see Appendix H).

This development would assist Greater Manchester in achieving the aims of the policies within the GMSF, including the following:

- provision of high quality homes to support new jobs along the M62 corridor and create a sustainable and high quality extension to the urban area
- achieve excellent design and sustainability through master-planning
- incorporate design codes to ensure comprehensive development
- ensure the preservation of the setting of St John's Church and the ware memorial and consider views from Tandle Hill Country Park
- retain a separation between the urban areas of Rochdale and Middleton
- consider a potential new railway station at Slattocks
- provide connecting pedestrian and cycle routes to other residential areas and transport hubs
- take account existing residential properties
- deliver high quality landscaping and green infrastructure

- create attractive boundary areas
- consider and improve the availability of local primary and secondary school places
- incorporate noise and air quality mitigation in respect of the M62 and A627(M) corridors.

On the basis of the information reviewed within this Minerals Assessment, it is considered that given the historical mineral extraction already undertaken in large areas of the site, and the extensive areas of the wider Rochdale and Greater Manchester area that are covered by the Mineral Safeguarding Area for sand and gravel, development of this site could be undertaken in line with the mineral safeguarding policies of the Greater Manchester Joint Development Plan without any additional extraction of mineral resources.

The importance of the land at Stakehill within the Greater Manchester Places for Everyone policy document should also be taken into consideration.

6 REFERENCES

BGS GeoIndex Onshore (accessed online, https://mapapps2.bgs.ac.uk/geoindex/home.html?_ga=2.66027054.1050639966.1674032823-632543622.1674032823).

BGS and the Office of the Deputy Prime Minister, Mineral Resource Information in Support of National, Regional and Local Planning, comprising the Cities of Manchester and Salford and the Metropolitan Boroughs of Bolton, Bury, Oldham, Rochdale, Stockport, Tameside, Trafford and Wigan, 2006.

BGS open report, Mineral Safeguarding in England: good practice advice, 2011 (BGS OR/11/046).

BGS, Minerals UK datasets accessed via the BGS portal (<https://www2.bgs.ac.uk/mineralsuk/>), including legislation and policy section, mineral resource and planning section and mineral safeguarding section.

Greater Manchester Adopted Joint Minerals Development Plan, April 2013 (accessed online, https://www.manchester.gov.uk/downloads/download/5550/greater_manchester_joint_minerals_development_plan_documents).

Greater Manchester Combined Authority Places for Everyone Plan (accessed online, <https://www.greatermanchester-ca.gov.uk/what-we-do/planning-and-housing/places-for-everyone/submission-documents/>).

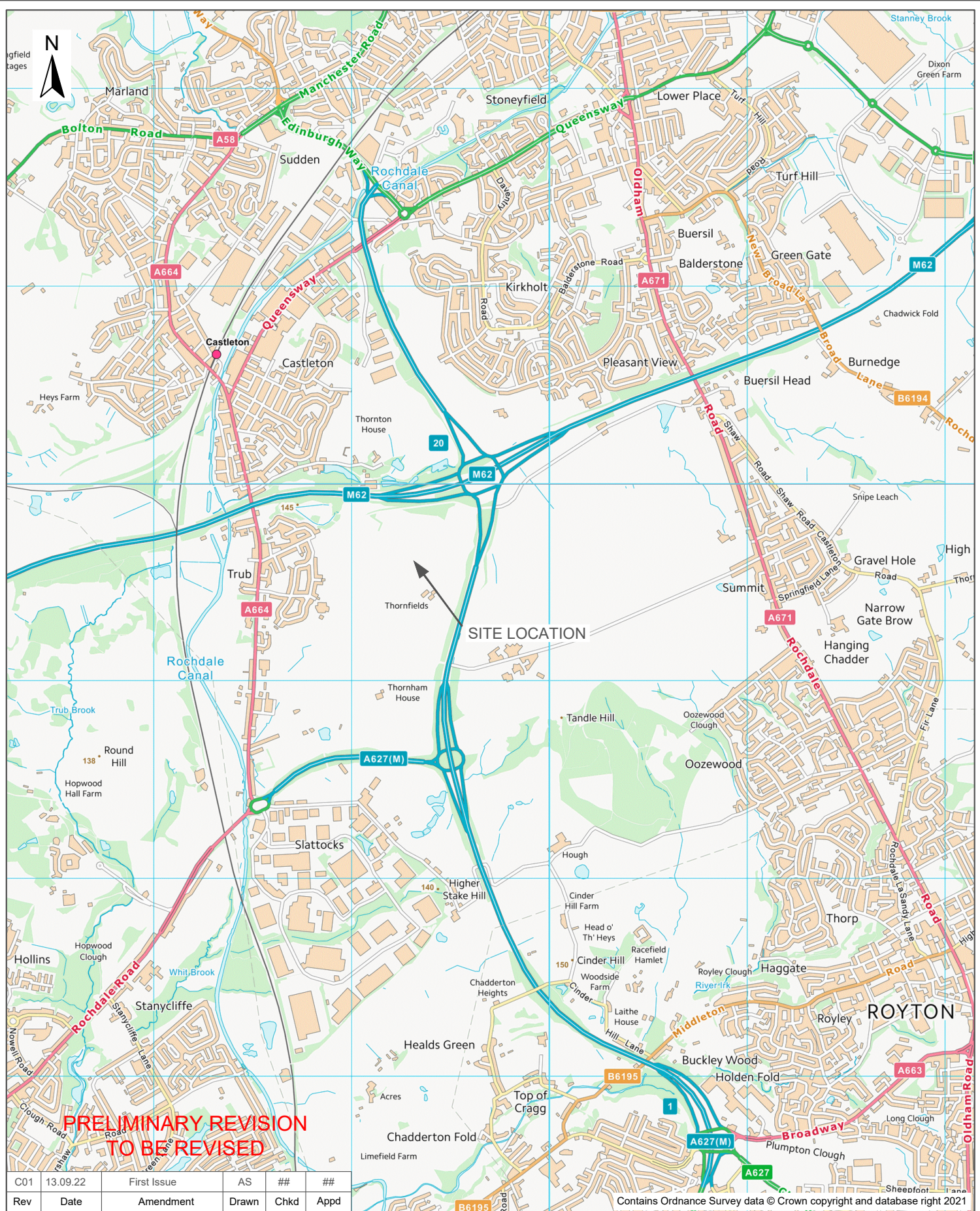
MPA and POS, Minerals Safeguarding Practice Guidance, version 1.4, The Mineral Products Association (MPA) and the Planning Officers' Society (POS), 2019.

Rochdale Borough Unitary Development Plan and Policies (accessed via council website, <https://www.rochdale.gov.uk/local-planning-policy/local-plan>).

RSK Environment Limited, Preliminary Risk Assessment, Land at Stakehill, report reference 322974-R01(00), dated September 2022.

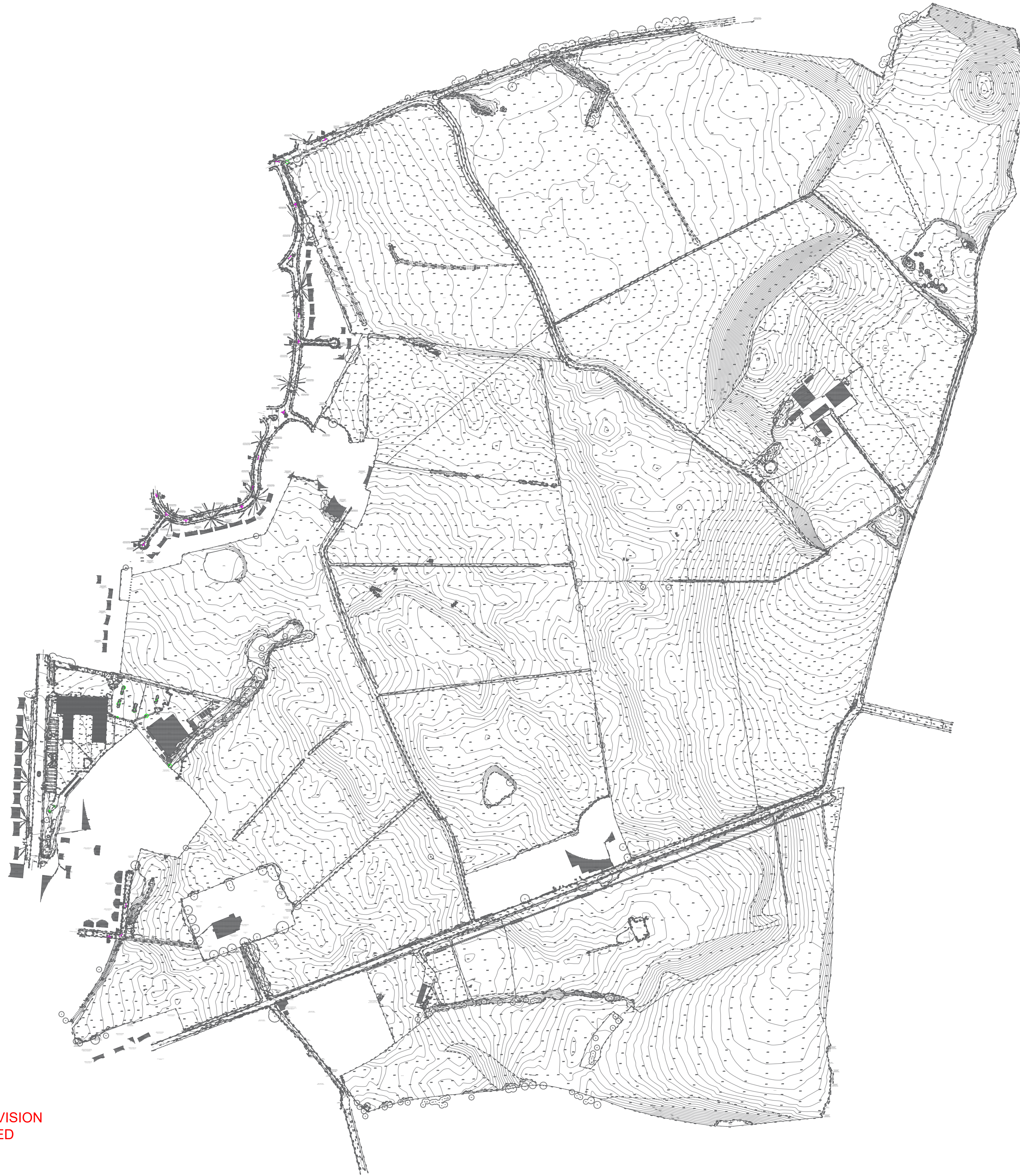
RSK Environment Limited, Coal Mining Risk Assessment, Land at Stakehill, report reference 322974-R02(00), dated September 2022.

FIGURES



C01	13.09.22	First Issue	AS	##	##
Rev	Date	Amendment	Drawn	Chkd	Appd

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			Project Name Land at Stakehill		
			Description Site Location Plan		
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			Rev P01	File name 322974-HE-111-SS-D-C-11101-P01	



PRELIMINARY REVISION
TO BE REVISED

LEGEND

Notes:

Base plan provided by Survey Eng Ltd No.Ref: RH.TS.21_A.

C01	13.09.22	First Issue	AS	##	##
Rev	Date	Amendment	Drawn	Chkd	Appd



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Project Name

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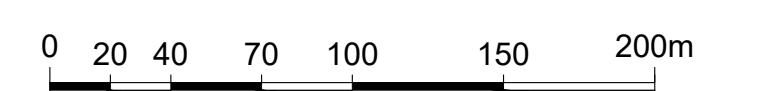
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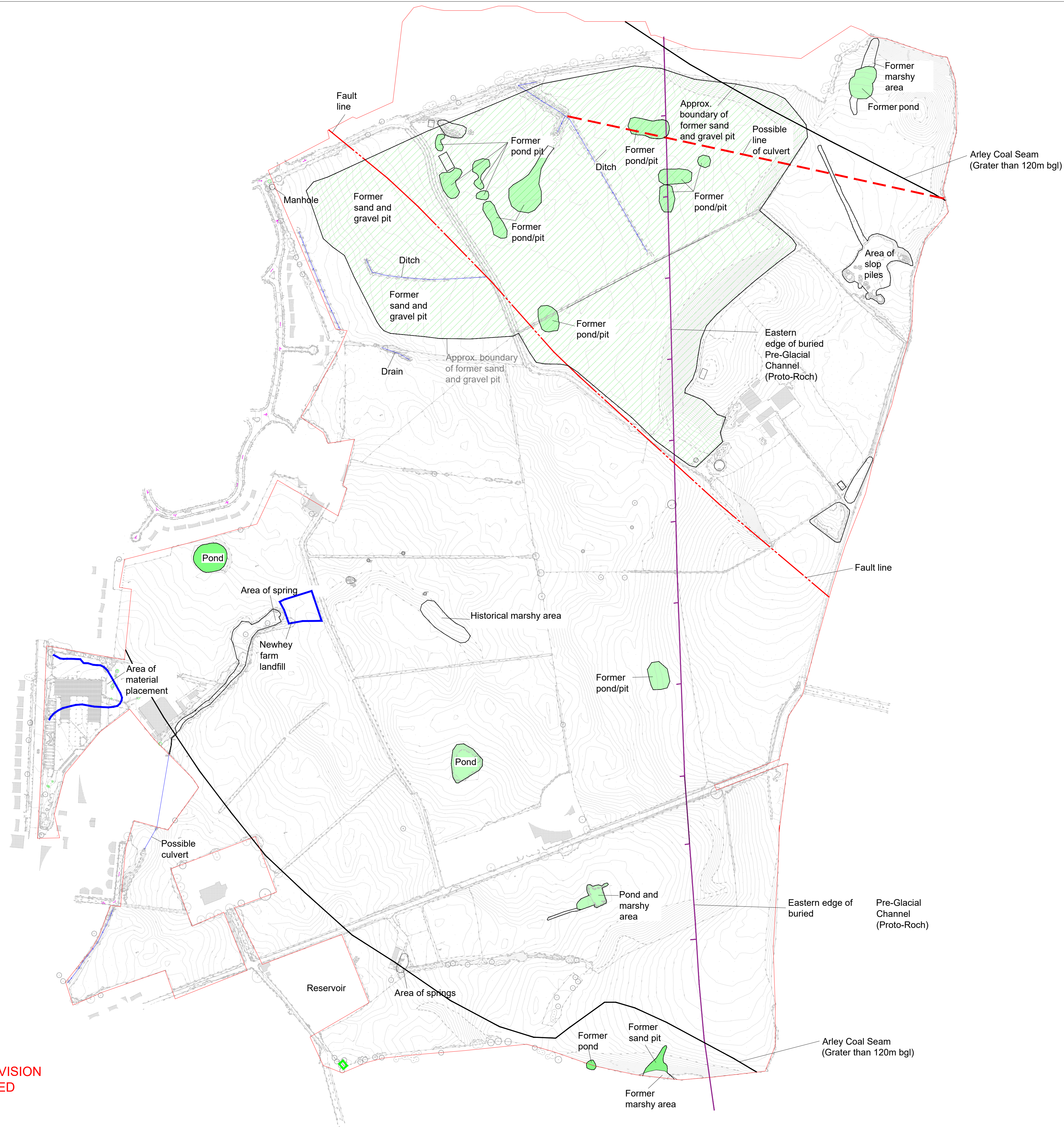
Site Layout Plan

Project ID	Drawing no.	Revision
322974	11201	P01

File name
322974-HE-112-SS-D-C-11201-P01

Dimensions	Scale	Size
m	1:2500	A1





PRELIMINARY REVISION
TO BE REVISED

LEGEND

- Site boundary
- Area of sand and gravel excavation
- Former pit/pond
- Pre-glacial channel

Notes:

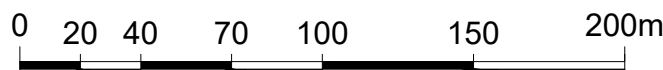
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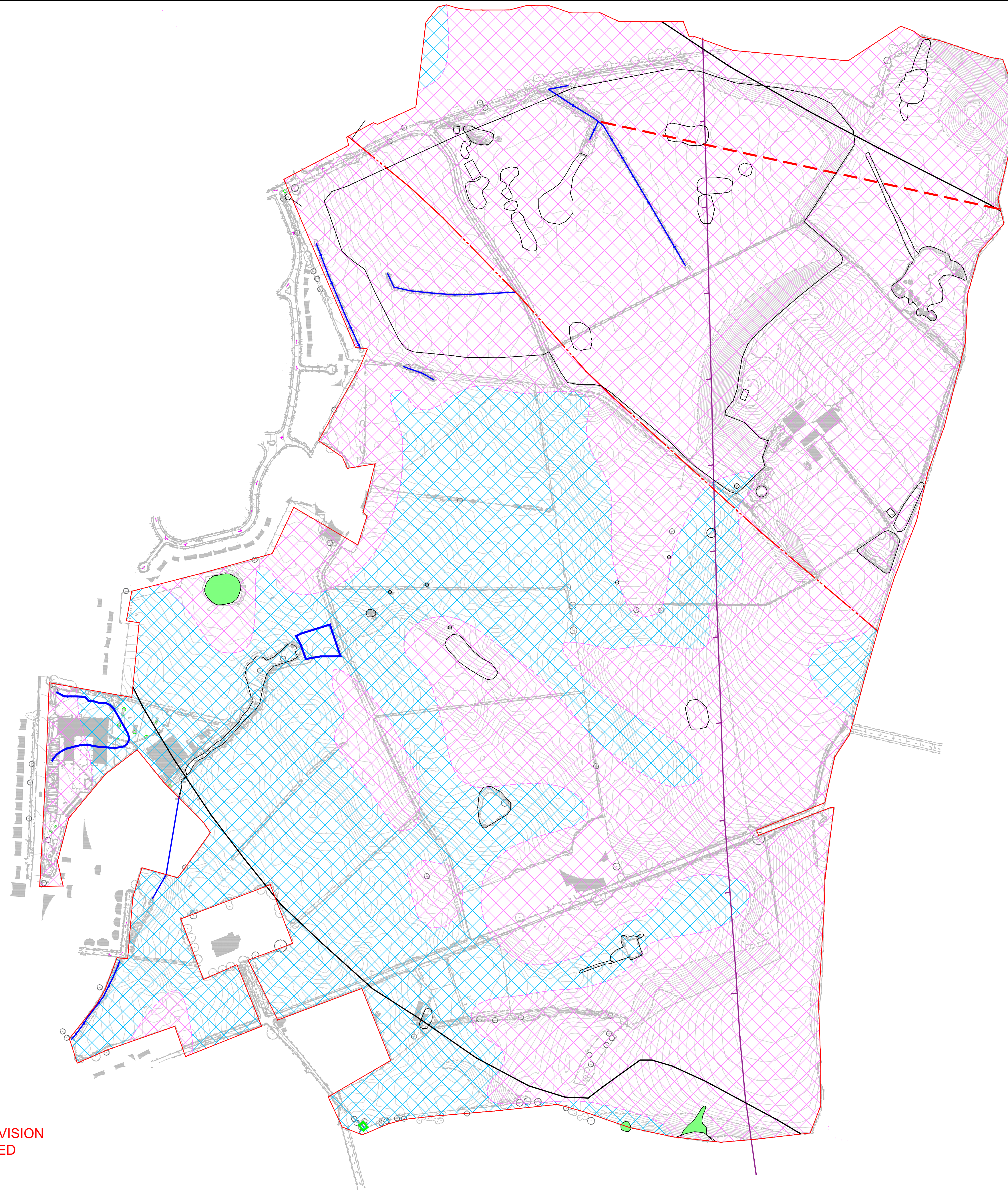
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Client		
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Project Name		
Land at Stakehill		
Description		
Minerals Safeguarding Plan		
Project ID	Drawing no.	Revision
322974	32402	P01
File name		
322974-HE-324-SS-D-C-32402-P01		
Dimensions	Scale	Size
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PRELIMINARY REVISION
TO BE REVISED

LEGEND

- Site boundary
- Devensian till
- Glaciofluvial sand and gravel

Notes:

Base plan provided by Survey Eng Ltd No.Ref: RH.TS.21_A.

C01	26.01.23	First Issue	BS	##	##
Rev	Date	Amendment	Drawn	Chkd	Appd



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Client

Redrow Homes Ltd

Project Name

Land at Stakehill

Description

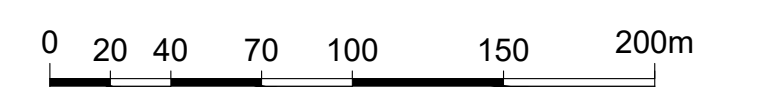
Superficial Geological Plan for Glaciofluvial
sand and gravel & Devensian till

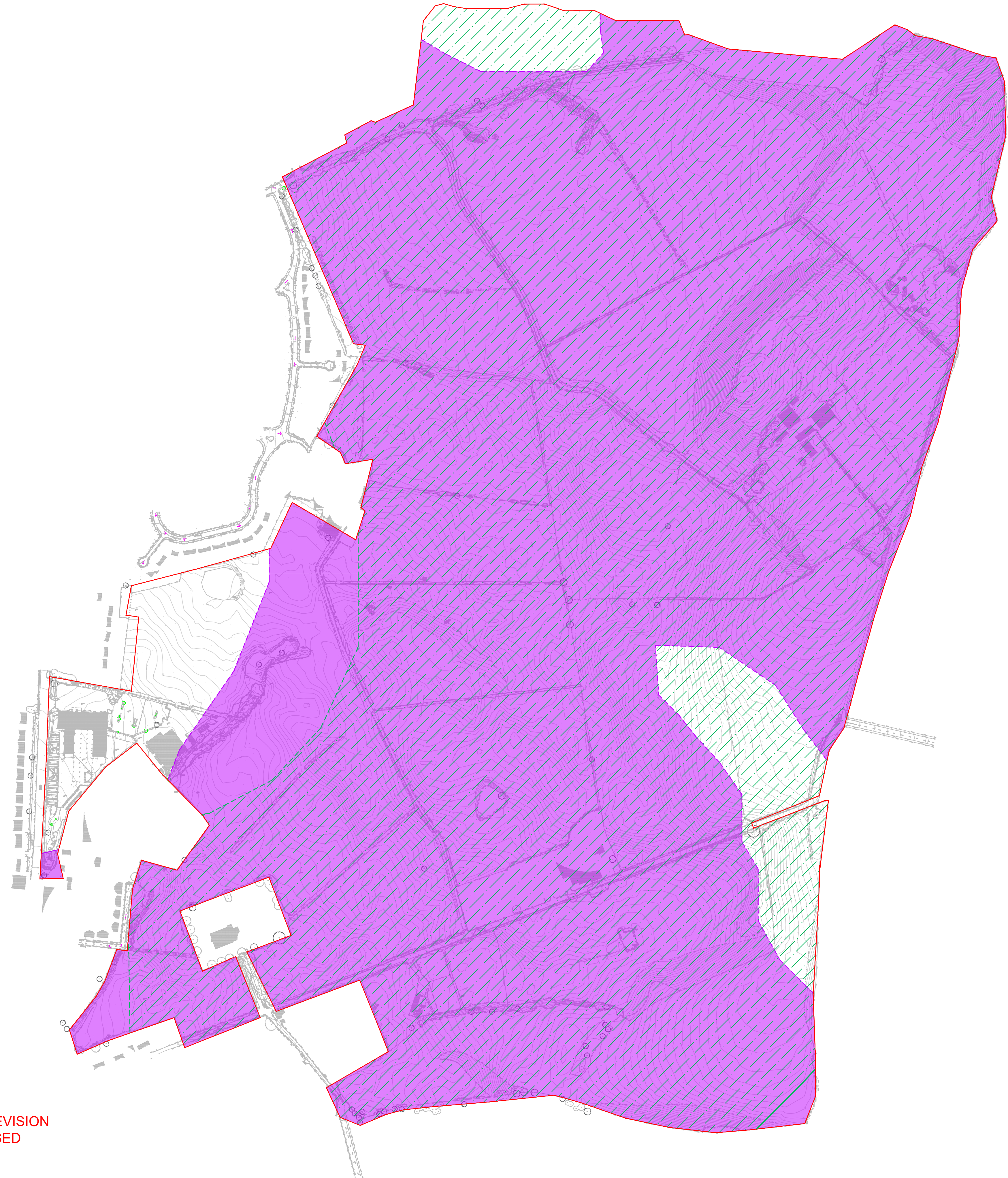
Project ID	Drawing no.	Revision
322974	32403	P01

File name

322974-HE-324-SS-D-C-32403-P01

Dimensions	Scale	Size
m	1:2500	A1





PRELIMINARY REVISION
TO BE REVISED

LEGEND

- Site boundary
- Mineral Safeguarding Area for coal
- Mineral Safeguarding Area for sand and gravel

Notes:

Base plan provided by Survey Eng Ltd No.Ref: RH.TS.21_A.

C01	26.01.23	First Issue	BS	##	##
Rev	Date	Amendment	Drawn	Chkd	Appd



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Tel: +44(0)1794 329276
Email: info@rsk.co.uk
Web: www.rsk.co.uk

Client

Redrow Homes Ltd

Project Name

Land at Stakehill

Description

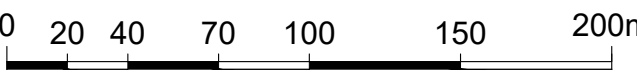
Superficial Geological Plan for Sand,
Gravel & Coal

Project ID	Drawing no.	Revision
322974	32404	P01

File name

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Dimensions	Scale	Size
m	1:2500	A1



APPENDIX A

SERVICE CONSTRAINTS

1. This report and the site investigation carried out in connection with the report (together the "Services") were compiled and carried out by RSK Environment Limited (RSK) for Redrow Homes Limited (the "Client") in accordance with the standard RSK Terms & Conditions provided in tender document 322974-TL02(00), dated 24 January 2023. The Services were performed by RSK with the reasonable skill and care ordinarily exercised by an environmental consultant at the time the Services were performed. Further, and in particular, the Services were performed by RSK taking into account the limits of the scope of works required by the client, the time scale involved and the resources, including financial and manpower resources, agreed between RSK and the Client.
2. Other than that, expressly contained in paragraph 1 above, RSK provides no other representation or warranty whether express or implied, in relation to the Services.
3. Unless otherwise agreed in writing, the Services were performed by RSK exclusively for the purposes of the Client. RSK is not aware of any interest of or reliance by any party other than the Client in or on the Services. Unless expressly provided in writing, RSK does not authorise, consent or condone any party other than the client relying upon the Services. Should this report or any part of this report, or otherwise details of the Services or any part of the Services be made known to any such party, and such party relies thereon that party does so wholly at its own and sole risk and RSK disclaims any liability to such parties. **Any such party would be well advised to seek independent advice from a competent environmental consultant and/or lawyer.**
4. It is RSK's understanding that this report is to be used for the purpose described in the introduction to the report. That purpose was a significant factor in determining the scope and level of the Services. Should the purpose for which the report is used, or the proposed use of the site change, this report may no longer be valid and any further use of or reliance upon the report in those circumstances by the client without RSK's review and advice shall be at the client's sole and own risk. Should RSK be requested to review the report after the date of this report, RSK shall be entitled to additional payment at the then existing rates or such other terms as agreed between RSK and the client.
5. The passage of time may result in changes in site conditions, regulatory or other legal provisions, technology or economic conditions which could render the report inaccurate or unreliable. The information and conclusions contained in this report should not be relied upon in the future without the written advice of RSK. In the absence of such written advice of RSK, reliance on the report in the future shall be at the Client's own and sole risk. Should RSK be requested to review the report in the future, RSK shall be entitled to additional payment at the then existing rate or such other terms as may be agreed between RSK and the client.
6. The observations and conclusions described in this report are based solely upon the Services which were provided pursuant to the agreement between the Client and RSK. RSK has not performed any observations, investigations, studies or testing not specifically set out or required by the contract between the client and RSK. RSK is not liable for the existence of any condition, the discovery of which would require performance of services not otherwise contained in the Services. For the avoidance of doubt, unless otherwise expressly referred to in the introduction to this report, RSK did not seek to evaluate the presence on or off the site of asbestos, invasive plants, electromagnetic fields, lead paint, heavy metals, radon gas or other radioactive or hazardous materials, unless specifically identified in the Services.
7. The Services are based upon RSK's observations of existing physical conditions at the Site gained from a visual inspection of the site together with RSK's interpretation of information, including documentation, obtained from third parties and from the Client on the history and usage of the site, unless specifically identified in the Services or accreditation system (such as UKAS ISO 17020:2012 clause 7.1.6):

- a. The Services were based on information and/or analysis provided by independent testing and information services or laboratories upon which RSK was reasonably entitled to rely.
- b. The Services were limited by the accuracy of the information, including documentation, reviewed by RSK and the observations possible at the time of the visual inspection.
- c. The Services did not attempt to independently verify the accuracy or completeness of information, documentation or materials received from the client or third parties, including laboratories and information services, during the performance of the Services.

RSK is not liable for any inaccurate information or conclusions, the discovery of which inaccuracies required the doing of any act including the gathering of any information which was not reasonably available to RSK and including the doing of any independent investigation of the information provided to RSK save as otherwise provided in the terms of the contract between the Client and RSK.

8. The intrusive environmental site investigation aspects of the Services are a limited sampling of the site at pre-determined locations based on the known historic / operational configuration of the site. The conclusions given in this report are based on information gathered at the specific test locations and can only be extrapolated to an undefined limited area around those locations. The extent of the limited area depends on the properties of the materials adjacent and local conditions, together with the position of any current structures and underground utilities and facilities, and natural and other activities on site. In addition, chemical analysis was carried out for a limited number of parameters (as stipulated in the scope between the client and RSK, based on an understanding of the available operational and historical information) and it should not be inferred that other chemical species are not present.
9. Any site drawing(s) provided in this report is (are) not meant to be an accurate base plan but is (are) used to present the general relative locations of features on, and surrounding, the site. Features (intrusive and sample locations etc) annotated on site plans are not drawn to scale but are centred over the approximate location. Such features should not be used for setting out and should be considered indicative only.
10. The comments given in this report and the opinions expressed are based on the ground conditions encountered during the site work and on the results of tests made in the field and in the laboratory. However, there may be conditions pertaining to the site that have not been disclosed by the investigation and therefore could not be taken into account. In particular, it should be noted that there may be areas of made ground not detected due to the limited nature of the investigation or the thickness and quality of made ground across the site may be variable. In addition, groundwater levels and ground gas concentrations and flows, may vary from those reported due to seasonal, or other, effects and the limitations stated in the data should be recognised.
11. Asbestos is often observed to be present in soils in discrete areas. Whilst asbestos-containing materials may have been locally encountered during the fieldworks or supporting laboratory analysis, the history of brownfield and demolition sites indicates that asbestos fibres may be present more widely in soils and aggregates, which could be encountered during more extensive ground works.
12. Unless stated otherwise, only preliminary geotechnical recommendations are presented in this report and these should be verified in a Geotechnical Design Report, once proposed construction and structural design proposals are confirmed.

APPENDIX B

DEVELOPMENT DRAWINGS



LEGEND

— Site boundary

Notes:

Base plan provided by Redrow Homes No.Ref: 31599-MR-M-Id02A-Masterplan Workshop - Figure 10.



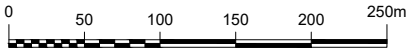
RSK
GEOSCIENCES

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Dimension	Scale	Size	Project ID	Drawing no.	Revision	File name
m	1:5000	A3	322974	32401	P02	322974-HE-324-SS-D-C-32401-P02

C01	15.09.22	First Issue	AS	##	##
Rev	Date	Amendment	Drawn	Chkd	Appd



APPENDIX C

HISTORICAL MAPS



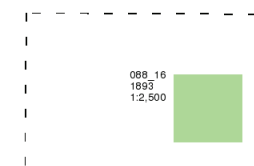
Lancashire And Furness

Published 1893

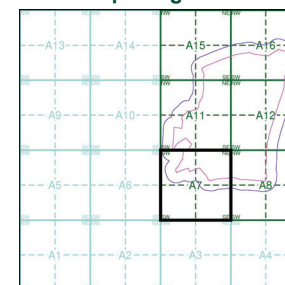
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Map Name(s) and Date(s)



Historical Map - Segment A7



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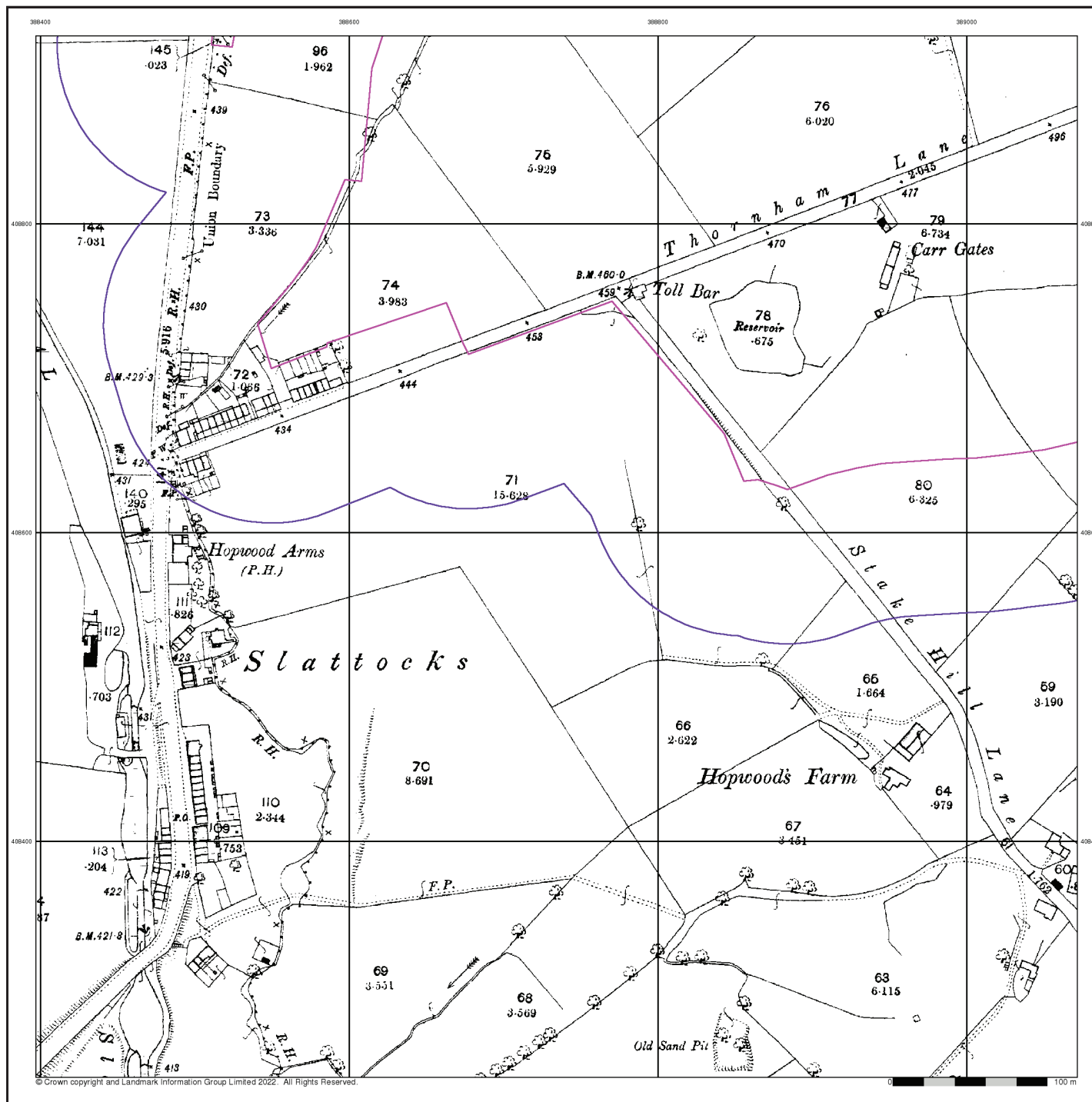
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Site Area (Ha): 95.3
Search Buffer (m): 100

Site Details

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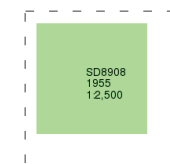
Ordnance Survey Plan

Published 1955

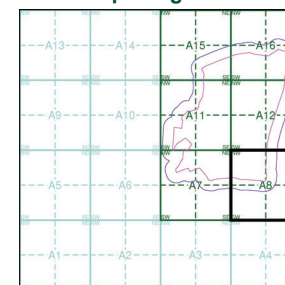
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Map Name(s) and Date(s)



Historical Map - Segment A8



Order Details

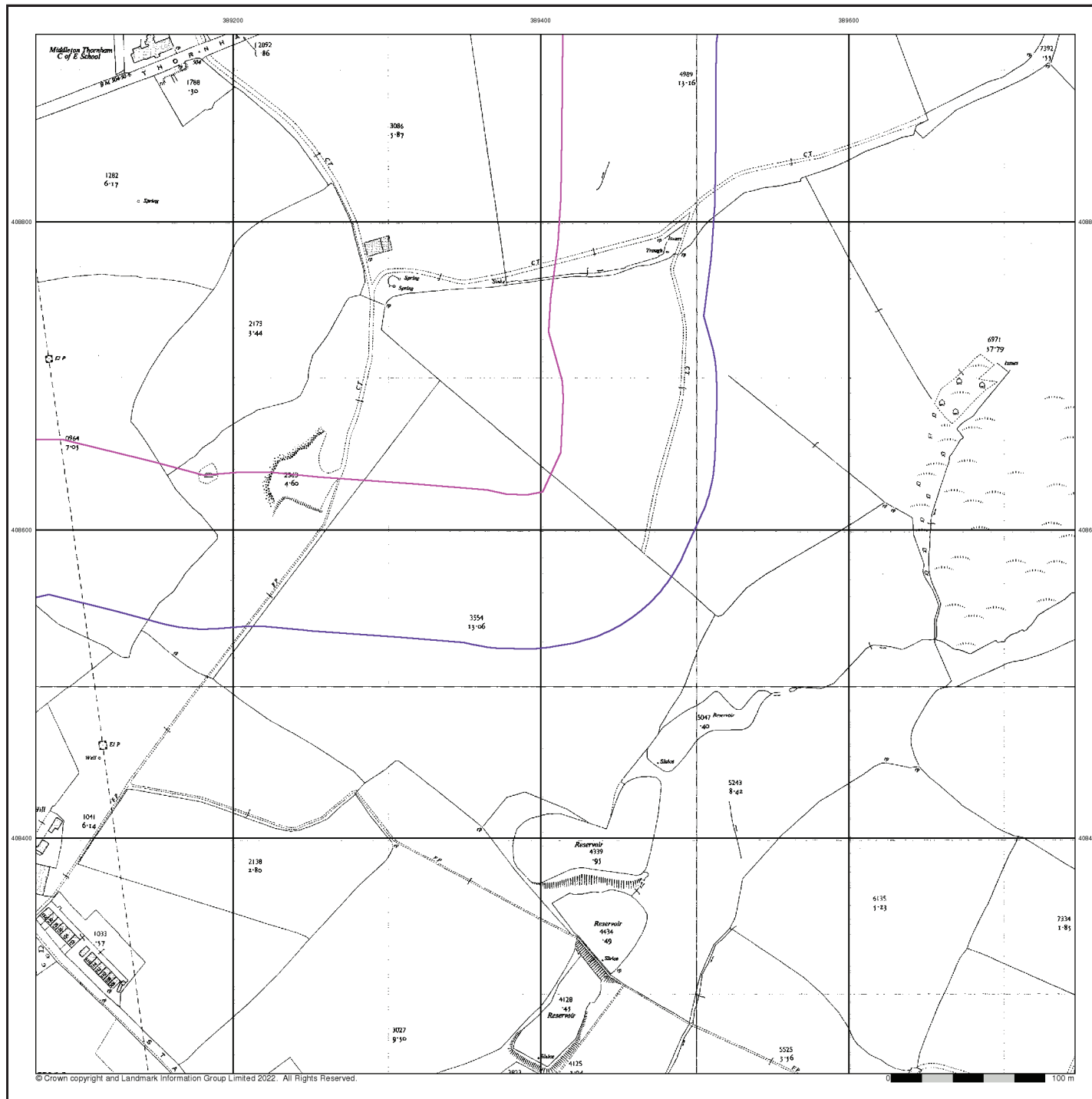
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Search Buffer (m): 100

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Supply of Unpublished Survey Information

Published 1975 - 1976

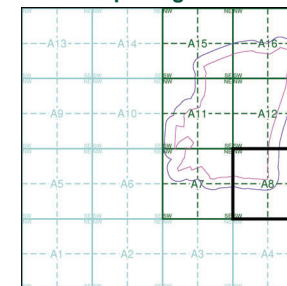
Source map scale - 1:1,250

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)

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Historical Map - Segment A8



Order Details

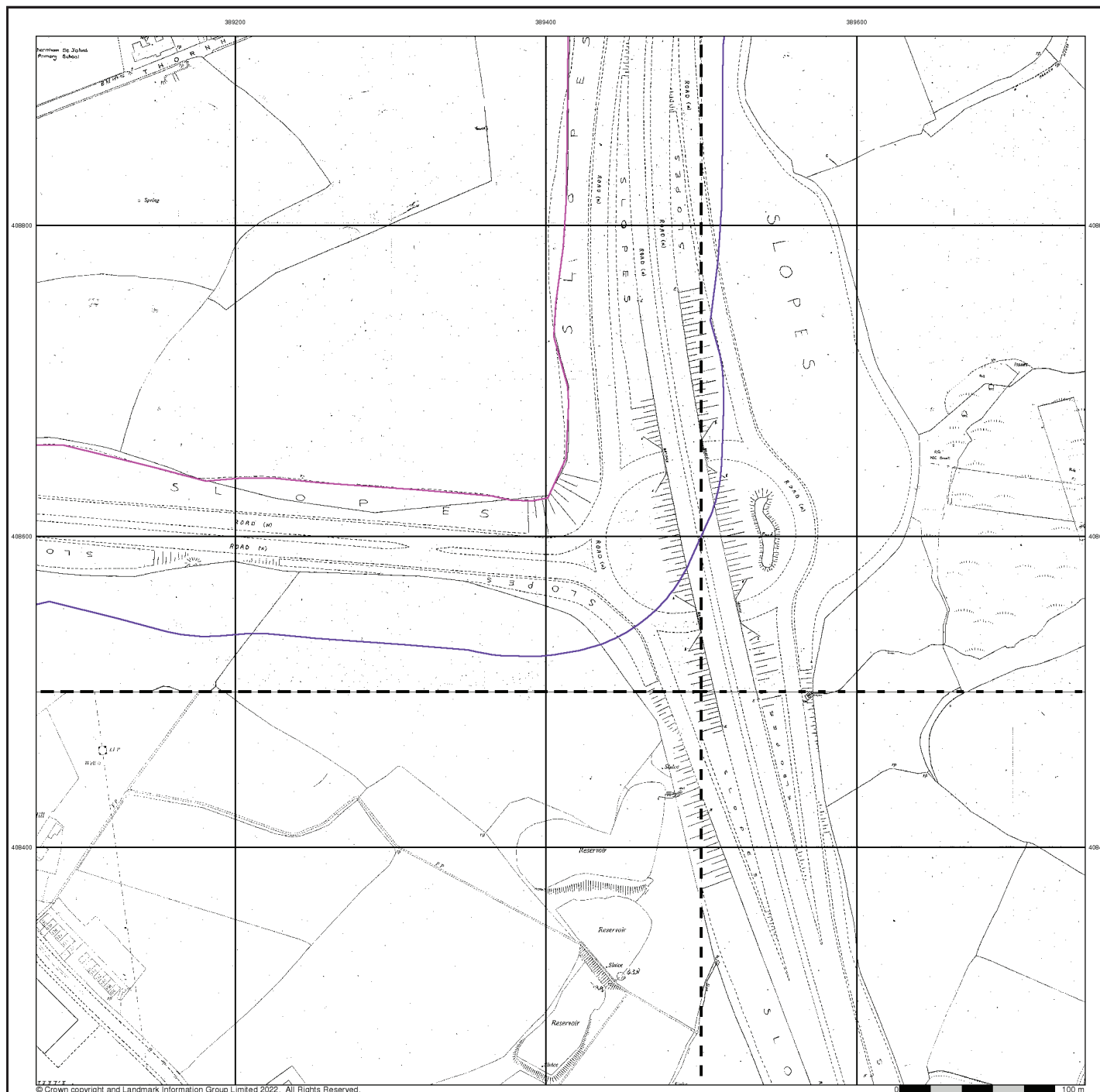
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Search Buffer (m): 100

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Lancashire And Furness

Published 1937 - 1939

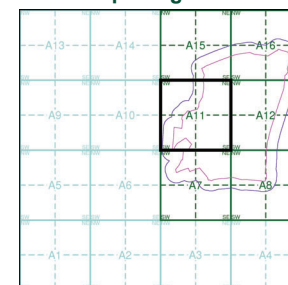
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Map Name(s) and Date(s)

088 12
1937
1:2,500
088 16
1939
1:2,500

Historical Map - Segment A11



Order Details

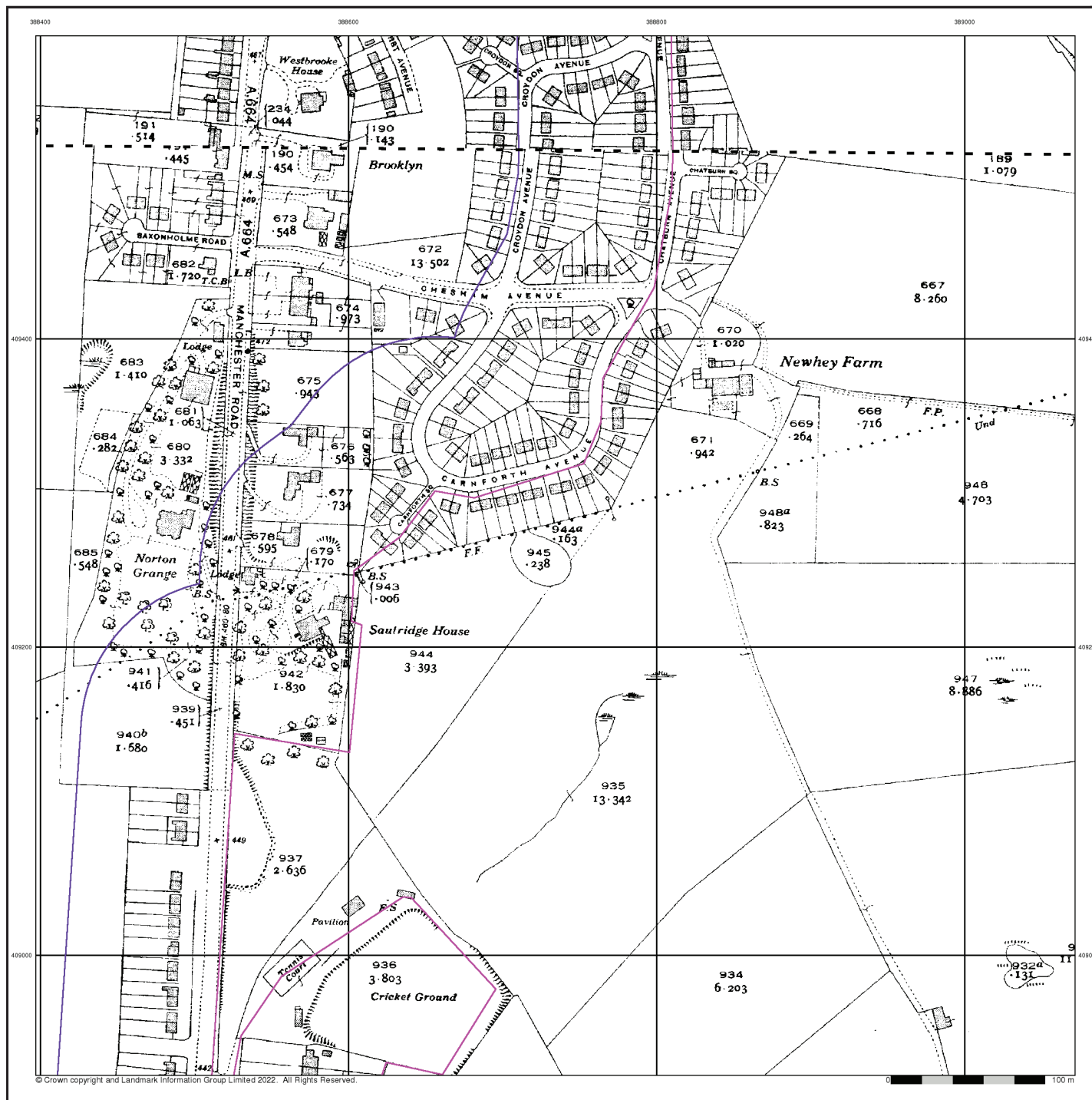
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Site Details

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Ordnance Survey Plan

Published 1954 - 1956

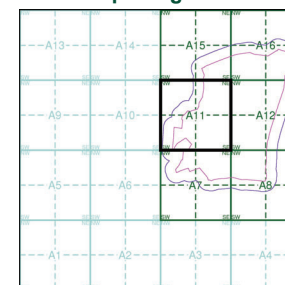
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Map Name(s) and Date(s)

D8809NW	D8809NE	D8909NW
1956	1956	1956
1:1,250	1:1,250	1:1,250
D8809SW	D8809SE	D8909SW
1956	1956	1956
1:1,250	1:1,250	1:1,250
D8808NW	D8808NE	
1954	1954	
1:1,250	1:1,250	

Historical Map - Segment A11



Order Details

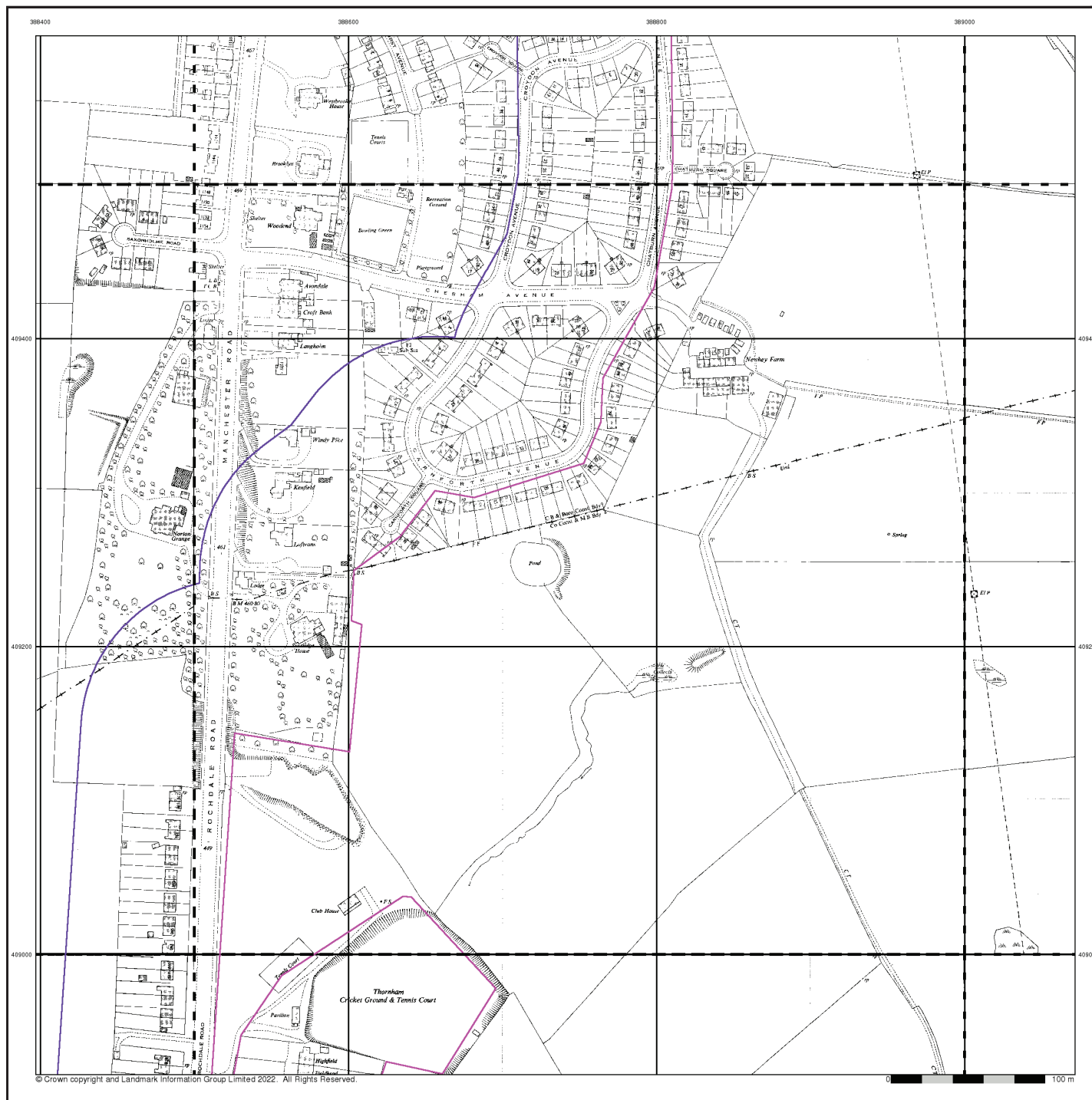
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Search Buffer (m): 100

Site Details

Thornfield Farm, Thornham Lane, Middleton, MANCHESTER, M24 2SH

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Ordnance Survey Plan

Published 1955 - 1956

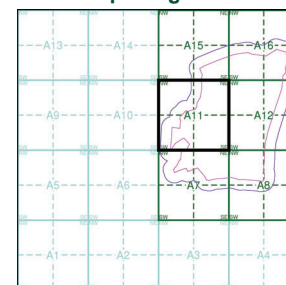
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Map Name(s) and Date(s)

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Historical Map - Segment A11



Order Details

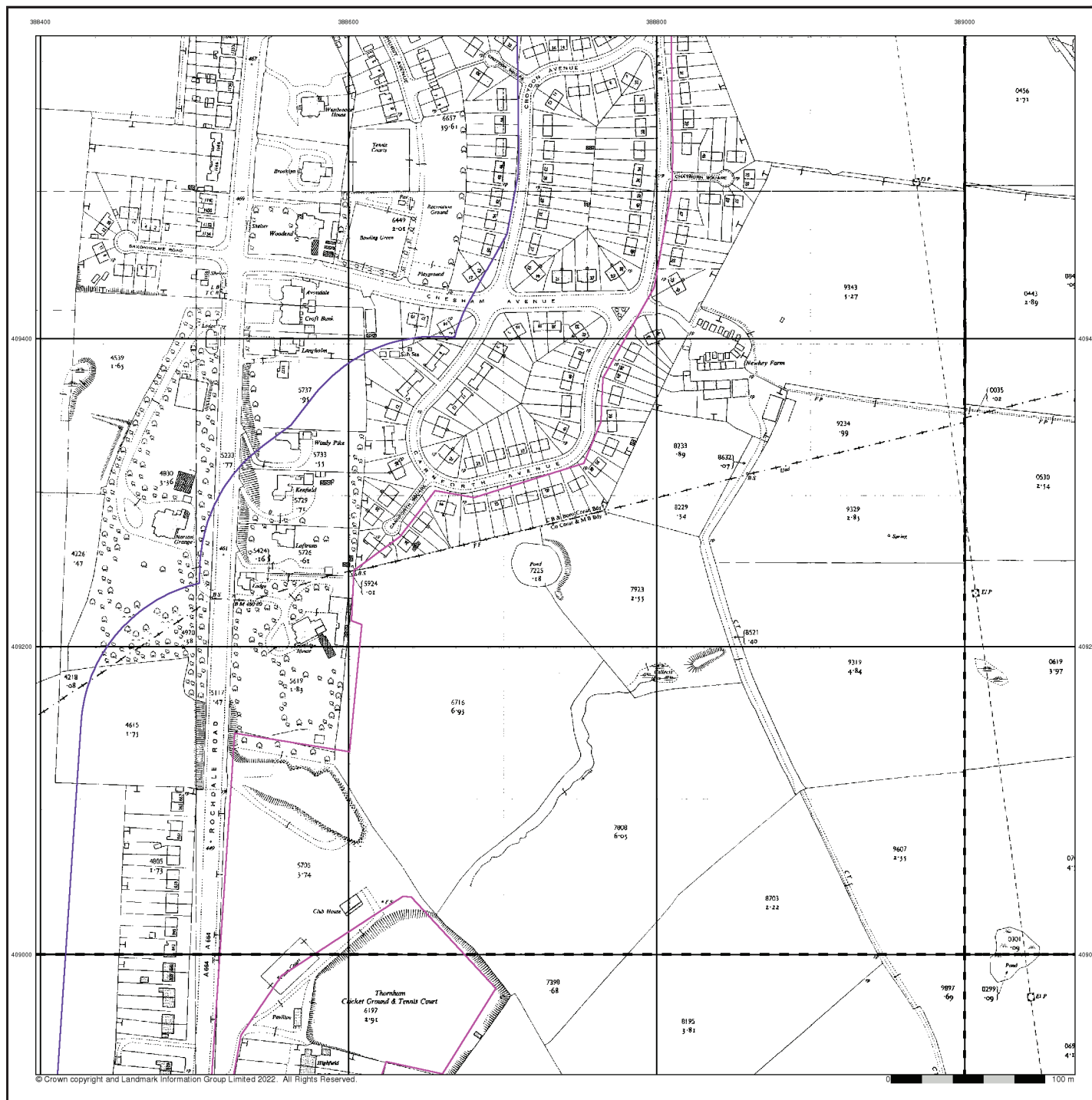
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Search Buffer (m): 100

Site Details

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Supply of Unpublished Survey Information

Published 1975 - 1977

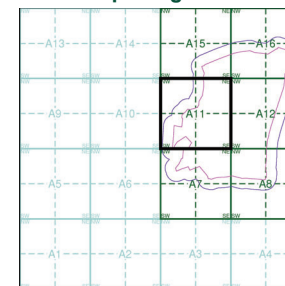
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Map Name(s) and Date(s)

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SD8809SW	SD8809SE
1975	1975
1:1,250	1:1,250
SD8808NW	SD8808NE
1975	1975
1:1,250	1:1,250

Historical Map - Segment A11



Order Details

Order Number: 300522833_1_1
Customer Ref: 322974
National Grid Reference: 388720, 408980
Slice: A
Site Area (Ha): 95.3
Search Buffer (m): 100

Site Details

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Lancashire And Furness

Published 1890 - 1893

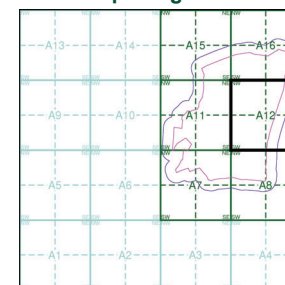
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Map Name(s) and Date(s)

088_12 1893 1:2,500	089_09 1895 1:2,500
088_16 1893 1:2,500	089_13 1895 1:2,500

Historical Map - Segment A12



Order Details

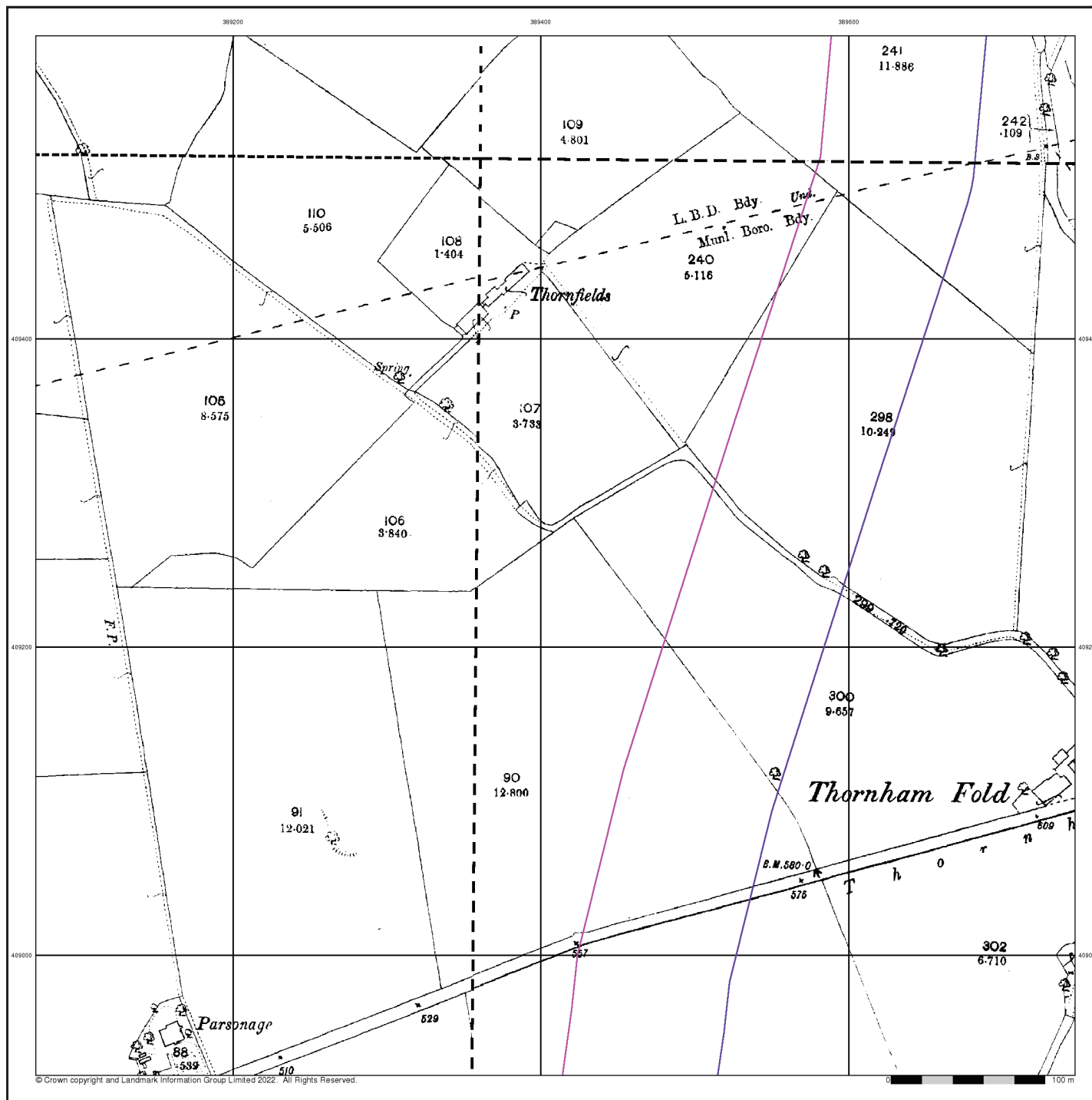
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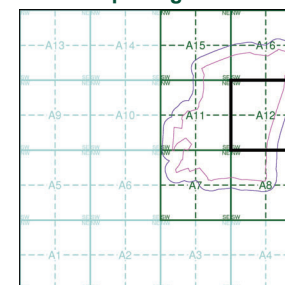




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Map Name(s) and Date(s)

Historical Map - Segment A12



Order Details

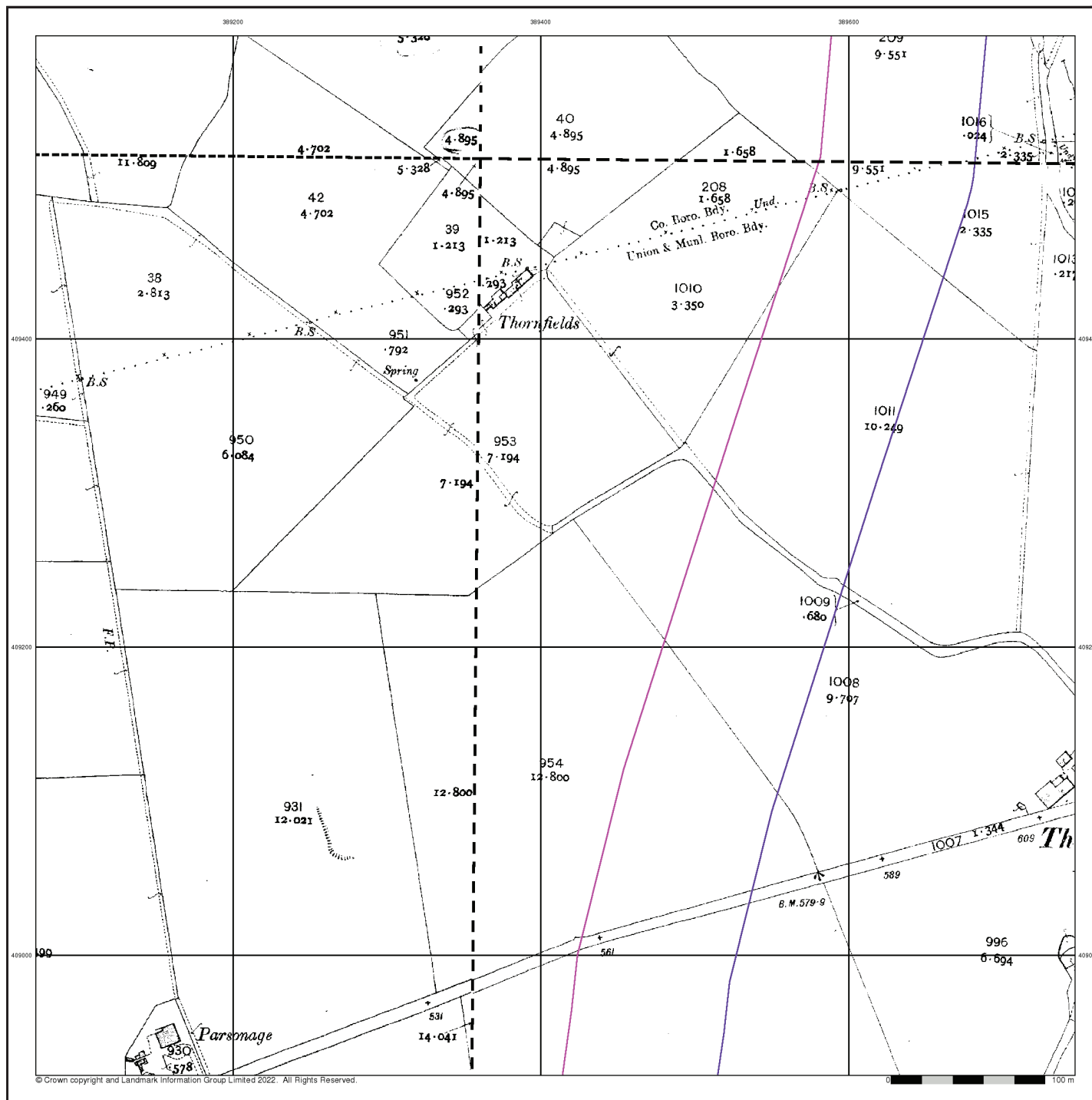
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Slice: A
Site Area (Ha): 95.3
Search Buffer (m): 100

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Lancashire And Furness

Published 1929 - 1930

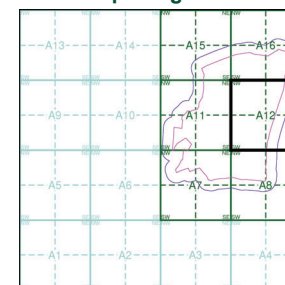
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Map Name(s) and Date(s)

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088_16 1929 1:2,500	089_13 1930 1:2,500

Historical Map - Segment A12



Order Details

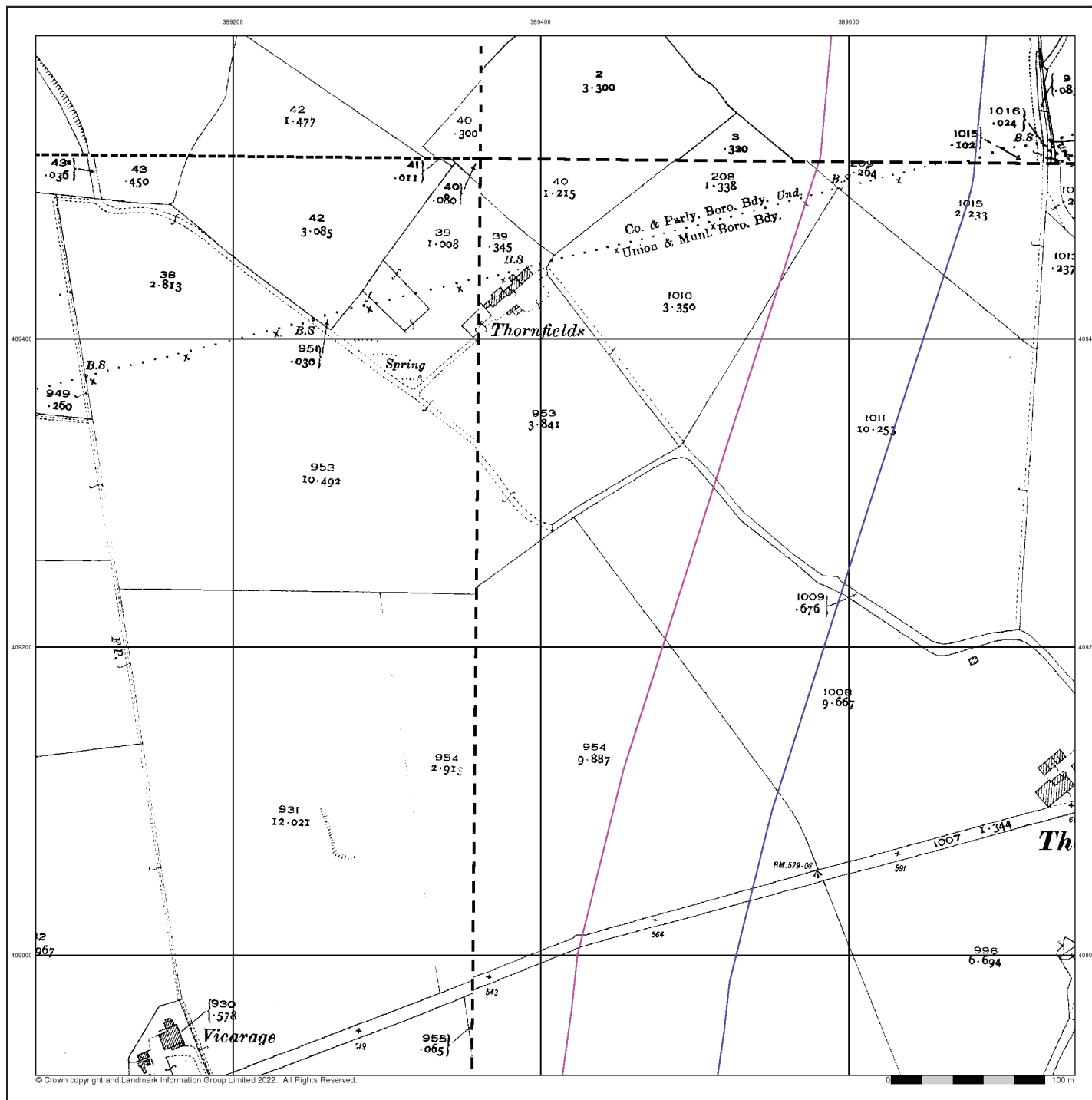
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Site Details

Thornfield Farm, Thornham Lane, Middleton, MANCHESTER, M24 2SH

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Lancashire And Furness

Published 1937 - 1939

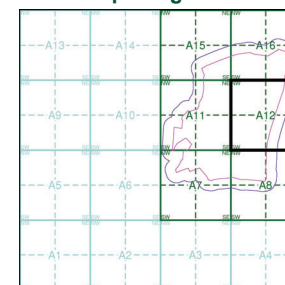
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Map Name(s) and Date(s)

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088_16 1939 1:2,500	089_13 1937 1:2,500

Historical Map - Segment A12



Order Details

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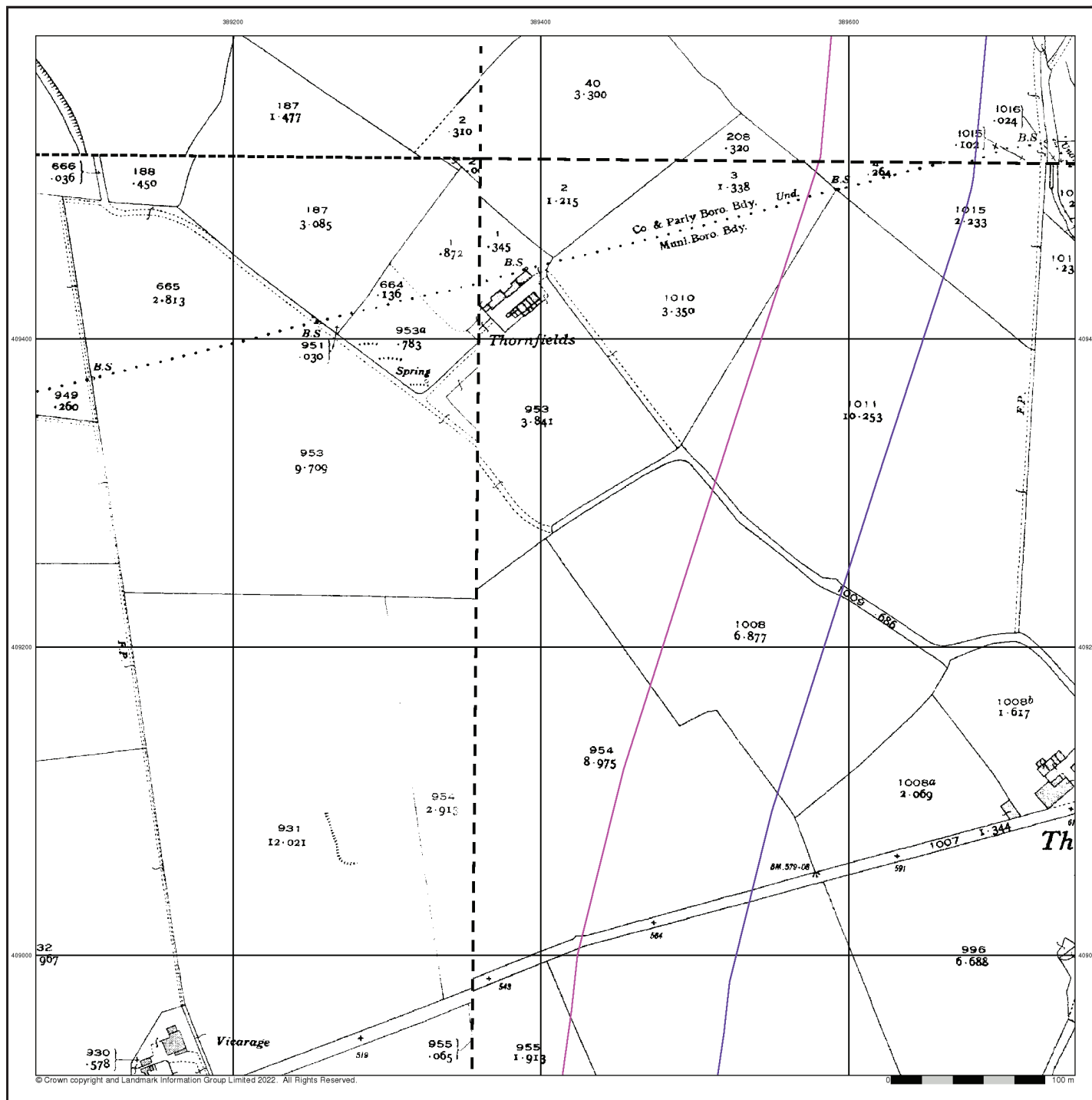
Site Details

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Ordnance Survey Plan

Published 1955 - 1956

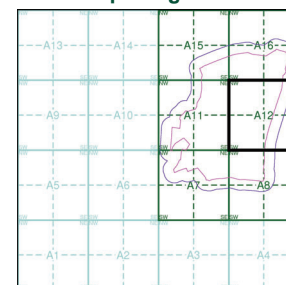
Source map scale - 1:2,500

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)

SD8909
1956
1:2,500
SD8908
1955
1:2,500

Historical Map - Segment A12



Order Details

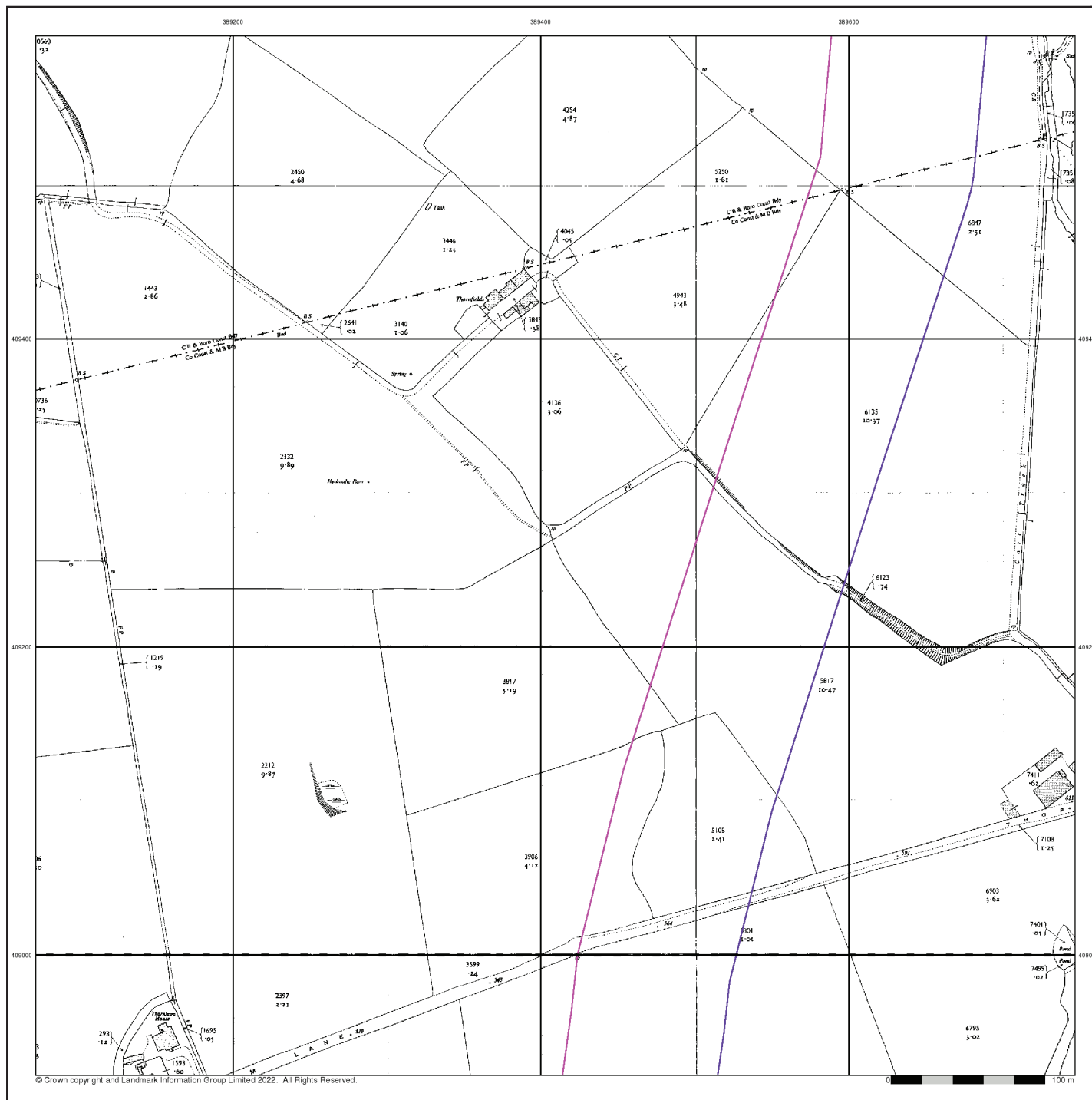
Order Number: 300522833_1_1
Customer Ref: 322974
National Grid Reference: 388720, 408980
Slice: A
Site Area (Ha): 95.3
Search Buffer (m): 100

Site Details

Thornfield Farm, Thornham Lane, Middleton, MANCHESTER, M24 2SH

Landmark
INFORMATION GROUP

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Ordnance Survey Plan

Published 1956

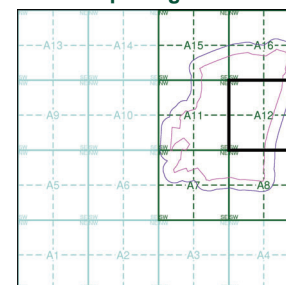
Source map scale - 1:1,250

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)

SD8909NW 1956 1:1,250	SD8909NE 1956 1:1,250
SD8909SW 1956 1:1,250	SD8909SE 1956 1:1,250

Historical Map - Segment A12



Order Details

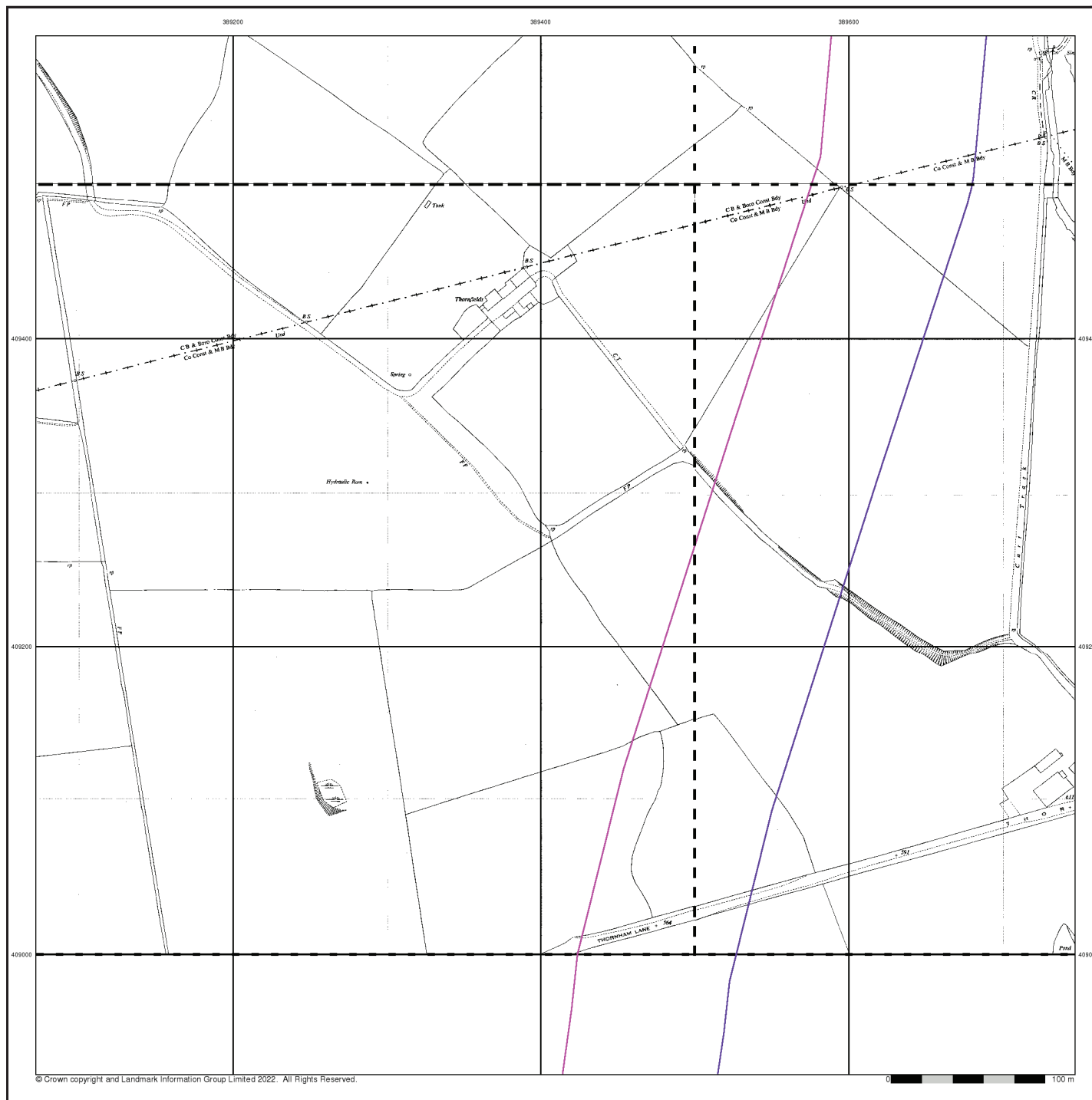
Order Number: 300522833_1_1
Customer Ref: 322974
National Grid Reference: 388720, 408980
Slice: A
Site Area (Ha): 95.3
Search Buffer (m): 100

Site Details

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Supply of Unpublished Survey Information

Published 1975 - 1976

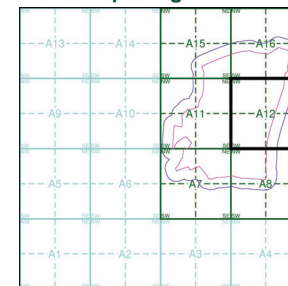
Source map scale - 1:1,250

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)

SD8909SW 1975 1:1,250	SD8908NE 1976 1:1,250
SD8908NW 1976 1:1,250	

Historical Map - Segment A12



Order Details

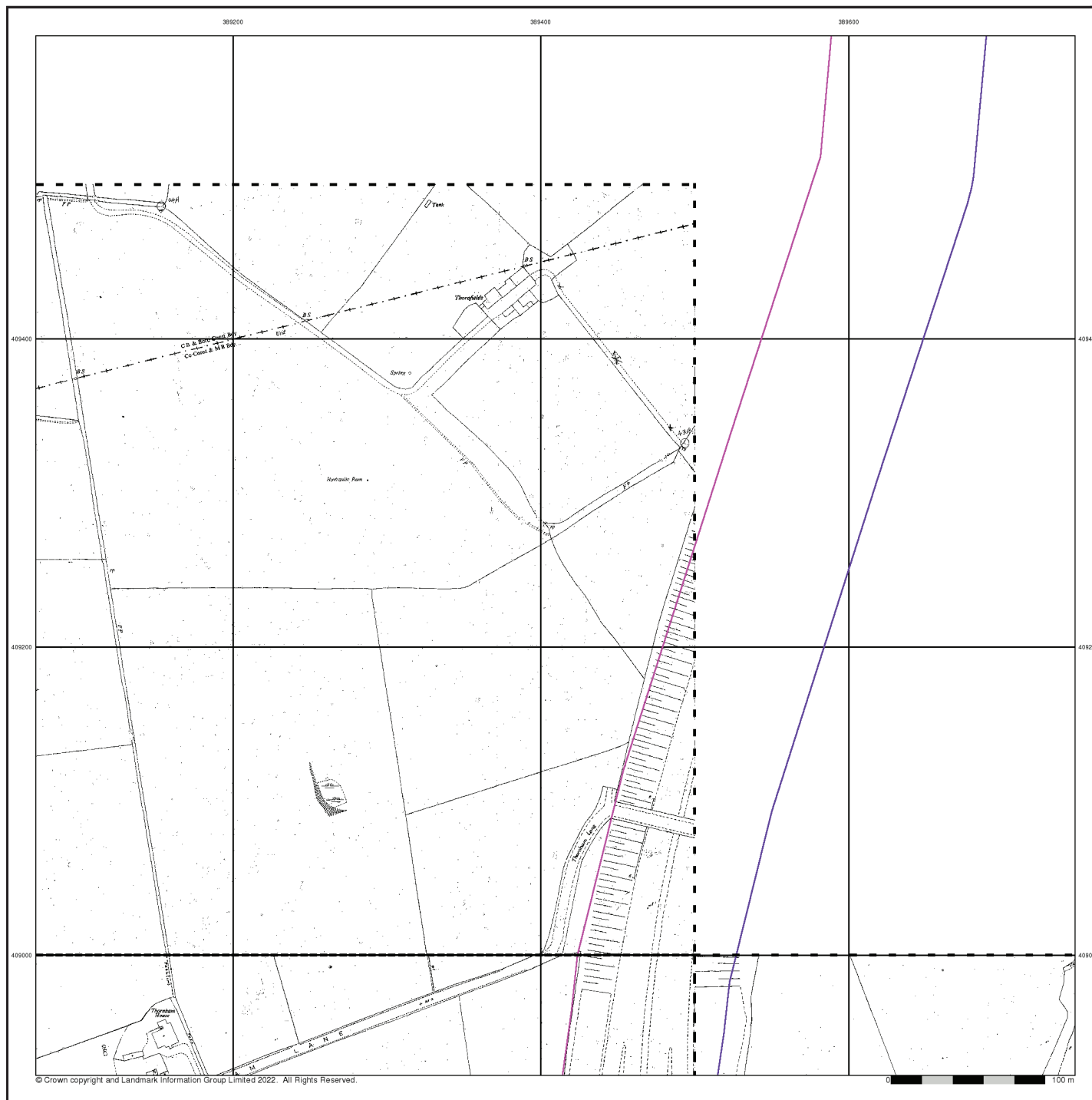
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Customer Ref: 322974
National Grid Reference: 388720, 408980
Slice: A
Site Area (Ha): 95.3
Search Buffer (m): 100

Site Details

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Additional SIMs

Published 1984 - 1986

Source map scale - 1:1,250

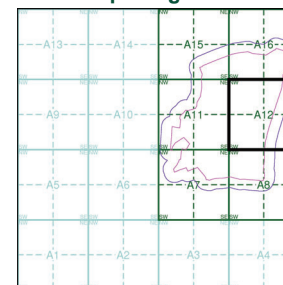
The SIM cards (Ordnance Survey's 'Survey of Information on Microfilm') are further, minor editions of mapping which were produced and published in between the main editions as an area was updated. They date from 1947 to 1994, and contain detailed information on buildings, roads and land-use. These maps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

Map Name(s) and Date(s)

SD8909NW
1986
1:1,250

SD8909SW
1984
1:1,250

Historical Map - Segment A12



Order Details

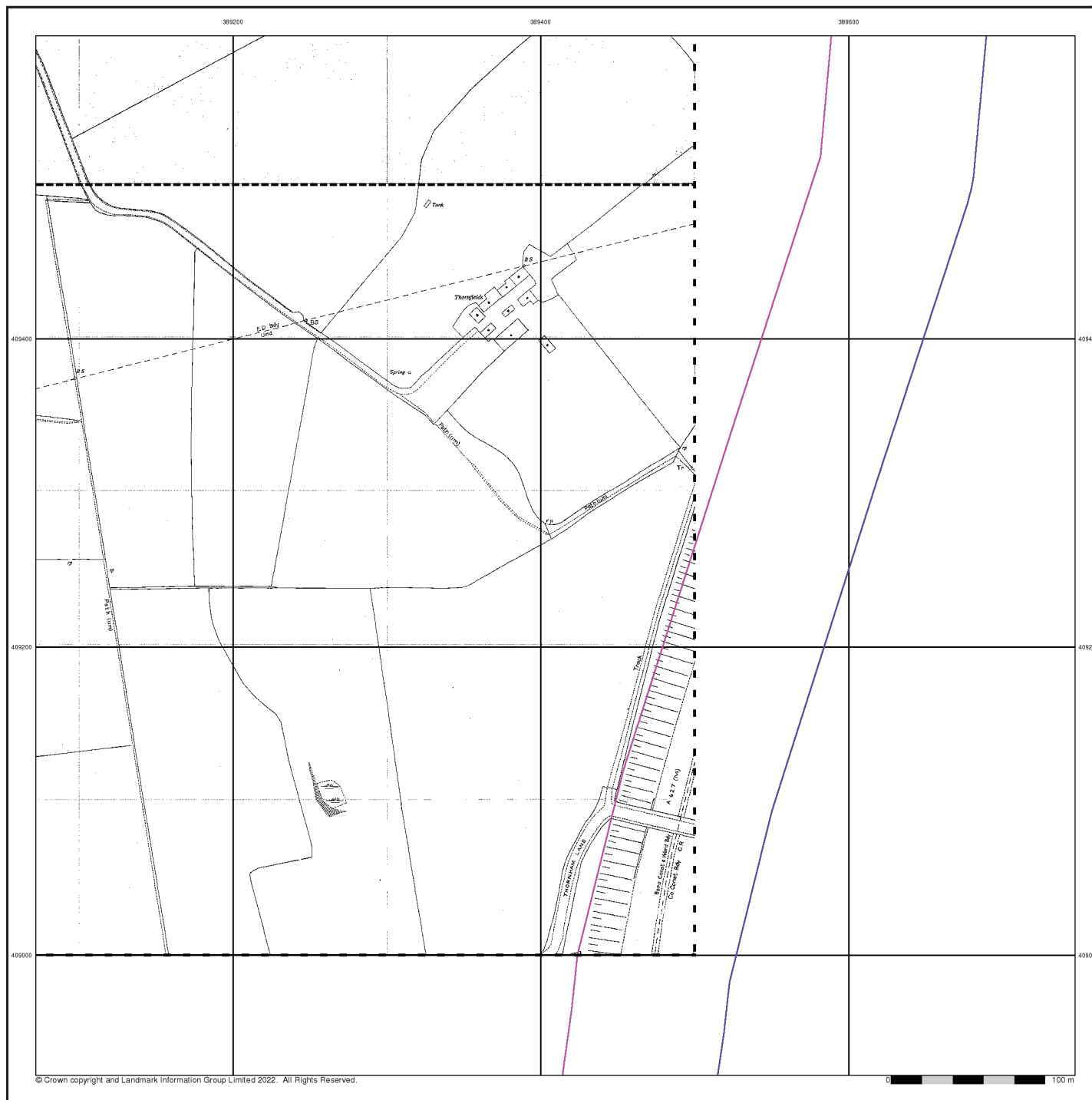
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Customer Ref: 322974
National Grid Reference: 388720, 408980
Slice: A
Site Area (Ha): 95.3
Search Buffer (m): 100

Site Details

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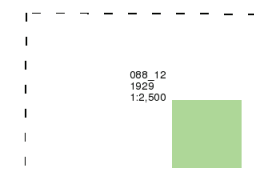
Lancashire And Furness

Published 1929

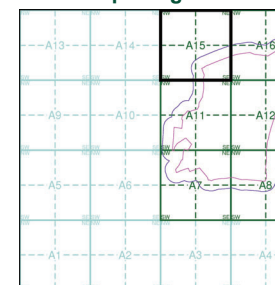
Source map scale - 1:2,500

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 A15



Order Details

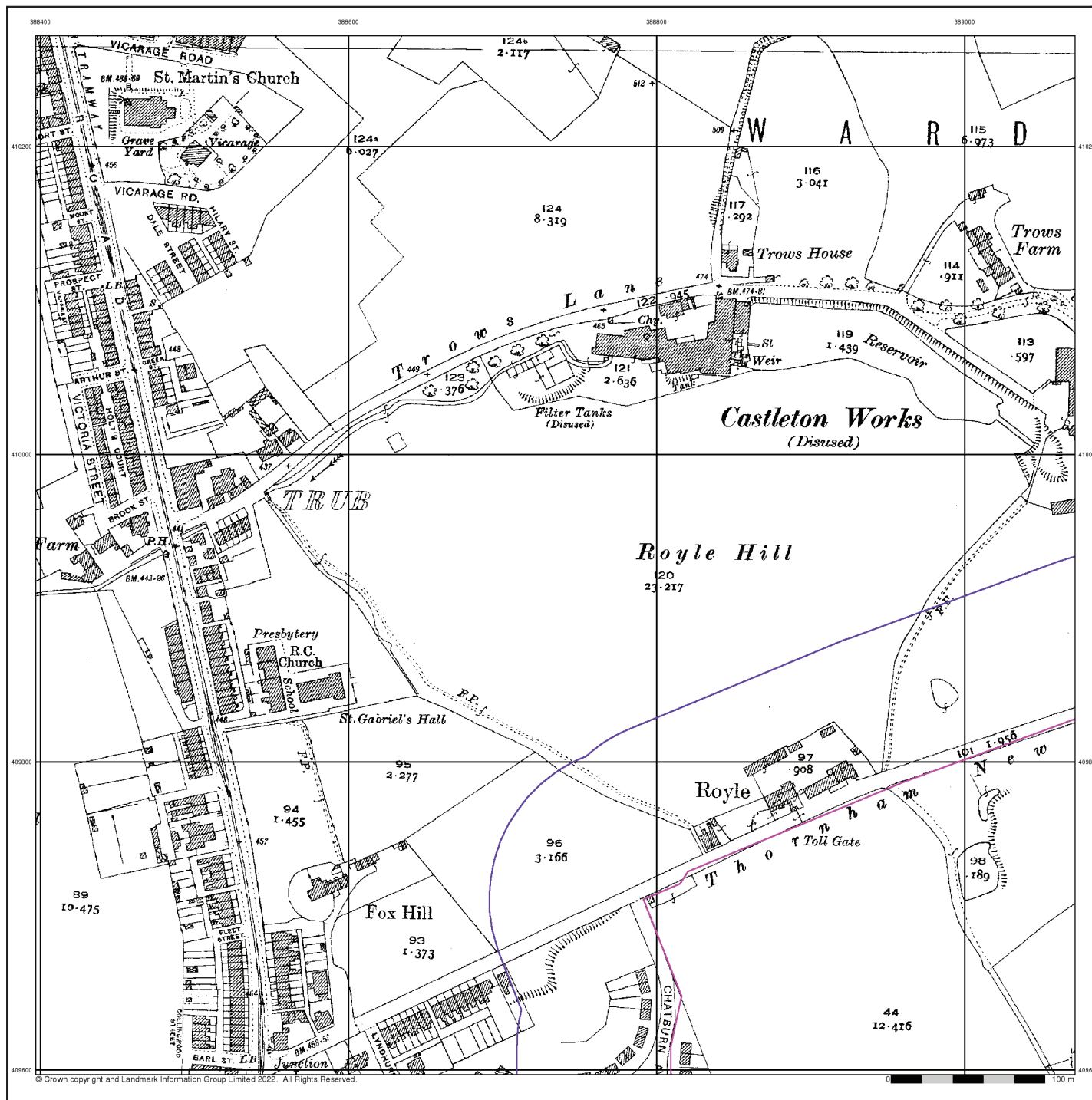
Order Number: 300522833_1_1
Customer Ref: 322974
National Grid Reference: 388720, 408980
Slice: A
Site Area (Ha): 95.3
Search Buffer (m): 100

Site Details

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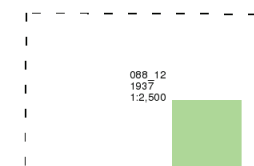
Lancashire And Furness

Published 1937

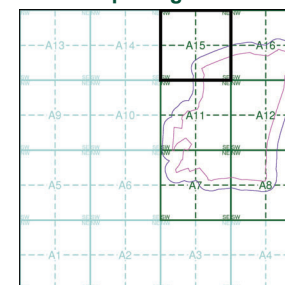
Source map scale - 1:2,500

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)



Historical Map - Segment A15



Order Details

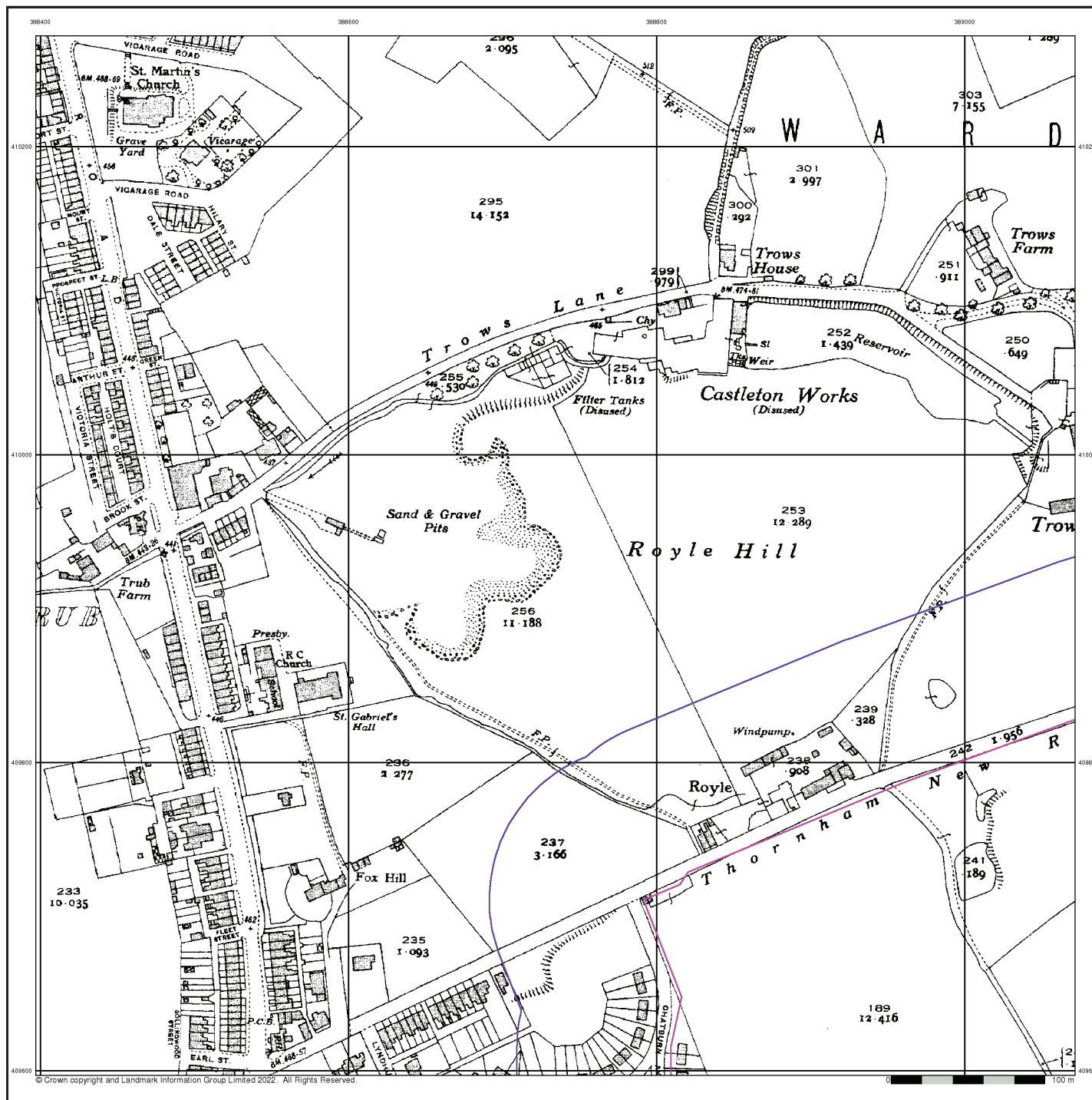
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Customer Ref: 322974
National Grid Reference: 388720, 408980
Slice: A
Site Area (Ha): 95.3
Search Buffer (m): 100

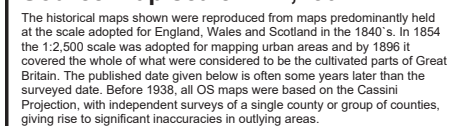
Site Details

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SD8810SW 1956 1:1,250	SD8810SE 1956 1:1,250	SD8910SW 1956 1:1,250
SD8809NW 1956 1:1,250	SD8809NE 1956 1:1,250	SD8909NW 1956 1:1,250

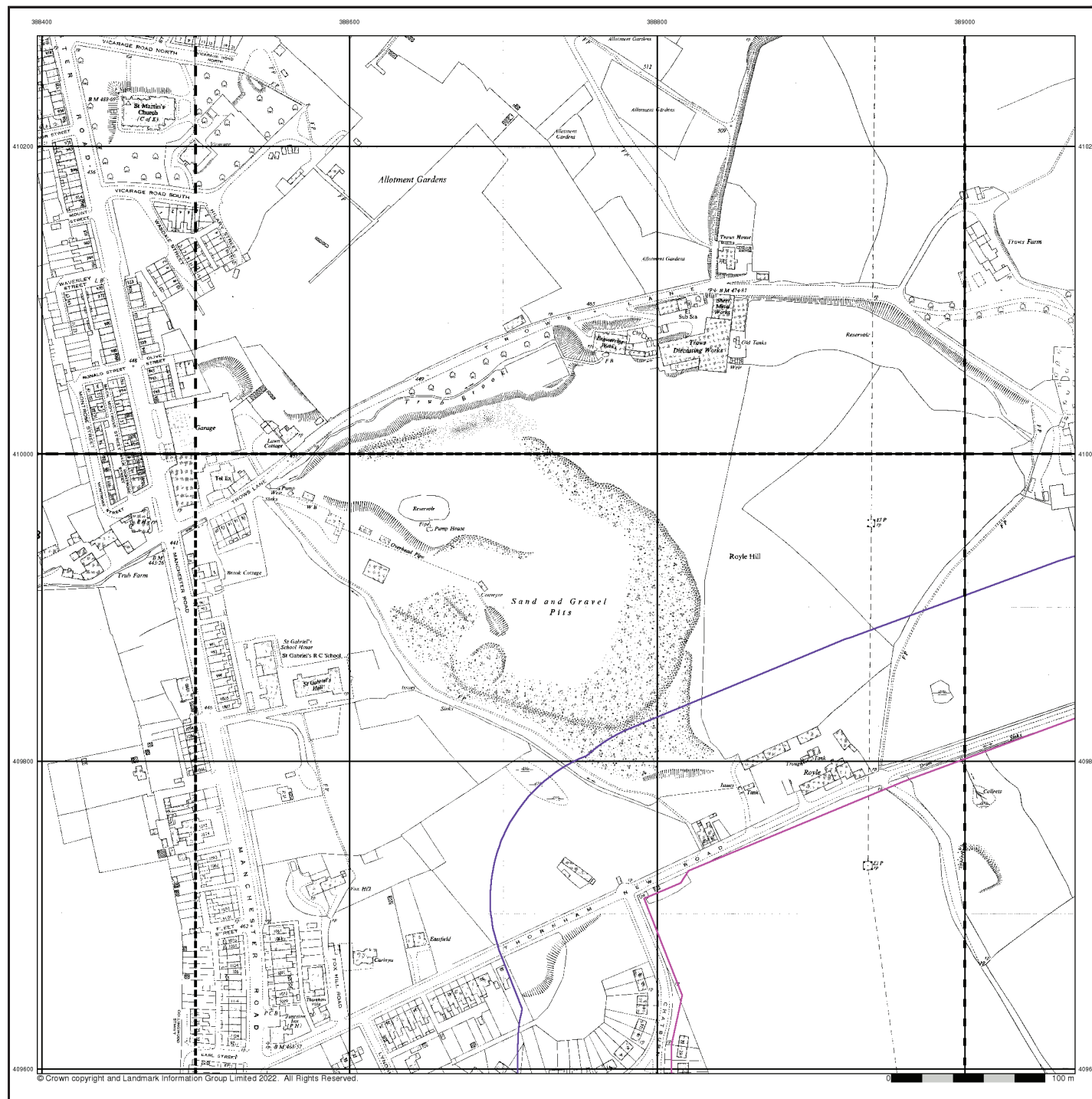
A 4x4 grid of cells labeled A1 through A16. The cells are arranged in four rows and four columns. The top row contains A13, A14, A15, and A16. The second row contains A9, A10, A11, and A12. The third row contains A5, A6, A7, and A8. The bottom row contains A1, A2, A3, and A4. A red boundary encloses the cells A15, A16, A11, A12, A7, and A8. Cells A15 and A16 are shaded light blue, while the others in the boundary are white. Cells A1 through A6 and A13 through A14 are white.



Order Number: 300522833_1_1
Customer Ref: 322974
National Grid Reference: 388720, 408980
Slice: A
Site Area (Ha): 95.3
Search Buffer (m): 100

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M24 2SH

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Ordnance Survey Plan

Published 1956

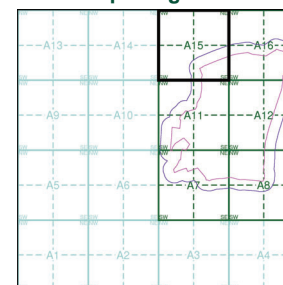
Source map scale - 1:2,500

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)

SD8810 1958 12,500	SD8910 1958 12,500
SD8809 1956 12,500	SD8909 1956 12,500

Historical Map - Segment A15



Order Details

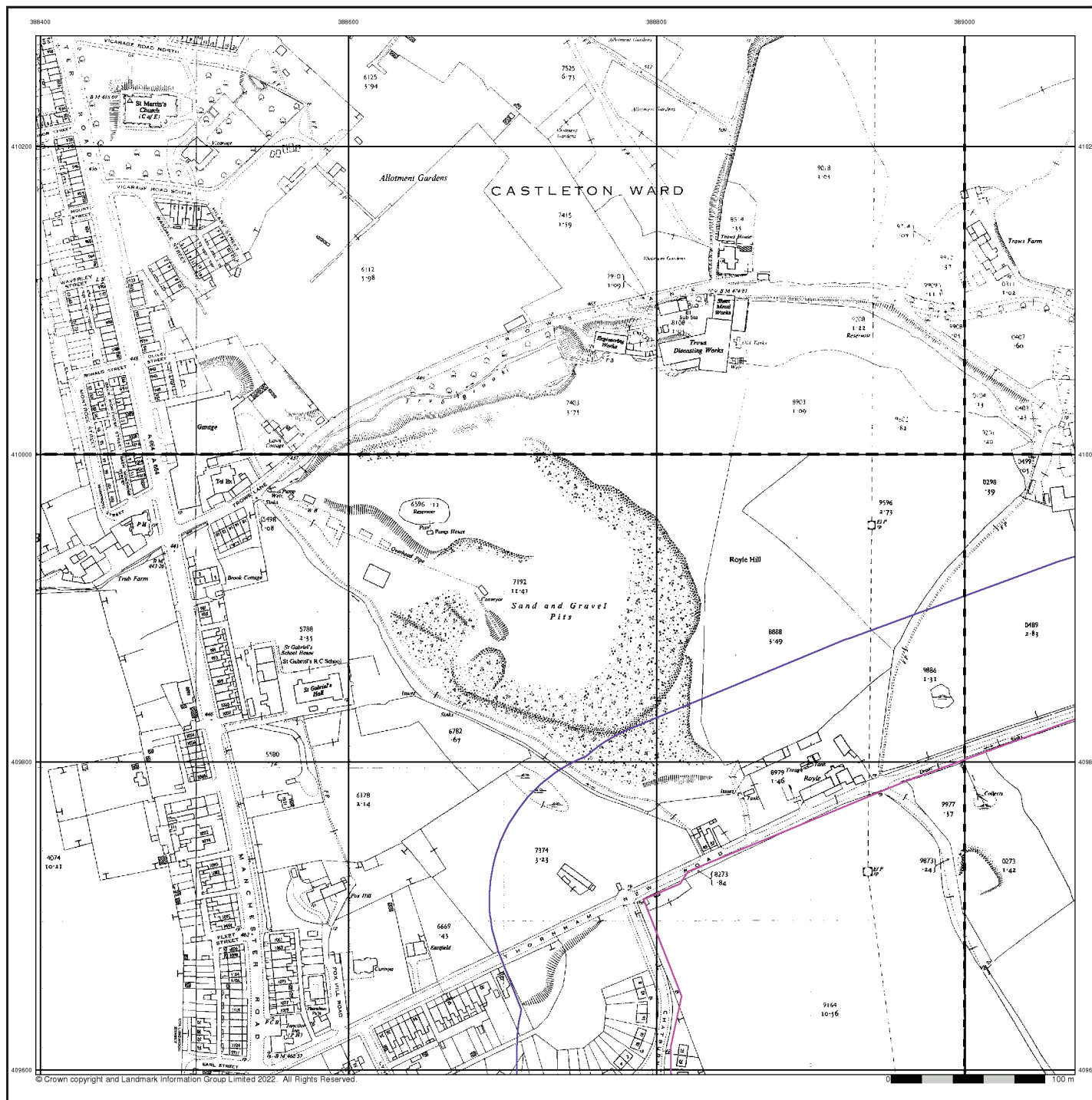
Order Number: 300522833_1_1
Customer Ref: 322974
National Grid Reference: 388720, 408980
Slice: A
Site Area (Ha): 95.3
Search Buffer (m): 100

Site Details

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Ordnance Survey Plan

Published 1976 - 1981

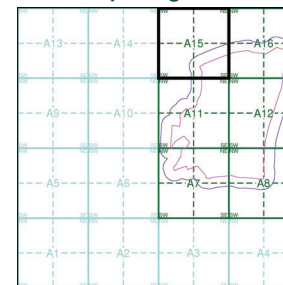
Source map scale - 1:1,250

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)

SD8810SW 1977 1:1,250	SD8810SE 1981 1:1,250	SD8910SW 1976 1:1,250
SD8809NW 1977 1:1,250	SD8809NE 1977 1:1,250	SD8909NW 1977 1:1,250

Historical Map - Segment A15



Order Details

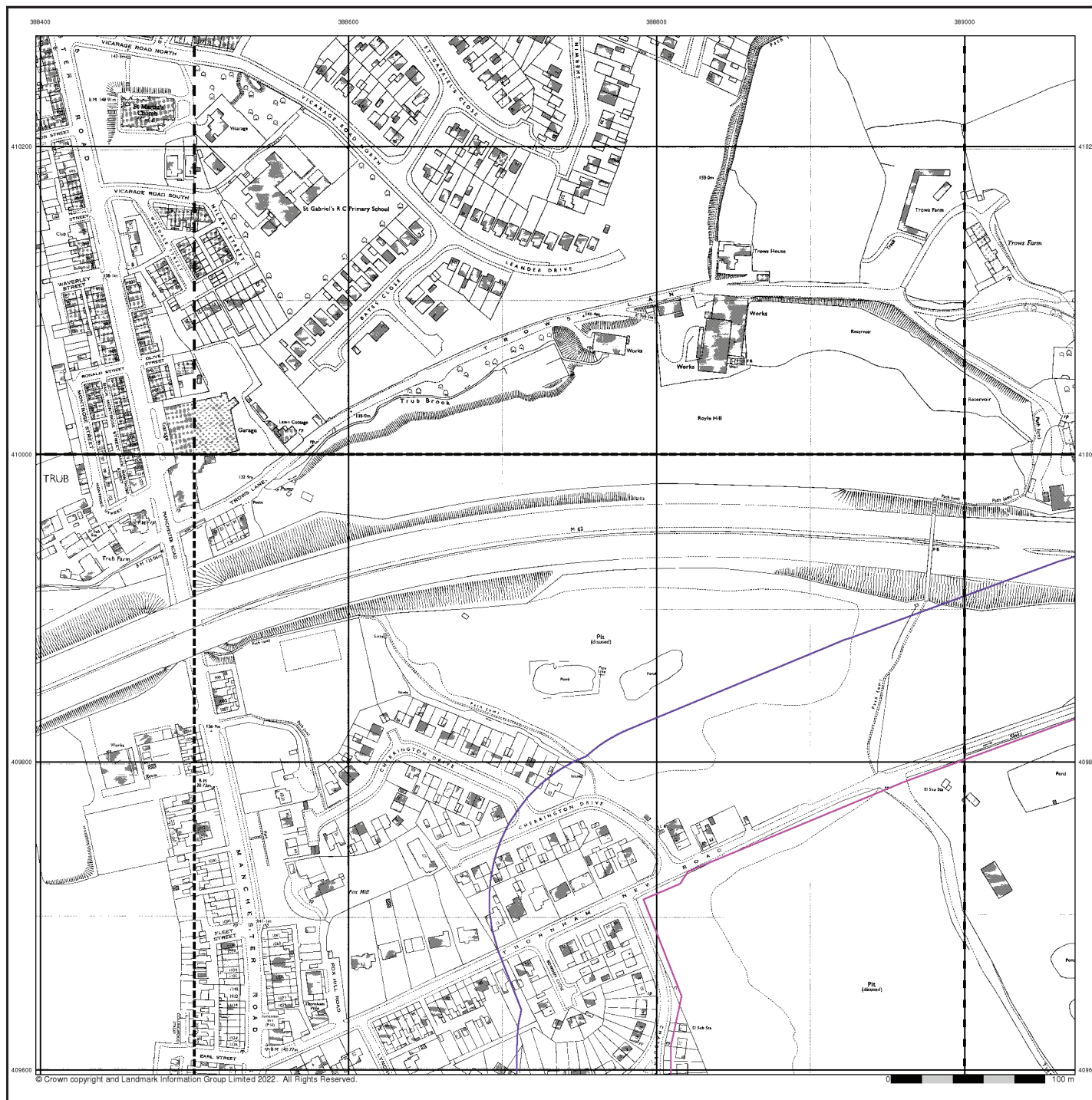
Order Number: 300522833_1_1
Customer Ref: 322974
National Grid Reference: 388720, 408980
Slice: A
Site Area (Ha): 95.3
Search Buffer (m): 100

Site Details

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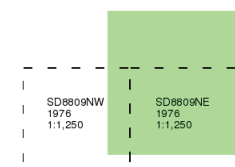
Supply of Unpublished Survey Information

Published 1976

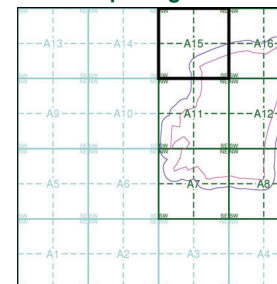
Source map scale - 1:1,250

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 A15



Order Details

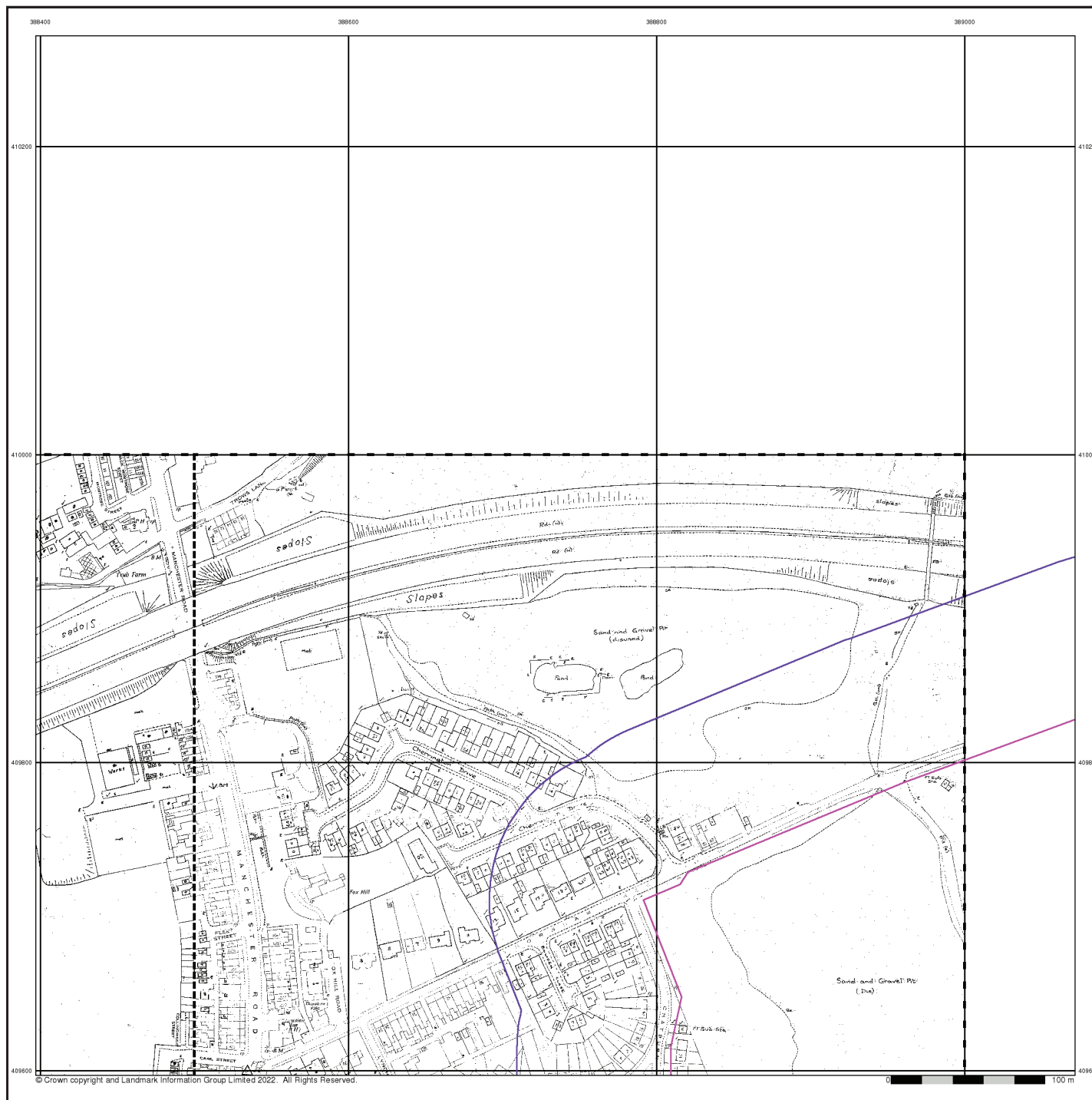
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Customer Ref: 322974
National Grid Reference: 388720, 408980
Slice: A
Site Area (Ha): 95.3
Search Buffer (m): 100

Site Details

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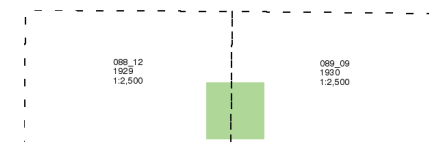
Lancashire And Furness

Published 1929 - 1930

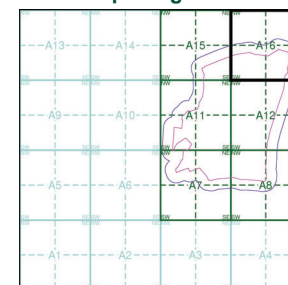
Source map scale - 1:2,500

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 A16



Order Details

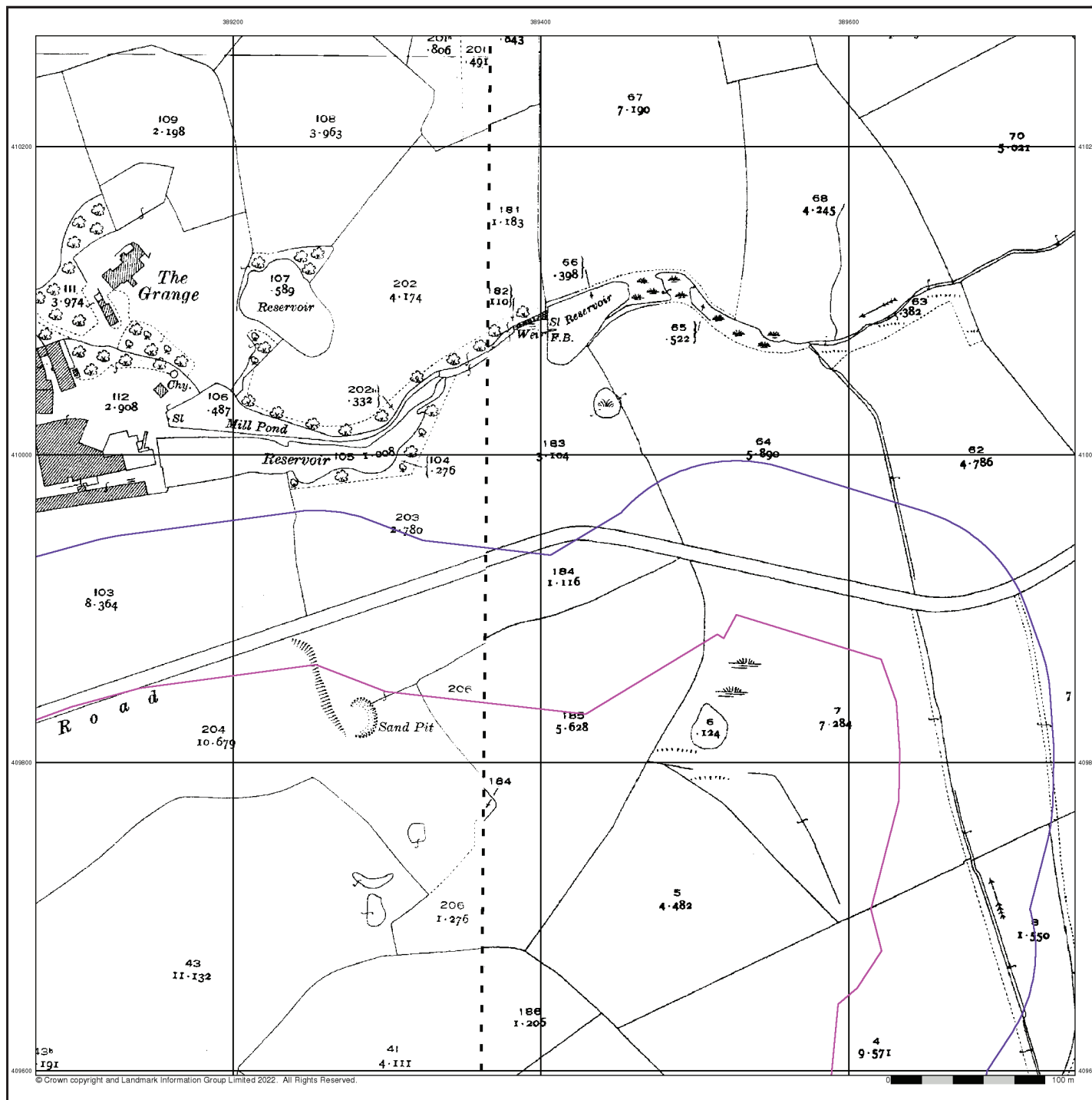
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Customer Ref: 322974
National Grid Reference: 388720, 408980
Slice: A
Site Area (Ha): 95.3
Search Buffer (m): 100

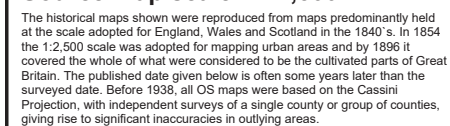
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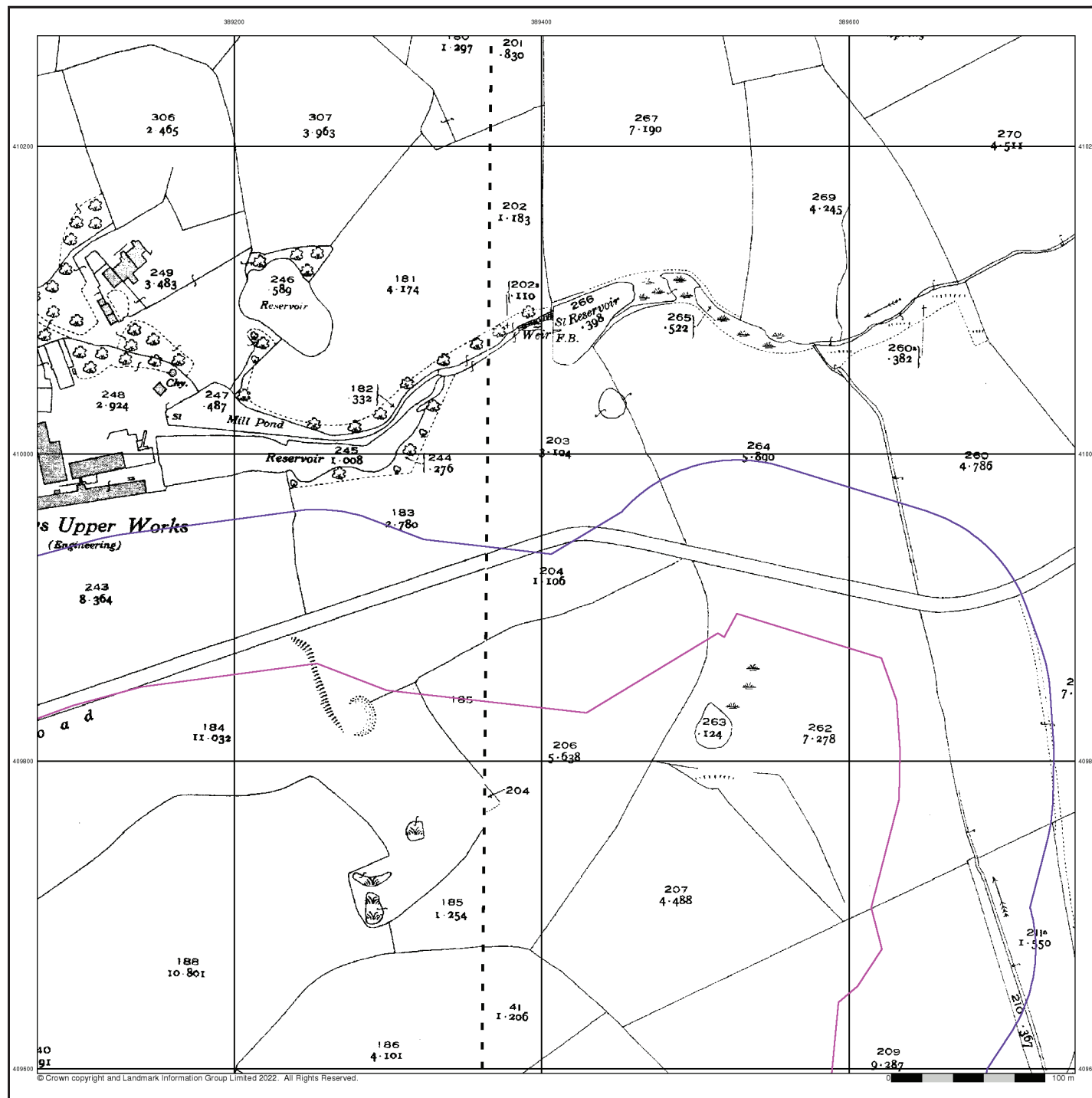
088_12
1907
12,500

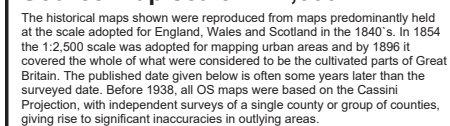
089_09
1907
12,500

Order Number: 300522833_1_1
Customer Ref: 322974
National Grid Reference: 388720, 408980
Slice: A
Site Area (Ha): 95.3
Search Buffer (m): 100

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SD8910
1956
12,500

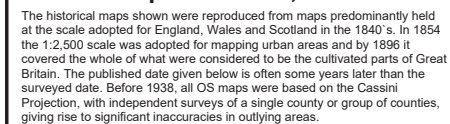
SD8909
1956
12,500



Order Number: 300522833_1_1
Customer Ref: 322974
National Grid Reference: 388720, 408980
Slice: A
Site Area (Ha): 95.3
Search Buffer (m): 100

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SD8910SW 1956 1:1,250	SD8910S 1956 1:1,250
SD8909NW 1956 1:1,250	SD8909N 1956 1:1,250

Figure 1 shows a 4x4 grid of nodes labeled A1 through A16. The nodes are arranged in a 4x4 grid. A red line connects nodes A15, A11, A7, and A3, forming a closed loop. A green line connects nodes A16, A12, A8, and A4, forming a closed loop. The red and green lines intersect at nodes A11 and A7.



Order Number: 300522833_1_1
Customer Ref: 322974
National Grid Reference: 388720, 408980
Slice: A
Site Area (Ha): 95.3
Search Buffer (m): 100

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Ordnance Survey Plan

Published 1976 - 1977

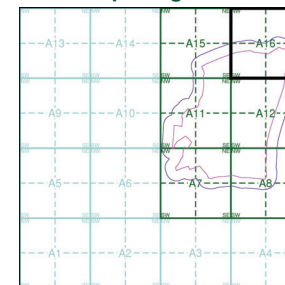
Source map scale - 1:1,250

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)

SD8910SW 1976 1:1,250	SD8910SE 1976 1:1,250
SD8909NW 1977 1:1,250	SD8909NE 1977 1:1,250

Historical Map - Segment A16



Order Details

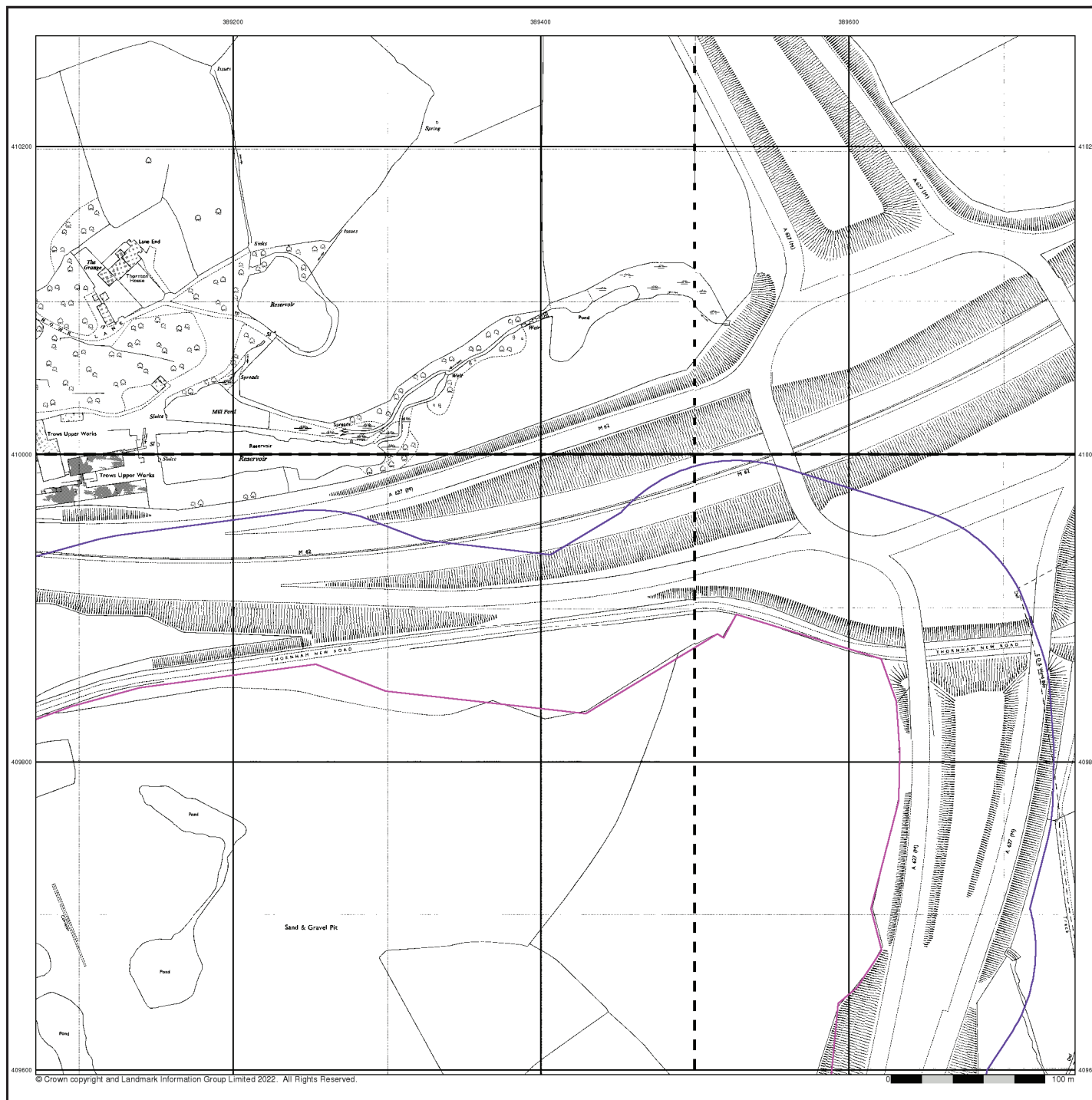
Order Number: 300522833_1_1
Customer Ref: 322974
National Grid Reference: 388720, 408980
Slice: A
Site Area (Ha): 95.3
Search Buffer (m): 100

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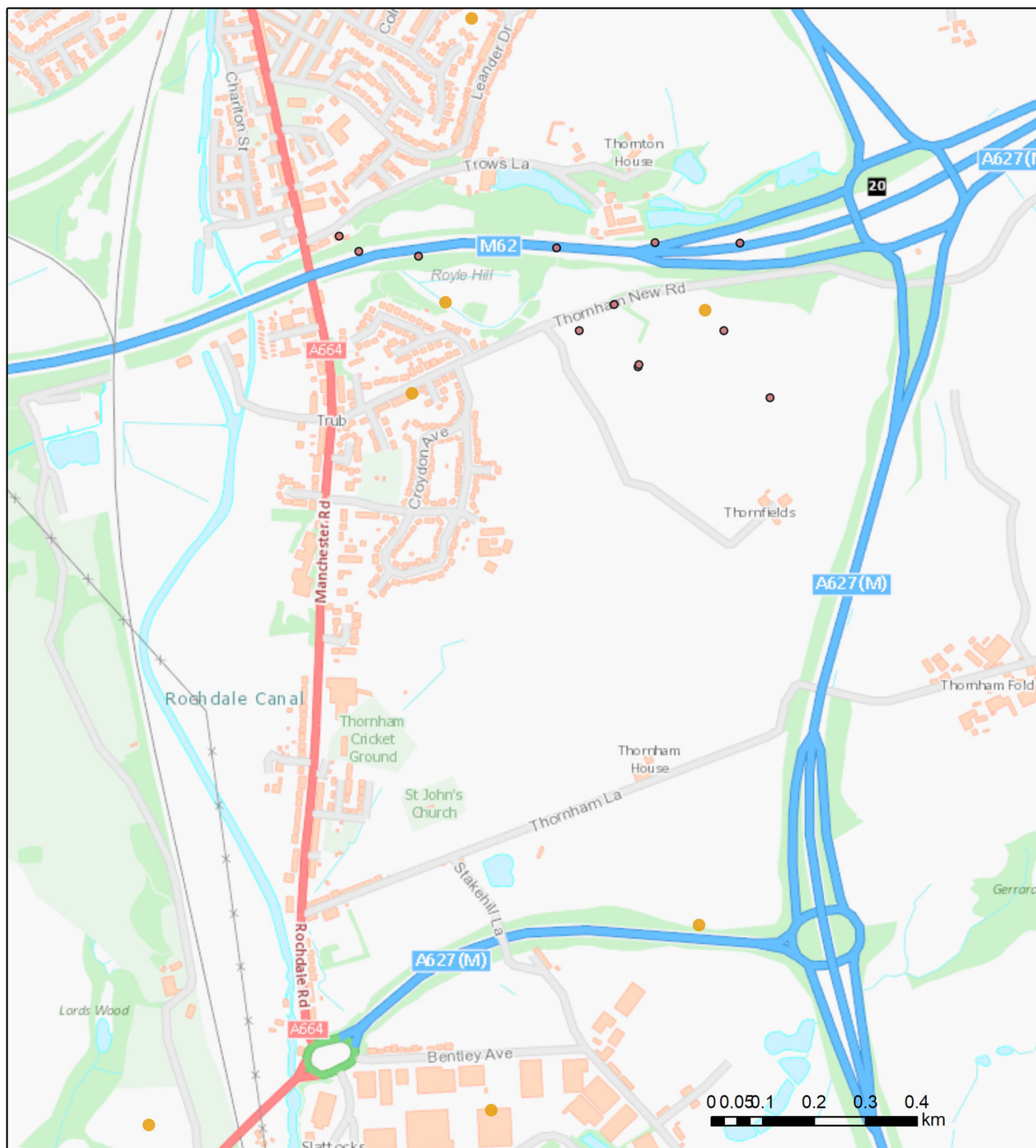
APPENDIX D

BGS DATASETS

GeoIndex Report



British
Geological
Survey



Contains OS data © Crown Copyright and database right 2020

GeoIndex Onshore Data Sources: NERC, Natural England, English Heritage and Ordnance Survey

Map Key

Mineral Planning Permissions (Points)

-  Planning Permissions centroids

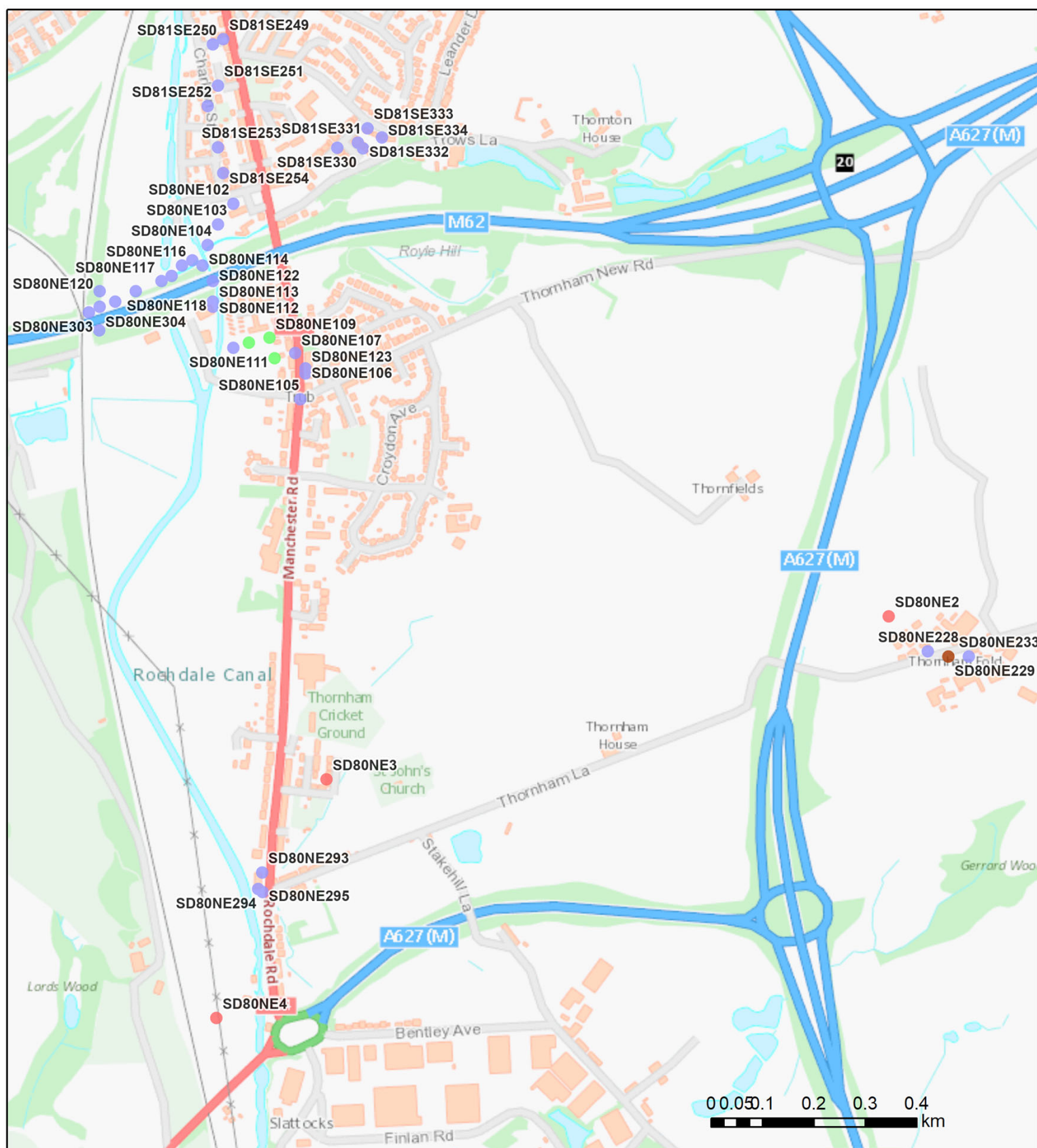
Mines and quarries

-  Active
-  Ceased
-  Dormant
-  Inactive
-  Special

GeolIndex BGS BHs plan



British
Geological
Survey



Contains OS data © Crown Copyright and database right 2020

GeolIndex Onshore Data Sources: NERC, Natural England, English Heritage and Ordnance Survey

Map Key

Borehole records

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

APPENDIX E

STRUCTURE OF MINERALS ASSESSMENT REPORT

ANNEX 1**Minerals Resources Assessments - components**

Minerals Assessment components	Information requirements & sources
Site location, boundaries and area	• Red line area in relation to MSA/MCA • Description of development including layout & phasing • Timescale for development
Mineral Resource	• Type of mineral • Existing mineral exploration data (e.g. previous boreholes in area) • Results of further intrusive investigation if undertaken • Extent of mineral – depth & variability • Overburden – depth & variability, overburden:mineral ratio • Mineral quality – including silt %/content • Estimated tonnage of resource potentially affected • Estimated economic/market value of resource affected
Potential constraints on mineral extraction at location	• Site location, proximate receptors, infrastructure/utilities, accessibility • Landscape, biodiversity & heritage designations
Potential opportunities for mineral extraction at location	• Proximity to existing mineral sites or processing plant • Previous consideration of site or adjacent land in preparation of Minerals Local Plan • Context of site and mineral within wider resource area • Proximity to viable transport links for mineral haulage • Potential benefits through mineral restoration e.g. land reclamation, landscape enhancement
Conclusions	• Amount of mineral at risk of sterilisation • Current and future economic or heritage importance of mineral • Viability of extraction from Site, taking account of existing reserves and potential resources elsewhere • Importance of the proposed non-minerals development
Prior Extraction	
Commercial & market considerations	• Interested operators/local market demand • Processing needs • Proximity to processor or market • Potential for on-site use of some or all of the mineral • Accessibility
Practicability & acceptability	• Effect on viability of non-minerals development including through delays and changes to landform and character • Site location, setting & proximity to receptors • Accessibility/transport • Hydrology/hydrogeology/drainage • Effect on designations or interests

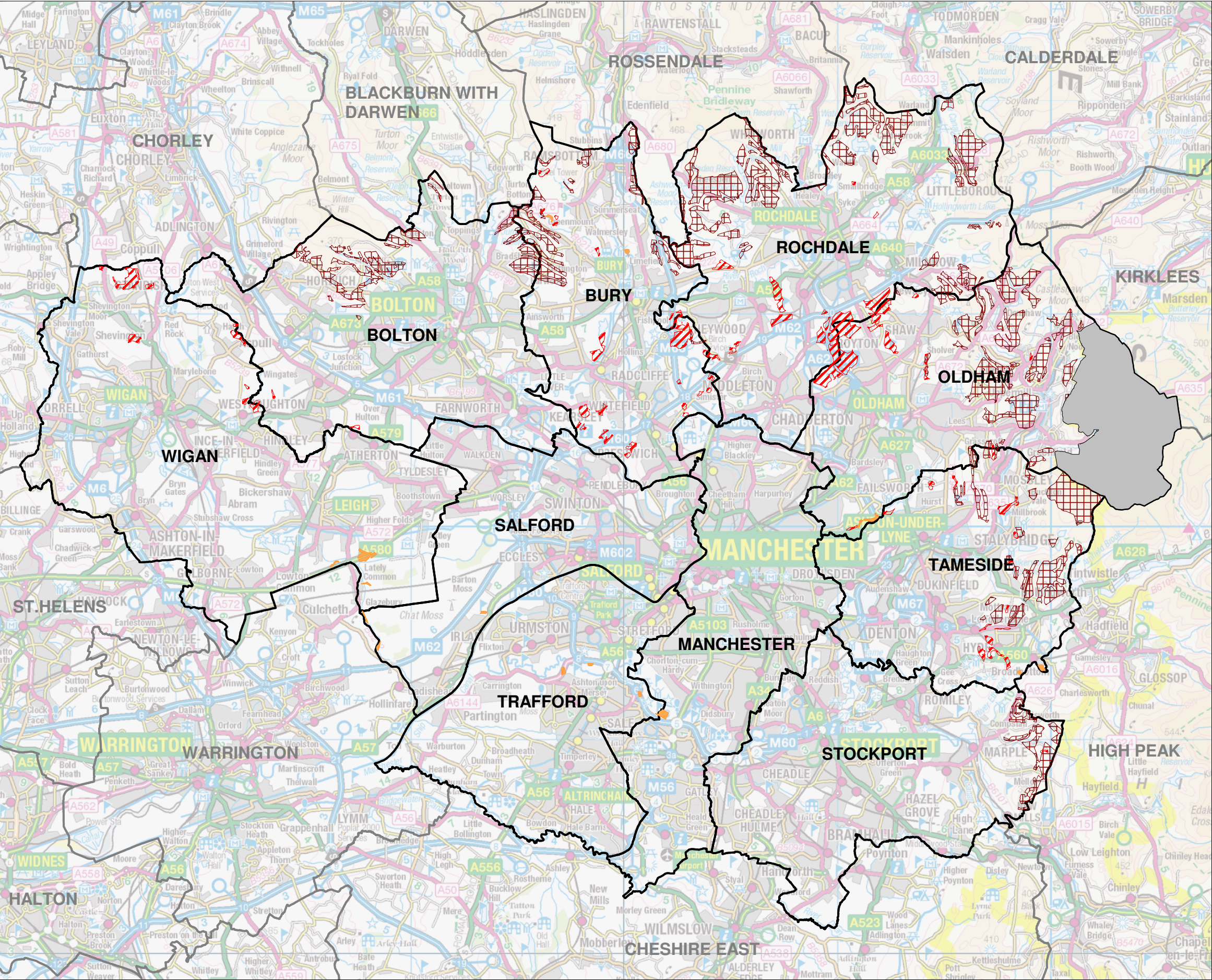
ANNEX 2

Minerals Infrastructure Assessments - components

Minerals Infrastructure Assessment components	Information requirements & sources
Site location, boundaries and area	• Red line area in relation to safeguarded site/MCA • Description of development • Timescale for development
Description of minerals infrastructure potentially affected	• Type of facility eg wharf, rail depot, concrete batching plant; asphalt plant; recycled aggregate site • Type of mineral handled/processed/supplied • Throughput/capacity
Potential sensitivity of proposed non-mineral development to operation of infrastructure on non-minerals development and its significance	• Noise • Dust • Traffic • Visual • Light
Potential impact of non-mineral development on safeguarded infrastructure/facility	• Loss of capacity – none, partial or total • Potential constraint on operation of facility – none or partial
Measures to mitigate potential impacts of operation of infrastructure on non-minerals development	• External and internal design & orientation eg landscaping; living & sleeping areas facing away from facility. • Fabric and features eg acoustic screening & insulation; non-opening windows; active ventilation
Conclusions	• Safeguarded facility will not be lost • Sensitivity of proposed development to effects of operation of safeguarded infrastructure/facility can be mitigated satisfactorily; or • If loss of site or capacity, or constraint on operation, evidence it is not required or can be re-located or provided elsewhere

APPENDIX F

GREATER MANCHESTER MINERALS PLANS

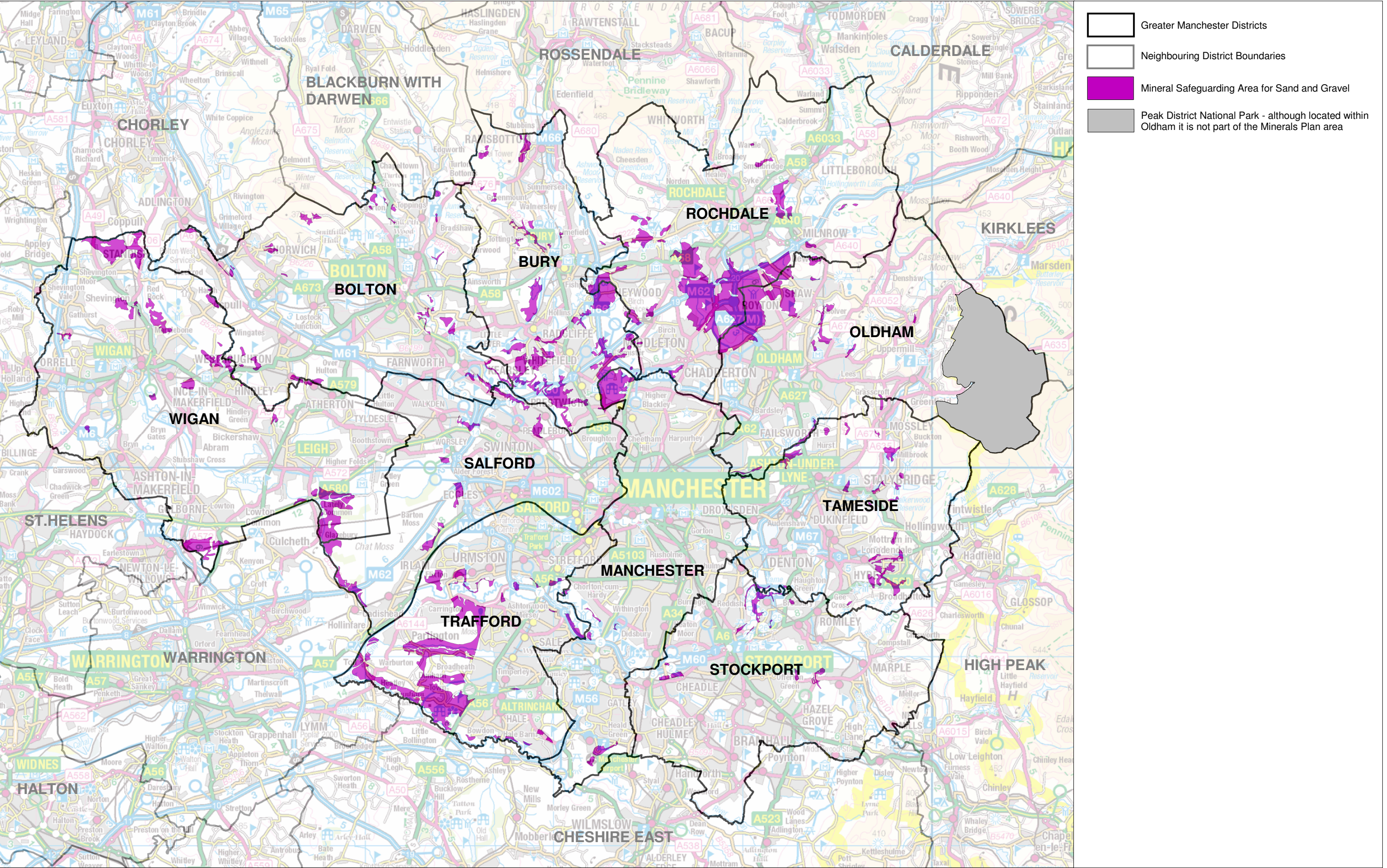


- Neighbouring District Boundaries
- Greater Manchester District Boundaries
- Peak District National Park - although located within Oldham it is not part of the Minerals Plan area
- Area of Search for Sand
- Area of Search for Sandstone
- Area of Search for Gravel

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Scale @ A3
1cm = 1.85km

Map 2 - Areas of Search for Minerals in Greater Manchester

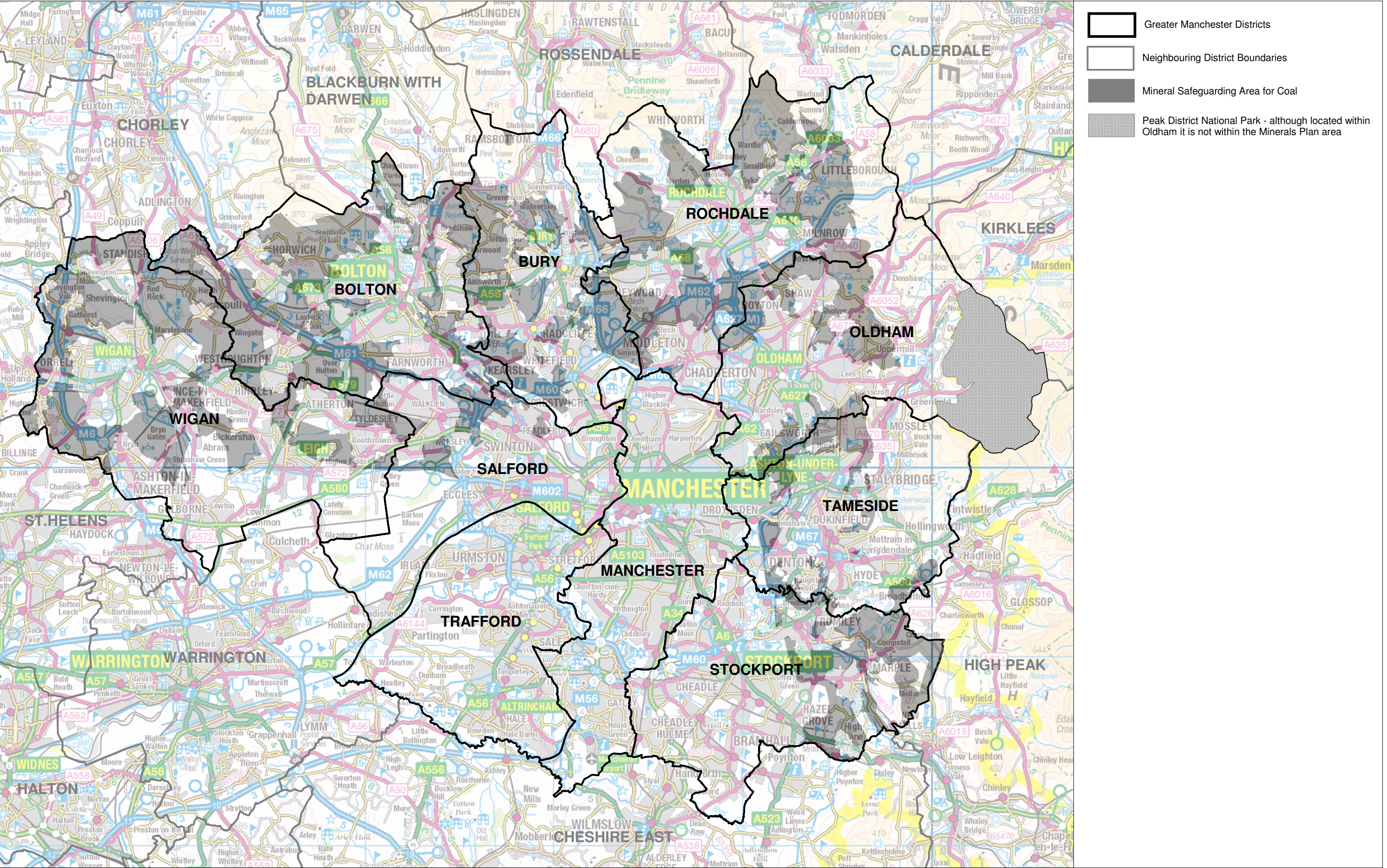


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Scale @ A3
1cm = 1.85km

Map 4 - Mineral Safeguarding
Area for Glaciofluvial Sand
and Gravel



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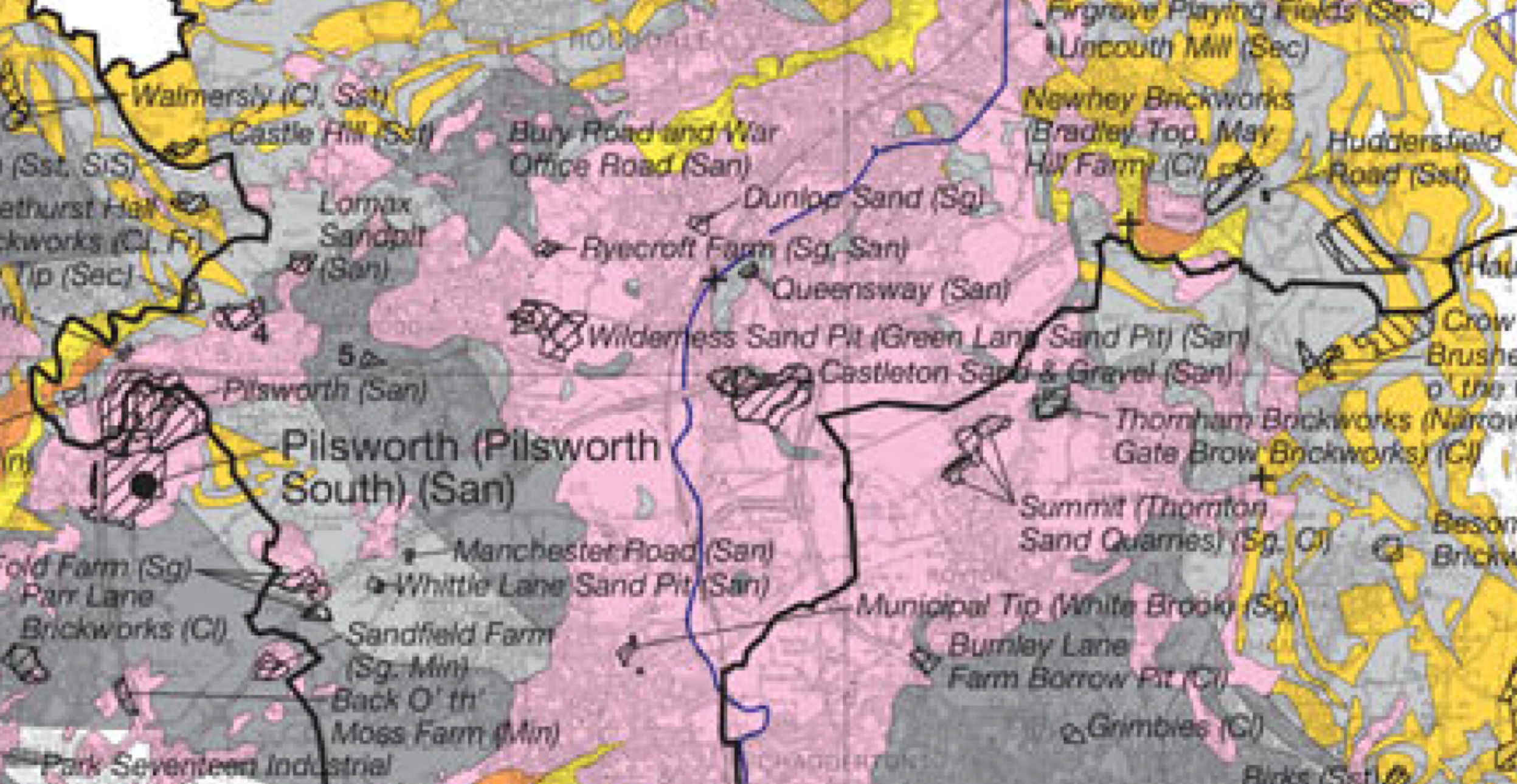
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Scale @ A3
1cm = 1.85km

Map 7 - Mineral Safeguarding Area for Coal

APPENDIX G

GREATER MANCHESTER MINERALS RESOURCES MAP



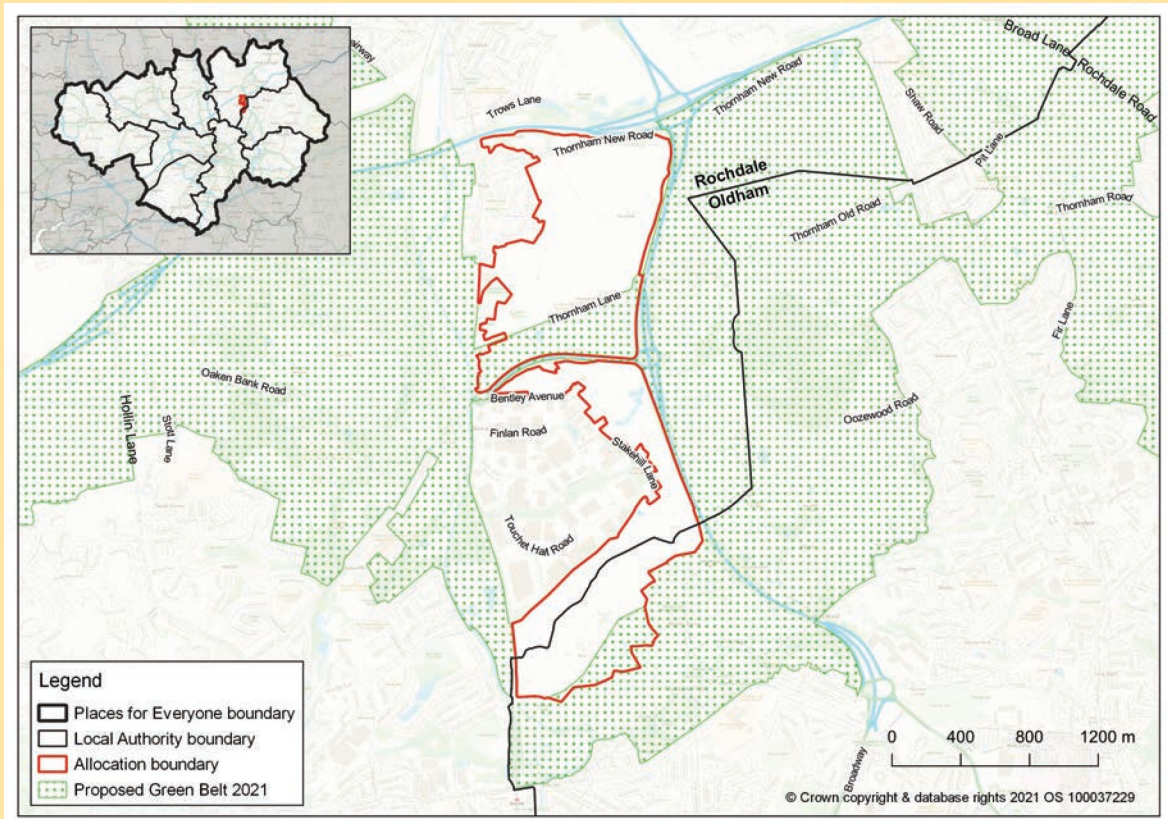
APPENDIX H

GREATER MANCHESTER PLACES FOR EVERYONE POLICY EXTRACT

Stakehill

Policy JP Allocation 2

Stakehill



Picture 11.6 JPA 2 Stakehill

Development at this site will be required to:

1. Deliver around 150,000 sqm of high quality, adaptable, employment floorspace within a 'green' employment park setting, with a focus on suitable provision for advanced manufacturing and other key growth sectors, taking advantage of its accessible location and proximity to Junction 20 of the M62, and complementing the other opportunities within the North-East Growth Corridor;
2. Provide around 1,680 high quality homes, including larger, higher value properties, to support the new jobs created within the North-East Growth Corridor and create a sustainable and high quality extension to the urban area;
3. Achieve excellent design and sustainability through masterplanning and the use of design codes for the whole site to ensure comprehensive development. The scale of the residential development on the northern part of the allocation provides an opportunity to adopt a 'garden village' approach to create a locally distinctive residential offer;

4. Ensure that the design of the scheme preserves or enhances the setting of the listed St John's Church and war memorial in line with the findings and recommendations of the Historic Environment Assessment (2020) in the Plan's evidence base and any updated assessment submitted as part of the planning application process;
5. Protect and enhance archaeological features and where appropriate carry out archaeological evaluation in the form of geophysics, field walking and trial trenching for areas specified in the Stakehill Historic Environment Assessment 2020 to understand where especially significant archaeology must be preserved in situ;
6. Have regard to views from Tandle Hill Country Park in terms of the design, landscaping and boundary treatment in order to minimise the visual impact as much as possible;
7. Retain a strategic area of Green Belt between the A627(M) spur and Thornham Lane to maintain separation between the urban areas of Rochdale and Middleton;
8. Support the delivery of improved public transport to and within the area to promote more sustainable travel and improve linkages to the employment opportunities from surrounding residential areas;
9. Contribute to the proposed new railway station at Slattocks which is currently being investigated by TfGM and ensure that new development is designed in a way to maximise the benefits of the new rail station through the creation of high quality walking and cycling routes;
10. Provide good quality walking and cycling routes to connect to new and existing residential areas and local transport hubs in order to encourage sustainable short journeys to work and promote healthier lifestyles;
11. Provide appropriate access to electric vehicle charging infrastructure and cycle storage;
12. Provide financial contributions to mitigate impacts on the highway network identified through a transport assessment;
13. Improve access arrangements in and around Stakehill Industrial Estate to assist in the separation of residential and employment traffic as much as possible and to make appropriate provision for lorry parking;
14. Ensure that the existing settlements and pockets of housing are taken fully into account through the masterplanning of the area;
15. Deliver high quality landscaping and green and blue infrastructure within the site both to enhance the attractiveness of the scheme and provide opportunities for recreation to both residents and people working in the area. This should include good quality boundary treatment, particularly on the boundary separating the development area and land to be retained as Green Belt to the south to provide an attractive defensible Green Belt boundary;
16. Retain and where possible enhance areas of biodiversity within the area, notably the Rochdale Canal Site of Special Scientific Interest, along with the existing brooks and ponds within the site;
17. Carry out a project specific Habitats Regulation Assessment for planning applications of 1,000 sqm / 50 dwellings or more;
18. Contribute and make provision for additional primary and secondary school places to serve the development. This will include provision of land and financial contributions to deliver the expansion of Thornham St John's Primary School located within the allocation;

19. Given the scale of the new housing provision it will be necessary for the proposal to deliver social infrastructure to ensure that the needs of new and existing communities are properly met; and
20. Incorporate appropriate noise and air quality mitigation taking account of the M62 and A627(M) motorway corridors.

- 11.44** Stakehill provides a significant opportunity for both Oldham and Rochdale to contribute to the future economic growth of Greater Manchester, capitalising on its proximity and connectivity to the motorway and rail network. It has the potential to provide a significant contribution to the sub-regional requirement for employment floorspace within key growth sectors and attract additional investment and economic activity to the area. The scheme will also generate a range of benefits for the local and wider economy. It would involve the loss of Green Belt, however, it offers an excellent location, as part of the North-East Growth Corridor and Northern Powerhouse with connections through to Liverpool and Leeds. The level of housing provided will contribute towards the delivery of our housing need, diversifying our housing stock and supporting the proposed employment opportunities across the North-East Growth Corridor and elsewhere.
- 11.45** The location of the housing and employment development within the allocation takes account of existing land uses and the potential to separate out residential and industrial traffic. The residential development will be focused to the north of Thornham Lane and to the south of the A627(M) spur. The employment development will be located to the south and east of the existing industrial estate.
- 11.46** Stakehill Industrial Estate has a strong reputation as an employment location and has excellent access to the motorway network. Public transport on the western edge of the site is good but public transport access, particularly from Oldham borough, requires improvement. This existing successful business park can provide a focus for a significantly expanded employment offer in this area which will complement the other opportunity areas within the North-East Growth Corridor gateway providing different types of premises and appeal to a wide range of uses and sectors.
- 11.47** As well as the expansion of the employment offer, an opportunity exists to deliver a significant amount of housing that will both support the new employment development and boost the supply of housing in this part of the sub-region. The site lies between the successful and attractive neighbourhoods of Chadderton and Slattocks. This area is characterised by generally good accessibility, a number of popular schools and proximity to a range of retail facilities and other services.
- 11.48** There will need to be significant public transport improvement to and within the site as a whole. The site lies between Castleton and Mills Hill railway stations, and walking and cycling connections to these two stations should be improved as part of the development. While the edges of the site nearest to these stations are potentially within walking distance it is unlikely that such trips will be made without additional supporting bus services that link these modes of transport. A new southerly link to Mills Hill station could form part of any expansion of the

industrial estate. The scale of development proposed does offer the opportunity to deliver significant public transport improvements that will improve sustainable travel options to both existing and future residents and workers within the site. This includes the potential to deliver a new rail station at Slattocks on the Calder Valley line along with an associated Park & Ride facility. This opportunity is currently being investigated further by TfGM and a contribution from the proposed development would assist in the delivery of this new station. Investment in public transport infrastructure or services will also be needed to provide access to the sites employment opportunities for Oldham residents, which needs to be investigated further by TfGM. Investment in public transport and associated infrastructure should be complemented by a high quality pedestrian and cycling network that links the new development to surrounding neighbourhoods and key services/facilities.

- 11.49** The development would involve the loss of an area of Green Belt but an area of Green Belt is to be retained between the A627(M) spur and Thornham Lane to provide some separation between the urban areas of Rochdale and Middleton. Whilst the development does not encroach into the areas around Tandle Hill Country Park, the relative proximity of some development to the park means it is vital that development provides high quality landscaping and open spaces to create an attractive environment and increase opportunities for links between the site for both informal and formal recreation. The impact of the development on views from Tandle Hill Country Park should be given particular consideration. As well as landscaping, any development should demonstrate how the design and materials used within the development can help mitigate against any visual impact. The site does include areas of biodiversity in the form of Sites of Biological Importance, ponds and brooks. These and other nature conservation features should be retained and, where possible, enhanced.
- 11.50** A proportion of the site to the south is also to be retained as Green Belt, providing an opportunity to significantly enhance the biodiversity value of the site and for the incorporation of sustainable drainage systems integrated as part of the multi-functional green infrastructure network reflecting its 'green' employment park setting.
- 11.51** As the development site forms part of the setting of the Church of St John, a Grade II listed building, the masterplan must seek to retain key views to and from the designated heritage, specifically those from the footpath on Church Avenue. The masterplan will also consider these sensitivities in terms of design, density and provision of green space to preserve the tranquillity of the Church. Similarly, where practical, historic field boundaries as highlighted by the Historic Environment Assessment 2020 should be retained and incorporated in to the masterplan to help retain the rural character of the site. These areas and assets identified by the Stakehill Historic Environment Assessment 2020 will require a programme of archaeological investigation. These sites will be considered through the detailed masterplanning of this site and any subsequent planning application.
- 11.52** It is considered that by 2040 these developments may lead to traffic increases on the M62 motorway because of their size and relative proximity to the motorway. The M62 passes close to designated National and European sites known to be susceptible to traffic pollution,

particularly nitrate deposition. As such, a project specific Habitats Regulation Assessment will be required for planning applications involving 1,000 or more sqm or 50 or more residential units.

- 11.53** The wider opportunity area is adjacent to and includes areas existing development. Any proposed scheme should have full regard to these areas and consider them through the detailed masterplanning of the area.
- 11.54** The scale of residential development means that significant community, leisure and recreational infrastructure will have to be provided as part of a comprehensive scheme. This will include the provision of additional school places as well as flexible community and medical facilities, facilities for sport and recreation and possibly a small local centre.
- 11.55** In terms of primary school provision, St John's CE Thornham Primary School is located within the site on the northern side of Thornham Lane. There is an opportunity to expand this small, village school to assist in meeting demand for primary school places generated from the proposed development and provide a highly accessible school for new residents.